



Jones Gillam Renz Architects

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ARCHITECT'S SUPPLEMENTAL INSTRUCTIONS

JONES GILLAM RENZ DOCUMENT JGR 710

PROJECT:	The Reserves at South Lake New Apartment Complex Grinnell, IA	Report No.	Three (3)
OWNER:	OPG South Lake Partners, LLC Dan Maximuk 234 N. Santa Fe Ave, Suite A Salina, KS 67401	Date	January 18, 2022
CONTRACTOR:	MCP Group 3501 SW Fairlawn Rd. Topeka, KS 66614	Architect's Proj No.	20-3118
		Contract For:	General Construction Mechanical, Electrical

The work shall be carried out in accordance with the following supplemental instructions issued in accordance with the Contract Documents without change in Contract Sum or Contract Time. Prior to proceeding in accordance with these instructions, indicate your acceptance of these instructions for minor change to the Work as consistent with the Contract Documents and return a copy to the Architect.

DESCRIPTION:

1. IFA Plan Review and Responses is attached for reference. Associated revised drawings and specifications attached and listed below
 - a. Drawings
 - i. Sheet A2.1 – Floor Plans A, B, C & D – Finished flooring material in Baths have been changed to Sheet Vinyl.
 - ii. Sheet A2.2
 1. Apartment Interior Finish Schedule – Bath 103 & Master Bath 118 have been changed to Sheet Vinyl. Laundry 106 & Linen 108 have been changed to either Sheet Vinyl or Vinyl Plank (reference unit floor plans for material locations).
 2. Apartment Door Schedule: Door 1 has been changed to a steel frame.
 - iii. Sheet A2.4 – Floor Plans A, B & C – Finished flooring material in Baths have been changed to Sheet Vinyl.
 - iv. Sheet A2.10 – Apartment Building A Summary has been corrected
 - v. Sheet A2.11 – Apartment Building B Summary has been corrected
 - vi. Sheets A3.1-A3.3 – notes have been changed to read “hardi-panel siding” in lieu of composite siding
 - b. Specifications
 - i. Section 08111 – Standard Doors and Frames:
 1. 1.01A has been modified to read: Exterior Entry Doors: Fire-rated (20 min) and thermally insulated, thermally broken, Masonite HD Wood Edge Panel Doors with Fiberglass facing and metal frames.
 2. 2.04A has been modified to read: Exterior Frames: 16 gage thick material, base metal thickness.
 - ii. Section 085313 – Vinyl Windows – Added Section 2.1A.3 – For this project, window performance is required to meet Energy Star Multi-Family Program, which requires the Prescriptive Pathway be met. Former Table was replaced with new, which identifies the prescriptive pathway for Northern climate as: U-Value .27 & SHGC as “any”.
 - iii. Section 09650 – Resilient Flooring
 1. Added note 2.01A.6 – Must be made from products that do not use vinyl chloride in the manufacturing process and do not produce dioxin Per IFA 2022 QAP Standards.
 2. Added Section 2.02 MATERIALS – VINYL SHEET FLOORING
 - iv. Section 10800 – Building Specialties: Added Section 1.5 – CLOSET SHELIVING
 - v. Section 12356 – Kitchen Casework:
 1. Added note 1.5C.1.b – Cabinets shall have no formaldehyde added during the manufacturing process.
 2. Added note 2.3D – All Cabinets: No formaldehyde shall be added during the manufacturing process.
2. Revised Projected Energy Report – by The Element Group – is attached.

Attachments:

1. IFA Plan Review and Responses (2 pages)
2. Revised Sheets - A2.1, A2.2, A2.4, A2.10, A2.11, A3.1, A3.2, A3.3
3. Revised Specifications – Sections 08111, 085313, 09650, 10800, 12356
4. Other – Revised Projected Energy Report (16 pages)

Issued by: Jones Gillam Renz Architects PO Box 2928, Salina, KS 67402
Maggie Gillam, Project Manager 785 827 0386 mgillam@jgrarchitects.com

Copies to:

MCP Group - Eric Hubener
OPG - Dan Maximuk
JGR Architect - Maggie Gillam
LST - John Lewis-Smith
Structural - Jim Manley

1/4/2023

Memo: South Lake Design Review

To: Matt Gillam, Jeff Gillam, Michael Boerst, Maggy Jares
From: John Kerss

Below are the review comments on the construction documents for South Lake Project, (21-35).

Please review and respond directly to the written comments describing what changes have been made and where those can be located in the documents. Respond directly to each comment indicating what change is being made and where in the construction documents the change can be found. Please respond ASAP for 10% test completion. All corrections should be incorporated into the bid/contract documents. IFA may request a complete, final copy of the contract documents when the review process is completed, and the drawing approval has been emailed to you.

Don't start construction until the formal drawing approval has been sent to you.

If you have questions, I can be reached at 515-681-8219

IFA Plan Review

Reviewed By: John Kerss, IFA

Documents used for plan review and referenced herein are:

1. Plans and Specifications from the Architect
2. Minimum Development Characteristics from the Online Application
3. QAP Appendix 1 – Threshold Requirements for Building, Construction, Site and Rehabilitation
4. The Threshold LIHTC Application
5. Energy Report

Red Responses – JGR

Green Responses – LST Engineers

Purple Responses – The Element Group

Review Items

1. Provide drawings and specs for the video security system. Drawings should show locations on the site and within the buildings. This must be submitted at this time, cannot be a deferred item. ****JGR working on a camera coverage site diagram**
2. Provide plans and specifications for the radon system, similarly, cannot be a deferred submittal. Radon Pipe locations are shown on Sheets A2.10 and A2.11 designated by Note 3. See section detail N on sheet A4.5. ****Because this is installed as a passive system, we don't usually provide a specification, we just call out the pipe on the drawings as a 4" diameter PVC schedule 40 pipe that runs up through the roof with a 3" perforated PVC pipe below the concrete slab.****
3. Is there a spec for the closet shelving? Must be adjustable without use of any tools. **I've added a specification to Section 10800 Building Specialties that covers the closet shelving. Yes, they are**

adjustable without the use of tools. I've attached the revised spec along with the actual product data.

4. Unit entry doors must have steel frames. Schedule shows wood. The door schedule on Sheet A2.2 has been revised to show steel frames. The specifications have been revised as well. See attached.
5. On A2.11 and A2.10 the building summaries are flipped, summary for A should be for B and vice versa. This has been revised. See attached Sheets A2.10 and A2.11
6. Elevations indicate "composite siding". Verify this is the Hardie siding called out in the specs. The only composite siding acceptable for points is Smart Board by LP. Specifications indicate that James Hardie Fiber-Cement Siding shall be used. Elevations have been revised to read "Hardi-panel" in lieu of composite siding. Reference attached specification and Sheets.
7. Add to Kitchen Casework spec that cabinets should have no formaldehyde added in the manufacturing process. This note has been added. See attached revised specification.
8. Bathroom floors must be a sheet vinyl product that meets QAP requirements. See G.6.3 in Part C – Threshold Requirements... Sheets A2.1, A2.2 and A2.4 have been revised to show bathrooms floors as Sheet Vinyl product. Specifications have been revised as well. Attached.
9. Sheet M6.1 has an Electric Water heater schedule that differs from the one on P6.1, which I think is the correct one. Please clarify. P6.1 has the plumbing fixture schedule and the water heaters are scheduled as HWH-A and HWH-B. M6.1 has an electric heater schedule and the electric wall heater is scheduled as EWH.
10. In the energy report, the AC unit listed in the drawings is 16 SEER, in the report it is 14.5. The primary water heater listed in the energy report should be the Electric at .93UEH for the apartment units. The gas .68 UEF is for the Club House. Preliminary energy report was based on drawings from 4/12/2022 where natural gas water heater is shown. TEG to update energy report with current, all electric systems
11. The energy report lists R20 for the walls but the drawings show R13 batts. How is the R7 remainder made up? Page 3 of the energy report shows specific wall make up (R-6.6 Zip and R-13 fiberglass batt). HERS certificated home feature summary combines and rounds R-value of walls to summarize information which is why this shows an R-20/
12. The energy report list Window U value for the most efficient option in the drawings, it should calculate instead for the worst condition that drawings allow for – U value of .30 with SHGC of .42 For the prescriptive pathway of the Energy Star Multifamily program windows must be U-0.27. Architect/construction team must submit window specifications to TEG prior to purchase to ensure the windows meet the Energy Star MF prescriptive requirements.
13. Please revise the energy report and/or the drawings so that they agree. TEG to update energy report on receipt of updated drawings and Energy Star HVAC design reports.

FINISHES, SCHEDULES, ETC.

REFERENCE SHEET A2.2 FOR INTERIOR FINISH SCHEDULE, DOOR SCHEDULES, WINDOW SCHEDULE AND FINISH DETAILS.

APARTMENT GENERAL NOTES

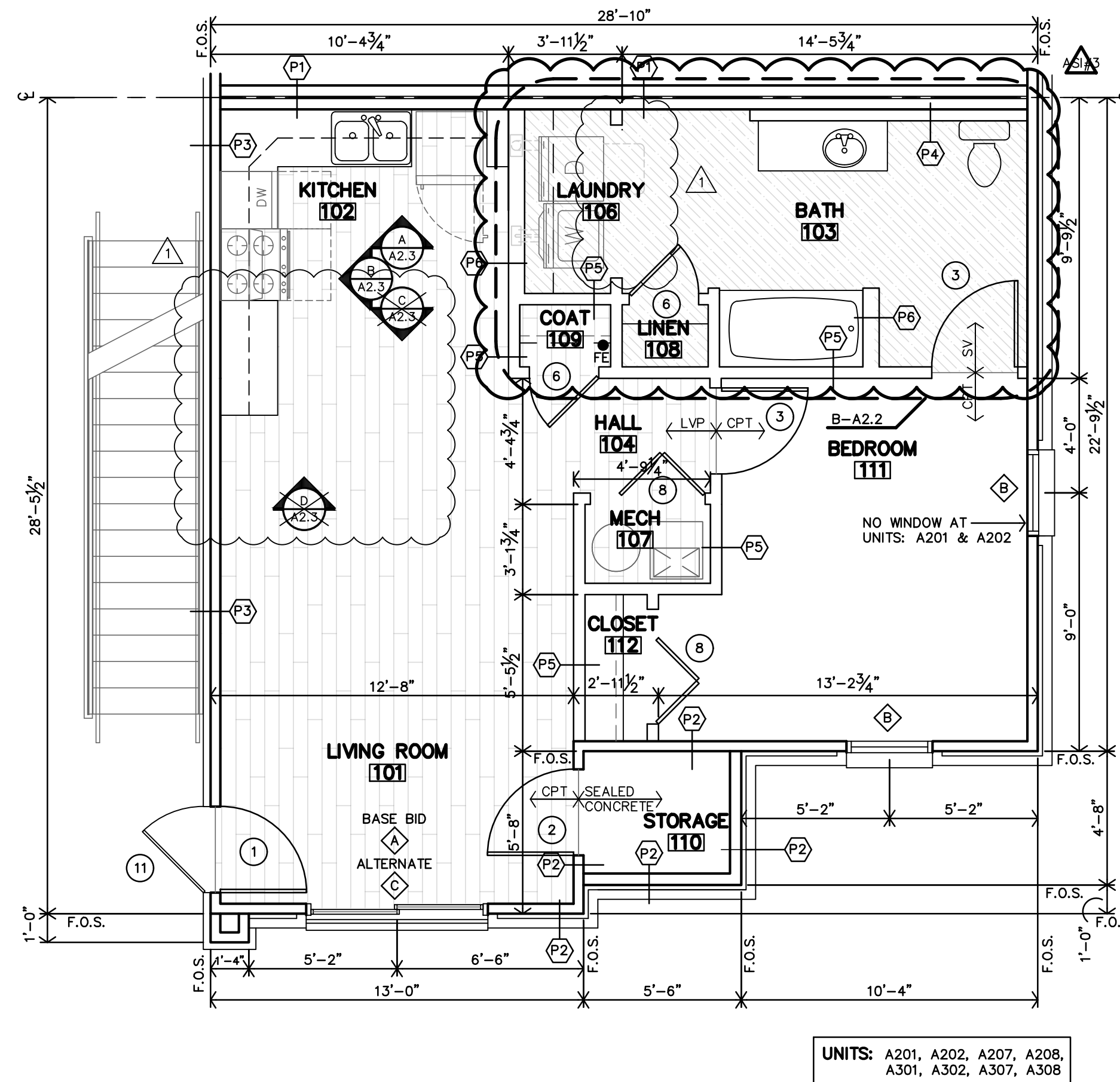
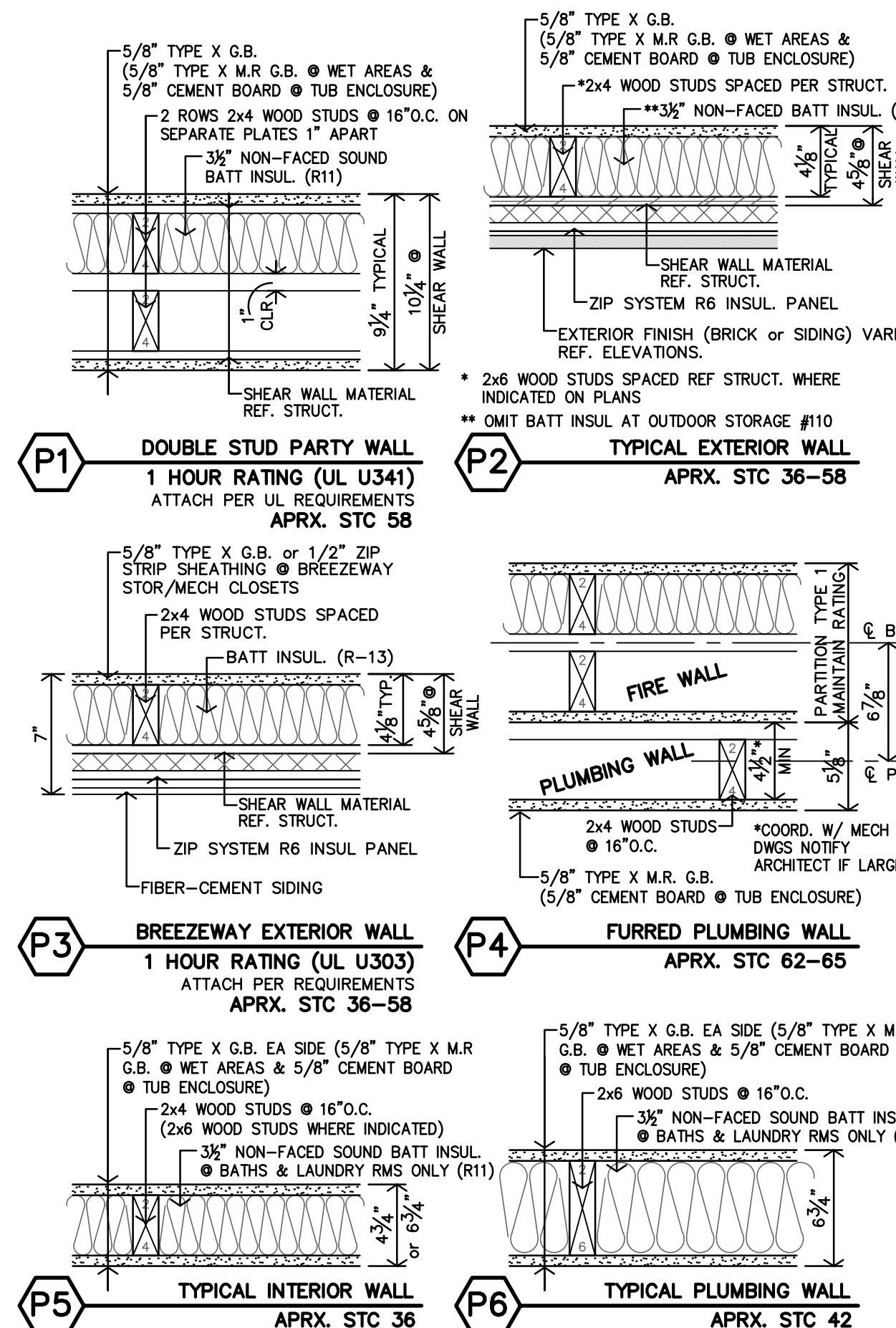
- REF. STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS.
- TYPICAL GROUND FLOOR FINISH FLOOR ELEVATION IS REFERENCED AS 100'-0". CONTRACTOR SHALL VERIFY BUILDING ELEVATION WITH SITE CIVIL DRAWINGS.
- REFERENCE SITE PLAN SHEET A1.1 FOR LOCATION & ORIENTATION OF BUILDINGS.
- CONTRACTOR SHALL PROVIDE ADJUSTABLE PLASTIC COATED WIRE SHELVES & ROD AT ALL CLOSETS U.N.O.
- CONTRACTOR SHALL PROVIDE FIREBLOCKING, ANCHOR BOLTS AND ANY REQUIRED SHEAR WALL BLOCKING AS REQUIRED BY STRUCTURAL DRAWINGS.
- CONTRACTOR TO PROVIDE FIRE BLOCKING AT PARTY WALL AT 10'-0" O.C., TYPICAL. CONTRACTOR TO PROVIDE FIRE BLOCKING AT PARTY WALL AT ALL BACK TO BACK ELECTRICAL OUTLETS. PROVIDED AND INSTALL ALL FIRE BLOCKING AND DRAFTSTOPS PER 2015 IBC, SECTION 718.
- FIRE EXTINGUISHERS SHALL BE INSTALLED & PROVIDED IN ACCORDANCE WITH NFPA 10, 2015 IBC, SECTION 906.1 AND SPECIFICATIONS. LOCATED PER CFP SHEET.
- ALL PENETRATIONS THRU RATED WALLS AND/OR FLOOR ASSEMBLIES SHALL BE FIRESTOPPED PER APPROVED U.L. DESIGNS. REFERENCE SHEET A4.8 FOR FIRE PENETRATION ASSEMBLIES.
- HOSE BIBS TO BE LOCATED 6" MIN. ABOVE MAINSCOT (30" MIN. ABV. FIN. FLOOR).
- B.O. HEADER 83" ABV. FIN. FLR.
- KITCHEN RECEPTACLES TO BE 44" MAX. ABOVE FIN. FLR.
- SUBMIT VERIFICATION THAT ALL CONSTRUCTION MATERIAL WILL MEET U.S. EPA CRITERIA PARTICULARLY MATERIALS THAT WILL BE OBTAINED FROM INTERNATIONAL SOURCES. ALSO PROVIDE VERIFICATION THAT THE CONSTRUCTION WILL NOT RESULT IN OR CONTAIN HAZARDOUS MATERIALS.
- ALL WALL DIMENSIONS ARE TO FACE OF CYP. BD. UNLESS NOTED OTHERWISE.
- F.O.S. = FACE OF STUD
- FE = FIRE EXTINGUISHER
- HEARING/VISION IMPAIRED UNIT (WHERE INDICATED ON SHEET A1.1 AND LISTED ON BUILDING PLANS):
 - CONTRACTOR SHALL INSTALL EQUIPMENT REQUIRED PER 2010 ADA SEC. 809.5.
 - REF. ELEC. DWGS

STAND./ADAPT. UNIT NOTES

- STANDARD UNITS (ALL SECOND & THIRD FLOOR UNITS):
 - CONTRACTOR TO PROVIDE 2x8 BLOCKING IN WALLS FOR COUNTERTOP & SUPPORTS.
 - NO REMOVABLE CABINET FRONTS.
- ADAPT. UNITS (WHERE INDICATED ON SHEET A1.1 AND BUILDING PLANS):
 - REFERENCE ENLARGED PLANS AND DETAILS FOR ADDITIONAL INFORMATION.
 - CONTRACTOR TO INSTALL REMOVABLE CABINET & 2x8 BLOCKING IN WALLS FOR FUTURE GRAB BARS @ ALL TOILET & TUB AND COUNTERTOPS, IN BATHS AND KITCHEN.
 - CONTRACTOR TO INSTALL REMOVABLE CABINET AT BATH #104. INSTALL 2x8 BLOCKING IN WALLS FOR FUTURE GRAB BARS @ ALL TOILETS & TUBS AND COUNTERTOPS AT BATHS #104.
 - CONTRACTOR TO INSTALL REMOVABLE CABINET & 2x8 BLOCKING IN WALLS FOR FUTURE GRAB BARS @ ALL TOILETS & TUBS AND COUNTERTOPS AT MASTER BATH #113.
 - CONTRACTOR TO INSTALL REMOVABLE CABINET FRONTS @ SINK & WORK SPACE IN KITCHEN #103.
 - AT ALL REMOVABLE CABINETS, FLOORS & WALLS SHALL BE FINISHED. NO FINISH MODIFICATIONS ALLOWED AFTER CABINET FRONT IS REMOVED. CONTRACTOR SHALL PROVIDE HOT WATER & DRAIN PIPES COVERS. OWNER SHALL INSTALL COVER AFTER CABINET FRONT IS REMOVED.
 - TOILETS SHALL BE ADA COMPLIANT (17"-19" HIGH).
 - CONTRACTOR TO INSTALL BLOCKING PER ASQ/ANSI 4117.1-2009.
 - ALL CLOSETS TO HAVE PLASTIC WIRE CLOTHES SHELF & ROD WITH ADJUSTABLE BRACKETS. (MOUNT SHELF AT HEIGHTS AS INDICATED ON PLANS)

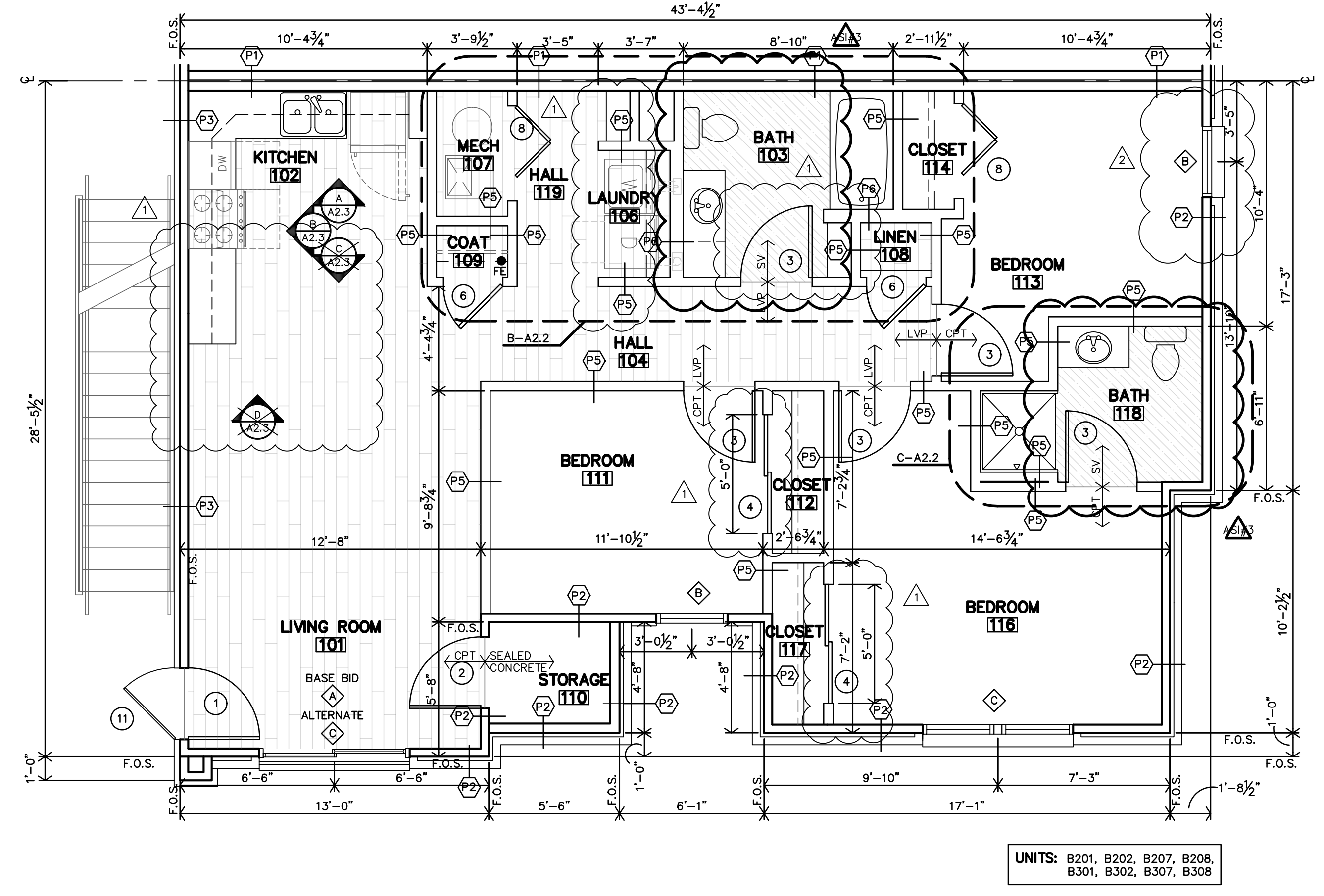
APARTMENT PARTITION SCHEDULE

- PARTITION NOTES:
- SHEAR WALLS: REF. STRUCTURAL FOR LOCATIONS, MATERIAL & SECTIONS
- FIRE BLOCKING REQUIRED PER 2015 IBC SEC. 708 & 718. @ 10'-0" O.C. VERT. & HORIZ. AND @ ALL BACK TO BACK ELECTRICAL OUTLETS. (1) LAYER = 5/8" TYPE X G.B. OR 1/2" PLYWOOD TO EXTEND THRU SPACE



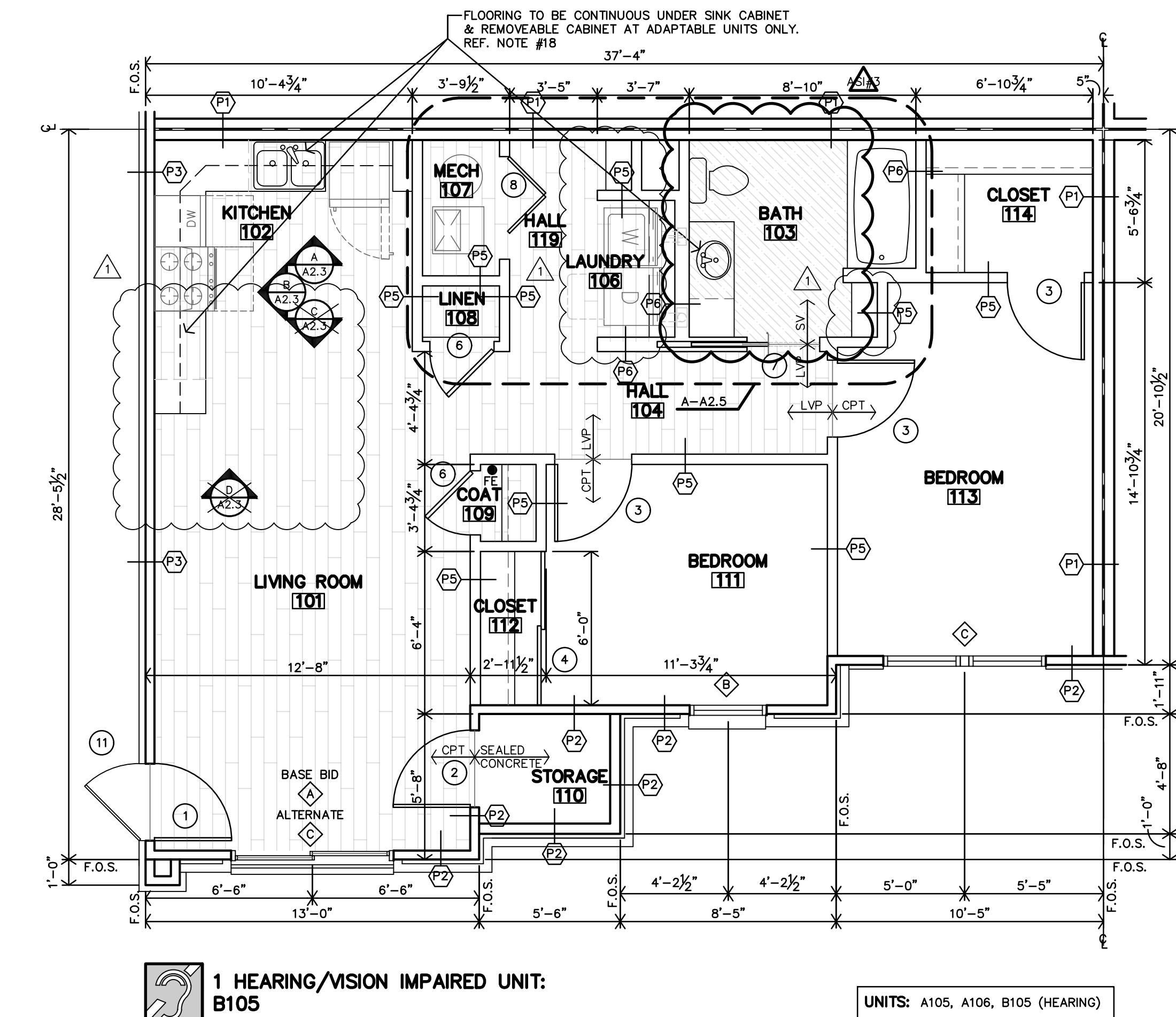
D 1 BEDROOM FLOOR PLAN (STANDARD)

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR STANDARD LOCATIONS



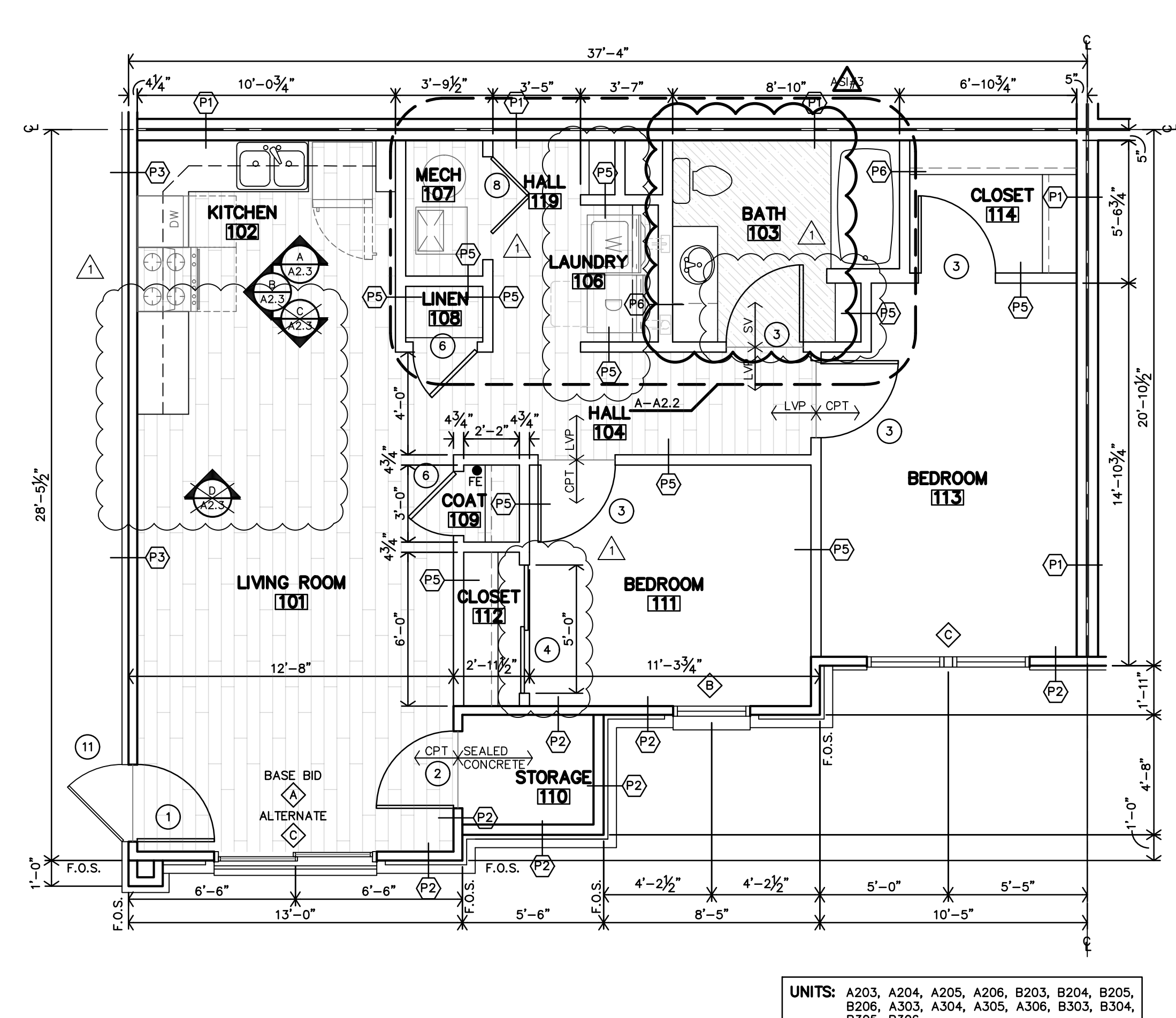
C 3 BEDROOM FLOOR PLAN (STANDARD)

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR STANDARD LOCATIONS



B 2 BEDROOM FLOOR PLAN (ADAPTABLE)

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR STANDARD LOCATIONS



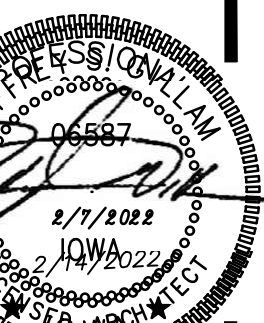
A 2 BEDROOM FLOOR PLAN (STANDARD)

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR STANDARD LOCATIONS

STANDARD/ADAPTABLE APARTMENTS

THE RESERVES at SOUTH LAKE
NEW APARTMENT COMPLEX
GRINNELL, IOWA

Architects Planners Designers
730 N. Ninth Street
P.O. Box 1008
Kansas City, MO 64108
JONES GILLAM RENZ
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REVISION:
DATE: 2-14-2022
JOB: 20-3118
SHEET:

A2.1

PREVIOUS REVISIONS: 3-11-22

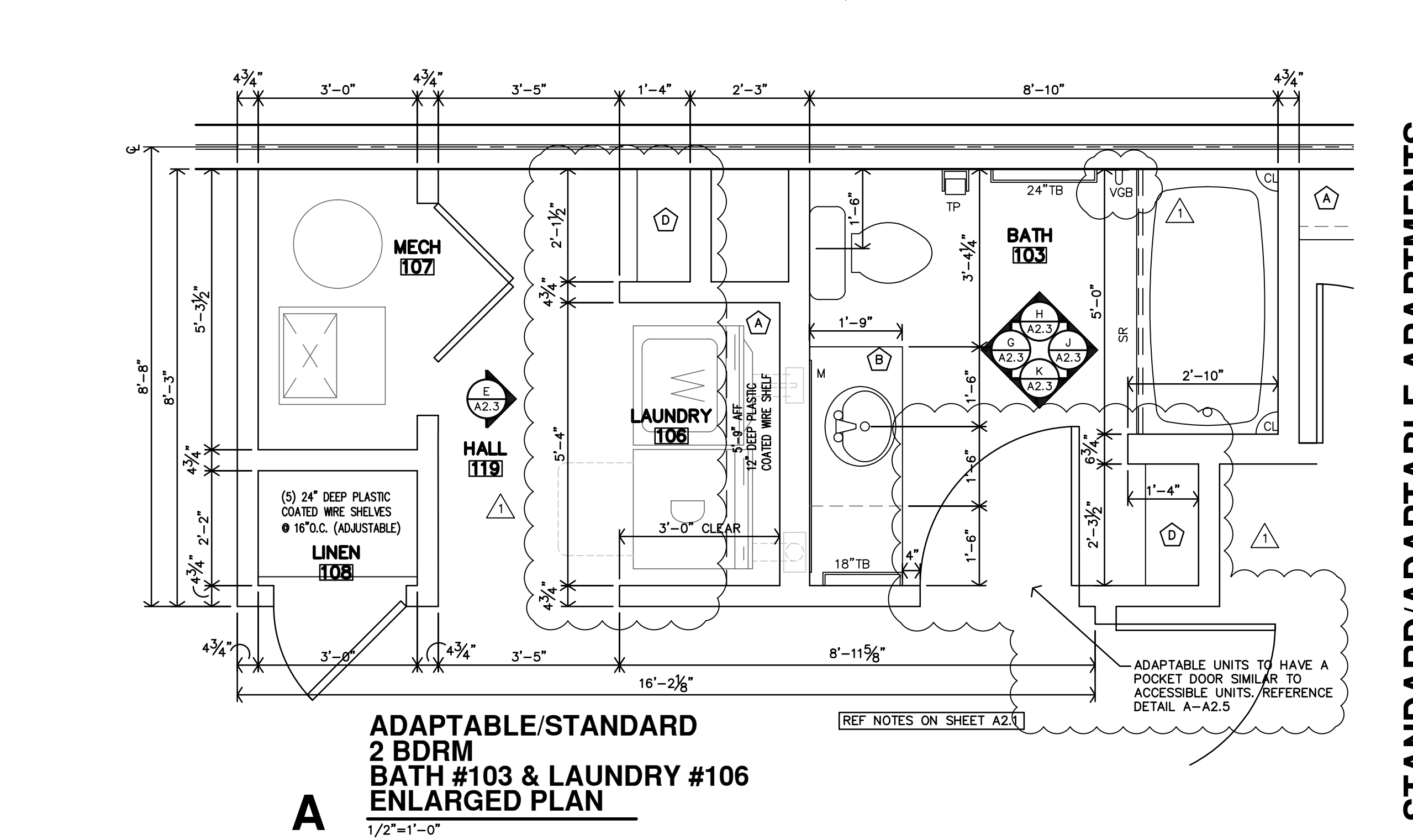
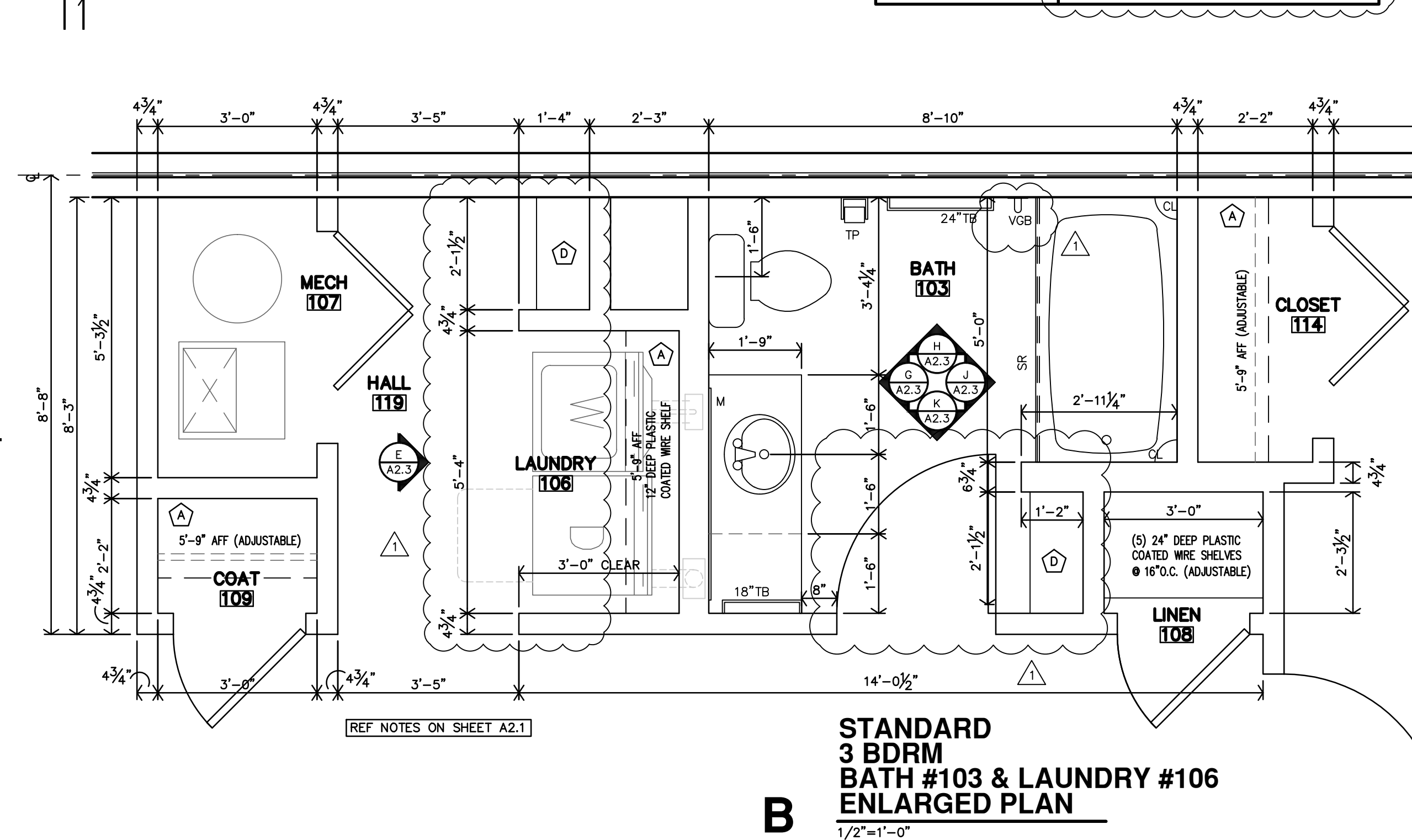
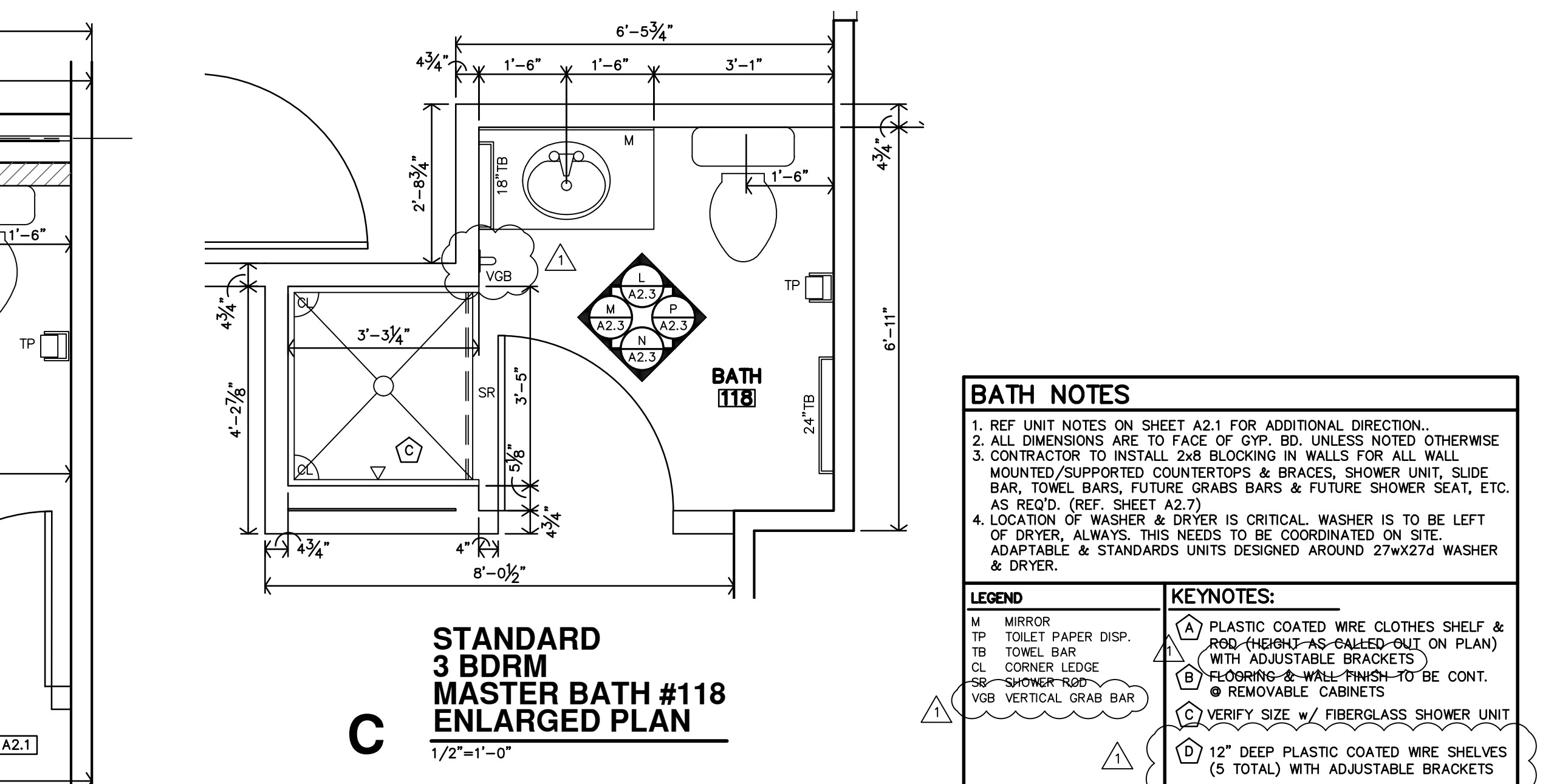
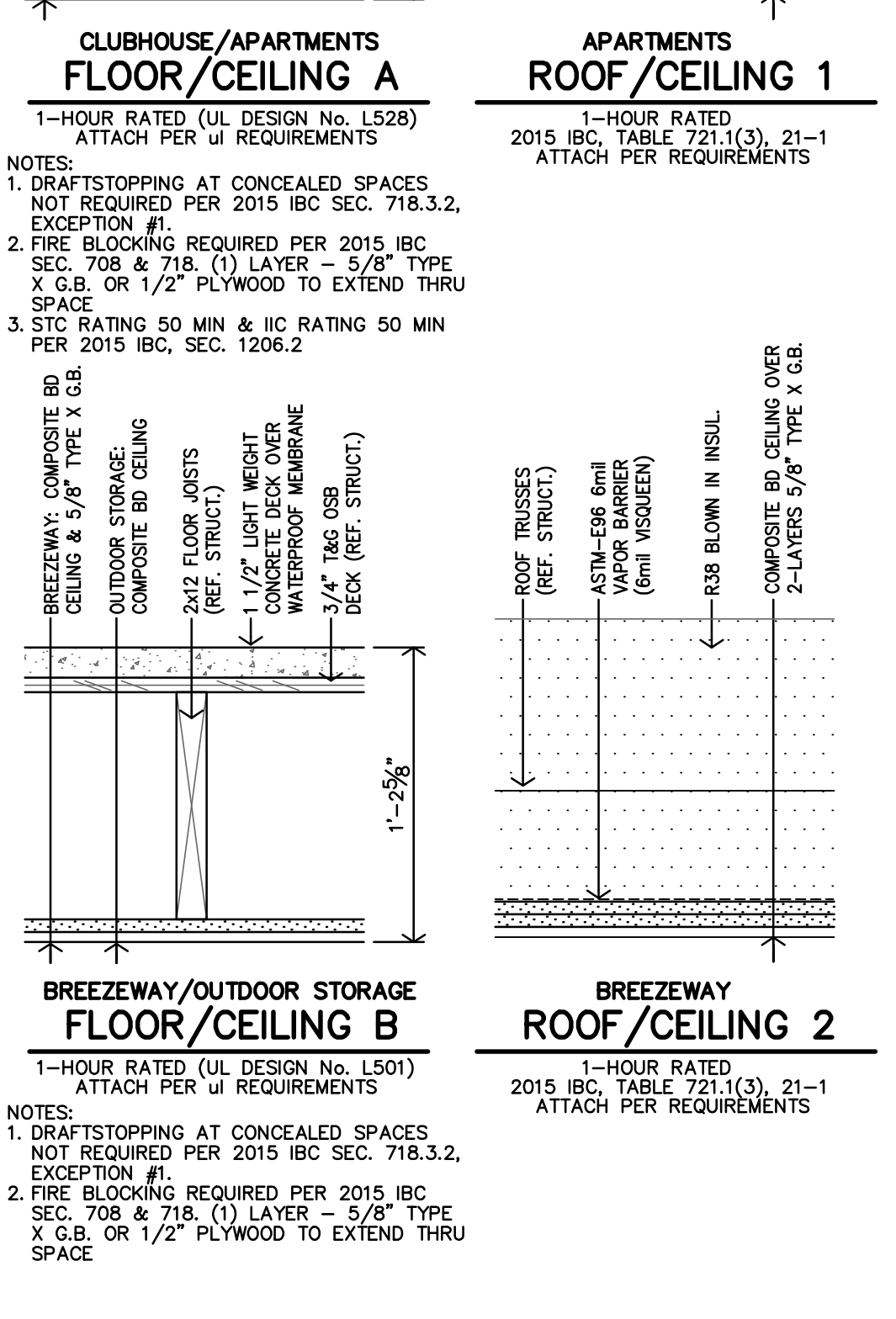
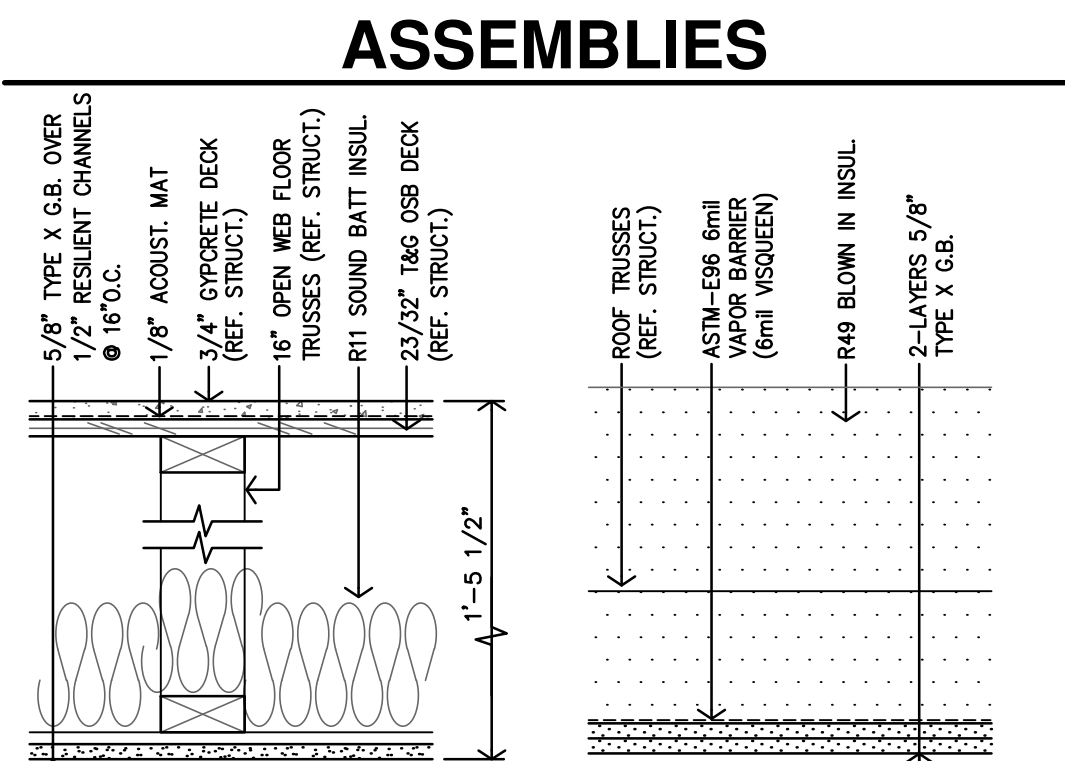
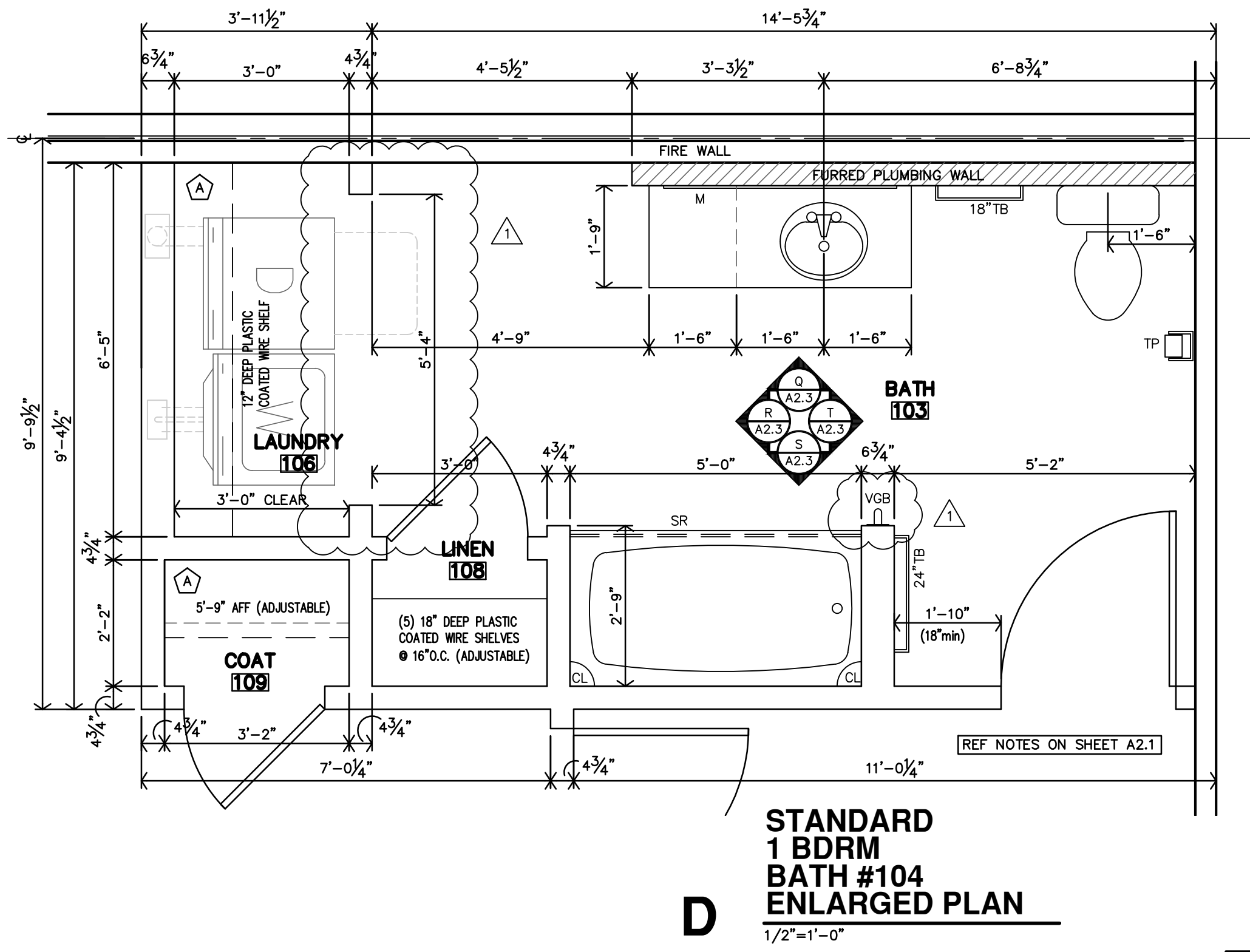
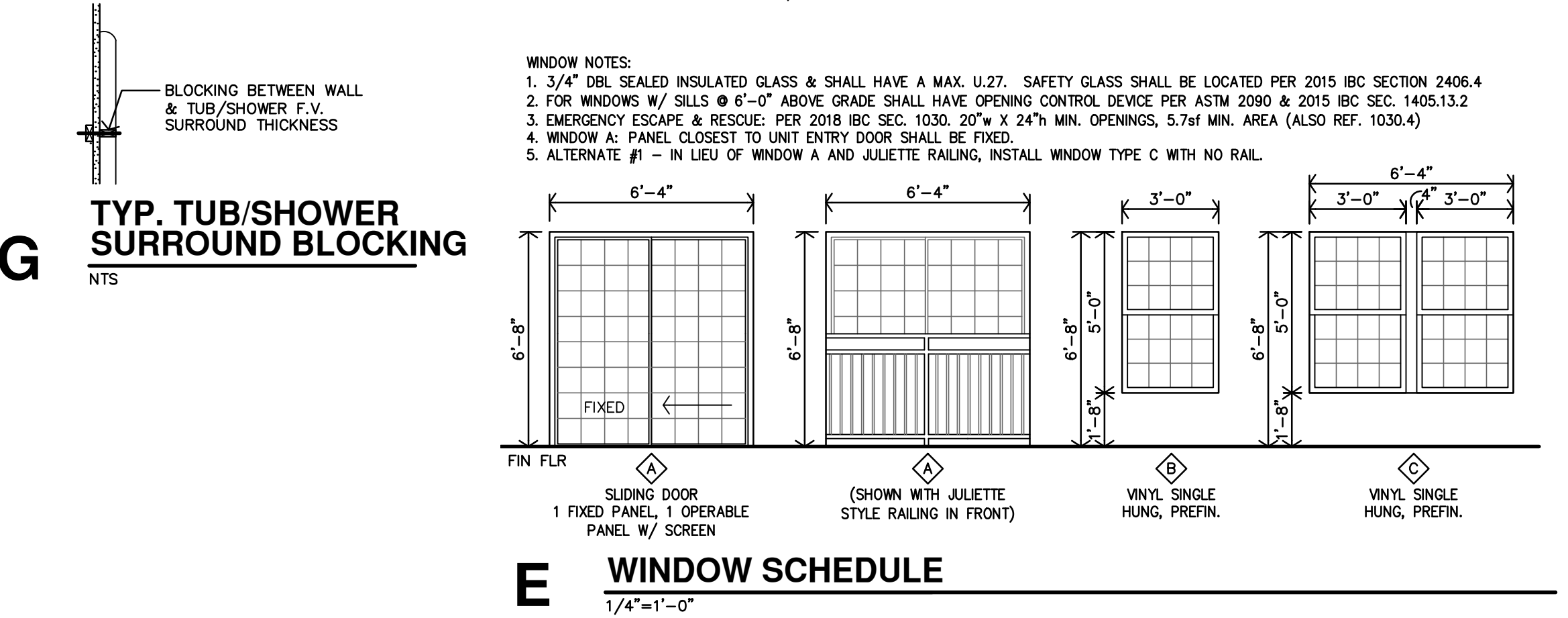
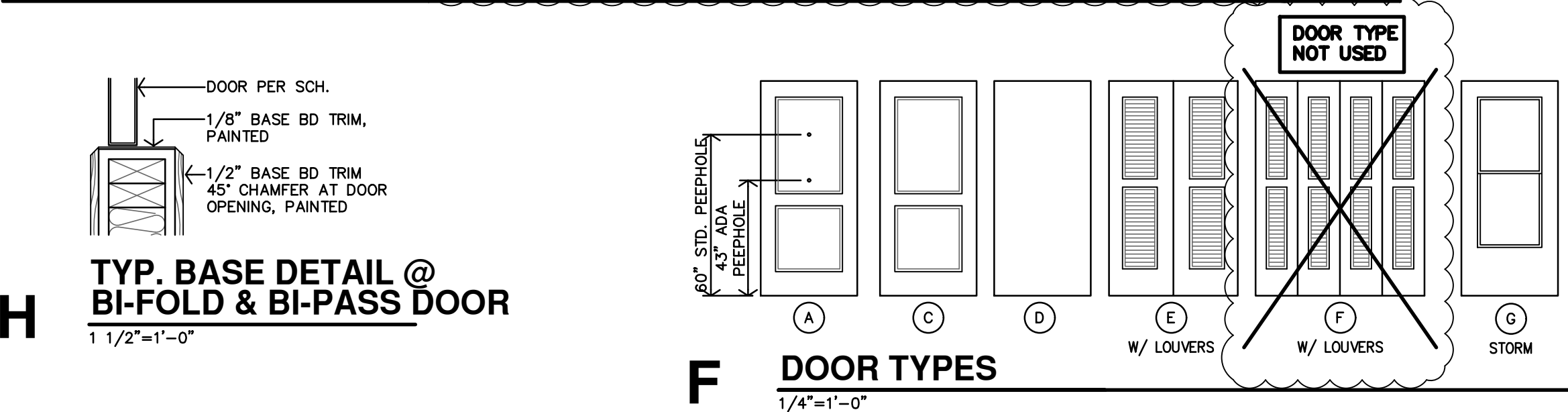
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APARTMENT INTERIOR FINISH SCHEDULE										
FINISHES & INSTRUCTIONS										
P1 - LATEX ENAMEL	C1 - CARPET #1	V - VINYL PLANK FLR'G TILE								
P2 - EPOXY PAINT	C2 - CARPET #2	ST - SPRAY TEXTURE								
CT - CERAMIC TILE	SV - SHEET VINYL	S - SMOOTH	T - TEXTURED LIGHT KNOCKDOWN							
NO.	DESCRIPTION	FLOOR	BASE	N.WALL	E.WALL	S.WALL	W.WALL	CLG	HGT.	NOTES
101	LIVING ROOM	V	P1	P1	P1	P1	P1	ST	9'-0"	NOTE 1, 2
102	KITCHEN	V	P1	P1	P1	P1	P1	ST	9'-0"	NOTE 1, 2 & 3
103	BATH	SV	P1	P1	P1	P1	P1	ST	9'-0"	NOTE 1, 2 & 3
104	LAUNDRY	V	P1	P1	P1	P1	P1	ST	9'-0"	NOTE 2
105	STORAGE	C1	P1	P1	P1	P1	P1	ST	9'-0"	
106	BEDROOM	C1	P1	P1	P1	P1	P1	ST	9'-0"	
107	CLOSET	C1	P1	P1	P1	P1	P1	ST	9'-0"	
108	LAUNDRY	V	P1	P1	P1	P1	P1	ST	9'-0"	
109	COAT	P1	P1	P1	P1	P1	P1	ST	9'-0"	
110	STORAGE	C1	P1	P1	P1	P1	P1	ST	9'-0"	
111	BEDROOM	C1	P1	P1	P1	P1	P1	ST	9'-0"	
112	CLOSET	C1	P1	P1	P1	P1	P1	ST	9'-0"	
113	BEDROOM	C1	P1	P1	P1	P1	P1	ST	9'-0"	
114	CLOSET	C1	P1	P1	P1	P1	P1	ST	9'-0"	
115	MASTER BEDROOM	C1	P1	P1	P1	P1	P1	ST	9'-0"	
116	MASTER BEDROOM	C1	P1	P1	P1	P1	P1	ST	9'-0"	
117	CLOSET	C1	P1	P1	P1	P1	P1	ST	9'-0"	
118	MASTER BATH	SV	P1	P1	P1	P1	P1	ST	9'-0"	NOTE 1, 2 & 3
119	HALL	V	P1	P1	P1	P1	P1	ST	9'-0"	

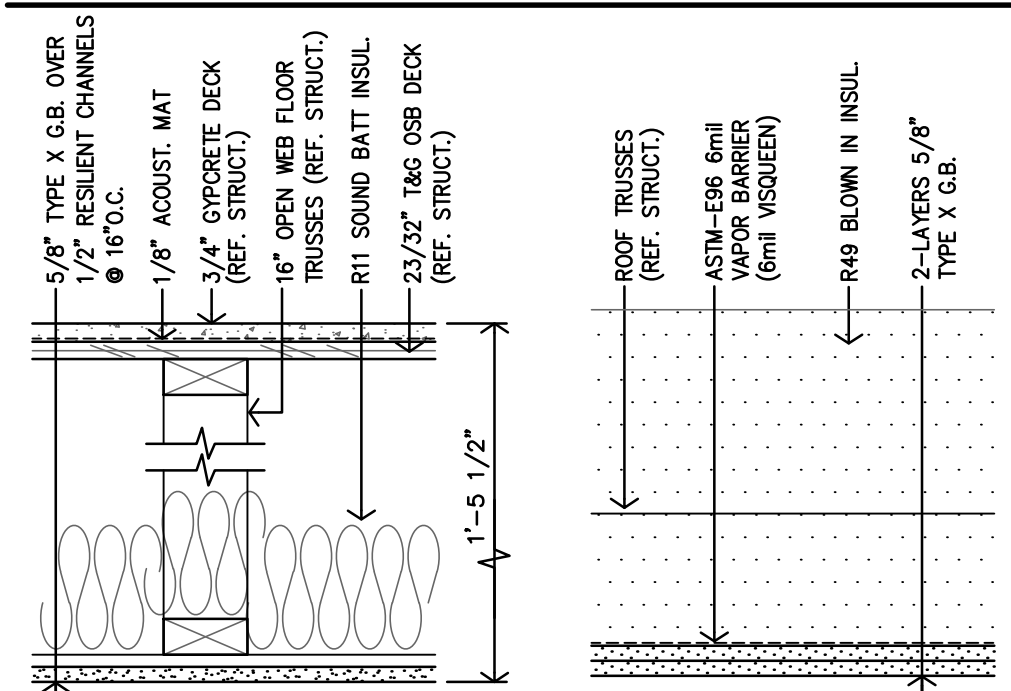
NOTES:
 1. AT ALL REMOVABLE CABINET FRONTS: WALLS AND FLOORS ARE TO BE FINISHED.
 2. INSTALL 5/8" TYPE X M.R. G.B. @ ALL WET AREAS.
 3. 5/8" CEMENT BOARD @ TUB ENCLOSURE.
 4. * INDICATES THAT MATERIAL VARIES BASED ON UNIT TYPE. REFERENCE FLOOR PLANS ON SHEETS A2.1 & A2.4 FOR LOCATIONS AND MATERIAL TYPE.

APARTMENT DOOR SCHEDULE										
MARK	DOOR			FRAME		RATING	NOTES	ROOM		
	SIZE	MATERIAL	TYPE	FINISH	MAT'L					
1	3'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-FOLD	PAINT	PAINT	20min	NOTES 1,2,3,4,5,6	LIVING ROOM #101, ENTRY DOOR		
2	3'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	NOTE 6	LIVING ROOM #101, BALCONY DOOR		
3	3'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	NOTES 7,8	BEDROOMS #111/116/118, BATHS #103/104/113, CLOSETS #114/119		
4	VARIES	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	REF. E-A2.1 (NOTE 10)	CLOSET #109		
5	2'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	NOTE 9	CLOSETS #108 & 121		
6	2'-10" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	REF. E-A2.1	CLOSET #114 (2BD)		
7	2'-10" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	REF. E-A2.1	MECHANICAL #112, CLOSET #109 (1BD)		
8	PR-2'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	REF. E-A2.1	LAUNDRY #106		
9	3'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	REF. E-A2.1	OUTDOOR STORAGE #117		
10	3'-0" x 6'-8"	1/2" INSULATED WOOD L.C. WOOD COVER	BI-PASS	PAINT	PAINT	20min	REF. E-A2.1	INSULATED STORM DOOR		

GENERAL NOTES:
 A. ALL DOOR HARDWARE TO BE LEVER TYPE LATCH SETS. PROVIDED & INSTALLED PER SPECIFICATIONS SEC. 8710. REF. SHEET A2.7 FOR BREEZEWAY DOOR SCHEDULE.
 B. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 C. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 D. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 E. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 F. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 G. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 H. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 I. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 J. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 K. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 L. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 M. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 N. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 O. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 P. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 Q. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 R. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 S. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 T. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 U. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 V. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 W. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 X. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 Y. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.
 Z. CONTRACTOR TO REVIEW AND ENSURE THE FOLLOWING ITEMS AND STATUTES HAVE BEEN MET AS WELL.

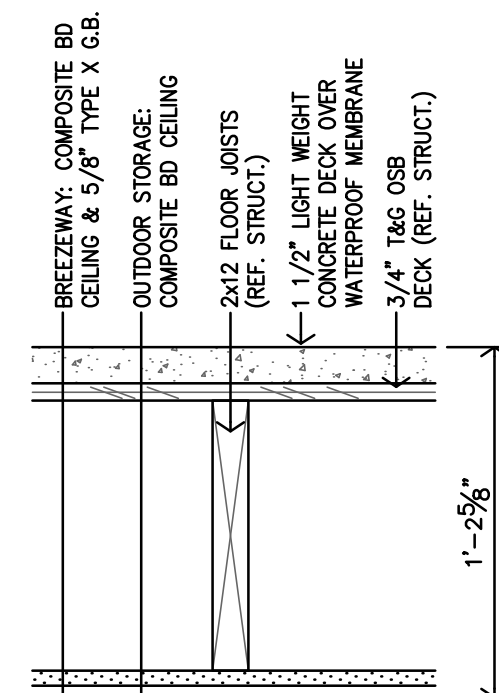


ASSEMBLIES



**CLUBHOUSE/APARTMENTS
FLOOR/CEILING A**
1-HOUR RATED (UL DESIGN No. L528)
ATTACH PER U.I. REQUIREMENTS

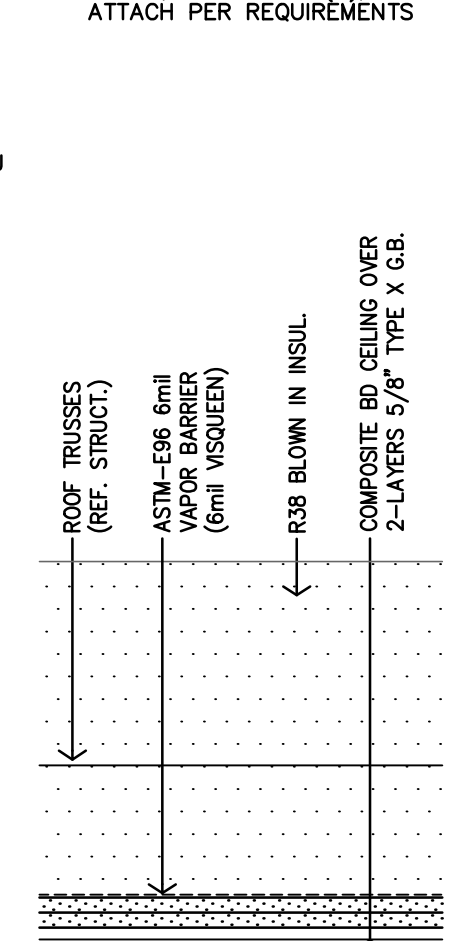
- NOTES:
1. DRAFTSTOPPING AT CONCEALED SPACES NOT REQUIRED PER 2015 IBC SEC. 718.3.2, EXCEPTION #1.
2. FIRE BLOCKING REQUIRED PER 2015 IBC SEC. 708 & 718. (1) LAYER - 5/8\"/>



**BREEZEWAY/OUTDOOR STORAGE
FLOOR/CEILING B**
1-HOUR RATED (UL DESIGN No. L501)
ATTACH PER U.I. REQUIREMENTS

- NOTES:
1. DRAFTSTOPPING AT CONCEALED SPACES NOT REQUIRED PER 2015 IBC SEC. 718.3.2, EXCEPTION #1.
2. FIRE BLOCKING REQUIRED PER 2015 IBC SEC. 708 & 718. (1) LAYER - 5/8\"/>

**APARTMENTS
ROOF/CEILING 1**
1-HOUR RATED
2015 IBC, TABLE 721.1(3), 21-1
ATTACH PER REQUIREMENTS

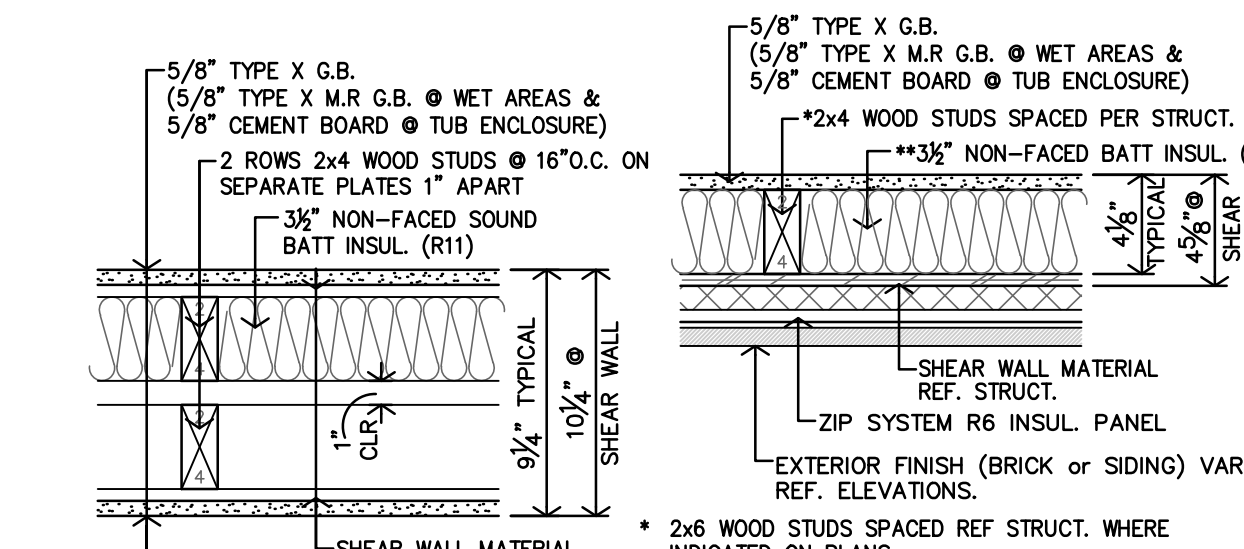


**BREEZEWAY
ROOF/CEILING 2**
1-HOUR RATED
2015 IBC, TABLE 721.1(3), 21-1
ATTACH PER REQUIREMENTS

- NOTES:
1. DRAFTSTOPPING AT CONCEALED SPACES NOT REQUIRED PER 2015 IBC SEC. 718.3.2, EXCEPTION #1.
2. FIRE BLOCKING REQUIRED PER 2015 IBC SEC. 708 & 718. (1) LAYER - 5/8\"/>

APARTMENT PARTITION SCHEDULE

- PARTITION NOTES:
1. SHEAR WALLS, REF. STRUCTURAL FOR LOCATIONS, MATERIAL & SECTIONS
2. FIRE BLOCKING REQUIRED PER 2015 IBC SEC. 708 & 718. (1) LAYER - 5/8\"/>



P1 DOUBLE STUD PARTY WALL
1 HOUR RATING (UL U341)
ATTACH PER U.I. REQUIREMENTS
APRX. STC 58

P2 TYPICAL EXTERIOR WALL
APRX. STC 36-58

P3 BREEZEWAY EXTERIOR WALL
1 HOUR RATING (UL U303)
ATTACH PER REQUIREMENTS
APRX. STC 36-58

P4 FURRED PLUMBING WALL
APRX. STC 62-65

P5 TYPICAL INTERIOR WALL
APRX. STC 36

P6 TYPICAL PLUMBING WALL
APRX. STC 42

APARTMENT GENERAL NOTES

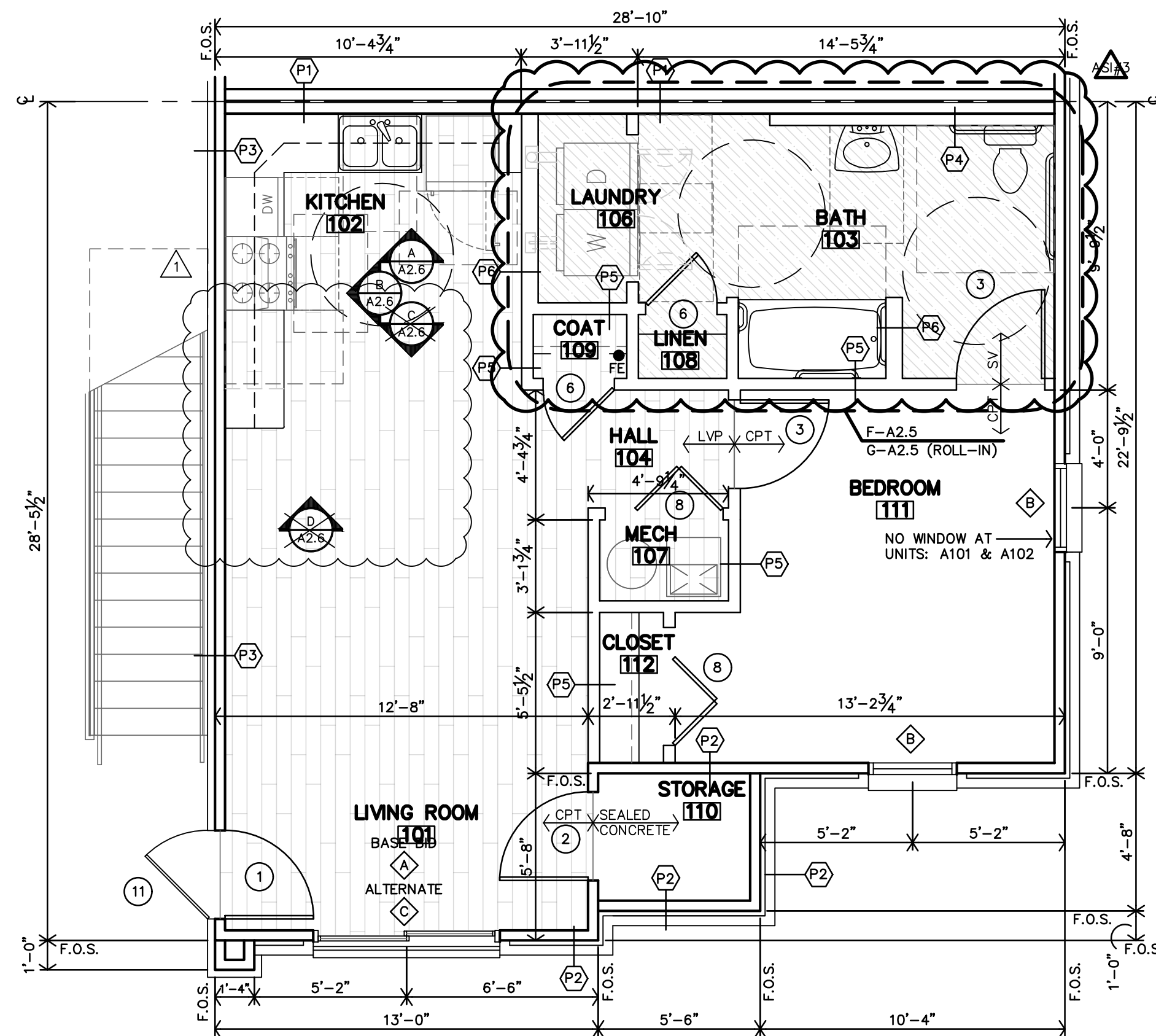
- REF. STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS.
- TYPICAL GROUND FLOOR FINISH FLOOR ELEVATION IS REFERENCED AS 100'-0". CONTRACTOR SHALL VERIFY BUILDING ELEVATION WITH SITE CIVIL DRAWINGS.
- REFERENCE SITE PLAN SHEET A1.1 FOR LOCATION & ORIENTATION OF BUILDINGS.
- CONTRACTOR SHALL PROVIDE ADJUSTABLE PLASTIC COATED WIRE SHELF & ROD AT ALL CLOSETS U.N.O.
- CONTRACTOR SHALL PROVIDE FIREBLOCKING, ANCHOR BOLTS AND ANY REQUIRED SHEAR WALL BLOCKING AS REQUIRED BY STRUCTURAL DRAWINGS.
- CONTRACTOR TO PROVIDE FIRE BLOCKING AT PARTY WALL AT 10'-0" O.C., TYPICAL. CONTRACTOR TO PROVIDE FIRE BLOCKING AT PARTY WALL AT ALL BACK TO BACK ELECTRICAL OUTLETS. PROVIDED AND INSTALL ALL FIRE BLOCKING AND DRAFTSTOPS PER 2015 IBC, SECTION 717.
- FIRE EXTINGUISHERS SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 10, 2015 IBC, SECTION 906.1 AND SPECIFICATIONS. LOCATED PER CFP SHEET.
- ALL PENETRATIONS THRU RATED WALLS AND/OR FLOOR ASSEMBLIES SHALL BE FIRESTOPPED PER APPROVED U.I. DESIGNS. REFERENCE SHEET A4.8 FOR FIRE PENETRATION ASSEMBLIES
- HOSE BIBS TO BE LOCATED 6" MIN. ABOVE MAINSCOT (30" MIN. ABV. FIN. FLOOR).
- B.O. HEADER 83" ABV. FIN. FLR.
- KITCHEN RECEPTACLES TO BE 44" MAX. ABOVE FIN. FLR.
- SUBMIT VERIFICATION THAT ALL CONSTRUCTION MATERIAL WILL MEET U.S. EPA CRITERIA PARTICULARLY MATERIALS THAT WILL BE OBTAINED FROM INTERNATIONAL SOURCES. ALSO PROVIDE VERIFICATION THAT THE CONSTRUCTION WILL NOT RESULT IN OR CONTAIN HAZARDOUS MATERIALS.
- ALL WALL DIMENSIONS ARE TO FACE OF C/P. B.O. UNLESS NOTED OTHERWISE.
- F.O.S. = FACE OF STUD
- FEC = FIRE EXTINGUISHER CABINET
- HEARING/VISION IMPAIRED UNIT (WHERE INDICATED ON SHEET A1.1 AND LISTED ON BUILDING PLANS):
 - CONTRACTOR SHALL INSTALL EQUIPMENT REQUIRED PER 2010 ADA SEC. 809.5.
 - REF. ELECT. DWGS

ACCESSIBLE UNITS NOTES

- ACCESSIBLE UNITS (WHERE INDICATED ON SHEET A1.1 AND LISTED ON BUILDING PLANS):
 - REFERENCE ENLARGED PLANS AND DETAILS FOR ADDITIONAL INFORMATION
 - 1-BEDROOM, CONTRACTOR TO INSTALL 2x8 BLOCKING IN WALLS FOR GRAB BARS @ TOILET & TUB AND @ SINKS & COUNTERTOPS.
 - 2-BEDROOM, CONTRACTOR TO INSTALL 2x8 BLOCKING IN WALLS FOR GRAB BARS @ ALL TOILETS & TUBS AND @ SINKS & COUNTERTOPS AT BATHS #104 & #113
 - 3-BEDROOM, CONTRACTOR TO INSTALL 2x8 BLOCKING IN WALLS FOR GRAB BARS @ ALL TOILET & TUB AND @ COUNTERTOP AT MASTER BATH #113
- ALL UNITS, CONTRACTOR TO INSTALL REMOVABLE CABINET FRONTS @ SINK & WORK SPACE IN KITCHEN #103.
 - CONTRACTOR SHALL INSTALL HOT WATER & DRAIN PIPES COVERS.
 - TOILETS SHALL BE ADA COMPLIANT (17"-19" HIGH).
 - CONTRACTOR TO INSTALL BLOCKING AND PROVIDE & INSTALL GRAB BARS PER ICC/ANSI-A117.1-2009.
 - ALL CLOSETS TO HAVE PLASTIC WIRE CLOTHES SHELF & ROD WITH ADJUSTABLE BRACKETS. (MOUNT SHELF AT HEIGHTS AS INDICATED ON PLANS)

FINISHES, SCHEDULES, ETC.

REFERENCE SHEET A2.2 FOR INTERIOR FINISH SCHEDULE, DOOR SCHEDULES, WINDOW SCHEDULE AND FINISH DETAILS.



2 FULLY ACCESSIBLE UNITS:
A102 & A108 (ROLL-IN SHOWER)

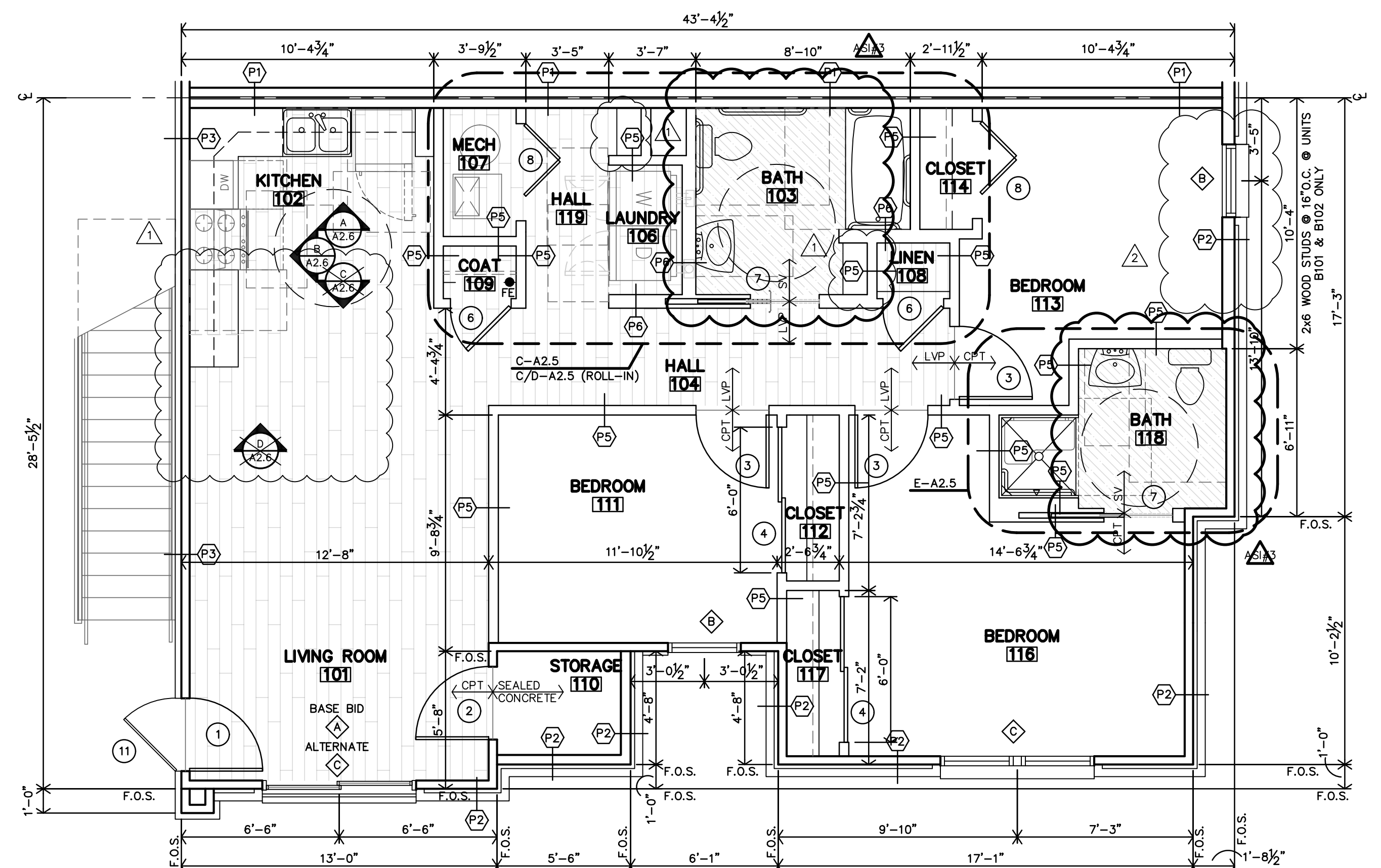
ACCESSIBLE

2 TYPE-A UNITS:
A101 & A107

TYPE-A

C ACCESSIBLE 1 BEDROOM FLOOR PLAN

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR ACCESSIBLE LOCATIONS



1 FULLY ACCESSIBLE UNIT:
B101 (ROLL-IN SHOWER)

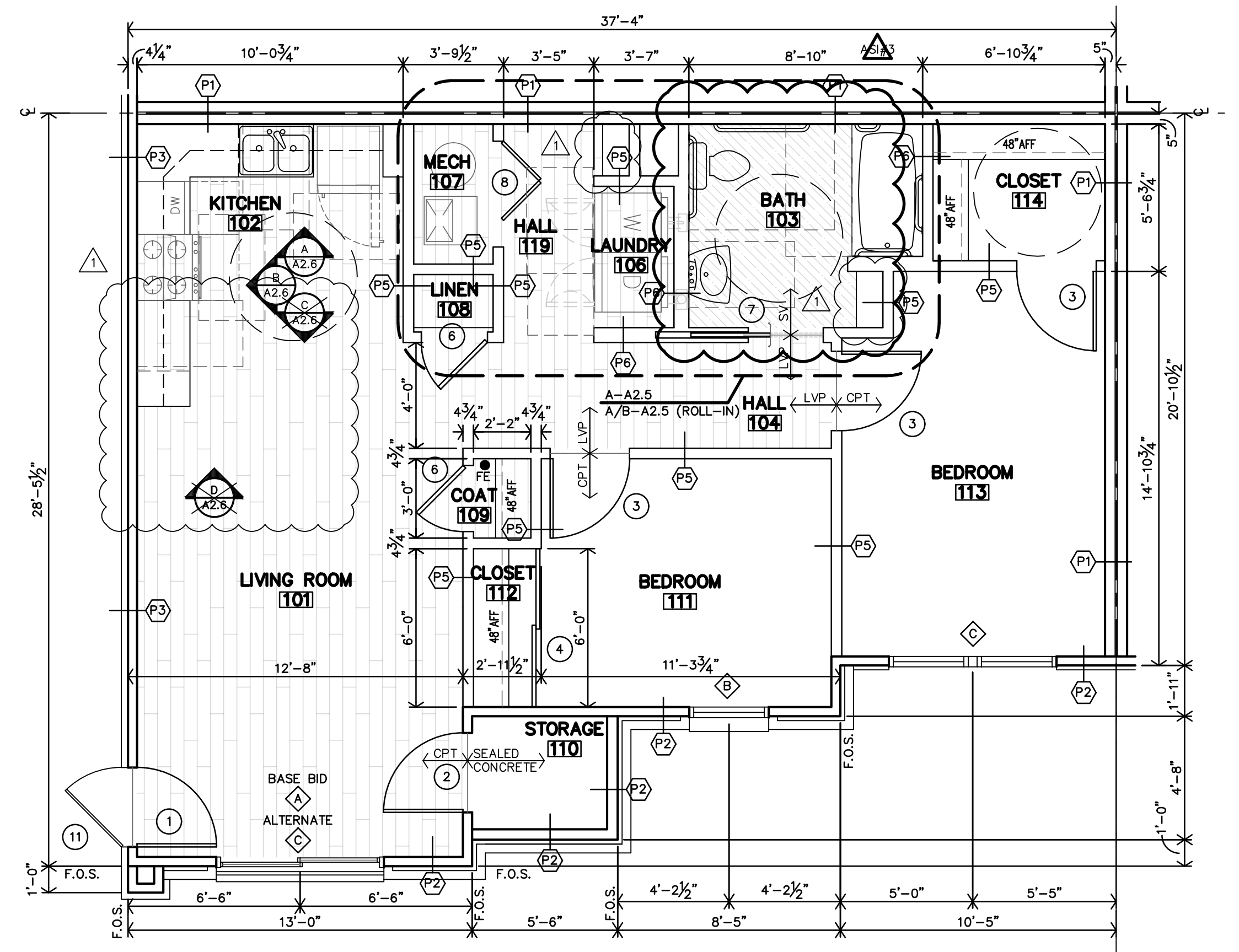
ACCESSIBLE

3 TYPE-A UNITS:
B102, B107 & B108

TYPE-A

B ACCESSIBLE 3 BEDROOM FLOOR PLAN

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR ACCESSIBLE LOCATIONS



2 FULLY ACCESSIBLE UNITS:
A104 & B103 (ROLL-IN SHOWER)

ACCESSIBLE

3 TYPE-A UNITS:
A103, B104 & B106

TYPE-A

A ACCESSIBLE 2 BEDROOM FLOOR PLAN

1/4"=1'-0" REF. BUILDING PLANS ON SHEETS A2.10 & A2.11 FOR ACCESSIBLE LOCATIONS

APARTMENT BUILDING A SUMMARY

	1 BD		2 BD		3 BD		Ext Strg	Breezeway	TOTAL GSF
	# of Units	GSF of each	# of Units	GSF of each	# of Units	GSF of each	GSF total	GSF total	PER BUILDING
FIRST FLOOR	4	731	4	905			208	982	7,734
SECOND FLOOR	4	731	4	905			208	982	7,734
THIRD FLOOR	4	731	4	905			208	982	7,734
TOTAL							624	2,946	23,202

GENERAL NOTES

- REF. SHEET A1.1 FOR LOCATION & ORIENTATION OF BUILDINGS.
- REF. SHEET A2.7 FOR BREEZEWAY AND ADJACENT ROOMS FINISH & DOOR SCHEDULES.
- F.O.S. = FACE OF STUD.
- REF. STRUCTURAL DRAWINGS FOR SHEAR WALL LOCATIONS.
- TYPICAL GROUND FLOOR FINISH FLOOR ELEVATION IS REFERENCED AS 100'-0". CONTRACTOR SHALL VERIFY BUILDING ELEVATION WITH SITE CIVIL DRAWINGS.
- CONTRACTOR SHALL PROVIDE FIREBLOCKING, ANCHOR BOLTS AND ANY REQUIRED SHEAR WALL BLOCKING AS REQUIRED BY STRUCTURAL DRAWINGS.
- CONTRACTOR TO PROVIDE FIRE BLOCKING AT PARTY WALL AT 10'-0" O.C., TYPICAL, CONTRACTOR TO PROVIDE FIRE BLOCKING AT PARTY WALL AT ALL BACK TO BACK ELECTRICAL OUTLETS, PROVIDED AND INSTALL ALL FIRE BLOCKING AND DRAFTSTOPS PER 2015 IBC, SECTION 718.2, 718.3 & 718.4.
- FIRE EXTINGUISHERS SHALL BE INSTALLED & PROVIDED IN ACCORDANCE WITH NFPA 10 & 2015 IBC, SECTION 908.1. LOCATED PER CFP SHEET.
- ALL PENETRATIONS THRU RATED WALLS AND/OR FLOOR ASSEMBLIES SHALL BE FIRESTOPPED PER APPROVED U.L. DESIGNS. REFERENCE SHEET A4.8 FOR FIRE PENETRATION ASSEMBLIES.
- ALL SIGNAGE MUST COMPLY W/ ADA 2010 SECTIONS 216 & 703 FOR SIZE, LOCATION AND FABRICATION.

KEY NOTES

- FIRE LINE IN INSULATED BULKHEAD ADD'L WATER LINES TO BE UNDERGROUND REF. MECH DWGS & SHEET A6.1. COORDINATE LOCATION OF BULKHEAD
- MECH. CLOSET 1st FLOOR ONLY. REF. SITE PLAN & MECH DWGS. FULLY INSULATE WALLS & CEILING.
- RADON PIPE THROUGH ROOF REF. K-A4.7 & MECH DWGS
- KNOX BOX REF. SHEET A1.1 FOR LOCATION
- METER CENTER LOCATON REF. ELECT. DWGS

APARTMENT CHART

	SYMBOL INDICATES ACCESSIBLE UNITS A102, A104, A108 (ROLL-IN), B101, B103
	SYMBOL INDICATES TYPE-A UNITS A101, A103, A107, B102, B104, B106, B107 & B108
	SYMBOL INDICATES A HEARING & VISION IMPAIRED ACCESS. UNITS: B105
ALL OTHER UNITS: • ADAPTABLE UNITS ON FIRST FLOOR • STANDARD UNITS ON SECOND/THIRD FLOORS	

ACCESSIBLE UNIT LEGEND

5 FIRST FLOOR UNITS SHALL BE FULLY ACCESSIBLE (10%)
(2) 1-bedroom
(2) 2-bedroom
(1) 3-bedroom

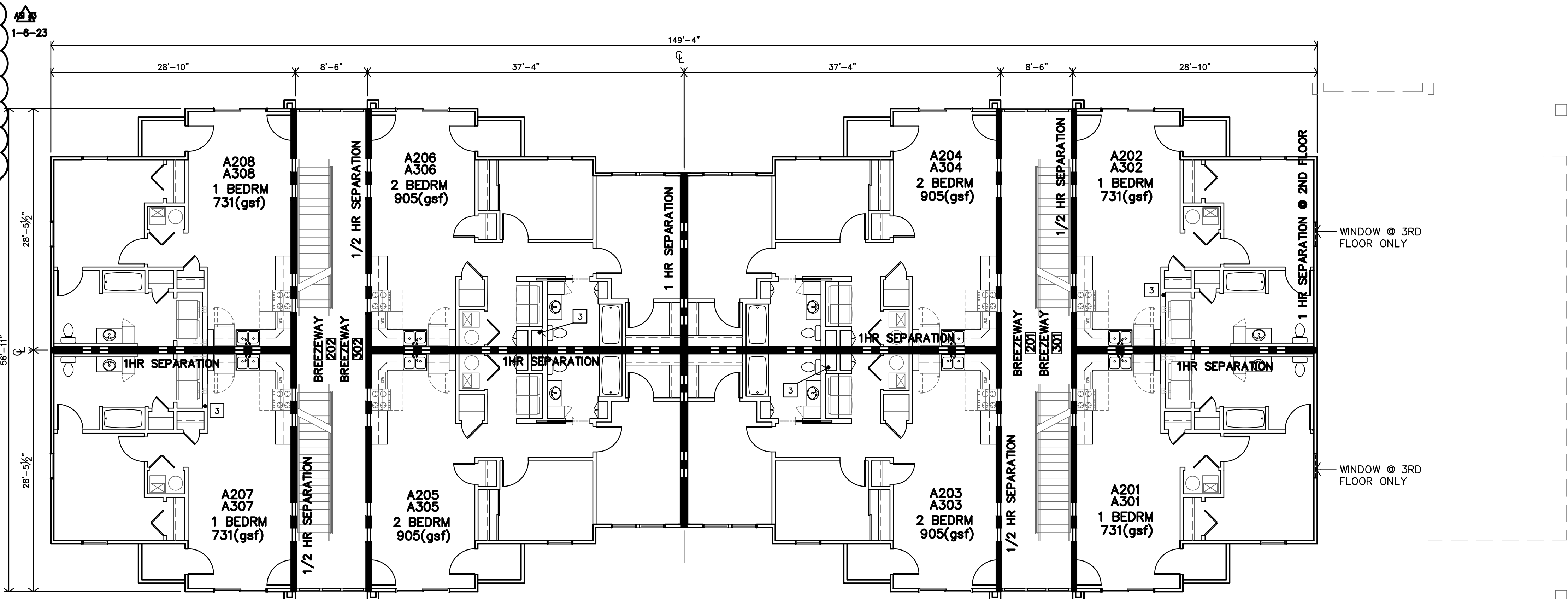
8 FIRST FLOOR UNITS SHALL BE TYPE-A ACCESSIBLE (15%)
(2) 1-bedroom
(3) 2-bedroom
(3) 3-bedroom

1 FIRST FLOOR UNIT SHALL BE HEARING IMPAIRED & VISION IMPAIRED ACCESSIBLE UNIT (2%)
(1) 2-bedroom

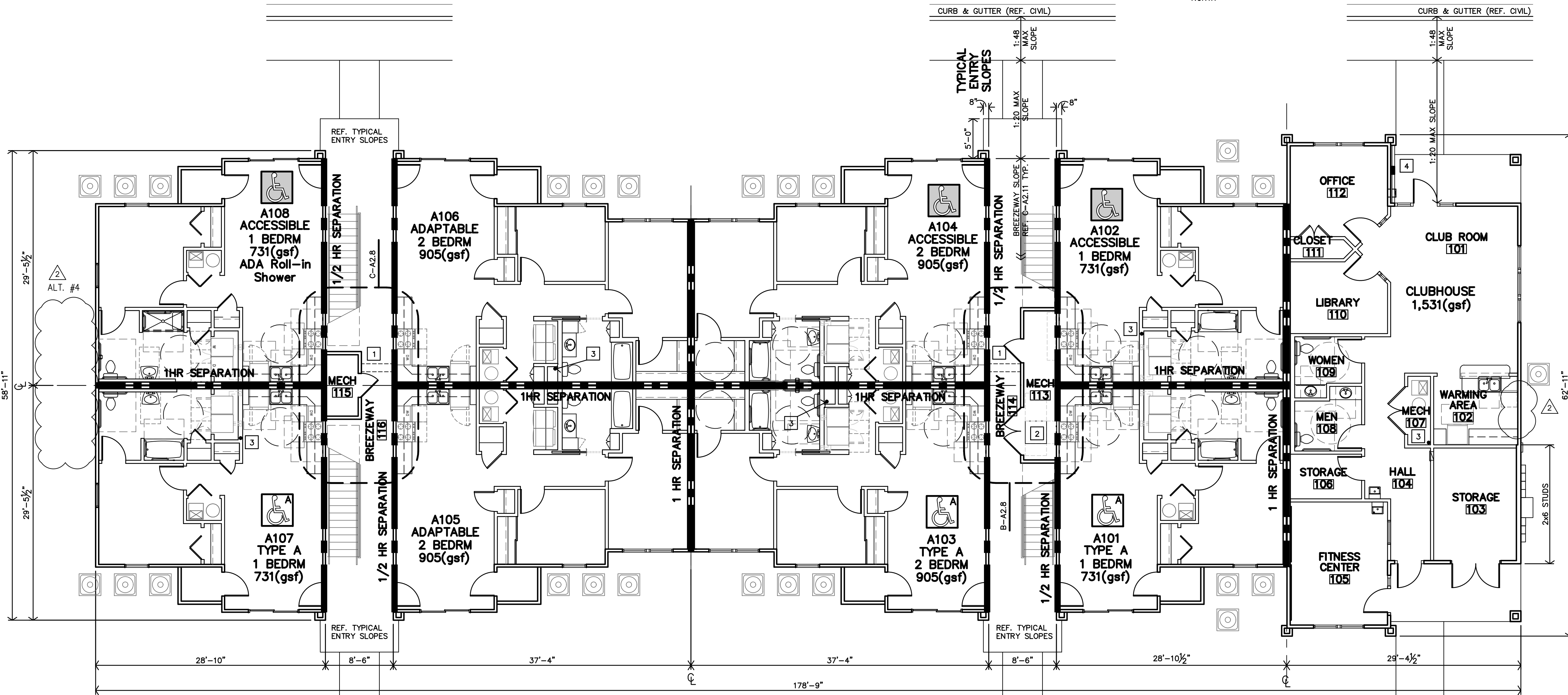
*NOTE: A MIN OF (3) ADA ROLL-IN SHOWER UNITS ARE REQUIRED (1 PER EVERY 20 UNITS), AND WILL BE PROVIDED AS FOLLOWS:

- (1) 1-BEDROOM UNIT
- (1) 2-BEDROOM UNIT
- (1) 3-BEDROOM UNIT

REFERENCE BUILDING PLANS FOR LOCATIONS



B APARTMENT BLDG. A
SECOND & THIRD FLOOR PLANS
1/8"=1'-0"



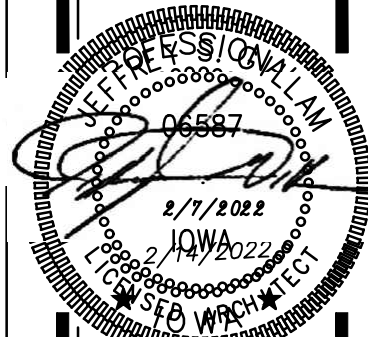
A APARTMENT BLDG. A
FIRST FLOOR PLAN
1/8"=1'-0"

THE RESERVES at SOUTH LAKE

NEW APARTMENT COMPLEX

GRINNELL, IOWA

Architects Planners Designers
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jgr@jgarchitects.com



REVISION:

6-17-22

1-6-23

DATE:

2-14-2022

JOB:

20-3118

SHEET:

A2.10

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APARTMENT BUILDING B SUMMARY

	1 BD		2 BD		3 BD		Ext Strg	Breezeway	TOTAL GSF
	# of Units	GSF of each	# of Units	GSF of each	# of Units	GSF of each	GSF total	GSF total	PER BUILDING
FIRST FLOOR			4	905	4	1313	208	982	10,062
SECOND FLOOR			4	905	4	1313	208	982	10,062
THIRD FLOOR			4	905	4	1313	208	982	10,062
TOTAL							624	2,946	30,186

GENERAL NOTES

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- METER CENTER LOCATON REF. ELEC. DWGS

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A102, A104, A106 (ROLL-IN), B101, B103
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- SYMBOL INDICATES A HEARING & VISION IMPAIRED ACCESS. UNIT
UNIT: B105
- ALL OTHER UNITS:
• ADAPTABLE UNITS ON FIRST FLOOR
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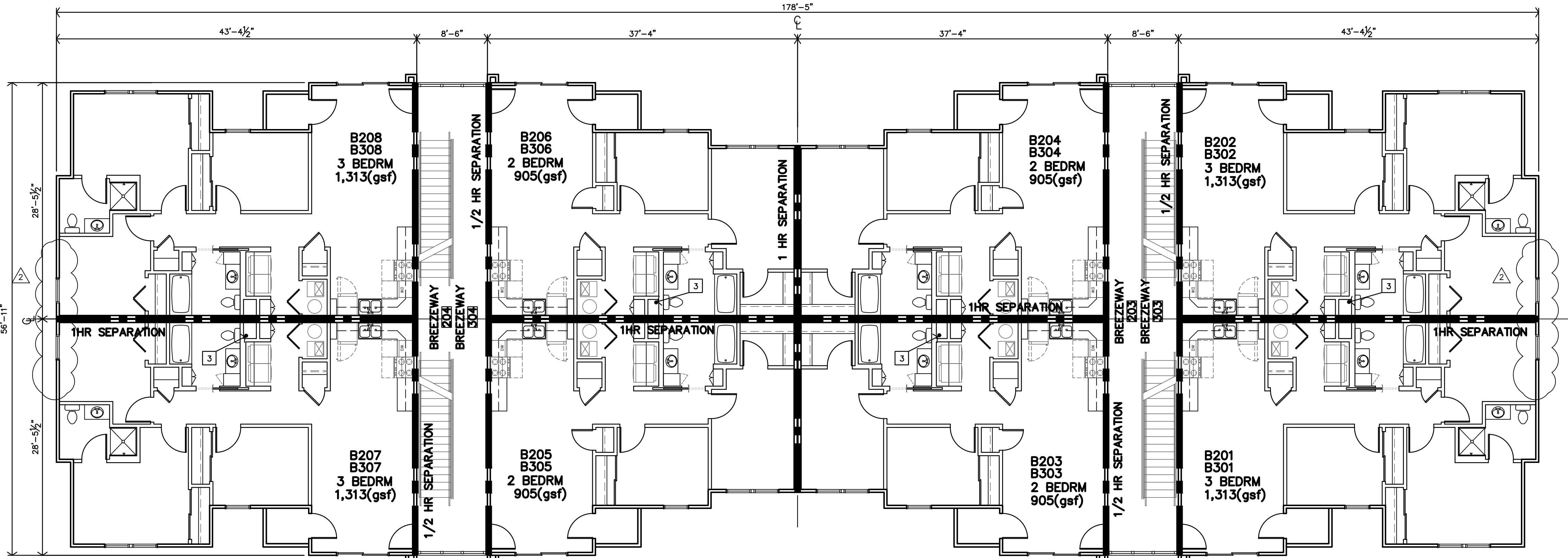
ACCESSIBLE UNIT LEGEND

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(1) 3-bedroom
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(2) 1-bedroom
(3) 2-bedroom
(3) 3-bedroom
- 1 FIRST FLOOR UNIT SHALL BE HEARING IMPAIRED & VISION IMPAIRED ACCESSIBLE UNIT (2%)
(1) 2-bedroom

*NOTE: A MIN OF (3) ADA ROLL-IN SHOWER UNITS ARE REQUIRED (1 PER EVERY 20 UNITS), AND WILL BE PROVIDED AS FOLLOWS:
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(1) 2-BEDROOM UNIT
(1) 3-BEDROOM UNIT

REFERENCE BUILDING PLANS FOR LOCATIONS

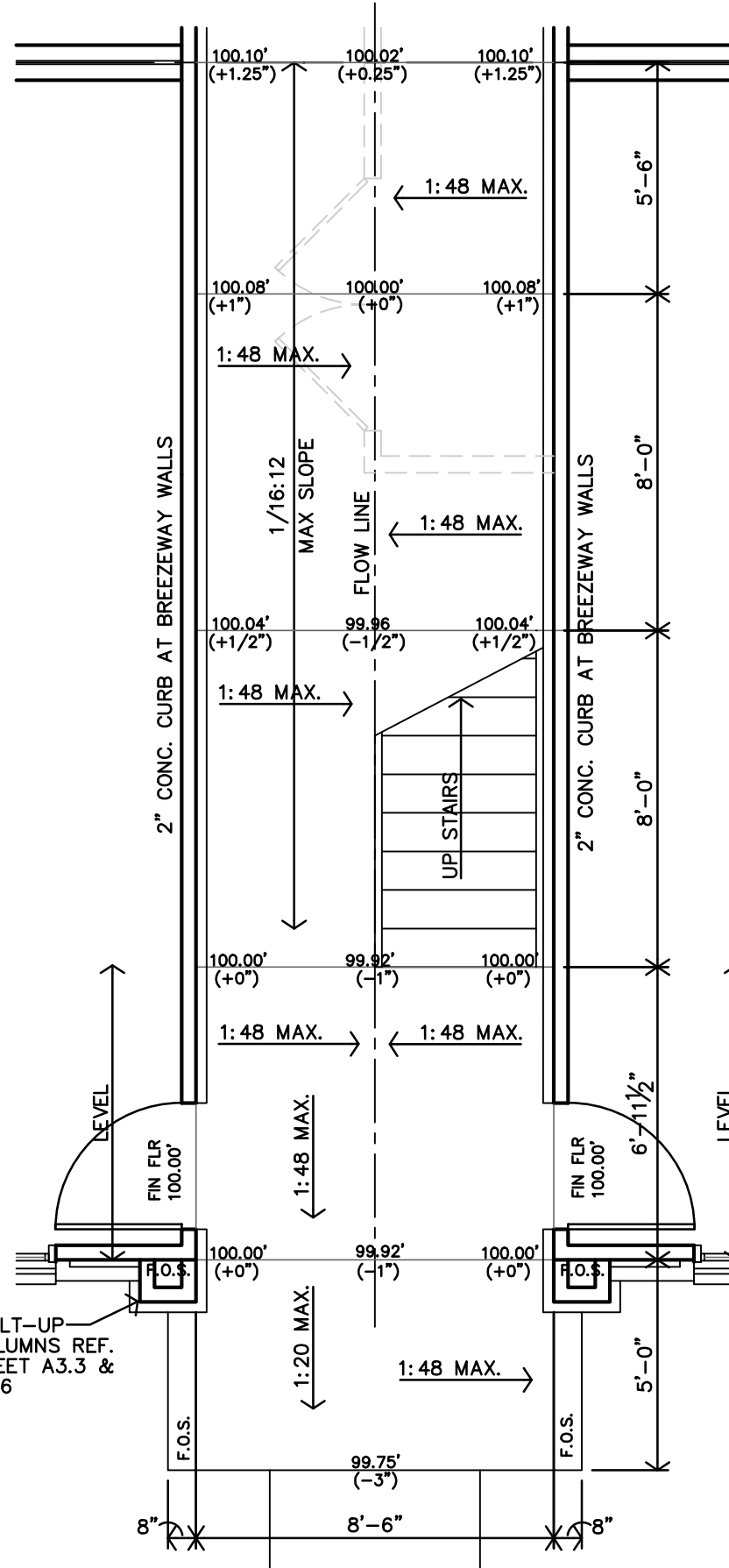
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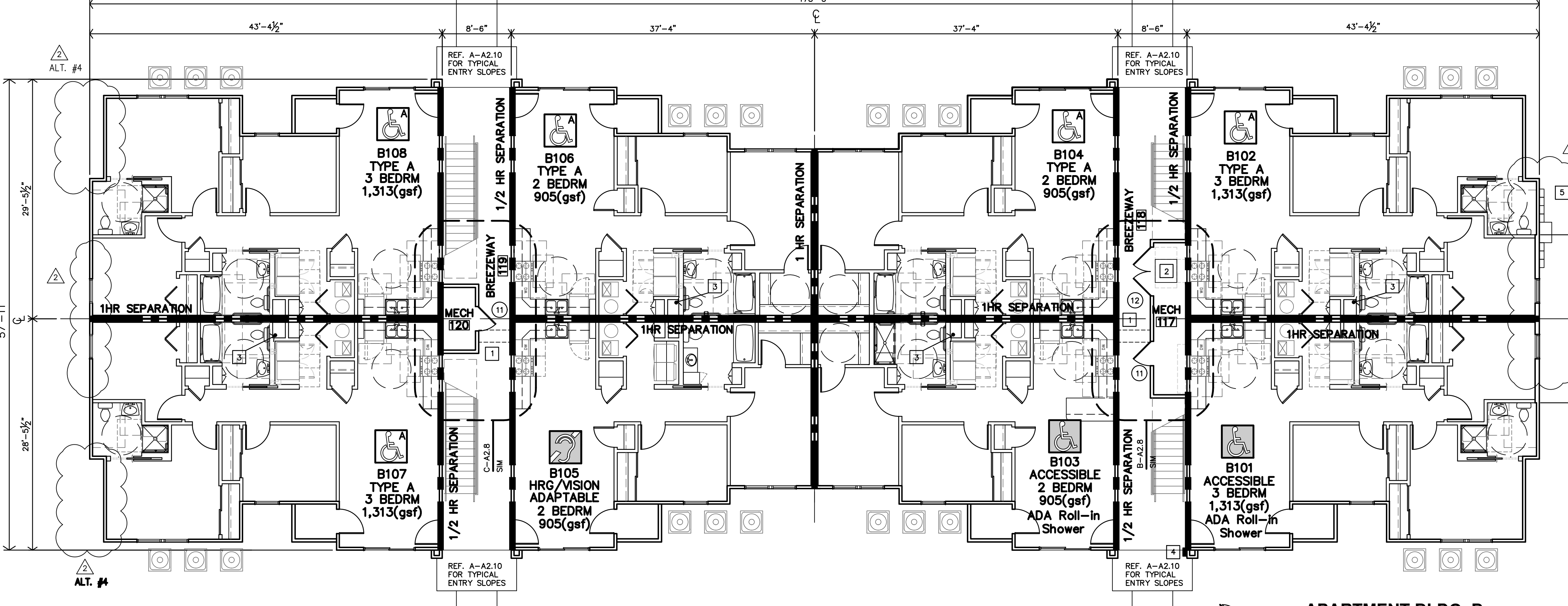
B APARTMENT BLDG. B
SECOND & THIRD FLOOR PLANS
1/8"=1'-0"



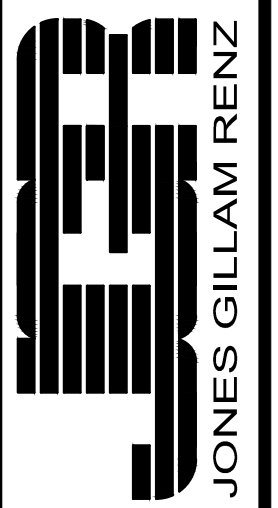
A APARTMENT BLDG. B
FIRST FLOOR PLAN
1/8"=1'-0"



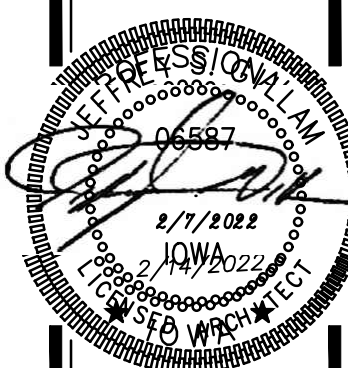
C BREEZEWAY SLOPES
1/4"=1'-0"



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jgr@jgrarchitects.com
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THE RESERVES at SOUTH LAKE
NEW APARTMENT COMPLEX
IOWA
GRINNELL,

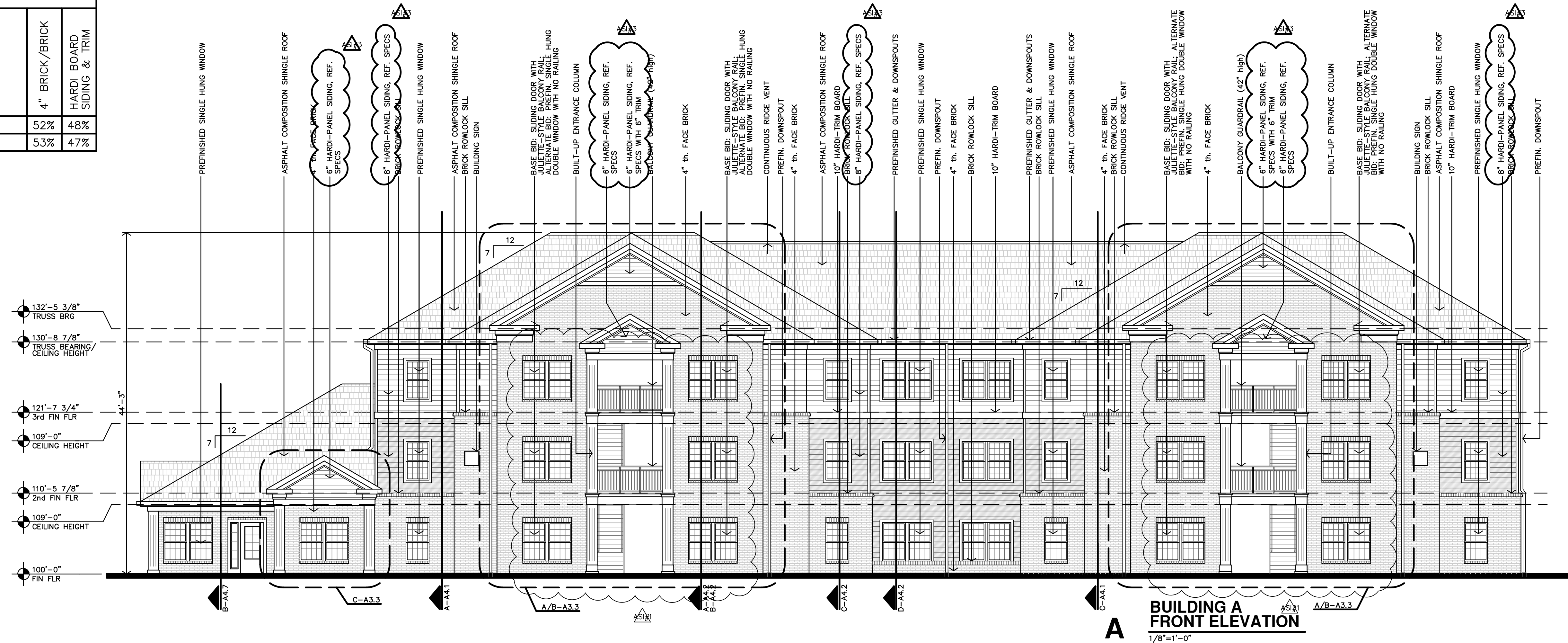


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DATE:	1-6-23
JOB:	2-14-2022
SHEET:	20-3118

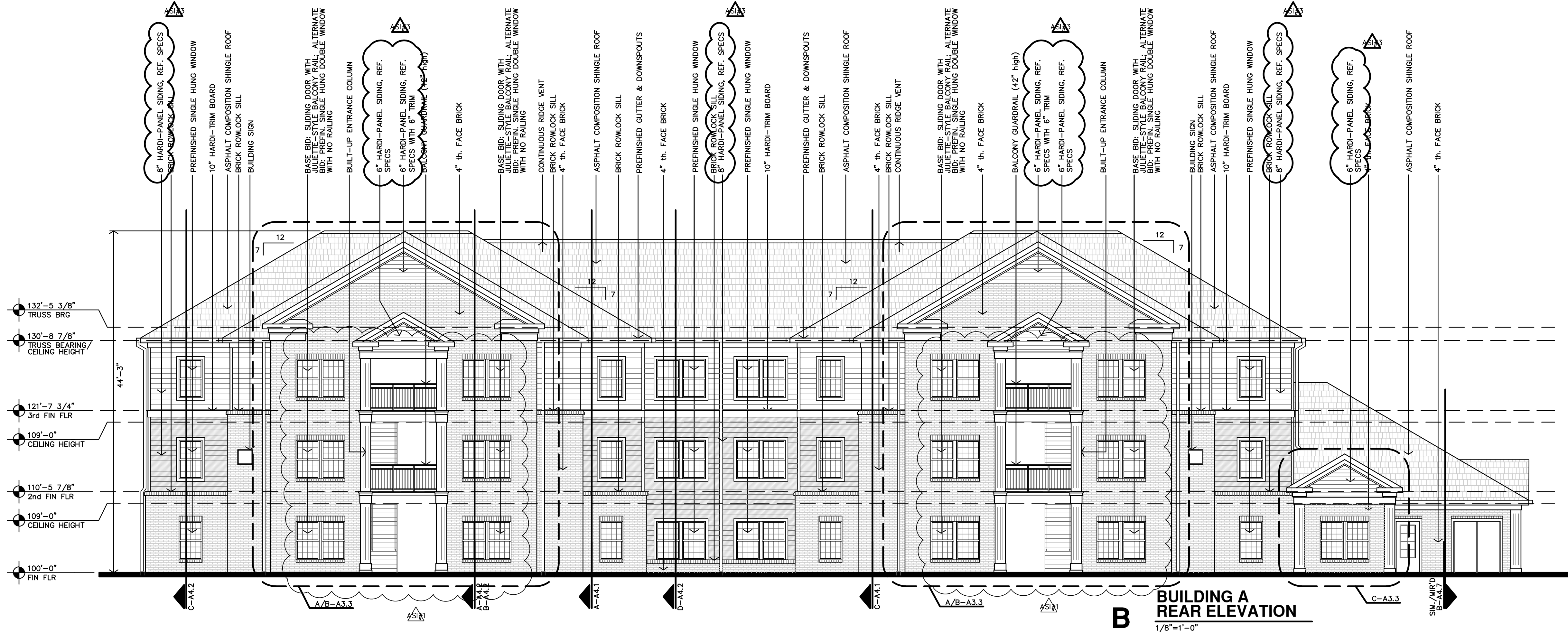
A2.11

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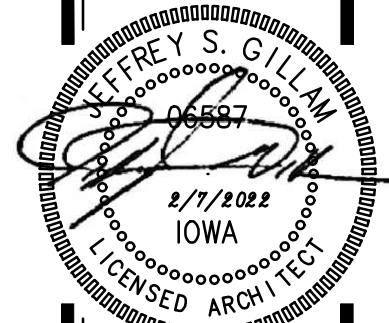
EXTERIOR MATERIALS		
DESCRIPTION	4" BRICK/BRICK	HARDI BOARD SIDING & TRIM
BUILDING 1	52%	48%
BUILDING 2	53%	47%



BUILDING A FRONT ELEVATION
1/8"=1'-0"



BUILDING A REAR ELEVATION
1/8"=1'-0"



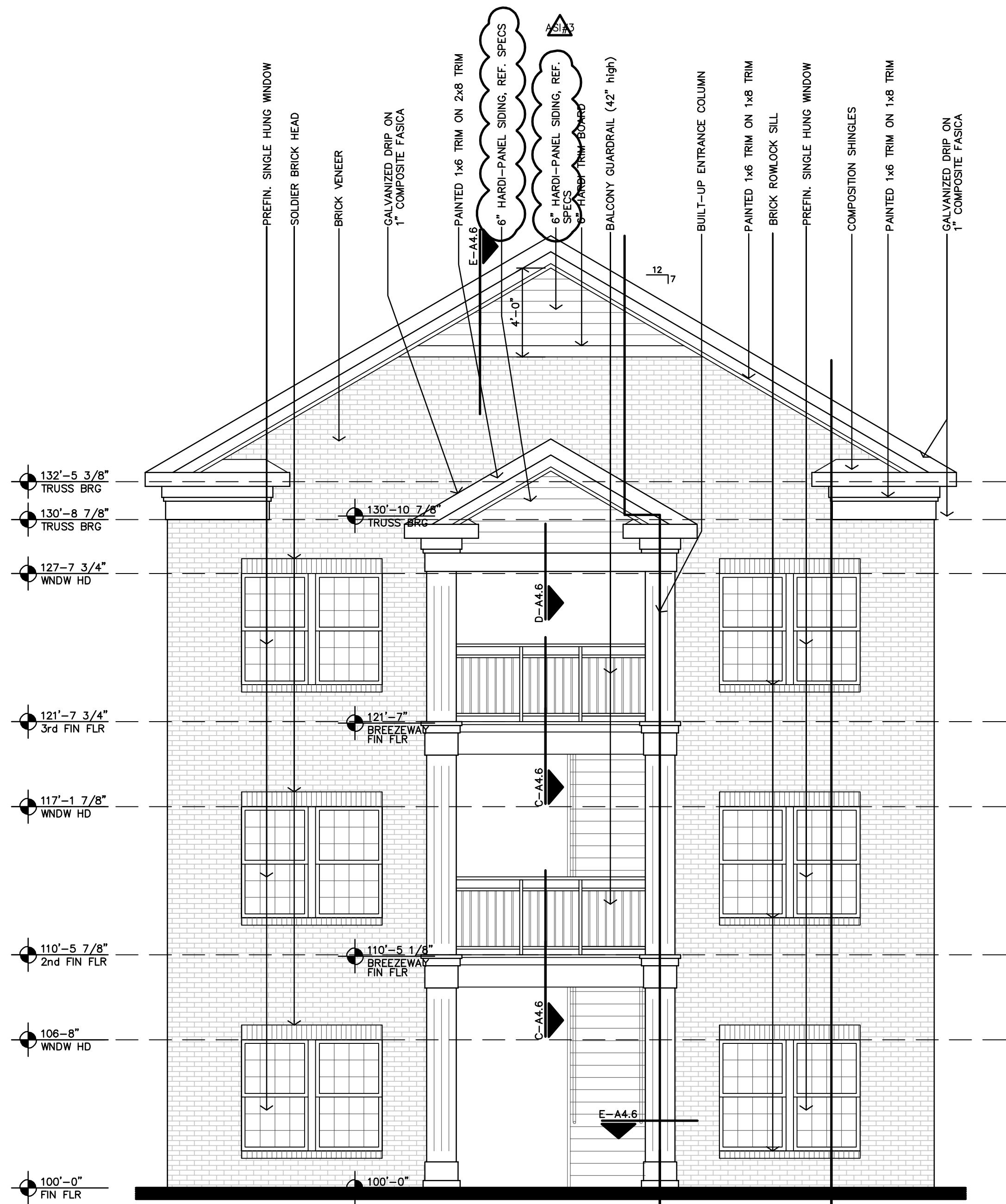
REVISION:
11-11-22
DATE:
2-14-2022
JOB:
20-3118
SHEET:

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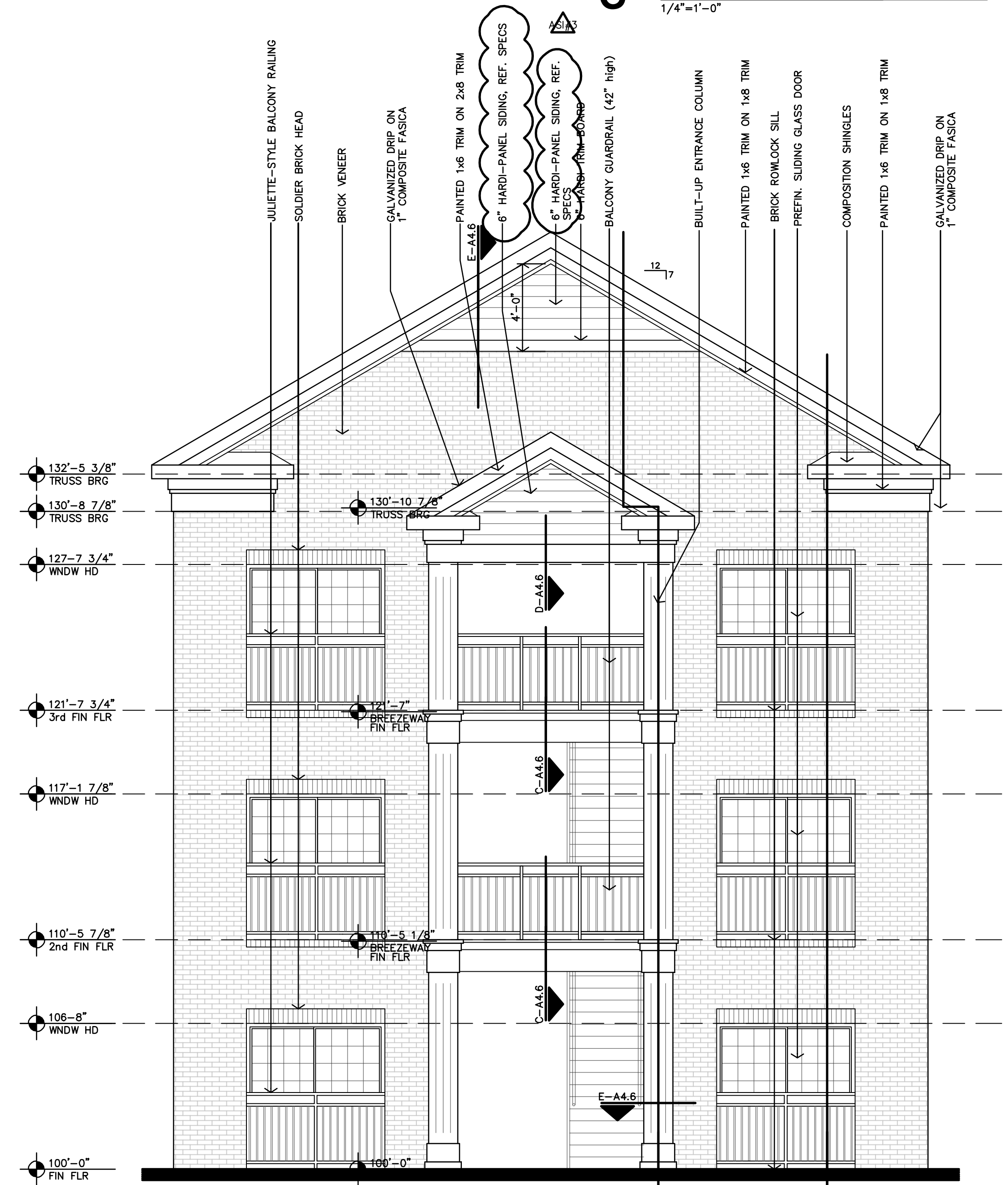
THE RESERVES at SOUTH LAKE
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GRINNELL, IOWA

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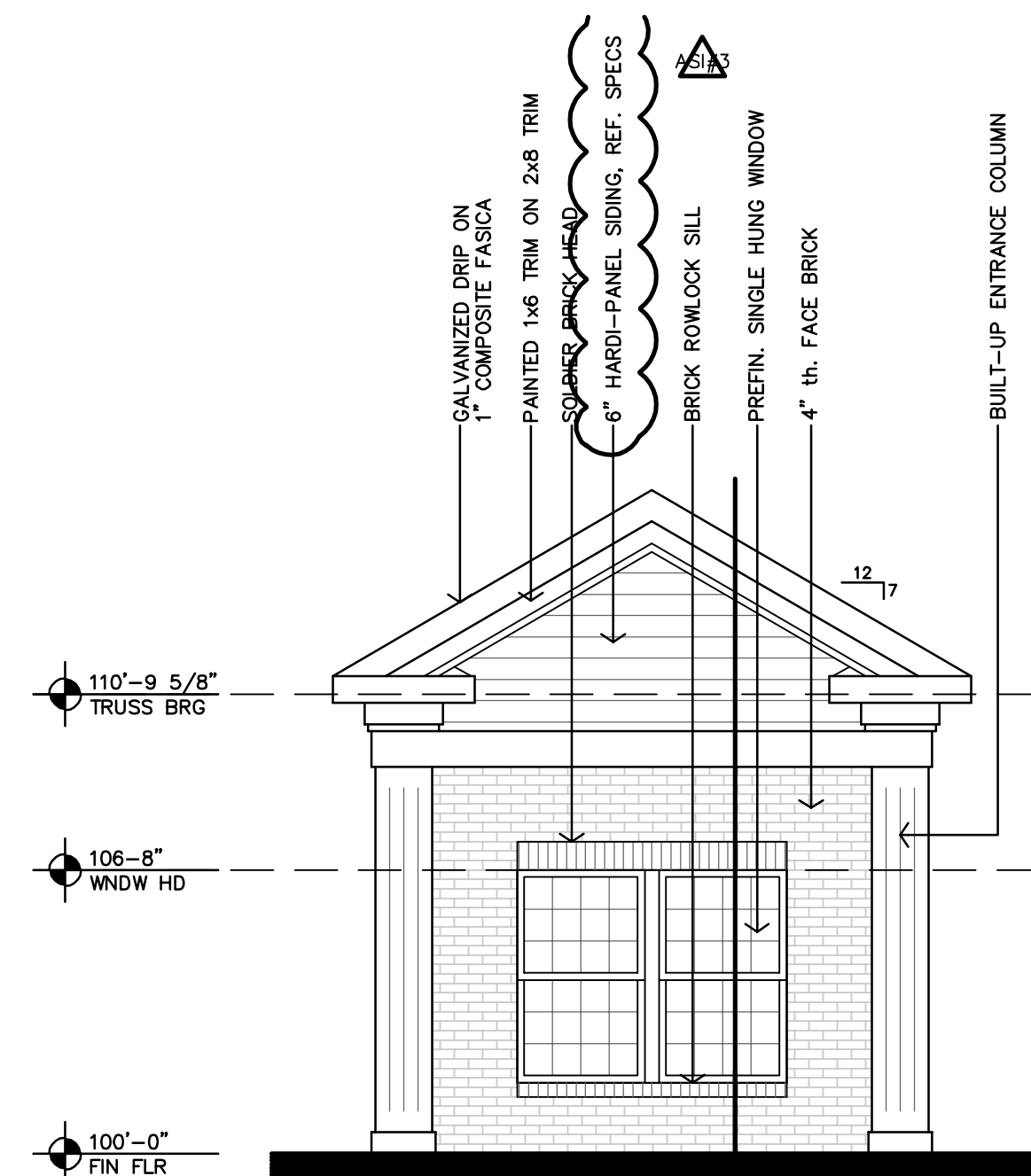
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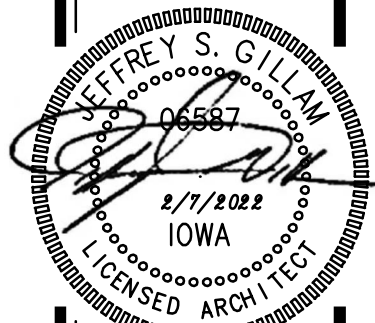
B **ALTERNATE BID APARTMENT ENTRY FEATURE**
1/4"=1'-0"



A **BASE BID APARTMENT ENTRY FEATURE**
1/4"=1'-0"



C **CLUBHOUSE GABLE FEATURE**
1/4"=1'-0"

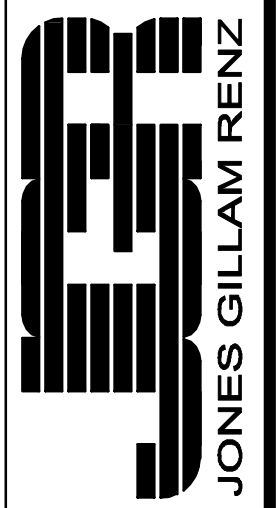


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SHEET:	

A3.3

THE RESERVES at SOUTH LAKE
NEW APARTMENT COMPLEX
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SECTION 08111

STANDARD DOORS AND FRAMES

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. **Exterior Entry Doors: Fire-rated (20 min) and thermally insulated, thermally Broken, Masonite HD Wood Edge panel doors with Fiberglass facing and metal frames. OR approved equal**
- B. Coordinate installation with **Storm Doors and hardware.**

1.02 REFERENCES

- A. ANSI A117.1 - Specifications for Making Buildings and Facilities Accessible to and Usable by Physically Handicapped People.
- B. NFPA 80 - Fire Doors and Windows.
- C. NFPA 252 - Fire Tests for Door Assemblies.
- D. UL 10B - Fire Tests of Door Assemblies.

1.03 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store, protect, and handle products to site.
- B. Accept doors and frames on site in manufacturer's packaging. Inspect for damage.

1.04 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on shop drawings.

PART 2 PRODUCTS

2.01 DOOR MANUFACTURERS

- A. **Masonite Int. Corp.,**
- B. Substitutions: Under provisions of the General Requirements.

2.02 DOORS

- A. Exterior Insulated Doors, **Fiberglass Oakcraft 2 Panel, Wood-Grain, Thermally Broken: SDI-100 Grade III.** Thermo-pane insulated windows as where indicated. Or approved equal.

2.03 DOOR CONSTRUCTION

- A. Exterior Face: Fiberglass facing, .0215" min. with protective chemical coatings and primer.
- B. Core: Polyurethane or styrene foam.
- C. **Thermal Insulated Door. Masonite Energy Star = U-Factor 0.17, SHGC 0.01, measured in accordance with NFRC 100 & NFRC 200. (1/4 View Lite - U-Factor 0.21, SHGC 0.08) or approved equal which meets the following IFA & 2012 IECC Energy Requirements:**

WINDOWS & DOORS

Windows, doors, and skylights shall be ENERGY STAR qualified, as illustrated below:

Performance for Windows		
Climate Zone	U-Factor	SHGC
Northern – Zones 5 and 6	0.27 or less	Any
	= 0.28	≥ 0.32
	= 0.29	≥ 0.37
	= 0.30	≥ 0.42

Skylight U-Value: 0.55
SHGC: Any

Doors: Opaque: 0.17 U-Value, No SGHC Rating
=½ lite: 0.25 U-Value, 0.25 SHGC
>½ lite: 0.30 U-Value, 0.40 SHGC

2.04 FRAMES

- A. **Exterior Frames: 16 gage thick material, base metal thickness.**
- 2.05 ACCESSORIES
 - A. Removable Stops: Rolled steel channel shape, mitered corners; prepared for countersink style screws.
 - B. Primer: Manufacturers standard.
 - C. Silencers: Resilient rubber, fitted into drilled hole.
- 2.06 FABRICATION
 - A. Fabricate doors with hardware reinforcement welded in place.
 - B. Attach fire rated label to each door unit.
 - C. Close top and bottom edge of exterior doors with flush end closure. Seal joints watertight.
 - D. Configure exterior doors with special profile to receive recessed weatherstripping.
 - F. Wood frames to be tight and solid, with insulation at all voids and cavities.
 - G. Transom Bars for Glazed Lights: Fixed type, of same profiles as jamb and head.
 - H. Prepare frame for silencers. Provide three single silencers for single doors and mullions of double doors on strike side. Provide two single silencers on frame head at double doors without mullions.
 - L. Configure exterior frames with special profile to receive recessed weathersripping.
 - M. Fabricate frames to suit masonry wall coursing with 4 or 2 inch head member.
- 2.07 FINISH
 - A. Fiberglass Reinforced facings, chemically coated and primed.
 - B. Primer: Baked.
 - C. Coat inside of frame profile with bituminous coating to a thickness of 1/16 inch.
- PART 3 EXECUTION
- 3.01 EXAMINATION
 - A. Verify that opening sizes and tolerances are acceptable.
- 3.02 INSTALLATION
 - A. Install doors and frames in accordance with ANSI/SDI-100 and DHI.
 - B. Coordinate installation of glass and glazing.
 - C. Install door louvers, plumb, and level. Pack insulation in all voids and cavities to ensure weather tight.
 - D. Coordinate installation of doors and frames with **installation of storm door frames and hardware.**
 - E. Coordinate with masonry and wallboard wall construction for anchor placement.
 - F. Install roll-formed steel reinforcement channels between two abutting frames. Anchor to structure and floor.
- 3.03 ERECTION TOLERANCES
 - A. Maximum Diagonal Distortion: 1/16 inch measured with straight edge, corner to corner.
- 3.04 ADJUSTING
 - A. Adjust door for smooth and balanced door movement.

END OF SECTION 08111

SECTION 085313

VINYL WINDOWS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes fixed and operable vinyl-framed windows.

1.3 PERFORMANCE REQUIREMENTS

- A. General: Provide vinyl windows capable of complying with performance requirements indicated, based on testing manufacturer's windows that are representative of those specified, and that are of test size indicated below:
 - 1. Size required by AAMA/WDMA 101/I.S.2/NAFS
 - 2. Size indicated on Drawings.
- B. Structural Performance: Provide vinyl windows capable of withstanding the effects of the following loads, based on testing units representative of those indicated for Project that pass AAMA/WDMA 101/I.S.2/NAFS, Uniform Load Structural Test:
 - 1. Design Wind Loads: Determine design wind loads applicable to Project from basic wind speed indicated in **miles per hour (meters per second)** at **33 feet (10 m)** above grade, according to ASCE 7, Section 6.5, "Method 2-Analytical Procedure," based on mean roof heights above grade indicated on Drawings.
 - a. Basic Wind Speed: **85 mph (38 m/s)**.
 - b. Exposure Category: B.
- C. **Energy Star compliant and Approved and Rated for Northern Climate – Zones 5 & 6.**

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: An installer acceptable to vinyl window manufacturer for installation of units required for this Project.
 - 1. Installer's responsibilities include providing professional engineering services needed to assume engineering responsibility.
 - 2. Engineering Responsibility: Preparation of data for vinyl windows, including Shop Drawings, based on testing and engineering analysis of manufacturer's standard units in assemblies similar to those indicated for this Project.
- B. Manufacturer Qualifications: A manufacturer capable of fabricating vinyl windows that meet or exceed performance requirements indicated and of documenting this performance by inclusion in lists and by labels, test reports, and calculations.
- C. Source Limitations: Obtain vinyl windows through one source from a single manufacturer.

Product Options: Information on Drawings and in Specifications establishes requirements for vinyl windows' aesthetic effects and performance characteristics. Aesthetic effects are indicated by dimensions, arrangements, alignment, and profiles of components and assemblies as they relate to sightlines, to one another, and to adjoining construction. Performance characteristics are indicated by criteria subject to verification by one or more methods including preconstruction testing, field testing, and in-service performance.

1.5 PROJECT CONDITIONS

- A. Field Measurements: Verify vinyl window openings by field measurements before fabrication and indicate measurements on Shop Drawings.

1.6 WARRANTY

- A. When warranties are required, verify with Owner's counsel that special warranties state in this Article are not less than remedies available to Owner under prevailing local laws. Coordinate with Division 01 Section "Product Requirements."
- B. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace vinyl windows that fail in materials or workmanship within specified warranty period.

1. Failures include, but are not limited to, the following:
 - a. Failure to meet performance requirements.
 - b. Structural failures including excessive deflection, water leakage, air infiltration, or condensation.
 - c. Faulty operation of movable sash and hardware.
 - d. Deterioration of vinyl, other materials, and finishes beyond normal weathering.
 - e. Failure of insulating glass.
2. Warranty Period:
 - a. Window: **Two** years from date of Substantial Completion.
 - b. Glazing: **Five** years from date of Substantial Completion.
 - c. Vinyl Finish: **Five** years from date of Substantial Completion.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer and Product: Pella or approved equal subject to compliance with requirements. **Energy Star Rated, 2012 IECC compliance for Iowa & Northern Climate - Zones 5 & 6 must be met. See Chart Below for Energy Star Requirements.**
 1. Pella – Encompass by Pella, Single-Hung, Tilt Sash and alternate for fixed, casement and or other window types. **U-Factor & SHGC rating for Northern Climate – Zones 5 & 6 must be met.** Must abide by performance specs within this spec section and submit for approval.
 2. Andersen – Series 100 Windows, Single Hung, Tilt Sash and alternate for fixed, casement, and or other window types. **U-Factor & SHGC rating for Northern Climate - Zones 5 & 6 must be met.** Must abide by performance specs within this spec section and submit for approval.
 3. For this project, window performance is required to meet **Energy Star Multi-Family Program**, which requires the **Prescriptive Pathway** be met. See table below.

Climate Zone	U-Factor ¹	SHGC ²	
Northern*	≤ 0.27	Any	Prescriptive
	= 0.28	≥ 0.32	Equivalent Energy Performance
	= 0.29	≥ 0.37	
	= 0.30	≥ 0.42	
North-Central	≤ 0.30	≤ 0.40	
South-Central	≤ 0.30	≤ 0.25	
Southern	≤ 0.40	≤ 0.25	

2.2 MATERIALS

- A. Vinyl Extrusions: Rigid (un-plasticized) hollow PVC extrusions, formulated and extruded for exterior applications, complying with AAMA/WDMA 101/I.S.2/NAFS.
- B. Vinyl Trim and Glazing Stops: Material and finish to match frame members.
- C. Fasteners: Aluminum, nonmagnetic stainless steel, epoxy adhesive, or other materials warranted by manufacturer to be noncorrosive and compatible with vinyl window members, cladding, trim, hardware, anchors, and other components.
 1. Exposed Fasteners: Unless unavoidable for applying hardware, do not use exposed fasteners. For application of hardware, use fasteners that match finish of member or hardware being fastened, as appropriate.
- D. Anchors, Clips, and Accessories: Aluminum, nonmagnetic stainless steel, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.

- E. Reinforcing Members: Aluminum, or nonmagnetic stainless steel, or nickel/chrome-plated steel complying with ASTM B 456 for Type SC 3 severe service conditions, or zinc-coated steel or iron complying with ASTM B 633 for SC 3 severe service conditions; provide sufficient strength to withstand design pressure indicated.
 - F. Compression-Type Weather Stripping: Provide compressible weather stripping designed for permanently resilient sealing under bumper or wiper action, and for complete concealment when vinyl window is closed.
 - 1. Weather-Stripping Material: Elastomeric cellular preformed gaskets complying with ASTM C 509.
 - 2. Weather-Stripping Material: Dense elastomeric gaskets complying with ASTM C 864.
 - 3. Weather-Stripping Material: Manufacturer's standard system and materials complying with AAMA/WDMA 101/I.S.2/NAFS.
 - G. Sliding-type weather stripping is primarily for double-hung or horizontal-sliding windows. Delete first paragraph below if these types of units are not included or if full weather stripping is not desired.
 - H. Sliding-Type Weather Stripping: Provide woven-pile weather stripping of wool, polypropylene, or nylon pile and resin-impregnated backing fabric. Comply with AAMA 701/702.
 - 1. Weather Seals: Provide weather stripping with integral barrier fin or fins of semirigid, polypropylene sheet or polypropylene-coated material. Comply with AAMA 701/702.
 - I. Replaceable Weather Seals: Comply with AAMA 701/702.
- 2.3 WINDOWS
- A. Window Type: Single hung & fixed as indicated on Drawings.
 - B. AAMA/WDMA Performance Requirements: Provide vinyl windows of performance indicated that comply with AAMA/WDMA 101/I.S.2/NAFS.
 - C. Condensation-Resistance Factor (CRF): Provide vinyl windows tested for thermal performance according to AAMA 1503, showing a CRF of [45] .
 - D. Thermal Transmittance: Provide vinyl windows with a whole-window, U-factor maximum indicated at **15-mph (24-km/h)** exterior wind velocity and winter condition temperatures when tested according to [AAMA 1503]. **Energy Star Rated, 2012 IECC compliance for Iowa & Northern Climate – Zones 5 & 6.**
- 2.4 GLAZING
- A. Glass and Glazing Materials: Refer to Division 08 Section "Glazing" for glass units and glazing requirements applicable to glazed vinyl window units.
 - B. Glass: Clear, insulating-glass units.
- 2.5 HARDWARE
- A. General: Provide manufacturer's standard hardware fabricated from aluminum, stainless steel, carbon steel complying with AAMA 907, or other corrosion-resistant material compatible with vinyl; designed to smoothly operate, tightly close, and securely lock vinyl windows, and sized to accommodate sash or ventilator weight and dimensions. Do not use aluminum in frictional contact with other metals.
 - B. Sill Cap/Track: of thickness, dimensions, and profile indicated; designed to comply with performance requirements indicated and to drain to the exterior.
 - C. Locks and Latches: Designed to allow unobstructed movement of the sash across adjacent sash in direction indicated and operated from the inside only.
 - D. Roller Assemblies: Low-friction design.
 - E. Windows at second floor and windows with the sill opening 6'-0" above grade shall be provided with Window Opening Control Device; device shall meet the ASTM F 2090 - Standard specification for window fall prevention devices with emergency escape (egress) release mechanisms.
- 2.6 INSECT SCREENS
- A. Delete this Article if insect screens are not needed. Copy and revise Article if other types of screens, such as solar or protection screens, are required to suit Project. Revise first paragraph below if screens are located both inside and outside of window sashes or ventilators; differentiate here, on Drawings, or in a window schedule.
 - B. General: Design windows and hardware to accommodate screens in a tight-fitting, removable arrangement, with a minimum of exposed fasteners and latches. Fabricate insect screens to fully integrate with window frame.
- 2.7 WINDOW SILLS
- A. All interior window sills/ledges shall be moisture resistant cultured marble, 1/2" min. thickness

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine openings, substrates, structural support, anchorage, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of work. Verify rough opening dimensions, levelness of sill plate, and operational clearances. Examine wall flashings, vapor retarders, water and weather barriers, and other built-in components to ensure a coordinated, weathertight window installation.
 - 1. Masonry Surfaces: Visibly dry and free of excess mortar, sand, and other construction debris.
 - 2. Wood Frame Walls: Dry, clean, sound, well nailed, free of voids, and without offsets at joints. Ensure nail heads are driven flush with surfaces in opening and within 3 inches (76 mm) of opening.
 - 3. Metal Surfaces: Dry; clean; free of grease, oil, dirt, rust, corrosion, and welding slag; without sharp edges or offsets at joints.
 - 4. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Comply with Drawings, Shop Drawings, and manufacturer's written instructions for installing windows, hardware, accessories, and other components.
- B. Install windows level, plumb, square, true to line, without distortion or impeding thermal movement, anchored securely in place to structural support, and in proper relation to wall flashing and other adjacent construction.
- C. Set sill members in bed of sealant or with gaskets, as indicated, for weathertight construction.
- D. Separate aluminum and other corrodible surfaces from sources of corrosion or electrolytic action at points of contact with other materials.

3.3 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust operating sashes and ventilators, screens, hardware, and accessories for a tight fit at contact points and weather stripping for smooth operation and weathertight closure. Lubricate hardware and moving parts.
- B. Clean exposed surfaces immediately after installing windows. Avoid damaging protective coatings and finishes. Remove excess sealants, glazing materials, dirt, and other substances.
- C. Clean factory-glazed glass immediately after installing windows. Comply with manufacturer's written recommendations for final cleaning and maintenance. Remove nonpermanent labels, and clean surfaces.
- D. Remove and replace glass that has been broken, chipped, cracked, abraded, or damaged during construction period.
- E. Protect window surfaces from contact with contaminating substances resulting from construction operations. In addition, monitor window surfaces adjacent to and below exterior concrete and masonry surfaces during construction for presence of dirt, scum, alkaline deposits, stains, or other contaminants. If contaminating substances do contact window surfaces, remove contaminants immediately according to manufacturer's written recommendations.

END OF SECTION 085313

SECTION 09650

RESILIENT FLOORING

PART 1 GENERAL

- 1.01 SECTION INCLUDES
 - A. Vinyl Sheet Flooring and Vinyl Plank Flooring
- 1.02 QUALITY ASSURANCE
 - A. **Hard flooring that is not ceramic tile or unfinished hardwoods will be FloorScore certified**
 - B. **All adhesives will comply with Rule 1168 of the South Coast Air Quality Management Program**
- 1.03 DELIVERY, STORAGE, AND HANDLING
 - A. Deliver, store, protect, and handle products to site under provisions of the General Requirements.
 - B. Protect roll materials from damage.
- 1.04 ENVIRONMENTAL REQUIREMENTS
 - A. Store materials for three days prior to installation in area of installation to achieve temperature stability.
 - B. Maintain ambient temperature required by adhesive manufacturer three days prior to, during, and 24 hours after installation of materials.
 - C. All adhesives shall comply with Rule 1168 of the South Coast Air Quality Management District.
- 1.05 MAINTENANCE DATA
 - A. Maintenance Data: Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning, stripping, and re-waxing.
- 1.06 EXTRA MATERIALS
 - A. Provide 60 sq ft of flooring, 10 lineal feet of base, and stair materials of each material specified.
- 1.07 WARRANTY
 - A. 3 year light commercial warranty

PART 2 PRODUCTS

- 2.01 MATERIALS – VINYL PLANK FLOORING
 - A. Plank Flooring: FS SS-W-40. **J&J Flooring – LVT, Timeless (Color to be selected by owner)**
 - 1. Size: 9"x48"
 - 2. Thickness: 5.0 mm min.
 - 3. Wear layer: 12 mil min.
 - 4. Manufacturer as selected above or approved equal.
 - 5. Color & pattern per drawings or finish schedule.
 - 6. **Must be made from products that do not use vinyl chloride in the manufacturing process and do not produce dioxin Per IFA 2022 QAP Standards.**
- 2.02 MATERIALS – VINYL SHEET FLOORING
 - A. Vinyl Composition Tile; ASTM F-1066, **As selected by owner/contractor**
 - 1. Total Thickness: .010"
 - 2. **Wear layer: 20 mil min.**
 - 3. Manufacturer, as selected by contractor.
 - 4. Color & pattern per drawings or finish schedule.
 - 5. Must have underlayment product on second and third floors.
 - 6. **Must be made from products that do not use vinyl chloride in the manufacturing process and do not produce dioxin Per IFA 2022 QAP Standards.**
- 2.03 ACCESSORIES
 - A. Subfloor Filler: White premix latex; type recommended by adhesive material manufacturer.
 - B. Primers and Adhesives: Waterproof; types recommended by flooring manufacturer.
 - C. Edge Strips: Flooring material as approved.
 - D. Sealer and Wax: Types recommended by flooring manufacturer.

PART 3 EXECUTION

- 3.01 EXAMINATION

- A. Verify concrete floors are dry to a maximum moisture content of 7 percent, and exhibit negative alkalinity, carbonization, or dusting.
 - B. Verify floor and lower wall surfaces are free of substances that may impair adhesion of new adhesive and finish materials.
- 3.02 PREPARATION
- A. Remove sub-floor ridges and bumps. Fill minor or local low spots, cracks, joints, holes, and other defects with sub-floor filler to achieve smooth, flat, hard surface.
 - B. Prohibit traffic until filler is cured.
 - C. Vacuum clean substrate.
 - D. Apply primer as recommended by manufacturer.
- 3.03 INSTALLATION – RESILIENT TILE FLOORING
- A. Install in accordance with manufacturer's instructions.
 - B. Spread only enough adhesive to permit installation of materials before initial set.
 - C. Set flooring in place, press with heavy roller to attain full adhesion.
 - D. Lay flooring with joints and seams parallel to building lines to produce symmetrical tile pattern.
 - G. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar.
 - H. Install resilient edge strips at unprotected or exposed edges, and where flooring terminates.
 - G. Scribe flooring to walls, columns, cabinets, floor outlets, and other appurtenances to produce tight joints.
- 3.04 CLEANING
- A. Clean all work as described in the General Requirements.
 - B. Remove access adhesive from floor, base, and wall surfaces without damage.
 - C. Clean, seal, and wax floor and base surfaces in accordance with manufacturer's instructions.
- 3.05 PROTECTION OF FINISHED WORK
- A. Protect finished Work.
 - B. Prohibit traffic on floor finish for 48 hours after installation.

END OF SECTION 09650

SECTION 10850

BUILDING SPECIALTIES

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Building specialties shall be furnished and installed as shown and herein specified. Installation shall be in accordance with the respective manufacturer's instructions. Certain manufacturer's products have been selected as a basic standard, and reference to these products has been made. Other manufacturers' products of equal capacities and design characteristics may be used, if approved by the Architect prior to the Bidding. The Contractor shall submit for approval shop drawings or standard cuts and illustrations or a combination thereof showing all items he proposes to use.

1.2 PLAYGROUND SURFACING & EQUIPMENT

- A. Edging – 12 Border Timbers by 2 by 2 Industries. Must be installed to maintain accessibility requirements. Color TBD
- B. Mulch – Rubber mulch by Ground Smart to meet the IPEMA's critical fall height protection per ASTM F1292-13 and ASTM F1951-99 standard for wheelchair accessibility. Color TBD
- C. Equipment (Reference Sheet A1.3 for more details)
 - 1. **Custom Play-Gym** – (1) Total. By Superior Playgrounds. Should include 4 play components. Suitable for ages 2-5. Color scheme TBD
 - 2. **Retro Rocker** – (1) Total by Superior Playgrounds. Suitable for ages 2-5. Color scheme TBD
 - 3. **Zig Zag Straight Rung Overhead Ladder** – (1) Total by Superior Playgrounds. Suitable for ages 5-12. Color scheme TBD
 - 4. **3.5" Arch Swing** – (1) Bay. By Superior Playgrounds. With 1 belt seat and 1 bucket seat, galvanized chains. Suitable for all ages. Color scheme TBD
- D. Benches – (2) Total – Polywood Traditional Garden 60" Bench. Color TBD

1.3 MAILBOXES

- A. Manufacturer – Florence Manufacturing Company, (1) 4C16D-20, (1) 4C16D-19, (1) 4C16S-09, & (1) 4C16D-6P, front loading horizontal mailboxes for recessed mounting with snap-on outer trim kit.
- B. Additional Features: Standard 5-pin cylinder tenant cam lock with two keys. Engraved identification number for slots with color fill. Owner to select color of all finishes.
- C. Quantity and Size: Reference Sheets on Sheet A1.2

1.4 BBQ – PICNIC AREA

- A. Picnic Tables – (2) Total – www.theparkcatalog.com Everest Series, (1) 6'-0" Heavy Duty Picnic Table and (1) 8'-0" Heavy Duty ADA Single Sided Picnic Table. Colors TBD
- B. BBQ Grill – (2) Total – MHP Propane Gas Grill with Stainless Steel Shelves and Stainless Grids on in-ground Post. Mounted to meet ADA requirements. www.bbqguys.com

1.5 CLOSET SHELIVING

- A. Reference floors for location and installation height.
- B. Easy to adjust system (without use of tools)
- C. Manufacturers: **Organized Living, Freedom Rail** or approved equal.
 - a. Color: White
 - b. Components: Rails, Rod Stop, Clothes Rod, Ventilated Shelves, Brackets, Mounting hardware
 - c. Hanging rail mounted to wall per manufacturer's instructions: uprights spaced 36 inches apart to support 50 pounds.

END OF SECTION 10850

SECTION 12356

KITCHEN CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Wood-faced kitchen cabinets.
 - 2. Wood-faced vanity cabinets.
 - 3. Plastic-laminate countertops.
- B. Related Sections include the following:
 - 1. Division 11 Section "Residential Appliances" for appliances mounted in kitchen casework.
 - 2. Division 15 Section "Plumbing Fixtures" for sink units mounted in countertops.

1.3 DEFINITIONS

- A. Exposed Surfaces of Casework: Surfaces visible when doors and drawers are closed, including visible surfaces in open cabinets or behind glass doors.
- B. Semi-exposed Surfaces of Casework: Surfaces behind opaque doors or drawer fronts, including interior faces of doors and interiors and sides of drawers. Bottoms of wall cabinets are defined as "semi-exposed."
- C. Concealed Surfaces of Casework: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, and ends of cabinets installed directly against and completely concealed by walls or other cabinets. Tops of wall cabinets and utility cabinets are defined as "concealed."

1.4 SUBMITTALS

- A. Product Data: For the following:

Samples and Submittals must be approved by Owner/Developer prior to ordering or production.

- 1. Cabinets.
 - 2. Plastic-laminate countertops.
 - 3. Cabinet hardware.
- B. Shop Drawings: For cabinets and countertops. Include plans, elevations, details, and attachments to other work. Show materials, finishes, filler panels, hardware, edge and backsplash profiles, cutouts for plumbing fixtures, and methods of joining countertops.
- C. Samples for Initial Selection: Manufacturer's color samples consisting of units or sections of units showing the full range of colors, textures, and patterns available for each type of material exposed to view.
- D. Samples for Verification: For the following materials; in sets showing the full range of color, texture, and pattern variations expected:
 - 1. Wood-veneered panels with transparent finish, 8 by 10 inches (200 by 250 mm), for each species.
 - 2. Solid wood with transparent finish, 50 sq. in. (300 sq. cm), for each species.
 - 3. Plastic laminate for countertops, 8 by 10 inches (200 by 250 mm).
 - 4. One unit of each type of exposed hardware.

- E. Product Certificates: Signed by manufacturers of casework certifying that products furnished comply with requirements. **Samples and Submittals must be approved by Owner/Developer prior to ordering or production.**

1.5 QUALITY ASSURANCE

- A. Source Limitations for Cabinets: Obtain cabinets through one source from a single manufacturer.
- B. Product Designations: Drawings indicate size, configurations, and finish material of casework by referencing designated manufacturer's catalog numbers. Other manufacturers' casework of similar sizes, similar door and drawer configurations, same finish material, and complying with the Specifications may be considered. Refer to Division 1 Section "Substitutions."
- C. Quality Standards: Unless otherwise indicated, comply with the following standards:
 - 1. Cabinets: KCMA A161.1.
 - a. KCMA Certification: Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semi exposed location of each unit and showing compliance with the above standard.
 - b. Cabinets shall have no formaldehyde added during the manufacturing process.**
 - 2. Plastic-Laminate Countertops: KCMA A161.2.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install kitchen casework until building is enclosed, wet-work is complete, and HVAC system is operating and will maintain temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Established Dimensions: Where kitchen casework is indicated to fit to other construction, establish dimensions for areas where casework is to fit. Coordinate construction to ensure that actual dimensions correspond to established dimensions. Provide fillers and scribes to allow for trimming and fitting.
- C. Field Measurements: Where kitchen casework is indicated to fit to existing construction, verify dimensions of existing construction by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes if necessary.
- D. Field Measurements for Countertops: Verify dimensions of countertops by field measurements after base cabinets are installed but before countertop fabrication is complete. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

1.7 COORDINATION

- A. Coordinate layout and installation of blocking and reinforcement in partitions for support of kitchen casework.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
- B. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - 1. Cabinets:
 - a. Mid America Cabinets, Vista Box Style, Concord Door Style**
 - 1) Wood: Red Oak; Stain: To be determined.
 - 2. Plastic Laminate for Countertops:
 - a. Formica Corp.
 - b. Nevamar Corp.
 - c. Pionite Plastics Corp.

d. WilsonArt

2.2 COLORS, TEXTURES, AND PATTERNS

- A. Colors, Textures, and Patterns: As listed, or selected by Architect from manufacturer's full range for these characteristics.

2.3 CABINET MATERIALS

- A. Exposed Materials: Comply with the following:
1. Exposed Wood Species: As follows. Do not use two adjacent exposed faces that are noticeably dissimilar in color, grain, figure, or natural character markings.
 2. Solid Wood: Clear hardwood lumber of species indicated, free of defects, selected for compatible grain and color, and kiln dried to 7 percent moisture content.
 3. Plywood: Hardwood plywood complying with HPVA HP-1 with face veneer of species indicated, selected for compatible color and grain with Grade A faces and Grade C backs of same species as faces.
 - a. Edge band exposed edges with minimum 1/8-inch- (3-mm-) thick, solid-wood edging of same species as face veneer.
- B. Semi exposed Materials: Unless otherwise indicated, provide the following:
1. Plywood: Hardwood plywood complying with HPVA HP-1 with Grade C faces stained to be compatible with exposed surfaces and Grade 3 backs of same species as faces.
 2. Thermoset Decorative Panels: Medium-density particleboard complying with ANSI A208.1, Grade M-2; with surface of thermally fused, melamine-impregnated decorative paper complying with LMA SAT-1.
 - a. Provide thermoset decorative overlay on both sides of shelves, dividers, drawer bodies, and other components with two semi exposed surfaces.
 - b. Provide PVC or polyester edge banding complying with LMA EDG-1 on components with semi exposed edges.
 3. Vinyl-Faced Particleboard: Medium-density particleboard complying with ANSI A208.1, Grade M-2 with an embossed, wood-grain-patterned vinyl film adhesively bonded to particleboard.
 - a. Provide vinyl film on both sides of shelves, dividers, drawer bodies, and other components with two semi exposed surfaces and on semi exposed edges.
 4. All cabinets and must be made with formaldehyde free materials.
- C. Concealed Materials: Comply with the following:
1. Particleboard: ANSI A208.1, Grade M-2.
 3. Medium-Density Fiberboard: ANSI A208.2.
 4. Hardboard: AHA A135.4, Class 1 Tempered.
 5. All cabinets and shelves must be made with formaldehyde free materials.

D. ALL CABINETS: No formaldehyde shall be added during the manufacturing process.

2.4 COUNTERTOP MATERIALS

- A. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3.
1. Grade: HGS.
 2. Grade: HGP.
 3. Provide through-color plastic laminate.
 4. Grade for Backer Sheet: BKL.
- B. Particleboard: ANSI A208.1, Grade M-2.
- C. Plywood: Exterior softwood plywood complying with PS 1, Grade C-C Plugged, touch sanded.
- D. Solid Wood Edges and Trim: Clear hardwood lumber of species indicated, free of defects, selected for compatible grain and color, and kiln dried.

- E. All countertop must be made of formaldehyde free material.

2.5 CASEWORK HARDWARE

- A. General: Manufacturer's standard units complying with BHMA A156.9, of type, material, size, and finish as selected from manufacturer's standard choices.
- B. Hinges: **Semi-concealed, self-closing hinges.**
- D. Drawer Guides: 100 lb. rated epoxy-coated-metal, self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05091.
- E. Cabinet Pulls: **Submit Samples, Selected by Architect/Owner from manufacturers Standard range.**

2.6 CABINET CONSTRUCTION

- A. Face Style: Reveal overlay; door and drawer faces partially cover cabinet body or face frames.
- B. Face Frames: 3/4-inch solid wood with glued mortise and tenon or doweled joints.
- C. Door and Drawer Fronts: 2 inch wide by 3/4 inch thick perimeter assembled around a 1/4 inch veneer panel.
- D. Cabinet Ends: 1/2 inch industrial-grade particle board fastened to face frame with tongue-and-groove. Exposed end panels are finished with wood veneer to match face frame finish.
- E. Cabinet Tops and Bottoms: Wall cabinets constructed of 1/4 inch hardboard dadoed into end panels and interlocked into hanging rails for strength. Base bottoms constructed similarly of 1/2 inch industrial-grade particle board.
- F. Hanging Rails: 3/4 inch by 2-1/2 inch hardwood on upper cabinets. 3/4 inch by 1 inch hardwood on base cabinets.
- G. Drawers: 7/16 inch industrial-grade particle board using full box construction with 1/8 inch hardboard bottoms. Drawer fronts constructed to match cabinet door material and style.
- H. Shelves: 1/2 inch industrial-grade particle board. Wall shelving adjustable up to 24" wide. Base cabinets feature 11 inch deep half-shelf.
- I. Toe Kick: 1/2 inch industrial-grade particle board fastened between end panels.
- J. Joinery: Rabbet backs flush into end panels and secure with concealed mechanical fasteners. Connect tops and bottoms of wall cabinets and bottoms and stretchers of base cabinets to ends and dividers with mechanical fasteners. Rabbet tops, bottoms, and backs into end panels.
- K. Factory Finishing: To greatest extent possible, finish casework at factory. Defer only final touchup until after installation.

2.7 PLASTIC-LAMINATE COUNTERTOPS

- A. Configuration: Provide countertops with the following front, cove (intersection of top with backsplash), backsplash, and end-splash style:
 - 1. Front: Classic waterfall edge
 - 2. Cove: Cove molding (one-piece postformed laminate supported at junction of top and backsplash by wood cove molding).
 - 3. Backsplash: Curved or waterfall shape with scribe.

- B. Plastic-Laminate Substrate: Particleboard not less than 3/4 inch (19 mm) thick.
 - 1. For countertops at sinks and lavatories, use phenolic-resin particleboard or exterior-grade plywood.
 - 2. Build up countertop thickness to 1-1/2 inches (38 mm) at front, back, and ends with additional layers of particleboard laminated to top.
- C. Backer Sheet: Provide plastic-laminate backer sheet on underside of countertop substrate.
- D. Paper Backing: Provide paper backing on underside of countertop substrate.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install casework with no variations in flushness of adjoining surfaces; use concealed shims. Where casework abuts other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips, and moldings in finish to match casework face.
- B. Install casework without distortion so doors and drawers fit openings and are aligned. Complete installation of hardware and accessories as indicated.
- C. Install casework and countertop level and plumb to a tolerance of 1/8 inch in 8 feet (3 mm in 2.4 m).
- D. Fasten cabinets to adjacent units and to backing.
 - 1. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches (600 mm) o.c. with No. 10 wafer-head screws sized for 1-inch (25-mm) penetration into wood framing, blocking, or hanging strips.
 - 2. Fasten wall cabinets through back, near top and bottom, at ends and not less than 24 inches (600 mm) o.c., with toggle bolts through metal backing behind gypsum board.
- E. Fasten plastic-laminate countertops by screwing through corner blocks of base units into underside of countertop. Form seams using splines to align adjacent surfaces, and secure with glue and concealed clamping devices designed for this purpose.
- F. Fasten solid-surfacing-material countertops by screwing through corner blocks of base units into underside of countertop. Align adjacent surfaces, and form seams to comply with manufacturer's written instructions using adhesive in color to match countertop. Carefully dress joints smooth, remove surface scratches, and clean entire surface.

3.2 ADJUSTING AND CLEANING

- A. Adjust casework and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.
- B. Clean casework on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas.

END OF SECTION 12356

Projected Energy Report

Reserves at South Lake Grinnell, IA

Project Type	New Construction
Building Type	Multifamily
Construction Year	2023
Number of Units	48
Units Testing	13
Housing Authority	IFA

Prepared by Michael Boerst



Introduction

The Element Group is excited to inform you of the successful design of your construction project. Based on your selection of building components and proper preliminary modeling, your project is projected to conform to the IFA requirements for energy efficiency.

The following report will layout an overview of the program requirements and the next critical steps to ensuring implementation of your qualifying energy design.

Program Requirements

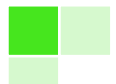
The following energy efficiency-related items are required for this program:

- ✓ Maximum HERS score of 62
- ✓ Energy Star Multifamily New Construction Prescriptive Compliance

As part of the process of verifying compliance with the energy efficiency programs listed above, The Element Group utilized the RESNET/DOE-approved REM Rate energy modeling software.

The computer simulated energy rating deals only with the energy systems, this project also requires on-site inspections, performance testing, quality installation verification and checklist documentation compliance. In addition, verification of 'mandatory minimum' prescriptive building components will be conducted. Listed below are the specific additional checklists and testing thresholds that will be completed on this project:

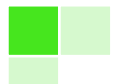
- ✓ Energy Star Multifamily New Construction Design Review Checklist
- ✓ Energy Star Multifamily New Construction Field Rater Checklist
- ✓ Dwelling unit compartmentalization limited to 0.30 CFM50/SF enclosure area
- ✓ Total duct leakage limited to 80 CFM25 or 8%, whichever is greater
- ✓ Duct leakage to the outside limited to 40 CFM25 or 4%, whichever is greater



Developer Selected Specifications

Listed in the following chart are the key building characteristics affecting the energy rating on your project. These items reflect the final specification choices made by your design team and have been modeled to help ensure compliance with the funded program. This analysis does not guarantee compliance with any program. The projected energy rating only deals with the energy systems. This project also requires on-site verification, performance testing, quality installation and checklist documentation of compliance.

Building Component	Selected	Notes
Perimeter Slab Insulation	R-10, 2' Deep	2" XPS Foam, Beveled with Top of Slab
Under Slab Insulation	None	
Foundation Wall Insulation	N/A	
Rim/Band Joist Insulation	R-13 + R6.6ci	R-13 Fiberglass Batt and 1½" Zip R Sheathing
Framed Floor Insulation	N/A	
Exterior Wall Insulation	R-13 + R6.6ci	R-13 Fiberglass Batt and 1½" Zip R Sheathing
Attic Insulation	R-49	Blown Insulation, Roughly 17" Required
Energy Heel Height	16"	
Window U-Value	0.27 max.	Energy Star Prescriptive Values
Window SHGC	NR	
Heating System Efficiency	9.5-9.75 HSPF	Air Source Heat Pump
Cooling System Efficiency	15-16 SEER	Air Source Heat Pump
Water Heating System	0.93 UEF min.	40 Gallon Electric In Unit Water Heater
Programmable Thermostat	Yes	Required per Energy Star MFNC
Ventilation System	Broan XB80	ASHRAE 62.2-2010, SmartExhaust, Energy Star
% Supply Duct in Unconditioned	0%	
R-Value	NA	
% Return Duct in Unconditioned	0%	
R-Value	NA	
% CFL or LED Fixtures	100% LED, Energy Star Rated	90% of Fixtures to be Energy Star Rated
% Exterior High Efficiency Lights	100% LED, Energy Star Rated	90% of Fixtures to be Energy Star Rated
Refrigerator	TBD	Energy Star rated
Dishwasher	TBD	Energy Star rated
Clothes Washer	TBD	Energy Star rated
Kitchen Exhaust Vented Outside?	Yes, 6" Round Duct	Must be vented to outside at 100 CFM for Energy Star



Next Critical Steps

Listed below are the timelines, key team member responsibilities and necessary actions to assist the project in compliance with this program.

Architect Review

We have consistently found the most successful projects to be those in which the necessary energy efficiency items were included in the final blueprints to the greatest extent possible. Because of this, we recommend the architect thoroughly review all prescriptive items and checklists as early in the process as possible.

Design Changes

The specification chart on the previous page reflects the final minimum specifications chosen by the developer. Any deviations in energy specifications lower than these thresholds, may result in non-compliance. *Any proposed changes to specifications must immediately be submitted to the Element Group project manager listed below to ensure key thresholds are still being met.*

HVAC Design Consultation Meeting

The Element Group will provide a consultant to assist with understanding the design and testing requirements for HVAC. Typically, this is the most critical and complicated aspect of the project's energy efficiency compliance.

On-Site Meeting

The Element Group will conduct a meeting prior to insulation with the general contractor and (if requested) key subcontractors. This meeting will cover the key energy efficiency installation requirements and best practices. Necessary checklists will be provided.

Slab Inspection

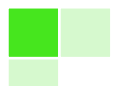
The Element Group will conduct one inspection to ensure proper installation of slab edge insulation, slab-to-footing insulation, and/or under slab insulation. Three to five days' notice for scheduling is preferred. Please call project manager for scheduling.

Framing Inspection

If requested. The Element Group will conduct a framing walk-through to address concerns and/or identify possible problem areas.

Pre-Drywall Insulation and Air Sealing Inspection

The Element Group will conduct insulation and air sealing inspections for all units. Three to five days' notice for scheduling is preferred. Please call project manager for scheduling. The following items should be completed prior to scheduling:



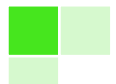
- ✓ Exterior wall insulation
- ✓ All exterior air-sealing
- ✓ All interior fire-caulking
- ✓ Air handler and ductwork installed and sealed (recommended)

We *highly* recommend having the air handler and ductwork ready for duct testing at this stage. Due to the stringent thresholds, we encounter a high rate of failure for duct testing. Troubleshooting and fixing any leakage issues becomes much more difficult once everything is covered up.

Final Testing and Verification

The Element Group will conduct final testing and verification using a sampling protocol/for all units. Five to seven days' notice for scheduling is preferred. Please call project manager for scheduling. The following items should be completed prior to scheduling:

- ✓ Power to the facility
- ✓ Gas meter unlocked
- ✓ All appliances installed
- ✓ All carpet, trim and lighting installed
- ✓ Mechanical equipment trim out completed
- ✓ Mechanical equipment move-in ready

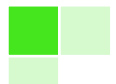


Sampling Proceeding and Rules

This project is using the RESNET sampling process to complete final testing results. Sampling can reduce project testing costs by reducing the number of units tested. However, there are stringent rules and compliance requirements that must be met. Deviation from the rules or inspection/testing failures will increase the number of units tested and substantially increase costs. It is critical that the sub-contractor understand the rules and ramifications of non-compliance and the increased risk assumed with re-inspection fees, repairs and time delays. Pre-construction manuals have been made for each sub-contractor outlining installation responsibilities. Additionally, all subcontractors will be given contact information for The Element Group in the event they have any questions. Listed below is an overview of the sample requirements.

Once the rater and builder are fully comfortable and invested in the sampling process and the worst-case specifications have been agreed upon, the project is ready to begin the sampling.

1. Qualification
 - a. To qualify for sampling, 7 consecutive units must be tested/inspected without observation of failure to meet previously determined worst-case threshold specifications.
 - b. Upon completion of this initial sampling qualifying set, sampling may commence.
2. Sampling
 - a. After completing the qualifying set, all remaining project units are placed into sample sets of no greater than 7 units.
 - b. Once sample sets are created, the rater shall test/inspect units at a rate of no less than 1 in 7 units.
 - c. As long as there are no failures identified in testing or meeting project worst-case specifications, the rater may continue certification of the project by testing units at a rate of 1 in 7.
3. Managing failures
 - a. If the rater identifies a failure(s), that failure(s) must be corrected and the rater must inspect/test an additional 1 unit.
 - b. If an additional failure(s) is identified in the second unit tested/inspected in the sample set, that failure(s) must be corrected and the rater must inspect/test all 7 units within the rest of the sample set.
 - c. If multiple additional failures are identified in the testing/inspection of the remaining units of the sample set, then those failures must be corrected and sampling must be discontinued.
 - d. To resume sampling, the builder must write a root-cause analysis to identify the issues which resulted in repeated project failures, and the project must requalify for sampling by having additional 7 consecutive units tested/inspected without incidence of failure.



Once all sample sets have been appropriately verified as above, the rater submits their worst-case energy models and testing/inspection documentation to the RESNET Provider for project certification. All project units then receive a HERS Index that is based on the worst-case energy model based on their floor plan type. The RESNET Provider then certifies the ratings for the project, registers them with RESNET, and the rater is able to produce certification documentation to submit to their client.

Contact Information

For questions, concerns and project scheduling, please contact:

Michael Boerst

Energy Consultant

The Element Group

651-666-0428

michael.boerst@missiongogreen.com

Mitchell Jarvis

Project Manager

The Element Group

319-640-0478

mitchell@missiongogreen.com

Dan McGuire

Director of Design and Auditing Services

The Element Group

319-440-6903

dan@missiongogreen.com



Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: jL9jWl1d

HERS® Index Score:

60

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

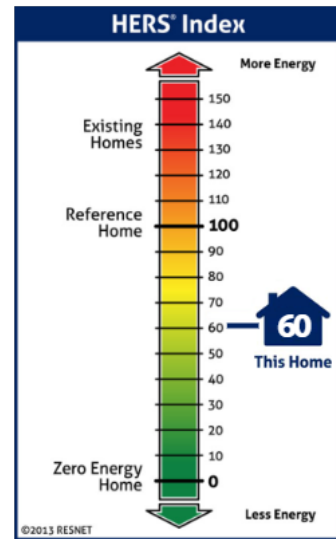
TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	10.5	\$0
Cooling	0.9	\$0
Hot Water	5.7	\$0
Lights/Appliances	10.6	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	27.7	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	1 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	731 ft ²
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	40 CFM @ 25Pa (5.47 / 100 ft ²)
Above Grade Walls:	R-20
Ceiling:	Adiabatic, R-1
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	N/A

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
Digitally signed: 1/11/23 at 2:35 PM



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: jL9jWl1d

HERS® Index Score:

60

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

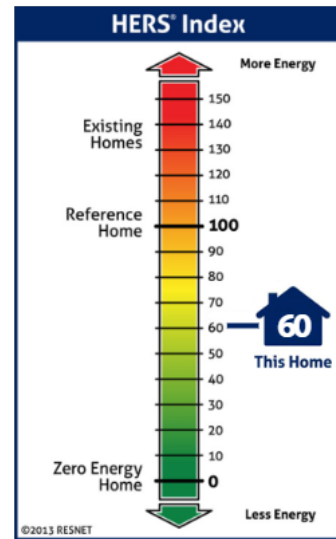
TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	7.5	\$0
Cooling	0.9	\$0
Hot Water	5.7	\$0
Lights/Appliances	10.6	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	24.7	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	1 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	731 ft ²
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	40 CFM @ 25Pa (5.47 / 100 ft ²)
Above Grade Walls:	R-20
Ceiling:	Adiabatic, R-1
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	R-1

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
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Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: jL9jWl1d

HERS® Index Score:

58

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:
TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	7.5	\$0
Cooling	0.9	\$0
Hot Water	5.7	\$0
Lights/Appliances	10.6	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	24.7	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

Rating Company: M2X Energy Inc

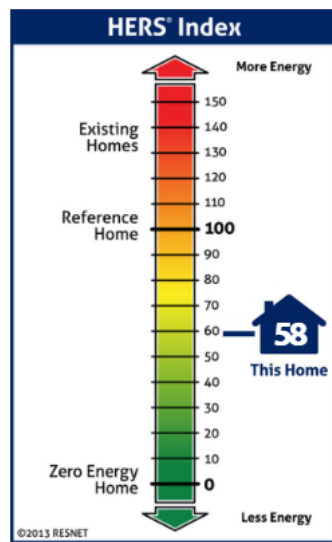
888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620



Michael Boerst

Michael Boerst, Certified Energy Rater
Digitally signed: 1/11/23 at 2:35 PM



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	1 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	731 ft ²
Number of Bedrooms:	1
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	40 CFM @ 25Pa (5.47 / 100 ft ²)
Above Grade Walls:	R-20
Ceiling:	Attic, R-49
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	R-1



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: P2lQnDGL

HERS® Index Score:

59

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	12.0	\$0
Cooling	1.1	\$0
Hot Water	7.1	\$0
Lights/Appliances	12.4	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	32.6	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

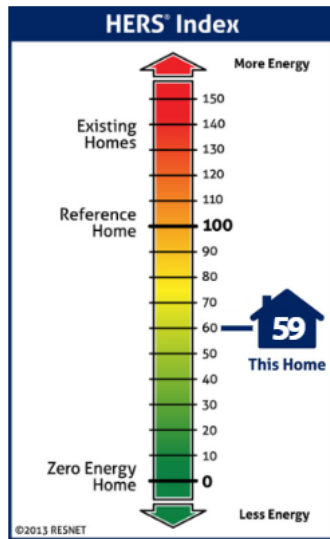
Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
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Home Feature Summary:

Home Type:	Apartment, end unit
Model:	2 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	905 ft ²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	40 CFM @ 25Pa (4.42 / 100 ft ²)
Above Grade Walls:	R-20
Ceiling:	Adiabatic, R-1
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	N/A



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: P2lQnDGL

HERS® Index Score:

59

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	8.5	\$0
Cooling	1.1	\$0
Hot Water	7.1	\$0
Lights/Appliances	12.4	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	29.1	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

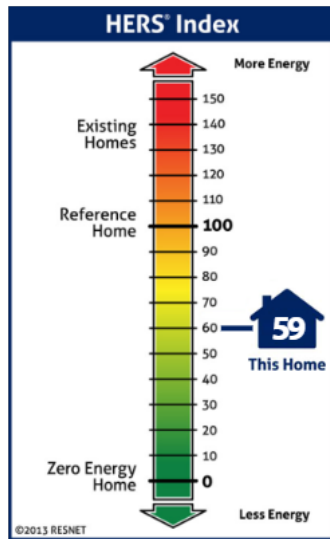
Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
Digitally signed: 1/11/23 at 2:41 PM



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	2 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	905 ft ²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	40 CFM @ 25Pa (4.42 / 100 ft ²)
Above Grade Walls:	R-20
Ceiling:	Adiabatic, R-1
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	R-1



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: P2lQnDGL

HERS® Index Score:

57

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

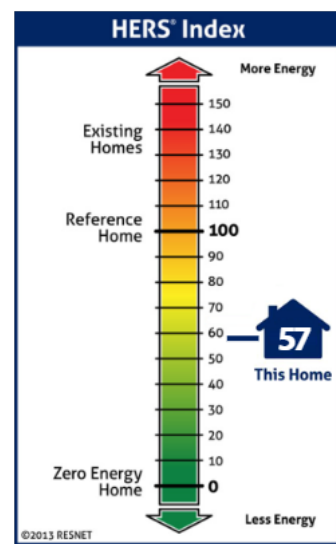
Builder:
TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	8.7	\$0
Cooling	1.1	\$0
Hot Water	7.1	\$0
Lights/Appliances	12.4	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	29.3	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	2 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	905 ft ²
Number of Bedrooms:	2
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	40 CFM @ 25Pa (4.42 / 100 ft ²)
Above Grade Walls:	R-20
Ceiling:	Attic, R-49
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	R-1

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
Digitally signed: 1/11/23 at 2:41 PM



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: ZdmD0WJL

HERS® Index Score:

59

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	14.5	\$0
Cooling	1.4	\$0
Hot Water	9.4	\$0
Lights/Appliances	14.4	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	39.7	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

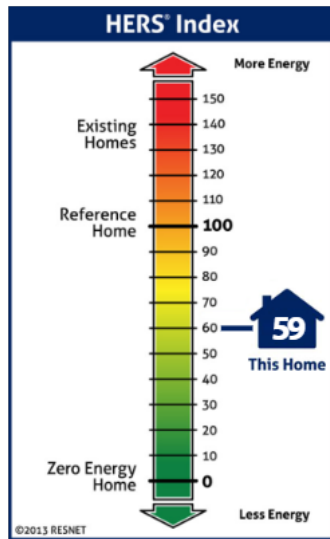
Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
Digitally signed: 1/11/23 at 2:46 PM



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	3 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	1,133 ft ²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	4 CFM25 / 100 ft ²
Above Grade Walls:	R-20
Ceiling:	Adiabatic, R-1
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	N/A



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: ZdmD0WJL

HERS® Index Score:

60

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

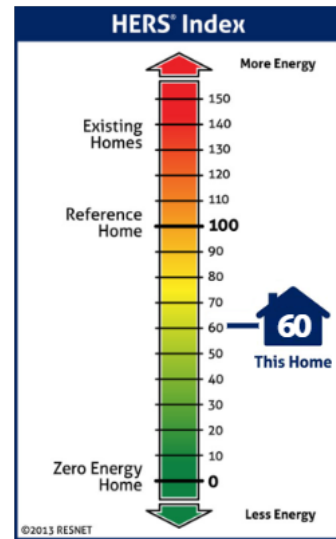
TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	10.1	\$0
Cooling	1.3	\$0
Hot Water	9.4	\$0
Lights/Appliances	14.4	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	35.3	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0



Home Feature Summary:

Home Type:	Apartment, end unit
Model:	3 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	1,133 ft ²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	4 CFM25 / 100 ft ²
Above Grade Walls:	R-20
Ceiling:	Adiabatic, R-1
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	R-1

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

Rating Company: M2X Energy Inc

888-850-4777

Rating Provider: Building Efficiency Resources
PO Box 1769 Brevard, NC 28712
800-399-9620

Michael Boerst

Michael Boerst, Certified Energy Rater
Digitally signed: 1/11/23 at 2:45 PM



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
The Energy Rating Disclosure for this home is available from the Approved Rating Provider.
This report does not constitute any warranty or guarantee.

Home Energy Rating Certificate

Projected Report
Based on Plans

Rating Date:
Registry ID:
Ekotrope ID: ZdmD0WJL

HERS® Index Score:

57

Your home's HERS score is a relative performance score. The lower the number, the more energy efficient the home. To learn more, visit www.hersindex.com

Annual Savings

\$0

*Relative to an average U.S. home

Home:

Grinnell, IA 50112

Builder:

TBD

Your Home's Estimated Energy Use:

	Use [MBtu]	Annual Cost
Heating	10.4	\$0
Cooling	1.4	\$0
Hot Water	9.4	\$0
Lights/Appliances	14.4	\$0
Service Charges		\$0
Generation (e.g. Solar)	0.0	\$0
Total:	35.5	\$0

This home meets or exceeds the criteria of the following:

ENERGY STAR MF v1.1
ENERGY STAR MF v1.0

Rating Completed by:

Energy Rater: Michael Boerst
RESNET ID: 7176148

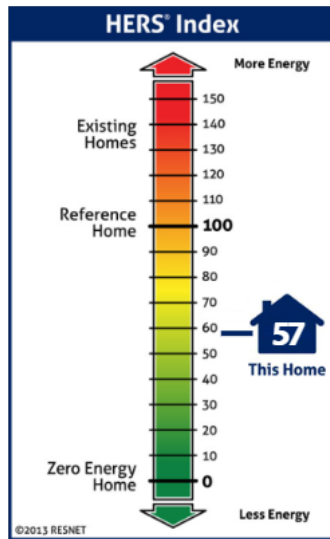
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Michael Boerst

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Home Feature Summary:

Home Type:	Apartment, end unit
Model:	3 Bedroom
Community:	Reserves at South Lake
Conditioned Floor Area:	1,133 ft ²
Number of Bedrooms:	3
Primary Heating System:	Air Source Heat Pump • Electric • 9.5 HSPF
Primary Cooling System:	Air Source Heat Pump • Electric • 16 SEER
Primary Water Heating:	Residential Water Heater • Electric • 0.93 Energy Factor
House Tightness:	0.3 CFM50 / s.f. Shell Area
Ventilation:	80 CFM • 7.6 Watts
Duct Leakage to Outside:	4 CFM25 / 100 ft ²
Above Grade Walls:	R-20
Ceiling:	Attic, R-49
Window Type:	U-Value: 0.27, SHGC: 0.49
Foundation Walls:	N/A
Framed Floor:	R-1



Energy savings calculated without modifications to the energy model. (As Modeled)

Ekotrope RATER - Version:4.0.1.3070
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