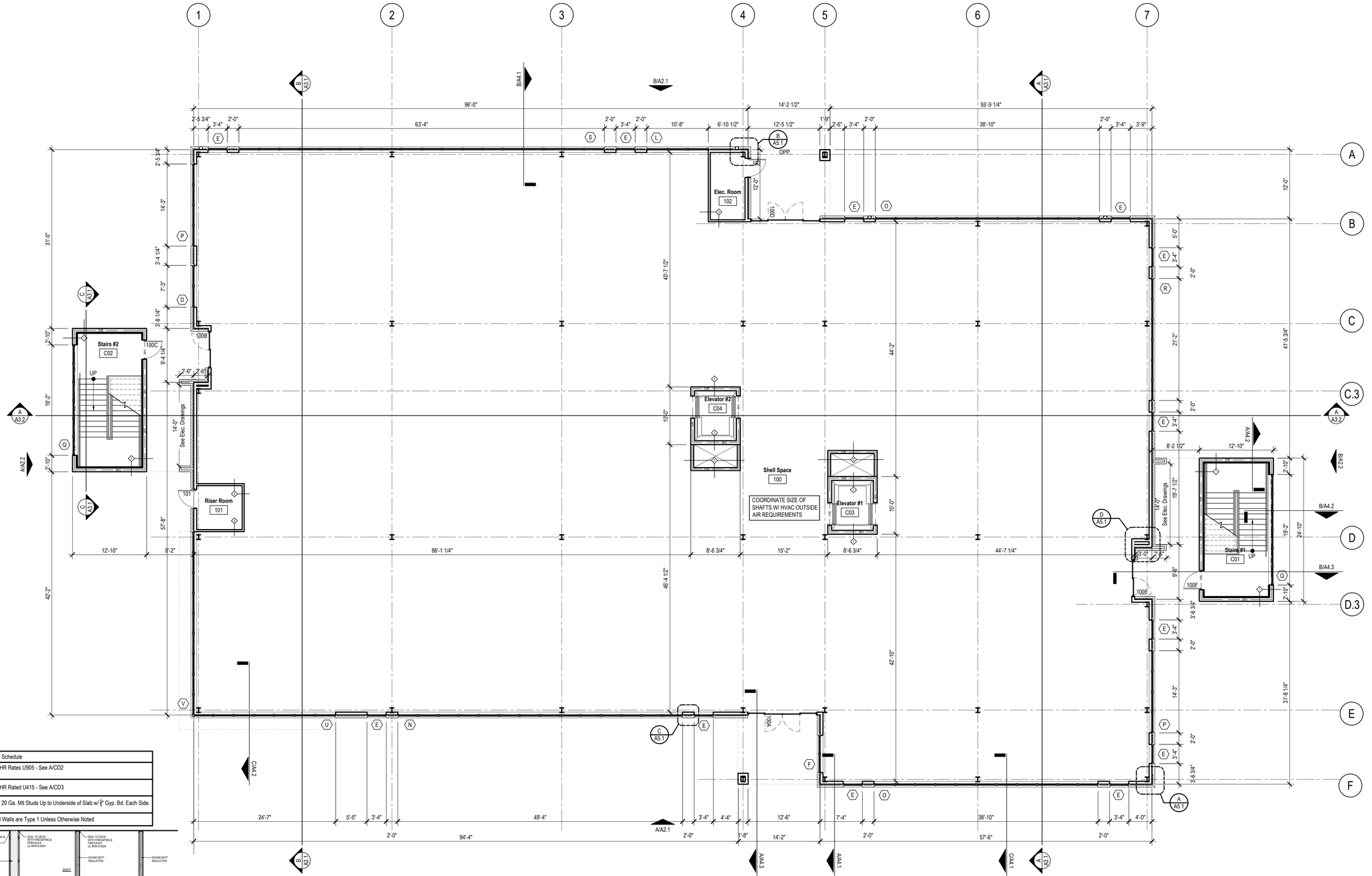
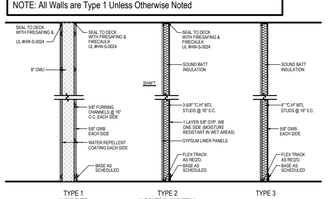


Wall Type Schedule
1 — 1-HR Rates U905 - See A/CD2
2 — 1-HR Rated U415 - See A/CD3
3 — 4" 20 Ga. Mtl Studs Up to Underside of Slab w/ 5/8" Gyp. Bd. Each Side.
NOTE: All Walls are Type 1 Unless Otherwise Noted



PLAN NORTH

First Floor Plan

A
1/8"

Lisle Architecture & Design, Inc.

614 Market Street
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(910) 763.4517 (f)

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LISLE ARCHITECTURE & DESIGN, INC. CORPORATE SEAL 2017 NORTH CAROLINA

DAVID BRIAN LISLE REGISTERED ARCHITECT 7903 NORTH CAROLINA WILMINGTON

DATE: 12.7.2020

PROJECT NO: 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

NO.	REV./SUB.	DATE

SHEET TITLE

First Floor Plan

SHEET NUMBER

A1.1

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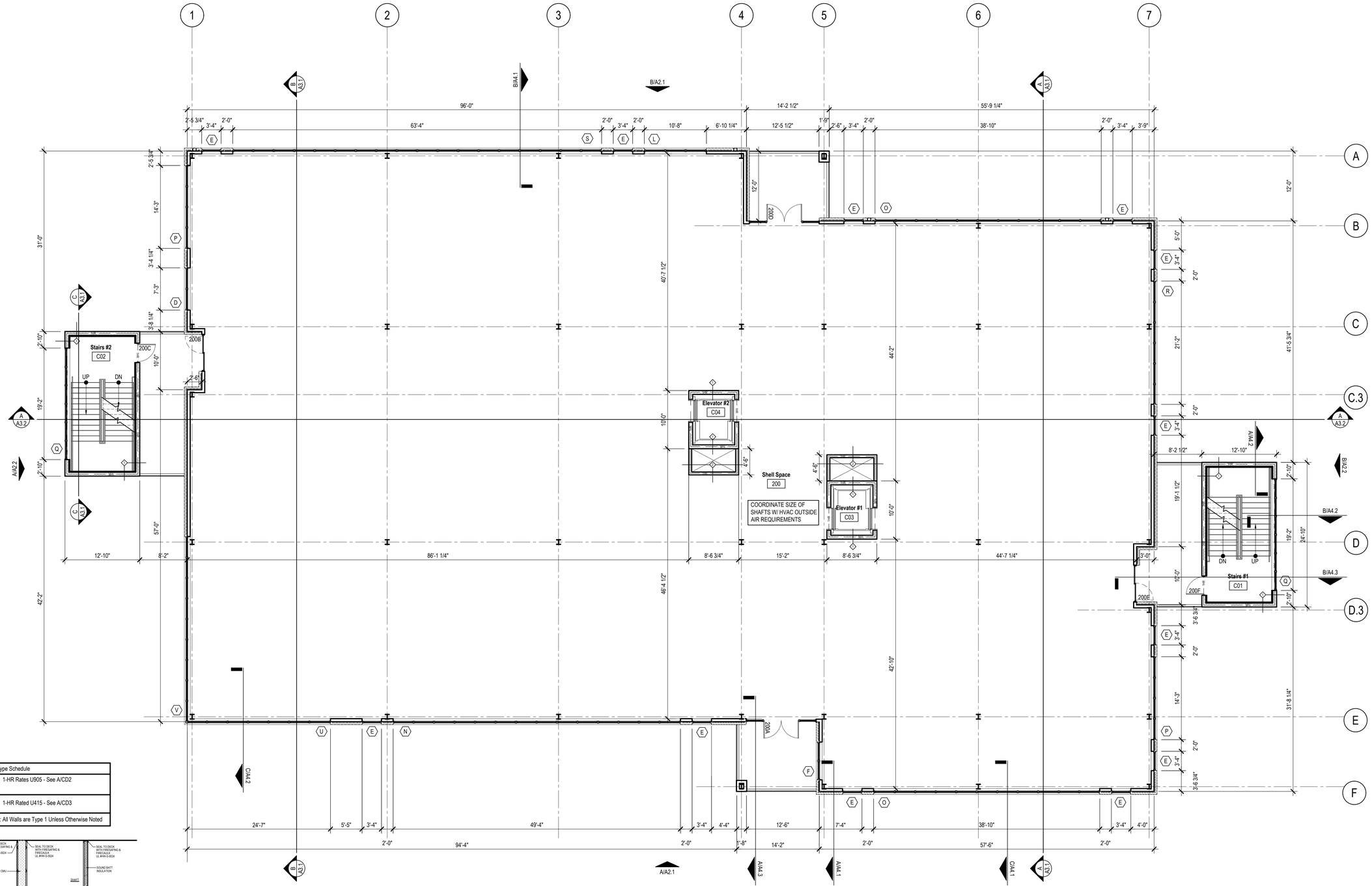
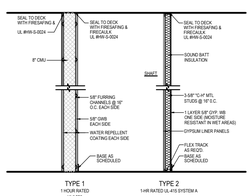


Wall Type Schedule
1 — 1-HR Rates U905 - See A/CD2
2 — 1-HR Rated U415 - See A/CD3
NOTE: All Walls are Type 1 Unless Otherwise Noted



PLAN NORTH

Second Floor Plan

A
1/8"

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DATE: 12.7.2020

PROJECT NO. 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

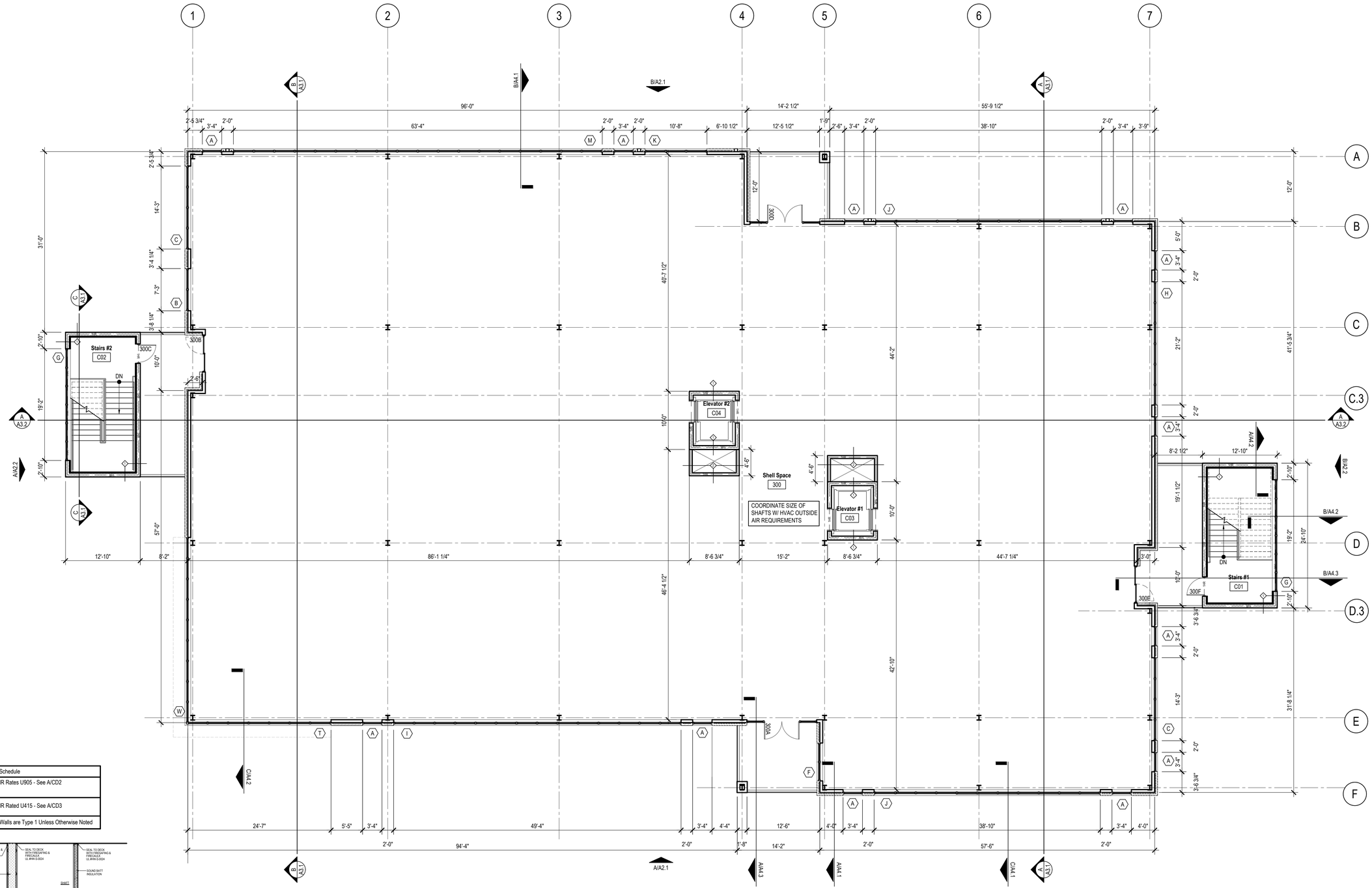
NO.	REV./SUB.	DATE

SHEET TITLE

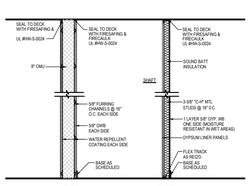
Second Floor Plan

SHEET NUMBER

A1.2



Wall Type Schedule	
1	1-HR Rates U905 - See A/CD2
2	1-HR Rated U415 - See A/CD3
NOTE: All Walls are Type 1 Unless Otherwise Noted	



PLAN NORTH

Third Floor Plan

A
1/8"

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LISLE ARCHITECTURE & DESIGN, INC. WILMINGTON, NORTH CAROLINA
SEAL

DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Third Floor Plan

SHEET NUMBER

A1.3

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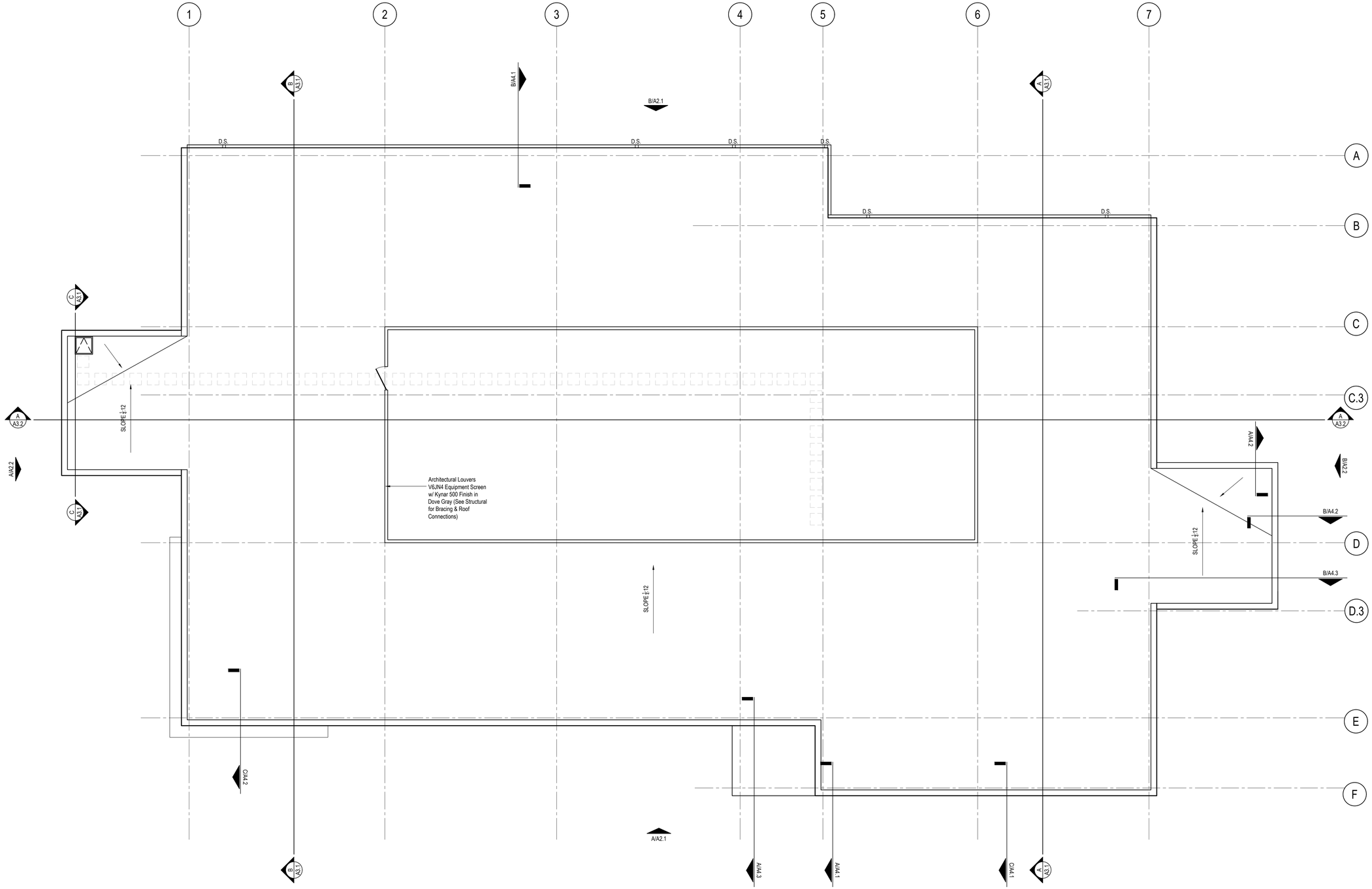

PLAN NORTH

Roof Floor Plan

A
1/8"

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LISLE ARCHITECTURE & DESIGN, INC. — CORPORATE SEAL — WILMINGTON, NORTH CAROLINA

BID SET

DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Roof Floor Plan

SHEET NUMBER

A1.4

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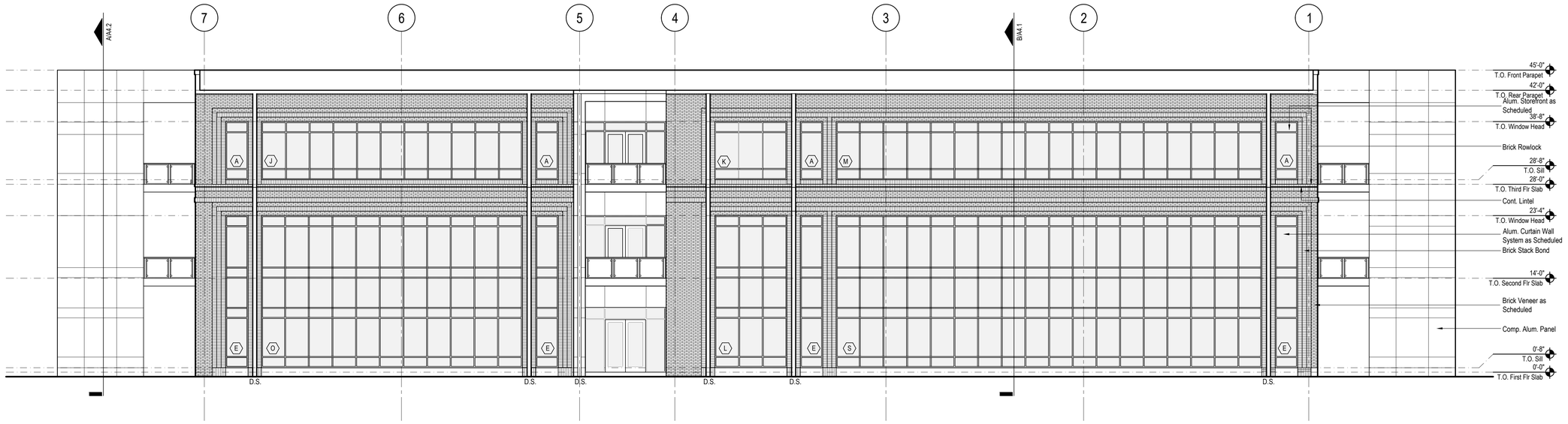
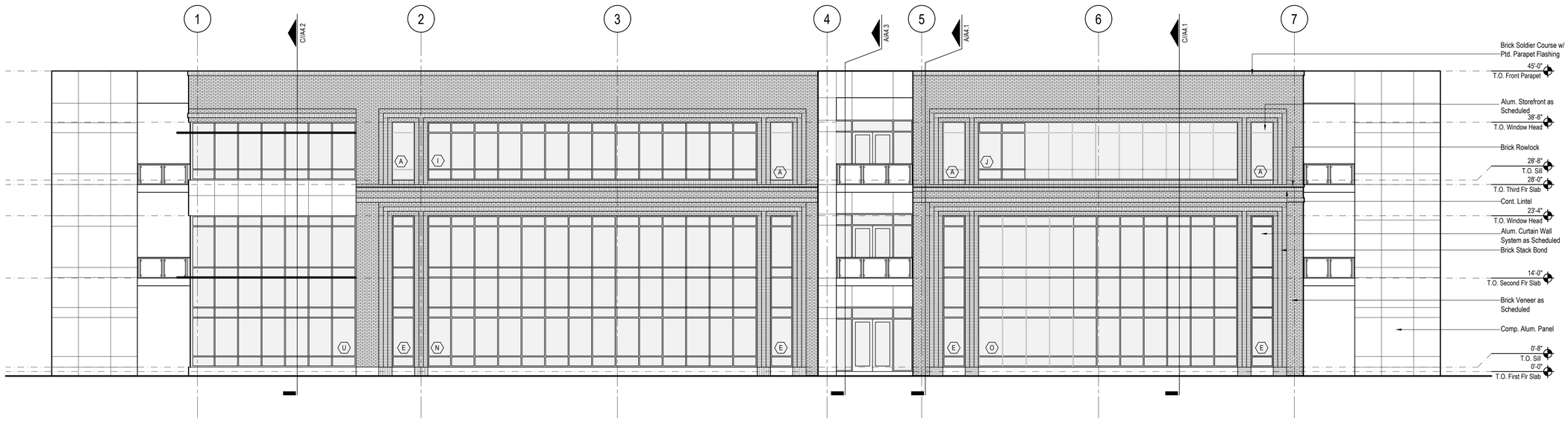


Exterior Elevation

B
1/8"



Exterior Elevation

A
1/8"

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LISLE ARCHITECTURE & DESIGN, INC. CORPORATE SEAL NORTH CAROLINA WILMINGTON

DATE: 12.7.2020

PROJECT NO: 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

NO.	REV./SUB.	DATE

SHEET TITLE

Building Elevations

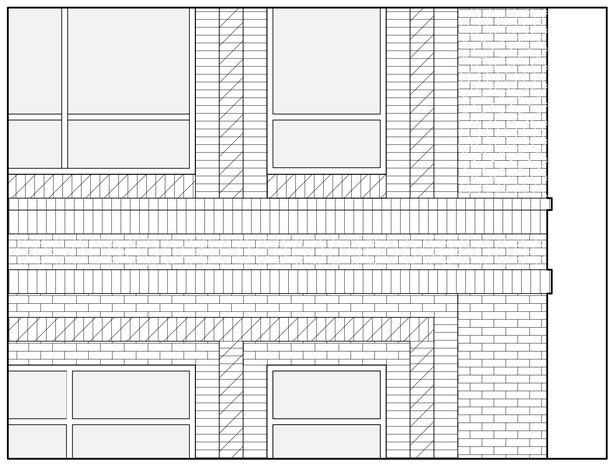
SHEET NUMBER

A2.1

EXTERIOR FINISH LEGEND	
TYPE	MATERIAL SPECIFICATION
	BRICK "A" - BELDEN BRICK BELCREST 500
	BRICK "B" - BELDEN BRICK POTOMAC CLEAR 8X W/ TEXTURE TO MATCH NO. 505
	BRICK "C" - BELDEN BRICK SANDY ROSE
ALUMINUM COMPOSITE PANEL	FIRESTONE ALUMINUM PLATE WALL SYSTEM SERIES 3200 .125" MATERIAL THICKNESS IN KYNAR 500 FINISH AS SELECTED BY ARCHITECT - ALL FLASHING TO BE PAINTED TO MATCH

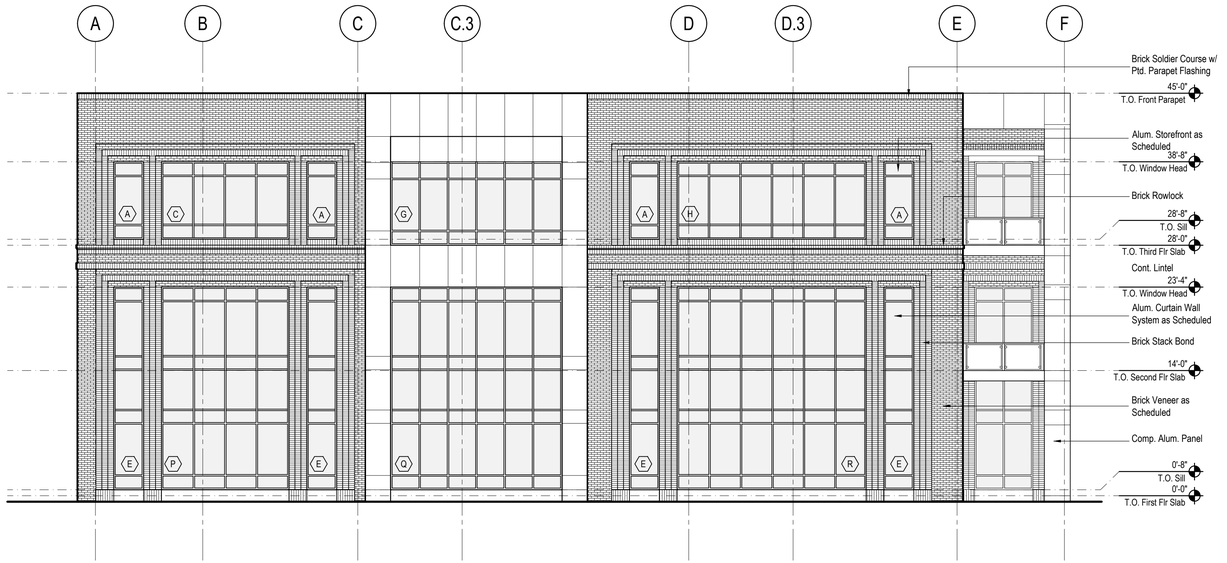
Finish Schedule

D
1/2"



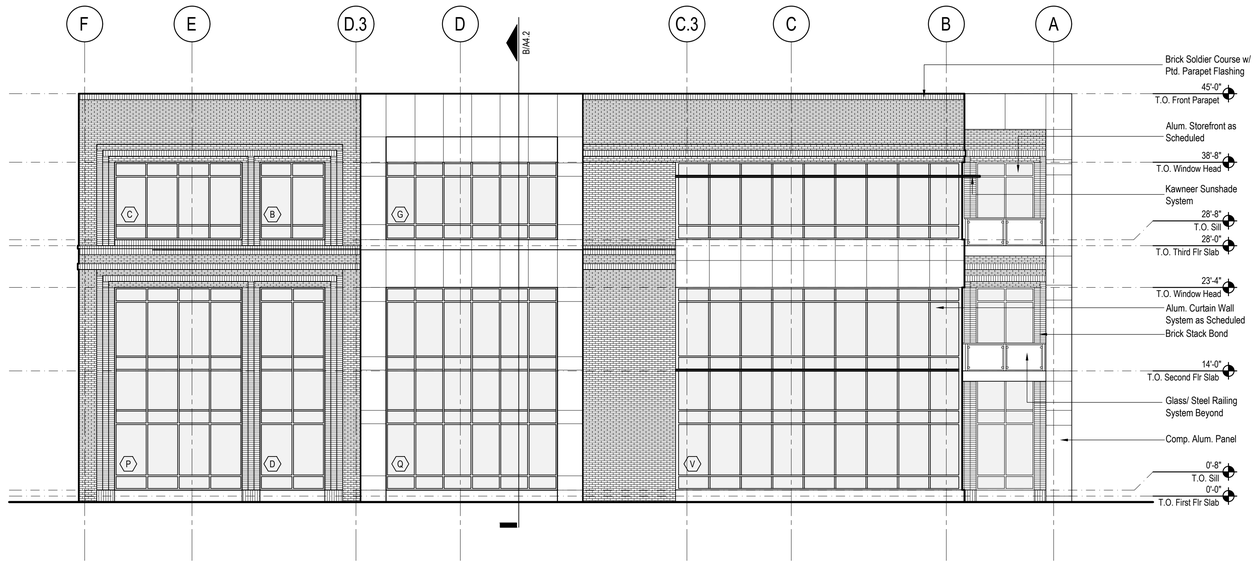
Enlarged Brick Patterns

C
1/2"



Exterior Elevation

B
1/8"



Exterior Elevation

A
1/8"

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DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO	REV./SUB.	DATE

SHEET TITLE

Building Elevations

SHEET NUMBER

A2.2

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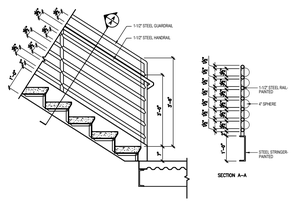
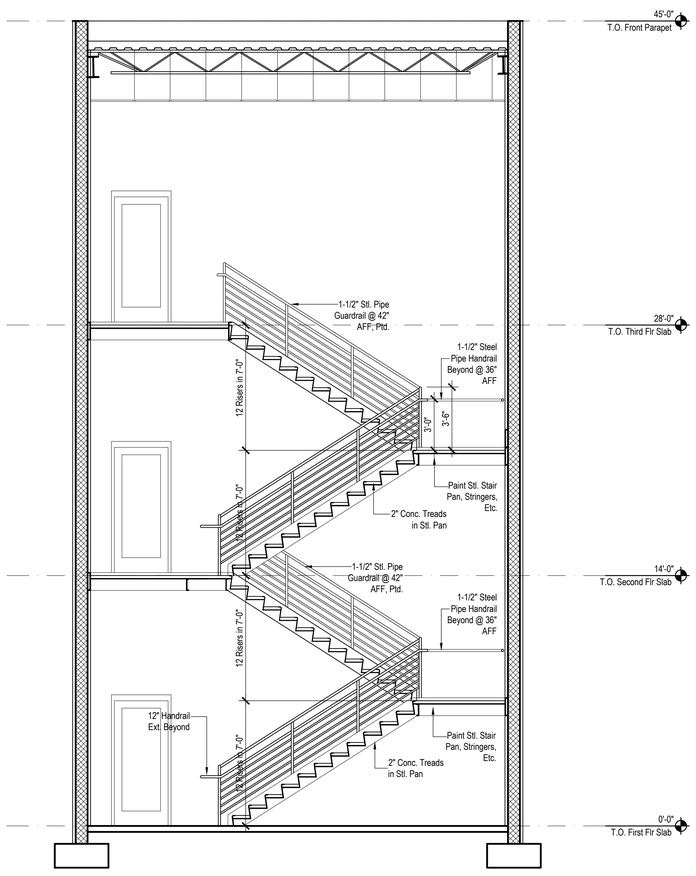


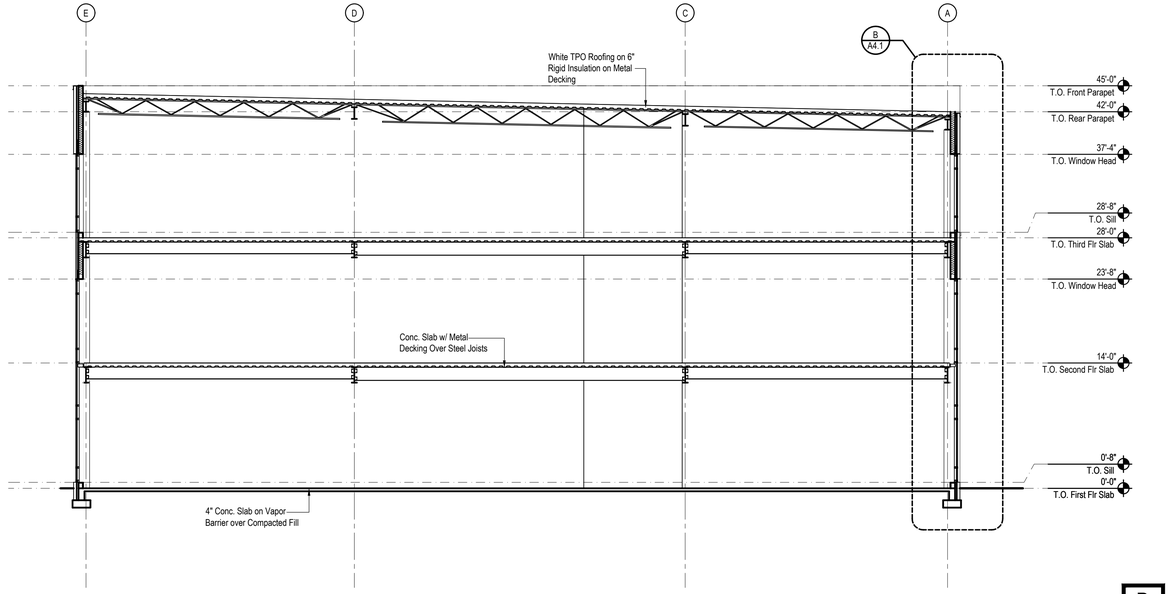
Handrail Detail

D
NTS



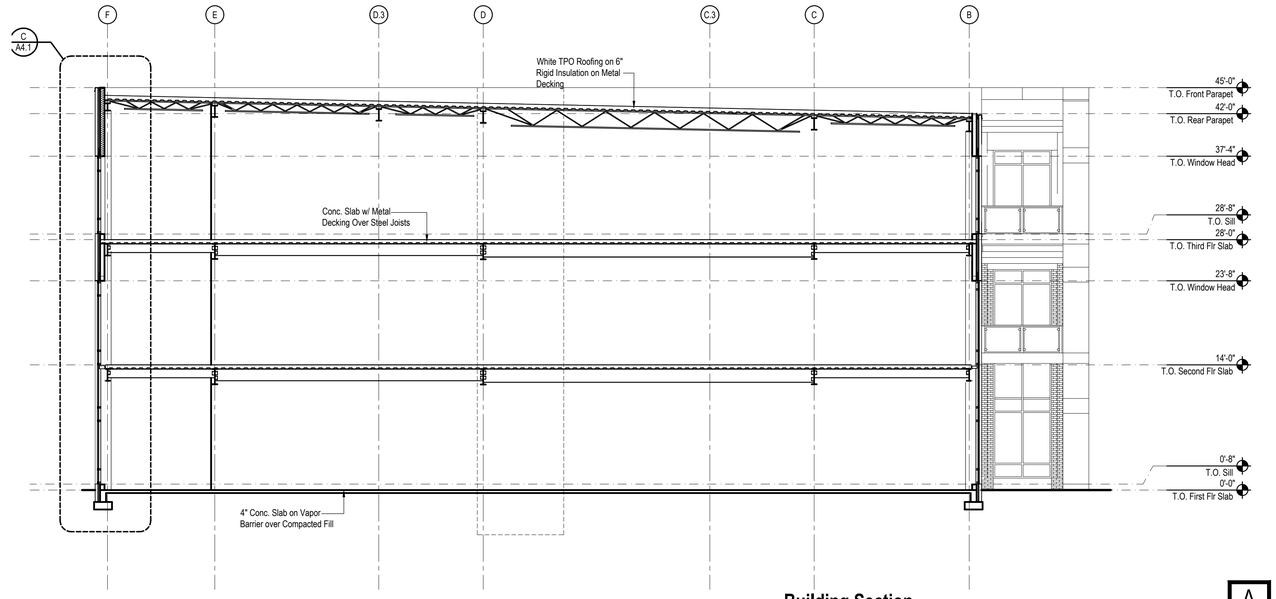
Stair Section

C
1/4"



Building Section

B
1/8"



Building Section

A
1/8"

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WILMINGTON, NC 28405

PROJECT NO. 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Building Section

SHEET NUMBER

A3.1

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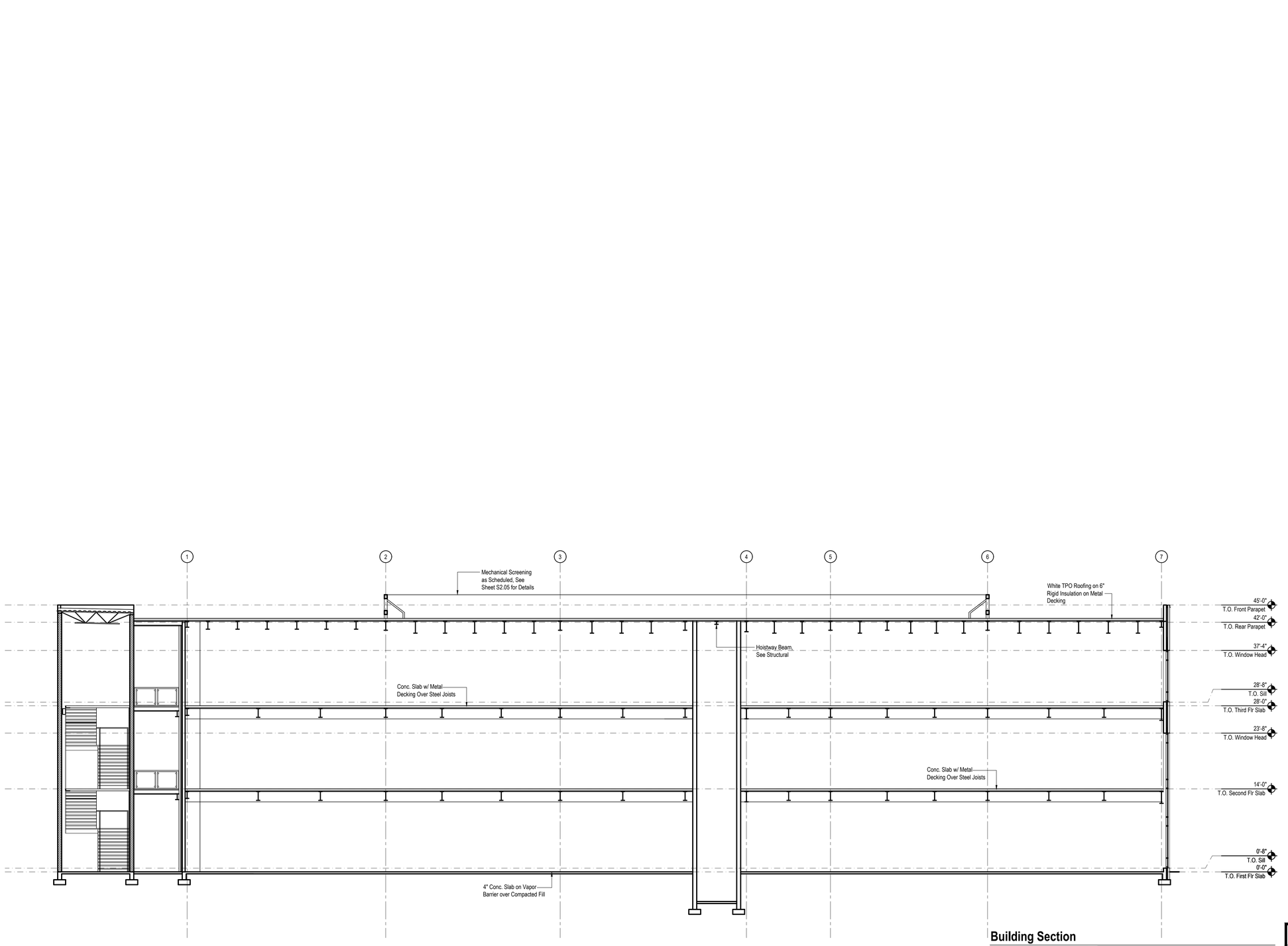

Building Section

A
1/8"

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PROJECT NO: 20131

NO	REV/SUB	DATE

SHEET TITLE

Building Section

SHEET NUMBER

A3.2

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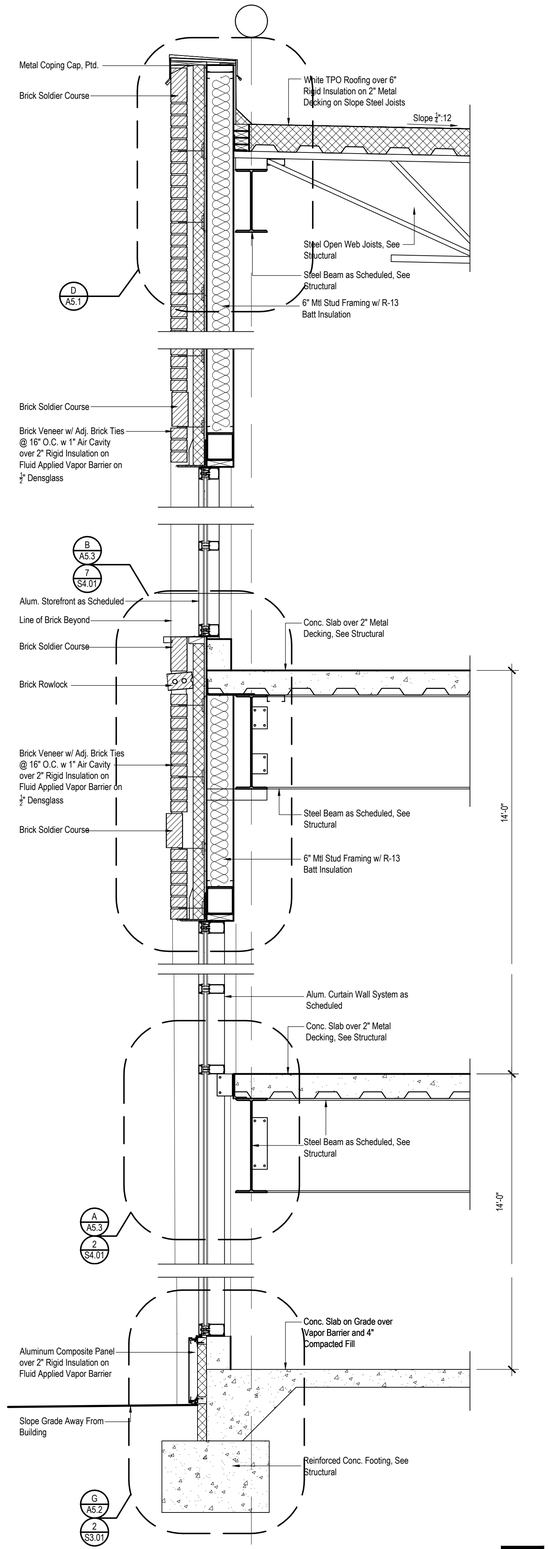
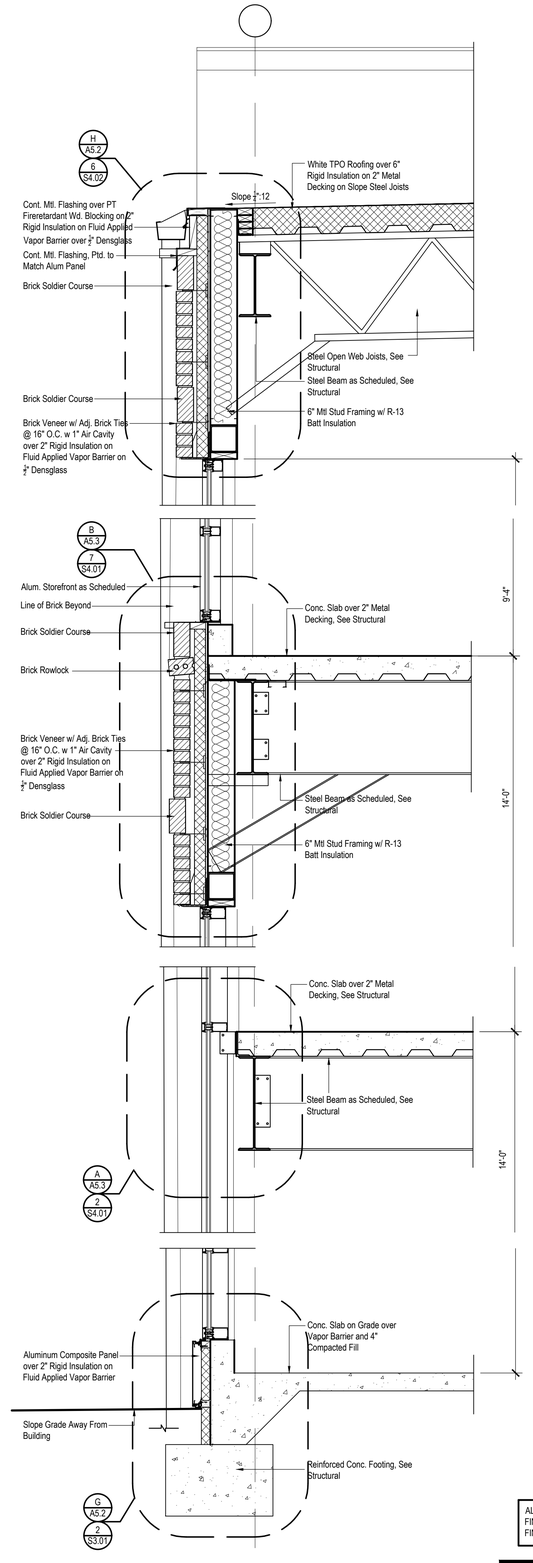


Typ. Wall Section @ Curtain Wall - High Side

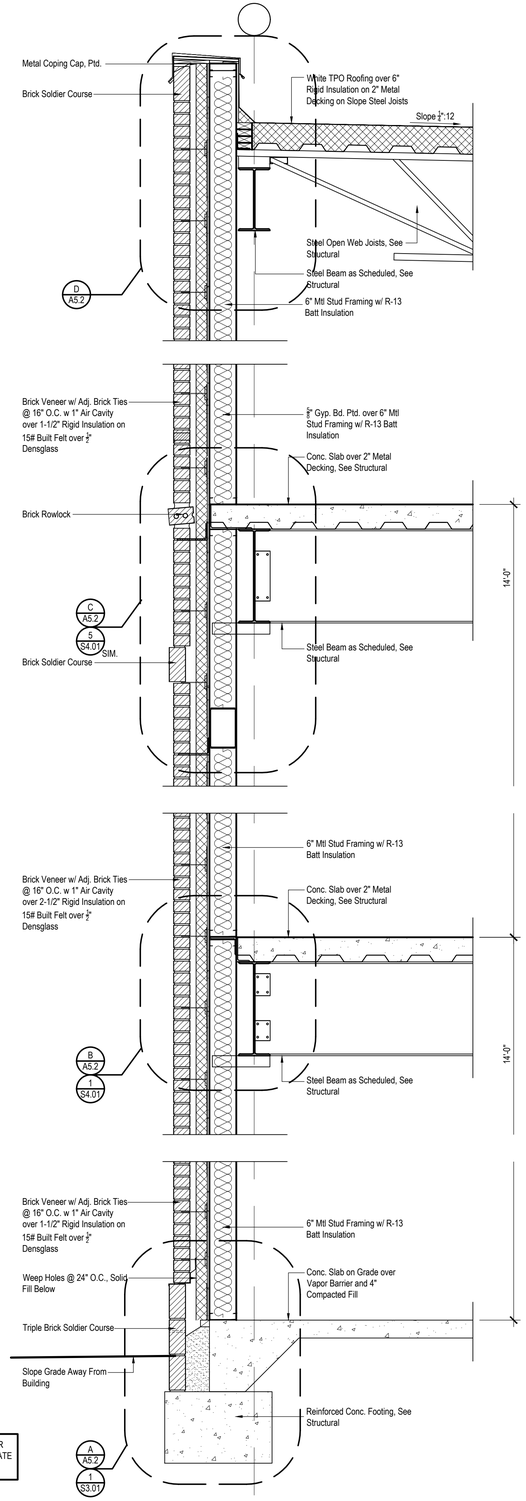
C
3/4"



Typ. Wall Section @ Curtain Wall - Low Side

B
3/4"

ALL EXPOSED STEEL MUST BE PAINTED TO MATCH KYNAR FINISH ON COMPOSITE ALUM. PANEL SYSTEM. COORDINATE FINAL SELECTION W/ ARCHITECT, TYP.



Typ. Wall Section @ Brick Veneer

A
3/4"

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ARCHITECTURE & DESIGN, INC. CORPORATE SEAL 2017 NORTH CAROLINA

DATE: 12.7.2020

PROJECT NO. 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

NO.	REV./SUB.	DATE

SHEET TITLE

Wall Sections

SHEET NUMBER

A4.1

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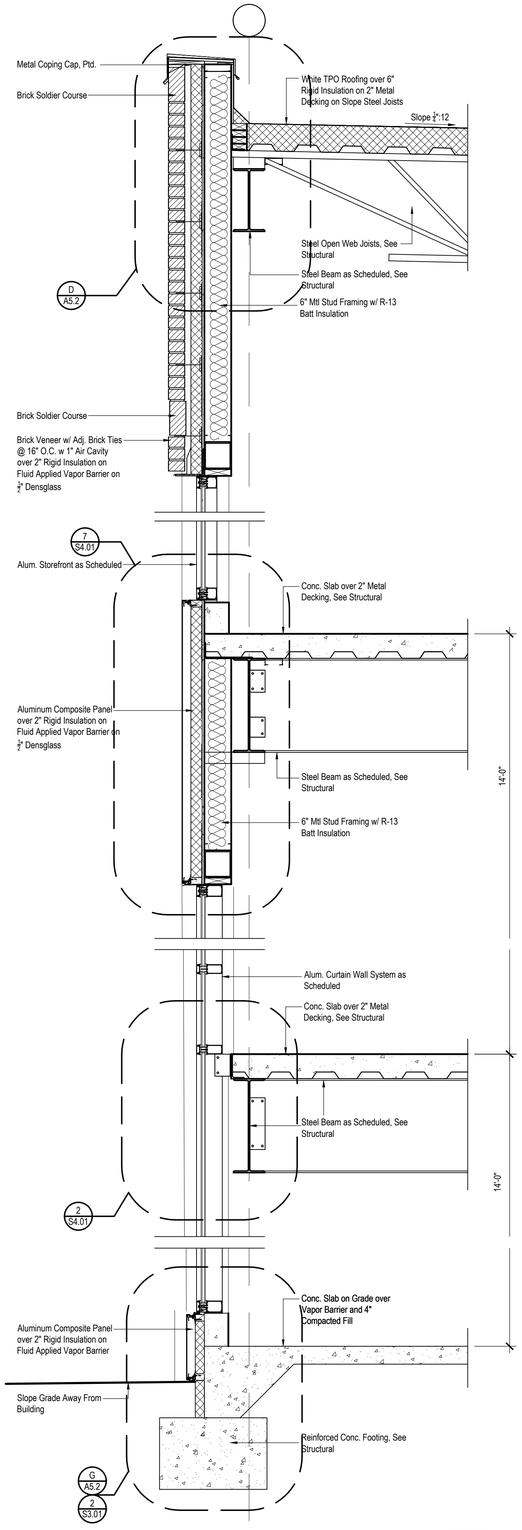
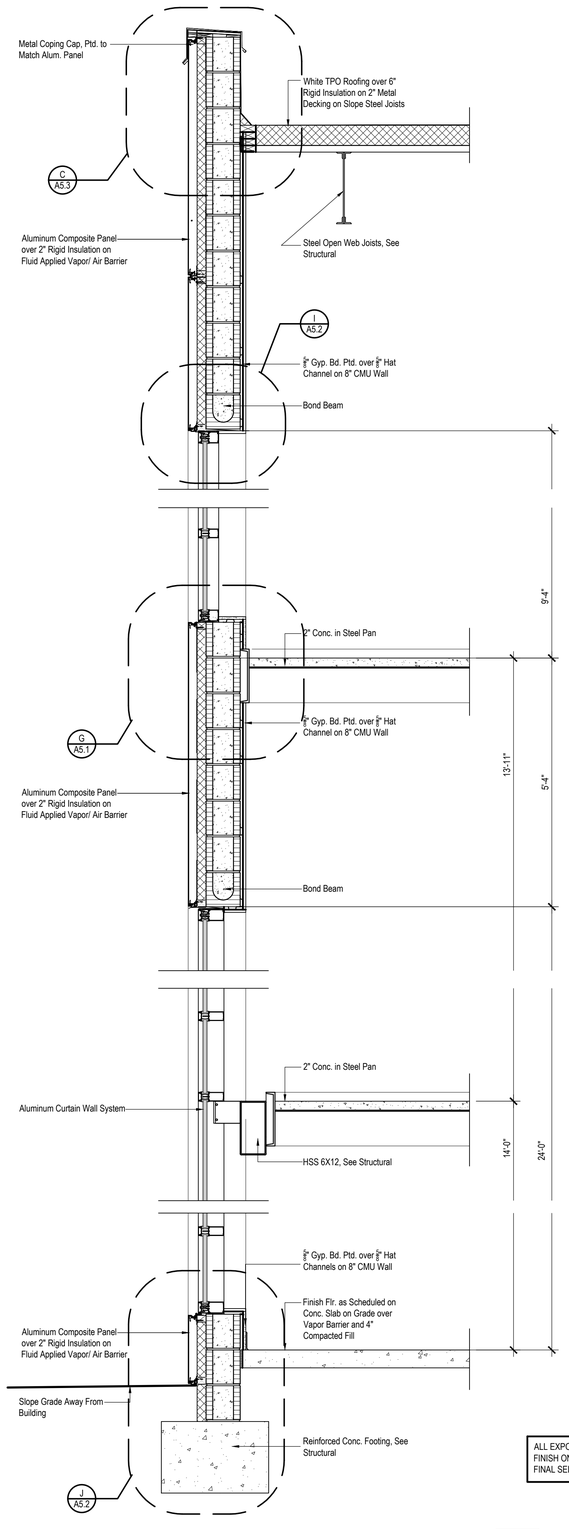


Wall Section @ Stairwell Windows

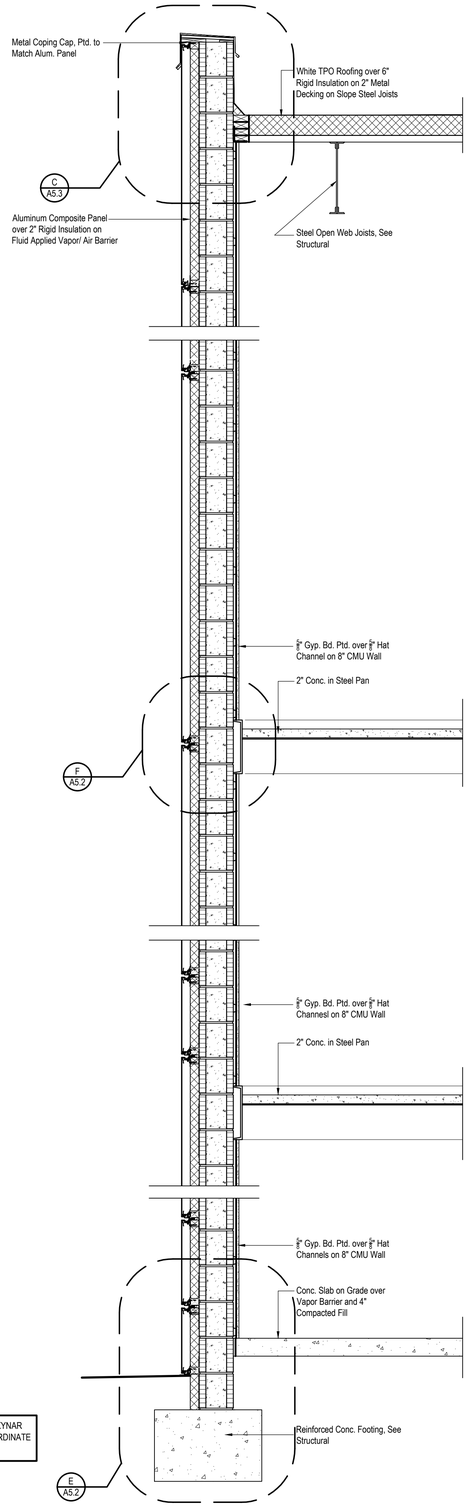
B
3/4"



Wall Section @ Stairwell Windows

B
3/4"

ALL EXPOSED STEEL MUST BE PAINTED TO MATCH KYNAR FINISH ON COMPOSITE ALUM. PANEL SYSTEM. COORDINATE FINAL SELECTION W/ ARCHITECT, TYP.



Wall Section @ Stairwell

A
3/4"

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SMITH SHELL BUILDING
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WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Wall Sections

SHEET NUMBER

A4.2

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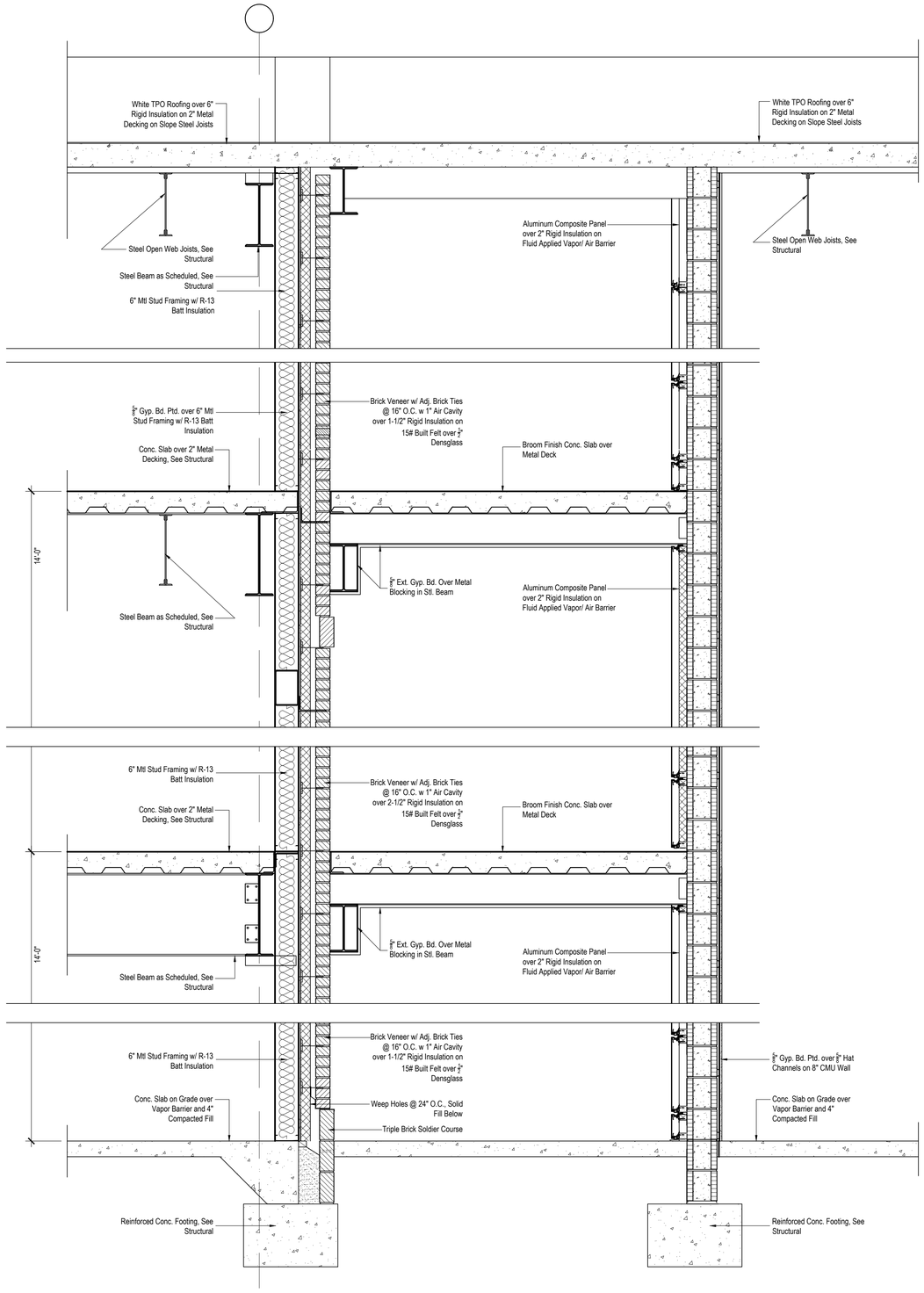

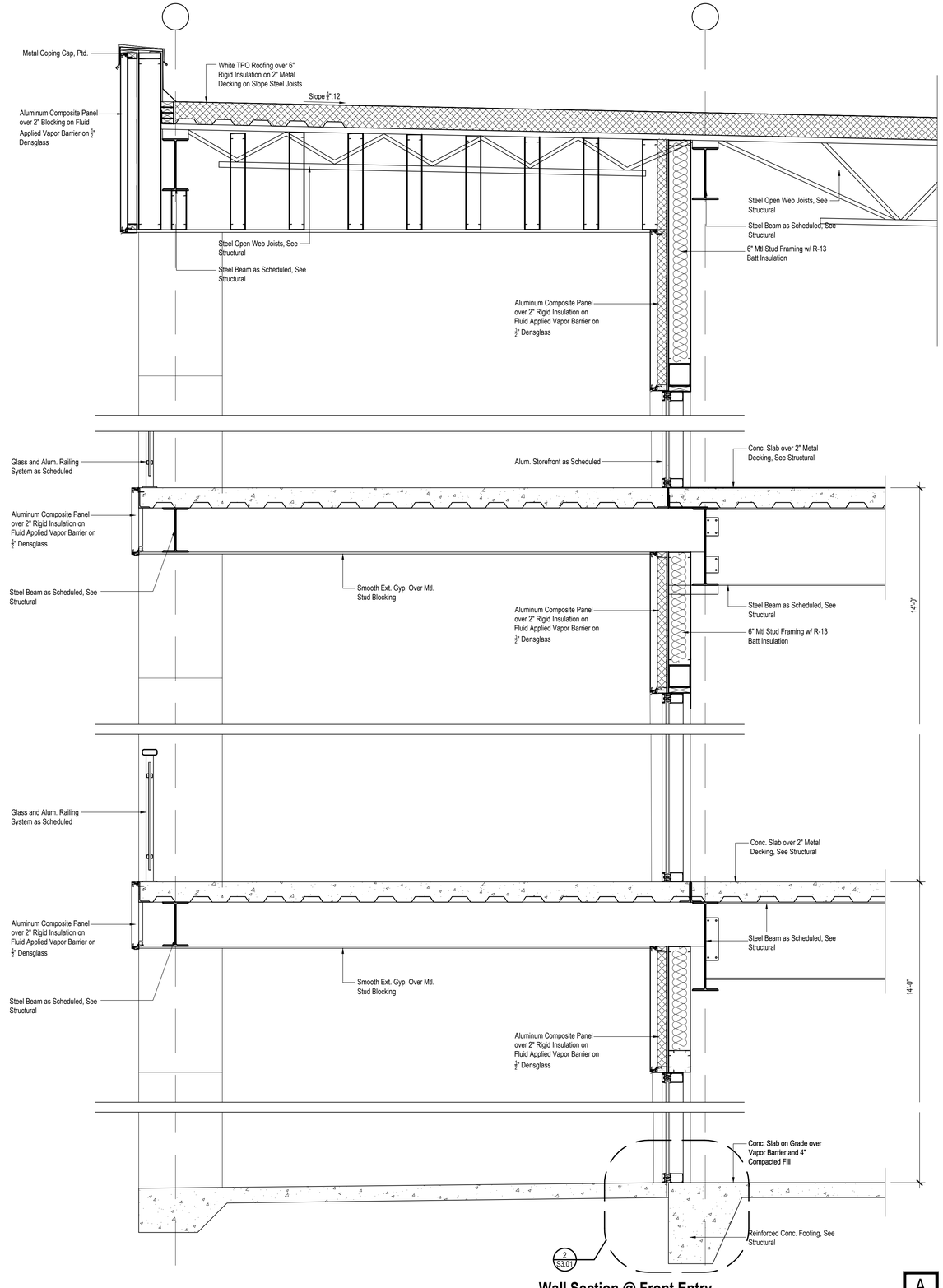

Wall Section @ Front Entry

A
3/4"

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PROJECT NO: 20131

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NO.	REV./SUB.	DATE

SHEET TITLE

Wall Sections

SHEET NUMBER

A4.3

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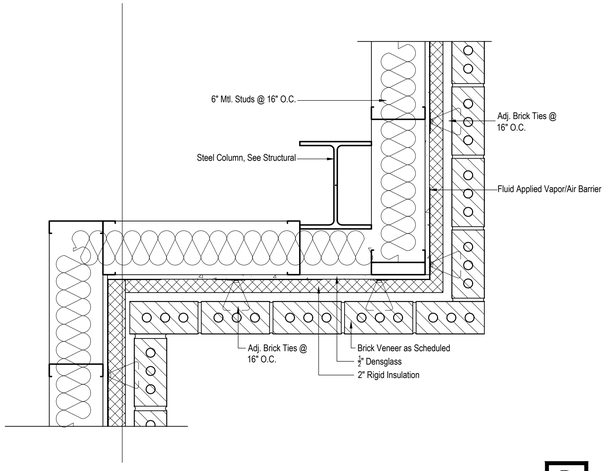
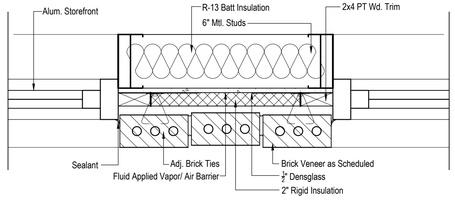


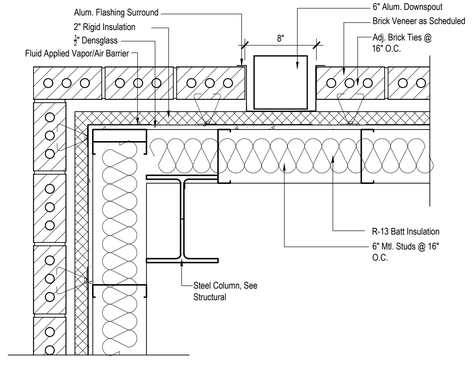
Int. Corner Detail

D
1-1/2"



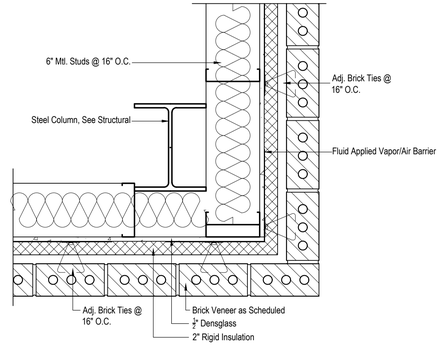
Window Jamb Detail

C
1-1/2"



Downspout Detail

B
1-1/2"



Ext. Corner Detail

A
1-1/2"

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DAVID BRIAN LISLE — REGISTERED ARCHITECT — 7903 — NORTH CAROLINA — WILMINGTON

SEAL

BID

DATE: 12.7.2020

PROJECT NO: 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

NO	REV./SUB.	DATE

SHEET TITLE

Plan Details

SHEET NUMBER

A5.1

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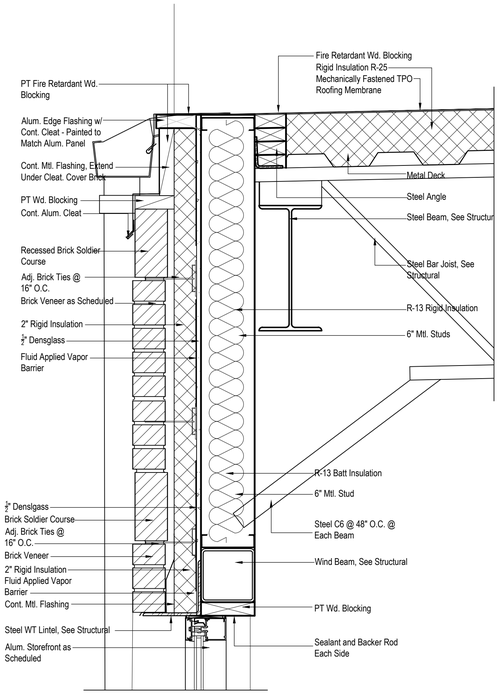
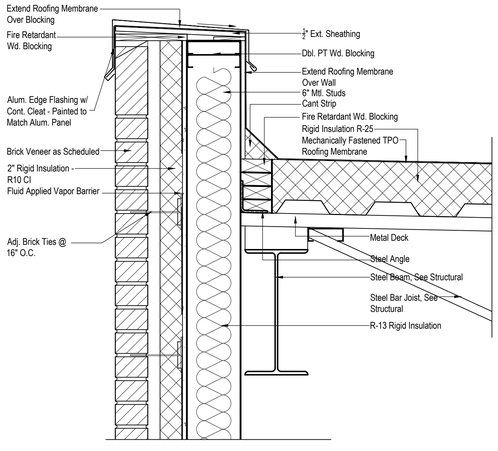


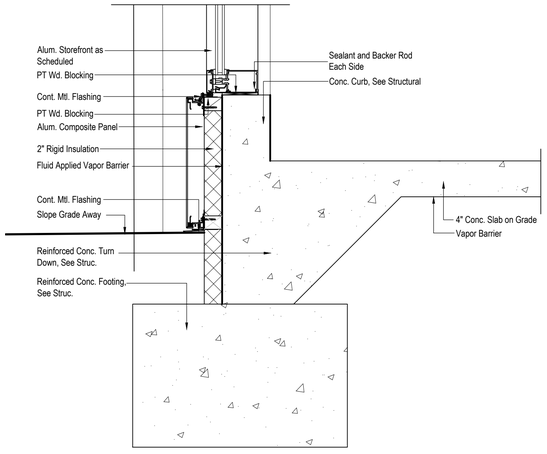
Low Roof Detail

H
1-1/2"



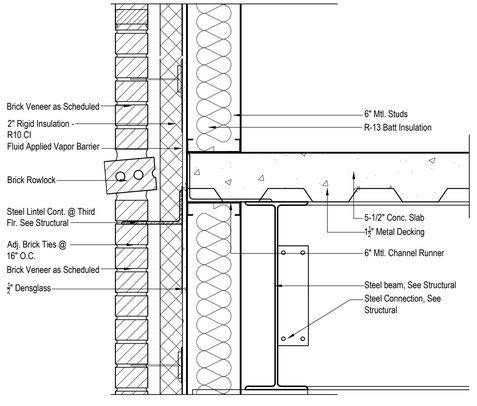
Parapet @ Stud Wall Detail

D
1-1/2"



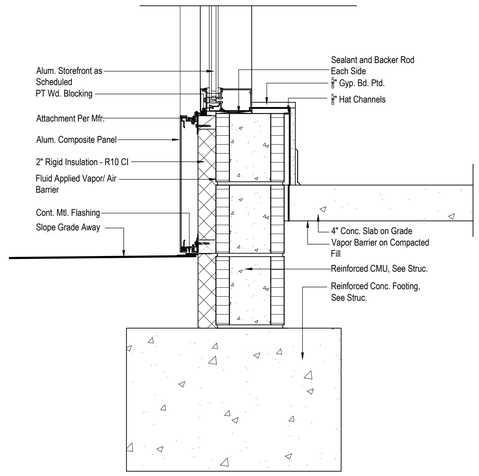
Footing Detail

G
1-1/2"



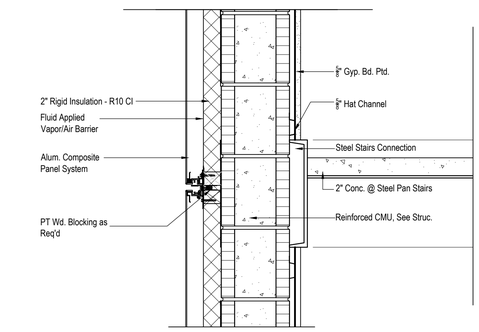
Third Floor Slab Detail

C
1-1/2"



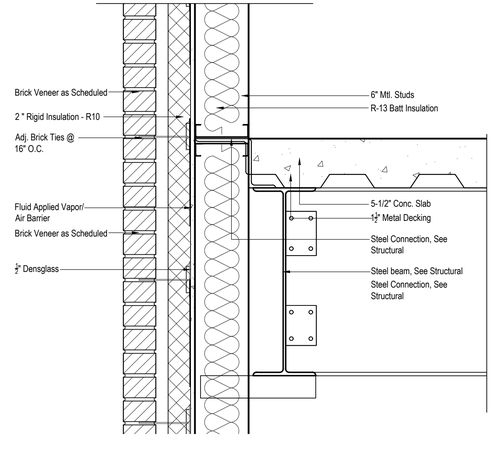
Footing Detail @ CMU

J
1-1/2"



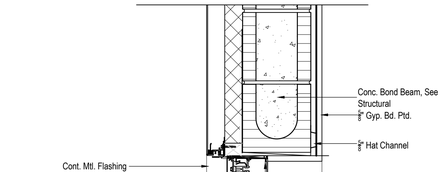
Stair Landing Detail

F
1-1/2"



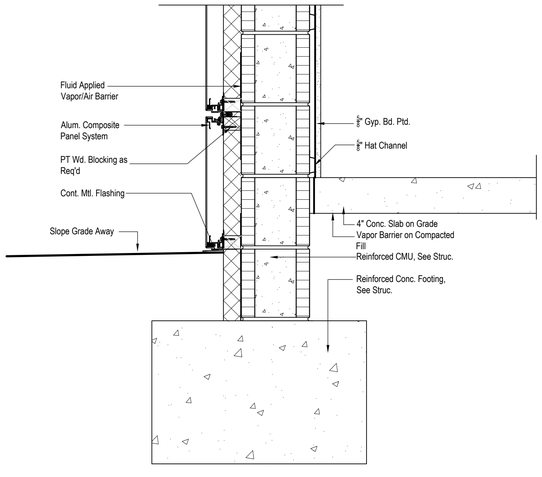
Second Floor Slab Detail

B
1-1/2"



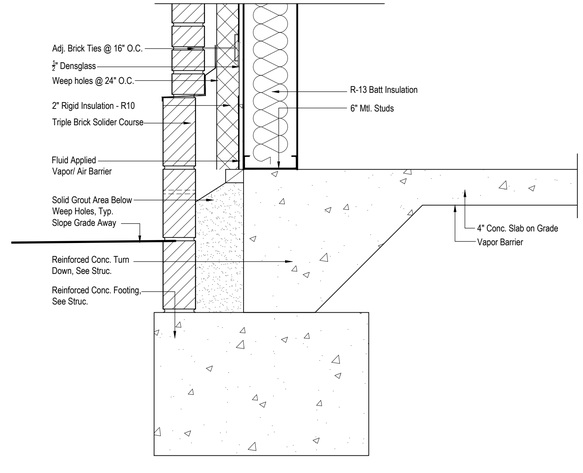
Window Head Detail

I
1-1/2"



Footing Detail

E
1-1/2"



Footing Detail

A
1-1/2"

Lisle Architecture & Design, Inc.

614 Market Street
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5 W. Hargett St. Suite 312
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(919) 980.0283 (o)

www.LisleArchitecture.com

DAVID BRIAN LISLE — REGISTERED ARCHITECT — 7903 — NORTH CAROLINA — WILMINGTON

DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Details

SHEET NUMBER

A5.2

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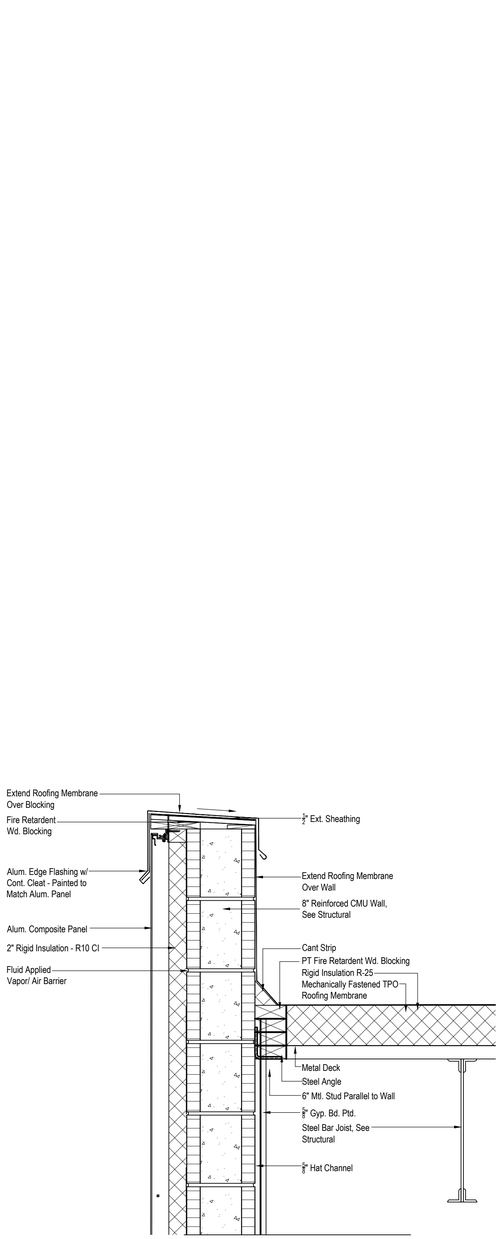
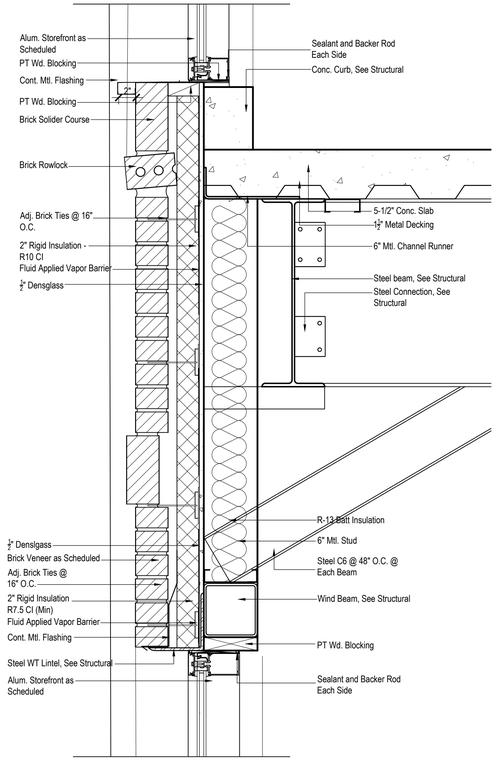


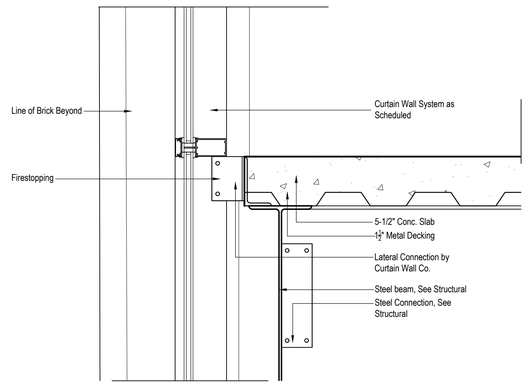
Parapet @ CMU

C
1-1/2"



Window Head/ Sill Detail

B
1-1/2"



Curtain Wall Detail

A
1-1/2"

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DATE: 12.7.2020

PROJECT NO: 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

NO.	REV./SUB.	DATE

SHEET TITLE

Details

SHEET NUMBER

A5.3

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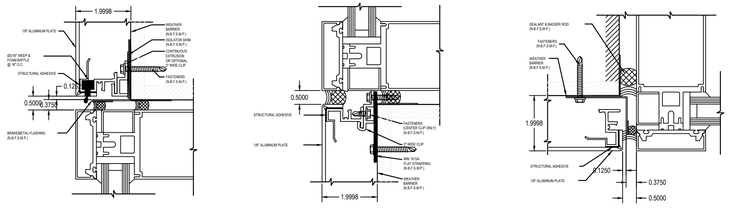

Aluminum Panel Details

E
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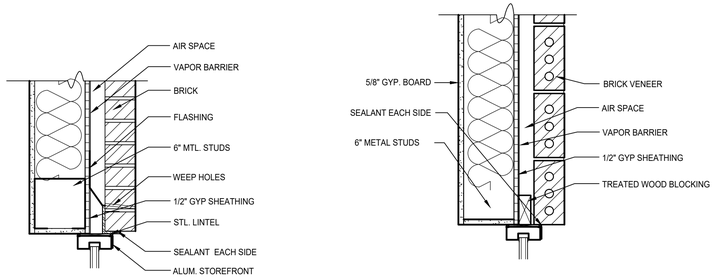
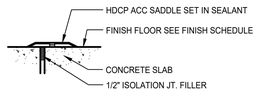


H1 ALUM. WINDOW HEAD

J1 ALUM. WINDOW JAMB

Door Details

D
--



Typ. Ext. Door Threshold

C
--

DOOR SCHEDULE

DOOR	SIZE (WxH)	MATERIAL				HEAD	JAMB	HARDWARE	FIRE RATING	REMARK
		DOOR	ELEV	FRAME	ELEV					
FIRST FLOOR										
100A	(2)3'-0" X 8'-0"	ALUM	1	ALUM				II		DURA-GLIDE 2000 BI-PART
100B	(2)3'-0" X 8'-0"	ALUM	1	ALUM				II		DURA-GLIDE 2000 BI-PART
100C	3'-0" X 8'-0"	ALUM	2	ALUM	A			I	2-HR	
100D	(2)3'-0" X 8'-0"	ALUM	3	ALUM				II		DURA-GLIDE 2000 SINGLE SLIDE
100E	(2)3'-0" X 8'-0"	ALUM	3	ALUM				II		DURA-GLIDE 2000 SINGLE SLIDE
100F	3'-0" X 8'-0"	ALUM	2	ALUM	A			I		
101	3'-0" X 8'-0"	HM	4	HM	B			III		
102	3'-0" X 8'-0"	HM	4	HM	B			III		
SECOND FLOOR										
200A	(2)3'-0" X 8'-0"	ALUM	1	ALUM				II		DURA-GLIDE 2000 BI-PART
200B	(2)3'-0" X 8'-0"	ALUM	1	ALUM				II		DURA-GLIDE 2000 BI-PART
200C	3'-0" X 8'-0"	ALUM	2	ALUM	A			I	2-HR	
200D	(2)3'-0" X 8'-0"	ALUM	3	ALUM				II		DURA-GLIDE 2000 SINGLE SLIDE
200E	(2)3'-0" X 8'-0"	ALUM	3	ALUM				II		DURA-GLIDE 2000 SINGLE SLIDE
200F	3'-0" X 8'-0"	ALUM	2	ALUM	A			I		
THIRD FLOOR										
300A	(2)3'-0" X 8'-0"	ALUM	1	ALUM				II		DURA-GLIDE 2000 BI-PART
300B	(2)3'-0" X 8'-0"	ALUM	1	ALUM				II		DURA-GLIDE 2000 BI-PART
300C	3'-0" X 8'-0"	ALUM	2	ALUM	A			I	2-HR	
300D	(2)3'-0" X 8'-0"	ALUM	3	ALUM				II		DURA-GLIDE 2000 SINGLE SLIDE
300E	(2)3'-0" X 8'-0"	ALUM	3	ALUM				II		DURA-GLIDE 2000 SINGLE SLIDE
300F	3'-0" X 8'-0"	ALUM	2	ALUM	A			I		

HARDWARE GROUPS

HARDWARE GROUP I

3 EA. HINGES	TA386	MCKINNEY	FINISH: T.B.D.
1 RIM EXIT DEVICE	2100	PRECISION	FINISH: T.B.D.
1 RIM EXIST DEVICE TRIM	3900K	PRECISION	FINISH: T.B.D.
1 CYLINDER	1E74	BEST	FINISH: T.B.D.
1 CLOSER	D3550	RYOBI	FINISH: T.B.D.
1 PERIMETER SEAL	160V	NATIONAL GUARD	FINISH: T.B.D.
1 DRIP CAP	17	NATIONAL GUARD	FINISH: T.B.D.
1 THRESHOLD	427V	NATIONAL GUARD	FINISH: T.B.D.
1 DOOR SWEEP	97V	NATIONAL GUARD	FINISH: T.B.D.

HARDWARE GROUP II
HARDWARE SUPPLIED BY SLIDING DOOR MFR.

HARDWARE GROUP III

3 EA. HINGES	TA386	MCKINNEY	FINISH: T.B.D.
1 CYLINDER	1E74	BEST	FINISH: T.B.D.
1 CLOSER	D3550	RYOBI	FINISH: T.B.D.
1 PERIMETER SEAL	160V	NATIONAL GUARD	FINISH: T.B.D.
1 DRIP CAP	17	NATIONAL GUARD	FINISH: T.B.D.
1 THRESHOLD	427V	NATIONAL GUARD	FINISH: T.B.D.
1 DOOR SWEEP	97V	NATIONAL GUARD	FINISH: T.B.D.

NOTES

1. ALL EXTERIOR HOLLOW METAL TO BE GALVANIZED, 16 ga. DOORS, 14 ga. FRAMES
2. ALL INTERIOR HOLLOW METAL TO BE COLD ROLLED STEEL, PRIMED, 18 ga. DOORS, 16 ga. FRAMES
3. SOLID CORE WOOD DOORS TO BE SLICED WHITE BIRCH, FACTORY PREFINISHED STAIN WITH LIFETIME WARRANTY
4. ALL DOORS AND FRAMES TO BE PROPERLY PREPPED AND REINFORCED FOR ALL HARDWARE PRIOR TO SHIPMENT TO JOBSITE

GLASS SCHEDULE & LEGEND

1. ALL INTERIOR GLASS TO BE 1/4" CLEAR, WHERE APPLICABLE.
2. ALL EXTERIOR GLASS TO BE 1" INSULATED CLEAR GLASS, LOW E, U = 0.35, COEFFICIENT = 0.25. UNLESS OTHERWISE NOTED
3. USE TEMPERED GLASS IN ALL DOORS AND WINDOWS LOCATED WITHIN 24 INCHES OF A DOOR.
4. USE TEMPERED GLASS WHERE EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
5. ALL DOOR AND WINDOW ASSEMBLIES LOCATED IN 1 HR. RATED WALL SHALL BE 45 MIN. RATED ASSEMBLIES
6. ALL DOOR AND WINDOW ASSEMBLIES LOCATED IN 2 HR. RATED WALL SHALL BE 1 1/2 HR. RATED ASSEMBLIES

T = TEMPERED GLASS

Door Schedule

B
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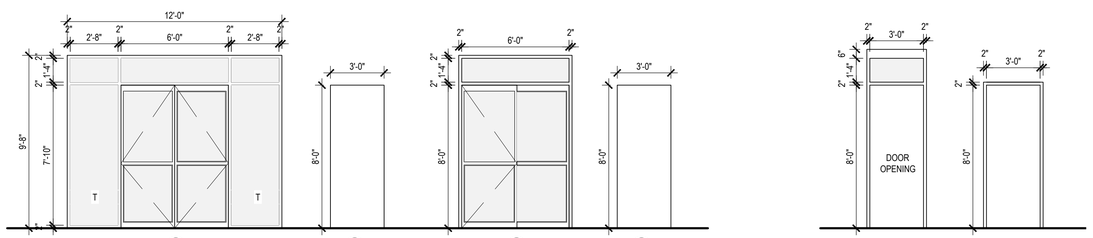

1 FULL GLASS ALUMINUM SLIDING STOREFRONT W/ TRANSOM - DURA-GLIDE 2000

2 2-HR HOLLOW METAL DOOR - PAINTED

3 FULL GLASS ALUMINUM SLIDING STOREFRONT W/ TRANSOM - DURA-GLIDE 2000

4 HOLLOW METAL EXTERIOR DOOR - PAINTED

A ALUMINUM STOREFRONT

B HOLLOW METAL FRAME - PAINTED

Door/ Frame Elevations

A
--

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DATE: 12.7.2020

PROJECT NO: 20131

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WILMINGTON, NC 28405

NO.	REV./SUB.	DATE

SHEET TITLE

Door Schedule and Elevations

SHEET NUMBER

A8.1

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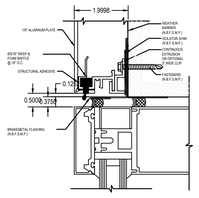
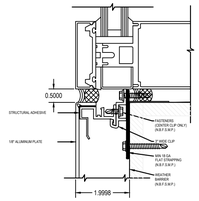


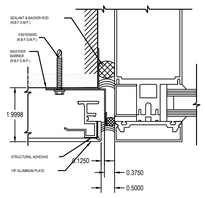
H1

ALUM. WINDOW HEAD



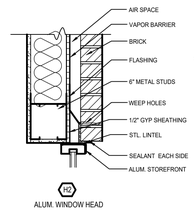
S1

ALUM. WINDOW HEAD



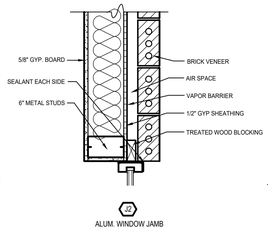
J1

ALUM. WINDOW HEAD



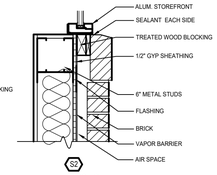
H2

ALUM. WINDOW HEAD



J2

ALUM. WINDOW JAMB



S2

ALUM. WINDOW SILL

WINDOW SCHEDULE

ITEM	SIZE (WxH)	MANUF.	COLOR	MATERIAL		SHGC	OPERATION	U-VALUE	REMARK
				GLASS	FRAME				
A	3'-4" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
B	7'-3" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
C	14'-3" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
D	7'-3" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
E	3'-4" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
F	6'-6" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
G	19'-2" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
H	21'-2" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
I	49'-4" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
J	38'-10" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
K	10'-8" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
L	10'-8" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
M	63'-4" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
N	49'-4" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
O	38'-10" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
P	14'-3" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
Q	19'-2" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
R	21'-2" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
S	63'-4" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
T	24'-10" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T
U	24'-10" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
V	31'-10" x 23'-4"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	CURTAIN WALL	.35 MIN	1620 UT - 7 1/2"
W	31'-10" x 8'-8"	KAWNEER	CLEAR ANOD.	LOW-E	ALUM	0.25	FIXED	.35 MIN	TRI-FAB 451T

GLASS SCHEDULE & LEGEND

1. ALL INTERIOR GLASS TO BE 1/4" CLEAR, WHERE APPLICABLE - FROSTED AS NOTED IN DOOR SCHEDULE.
2. ALL EXTERIOR GLASS TO BE 1" INSULATED CLEAR GLASS, LOW E, U = 0.35, SHGC COEFFICIENT = 0.25. UNLESS OTHERWISE NOTED - MUST COMPLY WITH TABLE 502.3 OF THE NC ENERGY CODE
3. USE TEMPERED GLASS IN ALL DOORS AND WINDOWS LOCATED WITHIN 24 INCHES OF A DOOR.
4. USE TEMPERED GLASS WHERE EXPOSED BOTTOM EDGE LESS THAN 18 INCHES ABOVE THE FLOOR.
5. ALL DOOR AND WINDOW ASSEMBLIES LOCATED IN 1 HR. RATED WALL SHALL BE 45 MIN. RATED ASSEMBLIES
6. ALL DOOR AND WINDOW ASSEMBLIES LOCATED IN 2 HR. RATED WALL SHALL BE 1 1/2 HR. RATED ASSEMBLIES

T = TEMPERED GLASS

Window Schedule

B

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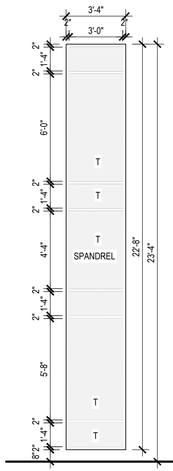
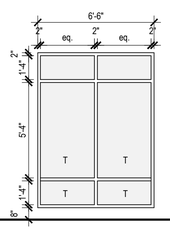


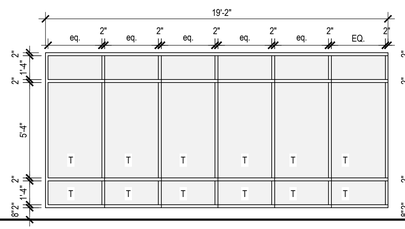
E

ALUMINUM CURTAIN WALL SYSTEM KAWNEER 1620UT - 7-1/2" DEPTH - CLEAR ANODIZED



F

ALUMINUM STOREFRONT WINDOW KAWNEER TRIFAB 451 - CLEAR ANODIZED



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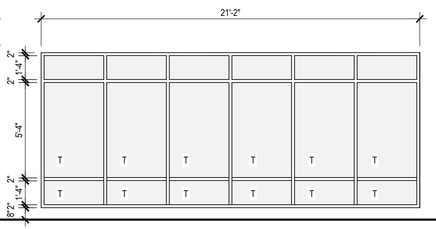

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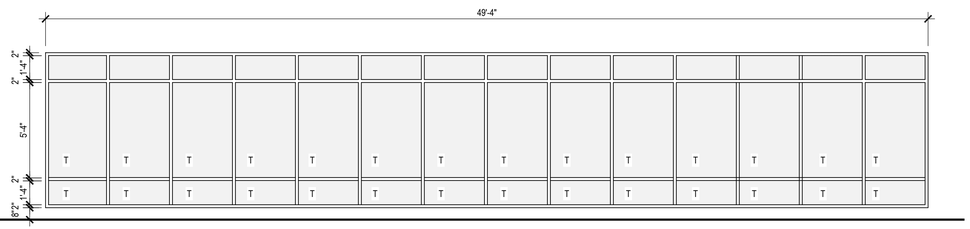

I

ALUMINUM STOREFRONT WINDOW KAWNEER TRIFAB 451 - CLEAR ANODIZED

Window Details

C

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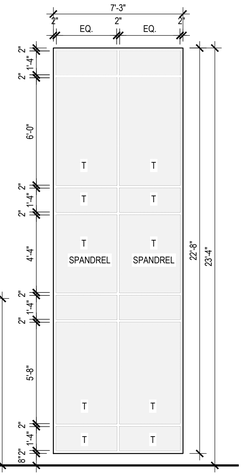

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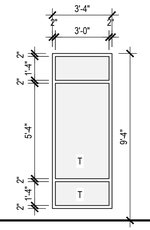
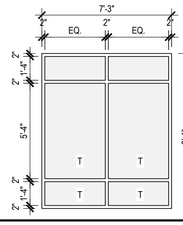


A

ALUMINUM STOREFRONT WINDOW KAWNEER TRIFAB 451 - CLEAR ANODIZED



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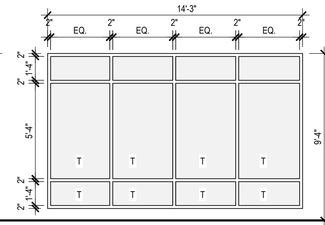

C

ALUMINUM STOREFRONT WINDOW KAWNEER TRIFAB 451 - CLEAR ANODIZED

Window Elevations

A

1/8"

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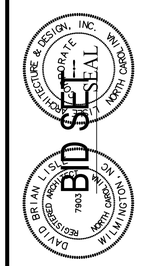


DATE: 12.7.2020

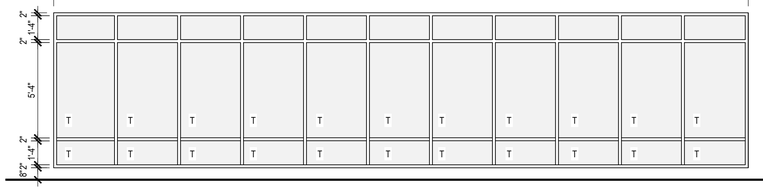
SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

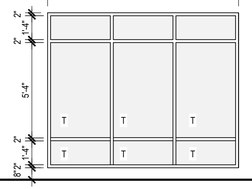
SHEET TITLE
Exterior Window Elevations/ Schedule

SHEET NUMBER
A8.2



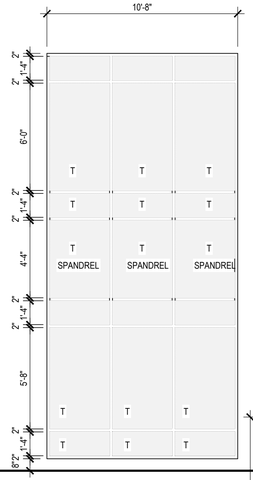
J

ALUMINUM STOREFRONT
WINDOW
KAWNEER TRIFAB 451 - CLEAR
ANODIZED



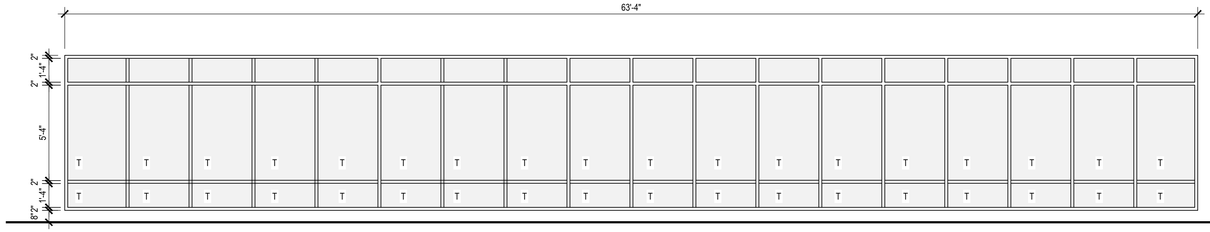
K

ALUMINUM STOREFRONT
WINDOW
KAWNEER TRIFAB 451 - CLEAR
ANODIZED



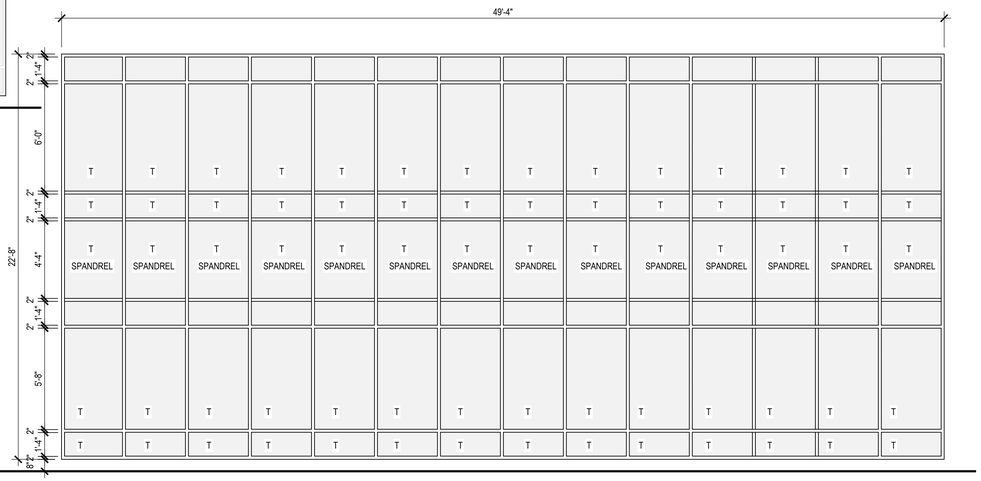
L

ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED



M

ALUMINUM STOREFRONT
WINDOW
KAWNEER TRIFAB 451 - CLEAR
ANODIZED



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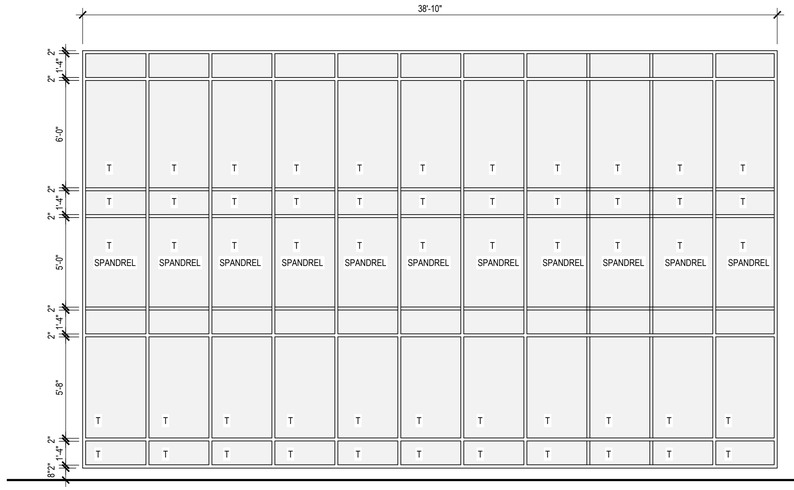
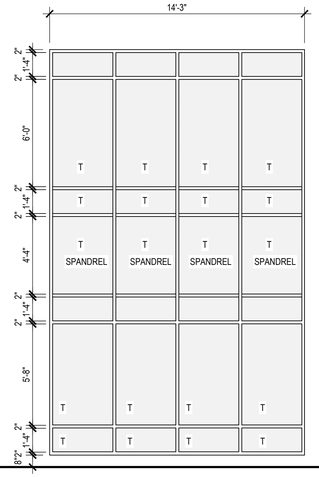
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED



O

ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED



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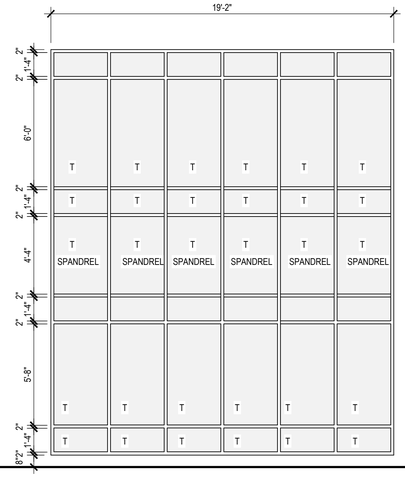
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED



Q

ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED

Window Elevations

A
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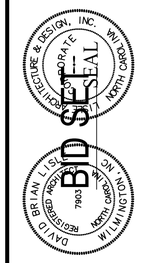


DATE: 12.7.2020

PROJECT NO. 20131

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

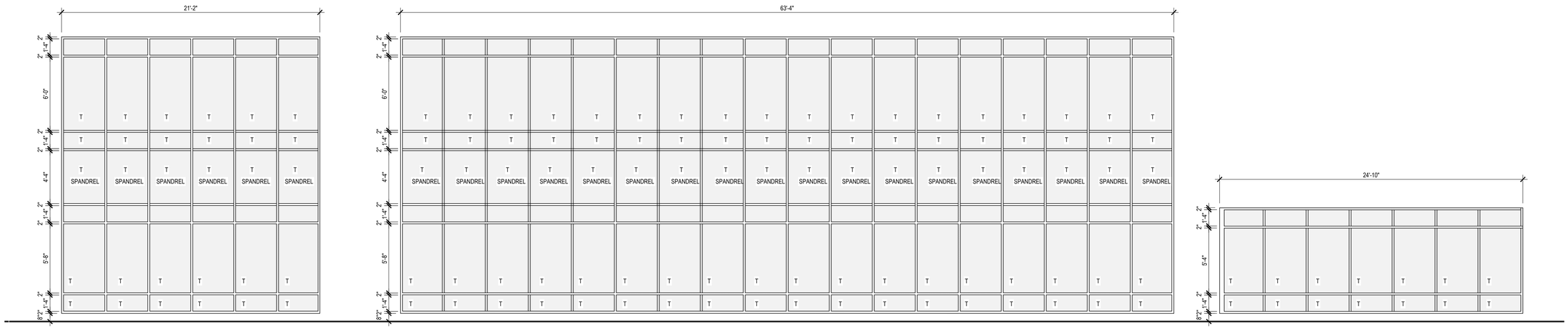
NO.	REV./SUB.	DATE

SHEET TITLE

Exterior
Window
Elevations

SHEET NUMBER

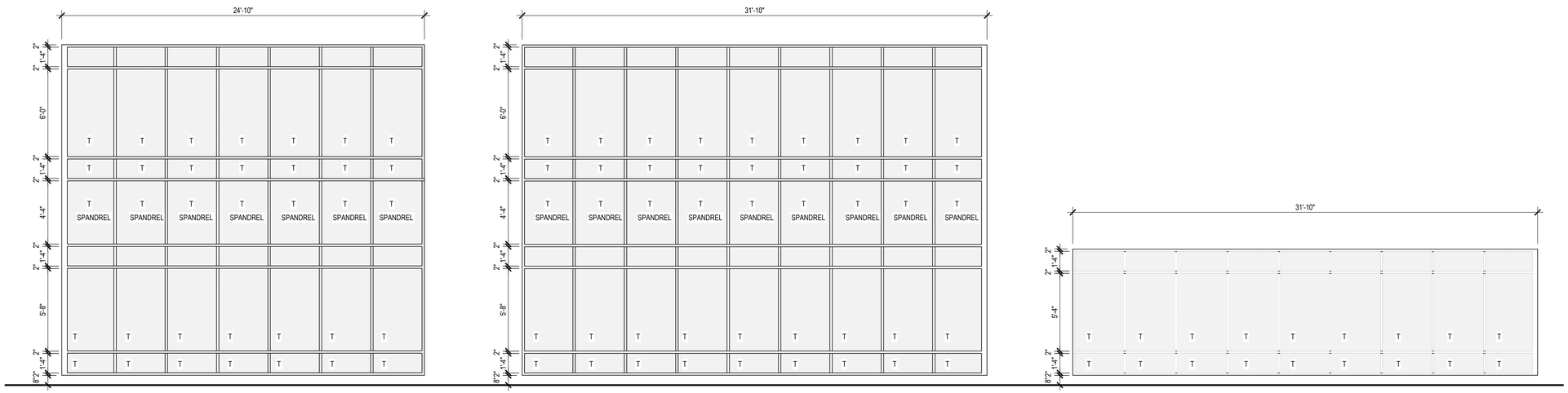
A8.3



R
ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED

S
ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED

T
ALUMINUM STOREFRONT
WINDOW
KAWNEER TRIFAB 451 - CLEAR
ANODIZED



U
ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED

V
ALUMINUM CURTAIN WALL SYSTEM
KAWNEER 1620UT - 7-1/2" DEPTH -
CLEAR ANODIZED

W
ALUMINUM STOREFRONT
WINDOW
KAWNEER TRIFAB 451 - CLEAR
ANODIZED

Window Elevations

A
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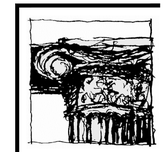

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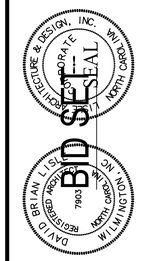

DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Exterior Window Elevations

SHEET NUMBER

A8.4

UL Product **iQ**™

BXUV.U905

Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
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BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U905

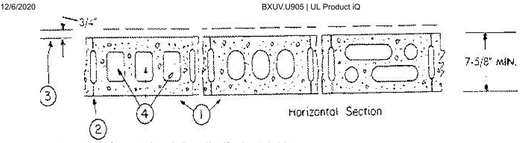
November 09, 2020

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**



1. **Concrete Blocks* —** Various designs. Classification D-2 (2 hr).
See **Concrete Blocks** category for list of eligible manufacturers.

2. **Mortar —** Blocks laid in full bed of mortar, nom. 3/8 in. thick, of not less than 2-1/4 and not more than 3-1/2 parts of clean sharp sand to 1 part Portland cement (proportioned by volume) and not more than 50 percent hydrated lime (by cement volume). Vertical joints staggered.

3. **Portland Cement Stucco or Gypsum Plaster —** Add 1/2 hr to classification if used. Where combustible members are framed in wall, plaster or stucco must be applied on the face opposite framing to achieve a max. Classification of 1-1/2 hr. Attached to concrete blocks (Item 1).

4. **Loose Masonry Fill —** If all core spaces are filled with loose dry expanded slag, expanded clay or shale (Rotary Kiln Process), water repellant vermiculite masonry fill insulation, or silicone treated perlite loose fill insulation add 2 hr to classification.

5. **Foamed Plastic* —** (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).
ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation", "EnergyShield Pro 2 Wall Insulation", EnergyShield CGF Pro and EnergyShield Ply Pro

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ SHEATHE

DUPONT DE NEMOURS, INC. — Types Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax XARMOR ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP), TUFF-R™ ci Insulation, Thermax Butler Stylwall Insulation Board and Thermax Morton Heavy Duty Insulation Board

FIRESTONE BUILDING PRODUCTS CO L L C — "Enverge™ CI Foil Exterior Wall Insulation" and "Enverge™ CI Glass Exterior Wall Insulation"

HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — Types "Xci-Class A", "Xci Foil (Class A)", "Xci 286"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — Types "TSX-8500", "ECOMAXci FR", "TSX-8510", "ECOMAX xi FR White", "ECOMAXci", "ECOMAXci FR Air Barrier", "Thermasheath-XP", "Thermasheath", "Durasheath", "Thermasheath-3", "Durasheath-3".

JOHNS MANVILLE — Type "AP Foil-Faced Foam Sheathing"

5A. **Building Units* —** As an alternate to Items 5, min. 1-in thick polyisocyanurate composite foamed plastic insulation boards, nom. 48 by 48 or 96 in.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Ply"

RMAX, A BUSINESS UNIT OF SIKA CORPORATION — "Thermasheath-SI", "ECOBASEci", "ThermaBase-CI", "ECOMAXci FR Ply", "ECOMAXci Ply".

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

Last Updated on 2020-11-09

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U905 - Elevator Shaft

A
NTS

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Not For Construction

DATE: 03.02.2020

LAMAR RESIDENCE
WILMINGTON, NC

PROJECT NO:

NO.	REV./SUB.	DATE

SHEET TITLE

UL Listings

SHEET NUMBER

CD2

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UL Product **iQ**™

BXUV.U415

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- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
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- Only products which bear UL's Mark are considered Certified.

BXUV - Fire Resistance Ratings - ANSI/UL 263 Certified for United States

BXUV7 - Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada

See General Information for Fire-resistance Ratings - ANSI/UL 263 Certified for United States
Design Criteria and Allowable Variances

See General Information for Fire Resistance Ratings - CAN/ULC-S101 Certified for Canada
Design Criteria and Allowable Variances

Design No. U415

August 05, 2020

Nonbearing Wall Ratings — 1, 2, 3 or 4 Hr

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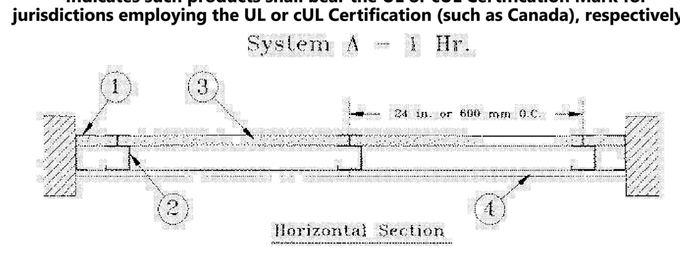

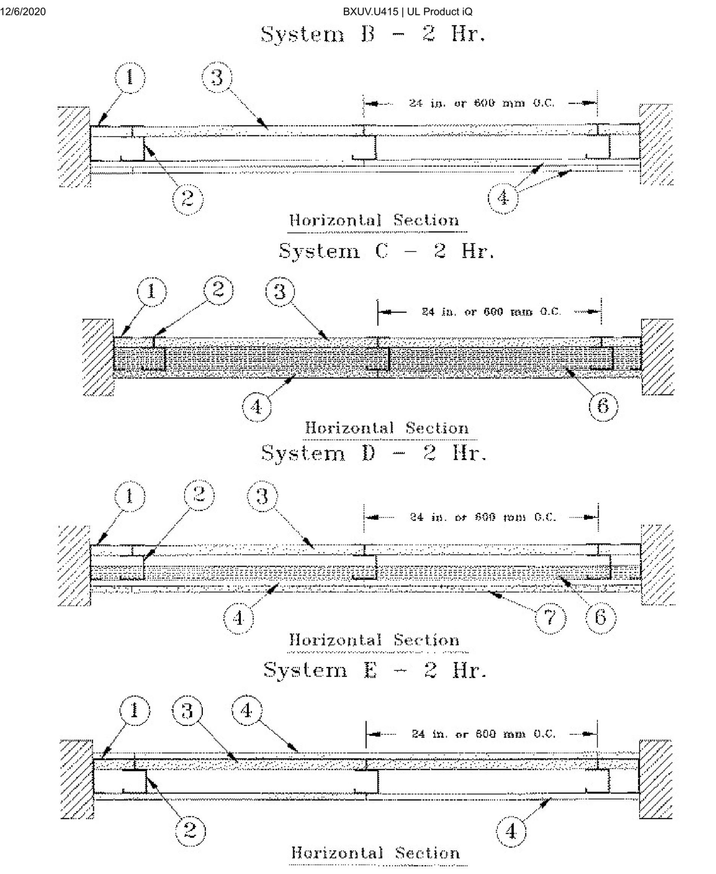

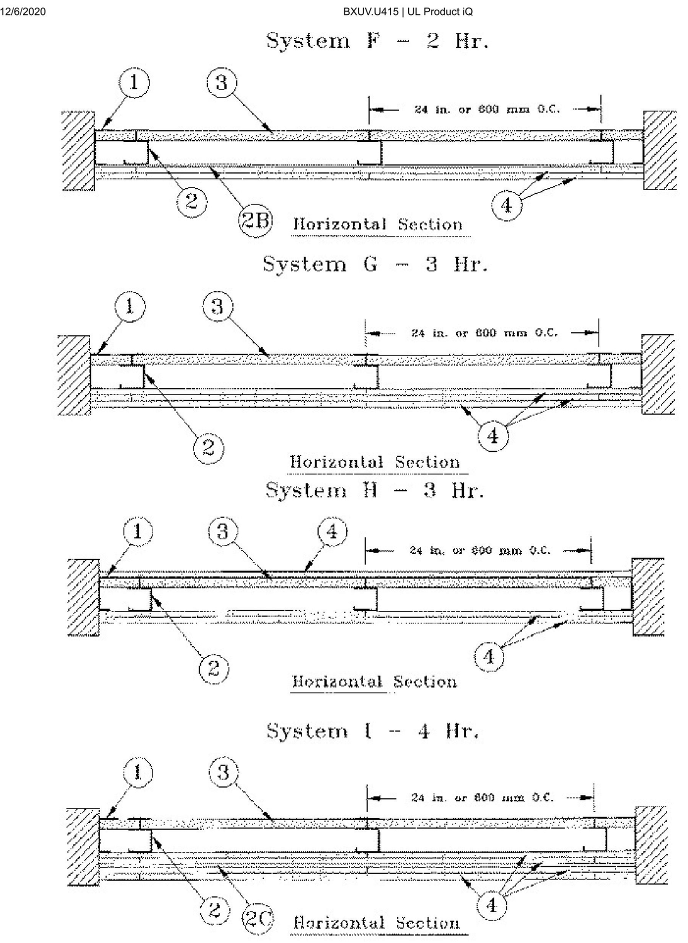

1. **Floor, Side and Ceiling Runners —** "J" - shaped runner, min 2-1/2 in. deep (min 4 in. deep when System C is used), with unequal legs of 1 in. and 2 in., fabricated from min 24 MSG (min 20 MSG when Item 4A, 4B, 4C, 4D or 7 are used) galv steel.

Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC. "E" - shaped studs (Item 2A) may be used as side runners in place of "J" - shaped runners.

2. **Steel Studs —** "C-H" - shaped studs, min 2-1/2 in. deep (min 4 in. deep when System C is used), fabricated from min 25 MSG (min 20 MSG when Items 2D, 4A, 4B, 4C, 4D or 7 is used) galv steel. Cut to lengths 3/8 to 1/2 in. less than floor-to-ceiling height and spaced 24 in. or 600 mm OC (max 16 in. OC when Items 4A, 4B, 4C, or 4D are used).

2A. **Steel Studs —** (Not Shown) — "E" - shaped studs installed back to back in place of "C-H" - shaped studs (Item 2) "E" - shaped studs secured together with steel screws spaced a maximum 12 in. OC. Fabricated from min 25 MSG (min 20 MSG when Item 2D, 4A, 4B or 7 is used) galv steel, min 2-1/2 in. deep (min 4 in. deep when System C is used), with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 to 1/2 in. less than floor to ceiling heights.

2B. **Furring Channels —** (Optional, Not Shown) — For use with single or double layer systems. Resilient furring channels fabricated from min 25MSG corrosion protected steel, installed horizontally, and spaced vertically a max 24 in. OC. Flange portion of channel attached to each intersecting "C-H" or "E" stud on side of stud opposite the 1 in. liner panels with 1/2 in. long Type S or S-12 pan-head steel screws. When furring channels are used, wallboard to be installed vertically only. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

2C. **Furring Channels —** For use with System I - "Hat" - shaped, 25 MSG galv steel furring channels attached directly over the inner layers of wallboard to each stud with 2 in. long Type S pan head steel screws. Screws alternate from top flange to bottom flange at each stud intersection. Furring channels spaced vertically max 24 in. OC.

2D. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

2E. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. . Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire.Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ea) to studs. Clips spaced 24 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

2F. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC. GENIECLIPS secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
PLITEQ INC — Type GENIECLIP

2G. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Gb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ga) to studs. Clips spaced 24 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

2H. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 2Ha) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

2I. **Steel Framing Members* —** (Optional, Not Shown) — For use with single or double layer systems. Furring channels and Steel Framing Members as described below. Not to be used with Type FRX-G gypsum board, lead backed gypsum boards (Items 4A-4D), or cementitious backer units (Item 7).

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. or 1-1/2 in. deep, spaced max. 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Gypsum board installed vertically only and attached to furring channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ia) to studs (Item 2 or 2A). Clips spaced max. 24 in. OC., and secured to studs with No. 8 x 1-1/2 in. minimum self-drilling, S-12 steel screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

3. **Gypsum Board* —** Gypsum liner panels, nom 1 in. thick, 24 in. or 600 mm (for metric spacing) wide. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" portion of "C-H" studs or the gap between the two 3/4 in. legs of the "E" studs. Free edge of end panels attached to long leg of vertical "J" - runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC. When wall height exceeds liner panel length, liner panel may be butted to extend to

the full height of the wall. Horizontal joints need not be backed by steel framing. In System I, butt joints in liner panels are staggered min 36 in. Butt joints backed with 6 in. by 22 in. strips of 3/4 in. thick gypsum wallboard (Item 4). Wallboard strips centered over butt joints and secured to liner panels with six 1-1/2 in. long Type G steel screws, three screws along the 22 in. dimension at the top and bottom of the strips.
CGC INC — Type SLX

UNITED STATES GYPSUM CO — Type SLX

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX

4. **Gypsum Board* —**

System A — 1 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. when installed vertically or 8 in OC when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, WRC, WRX, USGX. When ULIX is used insulation, Item 6, **Batts and Blankets*** is required and minimum stud depth is 4 in.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System B — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR, or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System C — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, secured with 1-1/4 in. long Type S steel screws spaced 8 in. OC along vertical edges and 12 in. OC in the field when installed vertically or 8 in. OC along the vertical edges and in the field when installed horizontally. Horizontal joints need not be backed by steel framing. Screws along side joints offset 4 in. Requires min 4 in. deep framing per Items 1, 2 and 3. Requires min 3 in. thick mineral wool batts per Item 6.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

System D — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached directly to studs with 1 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Horizontal joints need not be backed by steel framing. Requires face layer of 1/2 or 5/8 in. thick cementitious backer units per Item 7 and min 1-1/2 in. thick mineral wool batts per Item 6.

CGC INC — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System E — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, attached to studs with 1 in. long Type S steel screws spaced 12 in. OC when installed vertically or 8 in. when installed horizontally. Horizontal joints need not be backed by steel framing.

CGC INC — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX, SGX, USGX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System F — 2 Hr

Gypsum panels, with beveled, square or tapered edges, nom 1/2 in. or 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically in two layers. Inner or base layer attached to resilient furring channels (Item 2B) with 1 in. long Type S steel screws spaced 24 in. OC. Outer or face layer attached to resilient furring channels (Item 2B) with 1-5/8 in. long Type S steel screws spaced 12 in. OC and staggered 12 in. from base layer screws. Joints between inner and outer layers staggered 24 in.

CGC INC — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Types C and SCX

UNITED STATES GYPSUM CO — 1/2 in. Type C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, FRX-G, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SGX, SHX, ULIX, ULX, USGX, WRC, WRX.

USG BORAL DRYWALL SFZ LLC — 1/2 in. Type C; 5/8 in. Types C, SCX

USG MEXICO S A DE C V — 1/2 in. Types C, IP-X2, IPC-AR or WRC; 5/8 in. Types AR, C, IP-AR, IP-X1, IP-X2, IPC-AR, SCX, SHX, ULX, USGX, WRC, WRX

System G — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally in three layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in OC when installed horizontally. Middle layer attached to studs with 1-5/8 in. long Type S steel screws spaced 24 in. when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 2-1/4 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. . Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System H — 3 Hr

Gypsum panels, with beveled, square or tapered edges, nom 5/8 in. thick, 48 in. or 1200 mm wide, applied vertically or horizontally, two layers over the flange of the "C" section of the studs, one layer over the flange of the "H" section of the studs. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Face layer attached to studs with 1-5/8 in. long Type S steel screws spaced 16 in. when installed vertically or 12 in. OC when installed horizontally. Screws offset 6 in. from layer below. Horizontal joints on adjacent layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. on adjacent layers.

CGC INC — Types C, IP-X2, IPC-AR, WRC

THE SIAM GYPSUM INDUSTRY (SONGKHLA) CO — Type C

UNITED STATES GYPSUM CO — Types C, IP-X2, IPC-AR, WRC

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Types C, IP-X2, IPC-AR, WRC

System I — 4 Hr

Gypsum panels, with beveled, square or tapered edges, nom 3/4 in. thick, 4 ft wide (or 1200 mm for metric spacing) wallboard with square or tapered edges. Total of four layers to be used. First and second (inner) layers applied vertically or horizontally over the steel studs. Horizontal joints need not be backed by steel framing. When applied vertically, joints centered over studs and staggered min 24 in., otherwise all joints staggered min 12 in. First layer secured to studs with 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 24 in. OC. Second layer secured to studs with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Third layer applied vertically over the furring channels (Item 2C) with a 1-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. Fourth layer applied vertically or horizontally with 2-1/4 in. long Type S self-drilling, self-tapping bugle-head steel screws spaced 12 in. OC. When applied vertically, joints to be staggered min 24 in. from third layer, otherwise all joints staggered min 12 in.

CGC INC — Types IP-X3 or ULTRACODE

UNITED STATES GYPSUM CO — Types IP-X3 or ULTRACODE

USG BORAL DRYWALL SFZ LLC — Type ULTRACODE

USG MEXICO S A DE C V — Types IP-X3 or ULTRACODE

4A. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9) or Lead Discs or Tabs (see Item 10).
RAY-BAR ENGINEERING CORP — Type RB-LBG

4B. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nominal 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 (or #6 by 1-1/4 in. long bugle head fine driller) steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field.
NEW ENGLAND LEAD BURNING CO INC, DBA NELCO — Type Nelco

4C. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 or 3/4 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over 20 MSG steel studs and staggered min 1 stud cavity on opposite sides of studs. See Items 1, 2, 2A, 2B and 2D. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. For Joint Compound see Item 5. To be used with Lead Batten Strips (see Item 9A) or Lead Discs (see Item 10A). Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip.
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4D. **Gypsum Board* —** (As an alternate to Item 4 Systems A, B, C, D, E, G, H, and I when used as the base layer, For direct attachment only) — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

5. **Joint Tape and Compound —** (Not Shown)

Systems A, B, C, E, F, G, H, I

Joints on outer layers of gypsum boards (Item 4 and 4A) covered with paper tape and joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. Exposed screw heads covered with joint compound.

6. **Batts and Blankets* —**

Systems A, B, E, F, G, H, I

(Optional) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt mineral bearing the UL Classification Marking as to Fire Resistance.

System A With Type ULIX Gypsum Boards

Placed in stud cavities, any min. 3-1/2 in. thick glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. See **Batts and Blankets (BKNV or BZJZ) Categories** for names of Classified companies.

Systems C & D

Min 3 in. (System C) and min 1-1/2 in. (System D) thick mineral wool batts, friction fitted between the studs and floor and ceiling runners.

ROCKWOOL — Type AFB, min. density 1.8 pcf / 28.8 kg/m^3

THERMAFIBER INC — Type SAFB, SAFB FF

7. **Cementitious Backer Units* —** (System D) — Nom 1/2 or 5/8 in. thick panels, square edge, attached to studs over gypsum wallboard with 1-5/8 in. long, Type S-12, corrosion resistant steel screws spaced 8 in. OC and staggered 8 in. from gypsum wall board screws. Joints covered with glass fiber mesh tape. Vertical joints staggered one stud cavity from gypsum wallboard joints. Horizontal joints staggered a min of 12 in. from the gypsum wallboard joints.
UNITED STATES GYPSUM CO — Type DCB

8. **Laminating Adhesive* —** (Optional, Not Shown) — Used to bond outer layer of Cementitious Backer Units (Item 7) to inner layers of Gypsum Board (Item 4) in System D. ANSI A136.1 Type 1 organic adhesive applied with 1/4 in. square notched trowel. See Adhesives (BYWR) in the Fire Resistance Directory or Adhesives (BJLZ) in the Building Materials Directory for names of Classified companies.

9. **Lead Batten Strips —** (Not Shown, For Use With Item 4A) — Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. Strips placed on the interior face of studs and attached from the exterior face of the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4A) and optional at remaining stud locations. Required behind vertical joints.

9A. **Lead Batten Strips —** (Not Shown, for use with Item 4C) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.140 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".. Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 6) and optional at remaining stud locations.

10. **Lead Discs or Tabs —** (Not Shown, For Use With Item 4A) — Used in lieu of or in addition to the lead batten strips (Item 9) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 4A) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

10A. **Lead Discs —** (Not Shown, for use with Item 4C) — Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

11. **Lead Batten Strips —** (Not Shown, For Use With Item 4B) — Lead batten strips, 2 in. wide, max 10 ft long with a max thickness of 0.142 in. Strips placed on the face of studs and attached to the stud with two min. 1 in. long min. Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip or with one min. 1 in. long min. Type S-8 pan head steel screw at the top of the strip. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead batten strips required behind vertical joints of lead backed gypsum wallboard (Item 4B) and optional at remaining stud locations.

12. **Lead Tabs —** (Not Shown, For Use With Item 4B) — 2 in. wide, 5 in. long with a max thickness of 0.142 in. Tabs friction-fit around front face of stud, the stud folded back flange, and the back face of the stud. Tabs required at each location where a screw (that secures the gypsum boards, Item 4B) will penetrate the steel stud. Lead tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Lead tabs may be held in place with standard adhesive tape if necessary.

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

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U415 - Utility Shaft

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NTS

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DAVID BRIAN LISLE REGISTERED ARCHITECT NORTH CAROLINA WILMINGTON, NC

DATE: 03.02.2020

LAMAR RESIDENCE
WILMINGTON, NC

PROJECT NO:

NO.	REV./SUB.	DATE

SHEET TITLE

UL Listings

SHEET NUMBER

CD3

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2018 BUILDING CODE SUMMARY FOR ALL COMMERCIAL PROJECTS

(EXCEPT ONE- AND TWO-FAMILY DWELLINGS AND TOWNHOUSES)

(Reproduce the following data on the building plans sheet 1 or 2)

Name of Project: Smith Office Shell Building

Address: _____ Zip Code _____

Owner/Authorized Agent: _____ Phone # (____) ____ - ____ E-Mail _____

Owned By: ❑ City/County ■ Private ❑ State

Code Enforcement Jurisdiction: ❑ City_____ ■ County New Hanover ❑ State

CONTACT: David Lisle

DESIGNER	FIRM	NAME	LICENSE #	TELEPHONE #	E-MAIL
Architectural	Lisle Architecture	David Lisle	7903	(910) 763.6053	david@lislearchitecture.com
Civil				(910)	
Electrical	David Sims and Assoc	Dave Falcinelli	040879	(910) 791.8016	office@dsaeng.com
Fire Alarm				(910)	
Plumbing	David Sims and Assoc	Chris Lippincott	026003	(910) 791.8016	office@dsaeng.com
Mechanical	David Sims and Assoc	Robert English	011227	(910) 791.8016	office@dsaeng.com
Sprinkler-Standpipe				(910)	
Structural				(910)	
Retaining Walls > 5 feet High				(910)	
Other				(910)	

("Other" should include firms and individuals such as truss, precast, pre-engineered, interior designers, etc.)

2018 NC BUILDING CODE: ❑ **New Building** ■ Shell/Core ❑ 1st Time Interior Completions
❑ Addition ❑ Phased Construction—Shell Core

2018 NC EXISTING BUILDING CODE: ❑ Prescriptive ❑ Alteration Level I ❑ Historic Property
(check all that apply) ❑ Repair ❑ Alteration Level II ❑ Change of Use
❑ Chapter 14 ❑ Alteration Level III

CONSTRUCTED: (date) _____ **CURRENT USE(S)** (Ch. 3): _____
RENOVATED: (date) _____ **PROPOSED USE(S)** (Ch. 3): _____

OCCUPANCY CATEGORY (Table 1604.5): Current: _____ Proposed: _____

BASIC BUILDING DATA

Construction Type: ❑ I-A ❑ II-A ❑ III-A ❑ IV ❑ V-A
(check all that apply) ❑ I-B ■ II-B ❑ III-B ❑ V-B
Sprinklers: ❑ No ❑ Partial ■ NFPA 13 ❑ NFPA 13R ❑ NFPA 13D
Standpipes: ■ No Class ❑ I ❑ II ❑ III ❑ Wet ❑ Dry
Primary Fire District: ■ No ❑ Yes **Flood Hazard Area:** ■ No ❑ Yes
Special Inspections Required: ■ No ❑ Yes

GROSS BUILDING AREA TABLE

Floor	Existing (sq ft)	New (sq ft)	Subtotal
3rd Floor		16043	
2nd Floor		16043	
Mezzanine			
1st Floor		16699	
Basement			
TOTAL	0	48785	0

ALLOWABLE AREA

Primary Occupancy Classification(s):

Assembly	❑ A-1	❑ A-2	❑ A-3	❑ A-4	❑ A-5
Business	■				
Educational	❑				
Factory	❑ F-1 Moderate	❑ F-2 Low			
Hazardous	❑ H-1 Detonate	❑ H-2 Deflagrate	❑ H-3 Combust	❑ H-4 Health	❑ H-5 HPM
Institutional	❑ I-1	❑ I-2	❑ I-3	❑ I-4	
I-3 Condition	❑ 1	❑ 2			
I-2 Condition	❑ 1	❑ 2			
I-3 Condition	❑ 1	❑ 2	❑ 3	❑ 4	❑ 5
Mercantile	❑				
Residential	❑ R-1	❑ R-2	❑ R-3	❑ R-4	
Storage	❑S-1 Moderate		❑ S-2 Low	❑ High-piled	
	❑ Parking Garage	❑ Open	❑ Enclosed	❑ Repair Garage	
Utility and Miscellaneous	❑				

Accessory Occupancy Classification(s): _____

Incidental Uses (Table 509): _____

This separation is not exempt as a Nonseparated Use (see exceptions).

Special Uses (Chapter 4 – List Code Sections): _____

Special Provisions: (Chapter 5 – List Code Sections): _____

Mixed Occupancy: ❑ No ❑ Yes Separation: _____ Hr. Exception: _____

❑ Non-separated Use (508.3)

❑ Separated Use (508.4)—See below for area calculations for each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1.

Select one

$$\frac{Actual\ Area\ of\ Occupancy\ A}{Allowable\ Area\ of\ Occupancy\ A} + \frac{Actual\ Area\ of\ Occupancy\ B}{Allowable\ Area\ of\ Occupancy\ B} \leq 1$$

_____ + _____ + ... = _____ ≤ 1.00

STORY NO.	DESCRIPTION AND USE	(A) BLDG AREA PER STORY (ACTUAL)	(B) TABLE 506.2[4] AREA	(C) AREA FOR FRONTAGE INCREASE[1, 5]	(D) ALLOWABLE AREA PER STORY OR UNLIMITED[2, 3]
1	Business	16699	69,000		69,000
2	Business	16043	69,000		69,000
3	Business	16043	69,000		69,000

1. Frontage area increases from Section 506.2 are computed thus:
   a. Perimeter which fronts a public way or open space having 20 feet minimum width = _____ (*F*)
   b. Total Building Perimeter = _____ (*P*)
   c. Ratio (*F*/*P*) = _____ (*F*/*P*)
   d. *W* = Minimum width of public way = _____ (*W*)
2. Unlimited area applicable under conditions of Section 507.
3. Maximum Building Area = total number of stories in the building × *D* (maximum 3 stories) (506.2).
4. The maximum area of open parking garages must comply with Table 406.5.4. The maximum area of air traffic control towers must comply with Table 412.3.1.
5. Frontage increase is based on the unsprinklered area value in Table 506.2.

ALLOWABLE HEIGHT

	ALLOWABLE	SHOWN ON PLANS	CODE REFERENCE
Building Height in Feet (Table 504.3)	75'	45'	
Building Height in Stories (Table 504.4)	4	3	

1. Provide code reference if the "Shown on Plans" quantity is not based on Table 504.3 or 504.4.

FIRE PROTECTION REQUIREMENTS

BUILDING ELEMENT	FIRE SEPARATION DISTANCE (feet)	RATING REQ'D	RATING PROVIDED (W/ _____* REDUCTION)	DETAIL # AND SHEET #	DESIGN # FOR RATED ASSEMBLY	SHEET # FOR RATED PENETRATION	SHEET # FOR RATED JOINTS
Structural Frame Including columns, girders, trusses							
Bearing Walls							
Exterior							
North							
East							
West							
South							
Interior							
Nonbearing walls and partitions Exterior walls							
North							
East							
West							
South							
Interior walls and partitions							
Floor Construction Including supporting beams and joists							
Floor Ceiling Assembly							
Columns Supporting Floors							
Roof Construction, including supporting beams and joists							
Roof Ceiling Assembly							
Columns Supporting Roof							
Shaft Enclosures—Exit		1-hr	1-hr	A/CD2	U905		
Shaft Enclosures—Other		1-hr	1-hr	A/CD3	U415		
Corridor Separation							
Occupancy/Fire Barrier Separation							
Party/Fire Wall Separation							
Smoke Barrier Separation							
Smoke Partition							
Tenant/Dwelling Unit/ Sleeping Unit Separation							
Incidental Use Separation							

* Indicate section number permitting reduction

PERCENTAGE OF WALL OPENING CALCULATIONS

FIRE SEPARATION DISTANCE (feet) FROM PROPERTY LINES	DEGREE OF OPENINGS PROTECTION (TABLE 705.8)	ALLOWABLE AREA (%)	ACTUAL SHOWN ON PLANS (%)

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting: ■ Yes ❑ No
Exit Signs: ■ Yes ❑ No
Fire Alarm: ■ Yes ❑ No
Smoke Detection Systems: ❑ Yes ■ No
Carbon Monoxide Detection: ❑ Yes ■ No

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet #: LS1-LS3

❑ Fire and/or smoke rated wall locations (Chapter 7)
❑ Assumed and real property line locations (if not on the site plan)
❑ Exterior wall opening area with respect to distance to assumed property lines (705.8)
❑ Occupancy Use for each area as it relates to occupant load calculation (Table 1004.1.2)
❑ Occupant loads for each area
❑ Exit access travel distances (1017)
❑ Common path of travel distances [Tables 1006.2.1 & 1006.3.2(1)]
❑ Dead end lengths (1020.4)
❑ Clear exit widths for each exit door
❑ Maximum calculated occupant load capacity each exit door can accommodate based on egress width (1005.3)
❑ Actual occupant load for each exit door
❑ A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation
❑ Location of doors with panic hardware (1010.1.10)
❑ Location of doors with delayed egress locks and the amount of delay (1010.1.9.7)
❑ Location of doors with electromagnetic egress locks (1010.1.9.9)
❑ Location of doors equipped with hold-open devices
❑ Location of emergency escape windows (1030)
❑ The square footage of each fire area (202)
❑ The square footage of each smoke compartment for Occupancy Classification I-2 (407.5)
❑ Note any code exceptions or table notes that may have been utilized regarding the items above

ENERGY SUMMARY

ENERGY REQUIREMENTS:
The following data shall be considered minimum and any special attribute required to meet the energy code shall also be provided. Each Designer shall furnish the required portions of the project information for the plan data sheet. If performance method, state the annual energy cost for the standard reference design versus the annual energy cost for the proposed design.

Existing building envelope complies with code: ❑ (If checked, the remainder of this section is not applicable.)

Exempt Building: ❑ Provide code or statutory reference: _____

Climate Zone: ■ 3A ❑ 4A ❑ 5A

Method of Compliance:
Energy Code: ❑ Performance ■ Prescriptive
ASHSAE 90.1: ❑ Performance ❑ Prescriptive
Other: ❑ Performance (specify source) _____

THERMAL ENVELOPE: (Prescriptive method only)

Roof/ceiling Assembly (each assembly)
Description of assembly: Full adhered TPO on 1/4" Coverboard on R25 CI on Metal Deck over Metal Trusses
U-Value of total assembly: _____
R-Value of insulation: R25
Skylights in each assembly: N/A
U-Value of skylight: N/A
total square footage of skylights in each assembly: _____

Exterior Walls (each assembly)
Description of assembly Brick veneer over R10CI on 1/2" Densglass on 2x Metal Studs w/ R15 Batt insulation
U-Value of total assembly: _____
R-Value of insulation: R15 + R10CI
Openings (windows or doors with glazing)
U-Value of assembly: .40 MIN.
Solar heat gain coefficient: .25
projection factor: 0
Door *R*-Values: _____

Walls below grade (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors over unconditioned space (each assembly)
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____

Floors slab on grade
Description of assembly: _____
U-Value of total assembly: _____
R-Value of insulation: _____
Horizontal/vertical requirement: _____
slab heated: _____

ACCESSIBLE DWELLING UNITS (SECTION 1107)

TOTAL UNITS	ACCESSIBLE UNITS REQUIRED	ACCESSIBLE UNITS PROVIDED	TYPE A UNITS REQUIRED	TYPE A UNITS PROVIDED	TYPE B UNITS REQUIRED	TYPE B UNITS PROVIDED	TOTAL ACCESSIBLE UNITS PROVIDED

ACCESSIBLE PARKING (SECTION 1106)

LOT OR PARKING AREA	TOTAL # OF PARKING SPACES		# OF ACCESSIBLE SPACES PROVIDED			TOTAL # ACCESSIBLE PROVIDED
	REQUIRED	PROVIDED	REGULAR WITH 5' ACCESS AISLE	VAN SPACES WITH 132" ACCESS AISLE	VAN SPACES WITH 8' ACCESS AISLE	
TOTAL						

PLUMBING FIXTURE REQUIREMENTS (TABLE 2902.1)

USE		WATERCLOSETS			URINALS	LAVATORIES			SHOWERS/ TUBS	DRINKING FOUNTAINS	
		Male	Female	Unisex		Male	Female	Unisex		Regular	Accessible
SPACE	EXIST'G										
	NEW										
	REQ'D										

SPECIAL APPROVALS

Special approval: (Local Jurisdiction, Department of Insurance, OSC, DPI, DHHS, ICC, etc., describe below)

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www.LisleArchitecture.com

NOT For Construction

DATE: 03.02.2020

LAMAR RESIDENCE
WILMINGTON, NC

PROJECT NO:

NO.	REV./SUB.	DATE

SHEET TITLE

Building Code Data Summary

SHEET NUMBER

CD1

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Smith Office Building

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Wilmington, North Carolina 28403
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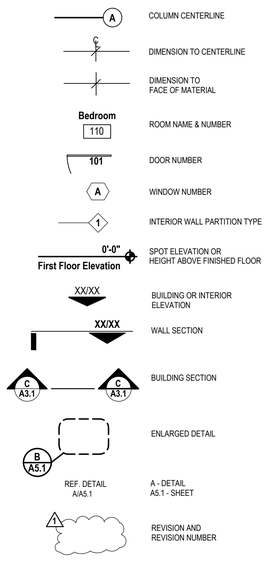
Wilmington, North Carolina 28401
(910) 343.8007

Abbreviations

A.C.T.	ACOUSTICAL CEILING TILE	INSUL.	INSULATION
ADJ.	ADJUSTABLE	JST.BRG.	JOIST BEARING
A.F.F.	ABOVE FINISHED FLOOR	LAV.	LAVATORY
ALUM.	ALUMINUM	MAX.	MAXIMUM
ALT.	ALTERNATE	M.B.S.	METAL BUILDING SUPPLIER
ANOD.	ANODIZED	MECH.	MECHANICAL
BD.	BOARD	MIN.	MINIMUM
BLDG.	BUILDING	MISC.	MISCELLANEOUS
BM.	BEAM	M.O.	MASONRY OPENING
BOT.	BOTTOM	MTD.	MOUNTED
BRG. HT.	BEARING HEIGHT	MTL.	METAL
CL	CENTER LINE	O.C.	ON CENTER
CLG.	CEILING	O.H.	OPPOSITE HAND
CLR.	CLEAR	PLYWD.	PLYWOOD
C.J.	CONTROL JOINT	P.T.	PRESSURE TREATED
C.M.U.	CONCRETE MASONRY UNIT	PT (D)	PAINT (ED)
COL.	COLUMN	REF.	REFER, REFERENCE
CONC.	CONCRETE	REINF.	REINFORCING
CONT.	CONTINUOUS	RM.	ROOM
DBL.	DOUBLE	ROT.	ROTATED
DET.	DETAIL	S.C.	SOLID CORE
DR.	DOOR	SCHED.	SCHEDULE (ED)
D.S.	DOWNSPOUT	SHT.	SHEET
DWG.	DRAWING	SIM.	SIMILAR
E.J.	EXPANSION JOINT	SPEC.	SPECIFICATION (S)
ELEV.	ELEVATION	STD.	STANDARD
ELEC.	ELECTRICAL	STL.	STEEL
EQ.	EQUAL	STRUCT.	STRUCTURE (AL)
E.W.C.	ELECTRIC WATER COOLER	TEMP.	TEMPERED
EXP.	EXPANSION	T.O.M.	TOP OF MASONRY
EXT.	EXTERIOR	T.O.P.	TOP OF PARAPET
F.F.	FINISH FLOOR	T.O.S.	TOP OF STEEL
FIN.	FINISH (ED)	T.O.W.	TOP OF WALL
FLR.	FLOOR	T.S.	TUBULAR STEEL
F.O.C.	FACE OF CONCRETE	TYP.	TYPICAL
F.O.G.B.	FACE OF GRADE BEAM	U.N.O	UNLESS NOTED OTHERWISE
F.O.M.	FACE OF MASONRY	V.C.T.	VINYL COMPOSITION TILE
F.O.S.	FACE OF STUD	VERT.	VERTICAL
F.R.P.	FIBERGLASS REINFORCED PANEL	W.C.	WATER CLOSET
GA.	GAUGE, OR GAGE	WD.	WOOD
GL.	GLASS	W.H.	WATER HEATER
GYP. BD.	GYPSUM BOARD	W/	WITH
H.B.	HOSE BIB		
H.C.	HOLLOW CORE		
HDWR.	HARDWARE		
HT.	HEIGHT		
H.V.A.C.	HEATING/VENTILATING/ AIR CONDITIONING		

Legend



Vicinity Map

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DAVID BRIAN LISLE — 6838 — REGISTERED ARCHITECT — NORTH CAROLINA — WILMINGTON

LISLE ARCHITECTURE & DESIGN, INC. — CORPORATE SEAL — 2017 — NORTH CAROLINA

BID SET

DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO. 20131

NO.	REV./SUB.	DATE

SHEET TITLE

Cover Sheet

SHEET NUMBER

CR

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ELECTRICAL LEGEND

○	CEILING OUTLET WITH LED OR FLUORESCENT FIXTURE
⚲	WALL OUTLET WITH LED OR FLUORESCENT FIXTURE
○	CEILING OUTLET WITH LED OR FLUORESCENT FIXTURE
S	SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
S_3	SWITCH, THREE WAY, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
Sos	DUAL TECH OCCUPANCY SENSOR WITH ON/OFF SWITCH, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX, SENSORWORX SWX-100 SERIES OR EQUAL
S_2	250V TWO POLE SWITCH, MATCH AMP RATING OF EQUIPMENT BREAKER
D	SLIDE DIMMER WITH ON/OFF SWITCH, SINGLE POLE, 120VAC, MOUNTED AT 48" AFF TO TOP OF OUTLET BOX
Dos	DUAL TECH OCCUPANCY SENSOR WITH DIMMING AND ON/OFF SWITCH, 120VAC, MOUNTED AT 48" AFF TO TOP OF BOX, SENSORWORX SWX-100 SERIES OR EQUAL
(OS)	DUAL TECH OCCUPANCY SENSOR, LOW VOLTAGE, CEILING MOUNT, SENSORWORX SWX-222-1 OR EQUAL (APPROX. SENSOR RANGE SHOWN ON PLAN)
(PP)	POWER PACK FOR LOW VOLTAGE OCCUPANCY SENSORS, SENSORWORX SWX-900-AX OR EQUAL
⊖	DUPLEX CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
⊕	QUAD CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
⊖	SIMPLEX CONVENIENCE RECEPTACLE, 120VAC, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX, UNO
$⊖^{XX}$	250V SINGLE PHASE RECEPTACLE RATED FOR "XX" AMPS, VERIFY NEMA TYPE REQUIRED WITH MANUFACTURER
⊕	EQUIPMENT CONNECTION, COORDINATE CONNECTION WITH EQUIPMENT CONNECTION SCHEDULE
⊙	CONVENIENCE RECEPTACLE, 120V, FLOOR MOUNT, COVER FLUSH W/ FINISHED FLOOR
⊙	FLOOR MOUNT PHONE/DATA OUTLET, COVER FLUSH W/ FINISH FLOOR
▼	PHONE OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
▽	DATA OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
▼	PHONE/DATA OUTLET, MOUNTED AT 18" AFF TO CENTER OF OUTLET BOX
J	JUNCTION BOX
TV	TV CONNECTION, VERIFY REQUIREMENTS, MOUNT AT +18" AFF UNO
▬	ELECTRICAL PANEL, SURFACE
▬	ELECTRICAL PANEL, FLUSH
	DISCONNECT SWITCH, FUSIBLE
F	FAN BY MECHANICAL CONTRACTOR
▬	PHONE/CATV PANEL, 4x8x¾ PLYWOOD WITH #6 INSUL. GROUND IN ¾" CONDUIT TO ELEC. SYSTEM GROUND

ELECTRICAL ABBREVIATIONS

NL	NIGHT LIGHT
AFF	ABOVE FINISHED FLOOR
GFI	GROUND FAULT INTERRUPTING
GFIA	GROUND FAULT INTERRUPTING WITH AUDIBLE ALARM
3R	WEATHERPROOF ENCLOSURE
UNO	UNLESS NOTED OTHERWISE
WP	WEATHERPROOF
AHU	AIR HANDLING UNIT
HP	HEAT PUMP
TBD	TO BE DETERMINED
CLG	CEILING MOUNTED

120V 20AMP WIRE SIZE CHART:

FOR 20A - 1ø - 120 VOLT SERVICE WIRE SIZE SHALL BE AS FOLLOWS:

DIST TO 1st CONNECTION	WIRE SIZE
60' TO LESS	#12
60' TO 100'	#10
OVER 100'	#8

LIGHTING FIXTURE SCHEDULE

SYMBOL	DESCRIPTION	LAMP NO	LAMP WATT	LAMP TYPE	LAMP COLOR TEMP	LAMP LUMENS	LAMP VOLT	MFG.	MODEL	MOUNTING	REMARKS
A-EM	STAIRWELL LINEAR LED	–	45	LED	3500K	5500	120	SIGNIFY DAY-BRITE	FSW455L835-UNV-SDIM-EMLED-LSXR10ADC	WALL AND CEILING	PROVIDE BATTERY BACKUP, MOTION SENSOR & AUTOMATIC DIM. SEE NOTE 4.
B	4' VAPOR TIGHT LINEAR LED	–	32	LED	3500K	3500	120	SIGNIFY DAY-BRITE	DWAE35L835-4-UNV	WALL AND CEILING	–
C/ C-EM	4" RECESSED DOWNLIGHT	–	25	LED	3000K	2500	120	SIGNIFY LIGHTOLIER	6RN Z6RDL25830WOCDZ10U	RECESSED	FOR C-EM LOCATIONS ADD 'EM' OPTION SEE NOTE 3.
D	4' LINEAR LED	–	32	LED	3500K	4000	120	SIGNIFY DAY-BRITE	FSSEZ440L835-UNV	CEILING	–
⊗	EXIT	–	–	LED	–	–	120	ISOLITE	RL-EM-R-WH-UN-SD	WALL OR CEILING	PROVIDE BATTERY BACKUP.
	EXIT/EMERGENCY COMBINATION	2	1	LED	–	–	120	ISOLITE	RLC-LED-R-U-WH-SD	WALL OVER DOOR	PROVIDE BATTERY BACKUP.
	EMERGENCY	2	3	LED	–	–	120	ISOLITE	BUG-3-WH-SD	WALL @ 7'-6" AFF	PROVIDE BATTERY BACKUP.

LIGHTING FIXTURE NOTES:

1. ALL LAMPS SHALL BE LED AND PROVIDED BY CONTRACTOR.
2. ALL BALLAST FOR FLUORESCENT FIXTURES SHALL BE ELECTRONIC UNLESS NOTED OTHERWISE.
3. FIXTURE SHALL BE WIRED TO OPERATE ON SWITCHED CIRCUIT (PHOTOCELL/CLOCK CONTROLLED FOR EXTERIOR LIGHTS) UNDER NORMAL POWER AND AN EMERGENCY LIGHT IN THE EVENT OF A POWER LOSS (PROVIDE UNSWITCHED HOT LEAD TO BATTERY). PROVIDE UL924 LISTED REMOTE BATTERY OR INVERTER IF INTEGRAL UL924 BATTERY NOT AVAILABLE, BODINE OR EQUAL.
4. TYPICAL MOUNTING ON WALL AT +7'-6" ABVOVE LANDING. WHERE SHOWN ON CEILING PROVIDE CABLE AND SUSPEND FIXTURE TO +10'-0" AFF MAXIMUM.

EQUIPMENT CONNECTION SCHEDULE

SYMBOL	DESCRIPTION	HP	KW	AMP	VOLT	PHASE	BKR	FEEDER COND	FEEDER WIRE	CONNECTION	REMARKS
–	–	–	–	–	–	–	–	–	–	–	–
–	–	–	–	–	–	–	–	–	–	–	–
DU-A/DAHU-A1, 2, 3 DU-B/DAHU-B1, 2, 3	DUCTLESS SPLIT SYSTEM	–	–	26	208	1	40/2	¾"	2#8, 1#10G	FUSED DISC NEMA 3R	SEE NOTE 2.

NOTES:

1. CONTRACTOR SHALL VERIFY ALL CONNECTIONS BEFORE RUNNING SERVICE OR ORDERING EQUIPMENT.
2. PROVIDE ALL REQUIRED CONDUIT WITH PULL STRING BETWEEN DHP/DC AND DAHU. COORDINATE WITH MECHANICAL CONTRACTOR FOR EXACT REQUIREMENTS. VERIFY BREAKER SIZE WITH SUPPLIER. PROVIDE ALL CODE REQUIRED DISCONNECTS AT UNITS.

ELECTRICAL SUMMARY
ELECTRICAL SYSTEM AND EQUIPMENT

METHOD OF COMPLIANCE:

ENERGY CODE:	☑ PRESCRIPTIVE	☐ PERFORMANCE
ASHRAE 90.1	☑ PRESCRIPTIVE	☐ PERFORMANCE

LIGHTING SCHEDULE

LAMP TYPE REQUIRED IN FIXTURE – SEE PLANS
NUMBER OF LAMPS IN FIXTURE – SEE PLANS
BALLAST TYPE USED IN THE FIXTURE – SEE PLANS
NUMBER OF BALLASTS IN FIXTURE – SEE PLANS
TOTAL WATTAGE PER FIXTURE – SEE PLANS
TOTAL INTERIOR WATTAGE SPECIFIED VS ALLOWED – SPECIFIED=XXX WATTS, ALLOWED=XXX WATTS
TOTAL EXTERIOR WATTAGE SPECIFIED VS ALLOWED – SPECIFIED=XXX WATTS, ALLOWED=XXX WATTS

ADDITIONAL PRESCRIPTIVE COMPLIANCE:

- ☐ 406.2 MORE EFFICIENT MECHANICAL EQUIPMENT
- ☑ 406.3 REDUCED LIGHTING POWER DENSITY
- ☐ 406.4 ENHANCED DIGITAL LIGHTING CONTROLS
- ☐ 406.5 ON-SITE RENEWABLE ENERGY
- ☐ 406.6 DEDICATED OUTDOOR AIR SYSTEM
- ☐ 406.7 REDUCED ENERGY USE IN SERVICE WATER HEATING

DESIGNERS STATEMENT

TO THE BEST OF MY KNOWLEDGE AND BELIEF, THE DESIGN OF THIS BUILDING COMPLIES WITH THE THERMAL ENVELOPE REQUIREMENTS OF THE LATEST NORTH CAROLINA STATE ENERGY CODE.

SIGNED: _____

NAME: DAVID P. FALCINELLI JR., PE

TITLE: ENGINEER

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DS ENGINEERING

DATE: 11.20.2020

Smith Office Building

PROJECT NO: (DSA # 20080)

NO.	REV./SUB.	DATE

SHEET TITLE

Specifications, Legend & Schedules

SHEET NUMBER

E0.1

TIME - 8:15 DATE - 11/18/2020 DRAWING LOCATION= F:\PROJECTS\2020\20080\Drawings\20080sla.dwg

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PANEL NO.:	#VALUE!	PROJECT:	SMITH OFFICE
USAGE:	LIGHTING AND APPLIANCE	CLIENT:	-
LOCATION:	OFFICE	MOUNTING:	SURFACE
PHASES:	3	PANEL TYPE:	NEMA 1
L-L VOLTS	208V	ENGINEER:	-
L-G VOLTS	120V	DSA PROJECT NO.:	20080
BUS AMPS:	400A	FED FROM:	<<setup>>
MAIN CB AMPS:	MLO		
AIC RATING:	<<setup>> MINIMUM		

LOAD AMPS.	DESCRIPTION	NOTES	BREAKER POLE	BREAKER AMP.	CKT. #	CKT. #	BREAKER AMP.	BREAKER POLE	NOTES	DESCRIPTION	LOAD AMPS.
0.0	SPACE FOR SHUNT TRIP		1		1 A 2		40	2		DUCTLESS SYS. OUTDOOR UNIT (DU-A)	26.0
122.5	ELEVATOR #1 HYD. PUMP	ST	3	200	3 B 4						26.0
122.5					5 C 6		20	1		AUTOMATIC DOOR	5.0
122.5					7 A 8		20	1		AUTOMATIC DOOR	5.0
2.0	LTS - EXTERIOR GROUND FLOOR		1	20	9 B 10		20	1		SPARE	0.0
2.0	LTS - EXTERIOR 2ND FLOOR		1	20	11 C 12		20	1		RECPT - EXTERIOR GROUND FLOOR	6.0
2.0	LTS - EXTERIOR 3RD FLOOR		1	20	13 A 14		20	1		RECPT - EXTERIOR 2ND FLOOR	6.0
2.0	LTS - STAIRWELL #1		1	20	15 B 16		20	1		RECPT - EXTERIOR 3RD FLOOR	6.0
2.0	LTS - STAIRWELL #2		1	20	17 C 18		20	1		ELEC. WALL HTR. SPRINKLER RM.	12.5
2.0	LTS - ELEVATOR SHAFT		1	20	19 A 20		20	1		RECPT - SPRINKLER RM	2.0
1.0	LTS - SPRINKLER/ELEC RMS		1	20	21 B 22		20	1		SPARE	0.0
10.0	SIGN		1	20	23 C 24		20	1		RECPT - ROOF	6.0
0.0	SHUNT TRIP		1		25 A 26		40	2		DUCTLESS SYS. OUTDOOR UNIT (DU-B)	26.0
122.5	ELEVATOR #2 HYD. PUMP	ST	3	200	27 B 28						26.0
122.5					29 C 30		20	1		AUTOMATIC DOOR	5.0
122.5					31 A 32		20	1		RECPT - PHONE	3.0
0.0	SPARE		1	20	33 B 34		20	1		RECPT - DATA	3.0
5.0	ELEVATOR CONTROLS		1	20	35 C 36		20	1		FACP	5.0
5.0	ELEVATOR CAB LTS		1	20	37 A 38		20	1		SPARE	0.0
1.5	RECPT - ELEVATOR PIT		1	20	39 B 40		20	1		AUTOMATIC DOOR	5.0
1.5	RECPT - ELEVATOR PIT		1	20	41 C 42		20	1		SPARE	0.0
1.5	RECPT - ELEVATOR SHAFT		1	20	43 A 44			1		SPACE	0.0
1.5	RECPT - ELEVATOR SHAFT		1	20	45 B 46			1		SPACE	0.0
10.0	SUMP PUMP		1	20	47 C 48			1		SPACE	0.0
10.0	SUMP PUMP		1	20	49 A 50			1		SPACE	0.0
5.0	ELEVATOR CONTROLS		1	20	51 B 52			1		SPACE	0.0
5.0	ELEVATOR CAB LTS		1	20	53 C 54			1		SPACE	0.0

LOAD SUMMARY	CON. KVA	%	DEM. KVA
RECEPTACLES	4.56	code	4.56
EQUIPMENT	50.73	100%	50.73
LIGHTS (INT.)	2.04	100%	2.04
LIGHTS (EXT.)	1.92	100%	1.92
HVAC	12.3	100%	12.3
KITCHEN	0	65%	0
LARGEST MOTOR	44.13	125%	55.1625
-	0	0%	0
TOTAL KVA	116 KVA		127 KVA
TOTAL AMPS	321 AMPS		352 AMPS

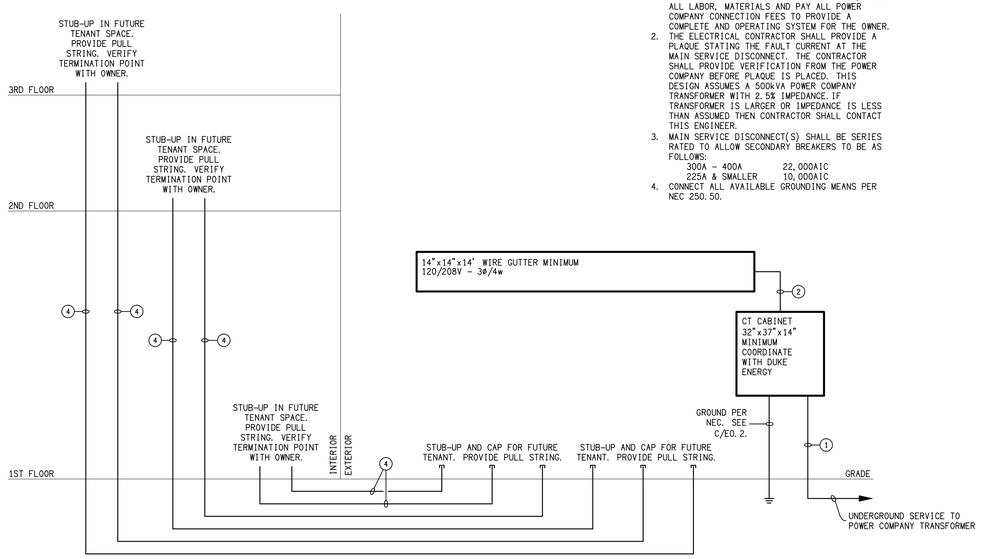
PANEL NOTES:

1. PROVIDE GROUND BUS
2. PROVIDE FULL SIZE NEUTRAL BUS UNLESS NOTED OTHERWISE
3. LO - INDICATES C.B. EQUIPPED WITH "LOCK-ON" DEVICE
4. GFI - INDICATES C.B. IS GFI TYPE (30 mA FOR EQUIPMENT, 5 mA FOR PERSONNEL)
5. ST- INDICATES C.B. EQUIPPED WITH SHUNT TRIP DEVICE
6. IG - INDICATES CIRCUIT SHALL INCLUDE ADDITIONAL ISOLATED GROUND CONDUCTOR

RISER #2 LOAD

DESCRIPTION	Aø	Bø	Cø
FUTURE TENANT	150	150	150
FUTURE TENANT	150	150	150
FUTURE TENANT	300	300	300
FUTURE TENANT	300	300	300
FUTURE TENANT	300	300	300
FUTURE TENANT	300	300	300
TOTAL	1500	1500	1500

MAX. CONNECTED LOAD = 1500A
SIZE GUTTER AND SERVICE FOR 1520A



RISER'S #1 & #2 NOTES:

1. CONTRACTOR SHALL PROVIDE CONCRETE PAD, PLUS ALL LABOR, MATERIALS AND PAY ALL POWER COMPANY CONNECTION FEES TO PROVIDE A COMPLETE AND OPERATING SYSTEM FOR THE OWNER.
2. THE ELECTRICAL CONTRACTOR SHALL PROVIDE A PLAQUE STATING THE FAULT CURRENT AT THE MAIN SERVICE DISCONNECT. THE CONTRACTOR SHALL PROVIDE VERIFICATION FROM THE POWER COMPANY BEFORE PLAQUE IS PLACED. THIS DESIGN ASSUMES A 500kVA POWER COMPANY TRANSFORMER WITH 2.5% IMPEDANCE. IF TRANSFORMER IS LARGER OR IMPEDANCE IS LESS THAN ASSUMED THEN CONTRACTOR SHALL CONTACT THIS ENGINEER.
3. MAIN SERVICE DISCONNECT(S) SHALL BE SERIES RATED TO ALLOW SECONDARY BREAKERS TO BE AS FOLLOWS:
   - 300A - 400A 22,000AIC
   - 225A & SMALLER 10,000AIC
4. CONNECT ALL AVAILABLE GROUNDING MEANS PER NEC 250.50.

WIRE SIZE LEGEND

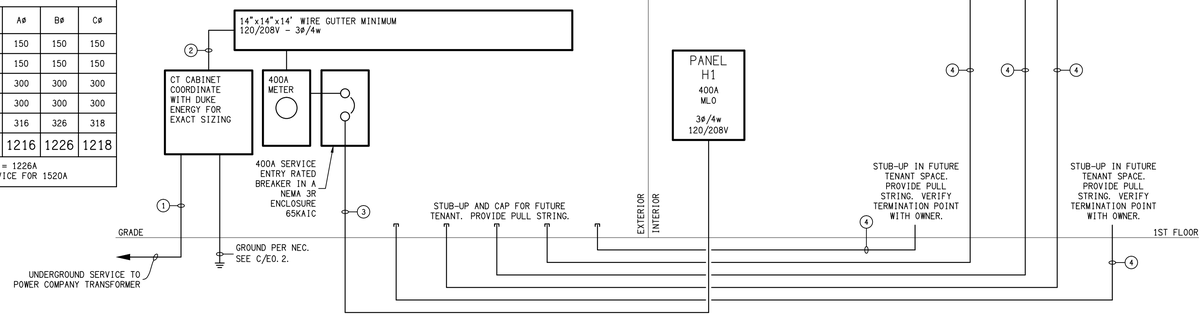
1. 4-SETS 4-500 IN 3½"C BY DUKE ENERGY
2. 4-SETS 4-500, 1-3/0G IN 3½"C
3. 2-SETS 4-3/0, 1#3 IN 2½"C
4. TWO 3½"C WITH PULL STRING

B / E0.2 — Power Riser #2
SCALE: NTS

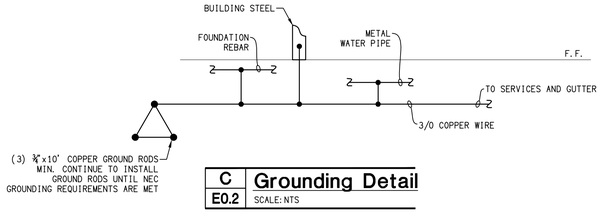
RISER #1 LOAD

DESCRIPTION	Aø	Bø	Cø
FUTURE TENANT	150	150	150
FUTURE TENANT	150	150	150
FUTURE TENANT	300	300	300
FUTURE TENANT	300	300	300
HOUSE PANELS	316	326	318
TOTAL	1216	1226	1218

MAX. CONNECTED LOAD = 1226A
SIZE GUTTER AND SERVICE FOR 1520A



A / E0.2 — Power Riser #1
SCALE: NTS



C / E0.2 — Grounding Detail
SCALE: NTS

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12/09/2020

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DATE: 11.20.2020

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PROJECT NO. (DSA # 20080)

SHEET TITLE

Panel Schedules & Power Risers

SHEET NUMBER

E0.2

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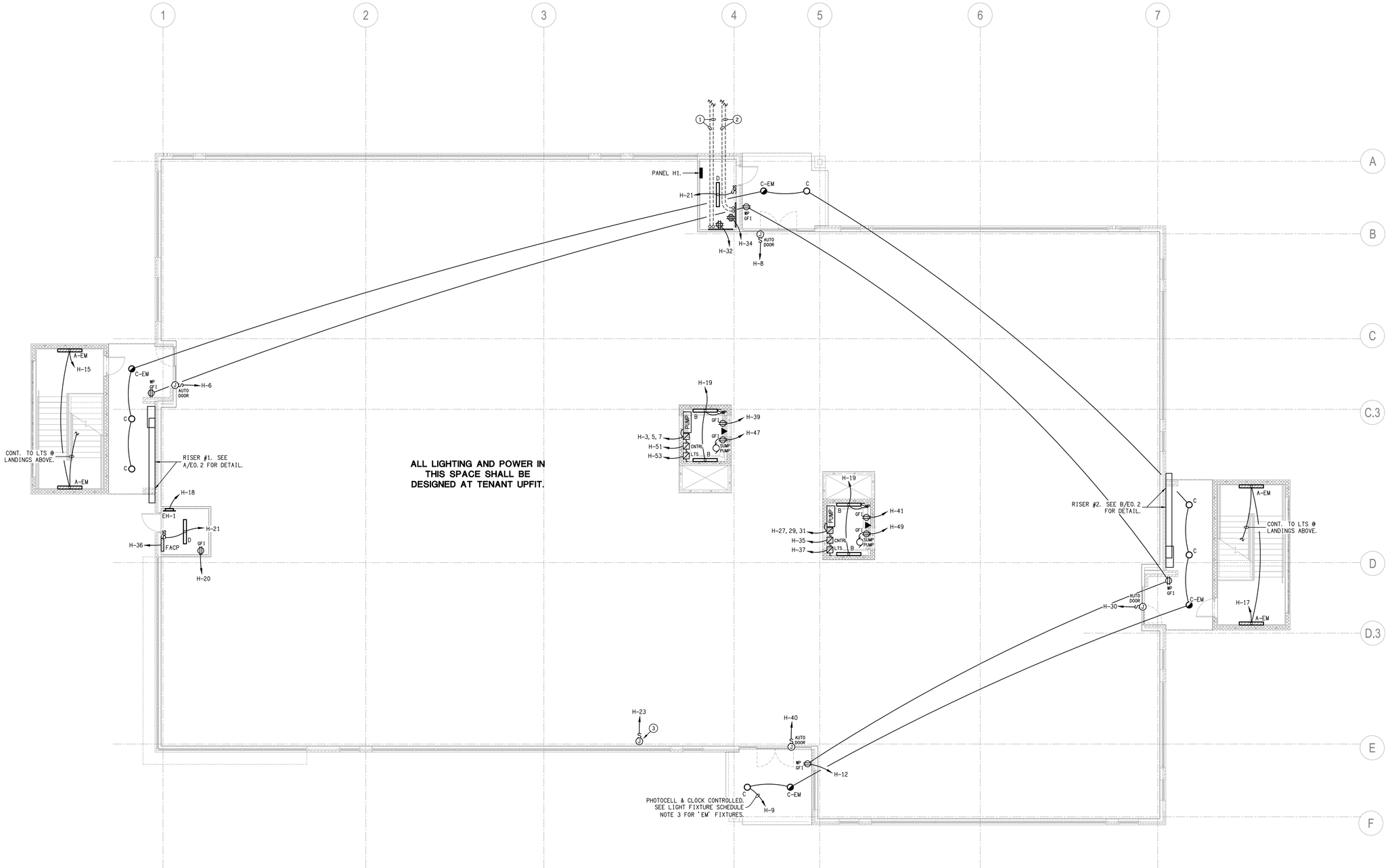

KEY NOTES

1. TWO 4"C WITH PULL STRING TO PHONE COMPANY POINT OF DELIVERY. VERIFY LOCATION AND ROUTING
2. TWO 4"C WITH PULL STRING TO CATV POINT OF DELIVERY. VERIFY LOCATION AND ROUTING.
3. JUNCTION BOX AND SWITCH FOR TENANT SIGN. IF A SWITCH IS PROVIDED WITH THE SIGN THEN THE ONE SHOWN CAN BE REMOVED. VERIFY LOCATION AND CONNECTION.
4. COORDINATE WITH ELEVATOR SUPPLIER FOR EXACT CONFIGURATION AND LOCATION OF ALL ELEVATOR CONNECTIONS AND DEVICES.

A	Lighting & Power Plan - 1st Floor
E1.1	SCALE: 1/8" = 1'-0"

EMERGENCY/EXIT LIGHTING NOTE:
ALL INTERIOR EMERGENCY AND EXIT LIGHTS TO BE FED FROM LIGHTING CIRCUIT IN SAME AREA THE FIXTURE RESIDES AND WIRED AHEAD OF ANY LOCAL SWITCHES TO PROVIDE AN ALWAYS HOT FEED. USE UN-SWITCHED NIGHT LIGHT CIRCUIT IF AVAILABLE.

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DSA ENGINEERING

DATE: 11.20.2020

Smith Office Building

PROJECT NO: (DSA # 20080)

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SHEET TITLE
1st Floor Lighting & Power Plan

SHEET NUMBER
E1.1

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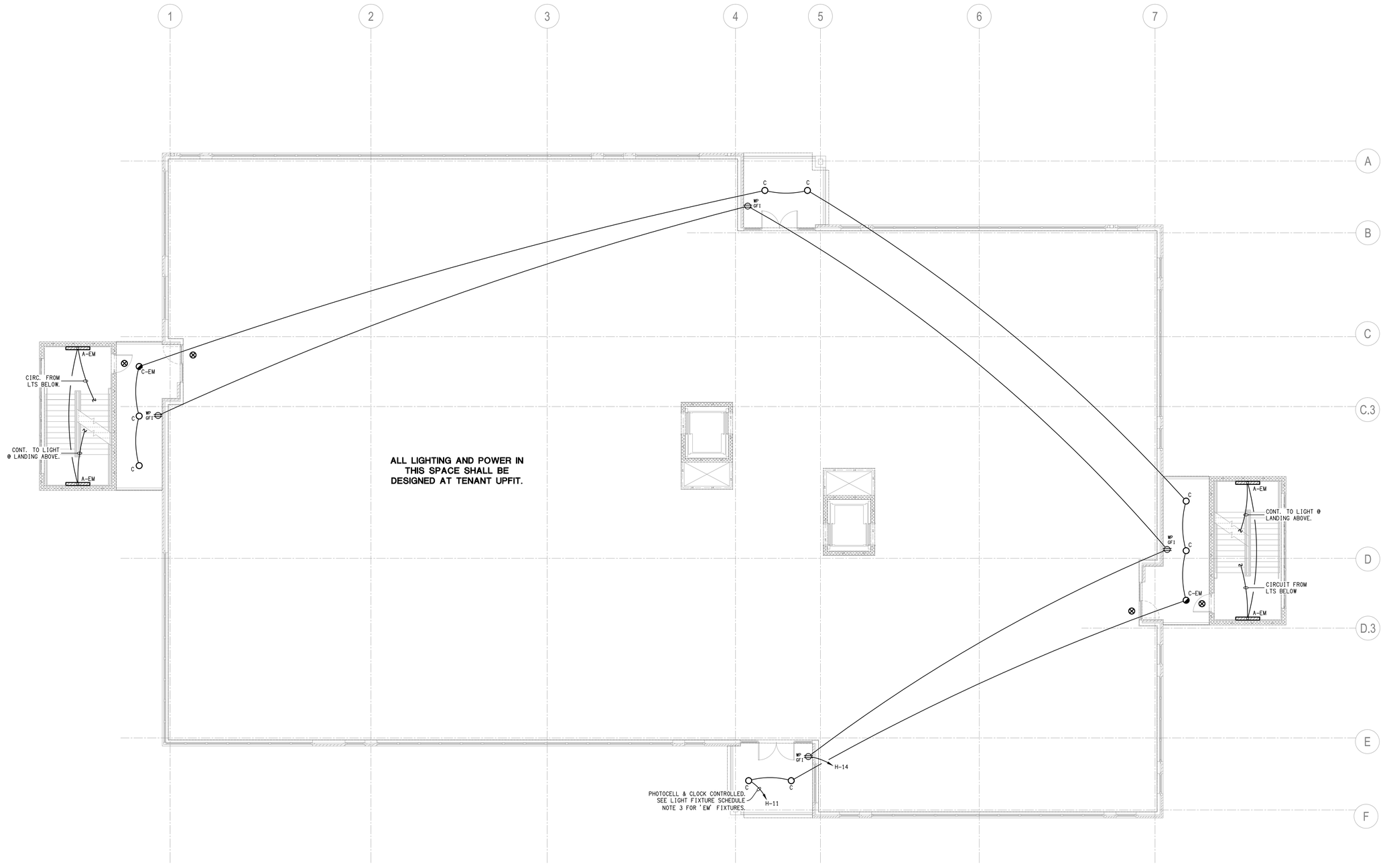

B	Lighting & Power Plan - 2nd Floor
E1.1	SCALE: 1/16" = 1'-0"

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SHEET TITLE

2nd Floor Lighting & Power Plan

SHEET NUMBER

E1.2

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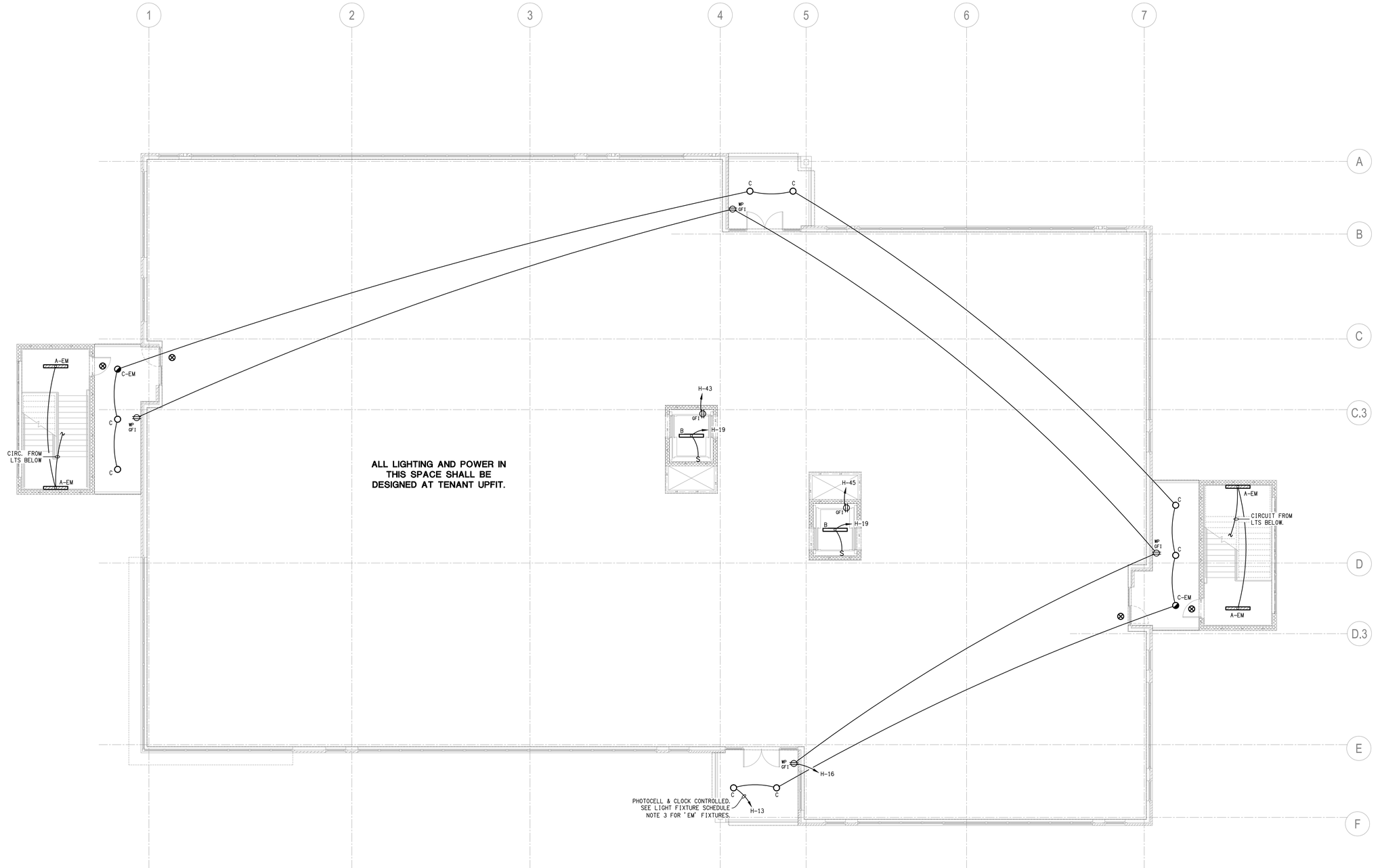

C E1.1 **Lighting & Power Plan - 3rd Floor**
SCALE: 1/16" = 1'-0"

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SHEET TITLE
3rd Floor Lighting & Power Plan

SHEET NUMBER
E1.3

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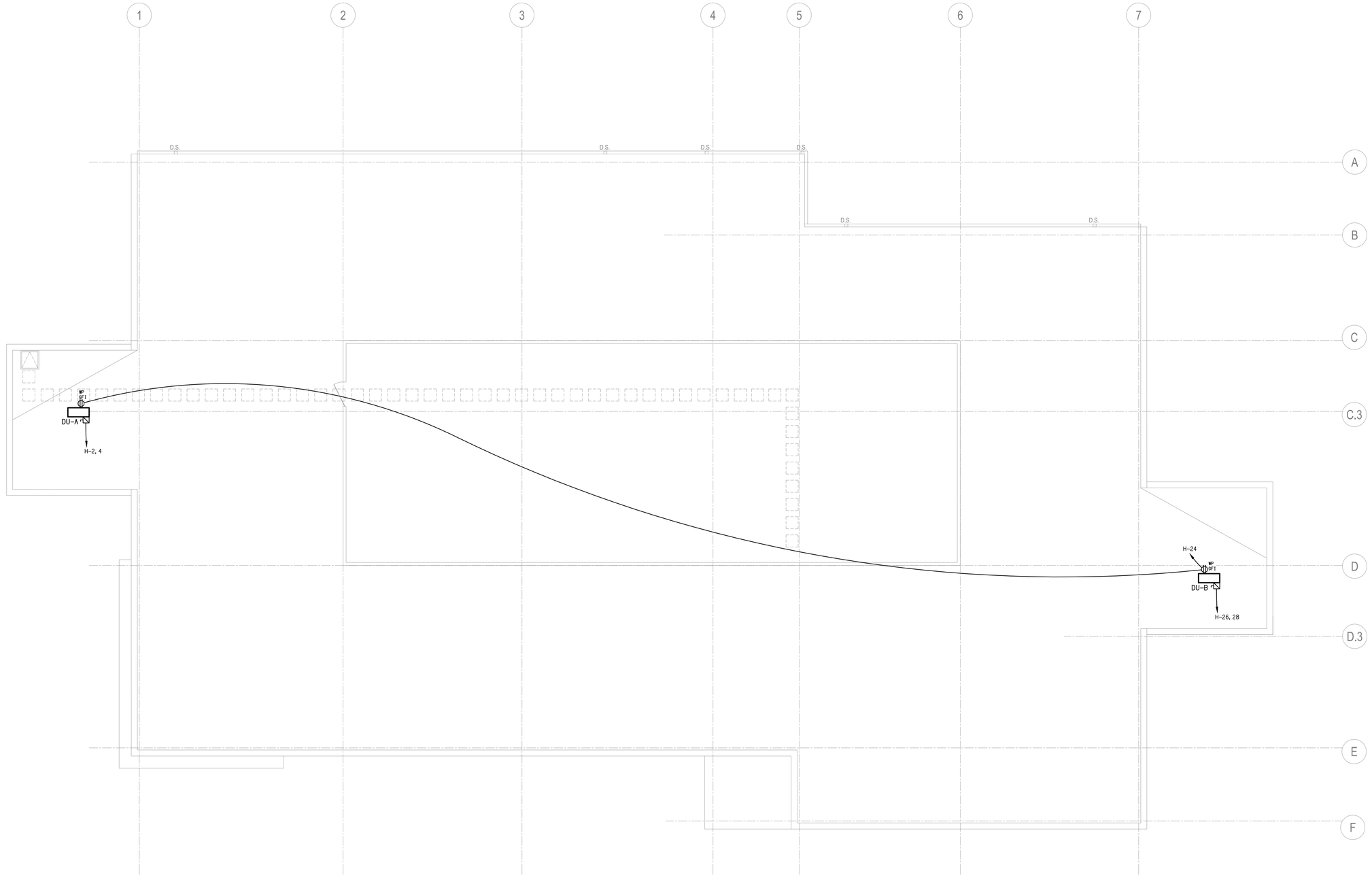

D	Roof Power Plan
E1.1	SCALE: 1/16" = 1'-0"

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SHEET TITLE

Roof Power Plan

SHEET NUMBER

E1.4

TIME- 8:15 DATE- 11/18/2020 DRAWING LOCATION- F:\PROJECTS\2020\20080\Drawings\20080tbk.dwg

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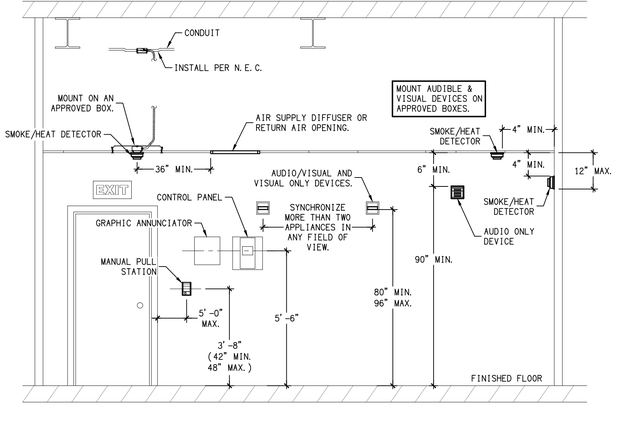
FIRE ALARM LEGEND

SYMBOL	DESCRIPTION
(S)	SMOKE DETECTOR, SEE DETAIL B/FA0.1 FOR MOUNTING
(H)	HEAT DETECTOR, SEE DETAIL B/FA0.1 FOR MOUNTING
FXX	STROBE/HORN, XX CANDELA, SEE DETAIL B/FA0.1 FOR MOUNTING
SXX	STROBE ONLY, XX CANDELA, SEE DETAIL B/FA0.1 FOR MOUNTING
F	PULL STATION, SEE DETAIL B/FA0.1 FOR MOUNTING
T	TAMPER SWITCH BY OTHERS, CONNECTED BY FIRE ALARM CONTRACTOR
F	FLOW SWITCH BY OTHERS, CONNECTED BY FIRE ALARM CONTRACTOR
BWP	WEATHER PROOF BELL
PIV	POST INDICATOR VALVE BY OTHERS, CONNECTED BY FIRE ALARM CONTRACTOR
FACP	FIRE ALARM CONTROL PANEL FOR SPRINKLER MONITORING ALARM SYSTEM
WP	WEATHER PROOF
CLG	CEILING MOUNT

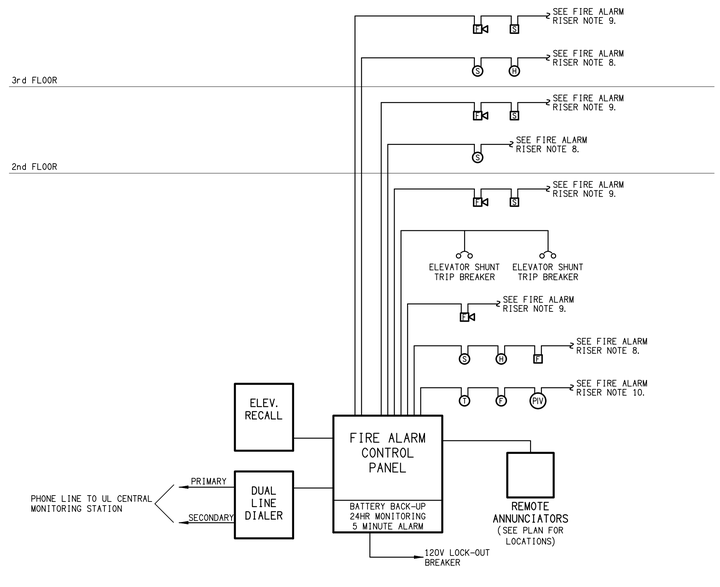
CONTRACTOR/OWNER SHALL BE RESPONSIBLE FOR HIRING A THIRD PARTY TO ASSESS THE EMERGENCY RESPONDER RADIO COVERAGE IN THE BUILDING. COORDINATE WITH THE LOCAL EMERGENCY RESPONDER GROUP RESPONSIBLE FOR THE EXISTING PUBLIC SAFETY COMMUNICATION SYSTEM. AMPLIFICATION SHALL BE PROVIDED AS REQUIRED TO MEET ALL REQUIREMENTS OF THE STATE BUILDING CODE.

FIRE ALARM RISER NOTES:

1. FIRE ALARM SYSTEM SHALL BE 24V DC, POWER LIMITED, FULLY SUPERVISED, WITH 24 HOUR STANDBY BATTERY. PANEL TO BE SURFACE MOUNTED. SYSTEM SHALL HAVE MINIMUM 25% SPARE CAPACITY. SYSTEM SHALL BE ADDRESSABLE.
2. FIRE ALARM DEVICES ARE TO BE INSTALLED IN ACCORDANCE WITH NFPA 72 AND 'ADA'.
3. ALL FIRE ALARM WIRING SHALL BE IN CONDUIT. FIRE CABLE ALLOWED IN CONCEALED AREAS.
4. DEVICE QUANTITIES SHALL BE AS INDICATED ON THE PLANS. VERIFY QUANTITY AND EXACT LOCATION OF SPRINKLER SYSTEM TAMPER AND FLOW SWITCHES WITH SPRINKLER CONTRACTOR.
5. ELECTRICAL CONTRACTOR SHALL PROVIDE A FIRE ALARM LAYOUT PLAN AT THE FACP AND THE ANNUNCIATOR PANEL.
6. ELECTRICAL CONTRACTOR TO PROVIDE AUTHORITY HAVING JURISDICTION WITH FIRE ALARM SYSTEM INSTALLATION PLANS FOR FINAL APPROVAL, PRIOR TO INSTALLATION.
7. EVACUATION TONE SHALL BE THREE BLAST TEMPORAL SIGNAL.
8. CONNECT ALL SMOKE DETECTORS, HEAT DETECTORS AND PULL STATIONS.
9. CONNECT ALL STROBES AND STROBE HORNS. MAXIMUM OF TEN DEVICES ON A CIRCUIT. PROVIDE ADDITIONAL CIRCUITS AS REQUIRED.
10. CONNECT ALL SPRINKLER SYSTEM DEVICES. COORDINATE WITH SPRINKLER CONTRACTOR.
11. VOLTAGE DROP CALCULATIONS AND BATTERY CALCULATIONS WILL BE PROVIDED BY THE CONTRACTOR.
12. FOR RESIDENTIAL SMOKE DETECTORS THE SOUNDER SHALL ACTIVATE LOCALLY AND ON GENERAL ALARM. LOCAL ACTIVATION SHALL NOT ACTIVATE GENERAL ALARM. PROVIDE ADDITIONAL DEVICES AS REQUIRED.
13. ALL WIRE SHALL BE COPPER.
14. ALL WIRE SHALL BE CAPPED AND RUN IN CONDUIT. U.L. APPROVED FIRE ALARM CABLE MARKED FPL PER NEC 760.28 SHALL BE ALLOWED IN CONCEALED NON-PLENUM AREAS ONLY WHEN NOT EXPOSED TO MECHANICAL DAMAGE.
15. ALL ALARM CIRCUITS SHALL BE 14 AWG MINIMUM. ALL SIGNAL CIRCUITS SHALL BE 18 AWG MINIMUM. ALL OTHER WIRE SHALL BE SIZED PER MANUFACTURE INSTRUCTIONS.



B FA0.1 Typical Mounting Height Detail
SCALE: NTS



A FA0.1 Fire Alarm Riser - Building 1
SCALE: NTS

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DATE: 11.20.2020

DSA ENGINEERING

Smith Office Building

PROJECT NO: (DSA # 20080)

NO.	REV./SUB.	DATE

SHEET TITLE
Fire Alarm Details & Notes

SHEET NUMBER
FA0.1

TIME - 8:15 DATE - 11/18/2020 DRAWING LOCATION= F:\PROJECTS\2020\20080\Drawings\20080fa1a.dwg

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A	Fire Alarm Plan - 1st Floor
FA1.1	SCALE: 1/8" = 1'-0"

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www.dsaeng.com

DATE: 11.20.2020

DS ENGINEERING

Smith Office Building

PROJECT NO: (DSA # 20080)

NO.	REV./SUB.	DATE

SHEET TITLE

1st Floor Fire Alarm Plan

SHEET NUMBER

FA1.1

B	Fire Alarm Plan - 2nd Floor
FA1.1	SCALE: 1/16" = 1'-0"

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12/09/2020

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NO.	REV./SUB.	DATE

SHEET TITLE

2nd Floor Fire Alarm Plan

SHEET NUMBER

FA1.2

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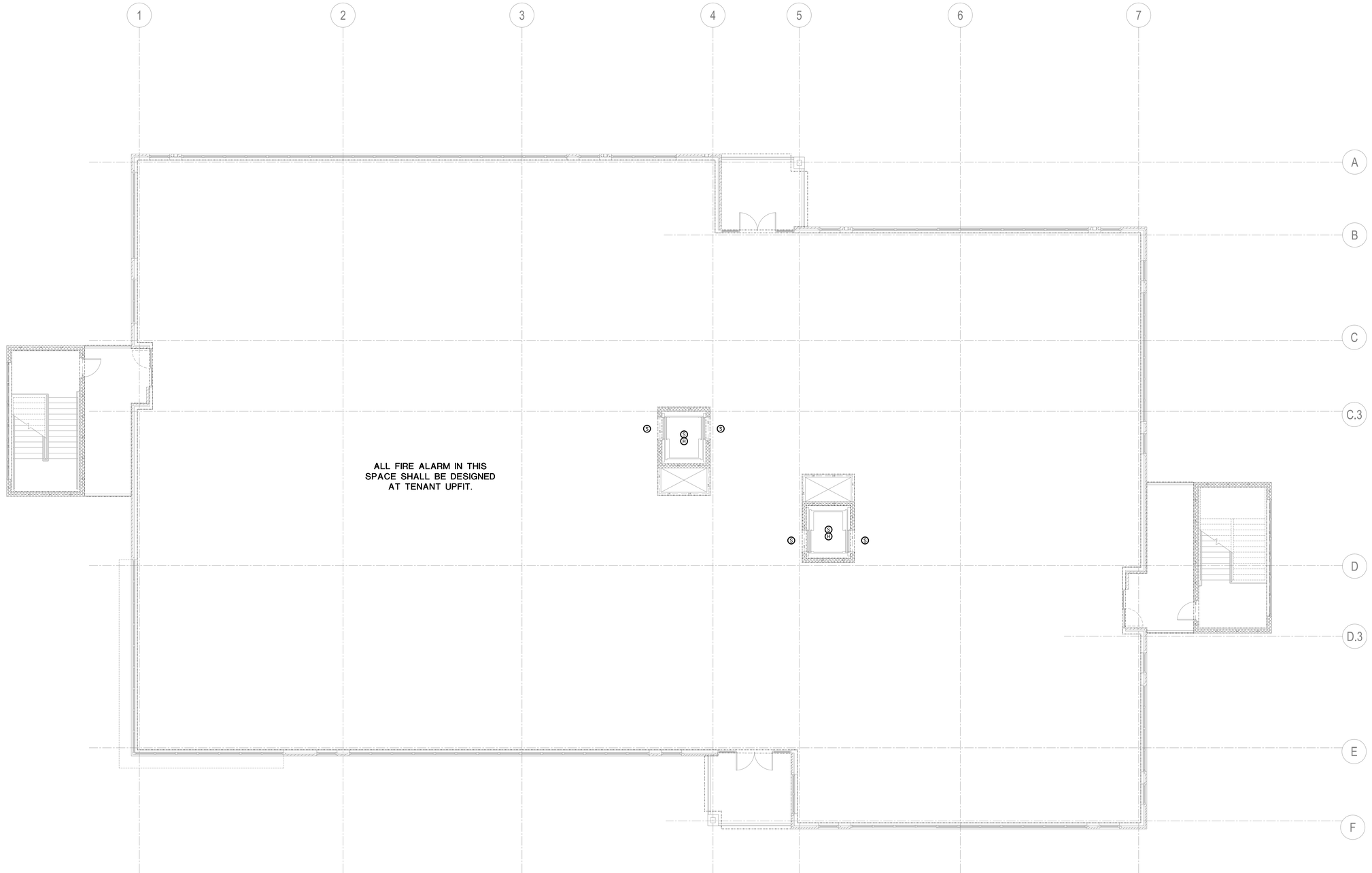

C	Fire Alarm Plan - 3rd Floor
FA1.1	SCALE: 1/16" = 1'-0"

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SHEET TITLE

3rd Floor Fire Alarm Plan

SHEET NUMBER

FA1.3

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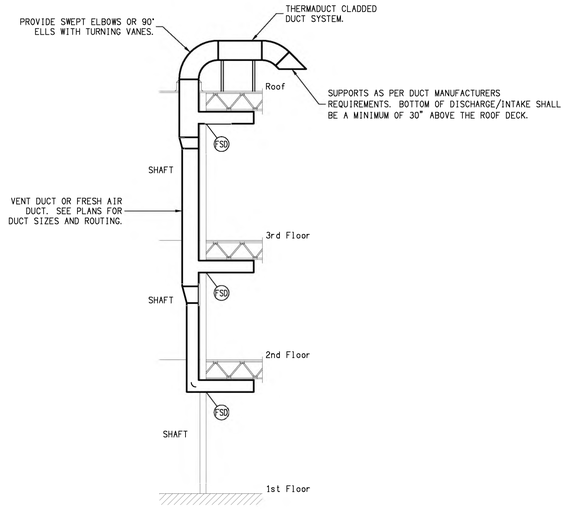

A — **Duct in Mechanical Shaft**
M0.1 Scale: None

DUCTLESS SPLIT SYSTEM SCHEDULE

COMPRESSOR							AIR HANDLING UNIT							GENERAL			
			ELECTRIC							ELECTRIC							
SYMBOL	MFG.	MODEL #	VOLT	PHASE	MCA	MOCP	SYMBOL	MFG.	MODEL #	VOLT	PHASE	MCA	MOCP	MOUNTING	COOLING (BTU/HR)	HEATING (BTU/HR)	SEER HSPF	REMARKS
DU-A	MITSUBISHI	MXZ-5C42NA2 -U1	208	1ø	32.5	40	DAHU-A1	MITSUBISHI	MSZ-GL18NA-U1	POWERED BY OUTDOOR UNIT				WALL	11,550	6,884	19.1 10.3	SEE NOTES
							DAHU-A2	MITSUBISHI	MSZ-GL15NA-U1	POWERED BY OUTDOOR UNIT				WALL	9,453	5,713	19.1 10.3	SEE NOTES
							DAHU-A3	MITSUBISHI	MSZ-GL18NA-U1	POWERED BY OUTDOOR UNIT				WALL	11,780	6,922	19.1 10.3	SEE NOTES
DU-B	MITSUBISHI	MXZ-5C42NA2 -U1	208	1ø	32.5	40	DAHU-B1	MITSUBISHI	MSZ-GL18NA-U1	POWERED BY OUTDOOR UNIT				WALL	11,550	6,884	19.1 10.3	SEE NOTES
							DAHU-B2	MITSUBISHI	MSZ-GL15NA-U1	POWERED BY OUTDOOR UNIT				WALL	9,453	5,713	19.1 10.3	SEE NOTES
							DAHU-B3	MITSUBISHI	MSZ-GL18NA-U1	POWERED BY OUTDOOR UNIT				WALL	11,780	6,922	19.1 10.3	SEE NOTES

NOTES:
1. PROVIDE MANUFACTURERS SOLID STATE PROGRAMMABLE THERMOSTAT WITH SET BACK CONTROLS FOR TIME OF DAY AND DAY OF WEEK, AND CAPABLE OF TEMPORARY MANUAL OVERRIDE.
2. ANCHOR COMPRESSOR TO STRUCTURAL FRAMING ON ROOF. ROOF PENETRATION AS PER ROOFING MANUFACTURER.
3. PROVIDE FRENCH DRAINS PER STATE CODE FOR CONDENSATE DISCHARGE.
4. PROVIDE MANUFACTURER RECOMMENDED CLEARANCES AROUND ALL INDOOR AND OUTDOOR UNITS.
5. BEFORE PURCHASING ANY MATERIALS OR EQUIPMENT CONSULT WITH MANUFACTURER THAT INSTALLED LINE LENGTHS DO NOT EXCEED MAXIMUM REFRIGERANT LINE LENGTH. PROVIDE MANUFACTURER RECOMMENDED EQUIPMENT FOR ANY LONG REFRIGERANT LINE LENGTHS.
6. THE MECHANICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL WIRING AND CONNECTIONS BETWEEN THE OUTDOOR UNIT AND THE INDOOR UNIT.

ELECTRIC HEATER SCHEDULE

SYMBOL	TYPE	kW	VOLT	PHASE	THERMOSTAT	MFG.	MODEL	COLOR	REMARKS
EH-1	WALL MOUNTED	1.5	120	1	INCLUDE	Q-MARK	CWH1151DSF	VERIFY	SEE NOTES

NOTES:
1. UNIT SHALL BE LISTED.
2. INSTALL AS PER MANUFACTURERS RECOMMENDATIONS.
3. PROVIDE LOW VOLTAGE WALL MOUNTED THERMOSTAT AND MANUFACTURERS SURFACE MOUNTING FRAME.

MECHANICAL LEGEND

- SUPPLY REGISTER - WALL
- SUPPLY REGISTER - CEILING
- RETURN REGISTER - CEILING
- A - DIFFUSER/GRILLE (A / 100) — 100 - CFM
- T — THERMOSTAT
- TH — COMBINATION THERMOSTAT/HUMIDISTAT
- REMOTE TEMPERATURE SENSOR
- 20x10 — RECTANGULAR DUCT - 20" WIDE INSIDE A/C SYSTEM - 10" HIGH INSIDE
- TURNING VANES
- 10"ø — RIGID ROUND DUCT - 10" I.D.
- 10"ø — FLEX DUCT - 10" I.D.
- BALANCING DAMPER
- REDUCER
- VENT FAN
- INLINE VENT FAN
- LOUVER
- ELECTRIC WALL HEATER
- FD — 1½ HR FIRE DAMPER
- RD — RADIATION DAMPER
- FSD — 1½ HR FIRE/SMOKE DAMPER
- D — DUCT MOUNTED SMOKE DETECTOR
- KEY NOTE
- C — CONDENSATE LINE
- FA — FRESH AIR DUCT
- R — REFRIGERANT LINE SET
- V — VENTILATION DUCT

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12/09/2020

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Smith Office Building

PROJECT NO. (DSA # 20080)

NO	REV./SUB.	DATE

SHEET TITLE
Mechanical Schedules & Details

SHEET NUMBER
M0.1

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A	1st Floor Mechanical Plan
M1.1	Scale: 1/8" = 1'-0"

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DSA ENGINEERING

Smith Office Building

PROJECT NO: (DSA # 20080)

NO.	REV./SUB.	DATE

SHEET TITLE

1st Floor Mechanical Plan

SHEET NUMBER

M1.1

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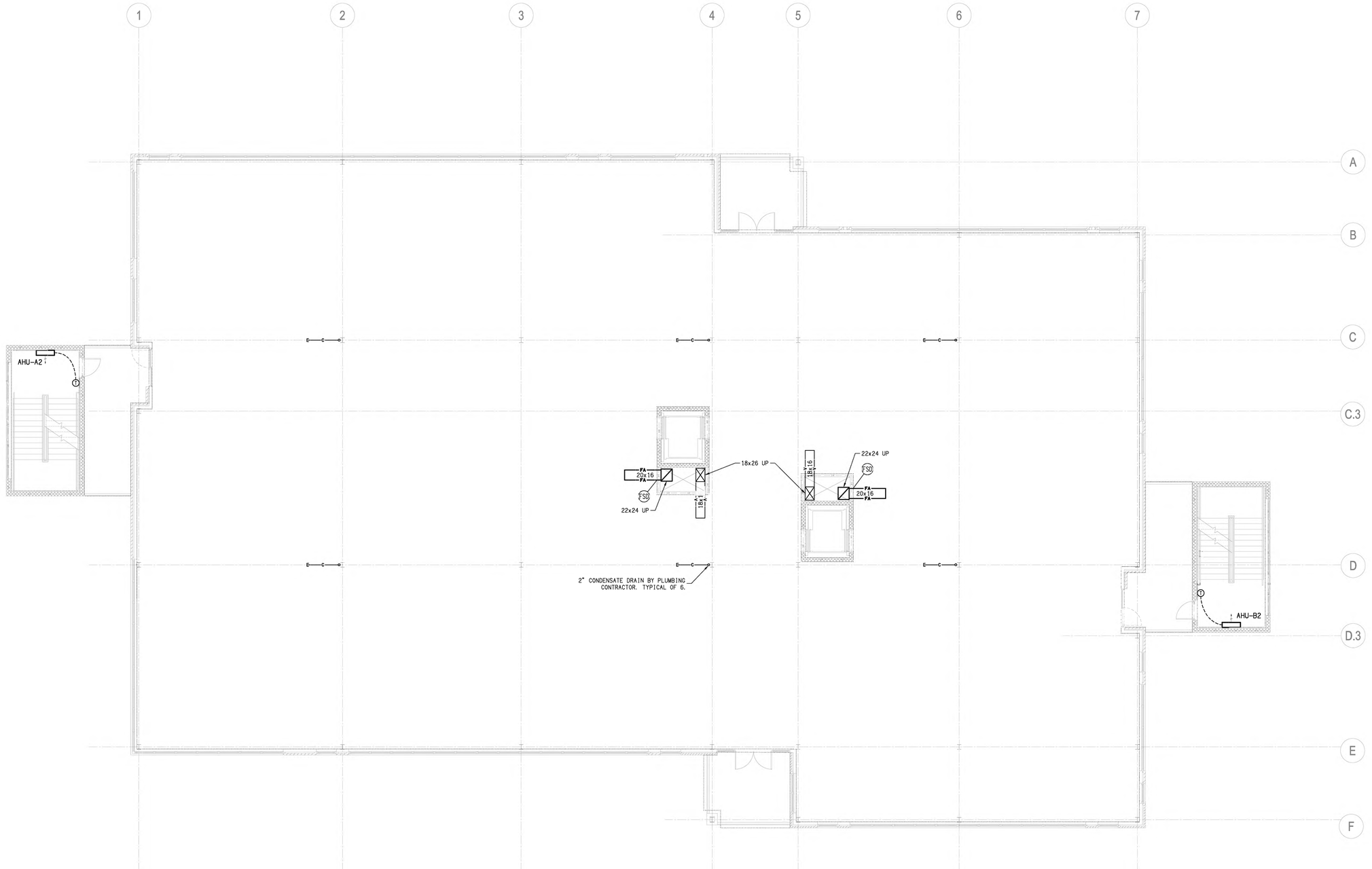

A	2nd Floor Mechanical Plan
M1.2	Scale: 1/8" = 1'-0"

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Smith Office Building

PROJECT NO: (DSA # 20080)

NO.	REV./SUB.	DATE

SHEET TITLE

2nd Floor Mechanical Plan

SHEET NUMBER

M1.2

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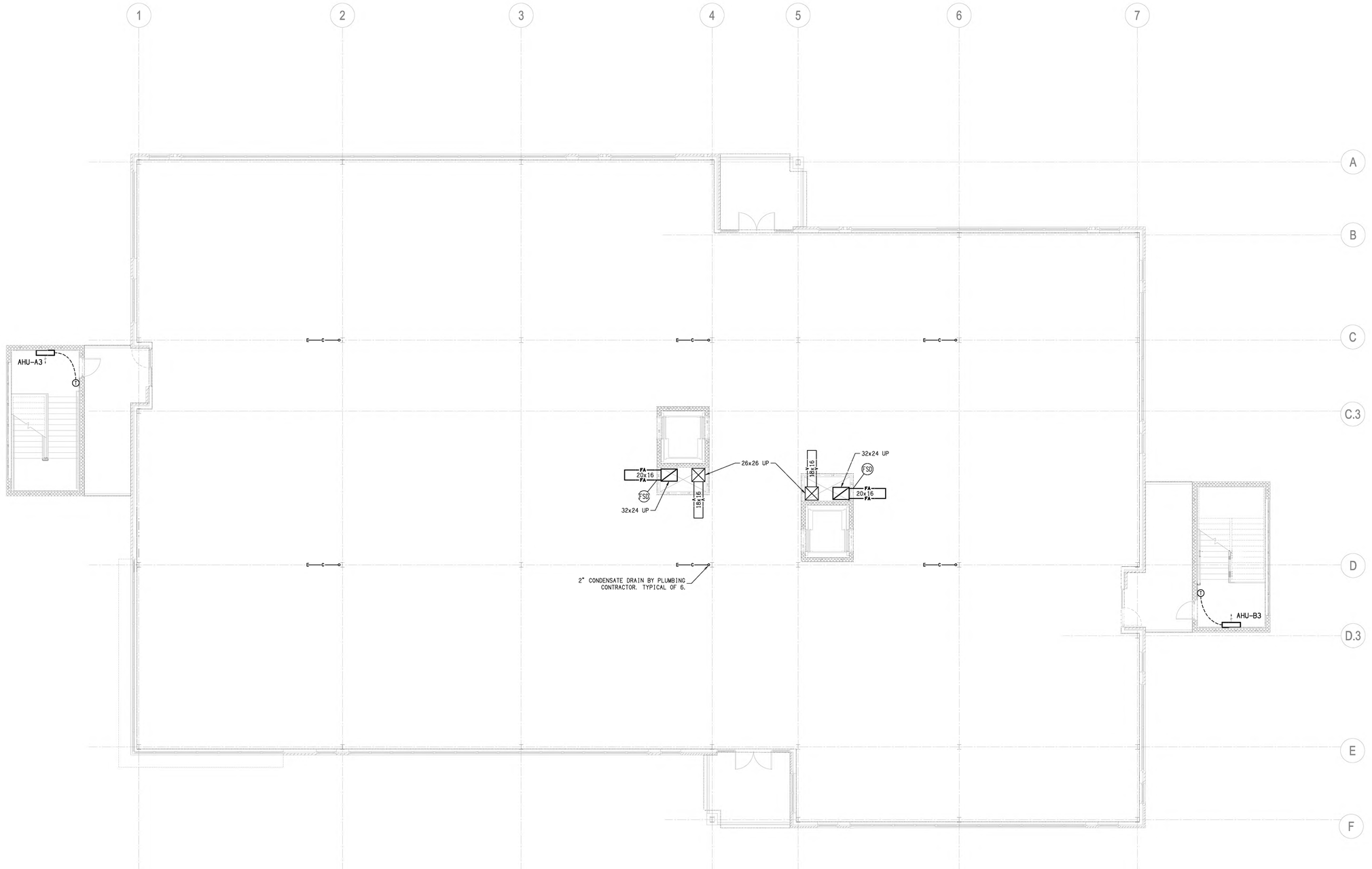

A	3rd Floor Mechanical Plan
M1.3	Scale: 1/8" = 1'-0"

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SHEET TITLE

3rd Floor Mechanical Plan

SHEET NUMBER

M1.3

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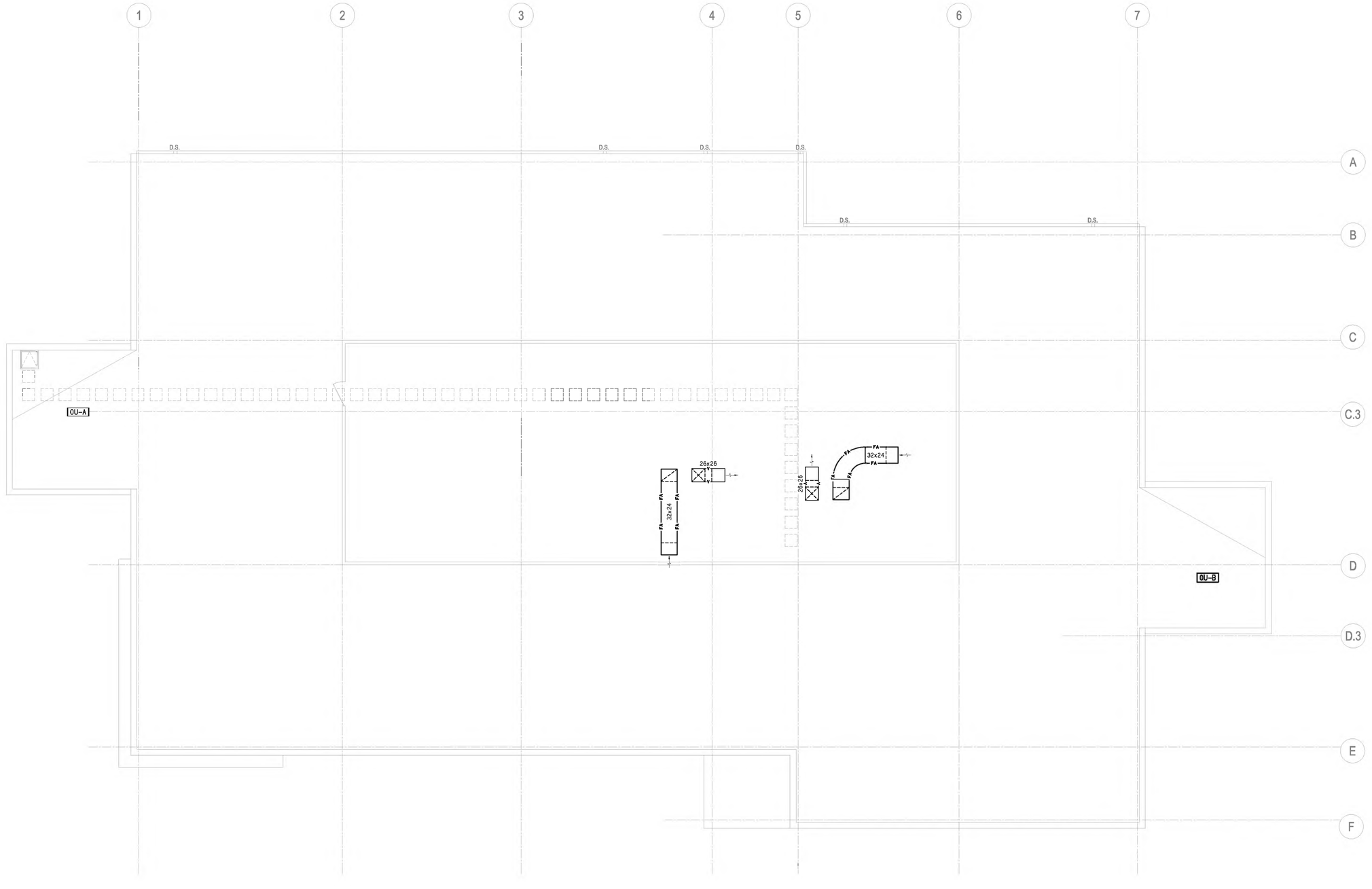

A M1.4 Roof Mechanical Plan
Scale: 1/8" = 1'-0"

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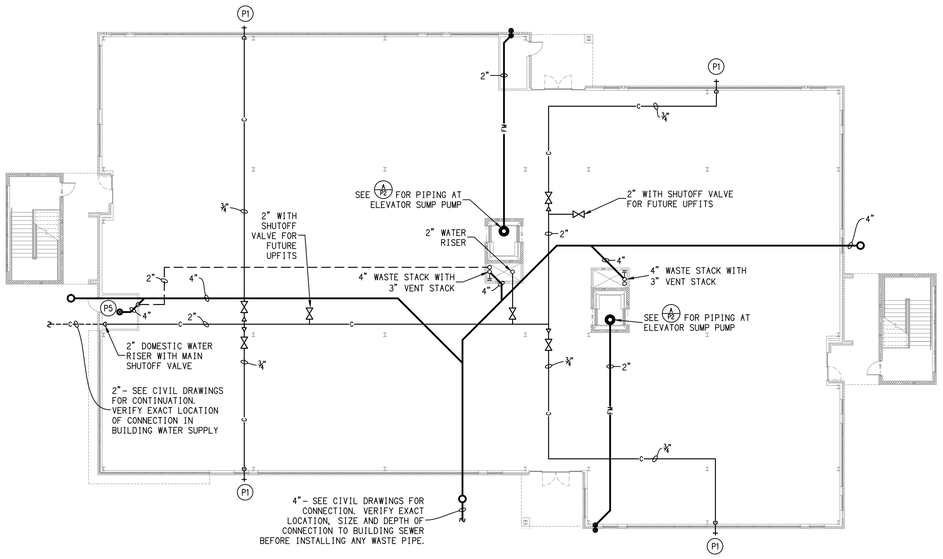
SHEET TITLE

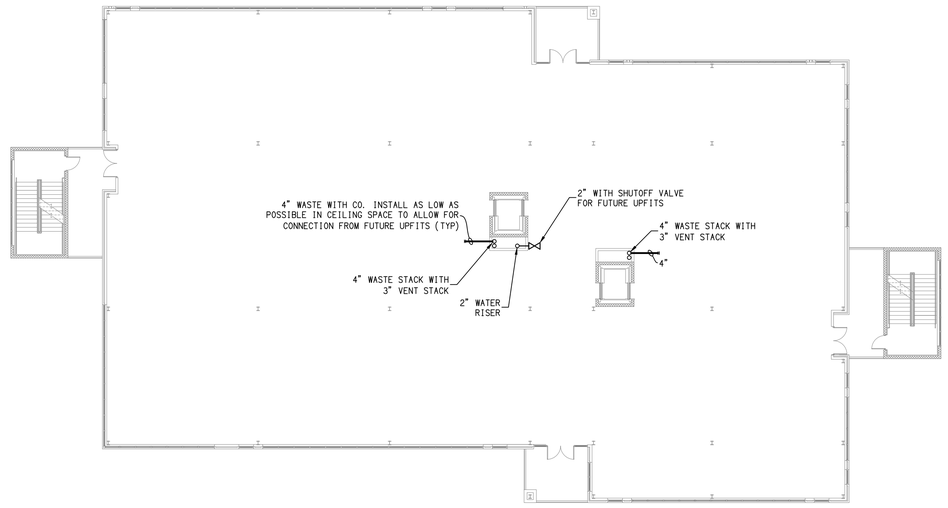
Roof Mechanical Plan

SHEET NUMBER

M1.4



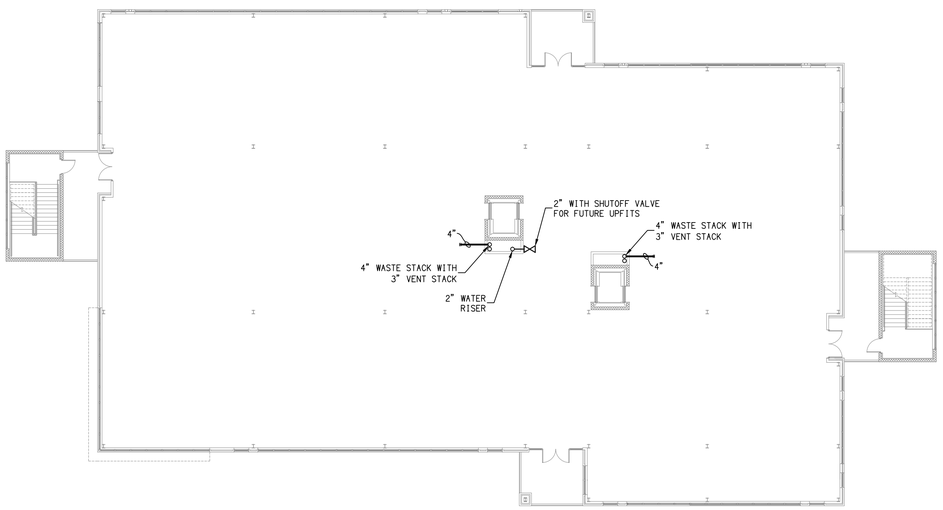
A/P1 FIRST FLOOR PLUMBING PLAN
SCALE: 1/8" = 1'-0"



B/P1 SECOND FLOOR PLUMBING PLAN
SCALE: 1/8" = 1'-0"

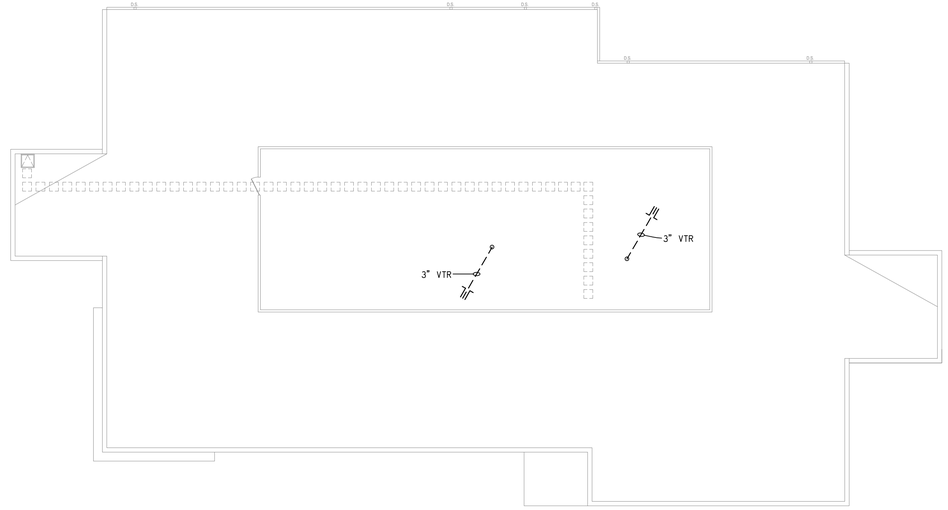
LEGEND

———	WASTE PIPE
- - - -	VENT PIPE
——c——	COLD WATER PIPE - ABOVE GRADE
----c----	COLD WATER PIPE - BELOW GRADE
⋈	GATE VALVE
→	HOSE BIBB
—◁—	PIPE REDUCTION
□	INTERIOR CLEANOUT (P2)
○	EXTERIOR CLEANOUT (P3)
—II	WALL CLEANOUT (P4)
VTR	VENT THROUGH ROOF
CO	CLEANOUT
(A/P1)	REFER TO PLAN OR DETAIL A ON SHEET P1
⊗	FLOOR DRAIN



C/P1 THIRD FLOOR PLUMBING PLAN
SCALE: 1/8" = 1'-0"

WATER DESIGN ASSUMES:
- 1½" TAP AND METER
- BACKFLOW PREVENTER AT METER
- 100' MAXIMUM 2" SITE WATER SUPPLY LINE



D/P1 ROOF PLUMBING PLAN
SCALE: 1/8" = 1'-0"

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SHEET TITLE
FIRST, SECOND, THIRD FLOOR & ROOF PLUMBING PLAN

SHEET NUMBER
P1

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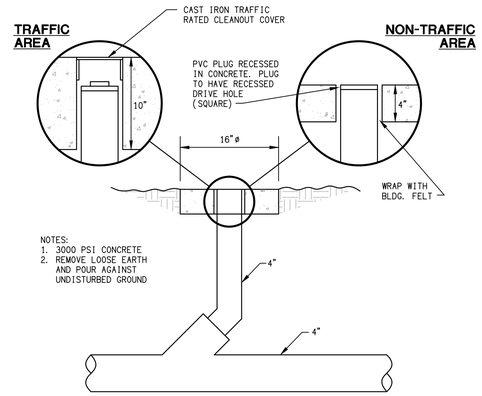
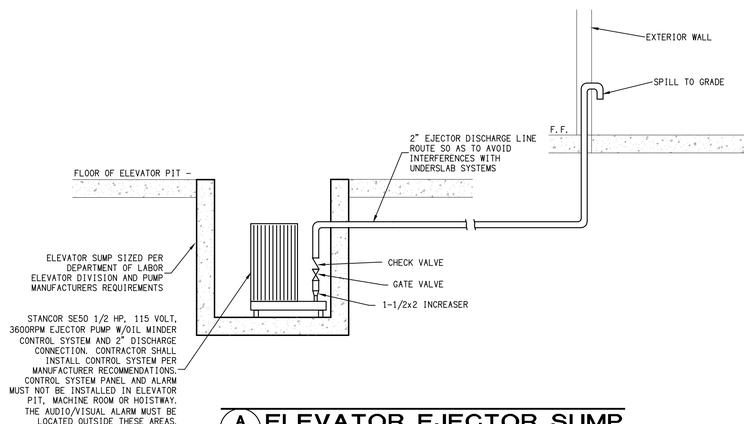
PLUMBING FIXTURE SCHEDULE -

SYM.	FIXTURE	CW	HW	DRAIN	STOPS & VALVES	MANUF.	MODEL	REMARKS
P-1	HOSE BIBB EXTERIOR	3/4"	–	–	–	WOODFORD	25	PROVIDE VACUUM BREAKER FREEZEPROOF
P-2	FINISHED FLOOR CLEANOUT	–	–	–	–	ZURN	ZN-1400-T	WITH NIKOLAY TOP
P-3	EXTERIOR CLEANOUT	–	–	–	–	ZURN	Z-1400	WITH CAST IRON TOP. SEE (B/P2)
P-4	WALL CLEANOUT COVERPLATE	–	–	–	–	ZURN	Z-1469	STAINLESS STEEL
P-5	FLOOR DRAIN – PRIMED	–	–	SEE PLAN	–	ZURN	ZN-415-5B-P	NIKOLAY TOP, DEEP SEAL TRAP, PROVIDE PRIMER TAP. VERIFY EXACT LOCATION AND FLOOR SLOPE BEFORE INSTALLATION BEGINS. SEE NOTE 1

NOTES:
1. FLOOR DRAIN SHALL BE PRIMED WITH 1/2" COPPER LINE FROM NEARBY CLEAR WATER FIXTURE (LAVATORY). TAP CLEAR WATER FIXTURE TAIL PIECE WITH WATER SAVER TRAP PRIMER AND ROUTE COPPER SUPPLY LINE UNDER SLAB TO DRAIN PRIMER CONNECTION. WATER SAVER TRAP PRIMER SHALL BE ACCESSIBLE AND CODE APPROVED. IF A CLEAR WATER FIXTURE SUCH AS A LAVATORY IS NOT AVAILABLE TAP NEARBY COLD WATER LINE AND ROUTE 1/2" PRIMER LINE THROUGH PRIMER VALVE CODE APPROVED FOR WASTE/WATER CROSS CONNECTION. VALVE SHALL BE ACCESSIBLE.



B/P2 **EXTERIOR CLEANOUT**
NO SCALE



A/P2 **ELEVATOR EJECTOR SUMP**
NTS

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SHEET TITLE

PLUMBING SCHEDULE, DETAILS AND SPECIFICATIONS

SHEET NUMBER

P2

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1.0 CODES AND STANDARDS:

1.1 "2018 North Carolina State Building Code" and "International Building Code", 2015.

1.2 "Minimum Design Loads for Buildings and other Structures" SEI/ASCE 7–16.

1.3 "Building Code Requirements for Structural Concrete (ACI 318–14)" American Concrete Institute 2014.

1.4 "Manual of Standard Practice", Concrete Reinforcing Steel Institute, latest edition.

1.5 "Specification for Structural Steel Buildings (AISC 360–10)" American Institute of Steel Construction, 2011 – 14th Edition

1.6 "Structural Welding Code – Steel (AWS D1.1)" and "Structural Welding Code – Reinforcing Steel (AWS D1.4)", American Welding Society.

1.7 "Building Code Requirements for Masonry Structures", ACI 530–13, ASCE 5–13, TMS 402–13.

1.8 "Standard Specifications for Joist Girders (JG–10)", "Standard Specifications for Open Web Steel Joists, K–Series (k–10)", "Standard Specifications for Long Span Steel Joist, LH Series and Deep Longspan Steel Joists, DLH Series (LH/DLH–1.1)", Steel Joist Institute

1.9 "Design Manual For Floor Decks and Roof Decks", Steel Deck Institute, latest edition.

2.0 DESIGN LOADS:
Project Located in: City of Wilmington, County of New Hanover, State of North Carolina.

2.1 Risk Category = II

2.2 Gravity Loads: (Reduced where allowed)

GRAVITY LOADS		
Location	Uniform (psf)	Concentrated (lbs) (Over 2.5'x2.5')
Roof Loads:		
Dead Load	20	
Live Load	20	300
Mechanical Area (inside screen wall)	65	
Floor Loads:		
Dead Load	72	
Floor Live Loads:		
Office	81	2000
Assembly	100	

2.3 Drifting Snow Loads per N.C. Building Code.

Pg = 10 psf
I = 1.0
Ce = 0.9
Ct = 1.0

2.4 Wind Loads per N.C. State Building Codes, 2018 edition (IBC 2015) & ASCE 7–16 (3–second gust)

Main Wind Force Resisting System:
V 146 mph
Exposure Category "B"

Building is enclosed & Internal Pressure coefficient (GCpi) = +0.18 & –0.18
Topographic Factor Kzt = 1.0
Wind Directionality Factor, Kd = 0.85

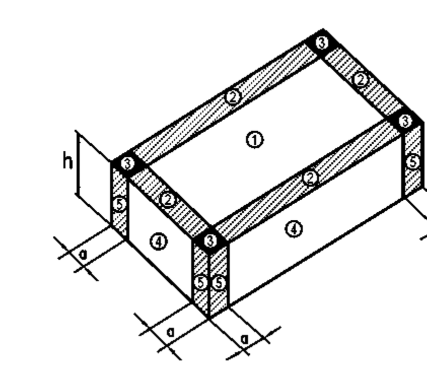
Calculated Wind Base Shear (For MWFRS)
Vx = 188k Vy = 308k

Components and Cladding:
V 146 mph
Exposure Category "B"

Components and Cladding Wind Pressure (psf)

Walls	Area = 10ft²		Area = 20ft²		Area = 50ft²		Area = 100ft²		Area = 500ft²	
Zone 4	44.5	-48.2	42.5	-46.3	39.9	-43.6	37.8	-41.6	37.8	-41.6
Zone 5	44.5	-59.5	42.5	-55.5	39.9	-50.2	37.8	-46.3	37.8	-46.3
Roof	**Area = 10ft²**		**Area = 20ft²**		**Area = 50ft²**		**Area = 100ft²**		**Area = 500ft²**	
Zone 1	18.0	-70.9	16.9	-66.2	16.0	-60.1	16.0	-55.4	16.0	-55.4
Zone 1'	18.0	-40.7	16.9	-40.7	16.0	-40.7	16.0	-40.7	16.0	-40.7
Zone 2	18.0	-93.9	16.9	-87.4	16.0	-79.5	16.0	-73.5	16.0	-73.5
Zone 3	18.0	-127.4	16.9	-115.4	16.0	-99.5	16.0	-87.4	16.0	-87.4

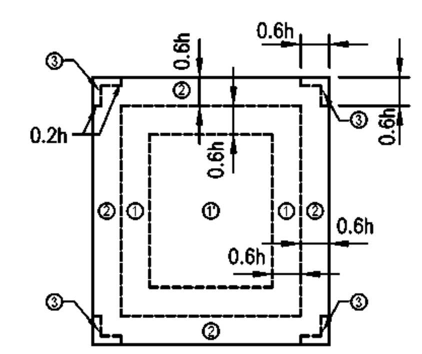
Notes:
1. Areas noted are effective wind areas as per ASCE 7–16, 26.2 definitions.
2. See figures below for Zone locations.
3. Plus and minus signs signify pressures acting toward and away from surfaces, respectively.
4. Design pressures shown in table are strength design wind pressures. Allowable stress design wind pressures may be calculated by factoring the pressures by 0.6.
5. Design pressures for effective wind areas between those noted in schedule may be interpolated.
6. Tributary area = greater of LxW or LxL/3.
7. Deflections may be calculated based on 42% of these loads.



COMPONENT & CLADDING WALL PRESSURES

Flat Roof

a = 10ft "corner zone"



COMPONENT & CLADDING ROOF PRESSURES

Flat Roof

h = 43ft "corner zone"

2.5 Seismic Loads per 2018 North Carolina State Building Code (IBC 2015) & ASCE 7–16

Risk Category = II
Site class = "D" (per geotechnical report)
Spectral Response Coefficients:
SDS = 0.159g
SD1 = 0.106g
Cs = 0.053g

Seismic Design Category = B
Seismic Importance Factor = 1.0
Basic Seismic – Force – Resisting System
Building Frame System – Special Steel Concentrically Braced Frames

RX=RY=3.0, ΩX=ΩY=3.0, CDX=CDY=3.0
Design Base Shear Vx = 174k Vy = 174k
Building Height Limit = NL
Analysis Procedure – 12.8.1 ASCE 7–16
Equivalent Lateral Force Procedure

2.6 Guardrail designed per North Carolina State Building Code, Section 1607.8

Guardrail:
Uniform load = 50 plf, any direction – per 1607.8.1
Concentrated load = 200 lbs, any direction – per 1607.8.1.1
Intermediate Rail: (all those expect handrail) per 1607.8.1.2

2.7 Flood Loads:
Project is not located in a flood zone.

3.0 FOUNDATIONS:

3.1 Foundation design is based on geotechnical report # 22:2973 by ECS Southeast, LLP, Wilmington, NC dated December 4, 2020. This report is available for inspection at the office of the architect or owner. The recommendations contained in this report are herein made part of the requirements of these contract documents.

3.2 Footings shall bear on strata capable of sustaining a minimum bearing pressure of 1500 psf.

3.3 Top of footing (T/FTG) elevations are shown on the drawings or are to be determined by the Contractor in the field in accordance with the guidelines set forth in the drawings.

3.4 Bottom of exterior footings, grade beams and walls shall bear at a minimum depth of 1'–0" below final grade for frost protection.

3.5 Testing and Inspection:
a. All areas to have slabs on grade shall be proof rolled in accordance with and under observation of the Geotechnical Engineer and approved prior to preparation for concrete placement.

b. All foundation bearing strata shall be inspected and approved by the Geotechnical Engineer prior to any concrete placement.

c. Geotechnical Engineer shall be the sole judge as to suitability of all foundation and/or slab bearing strata.

d. Footing bearing elevations shall be adjusted in the field as required to meet the design bearing pressures by additional excavation or compaction and/or backfilling or by other means acceptable to the Geotechnical Engineer.

3.6 Undercutting to remove existing fill beneath footings and slab shall be performed at the direction of the Geotechnical Engineer.

3.7 Engineered Fill: All fill material shall be selected in accordance with the Geotechnical Report Material shall be a clean, low plastic soil with a plasticity index less than 30 (less than 15 is preferred), liquid limit less than 50, and unit weight of 120 pcf (+ 5 pcf)

3.8 Compaction: All fill shall be placed in loose lifts not exceeding 8 inches in thickness and compacted to a minimum of 96 percent Standard Proctor (ASTM D–698) except that the top 12 inches shall be compacted to a minimum of 98 percent Standard Proctor. Moisture shall be controlled to within 3 percent above or below optimum content.

3.9 Remove all topsoil and organic materials. The stripping should extend at least 10' beyond the proposed construction limits.

3.10 Contractor shall review all construction considerations as outlined in the Geotechnical report and bid accordingly.

4.0 CONCRETE:

4.1 Concrete Strength:
All concrete shall be in accordance with the American Concrete Institute (ACI) 301 and 318.

4.2 Concrete shall have a 28 day compressive strength and density as follows:
a. Footings, Grade Beams, and Interior Slab–on–grade............3,000psi, Density = ±145pcf
b. Elevated Slab on Deck............3,000psi, Density = ±145pcf
c. Exterior Slab on Grade............4,000psi, Density = ±145pcf
d. CMU Grout Fill............3,000psi pea gravel mix, Density = ±145pcf, Slump 8"–11" or grout per Structural Masonry Notes, this sheet.

4.3 Concrete Mix Designs:
a. Submittals: Submit written reports of each proposed concrete mix not less than 15 days prior to the start of work.
b. Mix designs, including water, cement ratios and slumps, shall be prepared in accordance with ACI 301–05, Section 4, Cement shall conform to ASTM C 150 Type 1 or at contractor's option, ASTM C 595 Type IP where fly ash is permitted. Normal weight aggregate shall conform to ASTM C 33 and light weight aggregate shall conform to ASTM C 330. No admixtures containing calcium chloride shall be permitted in any concrete.
c. Aggregate size shall be #67 stone for supported slabs or other formed concrete elements; #57 stone for slabs on grade and footings or other concrete elements formed from and poured against earth; #89 stone for masonry grout.
d. Water reducing admixture shall be used in all concrete.
e. Air entraining admixture in accordance with ACI 301 shall be used in all concrete exposed freezing and thawing during construction or service conditions.
f. Concrete subjected to freezing/thawing shall have a maximum water/cement ratio of 0.45 and shall contain the amount of air entraining agent specified in ACI 301–05 Section 4.

4.4 Curing:
See specifications for curing method options and apply within two (2) hours after completion of finishing to all concrete flatwork and walls, U.N.O., other than footings and grade beams.

4.5 Use a non–corrosive, non–chloride accelerating admixture in concrete exposed to temperatures below 40 degrees. Uniformly heat the water and aggregates to a temperature of not less than 50 degrees. Place and cure concrete in accordance with ACI 306.

4.6 When hot weather conditions exist, place and cure concrete in accordance with ACI 301. Cool ingredients before mixing to maintain concrete temp. at time of placement below 90 degrees.

4.7 Reinforcing in all abutting concrete, including footings shall be continuous through or around all corners or intersections. Dowels or splices shall be equal in size and spacing to the reinforcing in the abutting members.

4.8 Refer to architectural drawings for door and window openings, drips, reglets, washes, masonry anchors, brick ledge elevations, slab depressions and miscellaneous embedded plates, bolts, anchors, angles, etc.

4.9 Refer to plumbing, mechanical and electrical drawings for underfloor, perimeter and other drains and for sleeves, outlet boxes, conduit, anchors, etc. The various trades are responsible for their items.

4.10 Base plates, anchor rods, support angles and other steel exposed to earth or granular fill shall be covered with a minimum of 3" of concrete.

4.11 Fill slabs, not shown on the structural drawings, shall be reinforced with a minimum of 3.0 lbs/yd³ of synthetic macro–fibers – see plan notes, unless noted otherwise on other drawings.

4.12 Finish surfaces to the following tolerances, according to ASTM E 1155, for a randomly trafficked floor surface:
a. Specified overall values of flatness, F(F) 25; and of levelness, F(L) 20; with minimum local values equal to 3/5 of the overall flatness and levelness values.
b. The composite F(F) and F(L) numbers shall be measured and reported within 72 hours after completion of slab concrete finishing operations and before removal of any supporting shores.

4.13 Non–shrink grout shall be pre–mixed, non–corrosive, non–metallic, non–staining containing silica sands, Portland cement, shrinkage compensating and water reducing agents. Product shall only require the addition of water. Minimum compressive strength shall be 2500 psi after one day and 7000 psi after 28 days. Grout shall be free of gas producing or air releasing and oxidizing agents and contain no corrosive iron, aluminum or gypsum.

4.14 Provide concrete grout – not mortar – for reinforced masonry lintel and bond beams where indicated on drawing or as scheduled.

4.15 Tolerance for anchor rods and other embedded items shall be per the AISC Code of Standard Practice Section 7.5.

4.16 Unless otherwise shown in the architectural drawings, provide 3/4–inch chamfers at all column, wall, slab or beam edges that are exposed to view in the finished structure.

4.17 Concrete cover for cast–in–place concrete reinforcement:
Concrete cast against & permanently exposed to earth:............3 Inches
Concrete exposed to earth or weather:
No. 6 through No. 18 Bars:............2 Inches
No. 5 Bar and smaller:............1½" Inches
Concrete not exposed to weather or in contact with ground:
Slabs, Walls, Joists:
No. 11 Bar and smaller:............¾" Inches
Beams, Columns:
Primary Reinforcement, Ties, Stirrups:............1½" Inches

5.0 REINFORCING STEEL:

5.1 Reinforcing shall be domestic new billet steel conforming to ASTM A615, Grade 60 or 60S including stirrups and ties, except that reinforcing which is required to be welded shall conform to ASTM A706.

5.2 Field bending of concrete reinforcing steel is not permitted.

5.3 Welded wire mat and fabric shall conform to ASTM A184 and A185 respectively and shall be provided in flat sheets. Welded wire mat/fabric shall be lapped 0'–6" at all splices.

5.4 Bar Splices:

	f'c = 3,000psi		f'c = 4,000psi		f'c = 5,000psi	
Bar Size	Ld (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)	Ld (in)	Class "B" Lap Splice (in)
#3	17	22	15	19	13	17
#4	22	29	19	25	17	23
#5	28	36	24	31	22	28
#6	33	43	29	37	26	34
#7	48	63	42	54	38	49
#8	55	72	48	62	43	56

1. Values are based on normal weight concrete.
2. Ld = minimum embed of rebar
3. Class "B" lap splice refers to minimum distance bars must be lapped for a full tension splice.

6.0 STRUCTURAL MASONRY:

6.1 All structural masonry shall conform to ACI 530 standards as appropriate to the material.

6.2 Concrete Masonry Units (CMU):
a. Units shall be lightweight cellular units conforming to ASTM C 90, Grade N–2. Concrete masonry net area unit strength shall be no less than 2,000psi in accordance with ASTM C 140, with a unit weight not exceeding 95 pcf.
b. Design compressive strength of CMU (fm) = 2,000psi.

6.3 Mortar shall conform to ASTM C 270. Mortar shall be type "S" and shall conform to the ASTM C270 proportion requirements.

6.4 Neither type "N" mortar nor masonry cement shall be used as part of the lateral force resisting system.

6.5 Grouting:
a. Grout shall conform to ASTM C476 as specified by proportion. Masonry grout shall conform to the ASTM proportion requirements for coarse grout with a slump of 8 to 11 inches. Contractor may substitute grout with pea gravel concrete masonry fill, see note 4.2 this sheet.
b. All bond beams shall be filled with grout and reinforced as indicated on the drawings (details or schedules). Mortar fill is not permitted.
c. All masonry wall cells or cavities indicated as reinforced shall be grouted for the full height of the wall, unless specifically noted otherwise on the drawings. Unreinforced walls indicated as grouted shall be grouted full height, unless specifically noted otherwise. Mortar fill is not permitted.
d. All masonry cells or cavities below grade shall be grouted solid unless specifically noted otherwise on the drawings. Mortar fill is not permitted.
e. Vertical grouting shall be low lift or high lift as follows:
(1) Low lift grouting shall be used for all cavity walls and may be used for all walls at the option of the Contractor. Lifts shall not exceed 4'–0" in height.
(2) High lift grouting is permissible only for filling of cellular masonry units and shall not exceed 12'–8" in height. Clean out holes shall be provided at the base of each grouted cell.
f. Grouting shall be stopped 1–1/2" below the top of a course to form a key at the joint.
g. Grouting of masonry beams or lintels shall be done in one continuous operation.
h. Consolidate pours with mechanical vibrator and reconsolidate by mechanical vibration after initial water loss and settlement has occured.
i. Mechanical vibrator shall be a low velocity vibrator with a ¾" head.

6.6 Masonry Reinforcing:
a. Foundation dowels may slope a maximum of 1:6 to align with wall cavities or vertical CMU cores. Greater slopes will require replacement of the foundation dowels.
b. Spliced reinforcing shall be lapped a length calculated per IBC 2107.5 OR 15" OR as shown on drawings, whichever is greatest. All splices shall be wired together.
c. Vertical reinforcing bars shall have a minimum clearance of ¾" from masonry and shall be held in position top and bottom and at intervals not exceeding 4'–0". Accessories for such support shall be used. Provide "AA Wire Products Company" (or approved equal) Rebar Positioner AA225 or AA239 for vertical bars and AA238 for horizontal bars or approved equal products from other suppliers.
d. Horizontal joint reinforcing shall be lapped no less than 6" all splices, including corners and tees where no control joint is used.
e. All horizontal joint reinforcing shall stop at control joints.
f. Horizontal reinforcing in bond beams shall be continuous through control joints.
g. All CMU walls shall have joint reinforcing @ 16"o.c. All joint reinforcing shall have (2) 9 gauge (0.148"ø or W1.7) side rods & cross rods @ 16"o.c.

6.7 Masonry contractor shall provide for and coordinate with other trades for placement of all items to be embedded or built into the masonry.

MINIMUM SPLICING LENGTH (Ld) FOR MASONRY	
BAR SIZE	SPLICE LENGTH
#3	16"
#4	22"
#5	26"
#6	43"
#7	60"

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NORTH CAROLINA PROFESSIONAL SEAL ENGINEER R. WOODS

NOT FOR CONSTRUCTION

DATE: 12.04.2020 - BUDGET PRICING

Smith Office - Sir Tyler IV
Wilmington, NC

PROJECT NO: 20131

NO.	REV./SUB.	DATE

GENERAL NOTES

S1.01

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7.3 All members shown are standard designations of "Dietrich Industries, Inc."

7.4 Design of members indicated in structural drawings is based on minimum properties of products produced by "Dietrich Industries." No substitution of materials is acceptable for use without prior approval of the structural engineer. Substitutions shall meet or exceed all properties produced by "Dietrich Industries, Inc."

7.5 All shop drawing submittals shall show layout, spacing, sizes, thicknesses and types of cold-formed metal framing, fabrication, and fastening and anchorage details, including mechanical fasteners. Show reinforcing channels, opening framing, supplemental framing, strapping, bracing, bridging, splices, accessories, connection details and attachment to adjoining work.

7.6 Shop drawings, design calculations and other structural data shall be prepared and sealed by a qualified engineer. The Structural Engineer shall be legally qualified to practice in the jurisdiction where the project is located and shall be experienced in providing engineering services of the kind indicated.

7.7 All framing components shall be cut squarely for attachment to perpendicular members or as required for an angular fit tight against abutting members. All load bearing stud/walls shall be factory assembled into panels with studs bearing squarely and fully in top and bottom tracks.

7.8 Fastening components shall be by self-drilling screws or by welding as defined below UNO on the drawings.

7.9 Screwed connections:
- a. Screws shall be type S-12 or type S-4 for all framing members per manufacturer's recommendations.
- b. A minimum of three (3) exposed threads shall penetrate through at joined materials.
- c. Corrosion-resistant cadmium-plated screws shall be used for screws attaching metal lath, masonry ties, and other exterior materials.

7.10 Welded connections:
- a. Gas metal arc welding (GMAW) shall be used for 20 ga. Or lighter members. AWSE-705-3, E-705-E, E-705-6 wire electrodes .030"-.035" diameter shall be used with carbon dioxide, argon-oxygen or argon-carbon dioxide shielding. Welding equipment 60-100 amperes at 25 volts using 220-volt 3-phase electric service.
- b. Shielded metal arc welding (SMAW) shall be used for 18 ga' and heavier members. AWS E-6012, E-6013, or E-7014 electrodes of 3/32" or 1/8" diameter shall be used. Welding equipment heat setting shall be varied dependent on material thickness.
- c. All welds shall be touched up with zinc rich paint, or paint similar to that used by the framing member manufacturer.

7.11 Alignment of studs (plumbness) and walls (straightness) shall be within 1/960 of their respective heights and lengths.

7.12 Studs shall be plumbed, aligned, and securely attached to top and bottom runners. Splices in studs are not permitted.

7.13 Where manufacturer's recommendations for erection, attachment, assembly, bracing, alignment, or other installation, or assembly requirements are more stringent than indicated in these drawings, the manufacturer's recommendations shall apply.

STEEL THICKNESS

Gauge:	Mils	Design Thickness		Minimum Thickness		Yield Strength
		Inches	mm	Inches	mm	ksi
20	33	0.0346	0.879	0.0329	0.836	33
18	43	0.0451	1.146	0.0428	1.087	33
16	54	0.0566	1.438	0.0538	1.367	50
14	68	0.0713	1.811	0.0677	1.720	50
12	97	0.1017	2.583	0.0966	2.454	50

8.0 STEEL JOISTS:

8.1 All steel joists shall be designed, fabricated, and erected in accordance with the SJI Specifications.

8.2 Joist ends shall be fixed and bridging shall be placed prior to application of any loads.

8.3 End Support:
- a. Minimum bearing requirements shall be in accordance with the SJI Specification. Extended joist ends for bearing on masonry shall be provided by the joist manufacturer where required to accommodate bearing conditions shown on the drawings.
- b. K Series joists shall be welded to supports with 1/8" fillet welds, one each side, 2" long.
- c. Bolt joists as indicated below to structural steel supports at column centerlines or where joists do not space on centerlines, bolt connections for each joist adjacent to centerline. K Series: 2 @ 1/2-inch diameter bolts (minimum)

8.4 Joist bridging:
- a. Shall be placed in accordance with the SJI Specification U.N.O. and shall be horizontal rods or angles at top & bottom chords for all K Series joists.
- b. Bridging that terminates at or is interrupted by structural steel members, shall be welded or bolted thereto. Provide diagonal ("X") bridging for ends of bridging lines terminating at walls/beams.

8.5 Holes in joist chords are not permitted, except at bearing and bolted connections.

8.6 All joists (40) forty feet and longer shall require a row of bolted bridging to be in place before slackening of hoisting lines.

9.0 STRUCTURAL STEEL:

9.1 All structural steel shall be of the grades indicated below, unless noted otherwise on plans or details.
Rolled shapes ASTM A992 Gr. 50
Steel pipe ASTM A53, Type E or S, Grade B, Fy-35ksi
Structural tubing ASTM A500, Grade B, Fy-46ksi
Plates and bars ASTM A36 U.N.O.
Anchor rods ASTM F1554, Grade 36 U.N.O.
Miscellaneous ASTM A36 U.N.O.

9.2 All structural steel shall be detailed, fabricated and erected in accordance with the AISC Code of Standard Practice. The fabricator is responsible for the design of connections not shown on the structural drawings. For the purpose of the connection design, the fabricator shall retain a professional engineer registered in the state where the project is located. The engineer shall seal and sign each shop drawing containing connection design. A note shall accompany the drawings stating that the seal is for "Connection Design Only".

9.3 Connection Design:
- a. Generally, connections shown on the drawings are schematic and are intended to show the relationship of the members.
- b. Connections shall be designed for one-half (1/2) the allowable uniform load on the member, as defined in Part 3, "Allowable Loads on Beams" tables in the AISC "Manual of Steel Construction", 14th Edition, See plan notes for design methodology and minimum reactions.

9.4 Bolted connections:
- a. Bearing type connections shall be snug tight with A325N or A490N bolts, U.N.O. Oversized and long-slotted holes are NOT permitted U.N.O. At single shear plate connections, provide bearing type fasteners with horizontal short slotted holes. All bolts shall be snug tight. DO NOT over torque bolts.
- b. Protruding bolt heads, shafts or nuts shall not extend nor prohibit the application of architectural finishes or placement of steel deck at its correct location and elevation.
- c. Connection designer is responsible for verifying the axial capacity after a section is reduced for bolt holes. Member size may be increased or plates added to maintain required capacity.
- d. Bolted connections shall be assembled and inspected in accordance with RCSC-2009 (Specification for Structural Joints Using High-Strength Bolts).

9.5 Welded connections:
- a. All welding shall be in accordance with the "Structural Welding Code - Steel" (AWS D1.1) of the American Welding Society, Latest Edition.
- b. Electrodes for welding shall comply with the requirements of Table 4.1.1 of the AWS code.
- c. At Moment Connections and Braced Frames Provide filler Metal that has a minimum CVN Toughness of 20 ft-lbs at minus 20 degrees F, As determined by AWS classification or Manufacturer Certification.
- d. Proof of welder certification shall be available at the job site during times of inspection.

9.6 Minimum plate thickness shall be 3/8" U.N.O.; minimum bolt diameter shall be 3/4-inch U.N.O.; minimum shop weld shall be 3/16" and minimum field weld shall be 1/4-inch U.N.O.

9.7 All re-entrant corners (such as copes and blocks) shall be cut and shaped notch free with a radius of at least 1/2-inch.

10.0 STEEL DECK:

10.1 Steel roof deck shall be galvanized, Type B, 1 1/2" deep, 20 gauge, U.N.O.

10.2 For steel roof deck spans, mechanically fasten side laps at mid-span using "Buildex", self-tapping TEKS No. 10 or larger machine screws or as noted on plan.
Provide additional sidelap fasteners where noted on plan.
Fasten roof deck to supporting members as noted on plan.

10.3 Do not hang pipes or ducts from steel roof deck. Fasten roof deck to supporting members as noted on plan.

10.4 COMPOSITE FLOOR DECK:
- a. Deck shall be 2" - 18 gauge, galvanized, composite floor deck. Vulcraft 2VLI18 or approved equal.
- b. Deck shall be galvanized per ASTM A924-94 (G60)
- c. Fasten composite floor deck to supporting members by not less than 3/4-inch puddle welds or elongated welds of equal perimeter, spaced not more than 12" o.c. with a minimum 2 welds per unit at each support.

11.0 COMPOSITE BEAMS:

11.1 Composite beams and girders DO NOT require temporary shoring for construction loads (wet concrete + 20 psf) U N O on the drawings. Contractor is responsible for verifying the construction load imposed on the structure. Where questions as to capacity arise, Contractor shall inform the Structural Engineer prior to proceeding with any work.

11.2 See details on S1.03 for typical stud layouts.

11.3 The number of shear connectors (studs) shown is based upon obtaining the full horizontal shear capacity indicated on the AISC "Load and Resistance Factor Design Specification for Steel Buildings" (LRFD) Chapter "I" for each stud for the strength and density of concrete where used. See composite steel deck notes also.

11.4 Studs shall be 3/4-inch diameter and shall extend not less than 1-1/2 inches above the top of the steel deck and shall not have less than 1/2-inch concrete cover above top of stud after welding and shall conform to ASTM A108.

11.5 The number of studs on a beam or between any two connections along a beam is shown on the drawings. Spacing of studs within the length shown shall be as uniform as possible.

11.6 No shop paint shall be applied to any studs nor to top flanges or surfaces of members receiving field welds.

11.7 Stud capacity varies with the type and length of the stud and with the properties of the composite deck. The deck supplier shall provide deck with a configuration that does not reduce the stud capacity per AISC requirements.

11.8 Stud type, length, shear value and detailed layout shall be submitted with the composite metal deck shop drawings.

11.9 Break ceramic ferrules (arc shields) loose and remove from deck.

11.10 A stud shear connector welded through the metal deck may take the place of a 3/4-inch puddle weld in order to secure the deck to the steel framing. Do not weld shear connectors through two layers (lapped ends) of deck units.

12.0 CONSTRUCTION AND SAFETY:

12.1 Woods Engineering P.A.'s responsibility is limited to the details and information shown on these drawings. It is the responsibility of the Contractor to provide adequate safety measures required by local codes as well as OSHA Standards for the Construction Industry.
This should include, but not be limited to the following:
Shoring to protect new as well as existing structures.
Necessary Scaffolding.
Material Handling Equipment.
Trench Boxing.

13.0 SPECIAL INSPECTIONS:

13.1 Refer to Sheet S1.04 for all Structural Material Inspections requirements.

14.0 SHOP DRAWING SUBMITTAL:

14.1 See Project Manual

14.2 Contractor shall submit Electronic copies (PDF format) of each shop drawing for review. Shop drawings shall be reviewed by the Contractor prior to submission to the Engineer. The Contractor shall allow 10 working days for shop drawing approval.

ABBREVIATIONS

@	AT
&	AND
AB	ANCHOR BOLTS
ACI	AMERICAN CONCRETE INSTITUTE
ADDL	ADDITIONAL
AFF	ABOVE FINISHED FLOOR
AISC	AMERICAN INSTITUTE OF STEEL CONSTRUCTION
AISI	AMERICAN IRON AND STEEL INSTITUTE
ALT	ALTERNATE
ARCH	ARCHITECTS - ARCHITECTURAL
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
AWS	AMERICAN WELDING SOCIETY
B, BOTT	BOTTOM
BCX	BOTTOM CHORD EXTENSION
BFF	BELOW FINISHED FLOOR
BLDG	BUILDING
BM	BEAM
BOS	BOTTOM OF STEEL
BRG	BEARING
BTWN	BETWEEN
CFS	COLD FORMED STEEL
CJ	CONTRACTION JOINT
CL	CENTERLINE
CLR	CLEAR
CMU	CONCRETE MASONRY UNITS
COL	COLUMN
CONC	CONCRETE
CONN	CONNECTION
CONST JT	CONSTRUCTION JOINT
CONT	CONTINUOUS
CONTR	CONTRACTOR
CSJ	COMPOSITE STEEL JOIST
CTRD	CENTERED
DBA	DEFORMED BAR ANCHOR
DD	DELEGATED DESIGN
DEFL	DEFLECTION
DEPR	DEPRESSION - DEPRESSED
DET	DETAIL
DIAG	DIAGONAL
ø	DIAMETER
DIM	DIMENSION
DIST	DISTANCE
DWG(S)	DRAWING(S)
DWL(S)	DOWEL(S)
EA	EACH
ELEV	ELEVATION
EMBED	EMBEDDED - EMBEDMENT
ENG	ENGINEER
EOR	ENGINEER OF RECORD
EQ	EQUAL
EQUIP	EQUIPMENT
EF	EACH FACE
EJ	EXPANSION JOINT
EOD	EDGE OF DECK
EOM	EDGE OF MASONRY
EOS	EDGE OF SLAB
EOW	EDGE OF WALL
EW	EACH WAY
EXIST	EXISTING
EXP	EXPANSION
EXT	EXTERIOR
FDN	FOUNDATION
FFE	FINISHED FLOOR ELEVATION
FS	FAR SIDE
FTG	FOOTING
GA	GAUGE
GALV	GALVANIZED
GT	GIRDER TRUSS
HD	HEADED
HI	HIGH
HORIZ	HORIZONTAL
HSS	HOLLOW STRUCTURAL SECTION
HT	HIP TRUSS
IFM	INSIDE FACE OF MASONRY
INT	INTERIOR
JBE	JOIST BEARING ELEVATION
JT	JOINT
K	KIP-S
KB	KICKER BRACE
KSI	KIPS PER SQUARE INCH
(L)	LONG SIDE REINFORCEMENT
LB	LONG BAR
LBS	POUNDS
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LO	LOW
LOC	LOCATION
LWC	LIGHT WEIGHT CONCRETE
MAX	MAXIMUM
MC	MOMENT CONNECTION
MECH	MECHANICAL
MFR	MANUFACTURER
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MOW	MIDDLE OF WALL
MP	MASONRY PILASTER
d	NAILS - PENNY
No	NUMBER
NS	NEAR SIDE
NTS	NOT TO SCALE
NWC	NORMAL WEIGHT CONCRETE
OC	ON CENTER
OFB	OUTSIDE FACE OF BRICK
OFM	OUTSIDE FACE OF MASONRY
OFS	OUTSIDE FACE OF STUD
OPNG	OPENING
OPP	OPPOSITE HAND
PEBS	PRE-ENGINEERED BUILDING SUPPLIER
PED	PEDESTAL
PL	PLATE
PSF	POUNDS PER SQUARE FOOT
PSI	POUNDS PER SQUARE INCH
PSL	PARALLEL STRAND LUMBER
PLF	POUNDS PER LINEAR FOOT
PT	PRESSURE TREATED
REF	REFERENCE
REINF	REINFORCING
REQD	REQUIRED
(S)	SHORT SIDE REINFORCEMENT
SB	SHORT BAR
SCHD	SCHEDULE
SF	STEP FOOTING
SIM	SIMILAR
SOG	SLAB ON GRADE
SPEC(S)	SPECIFICATION(S)
SPF	SPRUCE PINE FUR
SQ	SQUARE
STD	STANDARD
STIFF	STIFFENER
STIRR	STIRRUP
STL	STEEL
STR	STRUCTURAL
SW	SHEAR WALL
SYP	SOUTHERN YELLOW PINE
T	TOP
TCX	TOP CHORD EXTENSION
TOC	TOP OF CONCRETE
TOS	TOP OF STEEL
TOW	TOP OF WALL
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VB	VEHICLE BARRIER
VERT	VERTICAL
VIF	VERIFY IN FIELD
W	WITH
WWF	WELDED WIRE FABRIC

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DATE: 12.04.2020 - BUDGET PRICING

Smith Office - Sir Tyler IV
Wilmington, NC

PROJECT NO: 20131

NO.	REV./SUB.	DATE

GENERAL NOTES

S1.02

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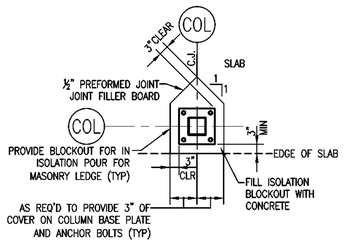
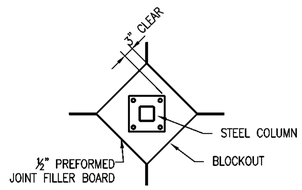


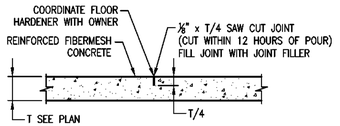
TYPICAL ISOLATION JOINT AT SLAB EDGE

NOT TO SCALE



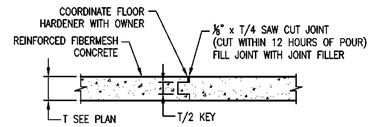
ISOLATION JOINT DETAIL

NOT TO SCALE



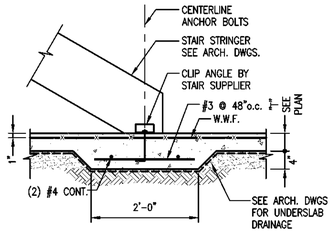
CONTRACTION JOINT

SCALE: 1" = 1'-0"



CONSTRUCTION JOINT

SCALE: 1" = 1'-0"



NOTE: EXTEND THICKENED SLAB BETWEEN STAIR STRINGERS AND 1'-0" BEYOND EACH

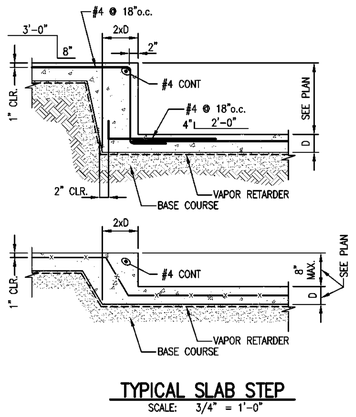
TYPICAL THICKENED SLAB

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

STEEL LINTEL SCHEDULE

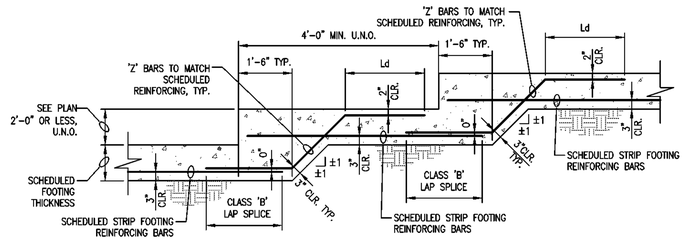
CLEAR OPENING	ONE ANGLE FOR EA 4"WYTHE	MIN BRG	MAX. HEIGHT OF BRICK
0'-8" TO 6'-0"	L7" x 4" x 5/16" LLH	8"	9'-0"
6'-0" TO 8'-0"	7"x5"x7/16" BENT PLATE LLH	8"	9'-0"
8'-0" TO 10'-0"	7"x7"x7/16" BENT PLATE	8"	9'-0"
10'-0" TO 12'-0"	9"x7"x7/16" BENT PLATE LLV	8"	9'-0"

NOTES:
1. WHERE LINTELS BEAR ON HOLLOW MASONRY UNITS FILL ALL CORES UNDER BEARING WITH GROUT FROM BOTTOM OF LINTEL TO 16" MINIMUM BELOW.
2. THESE LINTELS ARE NOT DESIGNED FOR MASONRY WALLS THAT CARRY FLOOR OR ROOF LOAD.
3. LINTELS ARE DESIGNED TO CARRY THE MAXIMUM HEIGHT OF BRICK LISTED IN SCHEDULE. IF STACKED BRICK HEIGHT EXCEEDS LISTED VALUE, THEN CONTACT STRUCTURAL ENGINEER FOR ALTERNATE DESIGN.
4. ALL STEEL LINTELS SHALL BE HOT DIP GALVANIZED AND PAINTED.
5. SEE DETAIL BELOW FOR REQUIREMENTS



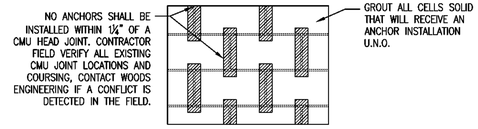
TYPICAL SLAB STEP

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



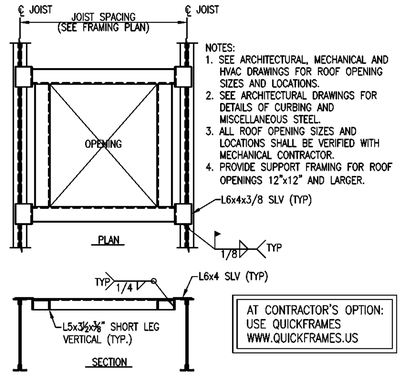
STEP FOOTING DETAIL

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



ANCHOR INSTALLATION DIAGRAM

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

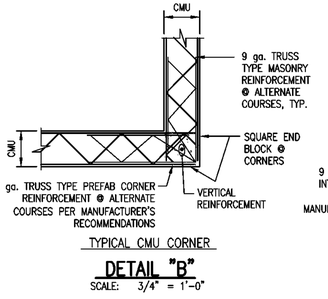


NOTES:
1. SEE ARCHITECTURAL, MECHANICAL AND HVAC DRAWINGS FOR ROOF OPENING SIZES AND LOCATIONS.
2. SEE ARCHITECTURAL DRAWINGS FOR DETAILS OF CURBING AND MISCELLANEOUS STEEL.
3. ALL ROOF OPENING SIZES AND LOCATIONS SHALL BE VERIFIED WITH MECHANICAL CONTRACTOR.
4. PROVIDE SUPPORT FRAMING FOR ROOF OPENINGS 12"x12" AND LARGER.

AT CONTRACTOR'S OPTION: USE QUICKFRAMES WWW.QUICKFRAMES.US

DETAIL OF TYPICAL ROOF OPENING

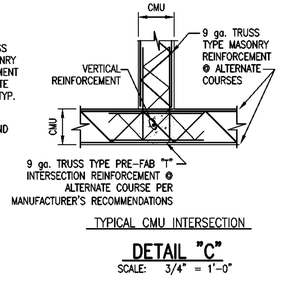
NOT TO SCALE



TYPICAL CMU CORNER

DETAIL "B"

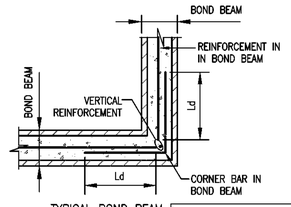
SCALE: 3/4" = 1'-0"



TYPICAL CMU INTERSECTION

DETAIL "C"

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

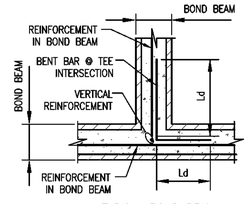


TYPICAL BOND BEAM REINFORCING

NOTE: TRUSS TYPE REINFORCEMENT SHOWN, HOWEVER LADDER OR TRUSS TYPES ARE ACCEPTABLE.

DETAIL "D"

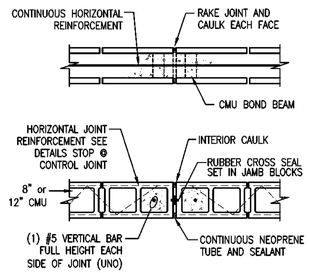
SCALE: 3/4" = 1'-0"



TYPICAL BOND BEAM INTERSECTION REINFORCING

DETAIL "E"

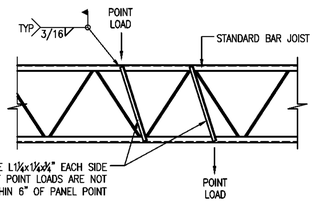
SCALE: 3/4" = 1'-0"



TYPICAL CONTROL JOINT

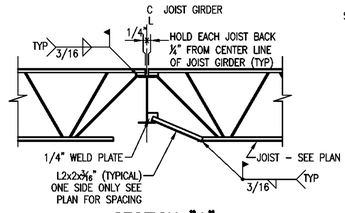
DETAIL "F"

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



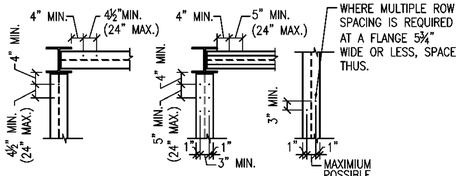
DETAIL OF TYPICAL JOIST REINFORCEMENT

NOT TO SCALE



SECTION "A"

SCALE: 1/2" = 1'-0"
GIRDER BOTTOM FLANGE (BRACE TYP.)

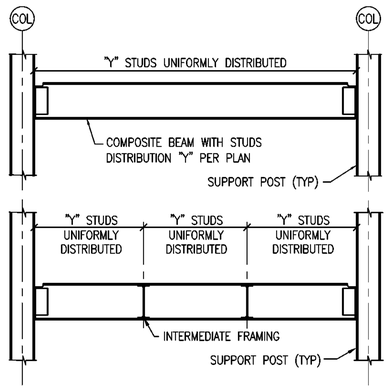


SINGLE ROW SPACING
USE SINGLE ROW SPACING EXCEPT WHEN REQUIRED BY FIELD CONDITIONS.

MULTIPLE ROW SPACING
NOTE: WHERE DECK IS CONTINUOUS OVER THE BEAMS THE DECK VALLEYS MAY CONTROL & POSSIBLY DICTATE SPACING. DECK SUPPLIER SHALL COMPLY W/ STUD CAPACITY REDUCTIONS REQUIRED TO EQUAL ORIGINAL CAPACITY.

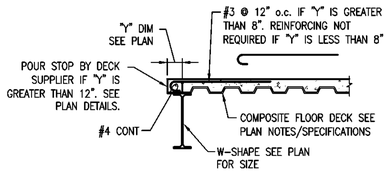
TYPICAL SHEAR STUD DETAIL

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



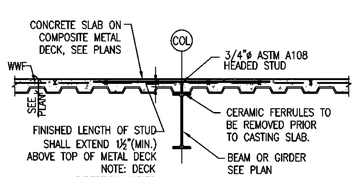
TYPICAL COMPOSITE BEAM STUD DISTRIBUTION

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



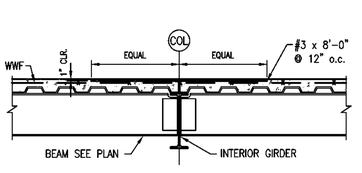
TYPICAL INTERIOR EDGE OF FRAMED FLOOR SLAB

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



TYPICAL SHEAR STUD DETAIL

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



TYPICAL COMPOSITE SLAB REINFORCEMENT

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

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DATE: 12.04.2020 - BUDGET PRICING

PROJECT NO: 20131

Smith Office - Sir Tyler IV
Wilmington, NC

NO.	REV./SUB.	DATE

TYPICAL DETAILS

S1.03

SCHEDULE FOR STRUCTURAL MATERIAL INSPECTIONS

BUILDING COMPONENTS OR MATERIAL	MATERIAL SUBMITTAL	INSPECTION / MONITORING	INSPECTION FREQUENCY	INSPECTOR QUALIFICATIONS	TEST REQUIREMENTS	TEST FREQUENCY	INSPECTION AGENCY
SOILS	1. REVIEW XX, XX. GEOTECHNICAL REPORT #34.1868 – ALLOWABLE SOIL BEARING = 2000psf 2. FILL MATERIAL SPECIFICATIONS. 3. VAPOR BARRIER	1.–2. INSPECT SOILS PER ATTACHED 2015 IBC, TABLE 1705.6 FOR REQUIRED VERIFICATION AND INSPECTION. 3. INSPECT VAPOR BARRIER INSTALLATION. SEE PROJECT & MANUFACTURER SPECS.	ALL INSPECTIONS ARE PERIODIC EXCEPT FILL PLACEMENT AND COMPACTION WHICH IS CONTINUOUS.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. PROVIDE VISUAL AND DCP TESTS PER ASTM STP-399 2. SUBGRADE DENSITY VERIFICATION	1. EACH ISOLATED FOOTING AND AT 20' INTERVALS FOR CONTINUOUS FOOTINGS. 2. AS REQUIRED TO VERIFY ENTIRE BUILDING PAD.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
CONCRETE	1. SUBMIT CONCRETE MIX DESIGN. 2. SUBMIT MATERIAL CERTIFICATION 3. SUBMIT REBAR SHOP DRAWINGS.	INSPECT CONCRETE CONSTRUCTION PER ATTACHED 2015 IBC, TABLE 1705.3	AS OUTLINED PER TASK IN TABLE 1705.3	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. TEST CONCRETE FOR COMPRESSIVE STRENGTH, SLUMP, AIR CONTENT, TEMPERATURE AND BATCH TO PLACEMENT TIME.	1. SAMPLES FOR STRENGTH TESTS FOR EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 YD^3 OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000FT^2 OF SURFACE AREA FOR SLABS OR WALLS.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
STEEL	1. SUBMIT ANCHOR BOLT SETTING PLAN. 2. SUBMIT STEEL SHOP DRAWINGS. 3. SUBMIT MATERIAL CERTIFICATES. 4. FABRICATOR CERTIFICATE OF COMPLIANCE WITH 2015 IBC, 1705.2.	INSPECT STEEL PER ATTACHED TABLE BELOW	AS OUTLINED PER TASK IN TABLE BELOW	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. VISUAL INSPECTION BY A QUALIFIED STEEL INSPECTOR. 2. MOMENT CONNECTIONS FIELD WELDED. 3. ALL FIELD BOLTING SHALL BE SNUG TIGHT.	INSPECT ALL FIELD CONNECTIONS. CONTINUOUS INSPECTION OF ALL MOMENT CONNECTIONS REQUIRED.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
STEEL JOISTS	1. SUBMIT STEEL SHOP DRAWINGS. 2. SUBMIT MATERIAL CERTIFICATES. 3. FABRICATOR CERTIFICATE OF COMPLIANCE WITH 2015 IBC, 1705.2.	INSPECT STEEL JOIST PER ATTACHED TABLE 1705.2.3	AS OUTLINED PER TASK IN TABLE 1705.2.3	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. VISUAL INSPECTION BY A QUALIFIED STEEL INSPECTOR. 2. MOMENT CONNECTIONS FIELD WELDED. 3. ALL FIELD BOLTING SHALL BE SNUG TIGHT.	1. PERIODIC	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
METAL ROOF DECK	1. SUBMIT PRODUCT DATA SHEET 2. SUBMIT METAL ROOF DECK SHOP DRAWINGS.	1. VERIFY DECK TYPE, DEPTH, AND GAUGE. 2. VERIFY QUANTITY AND QUALITY OF CONNECTIONS TO SUPPORT MEMBERS. 3. VERIFY SIDE LAP CONNECTIONS.	1. PERIODIC	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	NONE	NONE	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
MASONRY	1. SUBMIT MATERIAL CERTIFICATIONS.	INSPECT MASONRY PER ATTACHED ACI 530–13, TABLE 1.19.2. LEVEL B REQUIRED VERIFICATION AND INSPECTION OF MASONRY CONSTRUCTION.	AS OUTLINED PER TASK IN TABLE BELOW.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. TEST GROUT (PEA GRAVEL CONCRETE) FOR SLUMP & COMPRESSIVE STRENGTH.	1. SAMPLES FOR STRENGTH TESTS FOR EACH CLASS OF CONCRETE PLACED EACH DAY SHALL BE TAKEN NOT LESS THAN ONCE A DAY, NOR LESS THAN ONCE FOR EACH 150 YD^3 OF CONCRETE, NOR LESS THAN ONCE FOR EACH 5,000FT^2 OF SURFACE AREA FOR SLABS OR WALLS.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.
ROOF CLADDING	NONE.	1. VISUAL AND AS REQUIRED TO CERTIFY ROOF ATTACHMENT PER MANUFACTURER GUIDELINES.	1. PERIODIC.	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.	1. PER MANUFACTURER AND 2015 IBC CODE FOR A WIND SPEED OF 146 MPH.	1. PERIODIC	1. QUALIFIED INSPECTION AGENCY A) INSPECTION AGENCY TO BE APPROVED BY SPECIAL INSPECTION COORDINATOR & BUILDING OFFICIAL.

REQUIRED VERIFICATION & INSPECTION OF SOILS

VERIFICATION & INSPECTION TASK	CONTINUOUS	PERIODIC
1. VERIFY MATERIALS BELOW FOOTINGS ARE ADEQUATE TO ACHIEVE THE DESIGN BEARING CAPACITY.	–	X
2. VERIFY EXCAVATIONS ARE EXTENDED TO PROPER DEPTH AND HAVE REACHED PROPER MATERIAL.	–	X
3. PERFORM CLASSIFICATION AND TESTING OF CONTROLLED FILL MATERIALS.	–	X
4. VERIFY USE OF PROPER MATERIALS, DENSITIES AND LIFT THICKNESS DURING PLACEMENT AND COMPACTION OF CONTROLLED FILL.	X	–
5. PRIOR TO PLACEMENT OF COMPACTED FILL, OBSERVE SUBGRADE AND VERIFY THAT SITE HAS BEEN PREPARED PROPERLY,	–	X

NOTE: SEE IBC–2015, TABLE 1705.6, CHAPTER 17

REQUIRED VERIFICATION & INSPECTION OF CONCRETE CONSTRUCTION FREQUENCY CHART

VERIFICATION & INSPECTION TASK	CONTINUOUS	PERIODIC
1. INSPECTION OF REINFORCING STEEL INCLUDING PRESTRESSING TENDONS, AND VERIFY PLACEMENT	–	X
2. REINFORCING BAR WELDING: a. VERIFY WEDABILITY OF REINFORCING BARS OTHER THAN ASTM A 706 b. INSPECT SINGLE–PASS FILLET WELDS, MAXIMUM $\frac{5}{16}$"; and c. INSPECT ALL OTHER WELDS.	 – X	 X X
3. INSPECTION OF ANCHORS CAST IN CONCRETE	–	X
4. INSPECT ANCHORS POST–INSTALLED IN HARDENED CONCRETE MEMBERS a. ADHESIVE ANCHORS INSTALLED HORIZONTALLY OR UPWARDLY INCLUDED ORIENTATIONS TO RESIST SUSTAINED TENSION LOADS. b. MECHANICAL ANCHORS AND ADHESIVE ANCHORS NOT DEFINED IN 4.a	 X 	 X
5. VERIFY USE OF REQUIRED DESIGN MIX.	–	X
6. PRIOR TO CONCRETE PLACEMENT, FABRICATE SPECIMENS FOR STRENGTH TESTS, PERFORM SLUMP AND AIR CONTENT TESTS, AND DETERMINE THE TEMPERATURE OF THE CONCRETE.	X	–
7. INSPECTION OF CONCRETE AND SHOTCRETE PLACEMENT FOR PROPER APPLICATION TECHNIQUES.	X	–
8. VERIFY MAINTENANCE OF SPECIFIED CURING TEMPERATURE AND TECHNIQUES.	–	X
9. INSPECTION OF PRESTRESSED CONCRETE: a. APPLICATION OF PRESTRESSING FORCES. b. GROUTING OF BONDED PRESTRESSING TENDONS	 X X	 – –
10. INSPECT ERECTION OF PRECAST CONCRETE MEMBERS.	–	X
11. VERIFY IN–SITU CONCRETE STRENGTH, PRIOR TO STRESSING OF TENDONS IN POST–TENSIONED CONCRETE AND PRIOR TO REMOVAL OF SHORES AND FORMS FROM BEAMS AND STRUCTURAL SLABS.	–	X
12. INSPECT FORMWORK FOR SHAPE, LOCATION AND DIMENSIONS OF THE CONCRETE MEMBER BEING FORMED.	–	X

NOTE: SEE IBC 2015, TABLE 1705.3 FOR REFERENCE STANDARDS.

REQUIRED LEVEL B VERIFICATION & INSPECTION OF MASONRY CONSTRUCTION FREQUENCY CHART

VERIFICATION & INSPECTION TASK	CONTINUOUS	PERIODIC
1. COMPLIANCE WITH REQUIRED INSPECTION PROVISIONS OF THE CONSTRUCTION DOCUMENTS AND THE APPROVED SUBMITTALS SHALL BE VERIFIED.	–	x
2. VERIFICATION OF f'_m AND f'_{AAC} PRIOR TO CONSTRUCTION EXCEPT WHERE SPECIFICALLY EXEMPTED BY THIS CODE.	–	X
3. VERIFICATION OF SLUMP FLOW AND VSI AS DELIVERED TO THE SITE FOR SELF–CONSOLIDATING GROUT.	X	–
4. AS MASONRY CONSTRUCTION BEGINS, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
a. PROPORTIONS OF SITE–PREPARED MORTAR.	–	X
b. CONSTRUCTION OF MORTAR JOINTS.	–	X
c. LOCATION OF REINFORCEMENT, CONNECTORS, PRESTRESSING TENDONS AND ANCHORAGES.	–	X
d. PRESTRESSING TECHNIQUE.	–	X
e. GRADE AND SIZE OF PRESTRESSING TENDONS AND ANCHORAGES.	–	X
5. DURING CONSTRUCTION THE INSPECTION PROGRAM SHALL VERIFY:		
a. SIZE AND LOCATION OF STRUCTURAL ELEMENTS.	–	X
b. TYPE, SIZE AND LOCATION OF ANCHORS, INCLUDING OTHER DETAILS OF ANCHORAGE OF MASONRY TO STRUCTURAL MEMBERS, FRAMES OR OTHER CONSTRUCTION.	–	X
c. SPECIFIED SIZE, GRADE AND TYPE OF REINFORCEMENT, ANCHOR BOLTS, PRESTRESSING TENDONS AND ANCHORAGES.	–	X
d. WELDING OF REINFORCING BARS.	X	–
e. PREPARATION, CONSTRUCTION AND PROTECTION OF MASONRY DURING COLD WEATHER (TEMPERATURE BELOW 40°F) OR HOT WEATHER (TEMPERATURE ABOVE 90°F).	–	X
f. APPLICATION AND MEASUREMENT OF PRESTRESSING FORCE.	X	–
6. PRIOR TO GROUTING, THE FOLLOWING SHALL BE VERIFIED TO ENSURE COMPLIANCE:		
a. GROUT SPACE IS CLEAN.	–	X
b. PLACEMENT OF REINFORCEMENT AND CONNECTORS, AND PRESTRESSING TENDONS AND ANCHORAGES.	–	X
c. PROPORTIONS OF SITE–PREPARED GROUT AND PRESTRESSING GROUT FOR BONDED TENDONS.	–	X
d. CONSTRUCTION OF MORTAR JOINTS.	–	X
7. GROUT PLACEMENT SHALL BE VERIFIED TO ENSURE COMPLIANCE:	X	–
a. GROUTING OF PRESTRESSING BONDED TENDONS.	X	–
8. PREPARATION OF ANY REQUIRED GROUT SPECIMENS, MORTAR SPECIMENS AND/OR PRISMS SHALL BE OBSERVED.	–	X

NOTE: SEE IBC 2015, SECTION 1705.4 FOR REFERENCE STANDARDS.

(a) FREQUENCY REFERS TO THE FREQUENCY OF INSPECTION, WHICH MAY BE CONTINUOUS DURING THE TASK LISTED OF PERIODICALLY DURING THE LISTED TASK, AS DEFINED IN THE TABLE
(b) REQUIRED FOR THE FIRST 5000 ft^2 OF AAC MASONRY
(c) REQUIRED AFTER THE FIRST 5000 ft^2 OF AAC MASONRY
(d) SEE TABLE 1.19.2 OF TMS 402/ACI 530/ASCE 5–13 FOR REFERENCE STANDARDS

REQUIRED VERIFICATION & INSPECTION OF STEEL CONSTRUCTION

VERIFICATION & INSPECTION TASK	CONTINUOUS	PERIODIC
1. MATERIAL VERIFICATION OF HIGH–STRENGTH BOLTS, NUTS AND WASHERS:		
a. IDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	–	X
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	–	X
2. INSPECTION OF HIGH–STRENGTH BOLTING:		
a. SNUG–TIGHT JOINTS.	–	X
b. PRETENSIONED AND SLIP–CRITICAL JOINTS USING TURN–OF–NUT WITH MATCHMARKING, TWIST–OFF BOLT OR DIRECT TENSION INDICATOR METHODS OF INSTALLATION.	–	X
c. PRETENSIONED AND SLIP–CRITICAL JOINTS USING TURN–OF–NUT WITHOUT MATCHMARKING OR CALIBRATED WRENCH METHODS OF INSTALLATION.	X	–
3. MATERIAL VERIFICATION OF STRUCTURAL STEEL AND COLD–FORMED STEEL DECK:		
a. FOR STRUCTURAL STEEL, IDENTIFICATION MARKINGS TO CONFORM TO AISC 360	–	X
b. FOR OTHER STEEL, INDENTIFICATION MARKINGS TO CONFORM TO ASTM STANDARDS SPECIFIED IN THE APPROVED CONSTRUCTION DOCUMENTS.	–	X
c. MANUFACTURER'S CERTIFIED TEST REPORTS.	–	X
4. MATERIAL VERIFICATION OF WELD FILLER MATERIALS:		
a. IDENTIFICATION MARKINGS TO CONFORM TO AWS SPECIFICATION IN THE APPROVED CONSTRUCTION DOCUMENTS.	–	X
b. MANUFACTURER'S CERTIFICATE OF COMPLIANCE REQUIRED.	–	X
5. INSPECTION OF WELDING:		
a. STRUCTURAL STEEL AND COLD–FORMED STEEL DECK:		
1) COMPLETE AND PARTIAL PENETRATION GROOVE WELDS.	X	–
2) MULTIPASS FILLET WELDS.	X	–
3) SINGLE–PASS FILLET WELDS > $\frac{5}{16}$"	X	–
4) PLUG AND SLOT WELDS.	X	–
5) SINGLE–PASS FILLET WELDS ≤ $\frac{5}{16}$"	–	X
6) FLOOR AND ROOF DECK WELDS.	–	X
b. REINFORCING STEEL:		
1) VERIFICATION OF WELDABILITY OF REINFORCING STEEL OTHER THAN ASTM A 706.	–	X
2) REINFORCING STEEL–RESISTING FLEXURAL AND AXIAL FORCES IN INTERMEDIATE AND SPECIAL MOMENT FRAMES, AND BOUNDARY ELEMENTS OF SPECIAL STRUCTURAL WALLS OF CONCRETE AND SHEAR REINFORCEMENT.	X	–
3) SHEAR REINFORCEMENT.	X	–
4) OTHER REINFORCING STEEL	–	X
6. INSPECTION OF STEEL FRAME JOINT DETAILS FOR COMPLIANCE:		
a. DETAILS SUCH AS BRACING AND STIFFENING.	–	X
b. MEMBER LOCATIONS.	–	X
c. APPLICATION OF JOINT DETAILS AT EACH CONNECTION.	–	X

(a) OBSERVE ON A RANDOM BASIS, OPERATIONS NEED NOT BE DELAYED PENDING THESE INSPECTIONS. PERFORM THESE TASKS FOR EACH WELDED JOINT, BOLTED CONNECTION, OR STEEL ELEMENT
(b) SEE AISC 360 QUALITY ASSURANCE INSPECTION REQUIREMENTS

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DATE: 12.04.2020 - BUDGET PRICING

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STRUCTURAL MATERIAL INSPECTIONS

S1.04

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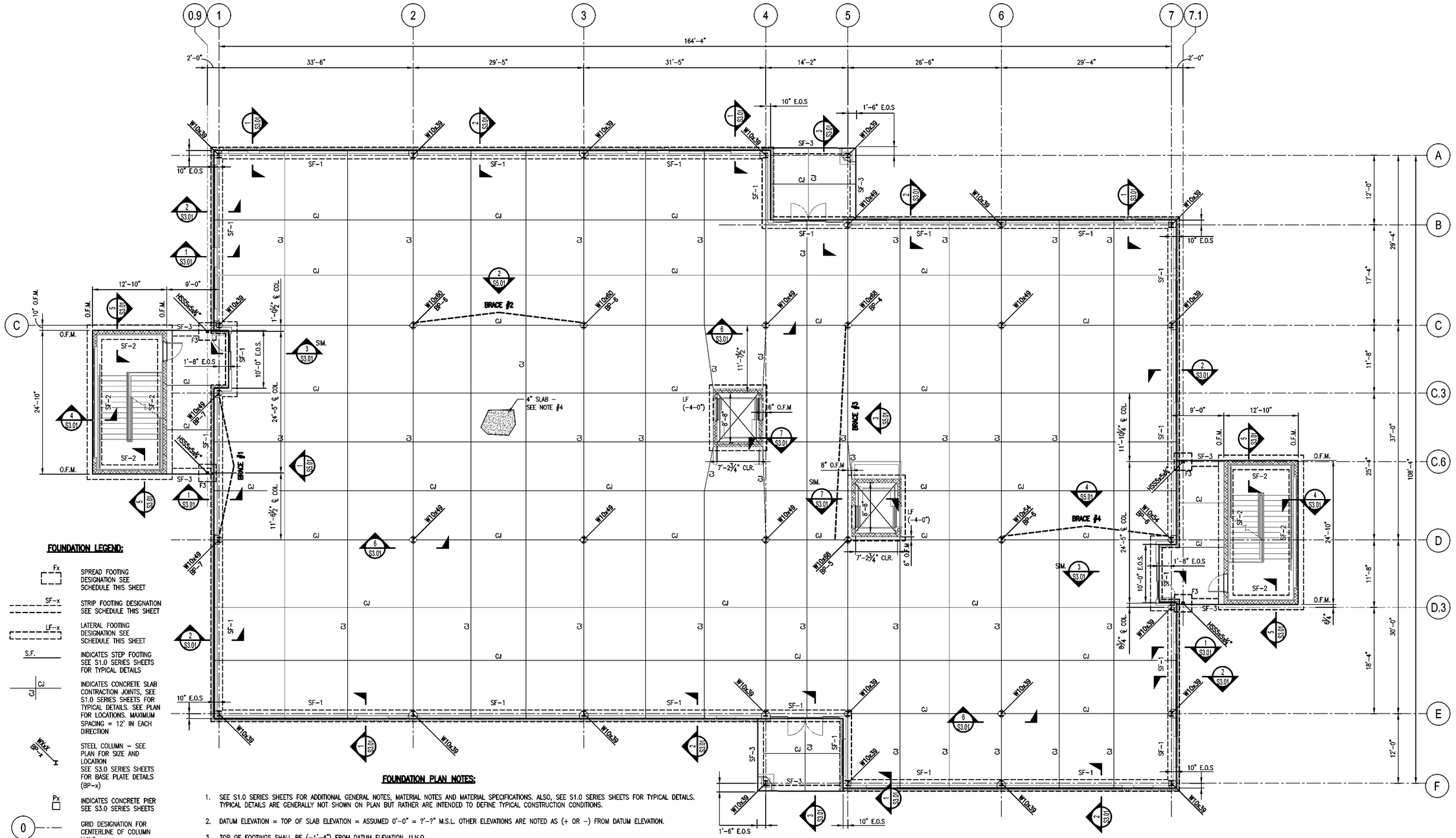

FOUNDATION LEGEND:

- Fx — SPREAD FOOTING DESIGNATION SEE SCHEDULE THIS SHEET
- SF-x — STRIP FOOTING DESIGNATION SEE SCHEDULE THIS SHEET
- LF-x — LATERAL FOOTING DESIGNATION SEE SCHEDULE THIS SHEET
- S.F. — INDICATES STEP FOOTING SEE S1.0 SERIES SHEETS FOR TYPICAL DETAILS
- CJ / C3 — INDICATES CONCRETE SLAB CONTRACTION JOINTS, SEE S1.0 SERIES SHEETS FOR TYPICAL DETAILS. SEE PLAN FOR LOCATIONS. MAXIMUM SPACING = 12' IN EACH DIRECTION
- W10x49 BP-1 — STEEL COLUMN - SEE PLAN FOR SIZE AND LOCATION SEE S3.0 SERIES SHEETS FOR BASE PLATE DETAILS (BP-x)
- Px — INDICATES CONCRETE PIER SEE S3.0 SERIES SHEETS
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- INDICATES 7" SLAB DEPRESSION COORDINATE EXACT LIMITS W/ ARCH. & PLUMBING DWGs & SEE S1.0 SERIES SHEETS FOR TYPICAL SLAB DEPRESSION DETAILS
- F.D. — FLOOR DRAIN - COORDINATE W/ PLUMBING DRAWINGS
- BRACE #x — INDICATES STEEL BRACE LOCATIONS SEE PLAN & SHEET S5.0 SERIES SHEETS
- E.J. — BUILDING EXPANSION JOINT LOCATION - SEE SECTIONS FOR DETAILS
- INV=X.XX — UNDERGROUND PLUMBING LINES - COORDINATE WITH PLUMBING DWGs

FOUNDATION PLAN NOTES:

1. SEE S1.0 SERIES SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SERIES SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. DATUM ELEVATION = TOP OF SLAB ELEVATION = ASSUMED 0'-0" = ?'-?" M.S.L. OTHER ELEVATIONS ARE NOTED AS (+ OR -) FROM DATUM ELEVATION.
3. TOP OF FOOTINGS SHALL BE (-1'-4") FROM DATUM ELEVATION, U.N.O.
4. SLAB-ON-GRADE SHALL BE 4" THICK 3000 psi CONCRETE WITH 6x6xW2.0xW2.0 or 3.0lbs/yd.^{3} OF SYNTHETIC MACRO-FIBERS (TUF-STRAND SF BY EUCLID, FIBER MAC SERIES BY BASF, OR FORTA-FERRO BY FORTA CORP, OR APPROVED EQUAL) ON 15 mil VAPOR RETARDER, ON 6" WELL COMPACTED CLEAN SAND WITH LESS THAN 3% FINES ON WELL COMPACTED SUB GRADE. VERIFY COMPACTION WITH QUALIFIED GEOTECHNICAL ENGINEER
5. REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL, PLUMBING, AND OTHER DISCIPLINE DRAWINGS FOR OPENINGS AND DEPRESSIONS NOT SHOWN ON THESE DRAWINGS.
6. RELOCATE ANY UTILITY LINES THAT CONFLICT WITH THE FOUNDATIONS OR DROP THE FOUNDATIONS TO AN ELEVATION BELOW THE PROPOSED UTILITIES. RELOCATE ANY GRAVITY FLOW LINES THAT CONFLICT WITH SPREAD FOOTINGS AS SHOWN ON STRUCTURAL FOUNDATION PLANS. IF A GRAVITY FLOW LINE TRAVELS UNDER A CONTINUOUS STRIP FOOTING EITHER:
   a. DROP THE FOOTING ELEVATION BELOW THE PROPOSED LINE.
   b. ENCASE THE LINE IN A STEEL PIPE 2" LARGER IN DIAMETER THAN THE LINE AND EXTEND THE PIPE 1'-0" PAST EACH SIDE OF THE CONCRETE FOOTING. BACKFILL THE TRENCH WITH #57 STONE. THE BEARING CAPACITY OF THIS AREA MUST MEET OR EXCEED THE ALLOWABLE SOIL BEARING CAPACITY.
7. DIMENSIONS ARE FROM EDGE OF SLAB (E.O.S.) AND OUTSIDE FACE OF STUD (O.F.S.) / CURTAINWALL (O.F.CW.) TO COLUMN CENTERLINE UNLESS NOTED OTHERWISE.
8. S.F. = STEP FOOTING, SEE TYPICAL DETAIL ON S1.0 SERIES SHEETS - G.C. TO COORDINATE STEPS IN FOUNDATION FOR PLUMBING, ELECTRICAL AND MECHANICAL.
9. SEE S5.0 SERIES SHEETS FOR (SHEARWALL, BRACE FRAMING, MOMENT FRAME, X-STRAPPING) INFORMATION AND REQUIREMENTS.
10. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.

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

TOP OF SLAB ELEVATION TABLE	
FLOOR	ELEVATION
Roof	VARIES
3rd	+28'-0"
2nd	14'-0"
1st	0'-0"

ELEVATIONS NOTED ARE FROM DATUM ELEVATION (0'-0")

LATERAL FOOTING (LF-X) SCHEDULE

MARK	SIZE width x thickness x length	REINFORCEMENT TOP BARS	REINFORCEMENT BOTTOM BARS	REMARKS
LF	?? x ?? x ??	(??) #??		

SPREAD FOOTING (FX) SCHEDULE

MARK	SIZE width x length x thickness	REINFORCEMENT TOP BARS EACH WAY (U.N.O.)	REINFORCEMENT BOTTOM BARS EACH WAY (U.N.O.)	REMARKS
F3	3'-0" x 3'-0" x ??	(??) #??		

STRIP FOOTING (SF-X) SCHEDULE

MARK	SIZE width x thickness x length	REINFORCEMENT TOP BARS	REMARKS
SF-1	2'-0" x 1'-0" x CONT.	(2) #5 CONT.	SEE DETAILS 1 & 2/S3.01
SF-2	2'-6" x 1'-0" x CONT.	(3) #5 CONT.	SEE DETAIL 7 & 8/S3.01
SF-3	1'-0" x 1'-4" x CONT.	(2) #4 CONT.	SEE DETAIL 4/S3.01

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FOUNDATION PLAN

S2.01

MASONRY HEADER SCHEDULE		
MARK	HEADER REQUIREMENTS	REMARKS
MH1		
MH2		

FLOOR FRAMING PLAN NOTES:

1. SEE S1.0 SERIES SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SERIES SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. SEE FLOOR ELEVATION TABLE THIS SHEET FOR TYPICAL SLAB ELEVATIONS. T/STL ELEVATIONS ARE 5½" BELOW SLAB ELEVATION.
3. TYPICAL FLOOR SLAB IS 3½" – 3,000 psi NORMAL WEIGHT CONCRETE TOPPING WITH 4lbs/yd³ OF SYNTHETIC MACRO–FIBERS (TUF–STRAND SF BY EUCLID, FORTA–FERRO BY FORTA CORP, OR APPROVED EQUAL) ON 2", 18 GAUGE GALVANIZED COMPOSITE METAL DECK VULCRAFT 2VLI18 OR APPROVED EQUAL. TOTAL FLOOR SLAB SYSTEM IS 5½" THICK.
4. PROVIDE JOIST BRIDGING PER SJI RECOMMENDATIONS.
5. J.B.E. = JOIST BEARING ELEVATION.
6. HANGER AND KICKER FOR WIND BEAM SUPPORTS – SEE SECTIONS
7. T/STL = TOP OF STEEL
8. DESIGNATIONS ON PLAN FOR BEAM REACTIONS, CAMBERS AND COMPOSITE BEAM SHEAR STUDS AS INDICATED BELOW. SEE "TYPICAL DETAILS" ON S1.0 SERIES SHEETS FOR STUD PLACEMENT DETAILS.

   STUDS EQUALLY PLACED ALONG MEMBER.....(xx)
   STUDS EQUALLY PLACED BETWEEN CONNECTING MEMBERS.....(xx/YY/ZZ)
   CAMBER AT MID SPAN (UNO).....C=xx ĸ
   ASD REACTIONS AT EACH END (KIPS).....xx ĸ (LRFD)
   (MINIMUM REACTION = 16k IF NOT SHOWN ON PLAN)(LRFD)
9. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.
10. EXIT STAIRS SHALL BE STEEL, METAL PAN AND CONCRETE, D.D.
11. SEE S2.01 SHEET FOR WF COLUMN SIZES.

SECOND FLOOR FRAMING PLAN

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

TOP OF SLAB ELEVATION TABLE	
FLOOR	ELEVATION
Roof	VARIES
3rd	+28'–0"
2nd	14'–0"
1st	0'–0"

ELEVATIONS NOTED ARE FROM DATUM ELEVATION (0'–0")

BEAM REACTIONS (IN kips) — BEAM SIZE — CAMBER (IF REQUIRED)

k W_x_ c=_" k

(x,y,z) — NUMBER OF STUDS EQUALLY SPACED BETWEEN CONNECTING MEMBERS

x y z

FLOOR FRAMING LEGEND

- W_x_ — STEEL COLUMN – SEE PLAN FOR SIZE AND LOCATION
- W_x_ — STEEL BEAM – SEE PLAN FOR SIZE AND LOCATION
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- BRACE #x — INDICATES STEEL BRACE LOCATIONS – SEE PLAN & SHEET S5.0 SERIES SHEETS
- E.J. — BUILDING EXPANSION JOINT LOCATION – SEE SECTIONS FOR DETAILS
- INDICATES 8" CMU WALL SEE PLAN FOR REQUIREMENTS
- MHx — MASONRY HEADER SEE SCHEDULE THIS SHEET
- KB — KICKER BRACE – L4x4 SEE 3/S4.01
- WP–x — INDICATES MASONRY WALL PLATE SEE S3.0 SERIES SHEETS
- MBP–x — INDICATES MASONRY BEARING PLATE SEE S3.0 SERIES SHEETS

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SECOND FLOOR FRAMING PLAN

S2.02

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MASONRY HEADER SCHEDULE		
MARK	HEADER REQUIREMENTS	REMARKS
MH1		
MH2		

FLOOR FRAMING PLAN NOTES:

1. SEE S1.0 SERIES SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SERIES SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. SEE FLOOR ELEVATION TABLE THIS SHEET FOR TYPICAL SLAB ELEVATIONS. T/STL ELEVATIONS ARE 5½" BELOW SLAB ELEVATION.
3. TYPICAL FLOOR SLAB IS 3½" – 3,000 psi NORMAL WEIGHT CONCRETE TOPPING WITH 4lbs/yd³ OF SYNTHETIC MACRO–FIBERS (TUF–STRAND SF BY EUCLID, FORTA–FERRO BY FORTA CORP, OR APPROVED EQUAL) ON 2", 18 GAUGE GALVANIZED COMPOSITE METAL DECK VULCRAFT 2VLI18 OR APPROVED EQUAL. TOTAL FLOOR SLAB SYSTEM IS 5½" THICK.
4. PROVIDE JOIST BRIDGING PER SJI RECOMMENDATIONS.
5. J.B.E. = JOIST BEARING ELEVATION.
6. HANGER AND KICKER FOR WIND BEAM SUPPORTS – SEE SECTIONS
7. T/STL = TOP OF STEEL
8. DESIGNATIONS ON PLAN FOR BEAM REACTIONS, CAMBERS AND COMPOSITE BEAM SHEAR STUDS AS INDICATED BELOW. SEE "TYPICAL DETAILS" ON S1.0 SERIES SHEETS FOR STUD PLACEMENT DETAILS.

   STUDS EQUALLY PLACED ALONG MEMBER.....(xx)
   STUDS EQUALLY PLACED BETWEEN CONNECTING MEMBERS.....(xx/YY/ZZ)
   CAMBER AT MID SPAN (UNO).....C=xx ĸ
   ASD REACTIONS AT EACH END (KIPS).....xx ĸ (LRFD)
   (MINIMUM REACTION = 16ĸ IF NOT SHOWN ON PLAN)(LRFD)
9. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.
10. EXIT STAIRS SHALL BE STEEL, METAL PAN AND CONCRETE, D.D.
11. SEE S2.01 SHEET FOR WF COLUMN SIZES.

THIRD FLOOR FRAMING PLAN

SCALE: 1/8" = 1'–0"

WIND BEAM B/STL =+1½" ABOVE CURTAIN WALL

TOP OF SLAB ELEVATION TABLE	
FLOOR	ELEVATION
Roof	VARIES
3rd	+28'–0"
2nd	14'–0"
1st	0'–0"

ELEVATIONS NOTED ARE FROM DATUM ELEVATION (0'–0")

BEAM REACTIONS (IN kips) — BEAM SIZE — CAMBER (IF REQUIRED)

_k W_x_ c=_" _k

(x,y,z) — NUMBER OF STUDS EQUALLY SPACED BETWEEN CONNECTING MEMBERS

x y z

FLOOR FRAMING LEGEND

- W_x_ — STEEL COLUMN – SEE PLAN FOR SIZE AND LOCATION
- W_x_ — STEEL BEAM – SEE PLAN FOR SIZE AND LOCATION
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- BRACE #x — INDICATES STEEL BRACE LOCATIONS – SEE PLAN & SHEET S5.0 SERIES SHEETS
- E.J. — BUILDING EXPANSION JOINT LOCATION – SEE SECTIONS FOR DETAILS
- INDICATES 8" CMU WALL SEE PLAN FOR REQUIREMENTS
- MHx — MASONRY HEADER SEE SCHEDULE THIS SHEET
- KB — KICKER BRACE – L4x4 SEE 3/S4.01
- WP–x — INDICATES MASONRY WALL PLATE SEE S3.0 SERIES SHEETS
- MBP–x — INDICATES MASONRY BEARING PLATE SEE S3.0 SERIES SHEETS

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NORTH CAROLINA WOODS ENGINEERING, P.A. CORPORATE SEAL No. C-1806

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 16781 R. WOODS

NOT FOR CONSTRUCTION

DATE: 12.04.2020 - BUDGET PRICING

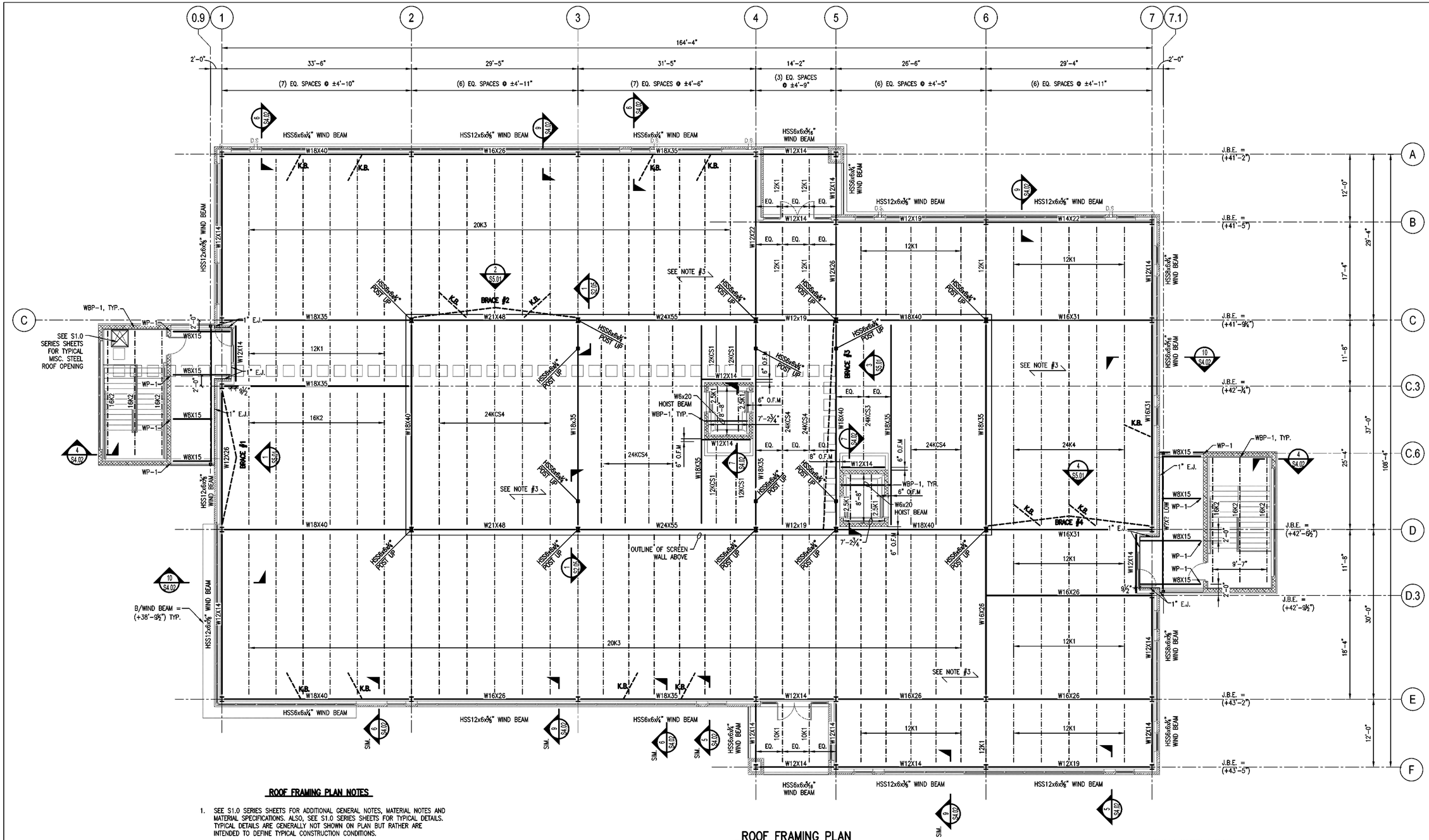
PROJECT NO: 20131

Smith Office - Sir Tyler IV
Wilmington, NC

NO.	REV/SUB.	DATE

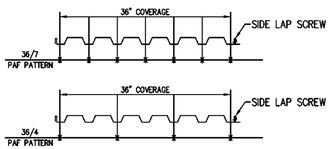
THIRD FLOOR FRAMING PLAN

S2.03



ROOF FRAMING PLAN NOTES

1. SEE S1.0 SERIES SHEETS FOR ADDITIONAL GENERAL NOTES, MATERIAL NOTES AND MATERIAL SPECIFICATIONS. ALSO, SEE S1.0 SERIES SHEETS FOR TYPICAL DETAILS. TYPICAL DETAILS ARE GENERALLY NOT SHOWN ON PLAN BUT RATHER ARE INTENDED TO DEFINE TYPICAL CONSTRUCTION CONDITIONS.
2. ELEVATIONS SHOWN ON PLAN ARE REFERENCED TO DATUM ELEVATION (0'-0") – SEE S2.01.
3. TYPICAL ROOF DECK IS 1½" DEEP, 20 ga., GALVANIZED, TYPE 'B' METAL ROOF DECK.
4. METAL ROOF DECK SHALL BE ATTACHED TO SUPPORTING MEMBERS WITH HILTI X-HSN 24 FOR STEEL THICKNESS EQUAL TO OR LESS THAN 3/8" AND HILTI X-ENP 19 OTHERWISE IN A 36/4 PATTERN U.N.O. ON PLAN – EXCEPT WITHIN ?'-?" OF ROOF EDGE PROVIDE FASTENERS IN A 36/7 PATTERN. PROVIDE (1) HILTI SCC TEK SIDELAP SCREW PER SPAN, U.N.O. ON PLAN.
5. ALL JOISTS SHALL BE DESIGNED FOR A NET UPLIFT PRESSURE OF 42 psf (LRFD)
6. PROVIDE JOIST BRIDGING PER SJI RECOMMENDATIONS.
7. SEE S5.0 SERIES SHEETS FOR BRACE FRAME INFORMATION.
8. WHEN A SECTION IS CUT OR A DETAIL IS LABELED FOR A PARTICULAR CONDITION, THAT SECTION OR DETAIL SHALL APPLY FOR ALL SIMILAR CONDITIONS REGARDLESS OF WHETHER CUT OR LABELED, U.N.O.
9. SEE S2.01 SHEET FOR WF COLUMN SIZES.



ROOF FRAMING PLAN

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

B/WIND BEAM = (+38'-9½") TYP.

TOP OF SLAB ELEVATION TABLE	
FLOOR	ELEVATION
Roof	VARIES
3rd	+28'-0"
2nd	14'-0"
1st	0'-0"

ELEVATIONS NOTED ARE FROM DATUM ELEVATION (0'-0")

ROOF FRAMING LEGEND

- W_x_ — STEEL COLUMN – SEE PLAN FOR SIZE AND LOCATION
- W_x_ — STEEL BEAM – SEE PLAN FOR SIZE AND LOCATION
- INDICATES STEEL ROOF JOISTS SEE PLAN FOR SIZE AND SPACING
- KB — KICKER BRACE – L4x4 SEE 3/S4.01
- 0 — GRID DESIGNATION FOR CENTERLINE OF COLUMN U.N.O.
- E.J. — BUILDING EXPANSION JOINT LOCATION – SEE SECTIONS FOR DETAILS
- BRACE #x — INDICATES STEEL BRACE LOCATIONS SEE PLAN & SHEET S5.0 SERIES SHEETS
- INDICATES 8" CMU WALLS (BELOW) SEE PLAN FOR REQUIREMENTS
- MHx — MASONRY HEADER SEE SCHEDULE THIS SHEET
- WP-x — INDICATES MASONRY WALL PLATE SEE S3.0 SERIES SHEETS
- MBP-x — INDICATES MASONRY BEARING PLATE SEE S3.0 SERIES SHEETS

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CORPORATE SEAL No. C-1806 NORTH CAROLINA WOODS ENGINEERING, P.A.

NORTH CAROLINA PROFESSIONAL SEAL 16402 ENGINEER CHRISTOPHER R. WOODS

DATE: 12.04.2020 - BUDGET PRICING

NO.	REV./SUB.	DATE

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Wilmington, NC

PROJECT NO. 20131

ROOF FRAMING PLAN

S2.04

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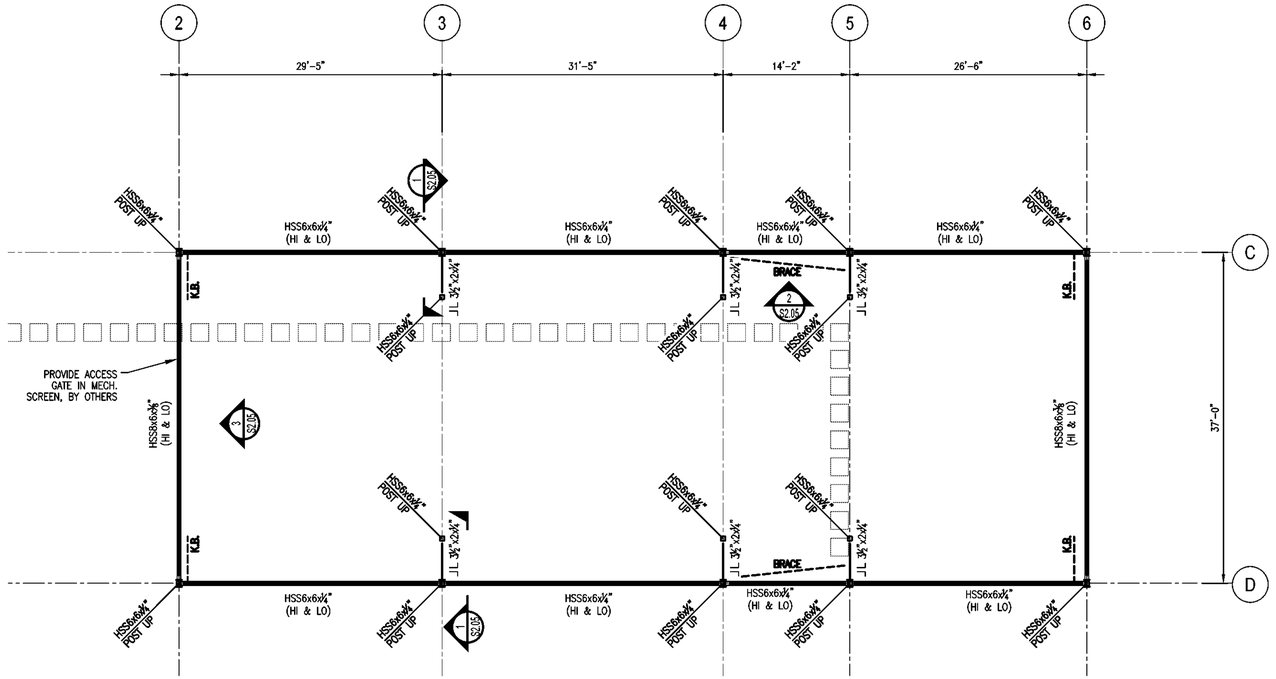
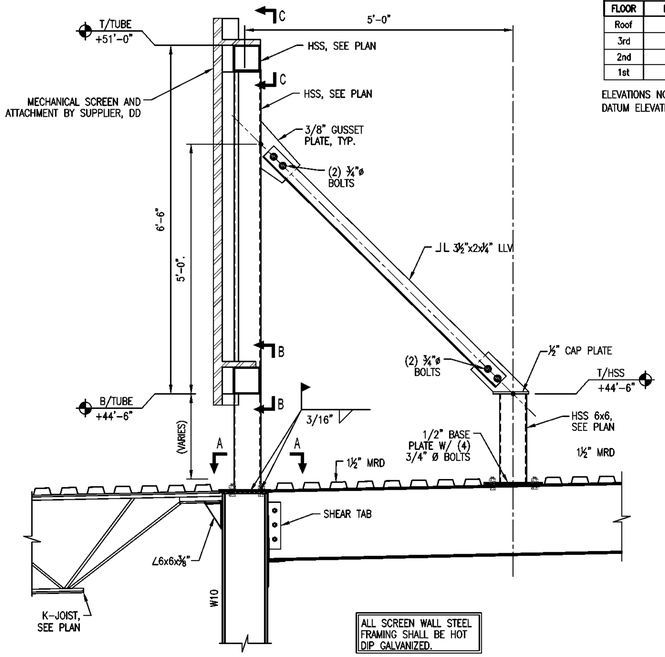


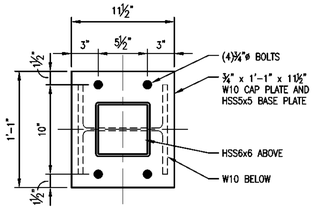
SCREEN WALL FRAMING PLAN
SCALE: 1/8" = 1'-0"

TOP OF SLAB ELEVATION TABLE	
FLOOR	ELEVATION
Roof	VARIES
3rd	+28'-0"
2nd	14'-0"
1st	0'-0"

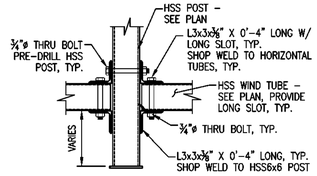
ELEVATIONS NOTED ARE FROM DATUM ELEVATION (0'-0")



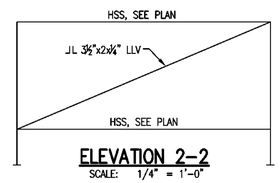
SECTION 1-1
SCALE: 3/4" = 1'-0"



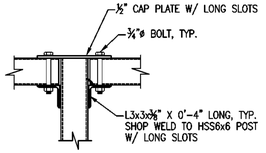
DETAIL A-A
SCALE: 1 1/2" = 1'-0"



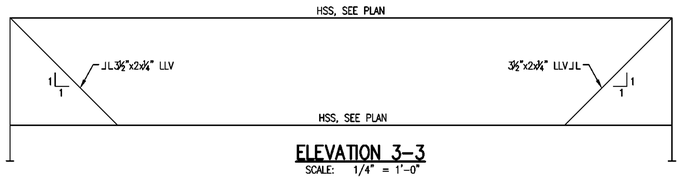
DETAIL B-B
SCALE: 3/4" = 1'-0"



ELEVATION 2-2
SCALE: 1/4" = 1'-0"



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



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

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NORTH CAROLINA

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PROJECT NO: 20131

NO.	REV./SUB.	DATE

SCREEN WALL FRAMING PLAN

S2.05

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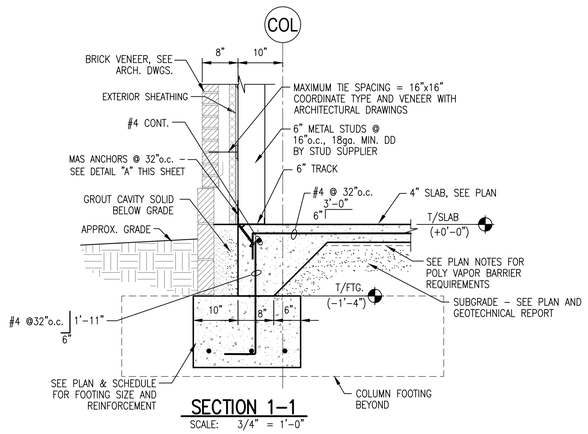
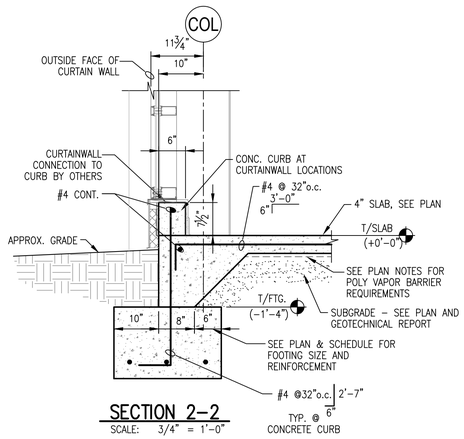


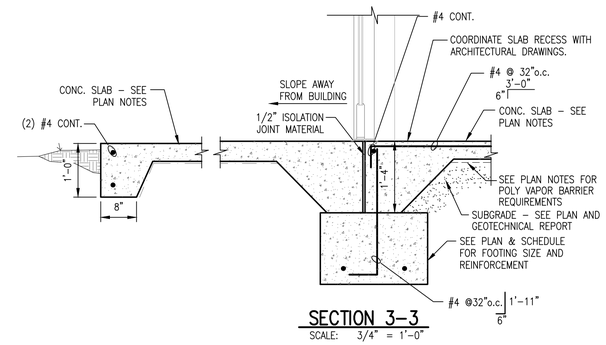
SECTION 1-1

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



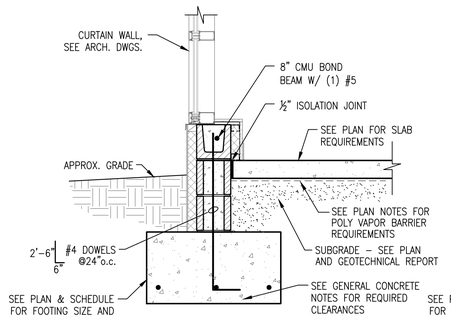
SECTION 2-2

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



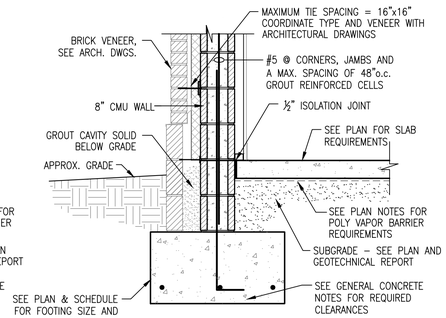
SECTION 3-3

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



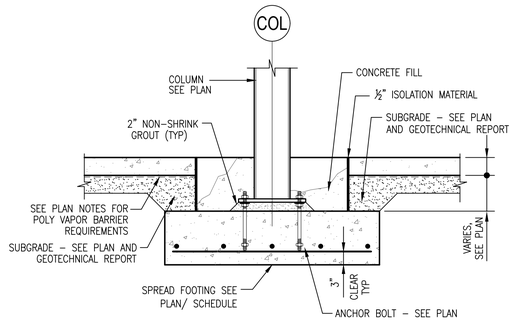
SECTION 4-4

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



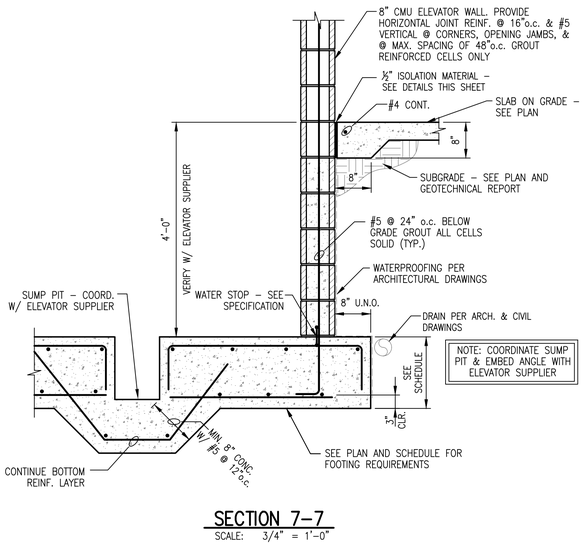
SECTION 5-5

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



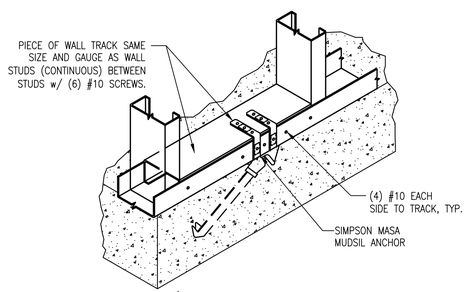
SECTION 6-6

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



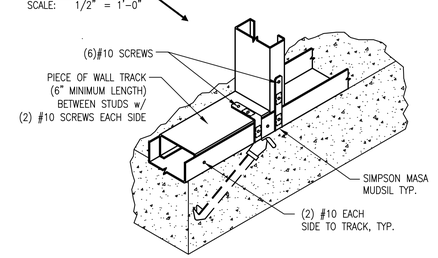
SECTION 7-7

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



DETAIL "A"

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



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NORTH CAROLINA PROFESSIONAL SEAL 032766 ENGINEER P. R. WOODS

DATE: 12.04.2020 - BUDGET PRICING

Smith Office - Sir Tyler IV
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PROJECT NO: 20131

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FOUNDATION SECTIONS & DETAILS

S3.01

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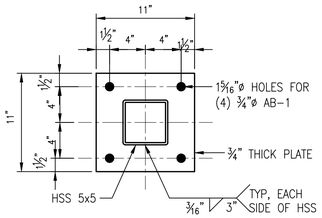
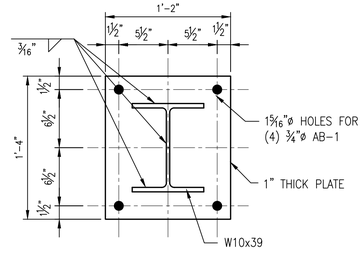


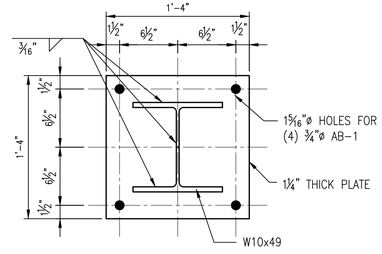
DETAIL 'BP-1'

SCALE: 1 1/2" = 1'-0"
(HSS 5x5 BASEPLATE)
TYPICAL, UNO



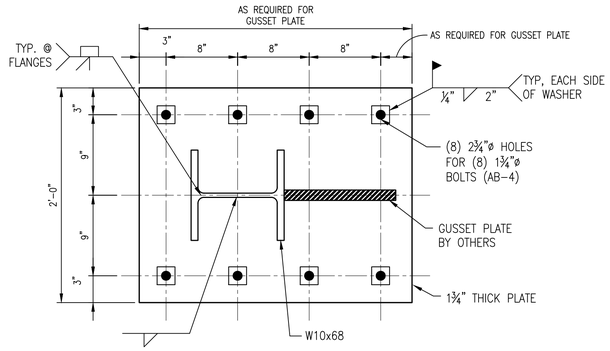
DETAIL 'BP-2'

SCALE: 1 1/2" = 1'-0"
(W10x39 BASEPLATE)
TYPICAL, UNO



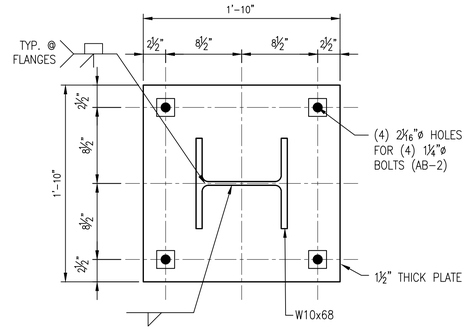
DETAIL 'BP-3'

SCALE: 1 1/2" = 1'-0"
(W10x49 BASEPLATE)
TYPICAL, UNO



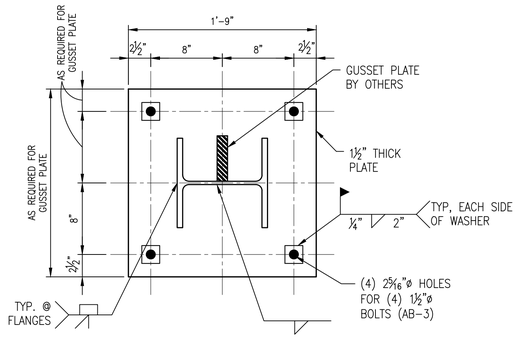
DETAIL 'BP-4'

SCALE: 1 1/2" = 1'-0"
(BRACE FRAME #3 BASEPLATE)
TYPICAL, UNO



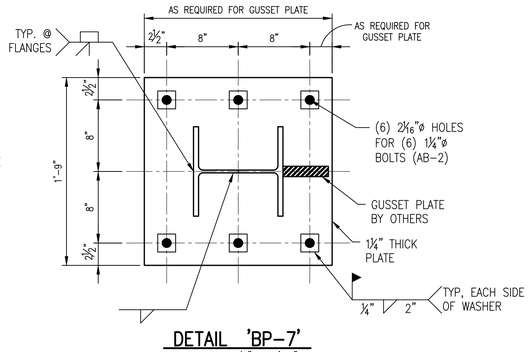
DETAIL 'BP-5'

SCALE: 1 1/2" = 1'-0"
(BRACE FRAME #3 BASEPLATE)
TYPICAL, UNO



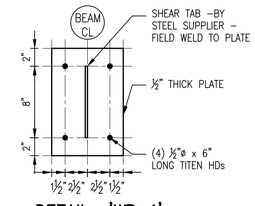
DETAIL 'BP-6'

SCALE: 1 1/2" = 1'-0"
(BRACE FRAME #2 & #4 BASEPLATE)
TYPICAL, UNO



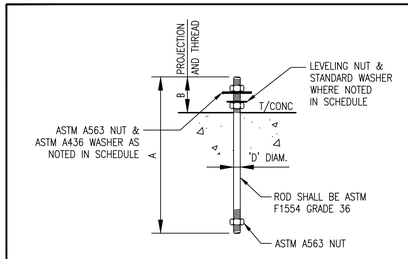
DETAIL 'BP-7'

SCALE: 1 1/2" = 1'-0"
(BRACE FRAME #1 BASEPLATE)
TYPICAL, UNO



DETAIL 'WP-1'

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



ANCHOR BOLT SCHEDULE

MARK	BOLT DIAM. D	HOLE DIAMETER	A	B	WASHER O.D. x t	WASHER HOLE DIAM.	LEVELING NUT	PULLOUT WASHER	REMARKS
AB-1	¾"	1⅝"	1'-2"	5"	2" x ¼"	1³⁄₁₆"	YES	–	
AB-2	1¼"	2⅛"	2'-6"	7"	3" x ½"	1⅜"	YES	–	
AB-3	1½"	2⅝"	2'-6"	8"	3½" x ½"	1⅜"	YES	4"x4"x¾"	
AB-4	1¾"	2¾"	2'-8"	9"	4" x ⅝"	1 1³⁄₁₆"	YES	4"x4"x¾"	

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WOODS ENGINEERING, P.A.
CORPORATE SEAL
No. C-1808
NORTH CAROLINA

NORTH CAROLINA
PROFESSIONAL
SEAL
16811
ENGINEER
CHRISTOPHER R. WOODS

NOT FOR CONSTRUCTION

DATE: 12.04.2020 - BUDGET PRICING

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BASE PLATES

S3.02

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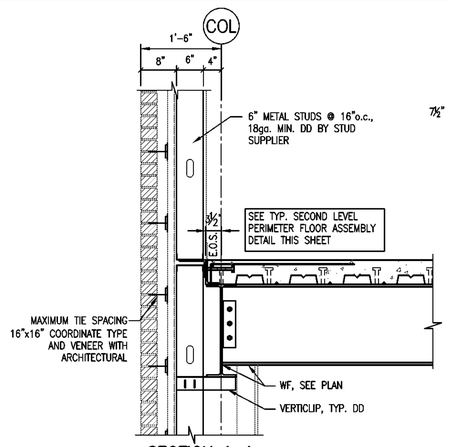
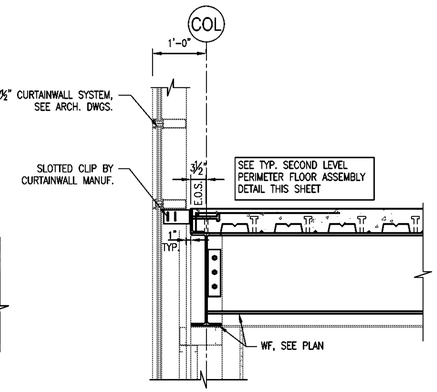
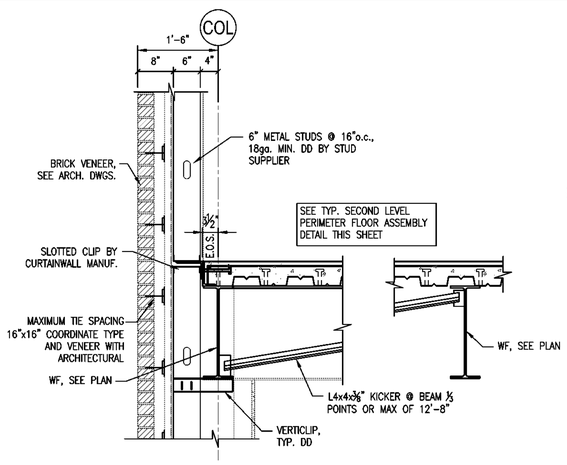


SECTION 1–1
SCALE: 3/4" = 1'-0"
2nd @ PERIMETER NO WINDOW



SECTION 2–2
SCALE: 3/4" = 1'-0"
@ 2nd PERIMETER CURTAIN WALL



SECTION 3–3
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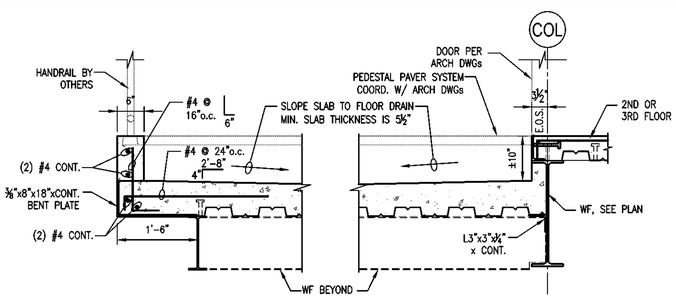
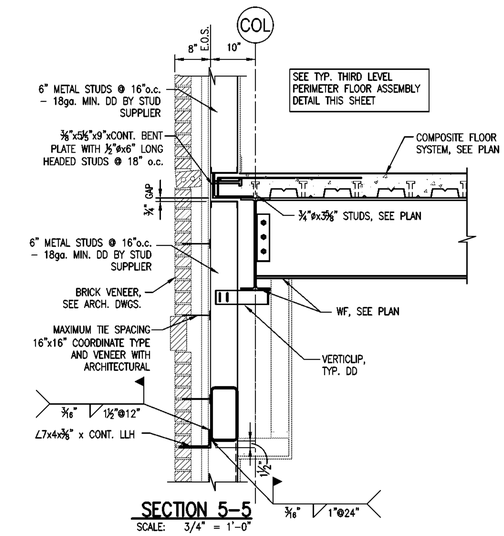
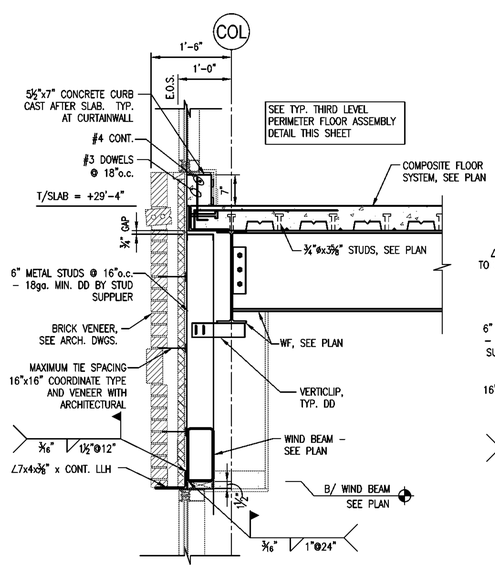


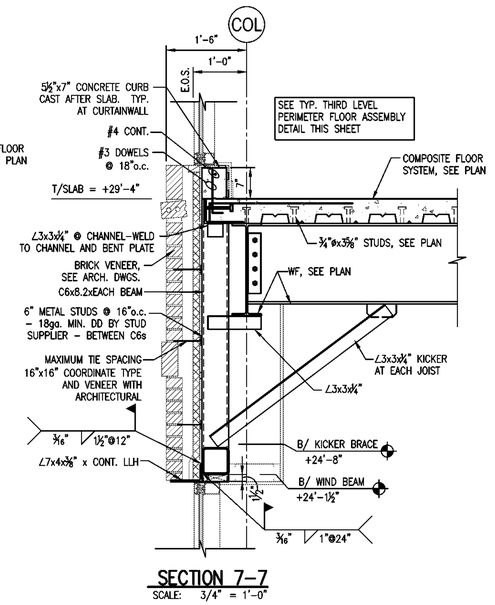
SECTION 4–4
SCALE: 3/4" = 1'-0"



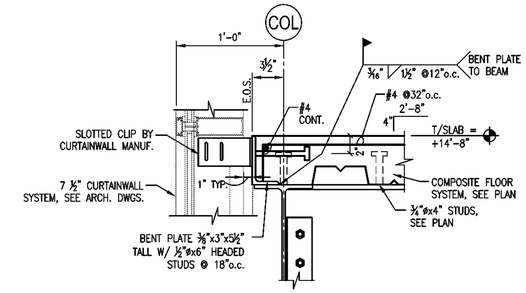
SECTION 5–5
SCALE: 3/4" = 1'-0"



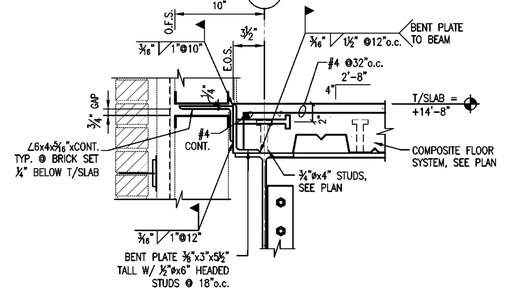
SECTION 6–6
SCALE: 3/4" = 1'-0"



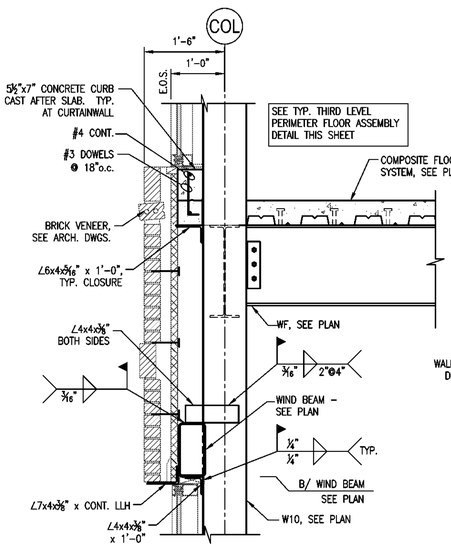
SECTION 7–7
SCALE: 3/4" = 1'-0"



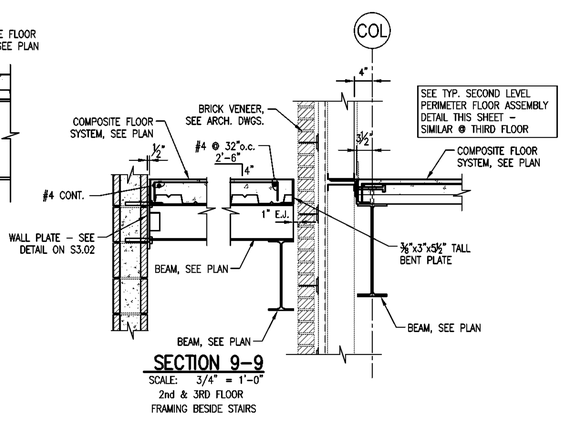
TYP. SECOND LEVEL PERIMETER FLOOR ASSEMBLY AT CURTAIN WALL
SCALE: 1 1/2" = 1'-0"



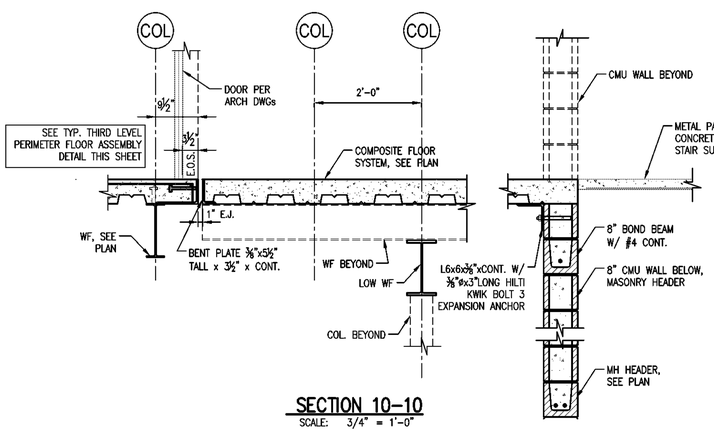
TYP. SECOND LEVEL PERIMETER FLOOR ASSEMBLY AT MASONRY
SCALE: 1 1/2" = 1'-0"



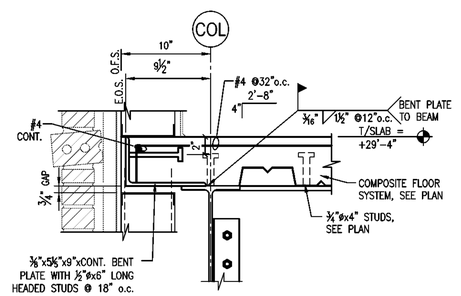
SECTION 8–8
SCALE: 3/4" = 1'-0"



SECTION 9–9
SCALE: 3/4" = 1'-0"
2nd & 3RD FLOOR FRAMING BESIDE STAIRS



SECTION 10–10
SCALE: 3/4" = 1'-0"



TYP. THIRD LEVEL PERIMETER FLOOR ASSEMBLY
SCALE: 1 1/2" = 1'-0"

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NORTH CAROLINA

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Smith Office - Sir Tyler IV
Wilmington, NC

PROJECT NO: 20131

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FRAMING SECTIONS & DETAILS

S4.01

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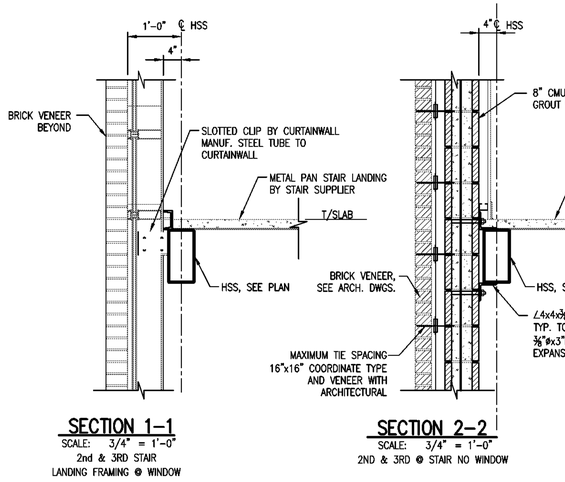
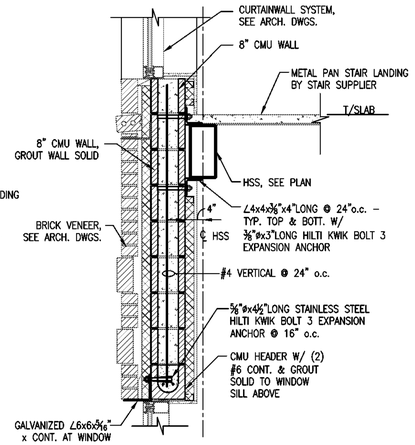
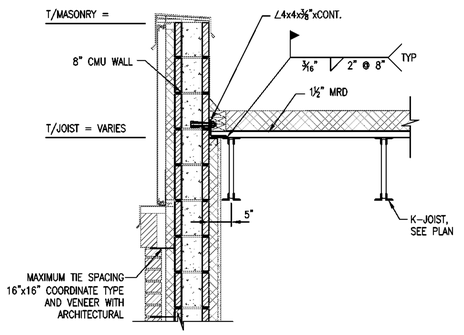


SECTION 1–1
SCALE: 3/4" = 1'-0"
2nd & 3RD STAIR LANDING FRAMING @ WINDOW

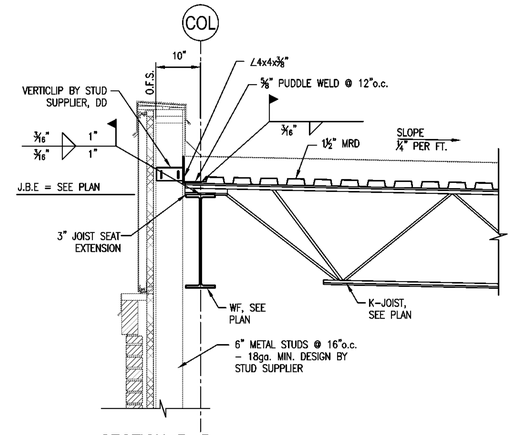
SECTION 2–2
SCALE: 3/4" = 1'-0"
2ND & 3RD @ STAIR NO WINDOW



SECTION 3–3
SCALE: 3/4" = 1'-0"



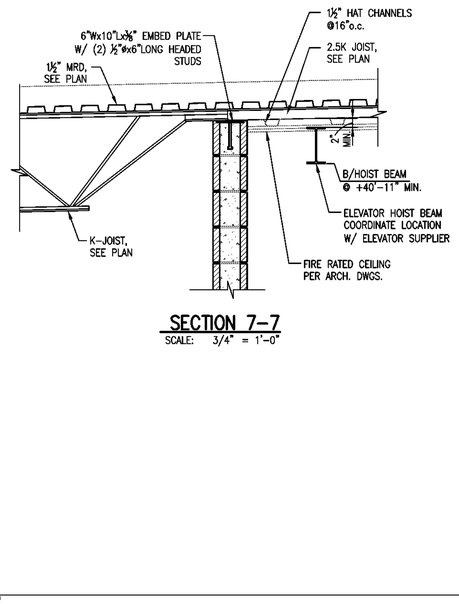
SECTION 4–4
SCALE: 3/4" = 1'-0"



SECTION 5–5
SCALE: 3/4" = 1'-0"

SECTION 6–6
SCALE: 3/4" = 1'-0"

SECTION 8–8
SCALE: 3/4" = 1'-0"
@ ELEVATOR FRAMING 2nd & 3RD



SECTION 7–7
SCALE: 3/4" = 1'-0"

SECTION 9–9
SCALE: 3/4" = 1'-0"

SECTION 10–10
SCALE: 3/4" = 1'-0"

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FLOOR FRAMING SECTIONS & DETAILS

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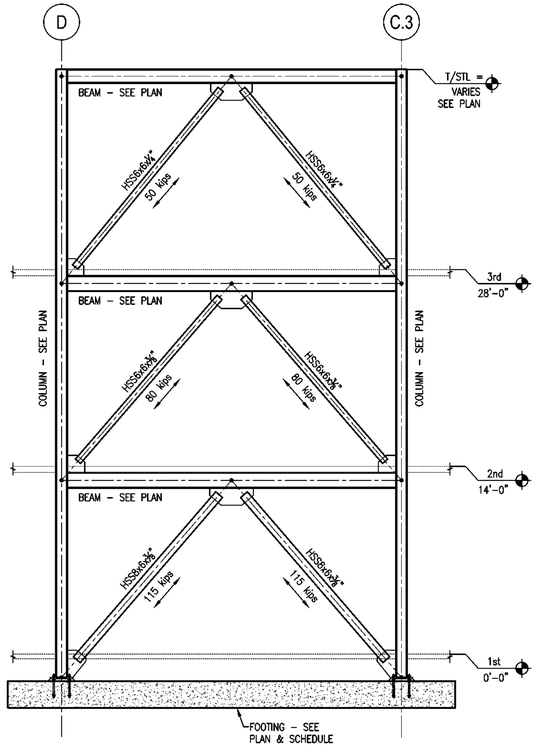
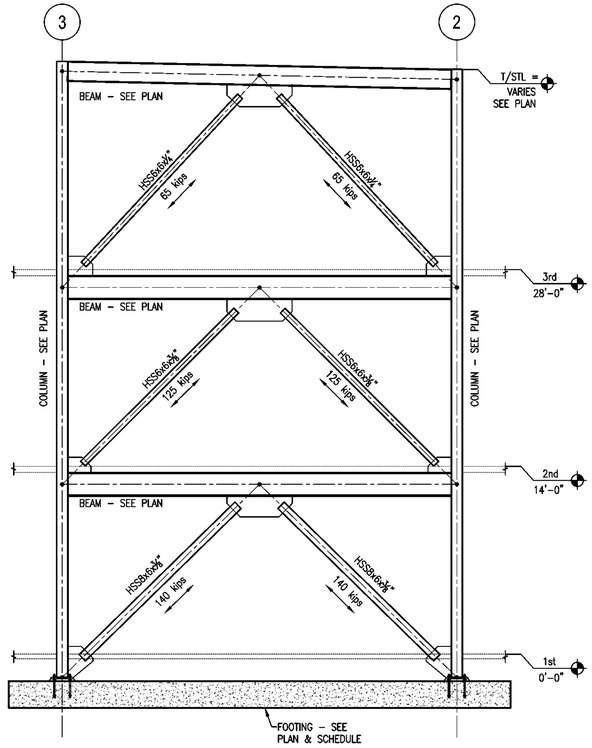


BRACE #1 ELEVATION

SCALE: 3/16" = 1'-0"

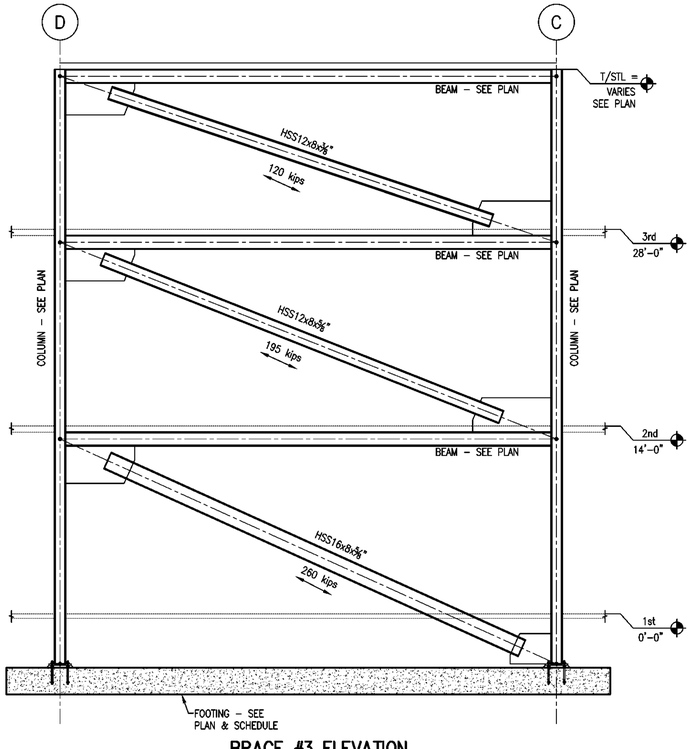


BRACE #2 ELEVATION

SCALE: 3/16" = 1'-0"

TOP OF SLAB ELEVATION TABLE	
FLOOR	ELEVATION
Roof	VARIES
3rd	+28'–0"
2nd	14'–0"
1st	0'–0"

ELEVATIONS NOTED ARE FROM DATUM ELEVATION (0'–0")



BRACE #3 ELEVATION

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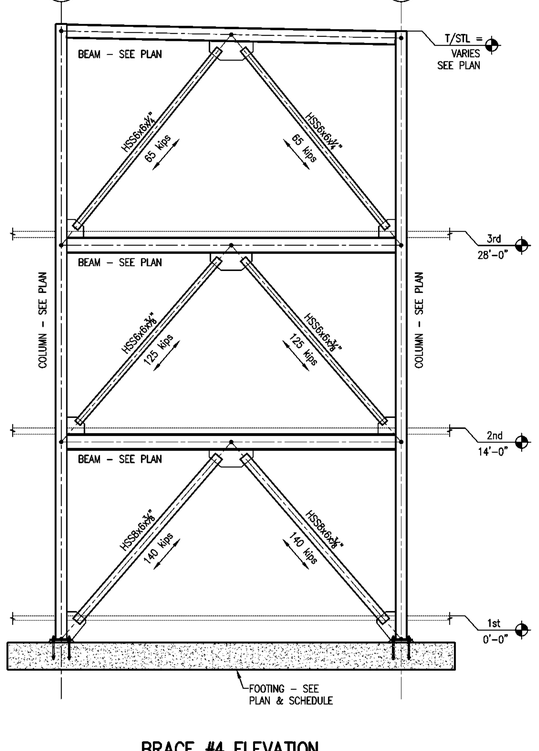

BRACE #4 ELEVATION

SCALE: 3/16" = 1'-0"

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CONSTRUCTION

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BRACE FRAME ELEVATIONS

S5.01

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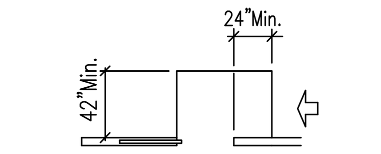
ADA Notes **

1. Ramps used as a part of a means of egress shall have a running slope not steeper than one unit vertical in 12 units horizontal (8-percent slope). (2018 NCSBC 1012.2, ANSI-2009 405)
2. A least one accessible route shall connect accessible buildings, accessible facilities, accessible elements and accessible spaces that are on the same site. (2018 NCSBC 1104.2, ANSI-2009 4).
   Directional Signage indicating the route to the nearest like accessible element shall be provided at the following locations. These directional signs shall include the International Symbol of Accessibility and sign charactes shall meet the visual character requirments in accordance with ICC A117.1
   1. Inaccessible building entrances; 2. Inaccessible public toilets and bathing facilities; 3. Elevator not serving an accessible route. ; 4. At each separate-sec toilet and bathing room indicating the location of the nearest family/assisted toilet or bathing room where provided in accordance with Section 1109.2.1.; 5. At exits and exit stairways serving a required accessible space, but not providing an approved accessible means or egress, signage shall be provided in accordance with Section 1009.10.; 6. Where drinking fountains for persons using wheel chairs and drinking fountains for standing persons are not located adjacent to each other, directional signage shall be provided indicating the location of the other drinking fountain. (2018 NCSBC 1111.2, ANSI-2009 703)
3. The required capacity of each door opening shall be sufficent for the occupant load therof and shall provide a minimum clear width of 32 inches. Clear opening of doorways with swinging doors shall be measured between the face of the door and the stop with the door open 90 degrees. The height of the door openings shall be not less than 80 inches. (2018 NCSBC 1010.1.1, ANSI-2009I 404.2.2).
4. Hand activated door opening hardware shall be centered between 34" to 48" above the floor. Latching and locking doors that are hand activated and which are in the path of travel, shall be openable with a single effort by lever type hardware, by panic bars, push-pull activating bars, or other hardware designed to provide passage without requiring the ability to grasp the opening hardware. Locked exit doors shall operate as above in egress direction. Handles, pulls, latches, locks, and other operating devices on accessible doors shall have a shape that is easy to grasp with one hand and does not require tight grasping, tight pinching, or twisting of the wrist to operate. Lever operated mechanism, push-type mechanism, and U-shape handles are acceptable designs. When sliding door are fully open, operating hardware shall be exposed and usable from both sides. (2018 NCSBC 1010.1, ANSI-2009 404.2.6).
5. The width of the level and clear area on the side to which the door swings shall extend 24" past the strike edge of the door for exterior doors and 18" past the strike edge for interior doors. (ANSI-2009 404.2.3.2). Refer to Door Clearances this Sheet.
6. Thresholds at doorways shall not exceed $\frac{3}{4}$ inches in height above the finished floor or landing for sliding door serving dwelling units or $\frac{1}{2}$ inch above the finished floor or landing for other doors. Raised thresholds and floor level changes greater than $\frac{1}{4}$ inch at doorways shall be ebeveled with a slope not greater than one vertical unit to two units horizontal. (2018 NCSBC 1010.1.7, ANSI-2009 404.2.4).
7. The force for pushing or pulling open interior swinging doors, other than fire doors, shall not exceed 5 pounds. These forces do not apply to the force required to retract latch bolts or disengage other devices that hold the door in a closesd position. For other swinging doors, as well as sliding and folding doors, the door latch shall release when subjected to a 15-pound force. The door shall be set in motion when subjected to a 30-pound force. The door shall swing to a full-open position when subjected to a 15-pound force. (2018 NCSBC 1010.1.3, ANSI-2009 404.2.8).
8. Walks and sidewalks shall have a continuous slip resistant surface that shall not be interrupted by steps or abrupt changes in level greater than 1/4". If walks cross driveways or parking lots, then they shall blend to a common level by means of curb cuts, curb ramps or sloped areas whose gradient shall not exceed 1:12.
   Walks shall maintain a minimum of 48" in width. (2018 NCSBC 1104)
9. Abrupt changes in level along any of accessible route shall not exceed 1/2". When changes in level do occur, they shall be beveled with a slope no greater than 1:2 . (ANSI-2009 303).
10. If a public walk has less than 60 inches clear width, then a 60 inches by 60 inches minimum clear passing space shall be provided at intervals not greater than 200 feet. The T-intersection of two walks is an acceptable passing space. (ANSI-2009 403.5.2).
11. All public walks that terminate at accessible entrances shall have a clear floor area at the door(s) in compliance with the applicable requirements of ANSI-2009 Table 404.2.3.
12. Circular handrail gripping surfaces shall be between 1-1/4" min. and 2" max. width or outside diameter. Noncircular handrail cross sections shall have a perimeter dimension of 4 inches minimum and 6 $\frac{1}{4}$ inches maximum, and a cross section dimension of 2 $\frac{1}{4}$ inches maximum. The shape shall provide an equivalent gripping surface. Handrail surfaces shall be smooth with no sharp edges. (2018 NCSBC 1014.3, ANSI-2009 505.7)
13. Clear space between a handrail and a wall or other surface shall be not less than 1-1/2 inches. A handrail and a wall other surface adjacent to the handrail shall be free of any sharp or abrasive objects. (2018 NCSBC 1014.7, ANSI-2009 505.5).
14. Handrail end shall return to a wall, guard or the walking surface or shall be continious to the handrail of an adjacent flight of stairs or ramp run. (2018 NCSBC 1014.6, ANSI-2009 505.10)
15. If alarm indicating appliances are provided, then audible and visual appliances complying with ANSI-2009 702 shall be provided.
16. The mounting height for controls and operating mechanisms in accessible spaces, along accessible routes, or part of accessible elements (e.g. a light switch, dispenser control, or Automatic Teller Machine) shall comply with ANSI-2009 Chapter 3.
   Forward Reach: (ANSI-2009 308.2)
   For an *unobstructed* forward reach, controls and operating mechanisms shall be located between 15 inches minimum to 48 inches maximum above the finished floor or ground level.
   For a forward reach over an *obstruction* the maximum height of any control or operating mechanism above the finished floor or ground level shall be:
   (1) 48" if the depth of the obstruction is less than 20 inches; or
   (2) 44" if the depth of the obstruction is 20 inches to 25 inches
   Parallel Reach: (ANSI-2009 308.3)
   For an *unobstructed* 10 inches maximum side reach, controls and operating mechanisms shall be located 9 inches minimum to 54 inches maximum above the finished floor or ground level.
   For a side reach over an *obstruction,* the obstruction shall have a 34 inches maximum height and a 24 inches maximum depth. Controls and operating mechanisms shall be located 46 inches maximum above the finished floor or ground level.
17. Electrical and communications system receptacles mounted on, or built in to, walls or partitions shall be located 15 inches minimum above the finished floor or ground level. (ANSI-2009 308).
18. The international symbol of accessibility shall be the standard used to identify facilities that are accessible to, and usable by, physically disabled persons as set forth in these building standards and ADA. The symbol specified above shall consist of a white figure on a blue background. The blue shall be equal to color number 15090 in federal standard 595A. All Signage shall comply with Chapter 11 of the 2018 NC State Building Code (2018 NCSBC 1111.1).
19. At kitchen sinks, faucet controls, and operating mechanisms shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. The force required to activate controls shall be no greater than 5lbs. Lever-operated, push-type, and electronically controlled mechanisms are examples of acceptable designs.
   Self-closing valves are allowed if the faucet remains open for at least 10 seconds. Sinks shall be mounted on counter surface no higher than 34" above finish floor and shall provide knee clearance of 27" high (min.) x 30" wide (min.) x 19": deep (min.) underneath sink. (ANSI-2009 309.4).
20. Toilet flush controls shall be operable with one hand and shall not require tight grasping, pinching, or twisting of the wrist. Controls for the flush valves shall be mounted on the wide side of the toilet areas, no more than 44" above the floor. The force required to activate controls shall be no greater than 5 lbs. (ANSI-2009 604.6).
21. Toilet Accessories. (ANSI-2009 606)
   A. A clear floor space of 30" x 48" complying with Section 305 shall be provided in front of a lavatory to allow a forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend into knee and toe space underneath the lavatory.
   B. Mirrors shall be mounted with the bottom edge no higher than 40" from the floor. Towel, Sanitary Napkins, Waste Receptacles. Where towel, sanitary napkins, waste receptacles, and other similar dispensing and disposal fixtures are provided, at least one of each type shall be located with all operable parts, including coin slots, within 40" from the finished floor.
   C. Toilet Tissue Dispensers. Toilet tissue dispensers shall be located on the wall within 12" of the front edge of the toilet seat.
22. Height and Clearances. Lavatories shall be mounted with the rim or counter surface no higher than 34"(865mm) above the finished floor. Provide a clearance of at least 29"(735mm) from the floor to the bottom of the apron. Knee and toe clearance shall comply with Restroom Details this sheet. Lavatories shall be mounted with a minimum distance of 18" to the centerline of the fixture. (ANSI-2009 606.3)
23. Clear Floor Space. A clear floor space of 30" x 48" (760mm x 1220mm) complying with ADA 11.6 shall be provided in front of a lavatory to allow forward approach. Such clear floor space shall adjoin or overlap an accessible route and shall extend a maximum of 19"(485mm) underneath the lavatory. See Restroom Details this sheet. (ANSI-2009 606.2)
24. Exposed Pipes and Surfaces. Hot water and drain pipes under lavatories shall be insulated or otherwise covered. There shall be no sharp or abrasive surfaces under lavatories. (ANSI-2009 606.6)
25. Faucets shall comply with ANSI-2009 606.4. Lever- operated, push-type, and electronically controlled mechanisms are examples of acceptable designs. Self-closing valves are allowed if the faucet remains open for at least 10 seconds.
26. Grab bars, tub and shower seats, fasteners and mounting devices shall be designed for 250 lbs. per linear foot load. (ANSI-2009 610.4).
27. Grab bars shall be located on each side, or one side and the back of the physically disabled toilet stall or compartment and shall be securely attached 33" minimum and 36" maximum above and parallel to the floor. (ANSI-2009 609.4.1).
28. The diameter or width of the gripping surface of the grab bar shall be 1 1/4" to 1 1/2" or the shape shall provide an equivalent gripping surface. (ANSI-2009 609.2).
29. Alcoves. For Parallel approach where the clear floor space is positioned for parallel approach, the alcove shall be 60 inches minimum in width where the depth exceeds 15 inches. For Forward Approach where the clear floor space is positioned for a forward approach, the alcove shall be a minimum of 36 inches minimum where the depth exceed 24 inches. (ANSI-2009 305.7)
30. Water closet compartments shall be equiped with a door that has an automatic closing device, and shall have a clear unobstructed opening width of 32" when located at the end and 34" when located at the side with the door positioned at an angle of 90 degrees from it's closed position. Except for door opening widths and door swings, a clear unobstructed access not less than 44" shall be provided to water closet compartments designed for use for the handicapped/people with disabilities and the space immediately in front of a water closet compartment shall be not less than 48" as measured at right angles to compartment door in it's closed position. (ANSI-2009 604.9)
31. Dining & Work Surfaces shall have a min width of 36" and a max height of 36" (ANSI-2009 902) and shall have a 30"Wx48"L minimum clear floor space.
32. Elevator operation shall be automatic with each car equipped with a self-leveling device that will automatically bring the car to the floor landings with a tolerance of 1/2 inch under rated loading to zero loading conditions. Self-leveling shall be automatic and independent of the elevator operating mechanism and shall correct for over-travel and under-travel. (ANSI-2009 407.4.4).
33. Automatic, power operated, horizontal sliding car and hoistway doors shall be provided. (ANSI-2009 407.3).
34. Cabs with center opening doors shall have an 80 inches minimum width and a 51 inches minimum depth. The depth of the cab from the inside face of the cab doors to the wall opposite shall be 54 inches minimum. (ANSI-2009 407.4.1).
35. Cabs with side-slide doors shall have a 68 inches minimum width and 51 inches minimum depth. The depth of the cab from the inside face of the cab floor(s) to the wall opposite shall be 54 inches minimum. (ANSI-2009 407.4.1)
   WARNING: Other codes, including but not limited to : Fire Code, Building Code, Elevator Code and Regulations adopted by the State Fire Marshall may contain more restrictive provisions regarding elevator cab. size. Check with the appropriate enforcing officals for details.
36. Regardless of the door position, the clear opening shall be 36 inches minimum. (ANSI-2009 407.4.1).
37. A 1-1/4" maximum gap shall be permitted between the car platform sill and the edge of any hoistway landing. (ANSI-2009 407.4.3)
38. Call buttons: The common horizontal centerline shall be a nominal 42 inches above the finished floor (36" min. and 48" max. height), except for the photo electric tube by-pass switch, emergency controls shall be grouped in one location in or adjacent to the bottom of the panel and no lower than 2'-11" from the floor. For multiple controls, one set must comply with the height requirements. The emergency telephone shall be positioned at 4'-0" maximum above the floor with a 2'-5" minimum cord. (ANSI-2009 407.4.6).
39. Car control buttons shall be 3/4" minimum and raised 1/8" minimum (+/- 1/32"). Control buttons shall be illuminated, have square shoulders, and be activated by a mechanical motion that is detectable. All buttons shall be designated by a 5/8" minimum Arabic symbol to the left of the control button with a braille symbol below the Arabic symbol. 3/8" minimum shall be provided between rows of control buttons. Raised characters shall be white on a black background. Controls and emergengy equipment identified by raised symbols shall include: door open, door close, alarm bell, emergency stop and telephone. (ANSI-2009 407.4.7).
40. A handrail is required on one wall of the car, preferably the rear. The bar shall be 1 1/2" minimum clear from the wall and 32" (+/-) above the floor.
   NOTE: Until the office of the State Architect issues specifications for elevator handrails, this Building Department will accept handrails of a size which conforms to that specified for restrooms or stairs or ramps only.
41. A visual and audible signal shall be provided at each hoistway indicating the car answering the call and the direction of travel. Visual signals shall be 2 1/2" x 2 1/2" minimum. Audible signals shall sound once for the up direction and twice for the down direction or shall have verbal annunciations that say up or down. The center line of these signalling fixtures shall be 72" from the lobby floor. (ANSI-2009 407.2.2).
42. Elevator landing jambs shall have the number of the floor for which the jamb is located designated by a 2" minimum Arabic numeral and a raised braille symbol at a height of 5'-0" above the floor and both sides of the door. Raised braille symbol shall be directly to the left of the Arabic symbol and shall be on a contrasting background. (ANSI-2009 407.2.3).
43. Drinking fountains shall have a clear floor space of 30" x 48" for a forward approach. The spout outlets of wheelchair accessible drinking fountains shall be 36 inches maximum. Spout outlets of drinking fountains for standing persons shall be 38 inches minimum to 43 inches maximum. The spout shall be located 15 inches minimum from the vertical support and 5 inches maximum for the front edge of the drinking fountain, including bumpers. (ANSI-2009 602)
44. Drinking fountains in a circulation path shall not protrude more than 4" maximum horizontally into the circulation path.

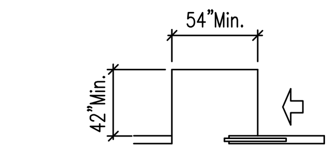
Kitchen and kitchenettes shall have at least one section 30 inches minimum in length with a maximum height of 34 inches. A clear floor space positioned for forward approach of 39 inches x 48 inches shall be provided and proper knee and toe clearance (ANSI 2009 306) There shall be a minimum clear aisle of 40 inches. Clear floor spaces for all fixtures and appliances shall be provided per ANSI 2009 1003.12.5.3 - 1003.12.5.6. (ANSI-2009 1003.12)

** NOTE: The 2018 NC State Building Code Chapter 11 takes precedence over the notes above. If there are any discrepancies between these drawings and the Code, contact the Architect prior to installation for clarification.

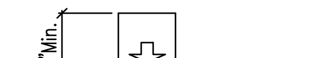
Door Clearances



(A) Latch Side Approach–Sliding Doors and Folding Doors

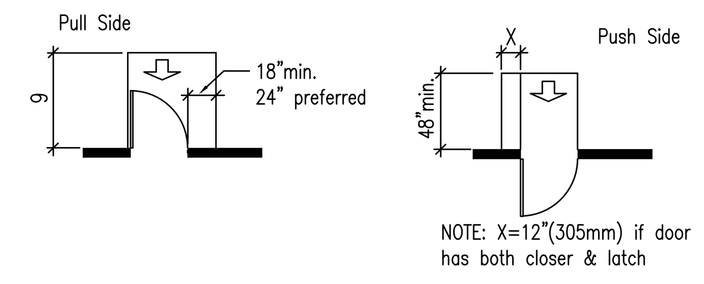


(B) Slide Side Approach–Sliding Doors and Folding Doors

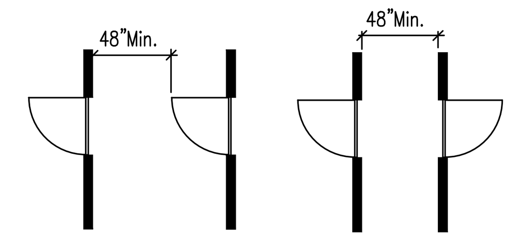


(C) Front Approach–Sliding Doors and Folding Doors

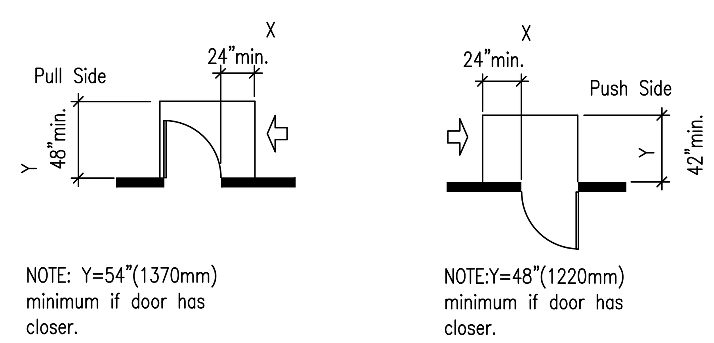
NOTE: All alcoves shall comply with the clearances for front approaches



(D) Front Approaches–Swinging Doors

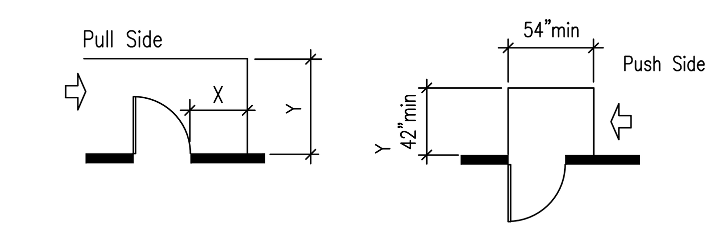


(E) Two Hinged Doors in Series



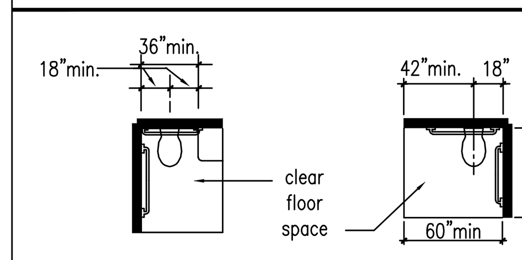
(F) Latch Side Approach – Swinging Doors

NOTE: All doors in alcoves shall comply with the clearances for front approaches.

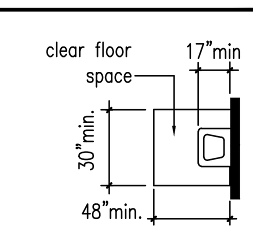


(G) Hinge Side Approaches–Swinging Doors

Toilet Stalls - Plans

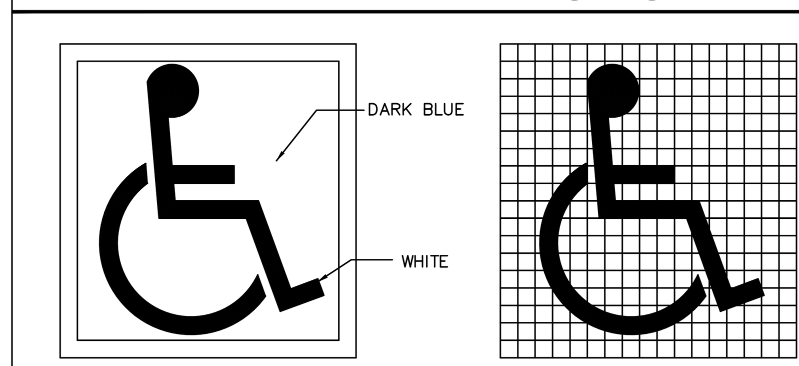


(B) Clear Floor Space At Water Closet

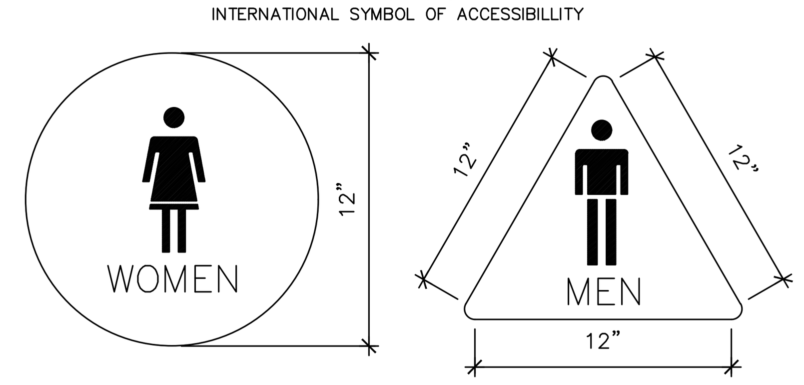


(A) Clear Floor Space at Lavatories

Restroom Signage

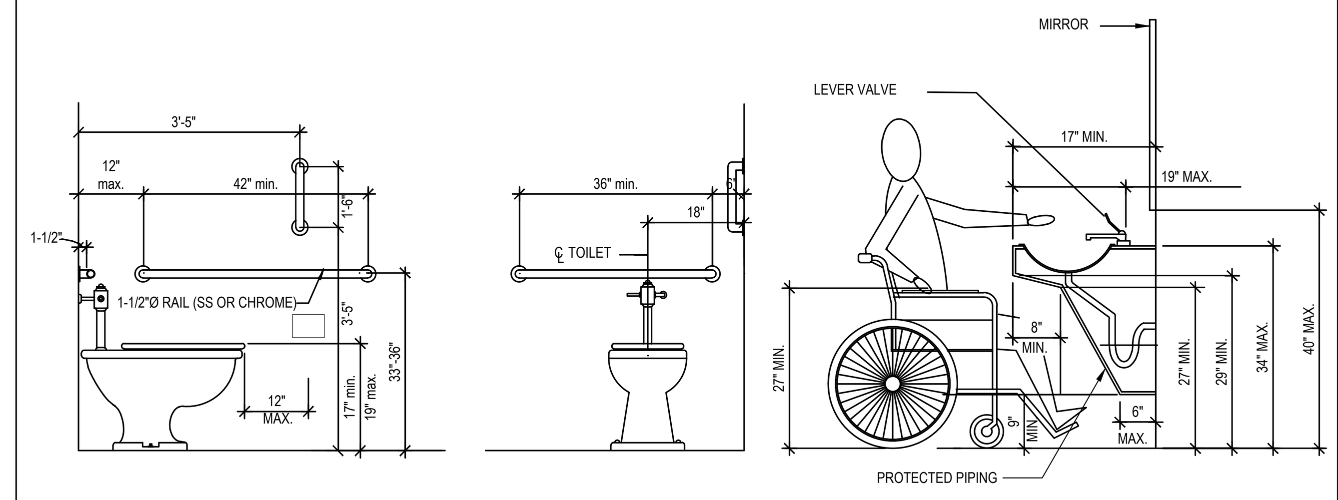


PROPORTIONS
INTERNATIONAL SYMBOL OF ACCESSIBILLITY



RESTROOM SIGNAGE 1" THICK
TEXT & GRAPHIC TO BE CONTRASTING
COLOR TO BLUE BACKGROUND
(MOUNT AT 60" A.F.F.)

Restroom Details

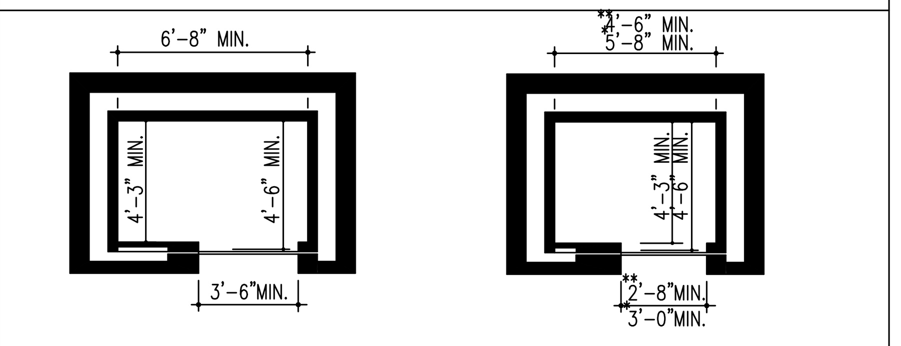


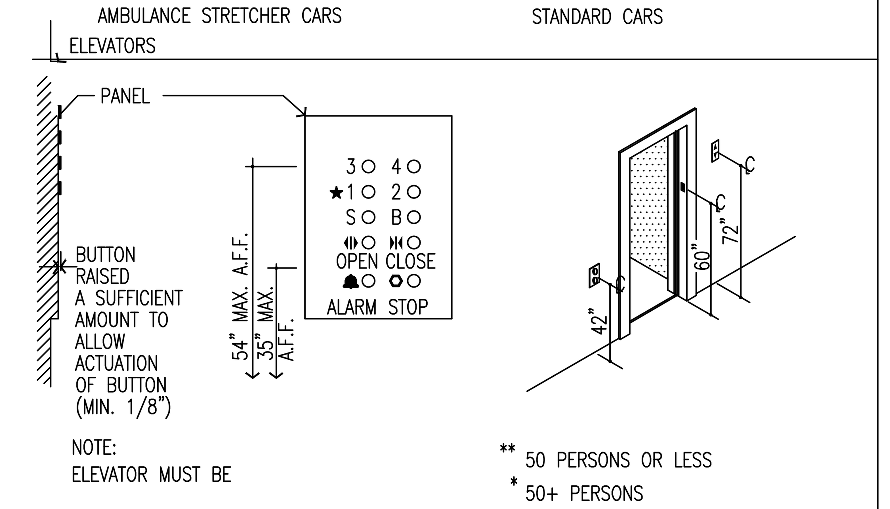
General Notes

1. THESE GENERAL NOTES SHALL APPLY TO ALL WORK AND ALL DRAWINGS IN THIS SET AND SHALL EXTEND TO ANY CHANGES, EXTRAS, OR ADDITIONS AGREED TO DURING THE COURSE OF THE WORK.
2. DURING BIDDING OR PLACING THE CONTRACTOR MAKE KNOWN TO ARCHITECT ANY LIMITATIONS, EXCLUSIONS, OR MODIFICATIONS TO THE PROJECT DURING THE BIDDING PHASE OF THE PROJECT. UNLESS NOTED THEY WILL BE PRESUMED INCLUDED.
3. ALL CONTRACTORS TO BE INVOLVED IN THIS WORK SHALL CARRY PROPERTY DAMAGE AND PUBLIC LIABILITY INSURANCE AS REQUIRED BY GOVERNMENTAL AGENCIES HAVING JURISDICTION AND COMPLY WITH STATUTORY REQUIREMENTS FOR DISABILITY AND WORKMEN'S COMPENSATION. THEY WILL COMPLY WITH ALL RULES AND REGULATIONS DICTATED BY THE OWNER AND THE CONDITIONS OF THE JOB. INSURANCE SHALL PROTECT THE OWNER AND ANY OTHER GROUP TO BE NAMED FROM LIABILITY DUE TO THE CONTRACTOR'S NEGLIGENCE. A PROPERLY EXECUTED CERTIFICATE OF INSURANCE, AIA DOCUMENT G705, SHALL BE SUBMITTED TO THE ARCHTIECT FACILITIES DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY WORK.
4. DO NOT SCALE DRAWINGS; DIMENSIONS SHALL GOVERN. DETAILS SHALL GOVERN OVER PLANS AND ELEVATIONS, LARGE SCALE DETAILS SHALL GOVERN OVER SMALL SCALE DETAILS.
5. THERE SHALL BE NO SUBSTITUTION OF MATERIALS WHERE A MANUFACTURER IS SPECIFIED. WHERE THE TERM "OR APPROVED EQUAL" IS USED THE ARCHITECT ALONE SHALL DETERMINE THE EQUALITY BASED UPON THE INFORMATION SUBMITTED BY THE CONTRACTOR.
6. THE GENERAL CONTRACTOR SHALL REVIEW ALL PLANS AND SPECIFICATIONS AND VERIFY ALL GOVERNING DIMENSIONS OF THE BUILDING PRIOR TO THE COMMENCEMENT OF WORK. HE SHALL EXAMINE ALL ADJOINING WORK OR AREAS UPON WHICH THE PERFORMANCE OF HIS WORK IS IN ANY WAY DEPENDENT. ANY VARIATIONS OR DISCREPANCIES SHALL BE REPORTED WITH ALL DUE EXPEDIENCY TO THE ARCHITECT PRIOR TO THE FABRICATION OR ERECTION OF THE WORK IN QUESTION. THE REPRESENTATIVE TO CONTACT IS DAVID LISLE - 910-763-6053
7. THE GENERAL CONTRACTOR SHALL BE RESPONSIBLE FOR THE DISTRIBUTION OF DRAWINGS TO ALL TRADES UNDER HIS JURISDICTION.
8. ANY INFORMATION REQUIRED BY THE CONTRACTORS THAT IS NOT SHOWN ON DRAWINGS OR OTHER CONTRACT DOCUMENTS SHALL BE REQUESTED BY THE GENERAL CONTRACTOR FROM THE ARCHITECT.
9. THE CONTRACTOR SHALL BE ANSWERABLE TO THE ARCHITECT FOR HIS WORK AND SHALL NOT ACCEPT INSTRUCTION WITHOUT VERIFICATION FROM THE ARCHITECT. CONTRACTOR WILL BE LIABLE FOR ANY EXPENSE CAUSED BY THE EXECUTION OF SUCH WORK WITHOUT SUCH VERIFICATION AND FOR THE EXPENSES CAUSED BY ITS REMOVAL OR CORRECTION.
10. A REPRESENTATIVE OF THE GENERAL CONTRACTOR AUTHORIZED TO DISCUSS THE WORK AND RECEIVE INSTRUCTIONS SHALL BE AT THE JOB SITE AT ALL TIMES THAT WORK IS IN PROGRESS.
11. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS FOR MISCELLANEOUS STEEL WORK, MOVABLE PARTITION WORK, ALL WOODWORK, DOORS, FRAMES, HARDWARE, FINISHES AND SUCH WORK AS MAY BE SPECIFICALLY REQUESTED IN THE CONTRACT DOCUMENTS TO THE ARCHITECT FOR WRITTEN APPROVAL. SHOP DRAWINGS SHALL SHOW ALL DIMENSIONS AND CONDITIONS AND SHALL BE SUBMITTED IN TRIPLICATE. WHEN THE ARCHITECT REQUIRES THE REVISION AND RESUBMITTAL OF SHOP DRAWINGS, SUCH RESUBMITTAL SHALL OCCUR WITHIN ONE (1) WEEK OF NOTIFICATION OF SUCH REQUIREMENT.
12. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR VERIFYING THE EXTENT, NATURE, AND SCOPE OF WORK DESCRIBED IN THE CONTRACT DOCUMENTS AND WILL COORDINATE WITH THE ARCHITECT, OR THE ARCHITECT'S REPRESENTATIVE. THE GENERAL CONTRACTOR IS TO PROVIDE ALL LABOR AND MATERIALS NECESSARY TO EXECUTE ALL WORK AS SHOWN ON THESE DRAWINGS WITH THE EXCEPTION OF THOSE ITEMS NOTED AS SEPARATE CONTRACTS OR "N.I.C." HE SHALL BE RESPONSIBLE FOR COORDINATING THIS WORK WITH THAT OF ALL OTHER TRADES INCLUDING THOSE OPERATING UNDER SEPARATE CONTRACT WITH THE LANDLORD AND/OR MSDW
13. ALL WORK SHALL BE PERFORMED BY SKILLED AND QUALIFIED WORKMEN AND IN ACCORDANCE WITH THE BEST PRACTICES OF THE TRADES INVOLVED. CARE SHALL BE TAKEN TO ENSURE COMPLIANCE WITH BUILDING REGULATIONS AND/OR GOVERNMENTAL LAWS, STATUTES, OR ORDINANCES CONCERNING THE USE OF UNION LABOR.
14. ALL MATERIALS SHALL BE NEW, UNUSED, AND OF THE HIGHEST QUALITY IN EVERY RESPECT UNLESS OTHERWISE NOTED.
15. ALL WORK SHALL BE ERECTED AND INSTALLED PLUMB, LEVEL, SQUARE AND TRUE AND IN PROPER ALIGNMENT.
16. MANUFACTURED MATERIALS AND EQUIPMENT SHALL BE INSTALLED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS AND INSTRUCTIONS UNLESS OTHERWISE NOTED.
17. WORK IS TO BE PERFORMED IN ACCORDANCE WITH THE RULES AND REGULATIONS OF GOVERNMENTAL AGENCIES HAVING JURISDICTION AND SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL CONSTRUCTION, SAFETY, AND SANITARY LAWS, CODES, STATUTES, AND ORDINANCES. ANY DISCREPANCIES, VARIATIONS, OR OMISSIONS IN THE CONTRACT DOCUMENTS SHALL BE REPORTED PROMPTLY TO THE ARCHITECT.
18. ALL FEES, TAXES, PERMITS, APPLICATIONS, AND CERTIFICATES OF INSPECTION AND THE FILING OF ALL WORK WITH GOVERNMENTAL AGENCIES SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR.
19. TIME IS OF THE ESSENCE AND THE GENERAL CONTRACTOR SHALL KEEP SUFFICIENT WORKMEN ON THE JOB SITE AT ALL TIMES TO PERFORM THE WORK IN THE MOST EXPEDITIOUS MANNER CONSISTENT WITH GOOD WORKMANSHIP, SOUND BUSINESS PRACTICE, AND THE BEST INTERESTS OF THE OWNER.
20. SHOULD OWNER REQUIRE WORK TO BE PERFORMED ON PREMIUM TIME ABOVE AND BEYOND THAT IMPLIED BY THE CONTRACT DOCUMENTS, THE ARCHITECT SHALL GIVE WRITTEN NOTICE AND THE CONTRACTOR SHALL COMPLY THEREWITH.
21. EACH TRADE WILL BE EXPECTED TO PROCEED IN A FASHION THAT WILL NOT DELAY OR DETAIN THE TRADE FOLLOWING THEM.
22. ALL WORK SHALL BE COMPLETED FOR THE AGREED CONTRACT PRICE WITHOUT RECOURSE TO LABOR STOPPAGES OR REVISIONS OF GOVERNING REGULATIONS, LAWS AND CODES ABOUT WHICH THE CONTRACTOR COULD HAVE REASONABLY BEEN EXPECTED TO HAVE HAD FOREWARNING AND TO HAVE MADE APPROPRIATE CONTINGENCY PLANS PRIOR TO THE SIGNING OF THE CONTRACT.
23. THE CONTRACTOR SHALL NOT PROCEED WITH ANY ADDITIONAL WORK OR CHANGES FOR WHICH HE EXPECTS ADDITIONAL COMPENSATION BEYOND THE CONTRACT AMOUNT WITHOUT WRITTEN AUTHORIZATION FROM THE ARCHITECT. FAILURE TO OBTAIN SUCH AUTHORIZATION SHALL INVALIDATE ANY CLAIM FOR SUCH EXTRA COMPENSATION.
24. ALL INSTALLED PLUMBING, MECHANICAL, AND ELECTRICAL EQUIPMENT SHALL OPERATE AS QUIETLY AND AS FREE OF VIBRATION AS POSSIBLE.
25. ALL WORK AND MATERIALS SHALL BE GUARANTEED AGAINST DEFECTS IN DESIGN, WORKMANSHIP, AND MATERIALS FOR A PERIOD OF AT LEAST ONE (1) YEAR FROM THE ARCHITECTS APPROVAL FOR FINAL PAYMENT.
26. CONTRACTOR SHALL AT ALL TIMES KEEP THE PREMISES FREE OF ACCUMULATIONS OF WASTE MATERIALS OR RUBBISH CAUSED BY HIS OPERATIONS CONTRACTOR SHALL CONFINE HIS OPERATIONS FOR REMOVAL TO SUCH METHODS AS MAY BE AGREEABLE TO THE OWNER. PREMISES TO BE SWEPT CLEAN OF RELATED CONSTRUCTION DEBRIS DAILY.
27.

27. UPON COMPLETION OF THE WORK THE CONTRACTOR SHALL NOTIFY THE ARCHITECT WHICH SHALL COMPILE A "PUNCH LIST" OF CORRECTIONS AND UNSATISFACTORY AND/OR INCOMPLETE WORK. FINAL PAYMENT WILL BE CONTINGENT ON THE COMPLETION OF THESE ITEMS UNDER THE TERMS OF THE CONTRACT.
28. DURING THE COURSE OF CONSTRUCTION, ACTUAL LOCATIONS SHALL BE INDICATED TO SCALE IN CONTRASTING INK ON THE DRAWINGS FOR ALL RUNS OF MECHANICAL AND ELECTRICAL WORK INCLUDING SITE UTILITIES AND CONCEALED DEVIATIONS FROM THE DRAWINGS. UPON COMPLETION OF THE PROJECT, INCLUDING THE PUNCH LIST, THIS INFORMATION SHALL BE TRANSFERRED TO A SET OF PDF DRAWINGS. THIS SET SHALL BE CONSPICUOUSLY MARKED "AS BUILT SET" AND RETURNED TO THE ARCHITECT WITH ONE (1) COPY TO THE OWNER.
29. DRAWINGS IN THIS SET AND THE DESIGNS THEREON ARE THE PROPERTY OF LISLE ARCHITECTURE & DESIGN , INC.
30. IT IS INTENDED THAT THE GENERAL CONTRACTOR PROVIDE A COMPLETE JOB AND ANY OMISSIONS IN THESE NOTES OR IN THE OUTLINE OF WORK SHALL NOT BE CONSTRUED AS RELIEVING THE GENERAL CONTRACTOR OF SUCH RESPONSIBILITIES AS ARE IMPLIED BY THE SCOPE OF THE WORK EXCEPT FOR ITEMS SPECIFICALLY NOTED.
31. SHOULD ANY PORTION OF THE CONTRACT DOCUMENTS PROVE TO BE, FOR WHATEVER REASONS, UNENFORCEABLE, SUCH UNENFORCEABILITY SHALL NOT EXTEND TO THE REMAINDER OF THE CONTRACT NOR SHALL IT VOID ANY OTHER PROVISION OF THE CONTACT UNLESS IT BE SHOWN THAT THE CONTRACT OR THE PROVISIONS THEREOF ARE DEPENDENT UPON THE UNENFORCEABLE PARTS FOR THEIR MEANING.
32. THROUGHOUT THE DURATION OF THE PROJECT THE GENERAL CONTRACTOR SHALL REFRAIN FROM ACTIONS THAT COULD LEAD TO THE FILING OF A CLAIM OF LIEN AGAINST OWNER BY SUBCONTRACTORS OR SUPPLIERS OF LABOR, MATERIALS, SERVICES, OR EQUIPMENT OR ANY OTHER INDIVIDUAL, COMPANY, OR ENTITY SO ENTITLED UNDER GOVERNING LAWS AND REGULATIONS UNLESS HE CAN SHOW REASONABLE AND JUSTIFIABLE CASE. APPROVAL FOR FINAL PAYMENT SHALL BE CONTINGENT UPON THE GENERAL CONTRACTOR'S OBTAINING AND FURNISHING TO THE ARCHITECT SIGNED RELEASES FROM SUCH INDIVIDUALS, COMPANIES, OR ENTITIES.
33. THE CONTRACTOR SHALL MAKE KNOWN TO THE ARCHITECT ANY DISCREPANCIES THROUGHOUT THE DRAWINGS PRIOR TO CONSTRUCTION. IF THE CONTRACTOR DOES NOT MAKE THEM KNOWN, HE SHALL TAKE RESPONSIBILITY AND LIABILITY FOR THE MOST EXPENSIVE OR HIGHEST QUALITY ITEM.

Elevators & Lifts





NOTE:
ELEVATOR MUST BE

** 50 PERSONS OR LESS
* 50+ PERSONS

Upfit Notes

1. BEFORE COMMENCING WORK THE GENERAL CONTRACTOR SHALL NOTIFY THE ARCHITECT OF ANY AREAS THAT HAVE NOT BEEN SATISFACTORILY COMPLETED BY THE LANDLORD AND/OR THE PREVIOUS TENANT TO MEET THE BASE BUILDING REQUIREMENTS (FIREPROOFING, DUCTWORK, CONDITION OF SLAB, CONDITION OF CORE AND DEMISING WALLS, UTILITY HOOKUPS, ELECTRICAL PANELS, ETC.).
2. GREAT CARE SHALL BE EXERCISED TO ASSURE THAT THE BUILDING SHALL BE PROTECTED FROM DAMAGE THAT COULD OCCUR BECAUSE OF THIS WORK AND CONTRACTORS SHALL PROVIDE PROTECTION FOR EXISTING AREAS AND NEW WORK AREAS. ANY DAMAGES DUE TO THIS WORK, OR ACCIDENTS SHALL BE REPAIRED, REPLACED, OR PATCHED AT THE DISCRETION OF THE ARCHITECT. THE CONTRACTOR SHALL BEAR FINANCIAL RESPONSIBILITY FOR SUCH DAMAGE AND ANY WORK UNDERTAKEN TO CORRECT IT.
3. THE CONTRACTOR SHALL EXERCISE GREAT CARE IN PROTECTING ALL MATERIALS EXISTING ON THE JOB FROM DAMAGE AND SHALL MAINTAIN PROTECTION FOR ALL TRAFFIC AREAS OF THE BUILDING TO BE USED DURING THE EXECUTION OF WORK RELATING TO THIS CONTACT WITH THE UNDERSTANDING THAT THE CONTRACTOR WILL RECTIFY ANY DAMAGE ATTRIBUTABLE TO HIS OPERATIONS.
4. IT IS EXPECTED THAT SUFFICIENT LABOR WILL BE PROVIDED SO THAT ACTIVITY FOR ANY GIVEN TRADE WILL NOT BE LIMITED TO ONLY ONE PART OF THE TOTAL WORK AREA.
5. EXISTING CONVECTOR/RADIATOR/PERIMETER ENCLOSURES ARE TO BE COVERED DURING THE WORK AND PROPERLY CLEANED AND VACUUMED PRIOR TO REINSTALLATION AND/OR THE COMPLETION OF CONSTRUCTION.
6. THE GENERAL CONTRACTOR SHALL NOT PLACE CEILING HVAC REGISTERS OR DIFFUSERS WHEREVER SHELVING, FILES, OR OVER FILE UNITS ARE INDICATED ON THE DRAWINGS.
7. THE GENERAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL EXIT SIGNS AS REQUIRED BY LOCAL CODES UPON APPROVAL OF SIGN LOCATIONS AND STYLES BY THE ARCHITECT AND BUILDING OFFICIALS HAVING JURISDICTION.

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LISLE ARCHITECTURE & DESIGN, INC. CORPORATE SEAL NORTH CAROLINA

DAVID BRIAN LISLE REGISTERED ARCHITECT 7903 NORTH CAROLINA WILMINGTON, NC

BID SET

DATE: 12.7.2020

SMITH SHELL BUILDING
SIR TYLER DR.
WILMINGTON, NC 28405

PROJECT NO: 20131

NO.	REV./SUB.	DATE

SHEET TITLE

ADA Details & Notes

SHEET NUMBER

SP1

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