COMPILED SET - 4/22/24

JOHN KNOX VILLAGE
COURTYARDS-BUILDING E

New Independent Living Building

LEE'S SUMMIT, MO

CONSTRUCTION SET

DATE: January 5, 2024

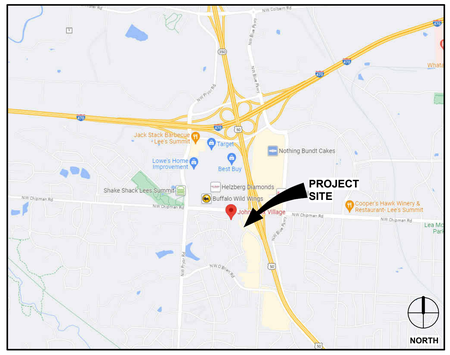
REVISED FOR BID SET: FEBRUARY 16, 2024

COMM. NO. 23104.00

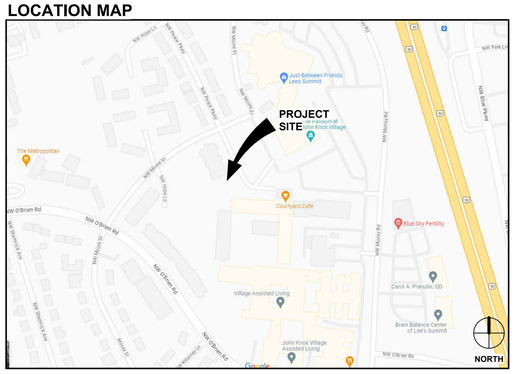
RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

Joe Frogge

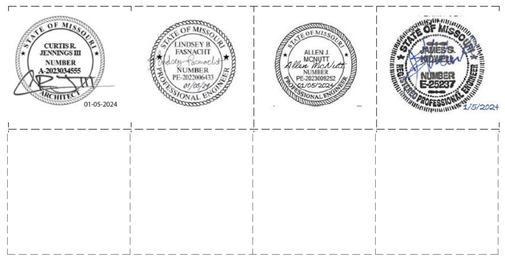
VICINITY MAP



LOCATION MAP



seals were errornously left off the Bid Set cover, but were submitted for the Permit Set.



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CHARLOTTE, NC 28203
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610.825.1288

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Irving, TX 75062
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www.greystonecommunities.com

BHC RHODES
CIVIL ENGINEERING
7101 College Blcd., Suite 400
Overland Park, KS 66210
Phone: 913.663.1900
www.ibhc.com

DRAWING INDEX

NOTE: CIVIL DRAWINGS BEING PERMITTED UNDER SEPARATE COVER, INCLUDED HERE FOR REFERENCE ONLY.

00 DEMOLITION NOTES

01 REMOVE & DISPOSE OF EXISTING CORRIDOR.

02 REMOVE & DISPOSE OF EXISTING CURB.

03 REMOVE & DISPOSE OF EXISTING CONCRETE SIDEWALK.

04 REMOVE & DISPOSE OF EXISTING RETAINING WALL.

05 REMOVE & DISPOSE OF EXISTING HANDRAIL.

06 REMOVE & DISPOSE OF EXISTING STORM PIPE.

07 REMOVE & DISPOSE OF EXISTING SANITARY PIPE.

08 REMOVE & RELOCATE EXISTING UNDERGROUND CABLE TV SERVICE LINE.

09 REMOVE & DISPOSE OF EXISTING UNDERGROUND ELECTRIC SERVICE LINE.

10 REMOVE & DISPOSE OF EXISTING ELECTRIC BOX.

11 SALVAGE AND REUSE EXISTING LIGHT POLE AND FIXTURE.

12 REMOVE EXISTING ELECTRIC BOXES, AC UNITS & CONCRETE PAD.

13 REMOVE AND DISPOSE OF EXISTING TREES; SEE TREE REMOVAL PLAN L0.1-L0.2

14 REMOVE EXISTING WATER SERVICE LINE.

15 REMOVE & DISPOSE OF EXISTING TRENCH DRAIN.

16 SAWCUT EXISTING CURB TO CLEAN EDGE.

17 SAWCUT EXISTING SIDEWALK TO CLEAN EDGE.

18 SAWCUT EXISTING PAVEMENT TO CLEAN EDGE.

19 REMOVE & DISPOSE OF EXISTING STORM STRUCTURE.

20 REMOVE & DISPOSE OF EXISTING SANITARY MANHOLE.

21 REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT.

22 MILL TOP 2" OF ASPHALT PAVEMENT.

23 REMOVE EXISTING PARKING STALL MARKINGS FROM ENTIRE PARKING BAY NOTED.

24 EXISTING TREE; PROTECT IN PLACE. SEE TREE PROTECTION PLAN L0.1 - L0.2

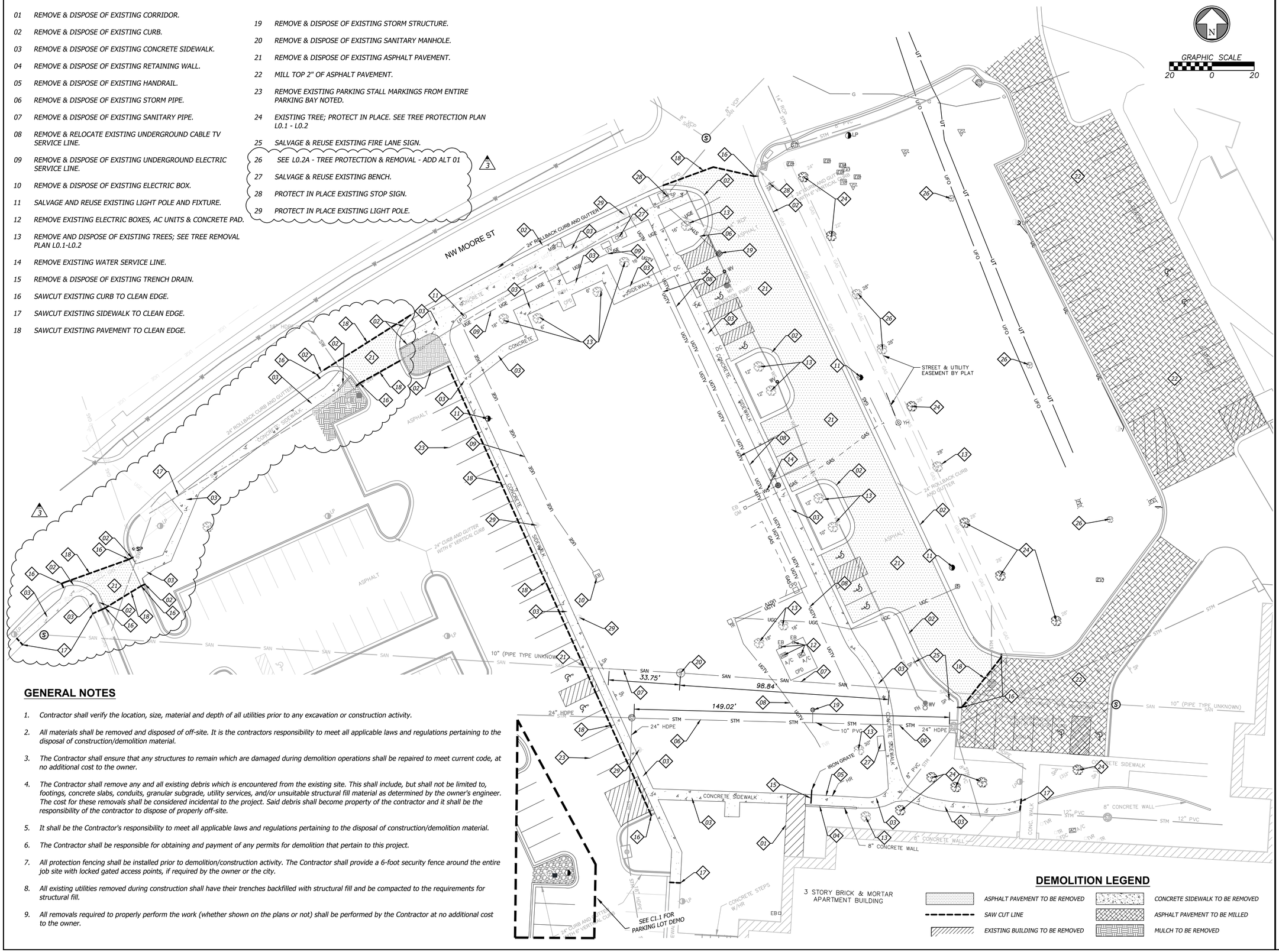
25 SALVAGE & REUSE EXISTING FIRE LANE SIGN.

26 SEE L0.2A - TREE PROTECTION & REMOVAL - ADD ALT 01

27 SALVAGE & REUSE EXISTING BENCH.

28 PROTECT IN PLACE EXISTING STOP SIGN.

29 PROTECT IN PLACE EXISTING LIGHT POLE.



GENERAL NOTES

1. *Contractor shall verify the location, size, material and depth of all utilities prior to any excavation or construction activity.*
2. *All materials shall be removed and disposed of off-site. It is the contractors responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.*
3. *The Contractor shall ensure that any structures to remain which are damaged during demolition operations shall be repaired to meet current code, at no additional cost to the owner.*
4. *The Contractor shall remove any and all existing debris which is encountered from the existing site. This shall include, but shall not be limited to, footings, concrete slabs, conduits, granular subgrade, utility services, and/or unsuitable structural fill material as determined by the owner's engineer. The cost for these removals shall be considered incidental to the project. Said debris shall become property of the contractor and it shall be the responsibility of the contractor to dispose of properly off-site.*
5. *It shall be the Contractor's responsibility to meet all applicable laws and regulations pertaining to the disposal of construction/demolition material.*
6. *The Contractor shall be responsible for obtaining and payment of any permits for demolition that pertain to this project.*
7. *All protection fencing shall be installed prior to demolition/construction activity. The Contractor shall provide a 6-foot security fence around the entire job site with locked gated access points, if required by the owner or the city.*
8. *All existing utilities removed during construction shall have their trenches backfilled with structural fill and be compacted to the requirements for structural fill.*
9. *All removals required to properly perform the work (whether shown on the plans or not) shall be performed by the Contractor at no additional cost to the owner.*

DEMOLITION LEGEND

- ASPHALT PAVEMENT TO BE REMOVED
- SAW CUT LINE
- EXISTING BUILDING TO BE REMOVED
- CONCRETE SIDEWALK TO BE REMOVED
- ASPHALT PAVEMENT TO BE MILLED
- MULCH TO BE REMOVED

STATE OF MISSOURI
ERIC BYRD
03/07/2024
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
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FINAL DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

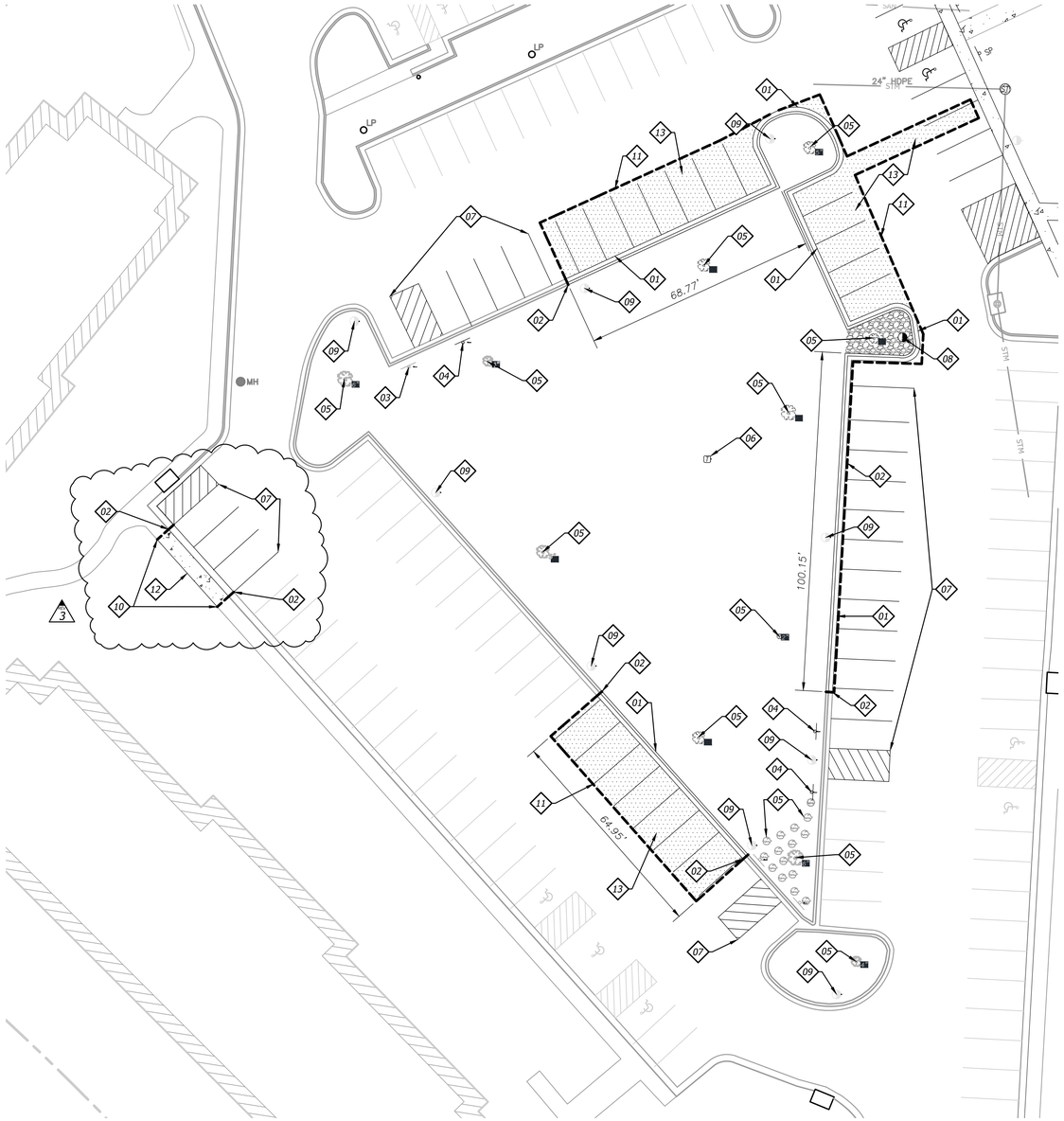
DESIGNER : DAS		DRAWN : ARK	
ARCHITECT : DAS		CHECKED : ERB	
ENGINEER : ERB		APPROVED : ERB	

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

DEMOLITION PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C1.0



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00 DEMOLITION NOTES

01 REMOVE & DISPOSE OF EXISTING CURB.

02 SAWCUT EXISTING CURB TO CLEAN EDGE.

03 PROTECT IN PLACE EXISTING SIGN.

04 SALVAGE & REUSE EXISTING SIGN.

05 SEE L0.2B - TREE PROTECTION & REMOVAL - ADD ALT 02.

06 SALVAGE AND REUSE EXISTING TELEPHONE BOX. NEW LOCATION TO BE COORDINATED WITH OWNER.

07 REMOVE EXISTING PARKING STALL MARKINGS.

08 SALVAGE AND REUSE EXISTING LIGHT POLE AND FIXTURE.

09 EXISTING LIGHT POLE AND FIXTURE; PROTECT IN PLACE.

3

10 SAWCUT EXISTING SIDEWALK TO CLEAN EDGE.

11 SAWCUT EXISTING PAVEMENT TO CLEAN EDGE.

12 REMOVE & DISPOSE OF EXISTING CONCRETE SIDEWALK.

13 REMOVE & DISPOSE OF EXISTING ASPHALT PAVEMENT.

N

GRAPHIC SCALE
20 0 20

DEMOLITION LEGEND

- *SAW CUT LINE*
- *EXISTING BUILDING*
- *GRAVEL PATCH TO BE DISPOSED OF*
- *ASPHALT PAVEMENT TO BE REMOVED*
- *CONCRETE SIDEWALK TO BE REMOVED*

BID ALTERNATE 2

STATE OF MISSOURI
ERIC BYRD
09/07/2024
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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FINAL
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ENGINEER : ERB		APPROVED : ERB	

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE
PARKING LOT
DEMOLITION PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C1.1

SITE		
SITE AREA:	1.72	AC
	75,000	SF
IMPERVIOUS AREA:		
EXISTING:	34,880	SF (46.5%)
PROPOSED:	43,200	SF (57.6%)
BUILDING		
BUILDING FOOTPRINT AREA :	19,000	SF (25.3%)
GROSS BUILDING AREA:	72,120	SF
52 UNITS		
PARKING		
PARKING REQUIRED:	52	
1 PER UNIT		
*PARKING PROVIDED:	52	TOTAL
	10	HANDICAP
		(4 VAN)
*REFER TO PARKING NARRATIVE		

SECTION MAP

SECTION 01-T47N-R32W

LEGAL DESCRIPTION

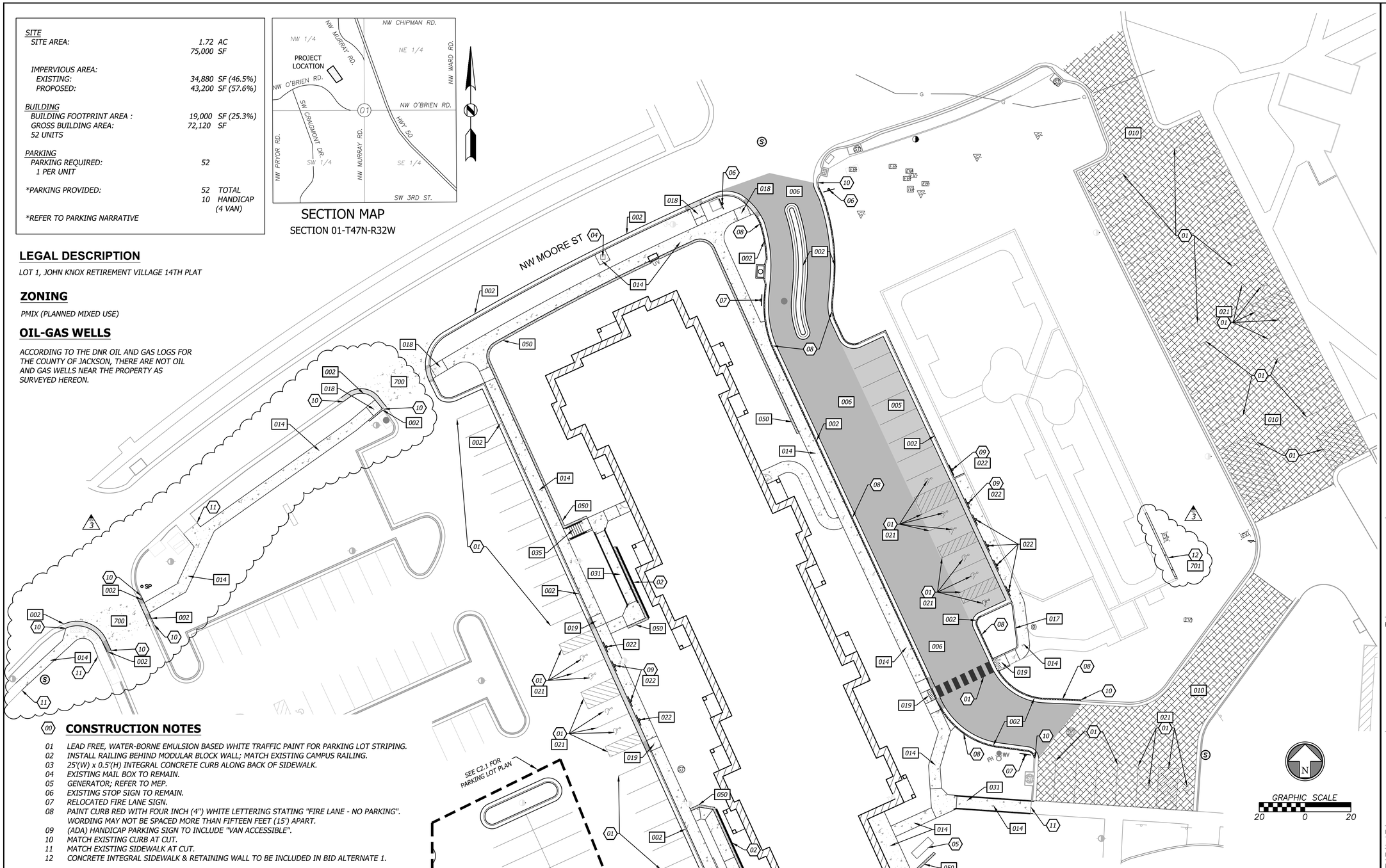
LOT 1, JOHN KNOX RETIREMENT VILLAGE 14TH PLAT

ZONING

PMIX (PLANNED MIXED USE)

OIL-GAS WELLS

ACCORDING TO THE DNR OIL AND GAS LOGS FOR THE COUNTY OF JACKSON, THERE ARE NOT OIL AND GAS WELLS NEAR THE PROPERTY AS SURVEYED HEREON.



00 CONSTRUCTION NOTES

01 *LEAD FREE, WATER-BORNE EMULSION BASED WHITE TRAFFIC PAINT FOR PARKING LOT STRIPING.*
02 *INSTALL RAILING BEHIND MODULAR BLOCK WALL; MATCH EXISTING CAMPUS RAILING.*
03 *25'(W) x 0.5'(H) INTEGRAL CONCRETE CURB ALONG BACK OF SIDEWALK.*
04 *EXISTING MAIL BOX TO REMAIN.*
05 *GENERATOR; REFER TO MEP.*
06 *EXISTING STOP SIGN TO REMAIN.*
07 *RELOCATED FIRE LANE SIGN.*
08 *PAINT CURB RED WITH FOUR INCH (4") WHITE LETTERING STATING "FIRE LANE - NO PARKING". WORDING MAY NOT BE SPACED MORE THAN FIFTEEN FEET (15') APART.*
09 *(ADA) HANDICAP PARKING SIGN TO INCLUDE "VAN ACCESSIBLE".*
10 *MATCH EXISTING CURB AT CUT.*
11 *MATCH EXISTING SIDEWALK AT CUT.*
12 *CONCRETE INTEGRAL SIDEWALK & RETAINING WALL TO BE INCLUDED IN BID ALTERNATE 1.*

000 DETAILS

SEE CONSTRUCTION DETAILS - SHEETS C7.0-C7.3

002 *CONCRETE CURB & GUTTER; RE. LEGEND FOR TYPE*
005 *NORMAL DUTY ASPHALT PAVEMENT*
006 *HEAVY DUTY ASPHALT PAVEMENT*
010 *ASPHALT PAVEMENT OVERLAY*
014 *CONCRETE SIDEWALK*
017 *SIDEWALK CURB*
018 *SIDEWALK RAMP (PUBLIC)*
019 *SIDEWALK RAMP (PRIVATE)*
021 *(ADA) HANDICAP PARKING STRIPING*
022 *(ADA) HANDICAP PARKING SIGNAGE*
031 *CONCRETE RAMP WITH HANDRAIL*
035 *CONCRETE STAIR & HANDRAIL*
050 *MODULAR BLOCK RETAINING WALL*
700 *CONCRETE DRIVEWAY ENTRANCE WITH BUFFER*
701 *INTEGRAL SIDEWALK & RETAINING WALL*

GRAPHIC SCALE
20 0 20

SITE LEGEND

- *PROPOSED BUILDING*
- *EXISTING BUILDING*
- *ASPHALT PAVEMENT OVERLAY*
- *NORMAL DUTY ASPHALT PAVEMENT*
- *HEAVY DUTY ASPHALT PAVEMENT*
- *KCMMB 4K CONCRETE PAVEMENT*
- *HAND RAIL*
- *PAINTED "FIRE LANE" CURB*
- *RETAINING WALL RAILING*
- *ROLLOVER CURB & GUTTER*
- *STANDARD CURB & GUTTER*
- *DRY CURB & GUTTER*
- *STANDARD ZERO HEIGHT CURB*
- *TRANSITION CURB*
- *RETAINING WALL*
- *CONCRETE SIDEWALK*
- *EXISTING MULCH*

STATE OF MISSOURI
ERIC BYRD
03/07/2024
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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p. (913) 663-1900

FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

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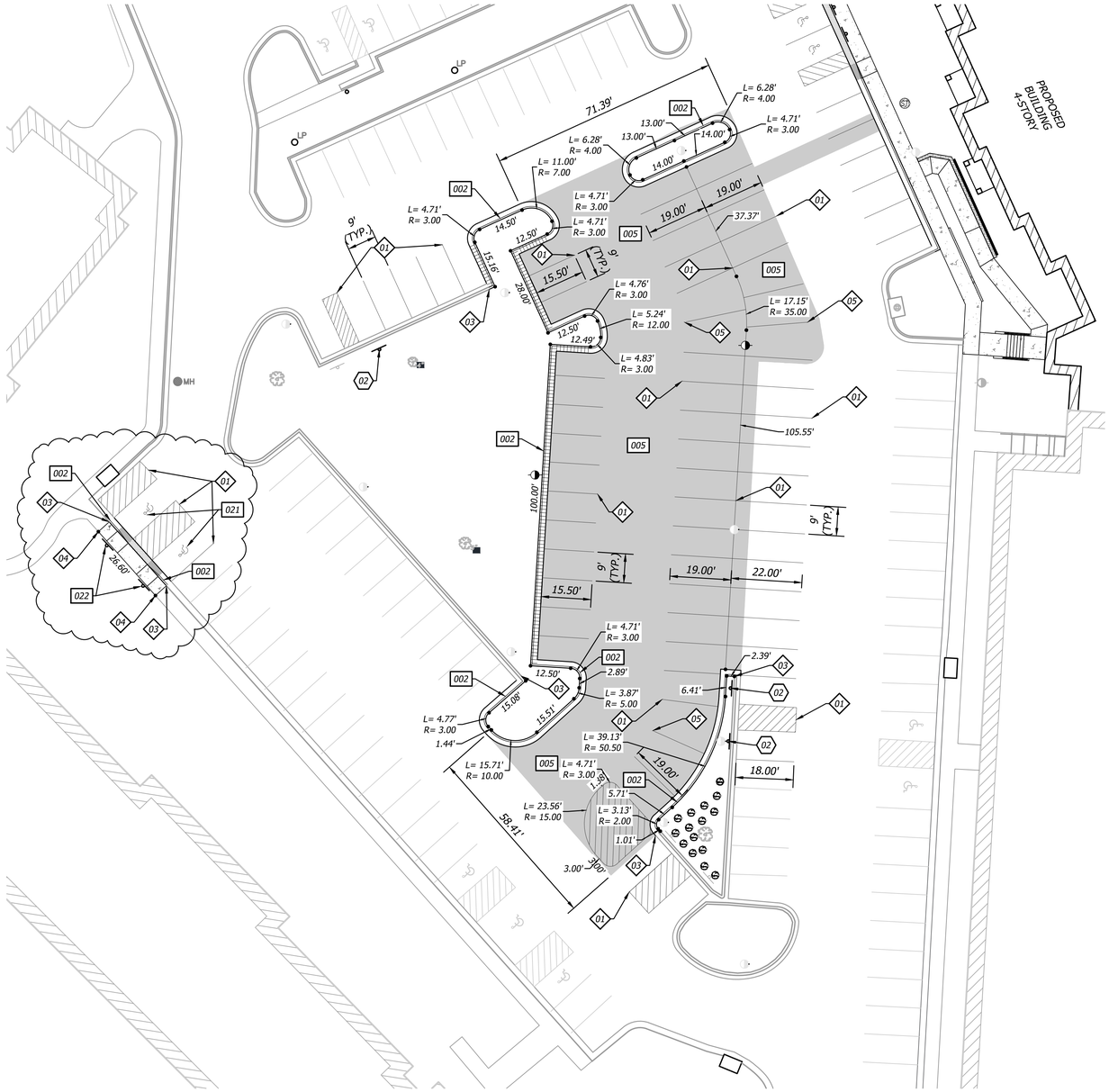
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

SITE PLAN

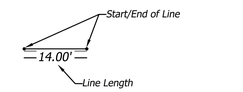
DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C2.0

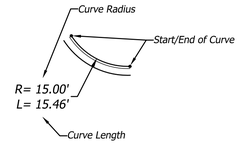


DIMENSION NOTES

1. *ALL DIMENSIONS ARE TO/ALONG BACK OF CURB UNLESS OTHERWISE NOTED*
2. *ALL DIMENSIONS ARE TO BOTTOM OF WALL UNLESS OTHERWISE NOTED*

DIMENSION LEGEND





00 CONSTRUCTION NOTES

01	*LEAD FREE, WATER-BORNE EMULSION BASED WHITE TRAFFIC PAINT FOR PARKING LOT STRIPING*
02	*RELOCATED MOBILITY PARKING SIGN*
03	*MATCH EXISTING CURB AT CUT*
04	*MATCH EXISTING SIDEWALK AT CUT*
05	*ALL CURVED PARKING SPOTS TO BE A MINIMUM WIDTH OF 9' AND MINIMUM LENGTH OF 19'*

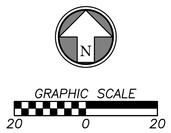
000 DETAILS

SEE CONSTRUCTION DETAILS - SHEETS C7.0-C7.3

002	*CONCRETE CURB & GUTTER; RE. LEGEND FOR TYPE*
005	*NORMAL DUTY ASPHALT PAVEMENT*
021	*(ADA) HANDICAP PARKING STRIPING*
022	*(ADA) HANDICAP PARKING SIGNAGE*

SITE LEGEND

- *PROPOSED BUILDING*
- *EXISTING BUILDING*
- *NORMAL DUTY ASPHALT PAVEMENT*
- *DRY CURB & GUTTER*
- *STANDARD CURB & GUTTER*
- *TRANSITION CURB*
- *STANDARD ZERO HEIGHT CURB*
- *CONCRETE SIDEWALK*



BID ALTERNATE 2

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FINAL
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NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

PARKING LOT SITE PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C2.1

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

NW MOORE ST

SEE DETAIL THIS SHEET

PROPOSED BUILDING 4-STORY

3 STORY BRICK & MORTAR APARTMENT BUILDING

DIMENSION NOTES

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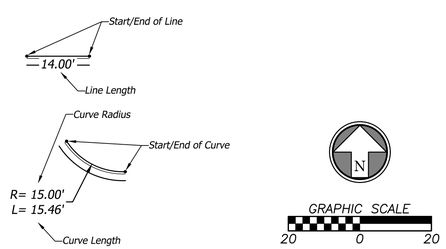
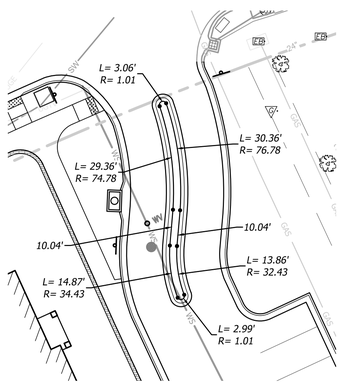
2. ALL DIMENSIONS ARE TO BOTTOM OF WALL UNLESS OTHERWISE NOTED

DIMENSION LEGEND





STATE OF MISSOURI
ERIC BYRD
09/07/2024
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3	Addendum 1	3/7/2024

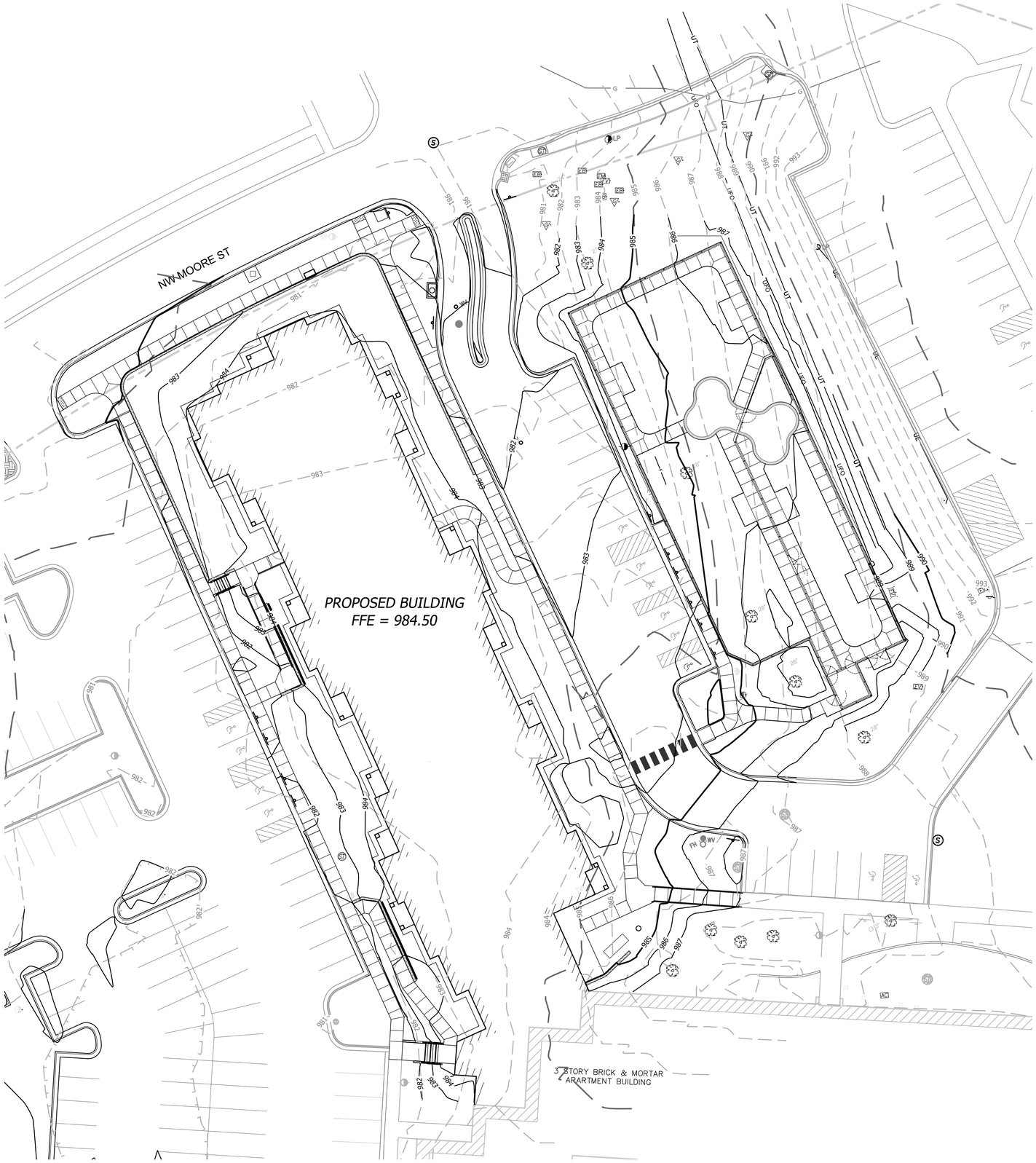
DRAWING TITLE

DIMENSION PLAN

DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING C3.0



GRADING NOTES

1. Contractor shall obtain a copy of the Geotechnical Services Report for the project and be familiar with the existing conditions and recommendations contained in the report if such a report has been prepared.
2. Contractor is responsible for any over excavation of existing unsuitable soils will be required under building and pavement areas. Contractor shall perform over excavation of unsuitable soils as a part of this work.
3. Contractor shall obtain soils suitable as structural fill from off-site sources. All borrow materials must be tested and approved by the Geotechnical Engineer prior to importing the soils to the project site.
4. Contractor shall operate under the terms and permits included in the Stormwater Pollution Prevention Plan (SWPPP) prepared for this project and permitted through the State of Kansas. Contractor shall employ a qualified person to conduct regular inspections of the site erosion control measures and document such inspections in the SWPPP document maintained by the Contractor.
5. All topsoil, vegetation, root structures, and deleterious materials shall be stripped from the ground surface prior to the placement of embankments. Contractor shall obtain the on-site geotechnical representative's acceptance of the existing ground surface materials and the proposed fill material prior to the placement of fill.
6. All proposed contour lines and spot elevations shown are finish ground elevations. Contractor shall account for pavement depths, building pads, topsoil, etc when grading the site.
7. All disturbed areas that are not to be paved (green spaces) shall be finish graded with a minimum of six inches of topsoil.
8. All excavation and embankments shall comply with the recommendations provided by the geotechnical engineer.
9. Prior to placing any concrete or asphalt pavement the contractor shall perform a proof roll of the pavement sub-grade with a fully loaded tandem axle dump truck. The proof roll shall be conducted in the presence of the on-site geotechnical representative. Areas that display rutting or pumping that are unsatisfactory to the geotechnical representative shall be re-worked and a follow-up proof roll shall be conducted prior to acceptance of the sub-grade for paving. The contractor may, at its own expense, stabilize the sub-grade using Class C fly ash or quicklime, as approved by the geotechnical engineer.
10. Finished grades shall not be steeper than 3:1.
11. All grading work shall be considered unclassified. No additional payments shall be made for rock excavation. Contractor shall satisfy himself as to any rock excavation required to accomplish the improvements shown hereon.
12. A 2.0% maximum cross slope shall be maintained on all pedestrian sidewalks and paths.

FLOOD STATEMENT

The subject property lies within Flood Zone " X " (unshaded) (Areas determined to be outside the 0.2% annual chance floodplain.), as shown on the Jackson County, Missouri and Incorporated Areas Flood Insurance Rate Map (F.I.R.M.).

Map Number: 29095C0416G and 29095C0417G
Panel No.: 416 and 417 of 625
Map Revised Date: January 20, 2017

NOTE: This statement is provided for informational purposes only and shall in no way constitute a basis for a flood certificate. No field work was performed to establish the boundaries of this zone. The information was derived by scaling the subject property on the above referenced map.

GRADING LEGEND

- STANDARD CURB & GUTTER
- ROLLOVER CURB & GUTTER
- DRY CURB & GUTTER
- ZERO HEIGHT CURB
- TRANSITION CURB
- RETAINING WALL
- 980 — FINISH GRADE MAJOR CONTOURS
- 982 — FINISH GRADE MINOR CONTOURS
- 980 — EXISTING GRADE MAJOR CONTOURS
- 982 — EXISTING GRADE MINOR CONTOURS

N

GRAPHIC SCALE
20 0 20

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
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p. (913) 663-1900

FINAL DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

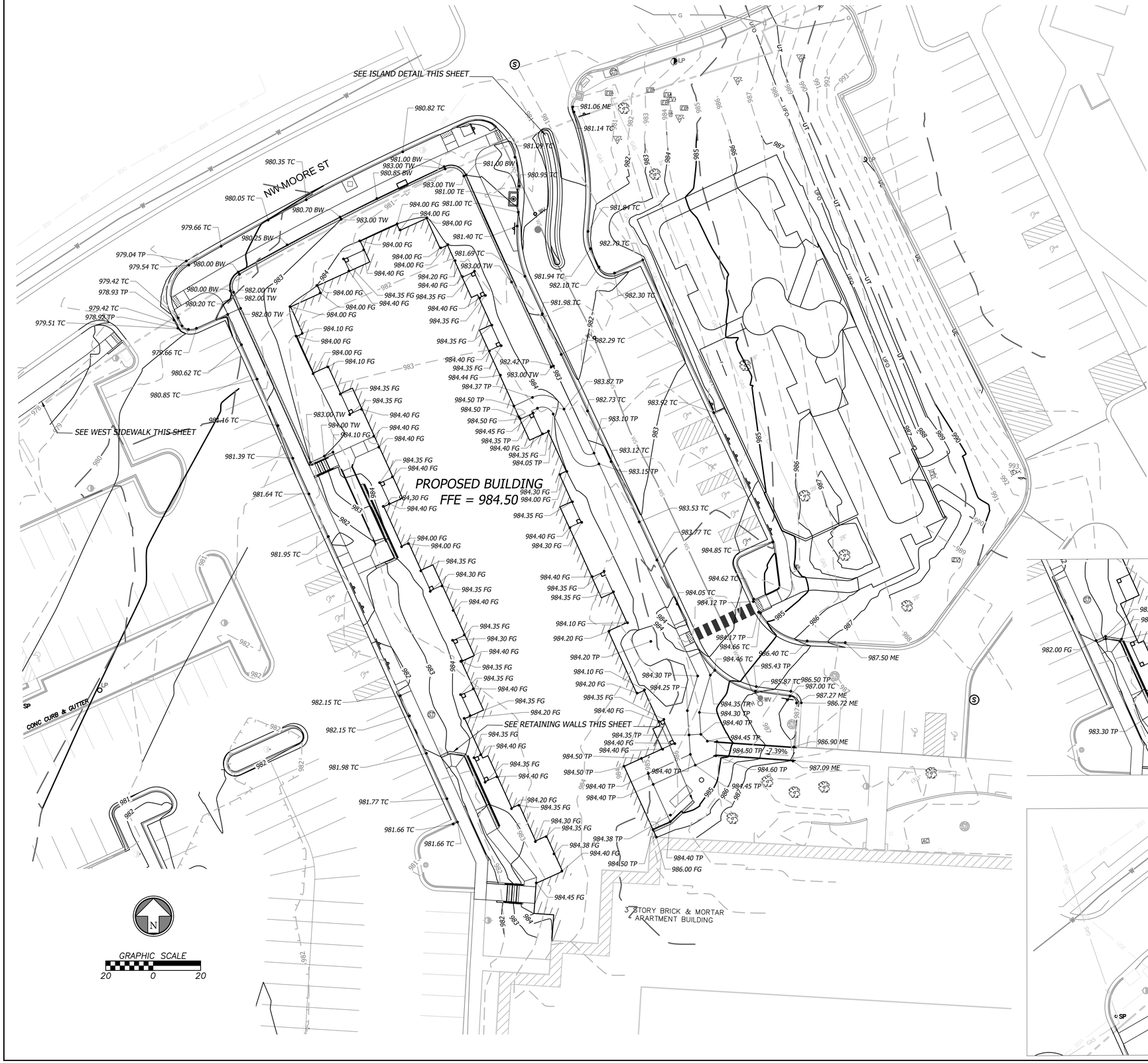
DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

GRADING PLAN

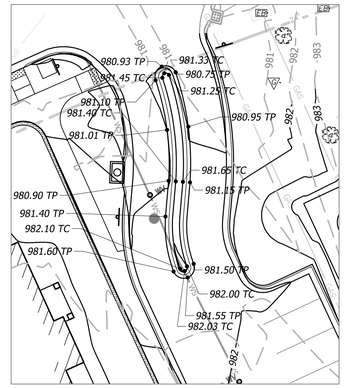
DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C4.0



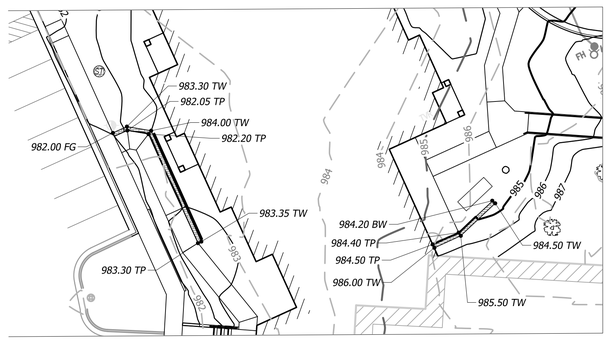
DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE

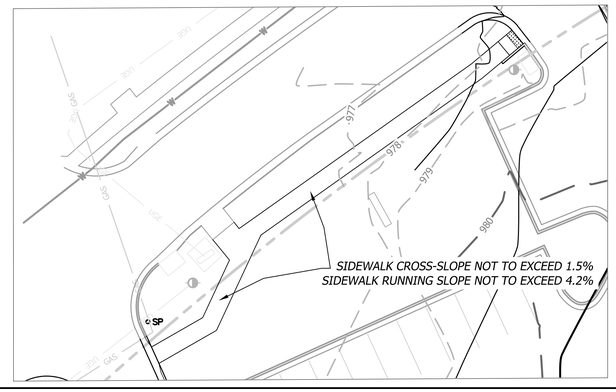
ISLAND



RETAINING WALLS



WEST SIDEWALK



STATE OF MISSOURI
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03/07/2024
NUMBER PE-2010013633
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1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

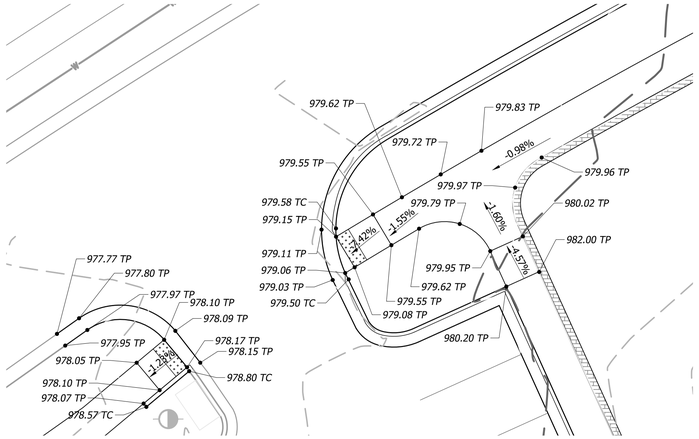
DETAILED GRADING PLAN

DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING C4.1

NORTHWEST SECTION



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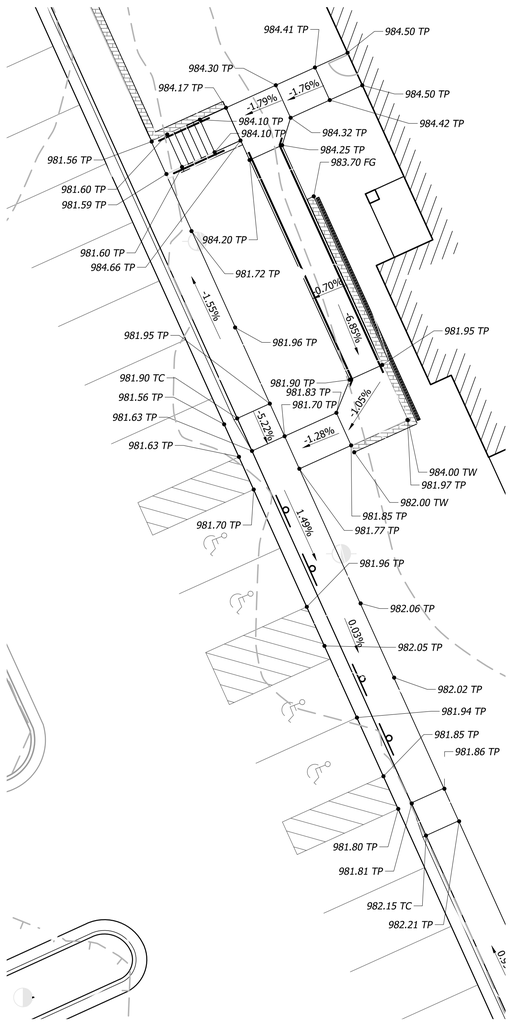
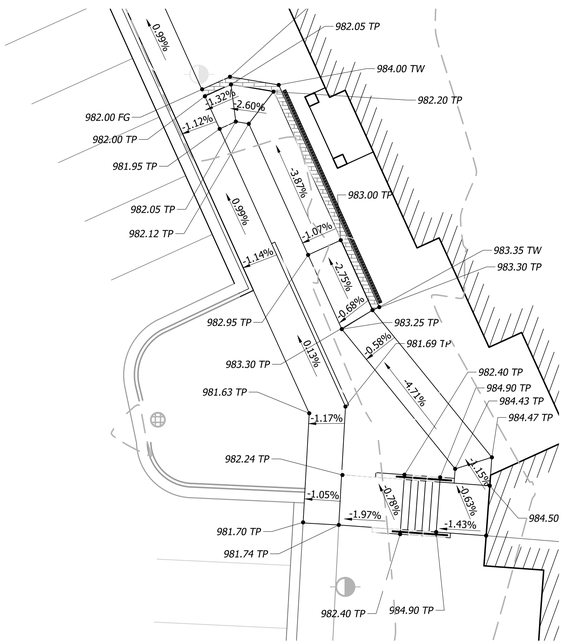


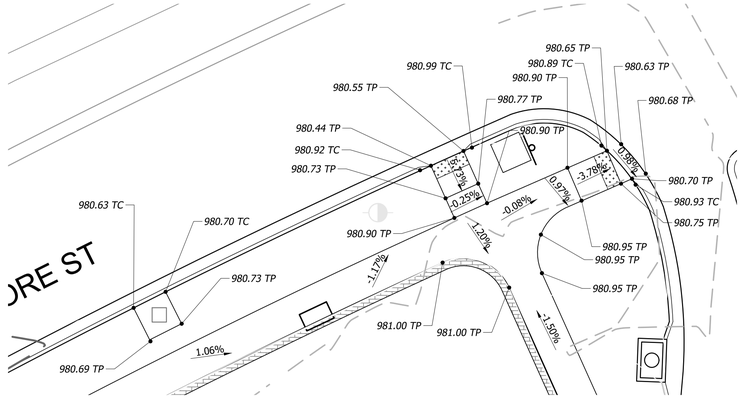
SOUTHWEST SECTION



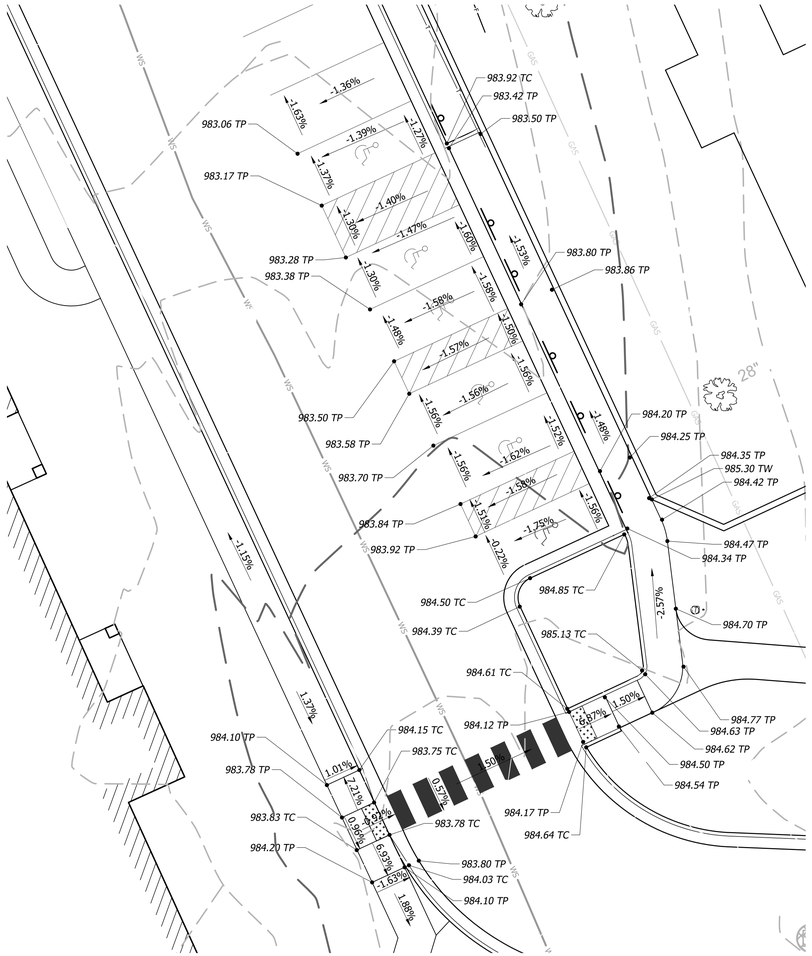
DETAILED GRADING LEGEND

0000.00 FG	FINISHED GRADE ELEVATION
0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
1.00%	SLOPE INDICATOR

NORTHEAST SECTION



EAST SECTION



GRAPHIC SCALE
10 0 10

STATE OF MISSOURI
ERIC BYRD
08/07/2024
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DRAWING TITLE

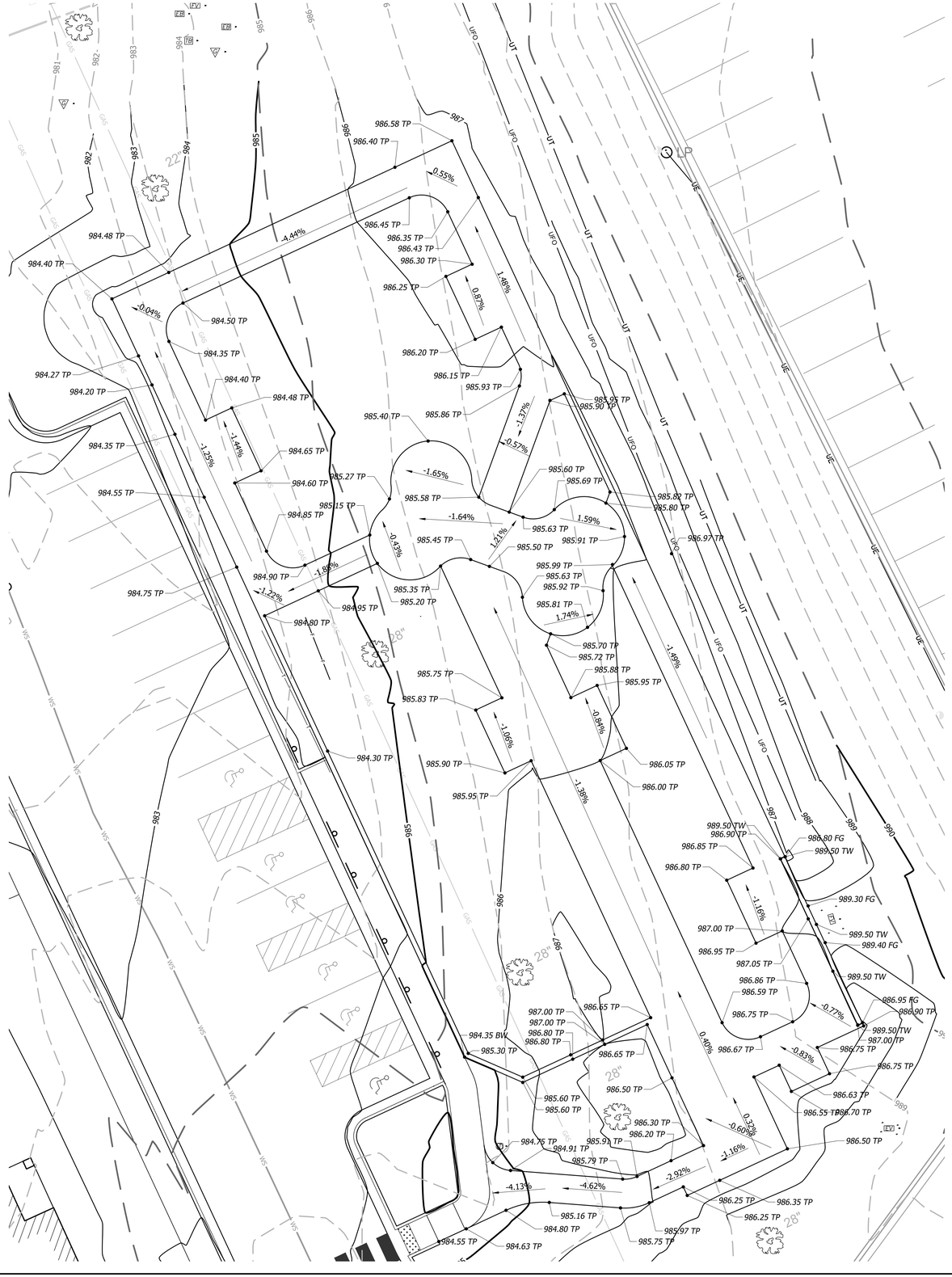
ADA GRADING PLAN

DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING C4.2

DOGPARK SECTION



DETAILED GRADING LEGEND

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0000.00 TC	TOP OF CURB ELEVATION
0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
1.00%	SLOPE INDICATOR

GRAPHIC SCALE
10 0 10

BID ALTERNATE 1

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
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Lee's Summit, Missouri
04/23/2024

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PROJECT TITLE

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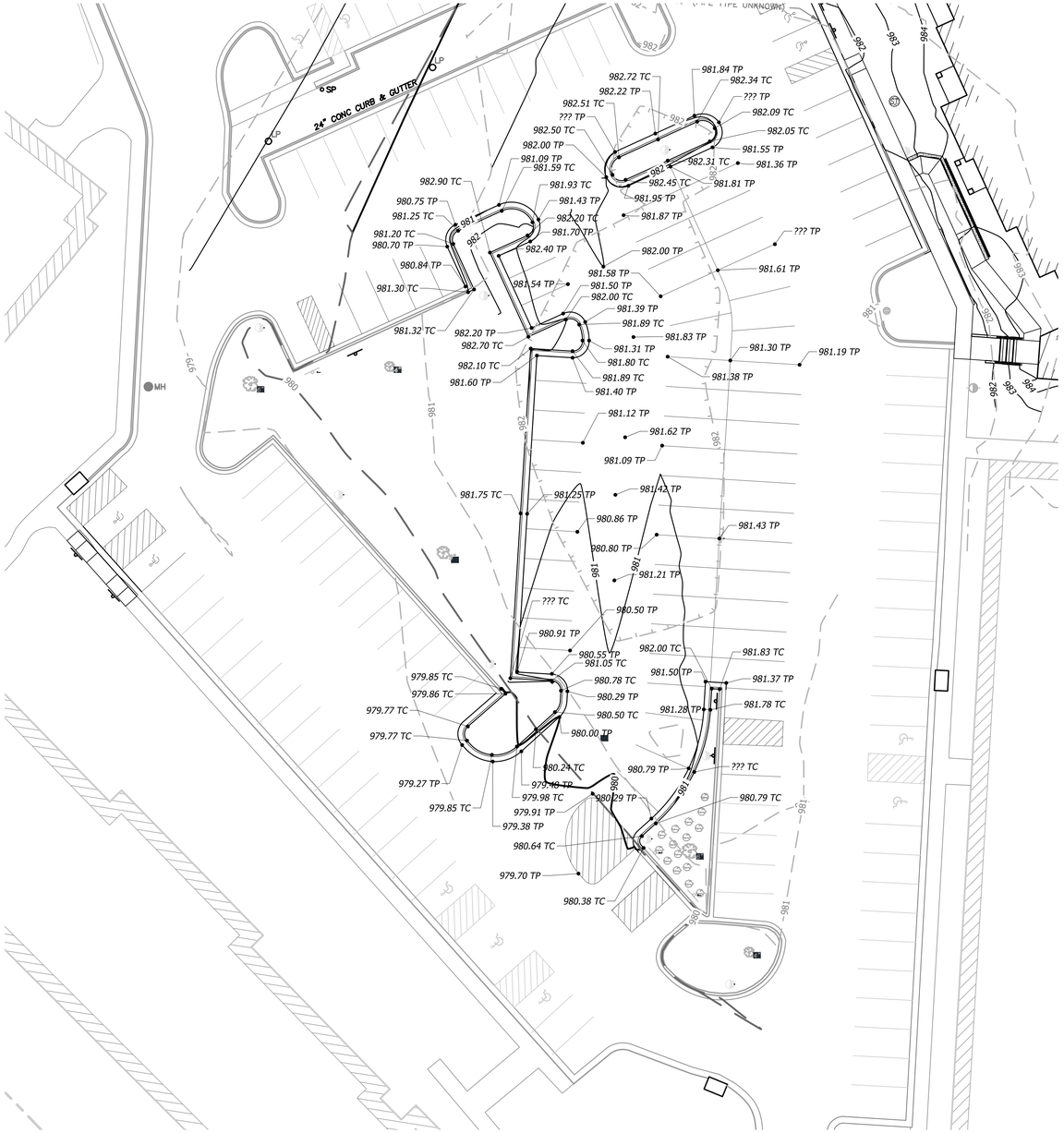
ENGINEER : ERB		APPROVED : ERB	
NO.	REVISION DESCRIPTION		DATE
1	FDP RESUBMITTAL		2/23/2024
3	Addendum 1		3/7/2024

DRAWING TITLE

DOG PARK DETAILED GRADING PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C4.3

SOUTHWEST PARKING LOT



DETAILED GRADING LEGEND

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0000.00 TP	TOP OF PAVEMENT ELEVATION
0000.00 TW	FG @ TOP OF RETAINING WALL
0000.00 BW	FG @ BOTTOM OF RETAINING WALL
0000.00 ME	MATCH EXISTING GRADE
0000.00 TE	TOP ELEVATION OF STRUCTURE
1.00%	SLOPE INDICATOR

N

GRAPHIC SCALE
20 0 20

BID ALTERNATE 2

STATE OF MISSOURI
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09/07/2024
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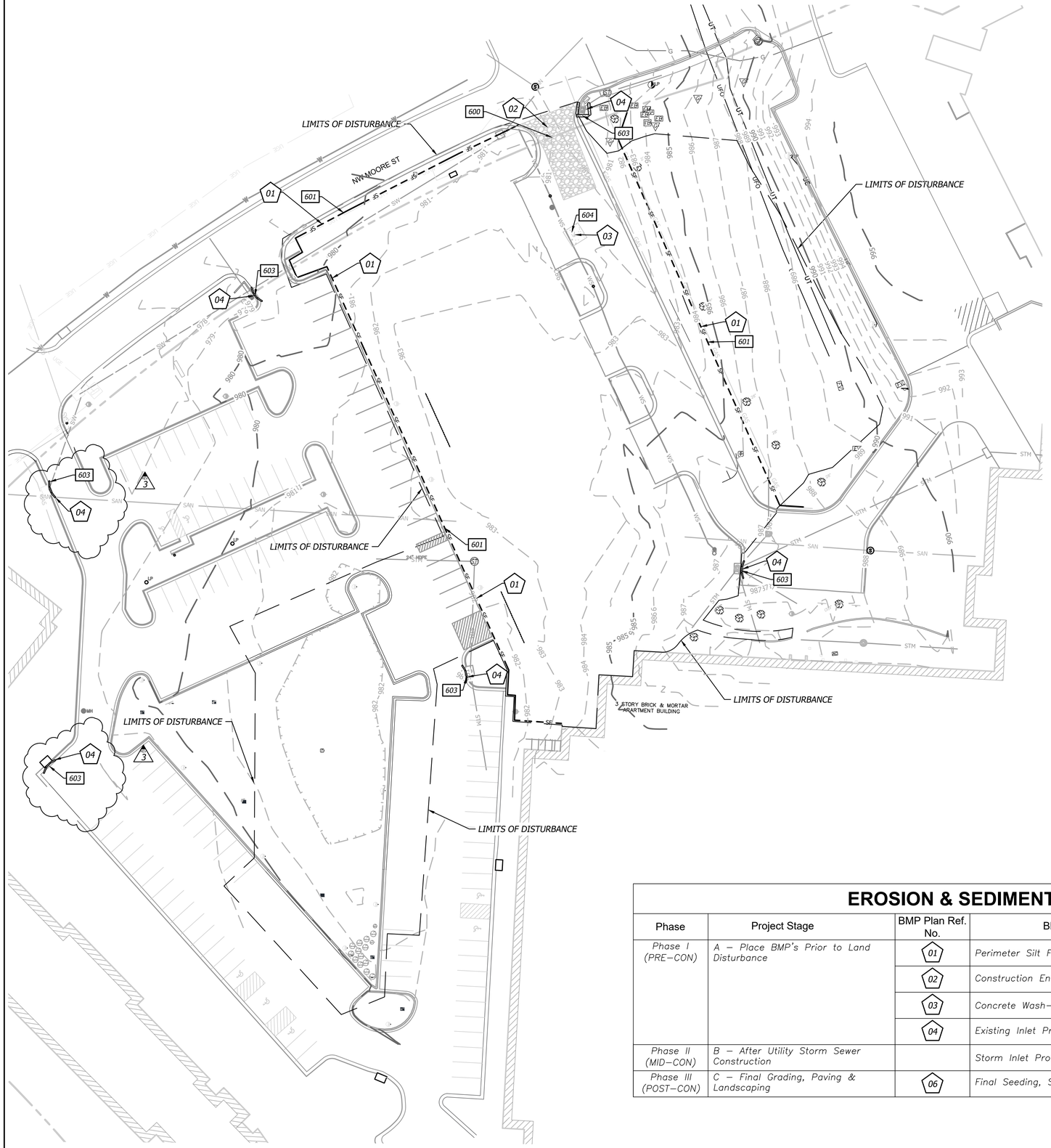
3	Addendum 1	3/7/2024

DRAWING TITLE

PARKING LOT DETAILED GRADING PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C4.4



EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. Prior to Land Disturbance activities, the contractor shall:
   - Delineate the outer limits of any natural stream corridor designated with construction fencing.
   - Install perimeter controls and request the inspection of the pre-construction erosion and sediment control measures designated on the approved erosion and sediment control plan. Land disturbance work shall not proceed until there is a satisfactory inspection.
   - Identify the limits of construction on the ground with easily recognizable indications such as construction staking, construction fencing, and placement of physical barriers or other means acceptable to the City inspector and in conformance with the erosion and sediment control plan.

2. The contractor shall comply with all requirements of the Storm Water Pollution Prevention Plan, including but not limited to:
   - The contractor shall seed, mulch, or otherwise stabilize any disturbed area where the land disturbance activity has ceased for more than 14 days.
   - The contractor shall perform inspections of erosion and sediment control measures at the following minimum intervals:
     - o During active construction phases - at least once per week
     - o During periods of inactivity - at least once per 14 days
     - o After each rainfall event of ½ inch or more - within 24 hours of the rain event
   - The contractor shall maintain an inspection log including the inspector's name, date of inspection, observations as to the effectiveness of the erosion and sediment control measures, actions necessary to correct deficiencies, when the deficiencies were corrected, and the signature of the person performing the inspection. The inspection log shall be available for review by the regulatory authority.
   - The contractor shall have the erosion and sediment control plan routinely updated to show all changes and amendments to the plan. A copy of the erosion and sediment control plan shall be kept on site and made available for review by the regulatory authority.

3. Unless otherwise noted in the plans, all seeding must conform to Division II-Construction and Materials Specification-Section 2150 published by the Kansas City Metropolitan Chapter of the American Public Works Association dated May 21, 2008. Permanent seeding shall be installed after completion of final grading except when seeding will occur outside of the acceptable seeding season as specified in Section 2150. When temporary seeding is installed, permanent seeding shall be installed at the next seeding season. Temporary seeding shall not be used as a stabilization measure for a period exceeding 12 months. The Permit will not be closed until permanent seeding has been established to a minimum of 70% density over the entire disturbed area.

4. The contractor shall maintain installed erosion and sediment control devices in a manner that preserves their effectiveness for preventing sediment from leaving the site or entering a sensitive area such as a natural stream corridor, areas of the site intended to be left undisturbed, a storm sewer, or an on-site drainage channel.

5. The contractor is responsible for providing erosion and sediment control for the duration of a project. If the City determines that the BMPs in place do not provide adequate erosion and sediment control at any time during the project, the contractor shall install additional or alternate measures that provide effective control.

6. Concrete wash or rinse water from concrete mixing equipment, tools and/or ready-mix trucks, tools, etc. may not be discharged into or be allowed to run directly into any existing water body or storm inlet. One or more locations for concrete wash out will be designated on site, such that discharges during concrete washout will be contained in a small area where waste concrete can solidify in place.

7. Chemicals or materials capable of causing pollution may only be stored onsite in their original container. Materials stored outside must be in closed and sealed water-proof containers and located outside of drainage ways or areas subject to flooding. Locks and other means to prevent or reduce vandalism shall be used. Spills will be reported as required by law and immediate actions taken to contain them.

8. Silt fences and erosion control BMPs which are shown along the back of curb must be installed within two weeks of curb backfill and prior to placement of base asphalt. Exact locations of these erosion control methods may be field adjusted to minimize conflicts with utility construction; however, anticipated disturbance by utility construction shall not delay installation.

9. Interior Silt Fence as necessary during construction. Portions may be limited as vegetation is established and hardscape is installed. Entire length may be installed at the contractor's option to aid in stabilizing slopes.

10. Private Erosion & Sediment Control inspections are required in accordance with NPDES schedule and requirements. After inspections, provide the City of Lee's Summit with reports and documentation.

EROSION CONTROL LEGEND

- DISTURBED AREA (1.73 AC)
- SILT/SEDIMENT FENCE
- INLET PROTECTION FILTER BAGS
- CONSTRUCTION ENTRANCE
- CONCRETE CLEANOUT

GRAPHIC SCALE
30 0 30

000 DETAILS

- *SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING*

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE–CON)	A – Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	C	Place as shown on plan
		02	Construction Entrance & Staging Area	C	Place as shown on plan
		03	Concrete Wash–Out	C	Place as shown on plan
		04	Existing Inlet Protection	C	Place as shown on plan
Phase II (MID–CON)	B – After Utility Storm Sewer Construction		Storm Inlet Protection	C	Place as shown on plan
Phase III (POST–CON)	C – Final Grading, Paving & Landscaping	06	Final Seeding, Sod, and Landscaping	N/A	Silt fencing & inlet protect may be removed once seed & sodded areas are established on 80% of site.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

STATE OF MISSOURI
ERIC BYRD
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NO.	REVISION DESCRIPTION	DATE
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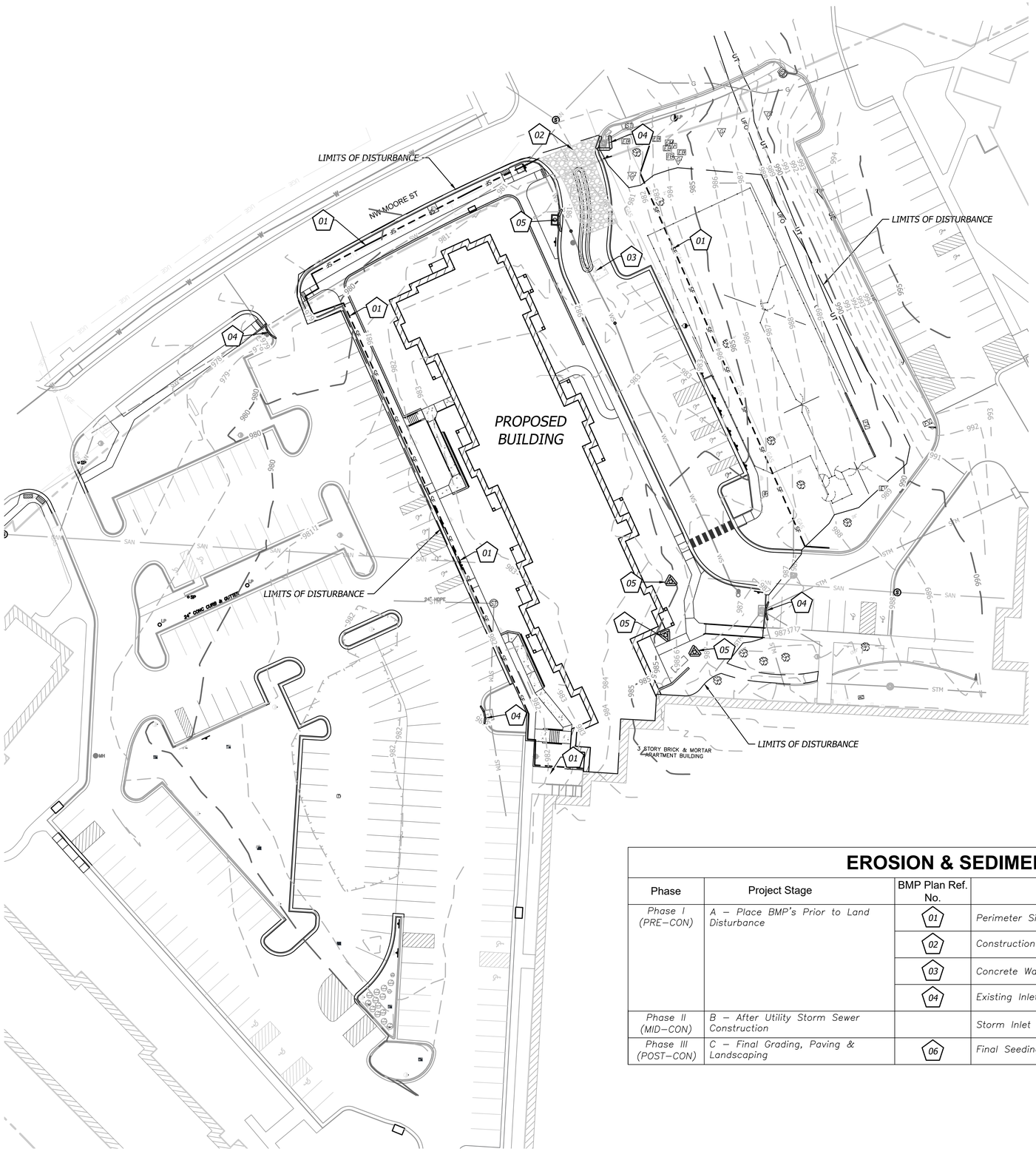
3	Addendum 1	3/7/2024

DRAWING TITLE

PRE-CONSTRUCTION EROSION CONTROL PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C5.0



EROSION CONTROL LEGEND

- DISTURBED AREA (1.73 AC)
- SF — SILT/SEDIMENT FENCE
- INLET PROTECTION FILTER BAGS
- CONSTRUCTION ENTRANCE
- CONCRETE CLEANOUT

000 DETAILS

- SEE EROSION CONTROL DETAIL SHEET FOR THE FOLLOWING

600 TEMPORARY CONSTRUCTION ENTRANCE
601 FILTER FABRIC SILT FENCE
603 STORM INLET PROTECTION
604 CONCRETE WASH-OUT

N

GRAPHIC SCALE
30 0 30

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE–CON)	A – Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	C	Place as shown on plan
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		03	Concrete Wash–Out	C	Place as shown on plan
		04	Existing Inlet Protection	C	Place as shown on plan
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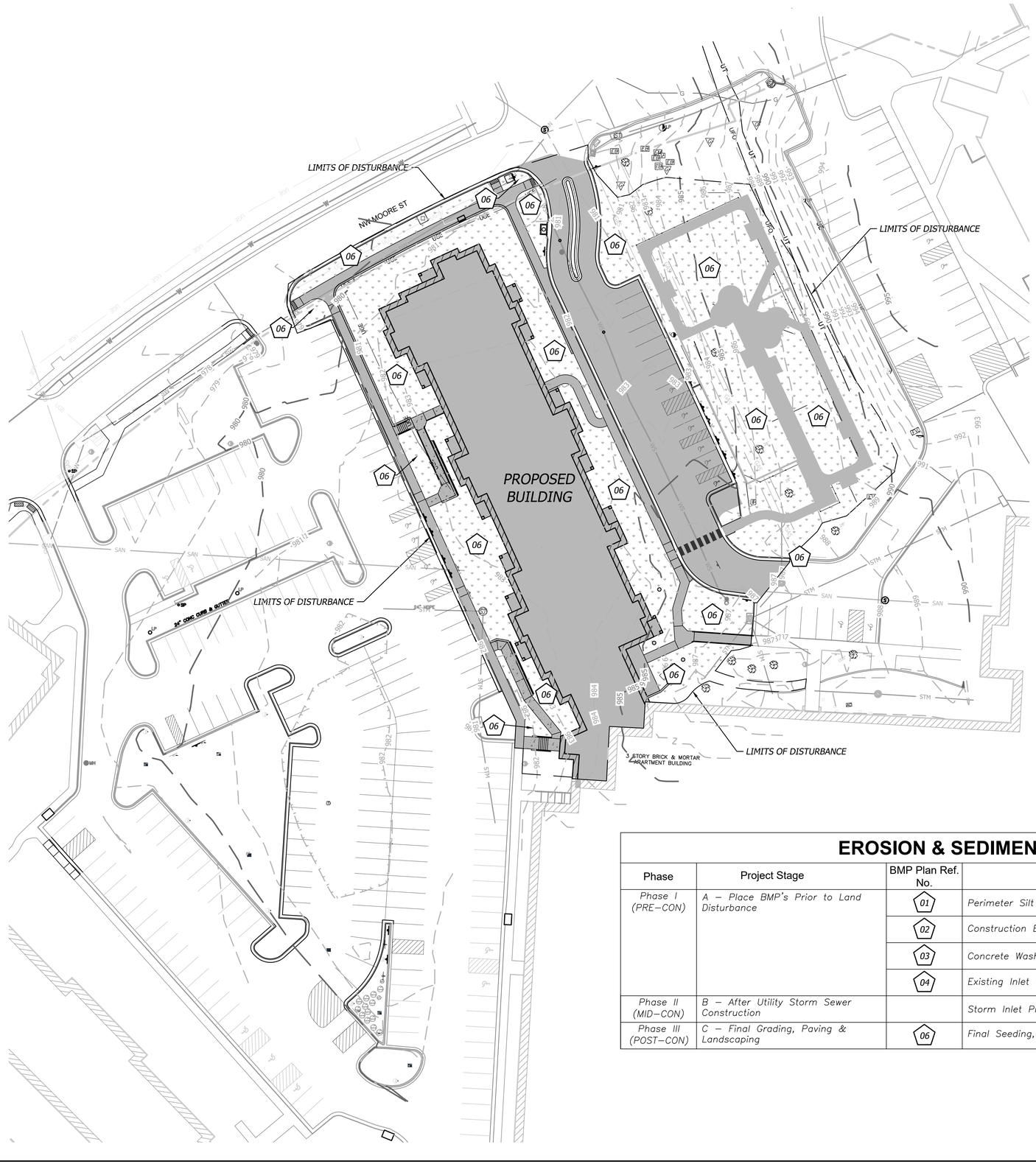
NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

MID-CONSTRUCTION EROSION CONTROL PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C5.1



EROSION CONTROL LEGEND

- DISTURBED AREA (1.73 AC)
- FINAL SEEDING (SOD &/OR LANDSCAPING)
- IMPERVIOUS AREA (0.87 AC)

N

GRAPHIC SCALE
30 0 30

EROSION & SEDIMENT CONTROL STAGING CHART

Phase	Project Stage	BMP Plan Ref. No.	BMP Description	Remove After Stage:	Notes:
Phase I (PRE-CON)	A – Place BMP's Prior to Land Disturbance	01	Perimeter Silt Fence	C	Place as shown on plan
		02	Construction Entrance & Staging Area	C	Place as shown on plan
		03	Concrete Wash-Out	C	Place as shown on plan
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DRAWING TITLE

POST-CONSTRUCTION EROSION CONTROL PLAN

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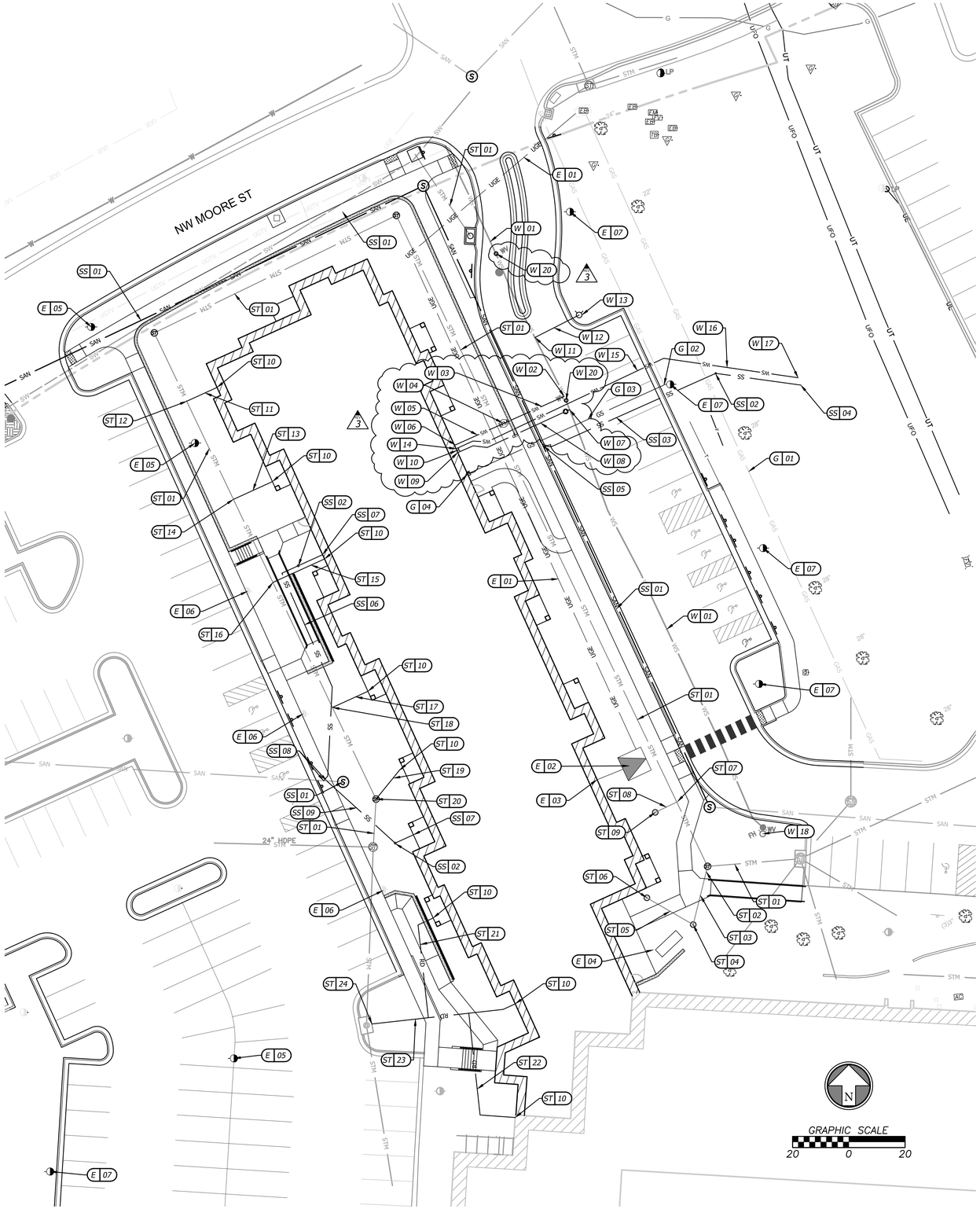
DRAWING C5.2



X 00 UTILITY CONSTRUCTION NOTES

W - WATER SERVICE INFORMATION - LEE'S SUMMIT WATER UTILITIES

01 EXISTING 6" WATER MAIN LINE.
02 CONNECT TO WATER MAIN WITH 2" CORPORATION STOP; REFER TO CONNECTION DETAIL.
03 INSTALL 22 LF OF 2" TYPE K COPPER SERVICE LINE WITH MINIMUM DEPTH OF COVER OF 42".
04 INSTALL 2" METER IN PIT AND 2"X3" REDUCER AFTER METER.
05 INSTALL 21 LF OF 3" SERVICE LINE WITH MINIMUM DEPTH OF COVER OF 42". THE FIRST 10' OF PIPE BEYOND THE METER SHALL BE COPPER AND THE REMAINING PIPE CAN BE C-900.
06 CONNECT WATER SERVICE TO BUILDING; SEE PLUMBING PLANS.
07 CONNECT TO WATER MAIN WITH 6"X6" TEE AND 6" GATE VALVE.
08 INSTALL 43 LF OF 6" C-900 FIRE PROTECTION LINE WITH MINIMUM DEPTH OF COVER OF 42".
09 CONNECT FIRE PROTECTION LINE TO BUILDING PLUMBING ; SEE MEP PLANS.
10 FIRE DEPARTMENT CONNECTION.
11 CONNECT TO WATER MAIN WITH 6"X6" TEE AND 6" GATE VALVE.
12 INSTALL 18 LF OF 6" C-900 FIRE PROTECTION LINE WITH MINIMUM DEPTH OF COVER OF 42"
13 INSTALL FIRE HYDRANT ASSEMBLY.
14 PICK UP 3/4" WATER SERVICE STUB FROM BUILDING; SEE PLUMBING PLANS (BID ALTERNATE 1)
15 INSTALL 79 LF OF 3/4" COPPER WATER SERVICE WITH MINIMUM DEPTH OF COVER OF 42" (BID ALTERNATE 1)
16 INSTALL 51 LF OF 3/4" COPPER WATER SERVICE WITH MINIMUM DEPTH OF COVER OF 42" (BID ALTERNATE 1)
17 CONNECT WATER SERVICE TO DOG WATER FOUNTAIN; SEE INSTALLATION GUIDE (BID ALTERNATE 1)
18 EXISTING FIRE HYDRANT ASSEMBLY.
3 20 ADJUST VALVE FROM EXISTING TO PROPOSED ELEVATION PER GRADING PLAN

E - ELECTRIC SERVICE INFORMATION - EVERGY

01 CONTRACTOR TO INSTALL PRIMARY UNDERGROUND ELECTRIC SERVICE FROM EXISTING ELECTRIC STRUCTURE TO TRANSFORMER PAD.
02 PROPOSED TRANSFORMER PAD.
03 CONTRACTOR TO INSTALL SECONDARY UNDERGROUND ELECTRIC SERVICE LINE FROM PROPOSED TRANSFORMER TO BUILDING; REF. ELECTRICAL PLAN.
04 PROPOSED GENERATOR; REFER TO MEP
05 PROPOSED RELOCATED LIGHT POLE; REFER TO MEP
06 EXISTING LIGHT POLE TO REMAIN; REFER TO MEP
07 PROPOSED LIGHT POLE; REFER TO MEP

G - GAS SERVICE INFORMATION - SPIRE

01 EXISTING 4" GAS MAIN.
02 TAP EXISTING GAS MAIN FOR SERVICE LINE; COORDINATE W/ SPIRE.
03 INSTALL 72 LF GAS SERVICE LINE.
04 GAS CONNECTION TO BLDG.; RE: PLUMBING PLAN.

ST - STORM SEWER INFORMATION - LEE'S SUMMIT PUBLIC WORKS

01 STORM SEWER LINE; RE: SHEET C6.2
02 CONNECT TO STORM STRUCTURE; FL = 981.00
03 INSTALL 21 LF 6" HDPE @ 2% SLOPE
04 INSTALL 12" NYLOPLAST DRAIN BASIN WITH DOME GRATE; RIM = 984.00; FL = 981.42
05 INSTALL 19 LF 6" HDPE @ 2% SLOPE
06 INSTALL 8" NYLOPLAST DRAIN BASIN WITH DOME GRATE; RIM = 984.20; FL = 981.80
07 CONNECT TO STORM PIPE WITH INSERT A TEE; FL = 980.00
08 INSTALL 8 LF 6" HDPE @ 2% SLOPE
09 INSTALL 12" NYLOPLAST DRAIN BASIN WITH DOME GRATE; RIM = 983.50; FL = 980.16
10 CONNECT ROOF DRAIN LINE TO BUILDING PLUMBING; REFER TO MEP
11 INSTALL 12 LF 4" HDPE @ MIN. 2% SLOPE
12 CONNECT TO STORM PIPE WITH INSERT A TEE; FL = 977.47
13 INSTALL 15 LF 4" HDPE @ MIN. 2% SLOPE
14 CONNECT TO STORM PIPE WITH INSERT A TEE; FL = 977.18
15 INSTALL 20 LF 4" HDPE @ MIN. 2% SLOPE
16 CONNECT TO STORM PIPE WITH INSERT A TEE; FL = 976.94
17 INSTALL 14 LF 4" HDPE @ MIN. 2% SLOPE
18 CONNECT TO STORM PIPE WITH INSERT A TEE; FL = 976.57
19 INSTALL 14 LF 6" HDPE @ MIN. 2% SLOPE
20 CONNECT TO STORM STRUCTURE; FL = 977.63
21 INSTALL 40 LF 6" HDPE @ MIN. 2% SLOPE
22 INSTALL 50 LF 6" HDPE @ MIN. 2% SLOPE
23 INSTALL 50 LF 4" HDPE @ MIN. 2% SLOPE
24 CONNECT TO STORM STRUCTURE; FL = 977.50

SS - SANITARY SEWER INFORMATION - LEE'S SUMMIT PUBLIC WORKS

01 RELOCATED SANITARY SEWER MAIN; RE: SHEET C6.1
02 INSTALL SANITARY SEWER CLEANOUT
03 INSTALL 98 LF OF 4" PVC-SDR26 SANITARY SERVICE LINE @ 2% MIN. SLOPE (BID ALTERNATE 1)
04 CONNECT SANITARY LINE TO DOG WATER FOUNTAIN; REFER TO INSTALLATION GUIDE (BID ALTERNATE 1)
05 CONNECT TO SANITARY MAIN WITH 8"X4" WYE; FL = 971.52 (BID ALTERNATE 1)
06 INSTALL 95 LF OF 6" PVC-SDR26 SANITARY SERVICE LINE @ 1% MIN. SLOPE
07 CONNECT TO BUILDING PLUMBING; REFER TO MEP
08 CONNECT TO SANITARY MAIN WITH 8"X6" WYE; FL = 970.00
09 INSTALL 40 LF OF 6" PVC-SDR26 SANITARY SERVICE LINE @ 1% MIN. SLOPE

UTILITY CONTACTS

CITY OF LEE'S SUMMIT, MO

PLANNING AND DEVELOPMENT
CITY HALL
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
TEL: (816) 969-1600
FAX: (816) 969-1619

PUBLIC WORKS
CITY HALL
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
TEL: (816) 969-1800
FAX: (816) 969-1809

CODES ADMINISTRATION
CITY HALL
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
TEL: (816) 969-1200
FAX: (816) 969-1201

WATER UTILITIES
CITY HALL
1200 SE HAMBLEN RD
LEE'S SUMMIT, MO 64063
TEL: (816) 969-1900
FAX: (816) 969-1935

ELECTRIC COMPANY
EVERGY
TEL: (888) 471-5275

GAS COMPANY
SPIRE
TEL: (816) 756-5252

PLANNING AND DEVELOPMENT
CITY HALL
220 SE GREEN STREET
LEE'S SUMMIT, MO 64063
TEL: (816) 969-1600
FAX: (816) 969-1619

PUBLIC WORKS
CITY HALL
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LEE'S SUMMIT, MO 64063
TEL: (816) 969-1800
FAX: (816) 969-1809

UTILITY NOTES

1. *CONTRACTOR SHALL REFER TO ALL SPECIFICATIONS, GUIDELINES, AND INSTALLATION DRAWINGS FROM THE CITY OF LEE'S SUMMIT, EVERGY, AND SPIRE FOR THE INSTALLATION OF ALL SERVICE LINES.*
2. *THE INFORMATION SHOWN ON THESE PLANS CONCERNING THE TYPE AND LOCATION OF UNDERGROUND UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES FOR FIELD LOCATION OF ALL UNDERGROUND UTILITY LINES PRIOR TO ANY EXCAVATION AND FOR MAKING HIS OWN VERIFICATION AS TO TYPE AND LOCATION OF UNDERGROUND UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.*
3. *CONTRACTOR TO ENSURE 6" MINIMUM SEPARATION BETWEEN UTILITIES AT CROSSINGS. CONTRACTOR TO CALL CIVIL IF ANY CONFLICTS BETWEEN UTILITIES ARE FOUND.*
4. *FIRE LINE NOTES:*
   - 4.1. *ALL PRIVATE FIRE LINES SHALL BE INSTALLED IN ACCORDANCE WITH NFPA 24, AND OTHER APPLICABLE CODES AND STANDARDS.*
   - 4.2. *CONTACT THE FIRE DEPARTMENT TO SCHEDULE INSPECTIONS PRIOR TO PRIVATE FIRE LINES BEING BACKFILLED.*
   - 4.3. *CONTACT THE FIRE DEPARTMENT TO WITNESS SCHEDULED HYDROSTATIC TESTS AND FLUSHES OF PRIVATE FIRE LINES.*
5. *STUB ALL CONNECTIONS TO WITHIN 5' OF THE BUILDING TO PROVIDE CONNECTION INTO THE BUILDING BY MECHANICAL/PLUMBING CONTRACTOR.*
6. *CONTRACTOR TO ENSURE MIN. 18" VERTICAL SEPARATION BETWEEN UTILITIES AT CROSSING. CONTRACTOR TO CALL ENGINEER IF ANY CONFLICTS BETWEEN UTILITIES ARE FOUND.*

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

STATE OF MISSOURI
ERIC BYRD
03/07/2024
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
BHC is a trademark of Brungardt Honomichl & Company, P.A.

FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

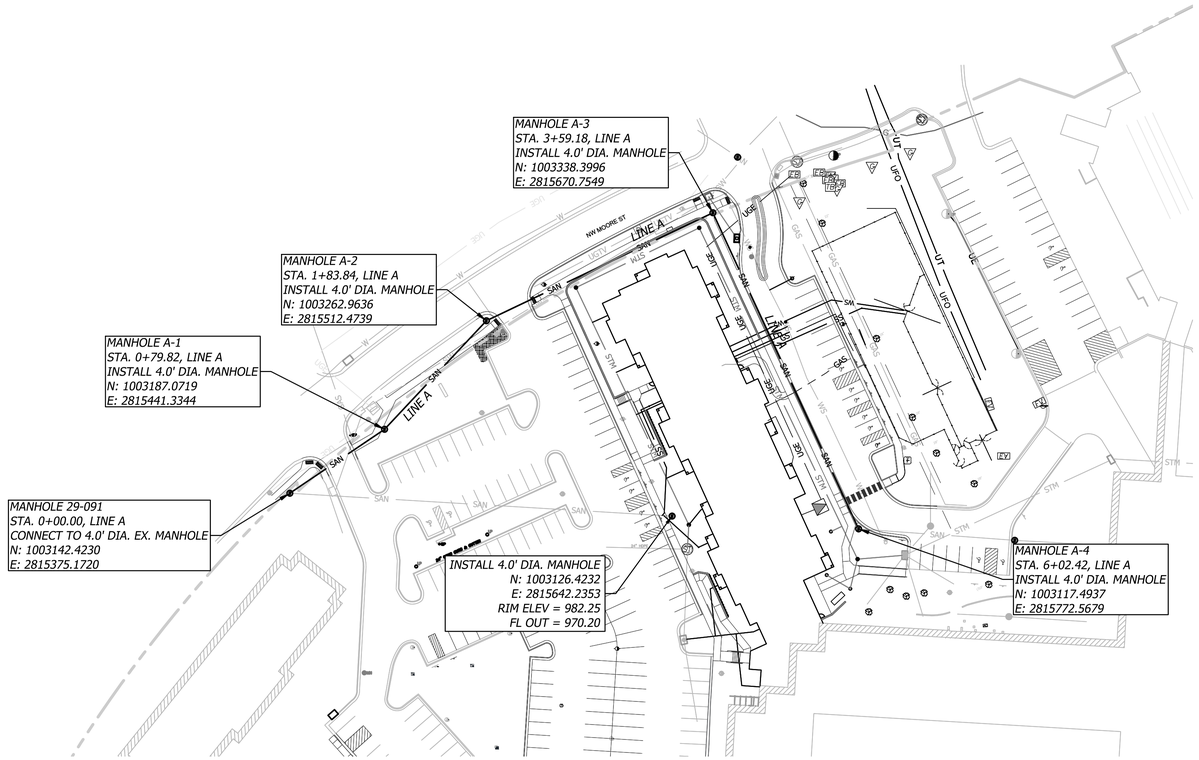
DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

UTILITY PLAN

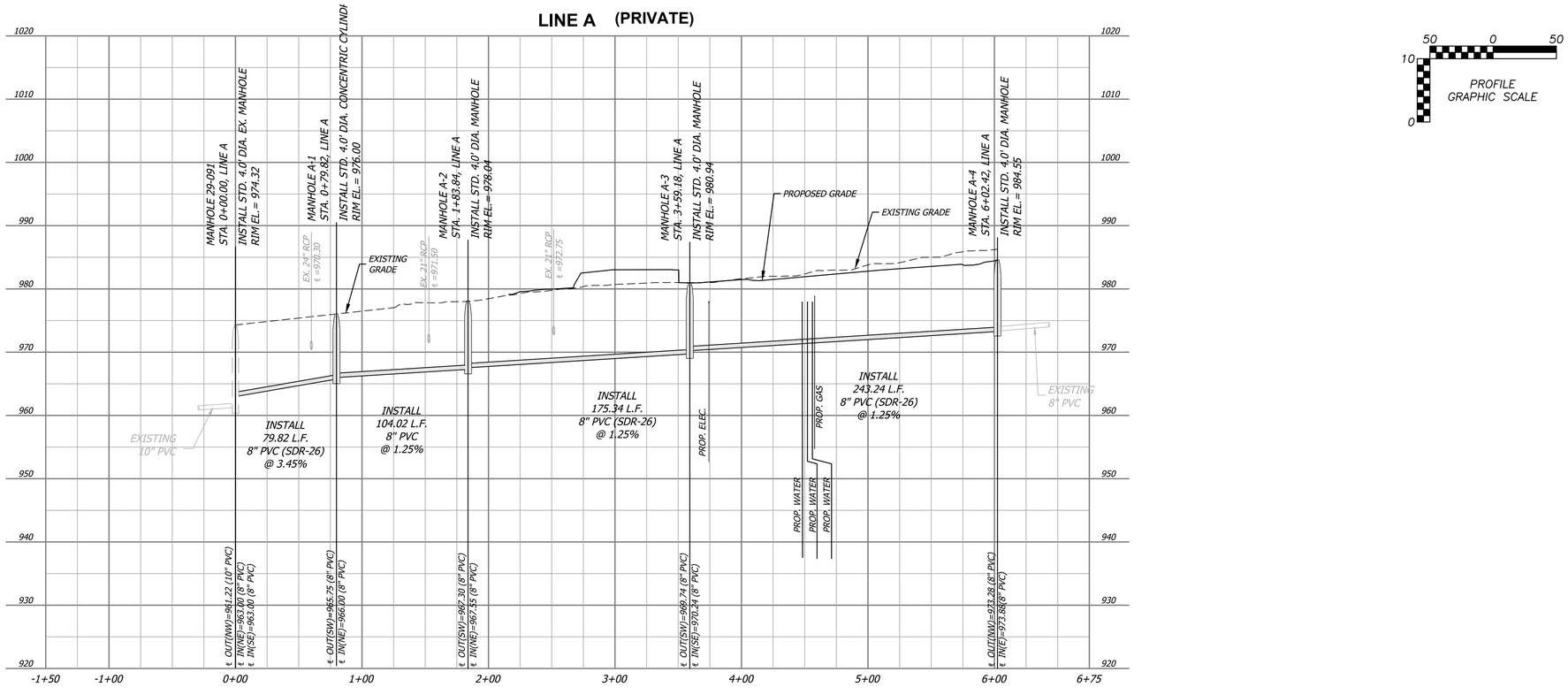
DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C6.0



SANITARY NOTE

ALL NORTHINGS, EASTINGS, AND ALIGNMENT STATIONING FOR SANITARY STRUCTURES ARE TO CENTER OF STRUCTURE UNLESS STATED OTHERWISE.

GRAPHIC SCALE
50 0 50



50 0 50
10
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PROFILE GRAPHIC SCALE

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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CIVIL ENGINEERING / SURVEYING / UTILITIES
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FINAL DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

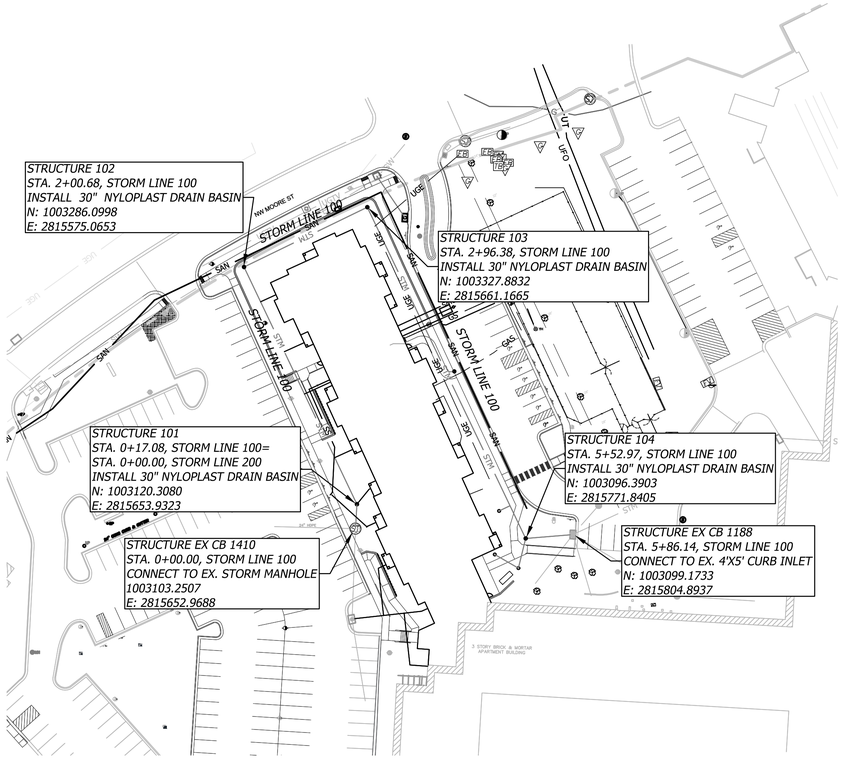
DRAWING TITLE

SANITARY PLAN & PROFILE

DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING C6.1



RELEASED FOR CONSTRUCTION
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
04/23/2024

STORM NOTE

ALL NORTHINGS, EASTINGS, AND ALIGNMENT STATIONING FOR STORM STRUCTURES ARE TO CENTER OF STRUCTURE UNLESS STATED OTHERWISE.

STRUCTURE 102
STA. 2+00.68, STORM LINE 100
INSTALL 30" NYLOPLAST DRAIN BASIN
N: 1003286.0998
E: 2815575.0653

STRUCTURE 103
STA. 2+96.38, STORM LINE 100
INSTALL 30" NYLOPLAST DRAIN BASIN
N: 1003327.8832
E: 2815661.1665

STRUCTURE 101
STA. 0+17.08, STORM LINE 100=
STA. 0+00.00, STORM LINE 200
INSTALL 30" NYLOPLAST DRAIN BASIN
N: 1003120.3080
E: 2815653.9323

STRUCTURE 104
STA. 5+52.97, STORM LINE 100
INSTALL 30" NYLOPLAST DRAIN BASIN
N: 1003096.3903
E: 2815771.8405

STRUCTURE EX CB 1410
STA. 0+00.00, STORM LINE 100
CONNECT TO EX. STORM MANHOLE
1003103.2507
E: 2815652.9688

STRUCTURE EX CB 1188
STA. 5+86.14, STORM LINE 100
CONNECT TO EX. 4'X5' CURB INLET
N: 1003099.1733
E: 2815804.8937

STRUCTURE 201
STA. 0+35.09, STORM LINE 300
INSTALL 6'x4' CURB INLET
N: 1003320.5949
E: 2815687.4737

STRUCTURE EX. JUNCTION BOX
STA. 0+00.00, STORM LINE 200
CONNECT TO EXIST. JUNCTION BOX
N: 1003349.6458
E: 2815667.7915

ERIC BYRD
NUMBER PE-2018013633

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STORM LINE 100 (PRIVATE)

STORM LINE 200 (PRIVATE)

FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS
Architecture
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Planning
Interiors

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Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	ARK
ARCHITECT	DAS	CHECKED	ERB
ENGINEER	ERB	APPROVED	ERB

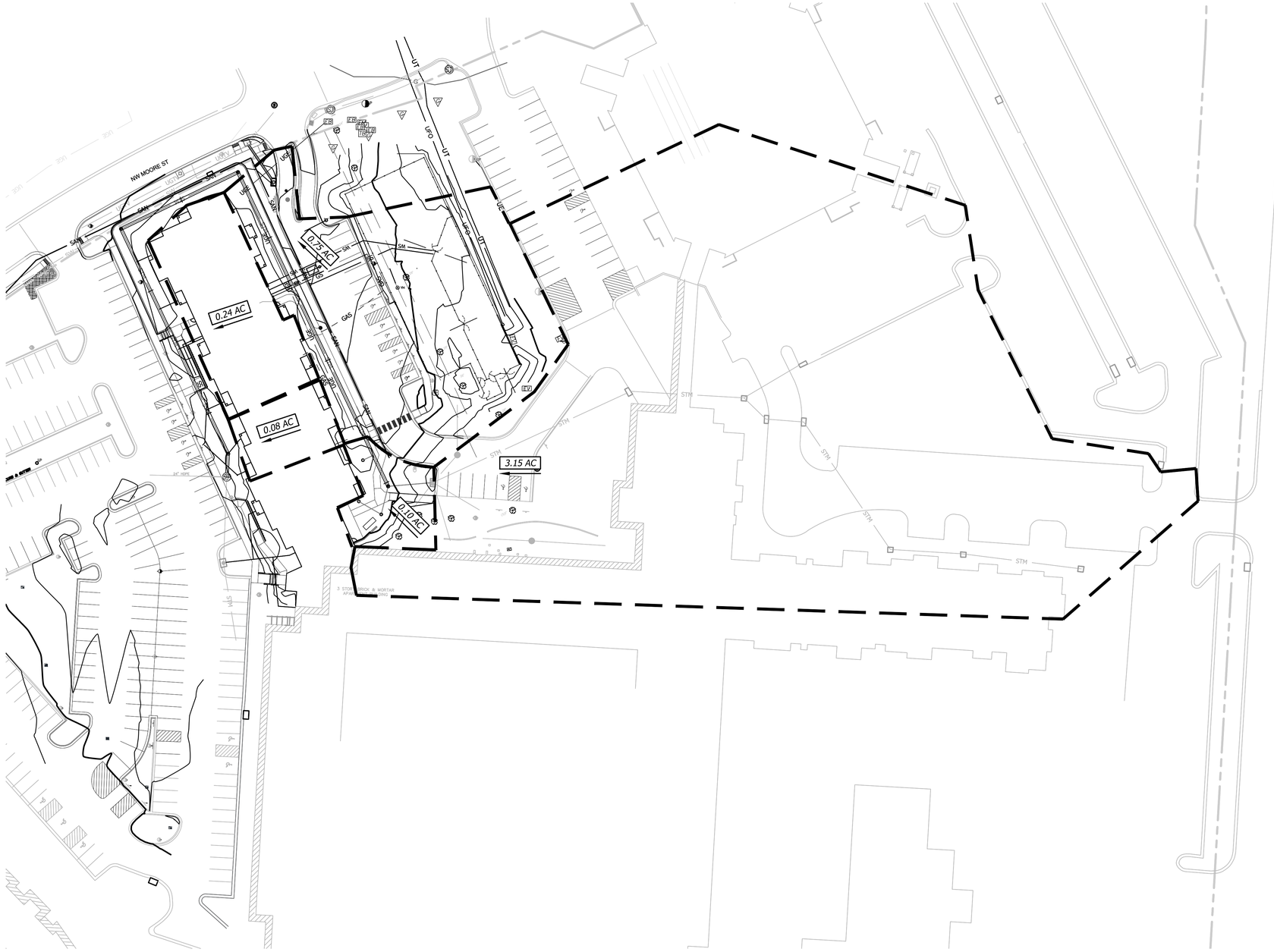
NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

STORM PLAN & PROFILE

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C6.2

Runoff Calculations	100-YR														Pipe Properties											
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. C x A	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlets	Up Piped Inlets	Up Area (acres)	Up C x A	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.
LINE 100																									DS TAILWATER @ STR #EX CB 1410	FREE
101	0.08	0.90	3.57	2.40	11.4	8.20	0.74	24.58	22.65	6.71			0.00	0.00	101	EX CB 1410	HDPE	0.012	24	17.08	0.74	0.00	976.31	976.18	983.15	978.58
102	0.24	0.90	3.49	2.33	11.0	8.32	2.25	24.19	22.65	6.71			0.00	0.00	102	101	HDPE	0.012	24	183.59	0.74	0.00	977.66	976.31	982.29	980.75
103	N/A	N/A	3.25	2.11	10.7	8.39	N/A	22.12	22.65	6.71			0.00	0.00	103	102	HDPE	0.012	24	95.70	0.74	0.00	978.37	977.66	983.19	981.84
104	0.10	0.30	3.25	2.11	10.1	8.57	0.32	22.59	22.65	6.71			0.00	0.00	104	103	HDPE	0.012	24	256.59	0.74	0.00	980.27	978.37	984.55	984.34
EX CB 1188	3.15	0.66	3.15	2.08	10.0	8.59	22.32	22.32	23.70	7.02			0.00	0.00	EX CB 1188	104	HDPE	0.012	24	33.17	0.81	N/A	980.54	980.27	987.08	985.09
LINE 200																									DS TAILWATER @ STR #EX JB	FREE
201	0.75	0.60	0.75	0.45	5.0	10.32	5.81	5.81	9.72	7.92			0.00	0.00	201	EX JB	HDPE	0.012	15	35.09	1.93	N/A	977.50	976.82	981.00	978.72



DRAINAGE LEGEND

- 980 — PROPOSED FINISH GRADE MAJOR CONTOUR
- 982 — PROPOSED FINISH GRADE MINOR CONTOUR
- 980 — EXISTING GRADE MAJOR CONTOUR
- 982 — EXISTING GRADE MINOR CONTOUR
- STM — PROPOSED STORM SEWER LINE
- DRAINAGE AREA BOUNDARY
- Field — AREA/DIRECTION OF DRAINAGE BOUNDARY

GRAPHIC SCALE
40 0 40

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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FINAL DEVELOPMENT PLAN

PROJECT TITLE

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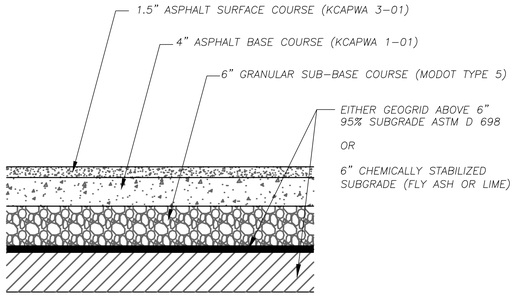
DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

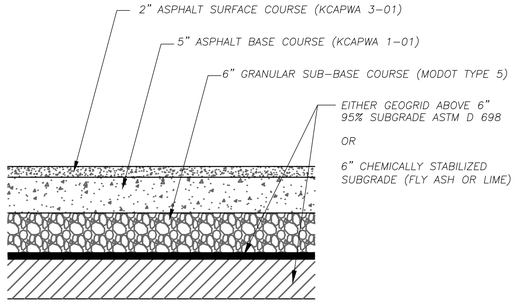
DRAWING TITLE

DRAINAGE MAP & CALCULATIONS

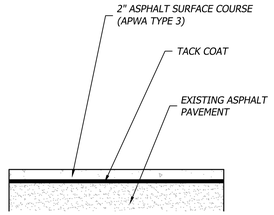
DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C6.3



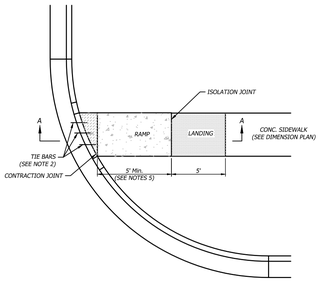
005 Normal Duty Asphalt Section
Not to Scale



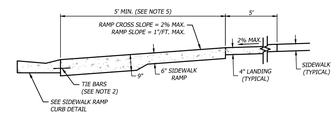
006 Heavy Duty Asphalt Section
Not to Scale

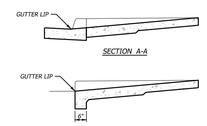


010 Asphalt Pavement Overlay
Not to Scale

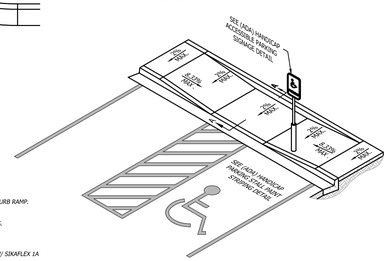


NOTES:
1. SIDEWALK RAMP LOCATION DETERMINED FROM THE INTERSECTION OF THE EXTENSION OF BACK OF SIDEWALK AND BACK OF CURB & GUTTER.
2. TIE BARS #4 EPOXY COATED @ 12"OC.
3. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
4. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 250' CENTERS MAX.
5. SIDEWALK RAMP SHALL BE LENGTHENED TO PROVIDE ADA COMPLIANCE SLOPE BUT NEED NOT EXCEED 15'.
6. ADA RAMP SLOPE MAX. = 1"/FT. ADA CROSS SLOPE MAX. = 2%.
7. SEE DETECTABLE WARNING DETAIL FOR THE INSTALLATION REQUIREMENTS.

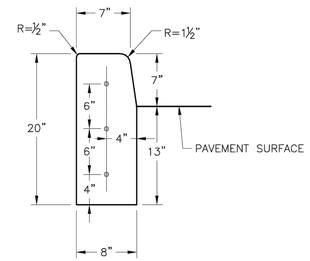




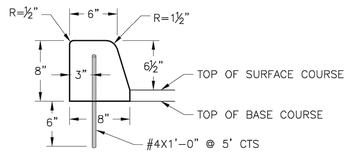
GENERAL NOTES:
1. PLACE TRUNCATED DOME DETECTABLE WARNING PANELS @ BASE OF CURB RAMP. INSTALL ACROSS FULL WIDTH OF RAMP 24"MIN. DEPTH.
2. TOOLED JOINTS ARE REQUIRED AT ALL SIDEWALK RAMP SLOPE BREAKS.
3. THICKEN CONCRETE UNDER DETECTABLE WARNING PANEL.
4. IN FREEZE THAW ZONES, LEAVE ¼" GAP IN BETWEEN PANELS & SEAL W/ SIKAFLEX 1A SEALANT OR APPROVED EQUAL.



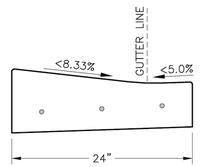
019 Sidewalk Ramp (Private)
Not to Scale



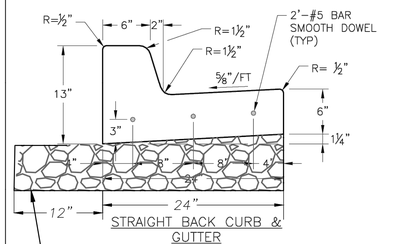
STRAIGHT CURB
(TYPE C-1)



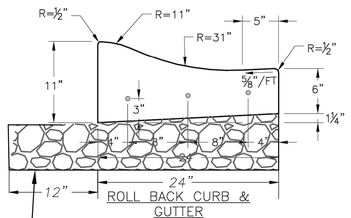
DOWELLED CURB
(TYPE DC)



CURB & GUTTER DETAIL AT RAMP
(ADA SLOPE REQUIREMENTS)

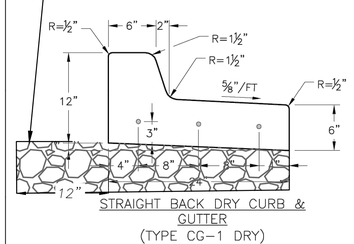


STRAIGHT BACK CURB & GUTTER
(TYPE CG-1)

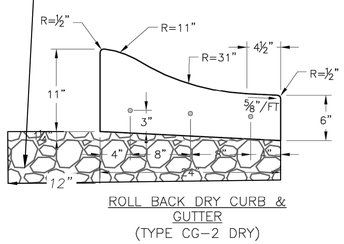


ROLL BACK CURB & GUTTER
(TYPE CG-2)

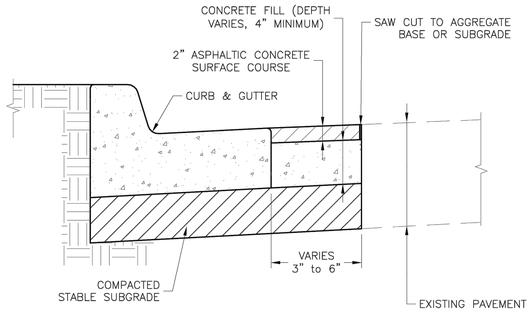
EITHER GEOGRID ABOVE 6" 95% SUBGRADE ASTM D 698
OR
6" CHEMICALLY STABILIZED SUBGRADE (FLY ASH OR LIME)



STRAIGHT BACK DRY CURB & GUTTER
(TYPE CG-1 DRY)



ROLL BACK DRY CURB & GUTTER
(TYPE CG-2 DRY)



CURB REPLACEMENT DETAIL

GENERAL NOTES

1. ¾" ISOLATION JOINTS WITH 3 (2'-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150' INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH
4. KCMMB 4K CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

002 Concrete Curb and Gutter
Not to Scale

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

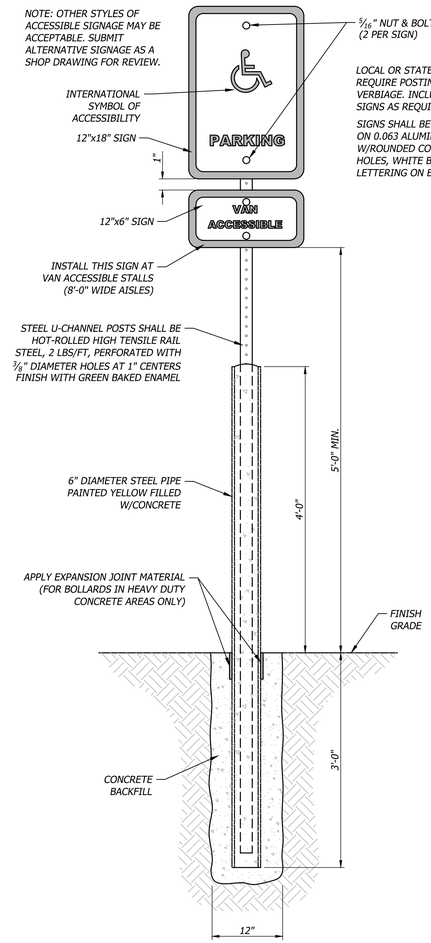
STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO

Project:
Sheet Name: CURB & GUTTER DETAIL

Drawn By: MJF
Checked By: DL
Date: 04/17
Proj. #:

GEN-4

NOTE: OTHER STYLES OF ACCESSIBLE SIGNAGE MAY BE ACCEPTABLE. SUBMIT ALTERNATIVE SIGNAGE AS A SHOP DRAWING FOR REVIEW.



LOCAL OR STATE REGULATIONS MAY REQUIRE POSTING OF FINES OR OTHER VERBIAGE. INCLUDE VERBIAGE ON SIGNS AS REQUIRED.

SIGNS SHALL BE BAKED ENAMEL ON 0.063 ALUMINUM SHEETING W/ROUNDED CORNERS, TWO MOUNTING HOLES, WHITE BORDER, SYMBOL & LETTERING ON BLUE BACKGROUND

022 (ADA) Handicap Parking Signage
Not to Scale

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
BHC is a trademark of Brungardt Honomichl & Company, P.A.

FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

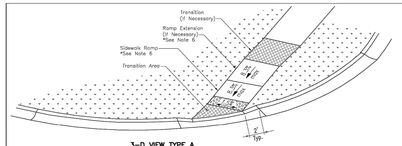
DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

CONSTRUCTION DETAILS

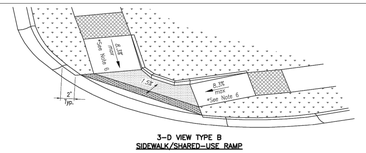
DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C7.0



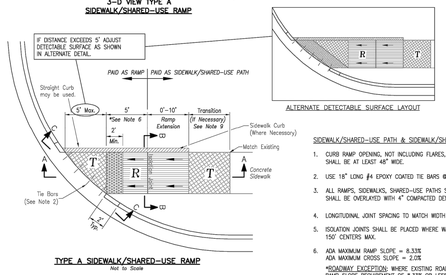
3-D VIEW TYPE A
SIDEWALK/SHARED-USE RAMP

LEGEND

R	SIDEWALK RAMP
TS	TURNING SPACE
	DETECTABLE WARNING SURFACE
T	TRANSITION



3-D VIEW TYPE B
SIDEWALK/SHARED-USE RAMP

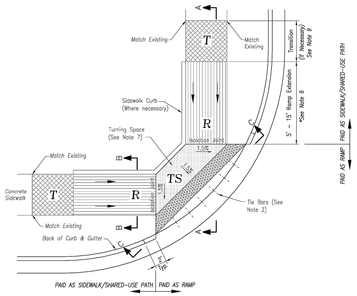


TYPE A SIDEWALK/SHARED-USE RAMP
Not to Scale

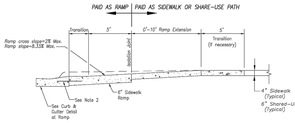
ALTERNATE DETECTABLE SURFACE LAYOUT

SIDEWALK/SHARED-USE PATH & SIDEWALK/SHARED-USE RAMP NOTES:

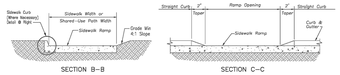
1. CURB RAMP OPENING, NOT INCLUDING FLARES, SHALL MATCH EXISTING SIDEWALK WIDTH AND OPENING SHALL BE AT LEAST 48" WIDE.
2. USE 18" LONG #4 EPOXY COATED TIE BARS @ 24" O.C. EMBED TIE BARS 9" IN EACH DIRECTION.
3. ALL RAMPS, SIDEWALKS, SHARED-USE PATHS SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
4. LONGITUDINAL JOINT SPACING TO MATCH WIDTH OF SIDEWALK.
5. ISOLATION JOINTS SHALL BE PLACED WHERE WALK ABUTS DRIVEWAYS AND SIMILAR STRUCTURES, AND 150' CENTERS MAX.
6. ADA MAXIMUM RAMP SLOPE = 8.33%
   ADA MAXIMUM CROSS SLOPE = 2.0%
   *ROADWAY EXCEPTION: WHERE EXISTING ROAD PROFILE GRADE DOES NOT ALLOW RAMP TO MEET RAMP SLOPE REQUIREMENT OF 8.33% OR LESS, THE RAMP SHALL BE EXTENDED TO A LENGTH OF 15 FEET TO MATCH EXISTING SIDEWALK. CROSS SLOPE OF RAMP SHALL BE 1.5%, ±0.5%.
7. TURNING SPACES SHALL BE 1.5%, ±0.5% SLOPE IN ANY DIRECTION. TURNING SPACES SHALL HAVE A MINIMUM 4'x4' TURNING AREA. TURNING SPACES, WITH A SIDEWALK CURB, SHALL HAVE A 5' TURNING AREA PERPENDICULAR TO THE SIDEWALK CURB.
8. FOR RETROFIT WORK, SLOPES TO BE DETERMINED IN FIELD BY CONTRACTOR AND APPROVED BY CITY INSPECTOR
9. RAMP EXTENSION AREA SHALL NOT BE USED AS TRANSITION TO EXISTING SIDEWALK. ANY TRANSITIONS REQUIRED TO MATCH RAMPS TO EXISTING SIDEWALK SHALL REQUIRE REMOVAL AND REPLACEMENT OF ADDITIONAL SIDEWALK BEYOND THE RAMP AREA. SIDEWALK TRANSITION LENGTH SHALL BE EQUAL TO OR GREATER THAN THE WIDTH OF THE EXISTING SIDEWALK. RAMP EXTENSIONS SHALL BE A CONTINUOUS SLOPE.
10. ALL SIDEWALK AND RAMP CONSTRUCTION SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).



TYPE B SIDEWALK/SHARED-USE RAMP
Not to Scale



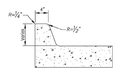
SECTION A-A



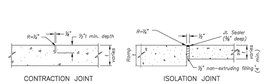
SECTION B-B

SECTION C-C

TYPE A & B SIDEWALK RAMP
Not to Scale

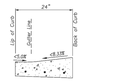


SIDEWALK CURB DETAIL
Not to Scale



CONTRACTION JOINT
ISOLATION JOINT

JOINT DETAILS
Not to Scale

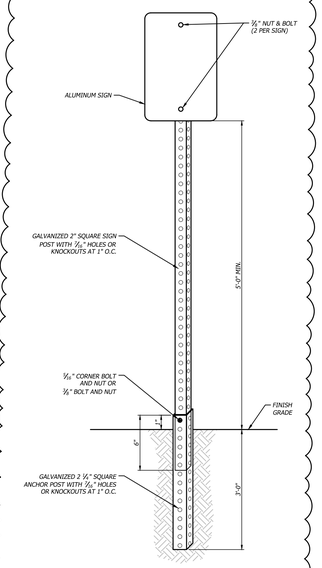


CURB & GUTTER DETAIL AT RAMP
Not to Scale

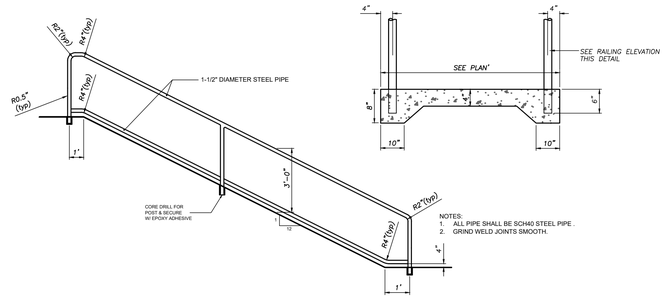
Project:	STANDARD DETAILS CITY OF LEE'S SUMMIT, MO LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name:	ADA RAMP RETROFIT DETAIL
Drawn By:	MJF
Checked By:	DL
Date:	04/17
Proj. #	
Sheet No.	GEN-3A

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

018 Sidewalk Ramp (Public)
Not to Scale

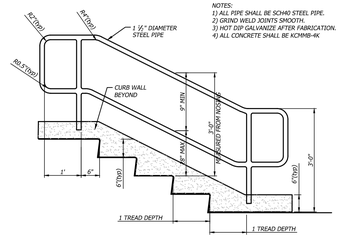


022 Sign Post Installation
Not to Scale



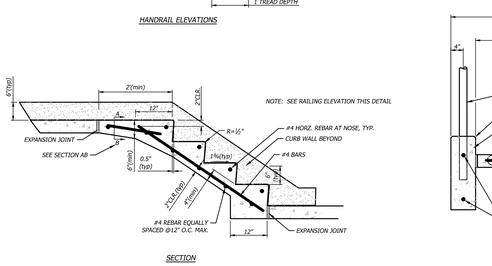
NOTES:
1. ALL PIPE SHALL BE SCH40 STEEL PIPE .
2. GRIND WELD JOINTS SMOOTH.

031 Concrete Ramp with Handrail
Not to Scale



NOTES:
1) ALL PIPE SHALL BE SCH40 STEEL PIPE.
2) GRIND WELD JOINTS SMOOTH.
3) HOT DIP GALVANIZE AFTER FABRICATION.
4) ALL CONCRETE SHALL BE KCMMB-4K

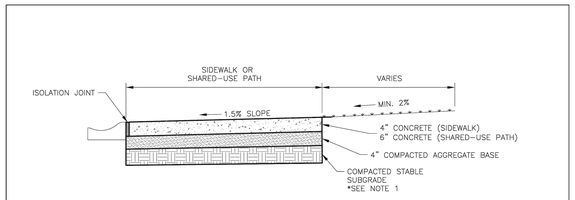
HANDRAIL ELEVATIONS



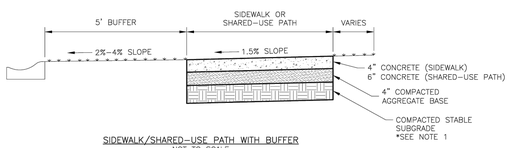
SECTION

SECTION A-B

035 Concrete Stair & Handrail
Not to Scale



SIDEWALK/SHARED-USE PATH WITHOUT BUFFER
NOT TO SCALE



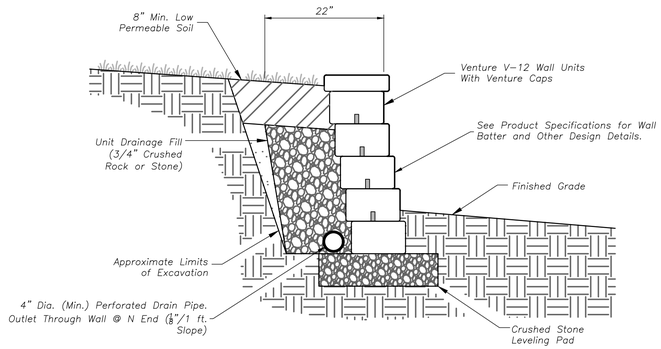
SIDEWALK/SHARED-USE PATH WITH BUFFER
NOT TO SCALE

GENERAL NOTES:

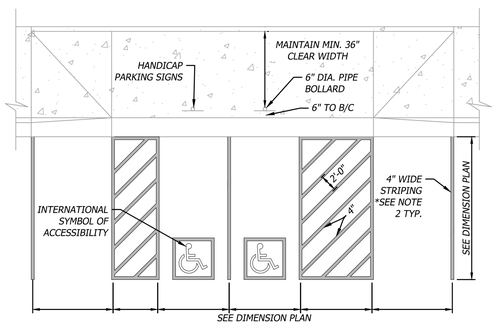
1. SUBGRADE MUST BE OF STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. 1.5% CROSS SLOPE MUST BE MAINTAINED THROUGH DRIVEWAYS.
3. KCMMB 4K CONCRETE MIX SHALL BE REQUIRED FOR ALL SIDEWALKS/SHARED-USE PATHS OR AS APPROVED BY THE CITY INSPECTOR.
4. ALL SIDEWALK/SHARED-USE PATHS SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG).
5. AN ISOLATION JOINT SHALL BE PLACED AT A MAXIMUM OF 150 FT. CONSTRUCTION JOINTS SHALL BE PLACED THE SAME WIDTH OF SIDEWALK/SHARED-USE PATHS, BUT NO GREATER THAN 10 FT.
6. AN ISOLATION JOINT SHALL BE PLACED WHERE THE SIDEWALK/SHARED-USE PATHS MEETS A RESIDENTIAL DRIVEWAY.
7. SHARED-USE PATHS WIDTH SHALL BE 10 FT. WIDE.
8. SIDEWALK/SHARED-USE PATHS FINISHING SHALL BE FULL BROOM FINISH OR AS DIRECTED BY CITY INSPECTOR.
9. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

LEE'S SUMMIT MISSOURI	Date: 04/17
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Drawn By: MJF
SIDEWALK/SHARED-USE PATH DETAIL	Checked By: DL
	GEN-2

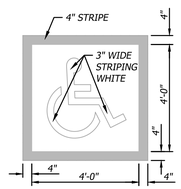
014 Concrete Sidewalk
Not to Scale



050 Modular Block Retaining Wall
Not to Scale



021 (ADA) Handicap Parking Striping
Not to Scale



INTERNATIONAL SYMBOL OF ACCESSIBILITY

NOTE:
1. SEE SITE GRADING AND DRAINAGE PLAN FOR PAVEMENT AND CURB ELEVATIONS, AND ASSOCIATED ALLOWABLE SLOPES FOR ACCESSIBLE PARKING
2. PARKING STRIPING COLOR TO BE YELLOW ON CONCRETE AND WHITE ON ASPHALT.

STATE OF MISSOURI
ERIC BYRD
08/07/2024
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
BHC is a trademark of Brungardt Honomichl & Company, P.A.

FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

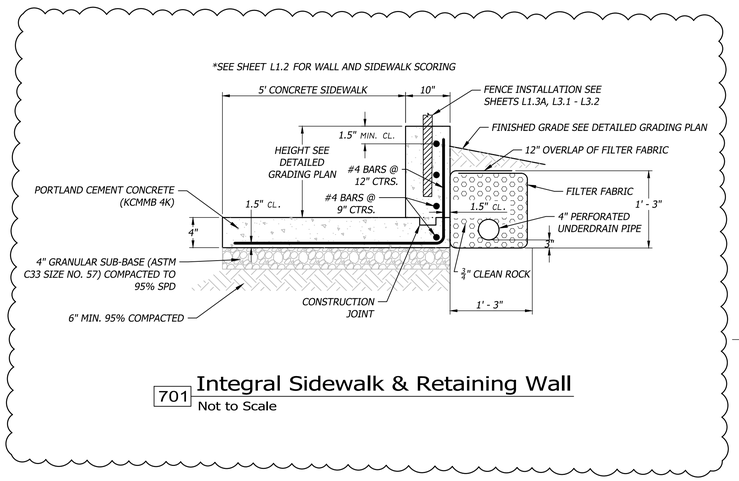
NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

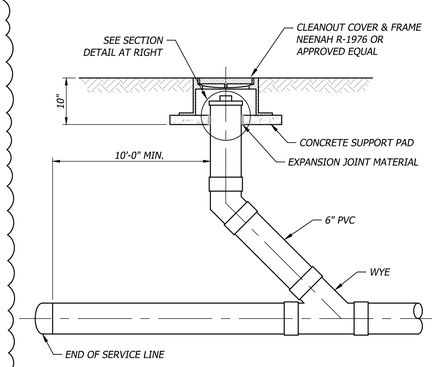
CONSTRUCTION DETAILS 2

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C7.1

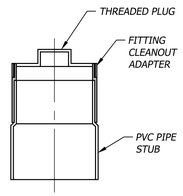
3

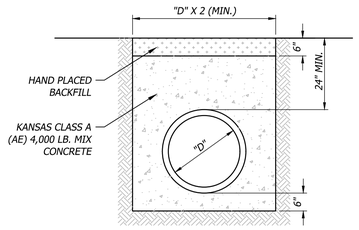


701 Integral Sidewalk & Retaining Wall
Not to Scale

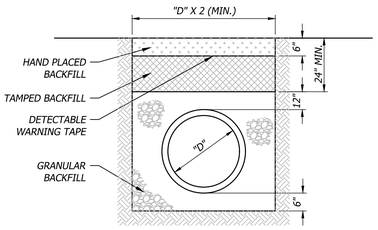


201 Cleanout
Not to Scale

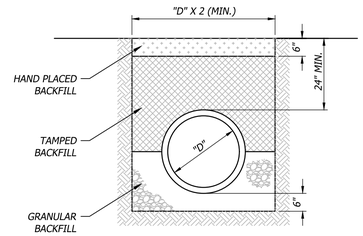




CONCRETE ENCASEMENT
CLASS "A"



HDPE/PVC PIPE BEDDING
CLASS "C"

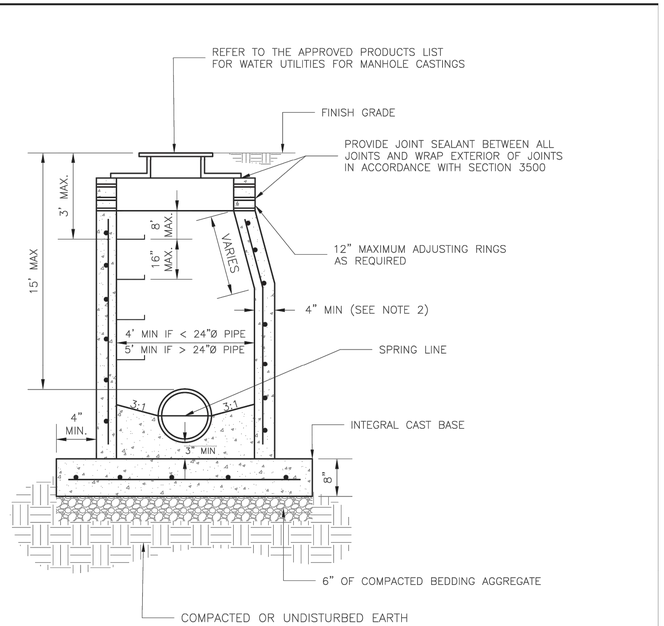


RIGID PIPE (RCP) BEDDING
CLASS "B"

NOTES:

1. GRANULAR FILL SHALL BE 1/2" CLEAN ROCK OR SAND/GRAVEL BEDDING MEETING KDOT TYPE UD-1, PLACED IN 6" LIFTS AND COMPACTED BY SLICING WITH A SHOVEL.
2. TAMPED FILL SHALL BE FINELY DIVIDED, JOB EXCAVATED MATERIAL FREE OF DEBRIS, ORGANIC MATERIAL, AND STONES, COMPACTED TO TYPE AA MR-5 COMPACTION.
3. HAND PLACED FILL SHALL BE FINELY DIVIDED MATERIAL, FREE OF DEBRIS AND STONES, COMPACTED TO TYPE AA MR-5 COMPACTION. ALL PIPE SHALL BE INSPECTED PRIOR TO BACKFILL.
4. ALL PIPE COVERED PRIOR TO INSPECTION SHALL BE UNCOVERED AT THE CONTRACTORS EXPENSE.

306 Pipe Bedding
Not to Scale

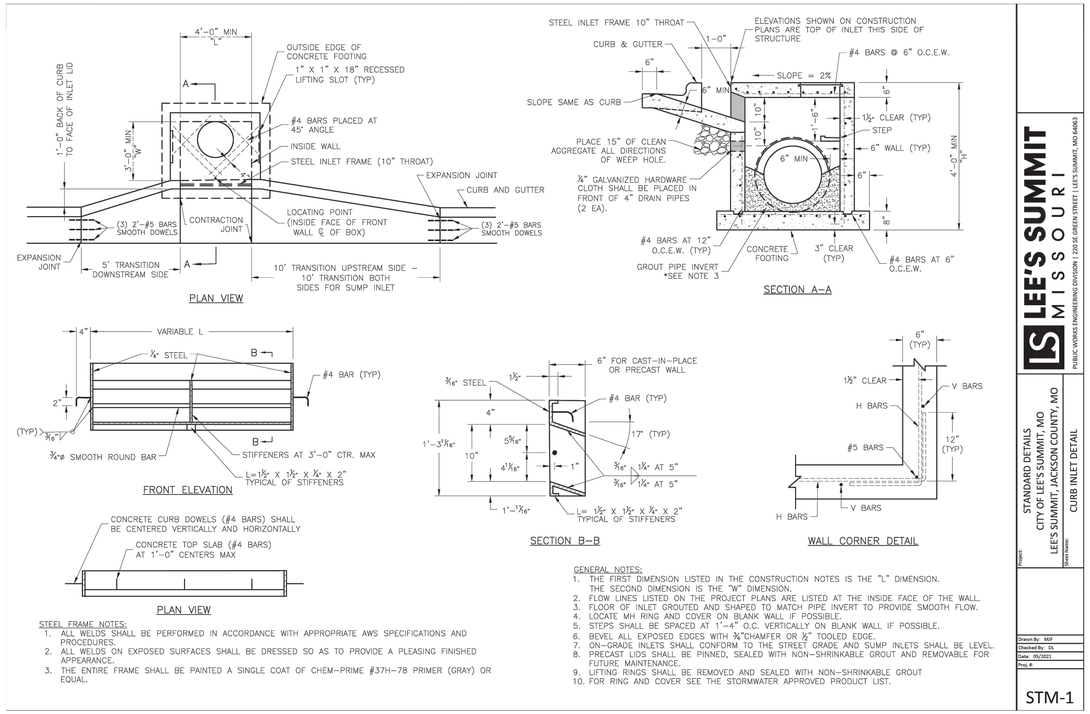


NOTES:

1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE–TWELFTH ($\frac{1}{12}$) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 12/2015 Drawn By: SC Checked By: DL
STANDARD SANITARY PRECAST MANHOLE	SAN-2

200 Sanitary Manhole
Not to Scale



STEEL FRAME NOTES:
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM–PRIME #37H–78 PRIMER (GRAY) OR EQUAL.

GENERAL NOTES:
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
5. STEPS SHALL BE SPACED AT 1'–4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
6. BEVEL ALL EXPOSED EDGES WITH ¾"CHAMFER OR ½" TOOLED EDGE.
7. ON–GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON–SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON–SHRINKABLE GROUT
10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

305 Curb Inlet
Not to Scale

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
CURB INLET DETAIL

Drawn By: MAF
Checked By: DL
Date: 05/2021
Proj. #:

STM-1

STATE OF MISSOURI
ERB BYRD
03/07/2024
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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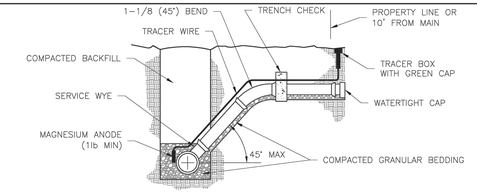
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : DAS		DRAWN : ARK	
ARCHITECT : DAS		CHECKED : ERB	
ENGINEER : ERB		APPROVED : ERB	
NO.	REVISION DESCRIPTION		DATE
1	FDP RESUBMITTAL		2/23/2024
3	Addendum 1		3/7/2024

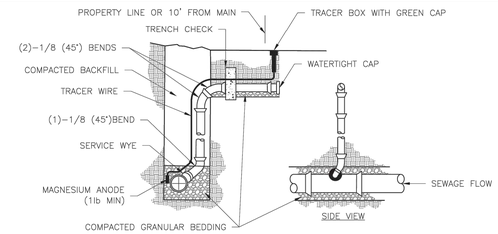
DRAWING TITLE

CONSTRUCTION DETAILS 3

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C7.2



STANDARD INSTALLATION
NOT TO SCALE



VERTICAL RISER
NOT TO SCALE

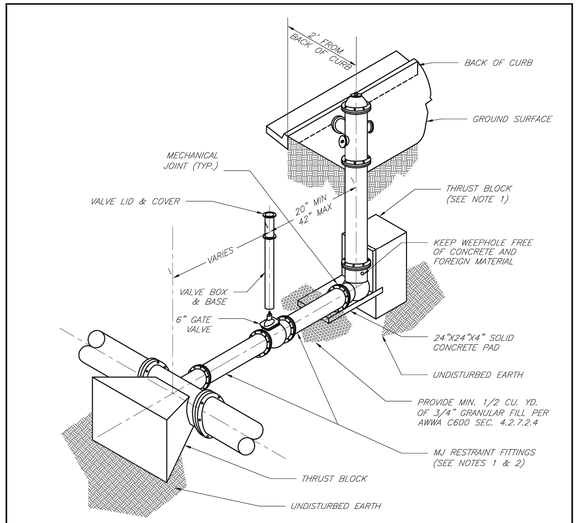
NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHICHEVER IS GREATER. WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
3. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
4. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
5. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
6. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
7. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
8. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER–PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SANITARY SEWER STUB DETAIL

Date: 12/2015
Drawn By: MJF
Checked By: DL

SAN-1

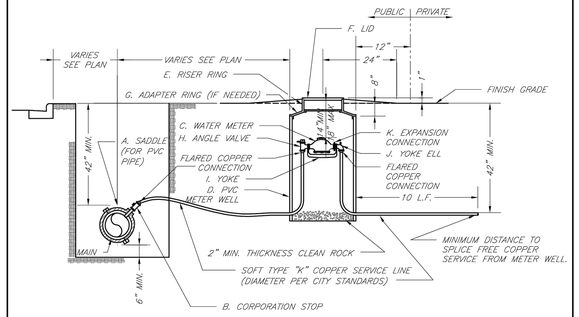


NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT INSTALLATION – STRAIGHT SET

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT–7
Rev: 1/14
Rev:



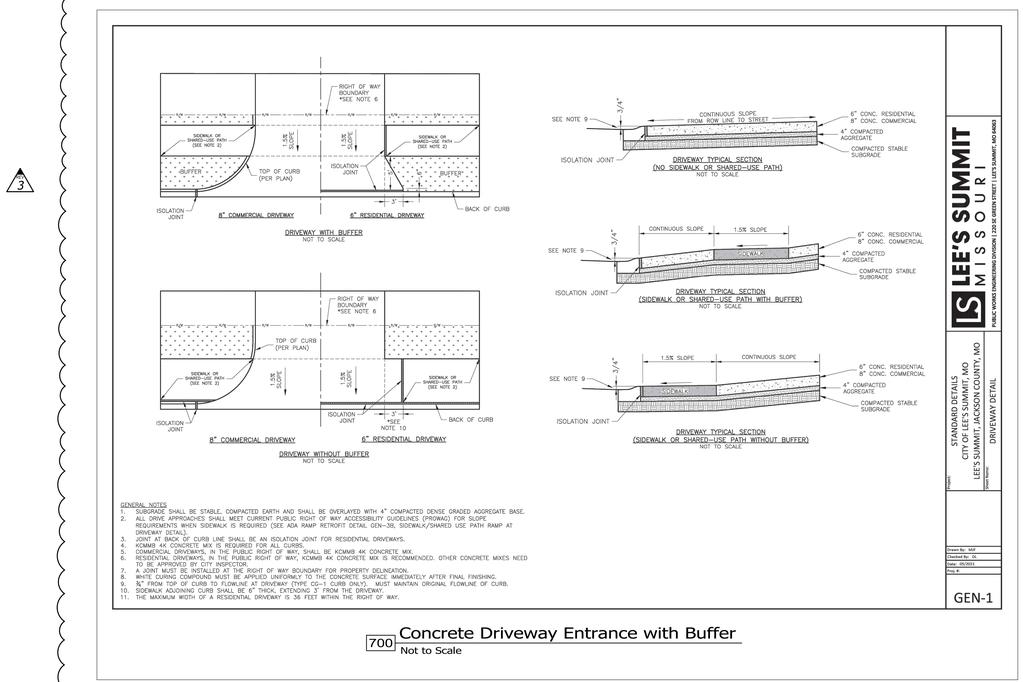
TYPICAL METER INSTALLATION – 2" AND SMALLER
NOT TO SCALE

NOTES:
1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.
2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.
3. CITY TO FURNISH ITEMS A–K.
4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.
5. 42" MINIMUM BURY DEPTH FOR ALL SERVICE LINES.
6. EXCAVATION FOR TAP TO EXPOSE 4 LINEAR FEET OF MAIN.
7. NO SPLICES ALLOWED BETWEEN METER AND MAIN.
8. SERVICE CONNECTION TAP AT APPROXIMATELY 45 DEGREES.
9. LID AND RISER RING SHALL BE SET SO THAT GROUND WATER WILL DRAIN AWAY FROM THE WELL.
10. CONTACT WATER UTILITIES, 816–969–1900, FOR REQUIREMENTS OF A METER LARGER THAN 2"

LEE'S SUMMIT
MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

SERVICE CONNECTION/METER WELL

Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT–11
Rev: 1/14
Rev:



GENERAL NOTES
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS. WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN–36, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. EXPANSION JOINT AT CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. ¾" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG–1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

STANDARD DETAILS
CITY OF LEE'S SUMMIT, MO
LEE'S SUMMIT, JACKSON COUNTY, MO
Sheet Name
DRIVEWAY DETAIL

Drawn By: MJF
Checked By: DL
Date: 05/2015
Proj. #

GEN–1

700 Concrete Driveway Entrance with Buffer
Not to Scale

STATE OF MISSOURI
ERIC BYRD
09/07/2024
NUMBER PE–2010013633
PROFESSIONAL ENGINEER

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
BHC is a trademark of Brungardt Honomichl & Company, P.A.

FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

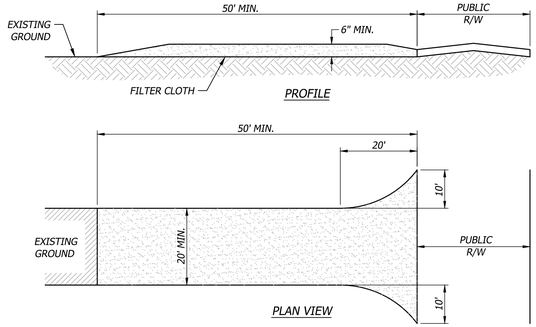
DESIGNER : DAS	DRAWN : ARK
ARCHITECT : DAS	CHECKED : ERB
ENGINEER : ERB	APPROVED : ERB

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/23/2024
3	Addendum 1	3/7/2024

DRAWING TITLE

CONSTRUCTION DETAILS 4

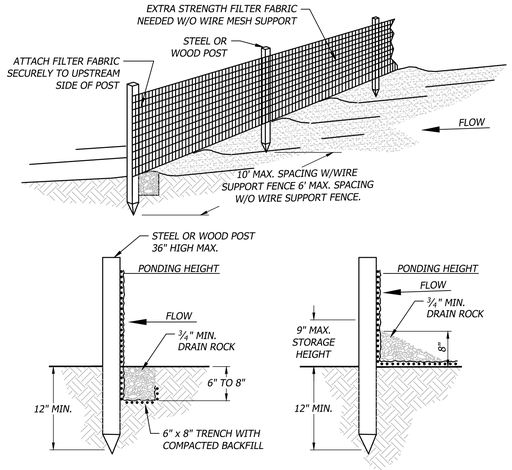
DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C7.3



CONSTRUCTION SPECIFICATIONS:

1. STONE SIZE - USE (2) INCH STONE, OR RECLAIMED OR RECYCLED EQUIVALENT.
2. LENGTH - AS REQUIRED, BUT NOT LESS THAN (50) FEET.
3. THICKNESS - NOT LESS THAN SIX (6) INCHES.
4. WIDTH - TWENTY (20) FOOT MINIMUM, BUT NOT LESS THAN THE FULL WIDTH AT POINTS WHERE INGRESS OR EGRESS OCCURS.
5. FILTER CLOTH - WILL BE PLACED OVER THE ENTIRE AREA PRIOR TO PLACING OF STONE.
6. SURFACE WATER - ALL SURFACE WATER FLOWING OR DIVERTED TOWARD CONSTRUCTION ENTRANCES SHALL BE PIPED ACROSS THE ENTRANCE. IF PIPING IS IMPRACTICAL, A MOUNTABLE BERM WITH 3:1 SLOPES WILL BE PERMITTED.
7. MAINTENANCE - THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH WILL PREVENT TRACKING OR FLOWING OF SEDIMENT ONTO PUBLIC RIGHTS-OF-WAY. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR AND/OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED ONTO PUBLIC RIGHTS-OF-WAY MUST BE REMOVED IMMEDIATELY.
8. WASHING - WHEELS SHALL BE CLEANED TO REMOVE SEDIMENT PRIOR TO ENTRANCE ONTO PUBLIC RIGHTS-OF-WAY. WHEN WASHING IS REQUIRED, IT SHALL BE DONE ON AN AREA STABILIZED WITH STONE AND WHICH DRAINS INTO AN APPROVED SEDIMENT TRAPPING DEVICE.
9. PERIODIC INSPECTION AS NEEDED MAINTENANCE SHALL BE PROVIDED AFTER EACH RAIN.

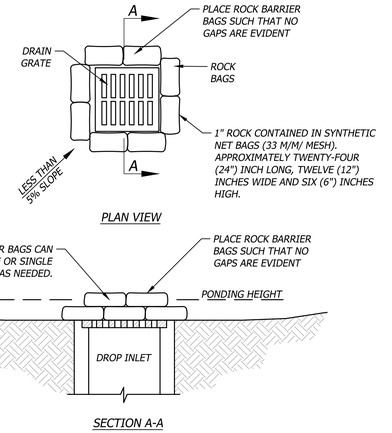
600 Temporary Construction Entrance
Not to Scale



NOTES:

1. MUST BE INSTALLED PROPERLY TO AVOID NOTICE OF VIOLATION.
2. SILT FENCE SHALL BE PLACED ON SLOPE CONTOURS TO MAXIMIZE POUNDING EFFICIENCY.
3. INSPECT AND REPAIR FENCE AFTER EACH STORM EVENT AND REMOVE SEDIMENT WHEN NECESSARY. 9" MAXIMUM RECOMMENDED STORAGE HEIGHT.
4. REMOVED SEDIMENT SHALL BE DEPOSITED TO AN AREA THAT WILL NOT CONTRIBUTE TO SEDIMENT OFF-SITE AND CAN BE PERMANENTLY STABILIZED.

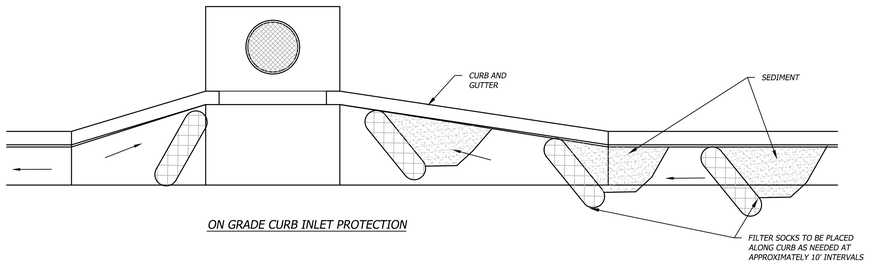
601 Filter Fabric Silt Fence
Not to Scale



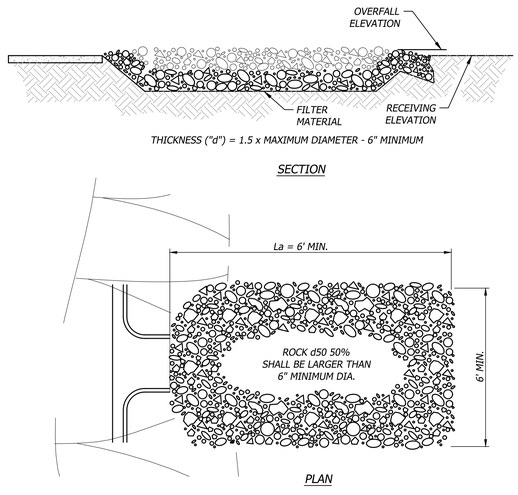
NOTES:

1. DROP INLET SEDIMENT BARRIERS ARE TO BE USED FOR SMALL, NEARLY LEVEL DRAINAGE AREAS. (LESS THAN 5%.)
2. A "REASONABLE" DESIGN SIZE PARTICLE TO CAPTURE MUST BE SELECTED.
3. SIZE DISTRIBUTION OF UPSTREAM SOIL PARTICLES MUST BE EVALUATED.
4. INFLOW AND OUTFLOW FROM THE SYSTEM FOR A SPECIFIC FREQUENCY STORM MUST BE KNOWN.
5. POND VOLUME IS DIRECTLY PROPORTIONAL TO THE DISCHARGE RATE OF WATER FROM THE SYSTEM.
6. POND VOLUME IS INVERSELY PROPORTIONAL TO THE MASS OF THE DESIGN SIZE SUSPENDED PARTICLE.
7. A SYSTEM MUST PROVIDE SUFFICIENT FLOW TO ALLOW FOR DEPOSITION OF DESIGN SIZE PARTICLES.
8. THE PONDING HEIGHT MUST BE WELL BELOW THE GROUND ELEVATION DOWNSLOPE TO PREVENT RUNNOFF FROM BYPASSING THE INLET. A TEMPORARY DIKE MAY BE NECESSARY ON THE DOWNSLOPE SIDE OF THE STRUCTURE.

603 Rock Bag Drop Inlet Barrier
Not to Scale



617 Inlet Filter Bags
Not to Scale



NOTES:

1. "La" = LENGTH OF APRON. DISTANCE 'La' SHALL BE OF SUFFICIENT LENGTH TO DISSIPATE ENERGY.
2. APRON SHALL BE AT A ZERO GRADE AND ALIGNED STRAIGHT.
3. FILTER MATERIAL SHALL BE FILTER FABRIC OR 6" THICK MINIMUM GRADED GRAVEL LAYER.
4. SIDE SLOPES SHALL BE 4:1 UNLESS NOTED OTHERWISE.
5. ROCK SHALL CONFORM TO MODOT SECTION 1114.2(b) STONE FOR AGGREGATE DITCH LINING.

605 Concrete Washout
Not to Scale

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
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FINAL DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
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DESIGNER : DAS		DRAWN : ARK	
ARCHITECT : DAS		CHECKED : ERB	
ENGINEER : ERB		APPROVED : ERB	

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

EROSION CONTROL DETAILS

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING C8.0

TREE PROTECTION & REMOVAL NOTES

GUIDELINES:

1. Tree Caliper (TrCa) shall be documented at the outset of construction activities. TrCa measurement shall follow standards found in "Timber Cruising Handbook," chapter 10 produced by the U.S. Forest Service.
2. Tree Protection Zone (TPZ) is to be calculated and clearly marked around each Existing Trees to Remain (ExTR) prior to construction. The TPZ is 1.5 feet away in radial distance from the tree trunk for every inch in Tree Caliper. (example: 28" TrCa x 1.5 = 42' TPZ)
3. Within the TPZ, critical areas such as flood plains and steep slopes should be left in their pre-construction condition.
4. Tree protection & preservation provides proactive management of ExTR throughout construction and other activities that may adversely affect ExTR and to manage and minimize damage from construction practices. Tree maintenance shall be performed only be an ISA Certified arborist who is familiar with the practices and hazards of aboriculture and equipment used in such operations.
5. Out the outset of construction, all trees indicated for removal shall have their trunks marked with bright orange paint on all visible sides.

TREE PROTECTION MEASURES:

1. Temporary Fencing: Install temporary fencing around tree protection zones (TPZ) to protect Existing Trees to Remain (ExTR) from construction damage. Maintain temporary fence and remove when construction is complete. Fencing should be the last item removed after completion of project. This fencing will be erected at the TPZ for each ExTR. Fencing shall comply with 02/L0.3. Fencing will be rigidly supported and maintained during all construction periods at the detailed minimum height above grade.
2. Laminated signs stating "No Entry, Tree Protection Area" in both English and Spanish are to be posted at thirty foot (30') intervals or on all four (4) cardinal sides--whichever is greater.
3. Protect tree root systems from damage caused by runoff or spillage of noxious materials while mixing, placing, or storing construction materials.
4. Protect root systems from ponding, eroding, or excessive wetting caused by watering operations.
6. Do not store construction materials, debris, or excavated material inside tree protection zones.
7. Do not permit vehicles or foot traffic within TPZs; prevent soil compaction over root systems.
8. Maintain TPZs free of weeds and trash.

TREE PRUNING:

1. Trees to remain that are affected by temporary and permanent construction shall be pruned according to current ANSI A300 pruning standards.
2. Trees to remain shall be pruned by an ISA Certified arborist to remove dead limbs, to achieve a more uniform appearance, and to keep them in a healthy state throughout construction proceedings.

EXCAVATION:

1. Do not excavate within tree protection zones, unless otherwise indicated and approved. Before excavation, pad preparation, or grading for foundations, footings, walls, or trenching, relevant trees shall be root pruned 1 foot outside the tree protection zone as described below.
2. Where excavation for new construction is required within tree protection zones and approved, hand prune or utilize root pruning techniques described below prior to excavation.
3. Do not allow exposed roots to dry out before placing permanent backfill. Provide temporary earth cover or pack with organic material and wrap with burlap. Water and maintain in a moist condition. Temporarily support and protect roots from damage until they are permanently relocated and covered with soil.
4. Where utility trenches are required near tree protection zones, tunnel under or around roots by drilling, auger boring, pipe jacking, or digging by hand around individual roots to mitigate damage to the root system and tree. A Supersonic Air tool (air spade) can also be used safely to open trenches without severing roots. See 03/L0.3.
5. Root Pruning: where required and approved, shall be done mechanically with a root pruning machine, vibratory plow, or with a narrow trencher with sharp blades. Once a trench is opened up, all exposed roots will be hand pruned to provide clean-cut ends. Do not cut main lateral roots or buttress roots; cut only smaller roots that interfere with installation of utilities. Cut roots with sharp pruning instruments; do not break or pull with backhoe or similar equipment.

DAMAGE MITIGATION AND REPLACEMENT:

1. Promptly repair trees damaged by construction operations within 24 hours. Treat damaged trunks, limbs, and roots according to arborist's written instructions.
2. Remove and replace trees indicated to remain that die or are damaged during construction operations that the arborist determines are incapable of restoring to normal growth pattern.
3. Provide new trees of caliper size and species selected by owner when damaged trees are required to be replaced. Plant and maintain new trees as specified.
4. Aerate surface soil, compacted during construction, 10 feet beyond the drip line and no closer than 36 inches to the tree trunk using vertical mulching techniques or radial aeration techniques as instructed by Landscape Architect.

DISPOSAL OF WASTE MATERIALS:

1. Remove excess excavated material and displaced tree's from owner's property and dispose according to City guidelines.

TREE REPLACEMENT:

1. In the event that a tree or trees designated for preservation are severely damaged, destroyed or removed, they shall be replaced upon notice by the Landscape Architect at the rates agreed upon.

EXTERIOR IRRIGATION SYSTEM SPECIFICATION

A. System Design and Performance Requirements
1. Provide an automatic, electrically-and centrally-controlled irrigation system for all new planting areas, unless otherwise directed by Owner's Representative.
2. The irrigation system should be designed to provide complete coverage and prevent overspray on paving and adjacent structures.
3. Irrigation Contractor must provide an irrigation design for the irrigation lines, sprinkler heads, and drip emitters. The irrigation designer must determine and document the existing water pressure and flow available at each hookup location.
4. Drip systems are encouraged in planting beds.
5. Pop-up type sprinkler heads are required.
6. Base sprinkler selection and spacing on a wind velocity of 10 mph.
7. Provide a soil moisture sensor for all systems.
8. Before starting construction, submit a design drawing to Landscape Architect for review and approval.

B. Submittals: Submit the following design and construction documents to Landscape Architect.
1. Design Documents
   a. Provide record drawings showing the location and type of all lines, heads, and valves. Use the site landscape drawing background as a base drawing to complete the record drawings. In addition, provide a reduced plan set to be left at the irrigation controller.
   b. Before starting construction, Irrigation Contractor must submit a list of irrigation systems designed by their irrigation designer over the last five years.
2. Construction Documents
   a. Before starting construction, submit:
      - A list of materials
      - Manufacturer specifications and installation procedures
      - Flow and test reports
   b. Provide the following operation and maintenance documentation:
      - A watering log (left at the irrigation controller)
      - A list of the closed suppliers for all heads, valves, and the irrigation system controller
      - Two copies of an operational manual (submit upon project completion)

C. Product Standards
1. Provide Owner's Representative with a product guarantee for the valves, heads, and drip lines used on the project.

D. Materials
1. All exterior irrigation pipe and fittings must be Class 200-DR 21 polyvinyl chloride (PVC) water pipe, extruded from virgin parent material, that conform to ASTM 2241 standards.
2. All sprinkler heads must be:
   - Industrial-grade
   - Full or adjustable, part-circle rotary pop-up, with a single or double nozzle
   - Driven by a hydraulic turbine-type motor or oscillating impact-type drive
   - Hydraulic valve-in-head model, normally closed
3. Automatic remote control valves must be electric solenoid-type, with globe screwed patterns, using 24 VAC, 60 Hz power with a running current of 2 W. The valve solenoids must be completely epoxy-encapsulated for positive waterproofing and must include a stainless steel shunt band. The valves must open and close slowly (in not less than 5 seconds) by means of a potential fluid resistor to avoid damage or surge pressures. All wiring in PVC conduits.
4. The automatic controller must be capable of 14-day programmability, with infinite timing from 0 to 60 seconds on each station, and no time lag between stations. The controller must be UL-listed, with a plug-in transformer using 115 VAC to 24 V circuit breaker protection. The cabinet must be lockable and waterproof.

E. Special Requirements
1. Booster pumps may be required when the existing water pressure and flow will not operate the irrigation system properly.
2. All irrigation systems must have a water meter from the Lee's Summit, Missouri, installed on the water service line inside the building. The purchase of the meter must be part of the Irrigation Contractor's bid.
3. Provide an air connection (for blowing out the system) and a backflow preventer on all irrigation systems.

F. Preparation
1. If existing water to a building will be shut down to provide water for the irrigation system, the Irrigation Contractor, in conjunction with the Owner's Representative, must prepare a shutdown procedure document before starting construction that outlines scheduling and notification requirements.

G. Installation Guidelines
1. Where possible, provide a uniform pipe bedding of suitable on-site material. If suitable material is not available, backfill the trench with sand. Using a material similar to the bedding, backfill the entire trench width evenly in 6" lifts to 6" above the top of the pipe. Compact the lifts to at least a 95% Standard Proctor density, meeting ASTM D1556 standards at optimum moisture (or as recommended by the soils engineer). Backfill the remaining trench in lifts not to exceed 12" up to the sub-grade height for the surface condition encountered. Compact the lifts to a 95% Standard Proctor density, meeting ASTM D1556 standards at optimum moisture (or as recommended by the soils engineer). Backfilling and compacting above the subgrade must be determined by the soils engineer or by the recommended paving design for the project.
2. Bury pressure irrigation lines at a minimum depth of 18". Bury non-pressure lines at a minimum depth of 12".

H. Quality Control
1. Work on exterior irrigation systems must conform to the following quality control standards.
   a. Testing Laboratory: Owner's Representative and/or General Contractor will retain the services of a qualified, independent testing laboratory to perform soil compaction tests, as directed, during construction.
   b. Testing Methodology and Extent: Conduct a coverage test when the sprinkler system is completed.

I. Cleaning and Adjusting
1. With the participation of Owner's Representative personnel, the system must be operated before acceptance by Owner's Representative.

J. Startup and Training
1. Irrigation Contractor must operate the irrigation system with Owner's Representative maintenance staff present to observe its operation.
2. Irrigation Contractor must adjust the system over a preventative maintenance period of 90 days and guarantee the system for one year upon acceptance of the system by Owner's Representative.

LANDSCAPE LINETYPES & SYMBOLS LEGEND

Symbol	Description
L.O.D.	LIMIT OF DISTURBANCE
MATCHLINE: SEE VIEW/SHEET	MATCHLINE
	VIEW ENLARGEMENT
	STREETSCAPE PLANTING SETBACK
	CONCRETE CONTROL JOINT
	CONCRETE EXPANSION JOINT
TP	TREE PROTECTION FENCING
980	PROPOSED MAJOR CONTOUR
982	PROPOSED MINOR CONTOUR
980	EXISTING MAJOR CONTOUR
982	EXISTING MINOR CONTOUR
26"	EXISTING PLANT TO BE REMOVED WITH APPROXIMATE CALIPER SIZE
26"	EXISTING PLANT TO REMAIN WITH APPROXIMATE CALIPER SIZE

LANDSCAPE SET ABBREVIATIONS

L.O.D.	Limits of Disturbance	VAC	Volts Alternating Current
P.O.B.	Point of Beginning	V	Volts
		Hz	Hertz (standard unit of frequency)
TPZ	Tree Protection Zone	W	Watts
TrCa	Tree Caliper / Stem Diameter	PVC	Polyvinyl Chloride
ExTR	Existing Tree(s) to Remain		
		"	Inches
O.C.	On Center	'	Feet
Clr.	Clear (Face to Face)	Ø	Diameter
TYP.	Typical	°	Degrees
SIM.	Similar	℄	Centerline
EQ.	Equal	@	At
APPROX.	Approximate		
QTY.	Quantity		
w/	With		
SPD	Standard Proctor Density		

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2018013633
PROFESSIONAL ENGINEER

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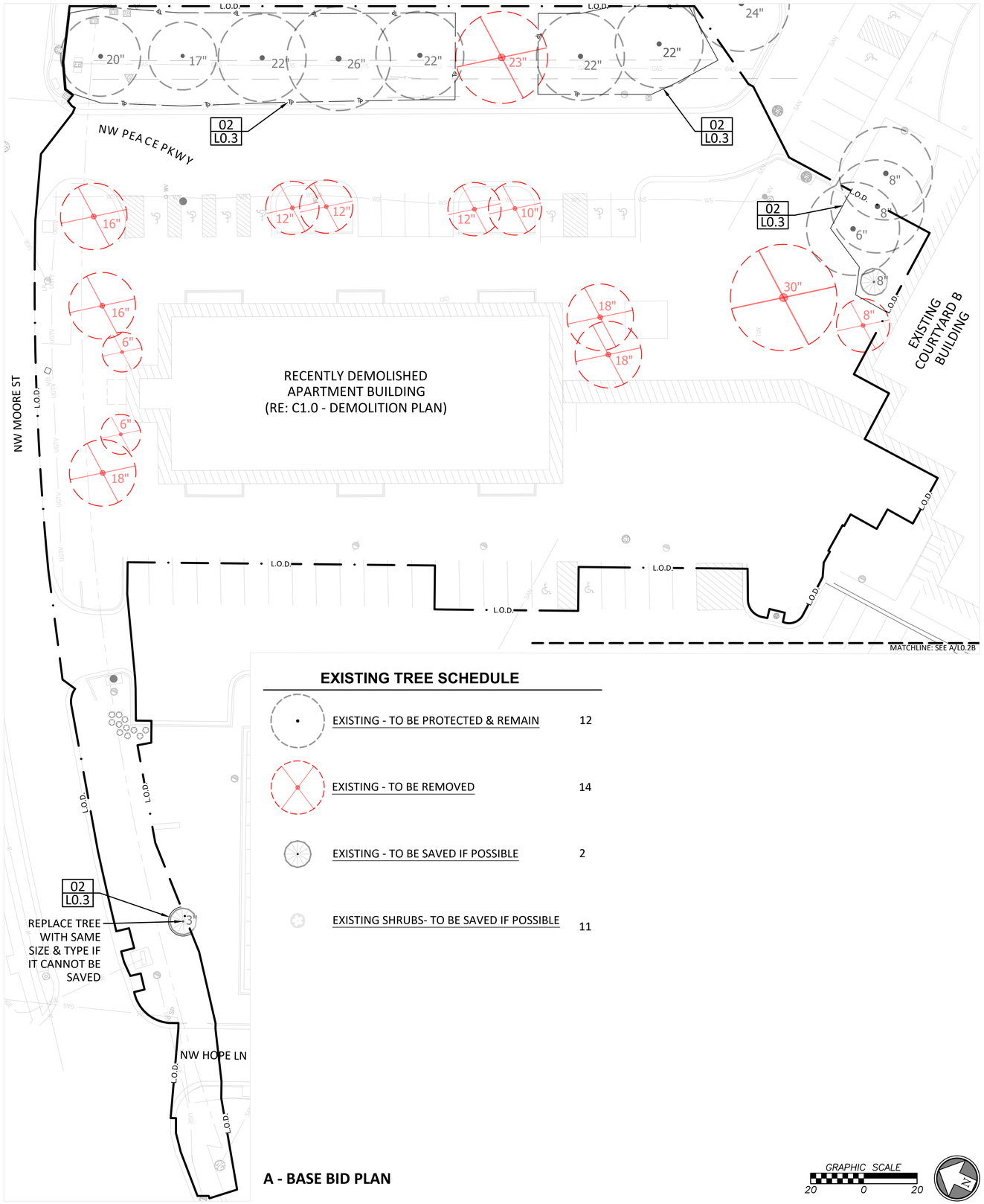
ARCHITECT :	DAS	CHECKED :	ADM
ENGINEER :	ERB	APPROVED :	CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

LANDSCAPE PLAN NOTES

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L0.1



EXISTING TREE SCHEDULE

	EXISTING - TO BE PROTECTED & REMAIN	12
	EXISTING - TO BE REMOVED	14
	EXISTING - TO BE SAVED IF POSSIBLE	2
	EXISTING SHRUBS- TO BE SAVED IF POSSIBLE	11

A - BASE BID PLAN

GRAPHIC SCALE
20 0 20

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FINAL
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PROJECT TITLE
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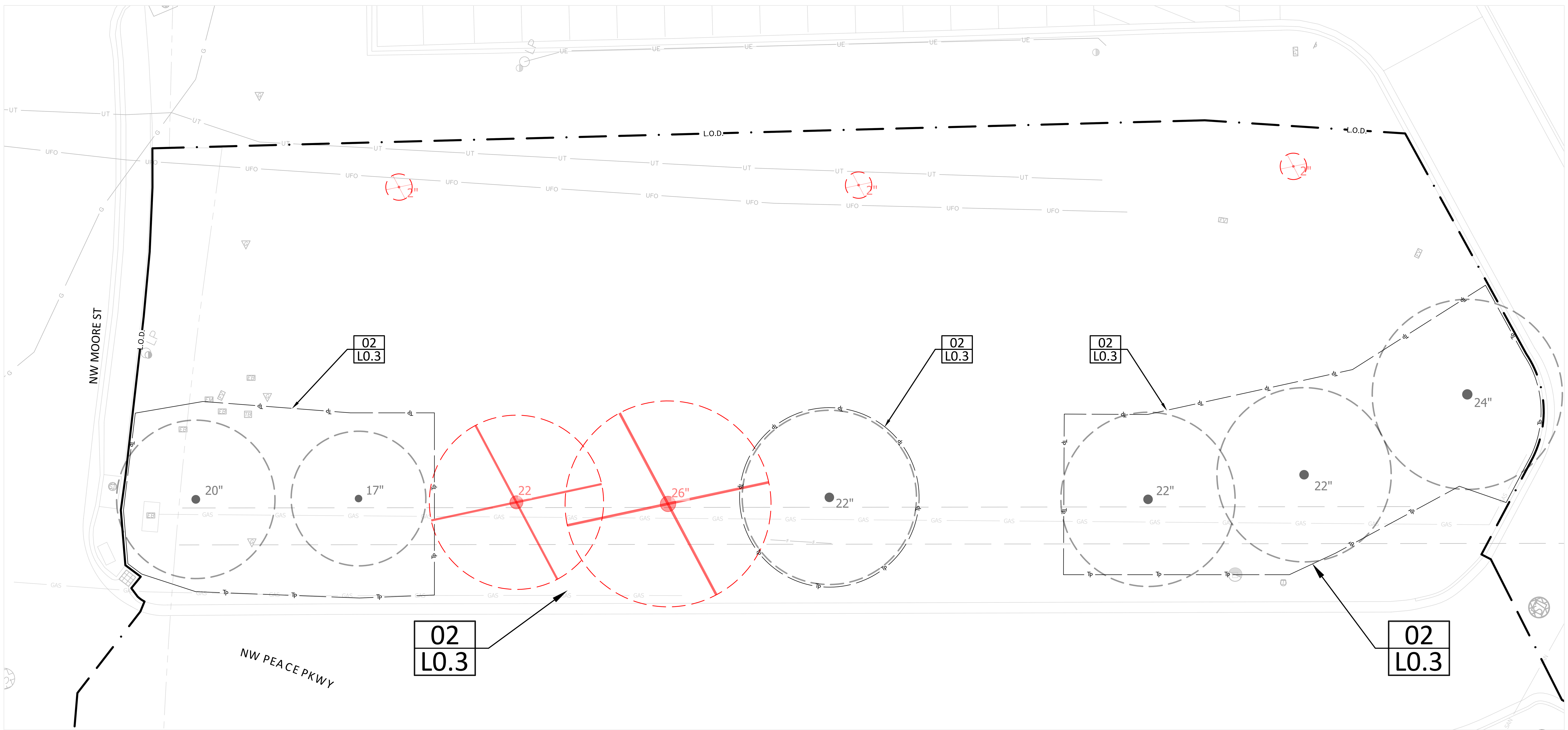
NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE
TREE
PROTECTION &
REMOVAL

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L0.2

EXISTING TREE SCHEDULE ADDITIVE ALTERNATIVE 01

(symbol)	EXISTING - TO BE PROTECTED & REMAIN	6
(symbol)	EXISTING - TO BE REMOVED	6



A - ADDITIVE ALTERNATE 01 PLAN

GRAPHIC SCALE
10 0 10

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DRAWING TITLE
TREE PROTECTION & REMOVAL - ADD ALT 01

DATE: December 1, 2023
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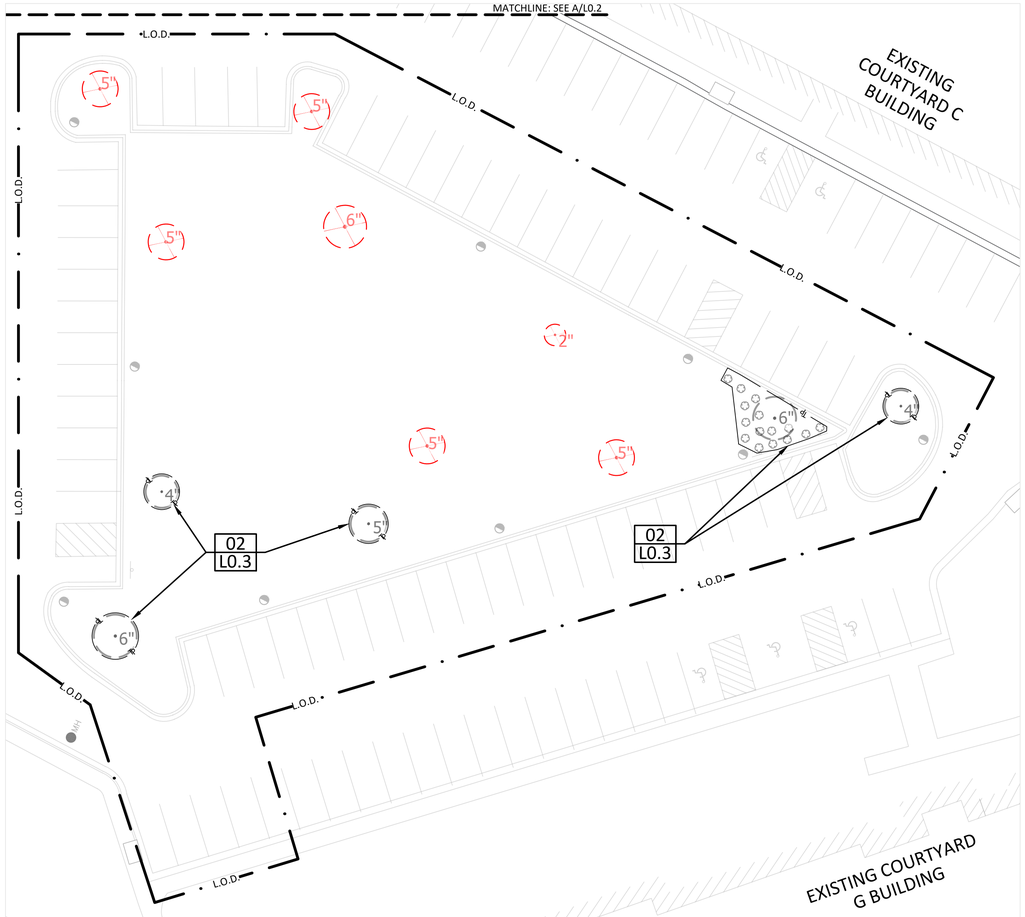
DRAWING L0.2A



EXISTING TREE SCHEDULE
ADDITIVE ALTERNATIVE 02

●	EXISTING - TO BE PROTECTED & REMAIN	5
✕	EXISTING - TO BE REMOVED	7
✿	EXISTING SHRUBS- TO BE SAVED IF POSSIBLE	15

A - ADDITIVE ALTERNATE 02 PLAN

GRAPHIC SCALE
20 0 20

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DRAWING TITLE
TREE PROTECTION & REMOVAL - ADD ALT 02

DATE: December 1, 2023
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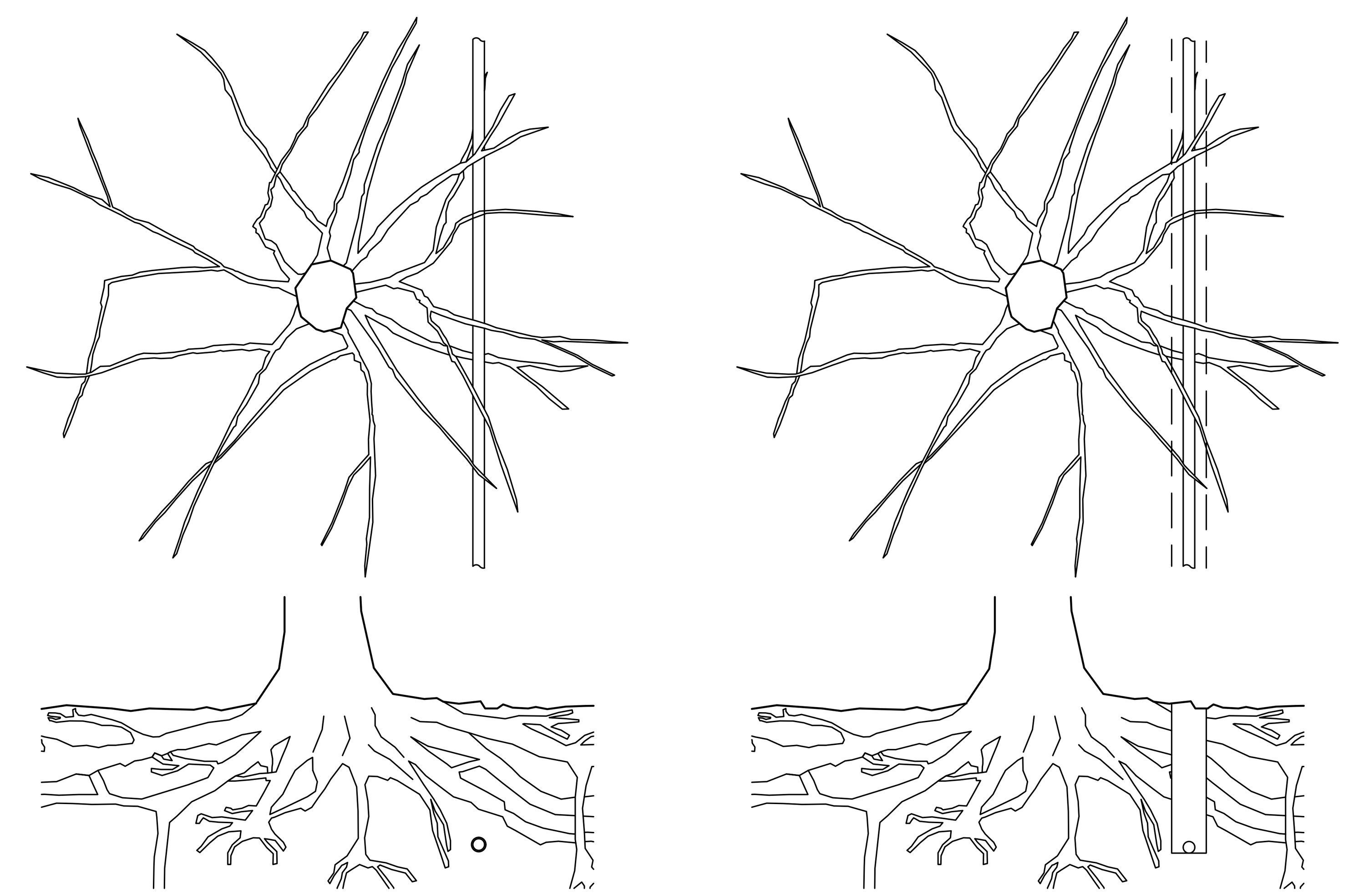
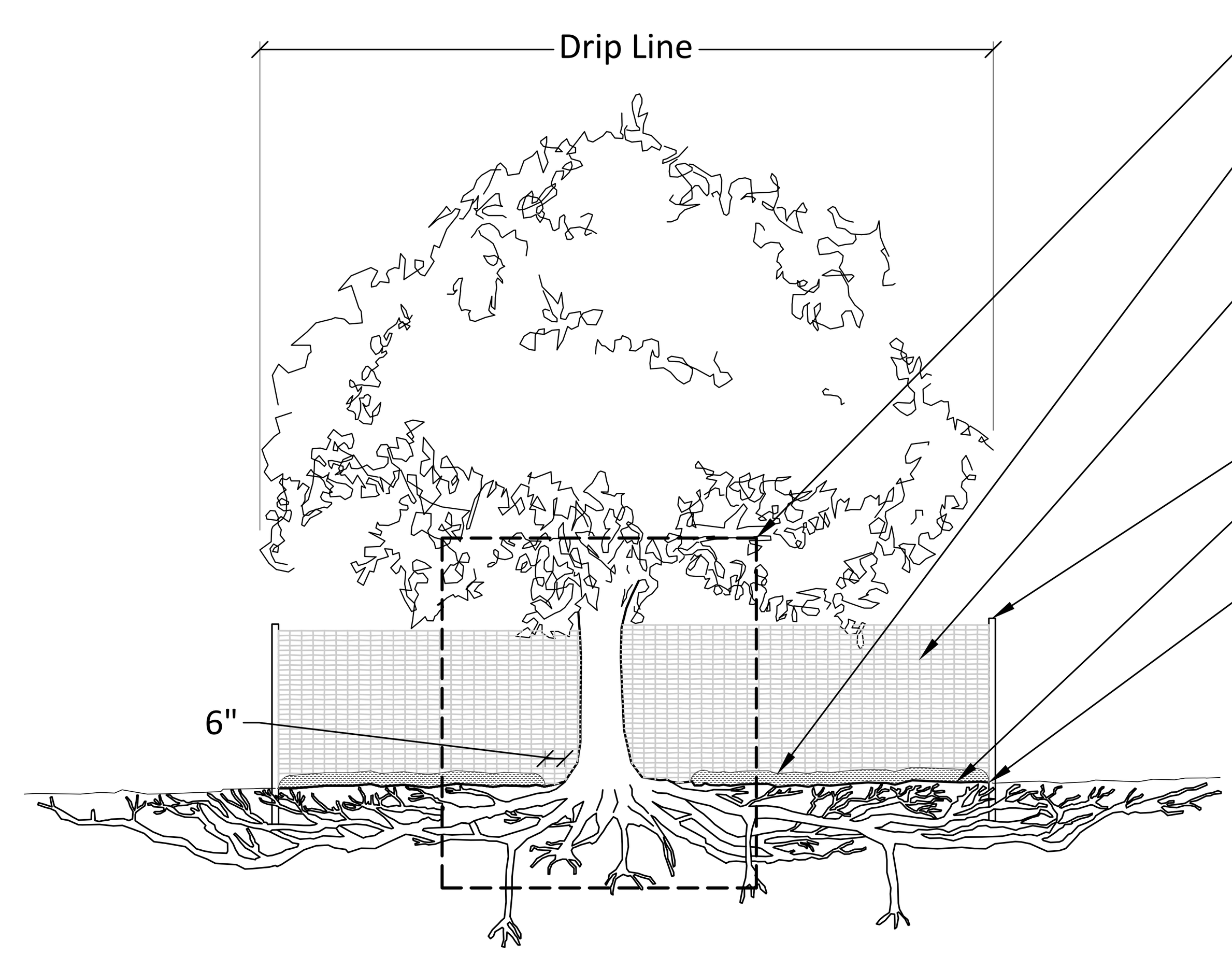
DRAWING L0.2B



Less damage is done to tree roots if utilities are tunneled under roots (left--top and bottom) rather than trenched across roots (right--top and bottom).

03 Underground Utility Installation
Not to Scale

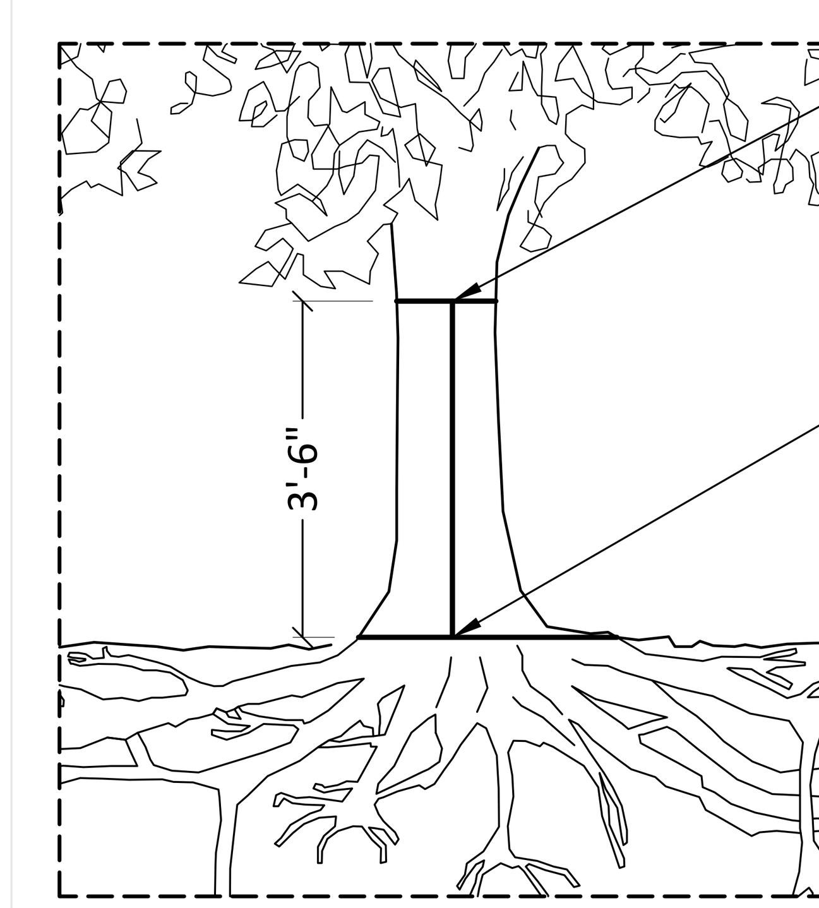


- Tree Protection Zone (TPZ) detail enlargement (Re: 01/L0.3)
- Apply four inch (4") thickness of organic mulch. Do not place mulch within six inches (6") of the tree trunk to allow the trunk to breathe.
- Tree Protection fence: to be installed at perimeter of TPZ (see Note 3 below). Orange-colored high-density polyethylene fencing with 3.5" x 1.5" openings. Steel posts installed at six feet (6') o.c.
- 2"Ø steel posts or approved equal
- Maintain existing grade within the tree protection fence unless otherwise indicated on the plans.
- Edge of Tree Protection Zone

Notes:

1. See L0.1 for additional information.
2. No equipment shall operate inside the protective fencing including during fence installation and removal.
3. Fencing to be joined together at the edge of CRZs to form larger areas where groupings of plant material exists (Re: L0.2, L0.2A, & L0.2B for approximate layout)

02 Tree Protection Barrier
Not to Scale



- Diameter at breast height (DBH) - measured in inches at 42" above existing grade
- Tree trunk at existing grade

TPZ Formula:
DBH x 1.5 = X feet Ø

Example: DBH = 20"
20 x 1.5 = 30' Ø TPZ

01 Tree Protection Zone
Not to Scale

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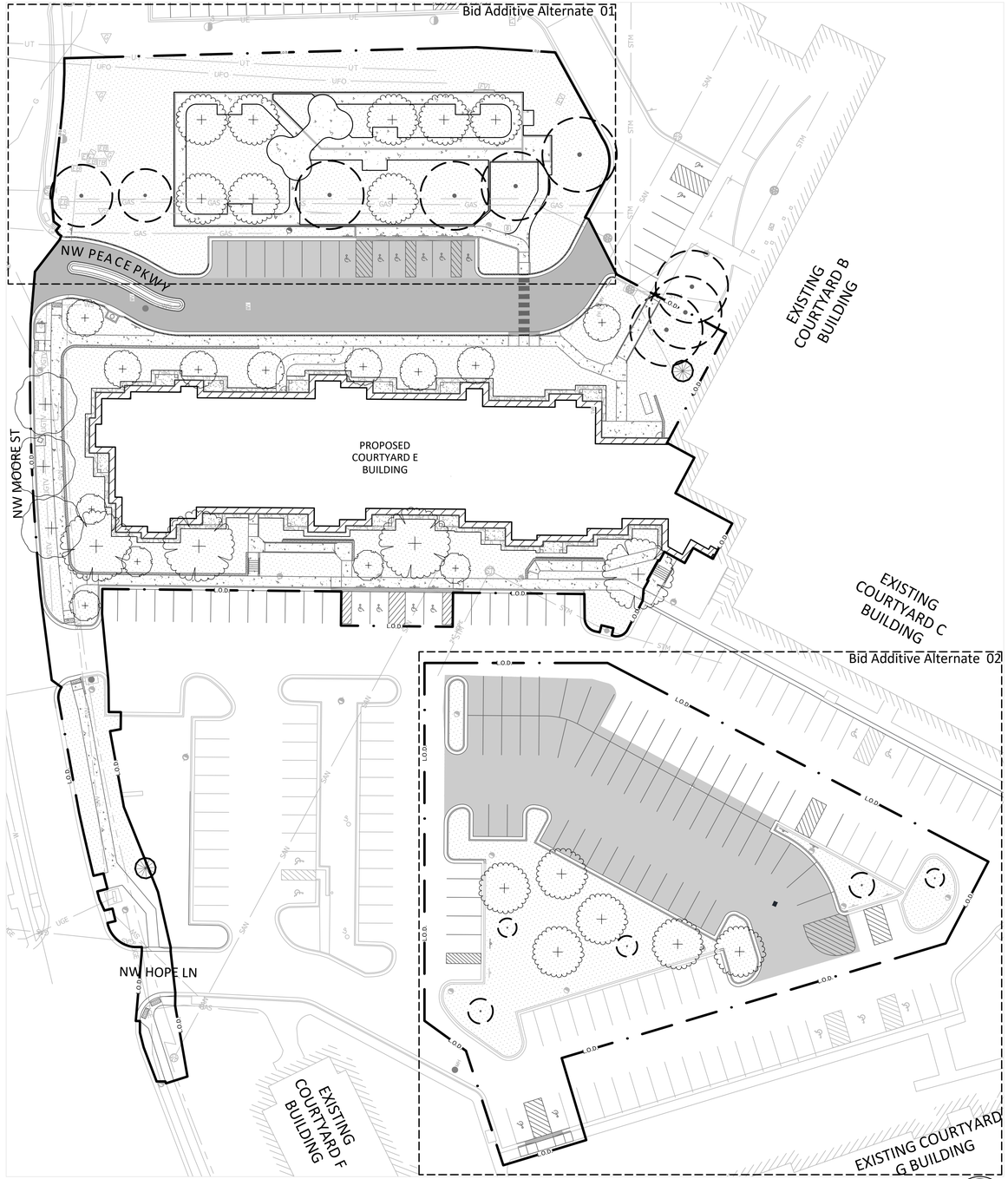
TREE PROTECTION DETAILS

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING
L0.3



SITE REFERENCE LEGEND

SYMBOL	DESCRIPTION
	BID ADDITIVE ALTERNATE 01 - DOG PARK
	BID ADDITIVE ALTERNATE 02 - ADDITIONAL PARKING
	PLANTING AREA
	MAINTENANCE STRIP
	10" WIDE CONCRETE MOW STRIP UNDER FENCE
	CONCRETE PAVING
	CONCRETE PAVING (RE: CIVIL)
	PARKING (RE: CIVIL)
	ROADWAY(RE: CIVIL)
	PROPOSED BUILDING OUTLINE (RE: ARCH)
	GROUND LEVEL PATIOS (RE: ARCH)

A - PROJECT EXTENTS

GRAPHIC SCALE
30 0 30

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DRAWING TITLE

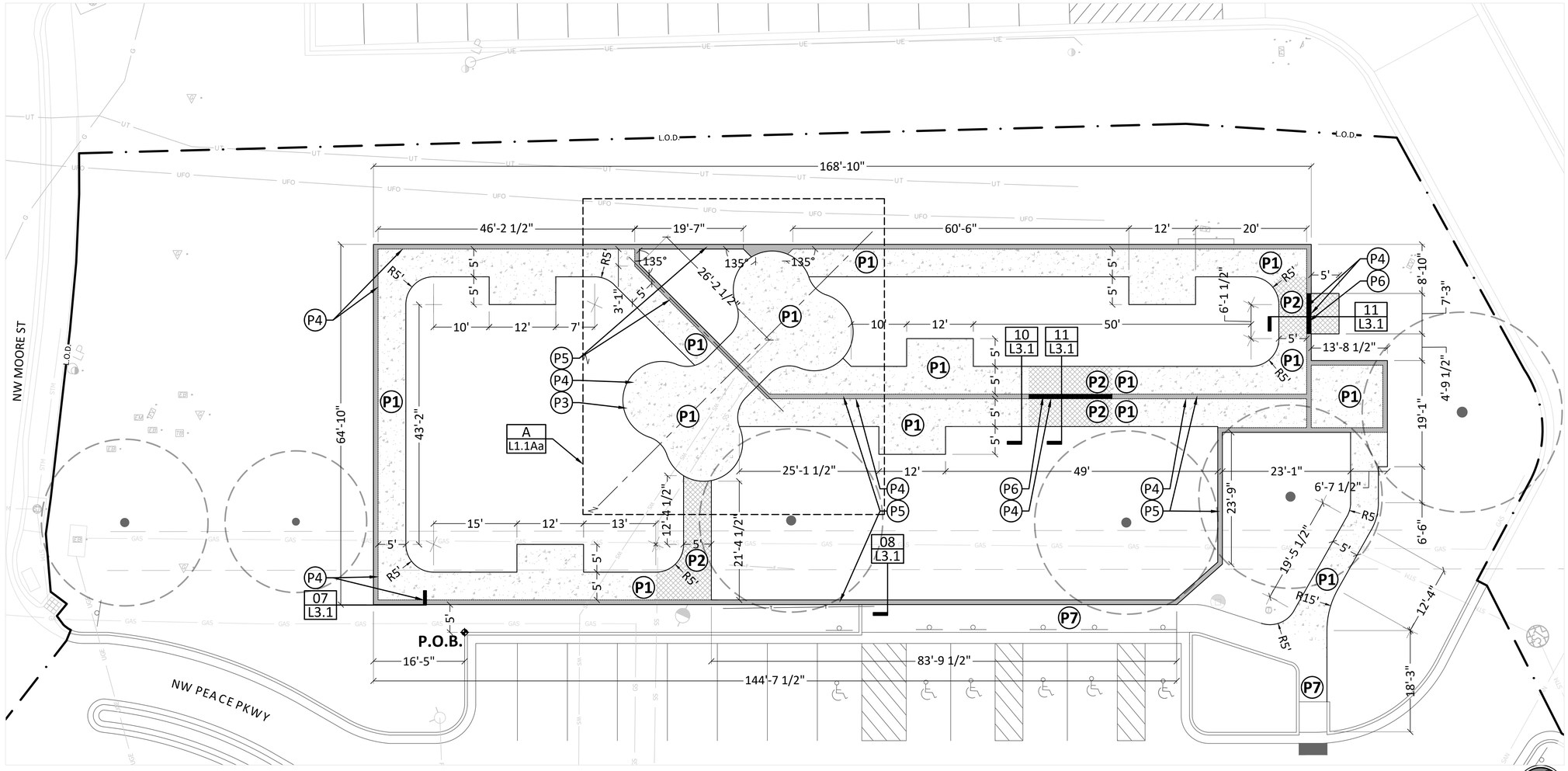
SITE REFERENCE PLAN

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L1.0

PAVING SCHEDULE - BID ADDITIVE ALTERNATE 01

Px	Type	Color / Product	Finish / Size	Joints / Additional Notes	Approx. Qty.
P1	LIGHT-DUTY CONCRETE	KCMMB 4K; STANDARD GRAY	MEDIUM BROOM FINISH	TOOLED CONTROL JOINTS SPACED AS SHOWN RE: 04/L3.1	3241 SF
P2	HEAVY DUTY CONCRETE	KCMMB 4K; STANDARD GRAY	MEDIUM BROOM FINISH	TOOLED CONTROL JOINTS SPACED AS SHOWN RE: 04/L3.1	323 SF
P3	DONOR PAVERS			RE: OWNER'S REPRESENTATIVE	
P4	ISOLATION JOINT	CLOSED-CELL POLYETHYLENE FLAT BACKER ROD		WHERE INDICATED ON PLAN AND PER DETAILS; ADD AT ALL VERTICAL SURFACES RE: 05 & 06/L3.1	
P5	10" CONCRETE MOW STRIP UNDER FENCE	KCMMB 4K; STANDARD GRAY	MEDIUM BROOM FINISH	ISOLATION JOINTS WHERE INDICATED PER DETAIL 10/L3.1	537 SF
P6	HEAVY DUTY 10" CONCRETE MOW STRIP	KCMMB 4K; STANDARD GRAY	MEDIUM BROOM FINISH	ISOLATION JOINTS WHERE INDICATED PER DETAIL 11/L3.1	537 SF
P7	CONCRETE SIDEWALK	RE: CIVIL	MEDIUM BROOM FINISH	TOOLED CONTROL JOINTS SPACED AS SHOWN RE: 04/L3.1	RE: CIVIL

NOTES:
1. Clay soils should be pre-wet before compaction and laying cementitious mixture.
2. Concrete pours should end at joint locations. All construction joint locations to become expansion joints.
3. Place expansion joints whever the sidewalk abuts another rigid structure.
4. Concrete mix shall use type and kind for current weather conditions and shall be protected while curing as required. (RE: Civil)



A - ADDITIVE ALTERNATE 01 PLAN

GRAPHIC SCALE 10 0 10

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ENGINEER	ERB	APPROVED	CDW

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DRAWING TITLE

PAVING LAYOUT - ADD ALT 01

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L1.1A

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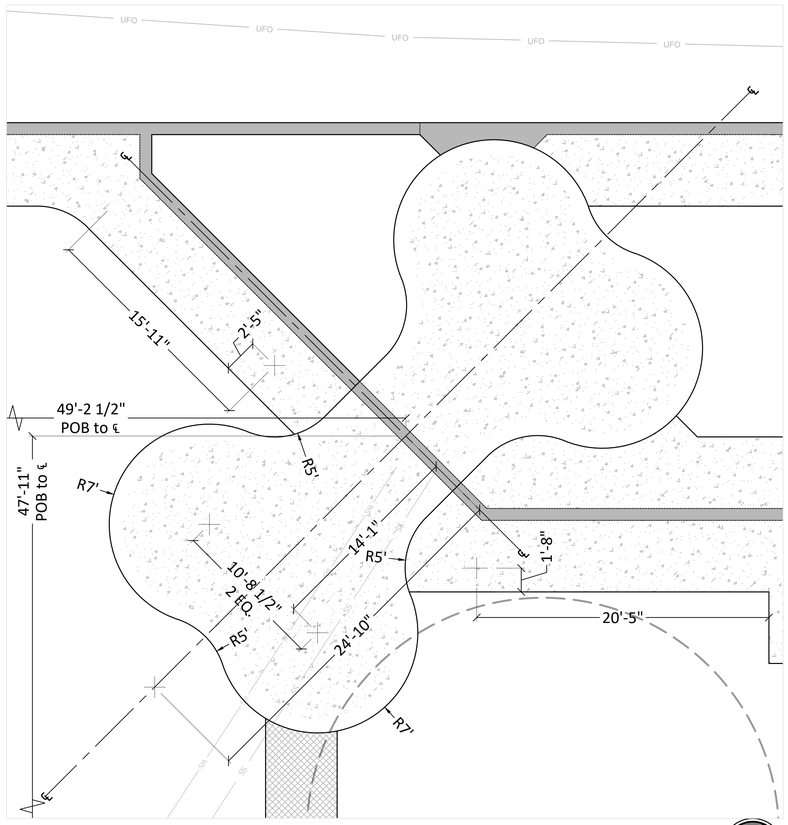
04/23/2024



A - ADDITIVE ALTERNATE 01 ENLARGEMENT PLAN

GRAPHIC SCALE
5 0 5

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DRAWING TITLE

PAVING LAYOUT ENLARGEMENT - ADD ALT 01

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L1.1Aa

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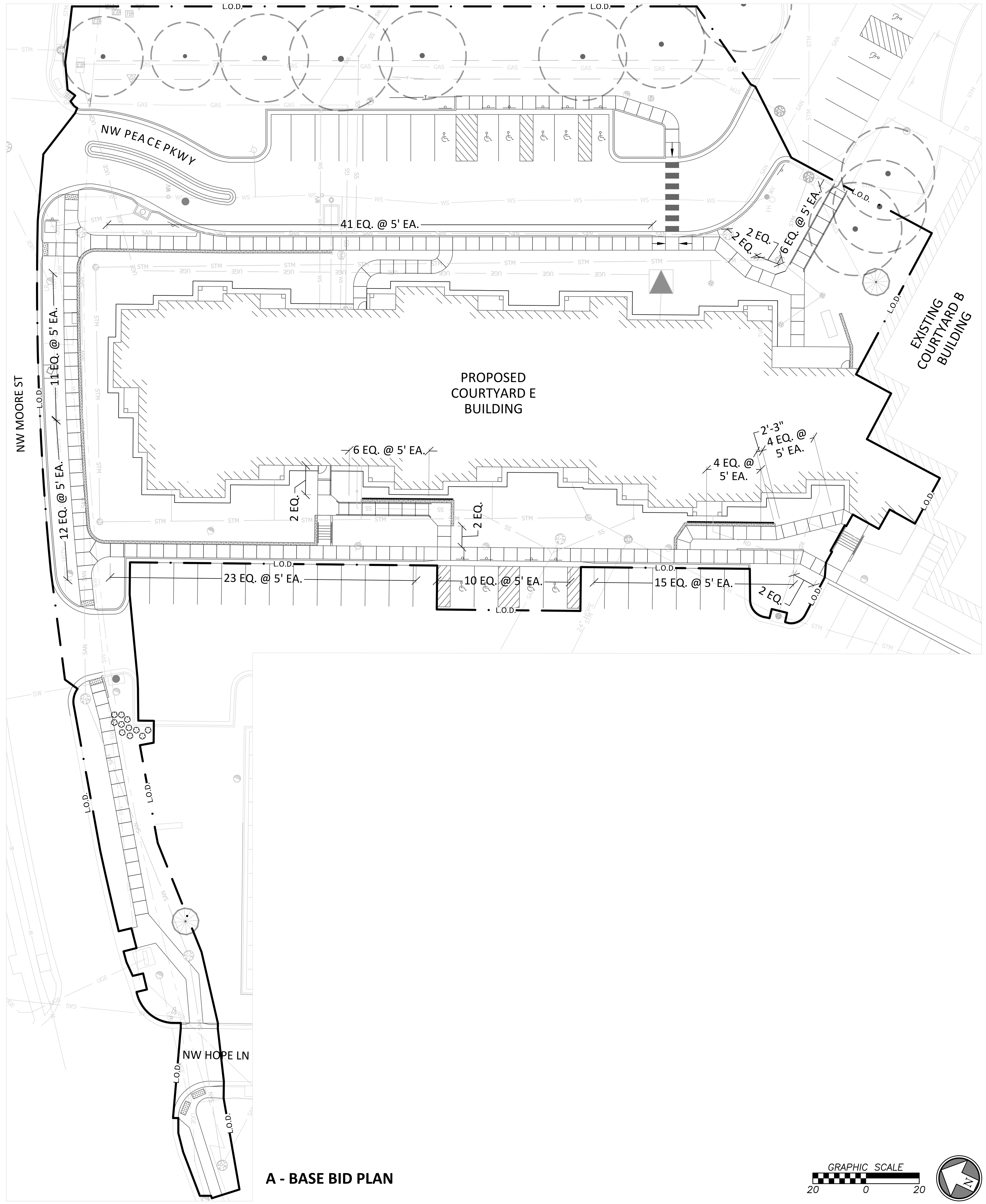

A - BASE BID PLAN

GRAPHIC SCALE
20 0 20

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STATE OF MISSOURI
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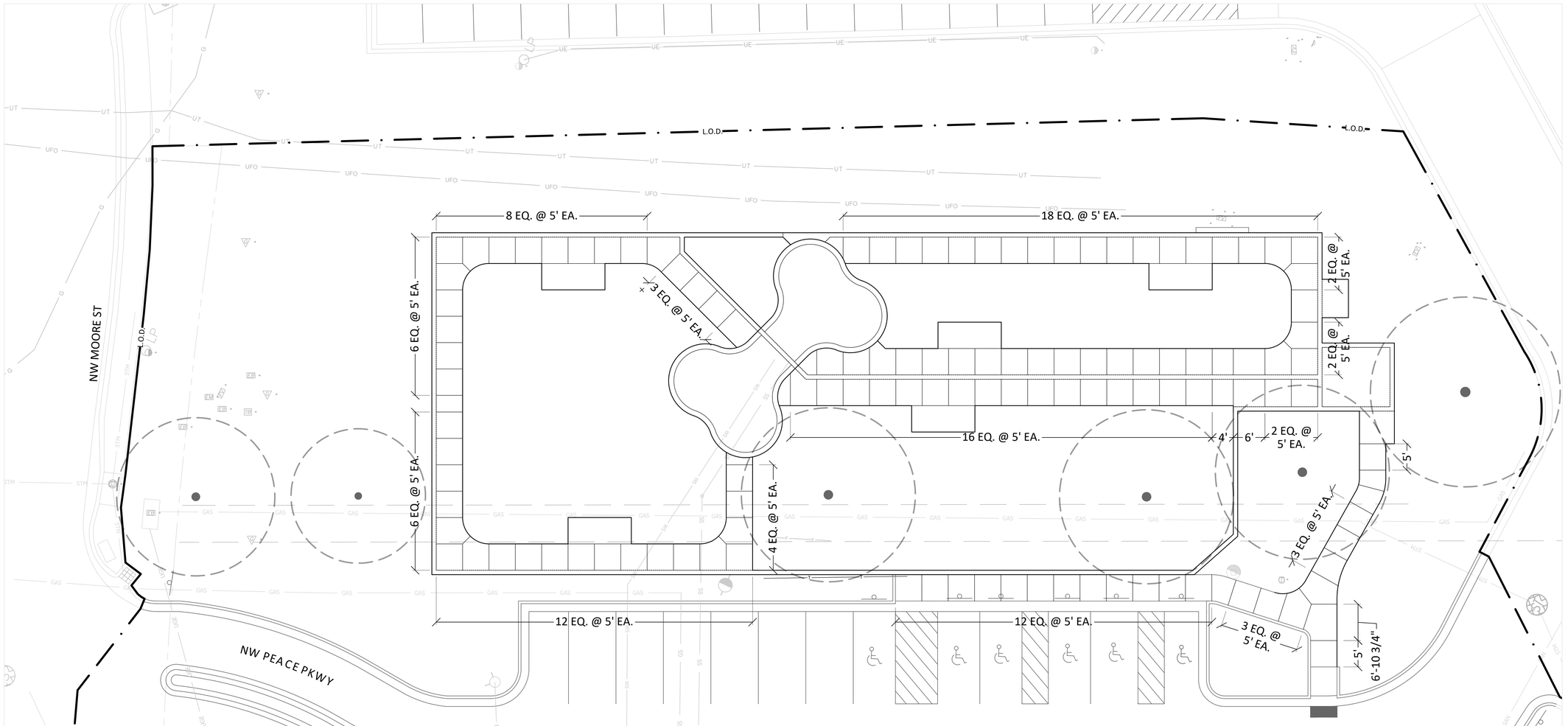
DRAWING TITLE

CONCRETE SCORING LAYOUT

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L1.2



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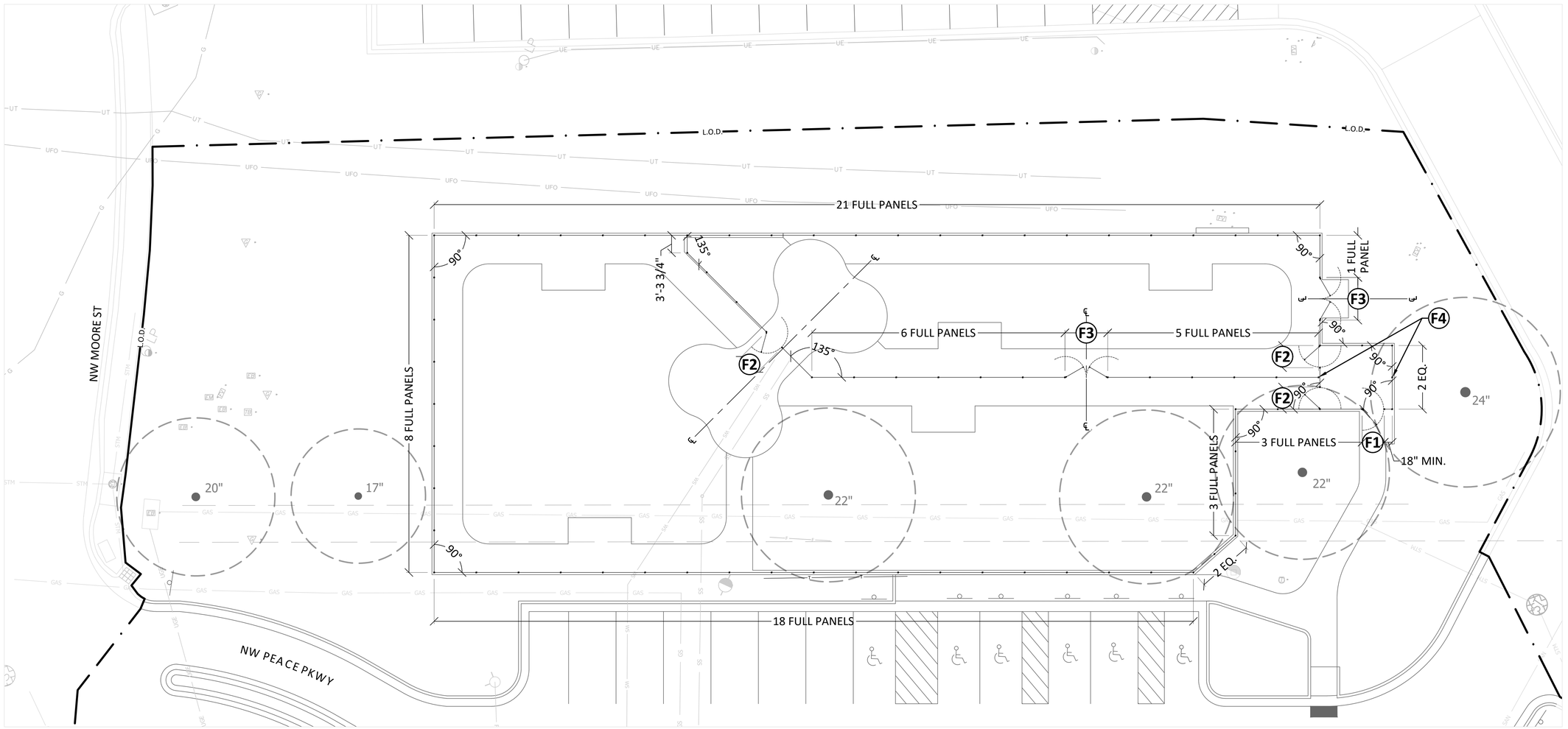
DRAWING TITLE

CONCRETE SCORING LAYOUT - ADD ALT 01

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L1.2A

DOG PARK FENCING NOTES

Fx	Description
F1	VERIFY PRIMARY ENTRY GATE POST SPACING W/ FENCE MANUFACTURER
F2	VERIFY SECONDARY ENTRY GATE POST SPACING W/ FENCE MANUFACTURER
F3	VERIFY SERVICE GATE POST SPACING W/ FENCE MANUFACTURER; CENTER FENCE ON REINFORCED PAVING AREA
F4	ALIGN POSTS



A - ADDITIVE ALTERNATE 01 PLAN

GRAPHIC SCALE 10 0 10

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DRAWING TITLE

FENCING LAYOUT - ADD ALT 01

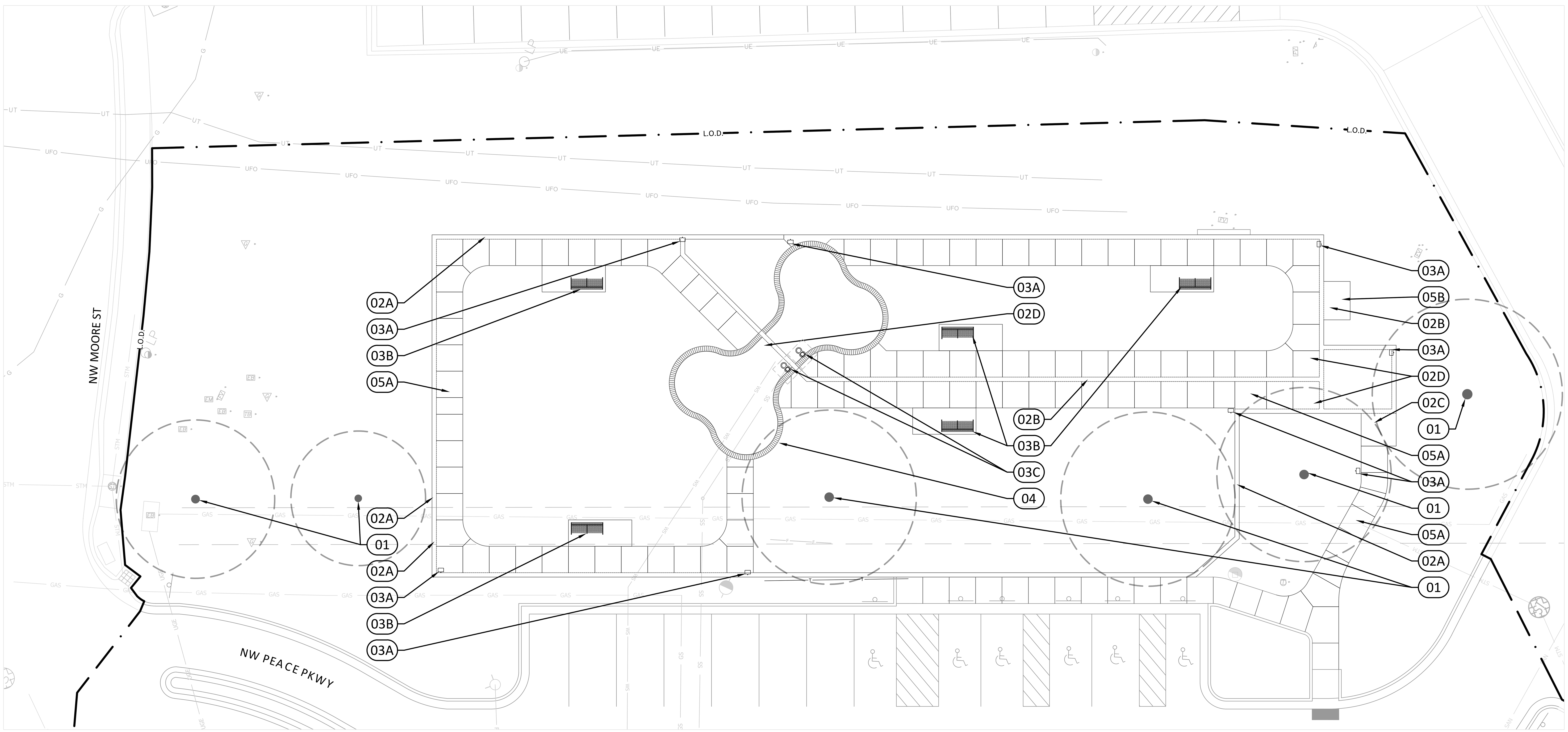
DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING L1.3A

DOG PARK AMENITIES SCHEDULE

xxx	Description	Approx. Qty.
01	EXISTING TREE TO REMAIN (RE: L0.2A)	
02A	DOG PARK FENCING ON 10" CONCRETE MOW STRIP (RE: L1.3A & 07 , 08, 10, 11/L3.1)	±79 PANELS ±84 POSTS ≈631 LF
02B	DOG PARK SERVICE GATES (RE: 03/L3.2)	2 SETS
02C	DOG PARK PRIMARY ENTRY GATE (RE: 04/L3.2)	1 UNITS
02D	DOG PARK SECONDARY ENTRY GATE (RE: 05/L3.2)	3 UNITS
03A	DOG WASTE STATION (RE: 01/L3.3)	7 UNITS
03B	6' PARK BENCH (RE: 02/L3.3)	5 UNITS
03C	WATER FOUNTAIN (RE: 03/L3.3)	2 UNITS
04	DONOR PAVERS (RE: OWNER'S REP)	≈386 PCS
05A	CONCRETE PAVING (RE: 01/L3.1)	≈ 3726 SF
05B	REINFORCED CONCRETE PAVING (RE: 01/L3.1)	≈ 375 SF



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DRAWING TITLE

AMENITIES LAYOUT - ADD ALT 01

DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING L1.4A

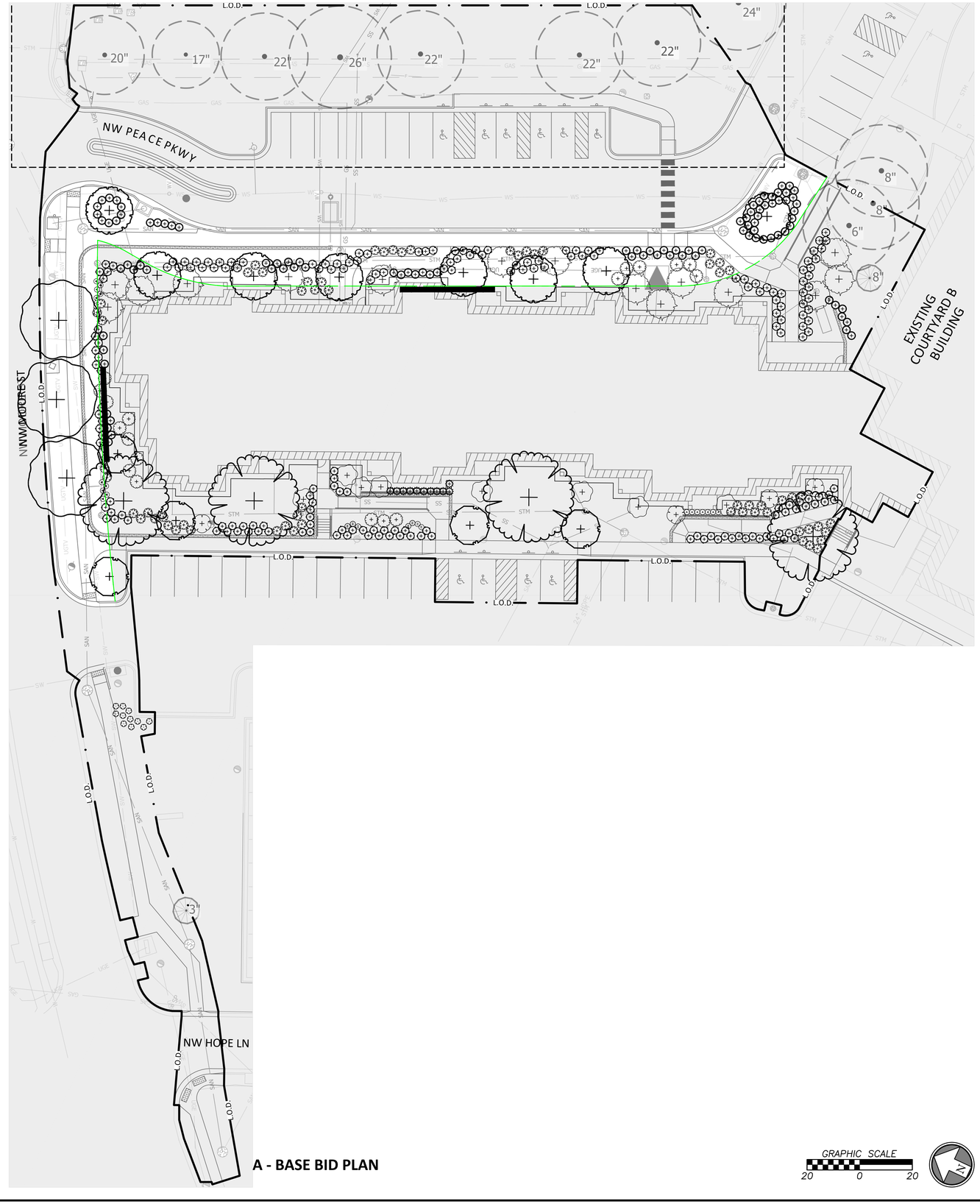
CODE REQUIRED LANDSCAPING

Project Total	Required	Description of Requirement
440 LF		STREET FRONTAGE WITH 20' WIDE LANDSCAPE STRIP
	14.67	1 TREE PER 30'
	22	1 SHRUB PER 20'
76533 SF		OPEN YARD AREA
	15.31	2 SHRUBS PER 5000 SF OF TOTAL LOT

SCHEDULE OF CODE REQUIRED 20' LANDSCAPE STRIP BASE BID

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	CAL
DECIDUOUS TREES				
	2	Acer ginnala `Flame` Flame Amur Maple	B & B	1.5"Cal
	14	Nyssa sylvatica `David Odom` Afterburner® Tupelo	B & B	3"Cal
	6	Quercus phellos Willow Oak	B & B	3"Cal

SYMBOL	QTY	BOTANICAL / COMMON NAME	SIZE	PLANT HT.
SHRUBS				
	5	Aronia melanocarpa 'Autumn Magic' Autumn Magic Black Chokeberry	5 gal	
	37	Buxus x 'Green Gem' Green Gem Boxwood	2 gal	
	21	Callicarpa x 'NCCX2' Pearl Glam® Beautyberry	5 gal	
	5	Hamamelis x intermedia `Diane` Diane Witch Hazel	5 gal	
	25	Ilex glabra 'Compacta' Compact Inkberry	5 gal	
	76	Itea virginica 'Sprich' Little Henry Sweetspire	2 gal	
GRASSES				
	6	Chasmanthium latifolium `River Mist` River Mist Variegated Northern Sea Oats	6" pot	



A - BASE BID PLAN

GRAPHIC SCALE
20 0 20

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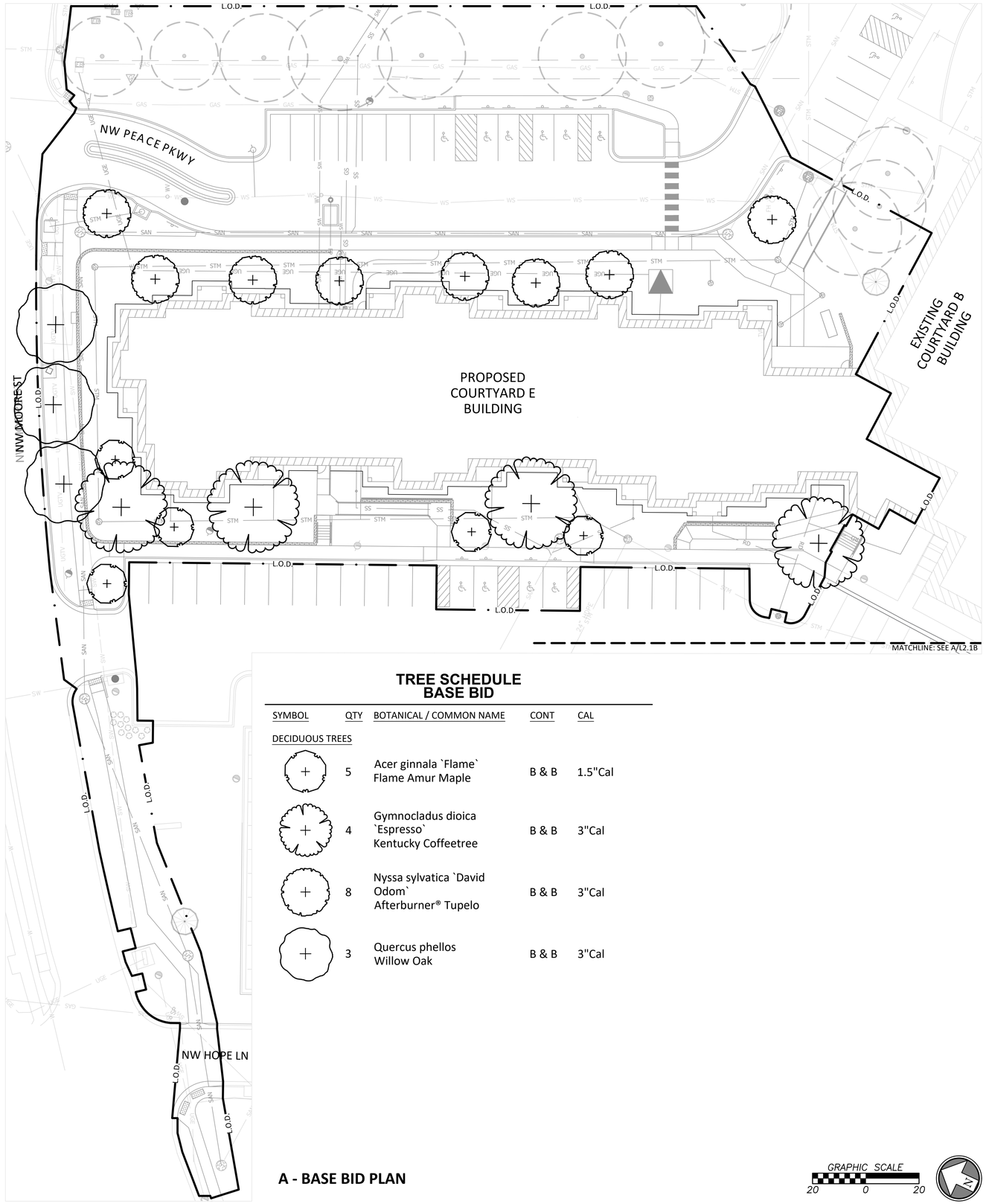
DRAWING TITLE

CODE REQUIRED LANDSCAPING

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.0



TREE SCHEDULE
BASE BID

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	CAL
DECIDUOUS TREES				
	5	Acer ginnala `Flame` Flame Amur Maple	B & B	1.5"Cal
	4	Gymnocladus dioica `Espresso` Kentucky Coffeetree	B & B	3"Cal
	8	Nyssa sylvatica `David Odom` Afterburner® Tupelo	B & B	3"Cal
	3	Quercus phellos Willow Oak	B & B	3"Cal

A - BASE BID PLAN

GRAPHIC SCALE
20 0 20

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FINAL
DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

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Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : ERDM	DRAWN : ERDM
ARCHITECT : DAS	CHECKED : ADM
ENGINEER : ERB	APPROVED : CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

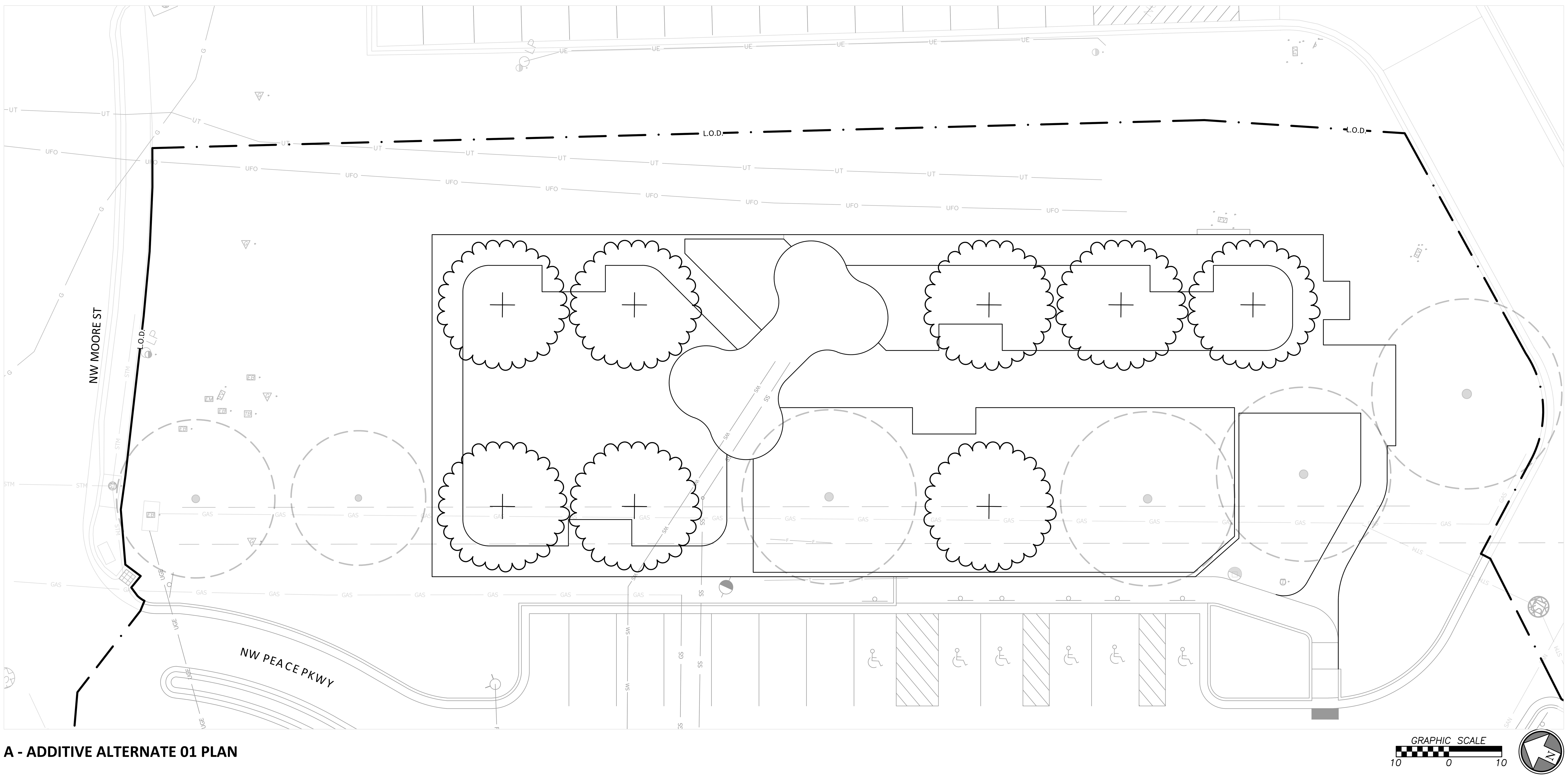
DRAWING TITLE

TREE PLANTING

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.1

TREE SCHEDULE
ADDITIVE ALTERNATE 01

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	CAL
DECIDUOUS TREES				
(tree symbol)	8	Gleditsia triacanthos inermis `Impcole` Imperial® Honey Locust	B & B	3"Cal



A - ADDITIVE ALTERNATE 01 PLAN

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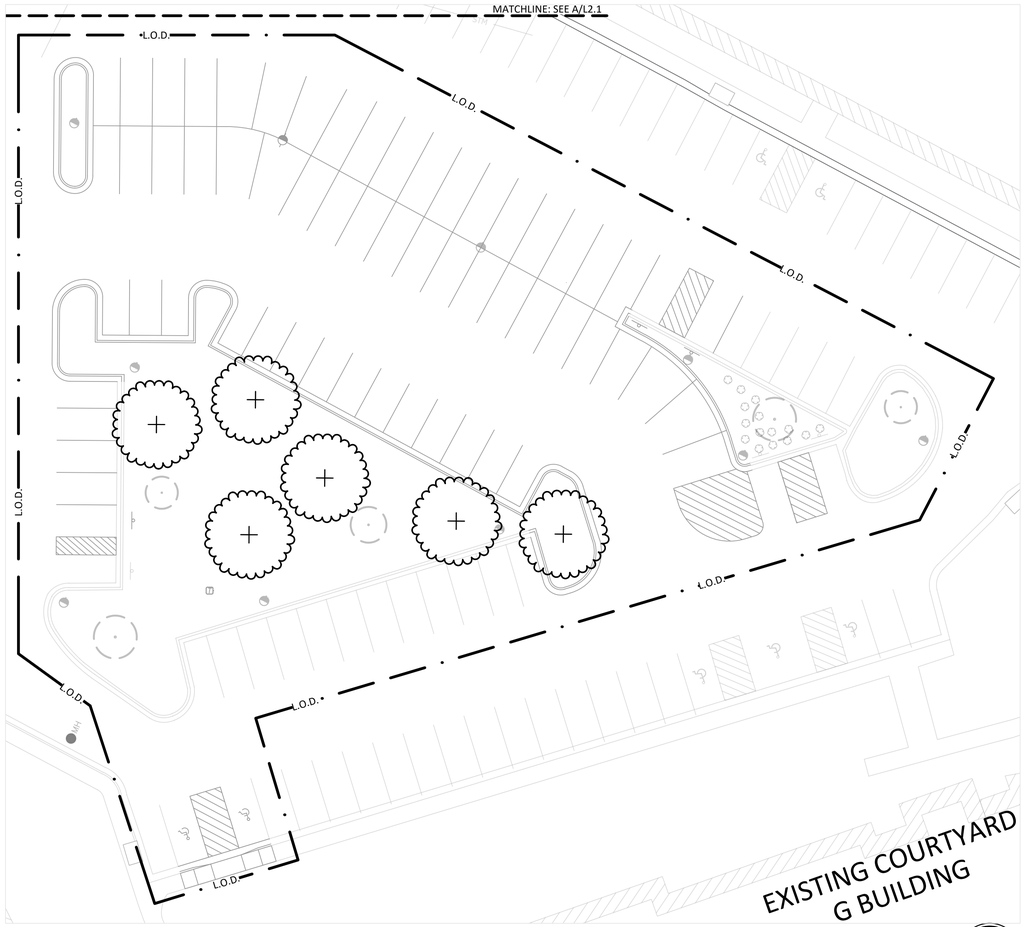
TREE PLANTING - ADD ALT 01

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.1A



A - ADDITIVE ALTERNATE 02 PLAN

GRAPHIC SCALE
20 0 20

N

TREE SCHEDULE
ADDITIVE ALTERNATE 02

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	CAL
DECIDUOUS TREES				
+	6	Gleditsia triacanthos inermis `Impcole` Imperial® Honey Locust	B & B	3"Cal

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ENGINEER	ERB	APPROVED	CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

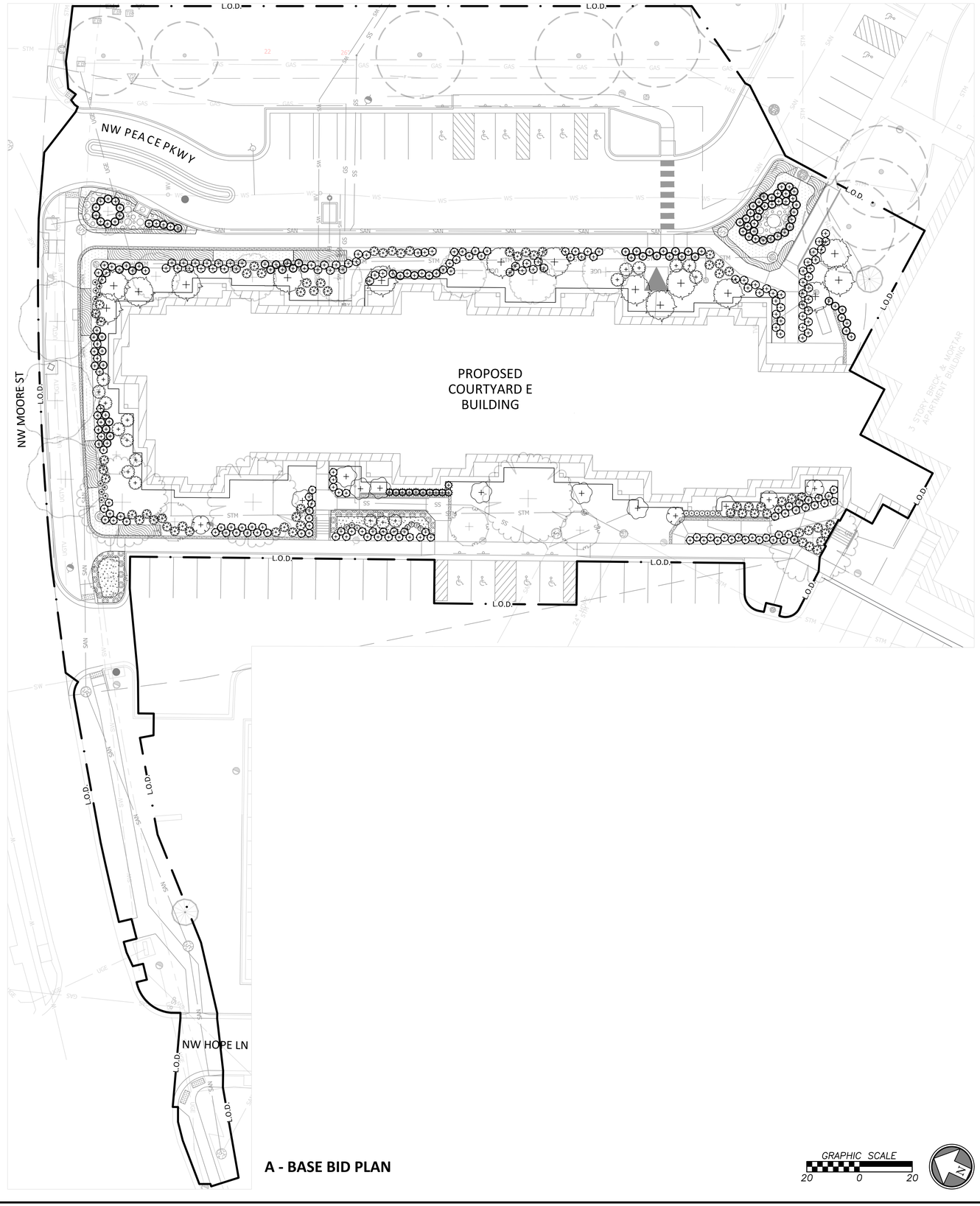
TREE PLANTING - ADD ALT 02

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.1B

SHRUB & PERENNIAL SCHEDULE
BASE BID

SYMBOL	QTY	BOTANICAL / COMMON NAME	SIZE	REMARKS
SHRUBS				
	18	Aronia melanocarpa 'Autumn Magic' Autumn Magic Black Chokeberry	5 gal	
	72	Buxus x 'Green Gem' Green Gem Boxwood	2 gal	
	63	Callicarpa x 'NCCX2' Pearl Glam® Beautyberry	5 gal	
	8	Calycanthus floridus 'Burgundy Spice' Burgundy Spice Sweetshrub	5 gal	
	4	Calycanthus floridus 'Michael Lindsey' Michael Lindsey Sweetshrub	5 gal	
	15	Hamamelis x intermedia `Diane` Diane Witch Hazel	5 gal	
	115	Ilex glabra 'Compacta' Compact Inkberry	5 gal	Ilex glabra Gem Box® is acceptable substitute
	11	Ilex verticillata 'Little Goblin Red' Little Goblin Red Female Winterberry	5 gal	Plant dwarf male pollinator within 20' of females; Ilex verticillata Red Sprite is acceptable substitute
	96	Itea virginica 'Sprich' Little Henry Sweetspire	2 gal	Itea virginica Fizzy Mizzy® is acceptable substitute
GRASSES				
	10	Chasmanthium latifolium `River Mist` River Mist Variegated Northern Sea Oats	6" pot	
	12	Muhlenbergia capillaris Pink Muhly Grass	1 gal	
	7	Schizachyrium scoparium 'Standing Ovation' Standing Ovation Little Bluestem	1 gal	Availabe at Loma Vista Nursery

SYMBOL	QTY	BOTANICAL / COMMON NAME	CONT	SPACING	REMARKS
SHRUB AREAS					
	108	Iberis sempervirens 'Alexander's White' White Evergreen Candytuft	1 gal	18" o.c.	
	359	Liriope spicata `Silver Dragon` Silver Dragon Creeping Lilyturf	1 gal	18" o.c.	
	844	Pulmonaria x `Dark Vader` Dark Vader Lungwort	1 gal	12" o.c.	
	274 sf	SHADE PERENNIAL BLEND			
	63	Astilbe x arendsii 'Rheinland' Rhienland Astilbe	1 gal	50% @ 18" o.c.	
	63	Hosta x 'June' June Hosta	1 gal	50% @ 18" o.c.	
	257 sf	SUN PERENNIAL BLEND			
	59	Asclepias tuberosa Butterfly Milkweed	1 gal	50% @ 18" o.c.	
	59	Echinacea purpurea Coneflower	1 gal	50% @ 18" o.c.	



A - BASE BID PLAN

GRAPHIC SCALE
20 0 20

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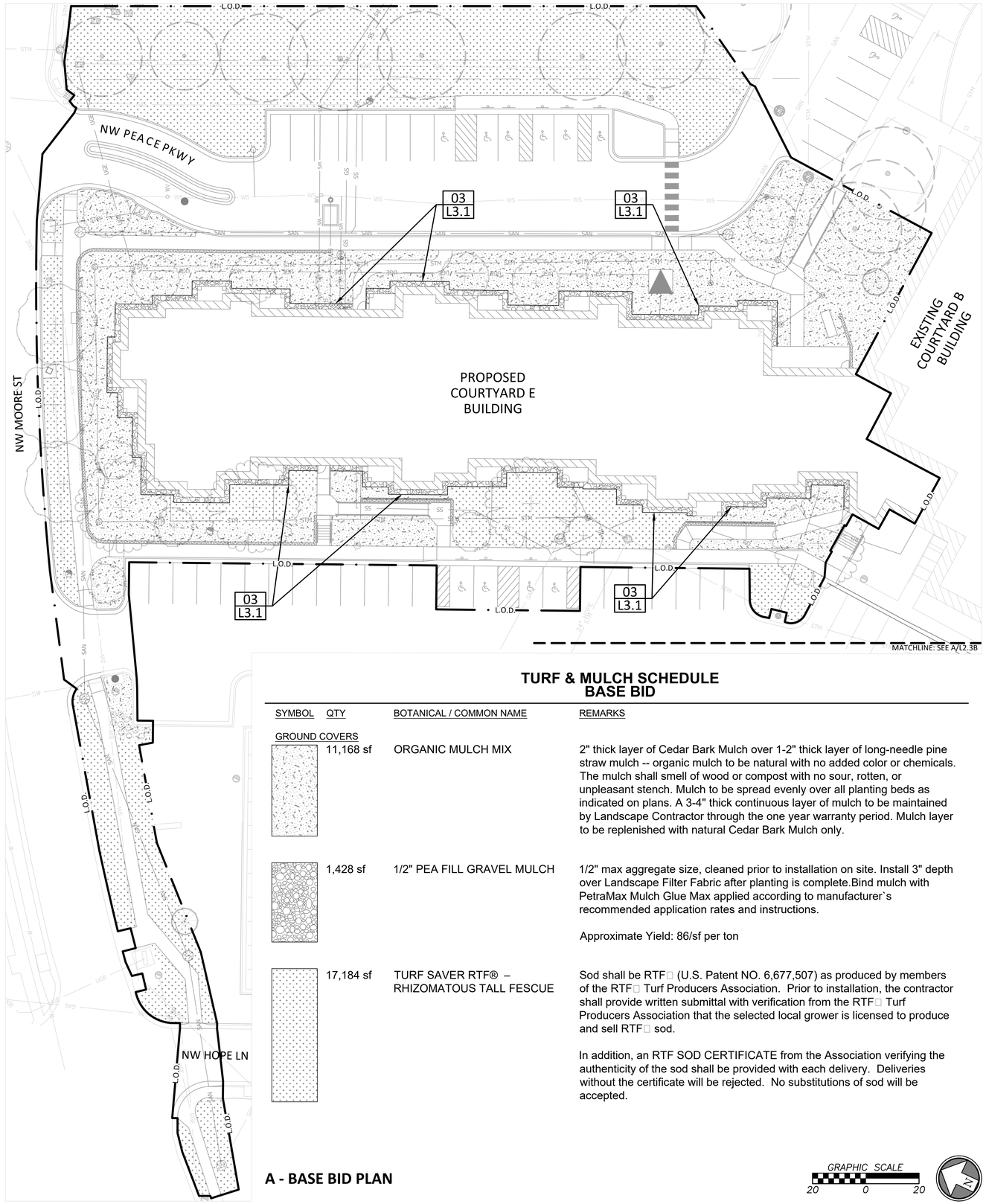
ENGINEER : ERB	APPROVED : CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

SHRUB & PERENNIAL PLANTING

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.2



TURF & MULCH SCHEDULE
BASE BID

SYMBOL	QTY	BOTANICAL / COMMON NAME	REMARKS
GROUND COVERS			
	11,168 sf	ORGANIC MULCH MIX	2" thick layer of Cedar Bark Mulch over 1-2" thick layer of long-needle pine straw mulch -- organic mulch to be natural with no added color or chemicals. The mulch shall smell of wood or compost with no sour, rotten, or unpleasant stench. Mulch to be spread evenly over all planting beds as indicated on plans. A 3-4" thick continuous layer of mulch to be maintained by Landscape Contractor through the one year warranty period. Mulch layer to be replenished with natural Cedar Bark Mulch only.
	1,428 sf	1/2" PEA FILL GRAVEL MULCH	1/2" max aggregate size, cleaned prior to installation on site. Install 3" depth over Landscape Filter Fabric after planting is complete.Bind mulch with PetraMax Mulch Glue Max applied according to manufacturer`s recommended application rates and instructions. Approximate Yield: 86/sf per ton
	17,184 sf	TURF SAVER RTF® – RHIZOMATOUS TALL FESCUE	Sod shall be RTF□ (U.S. Patent NO. 6,677,507) as produced by members of the RTF□ Turf Producers Association. Prior to installation, the contractor shall provide written submittal with verification from the RTF□ Turf Producers Association that the selected local grower is licensed to produce and sell RTF□ sod. In addition, an RTF SOD CERTIFICATE from the Association verifying the authenticity of the sod shall be provided with each delivery. Deliveries without the certificate will be rejected. No substitutions of sod will be accepted.

A - BASE BID PLAN

GRAPHIC SCALE
20 0 20

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

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ARCHITECT : DAS	CHECKED : ADM
ENGINEER : ERB	APPROVED : CDW

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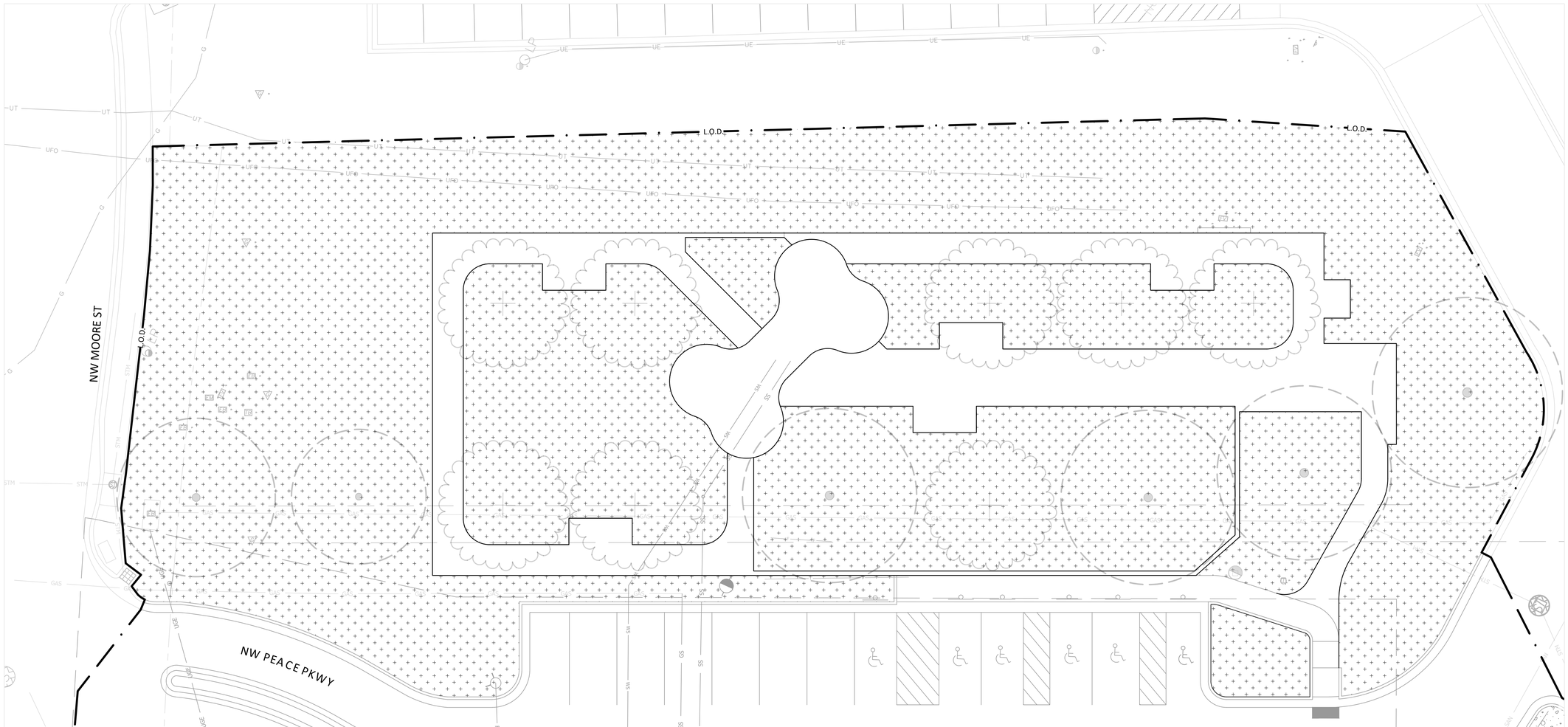
DRAWING TITLE

TURF & MULCH PLANTING

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.3

TURF & MULCH SCHEDULE
ADDITIVE ALTERNATE 01

SYMBOL	QTY	BOTANICAL / COMMON NAME	REMARKS
GROUND COVERS			
	19,122 sf	TURF SAVER RTF® – RHIZOMATOUS TALL FESCUE	Sod shall be RTF□ (U.S. Patent NO. 6,677,507) as produced by members of the RTF□ Turf Producers Association. Prior to installation, the contractor shall provide written submittal with verification from the RTF□ Turf Producers Association that the selected local grower is licensed to produce and sell RTF□ sod. In addition, an RTF SOD CERTIFICATE from the Association verifying the authenticity of the sod shall be provided with each delivery. Deliveries without the certificate will be rejected. No substitutions of sod will be accepted.



A - ADDITIVE ALTERNATE 01 PLAN

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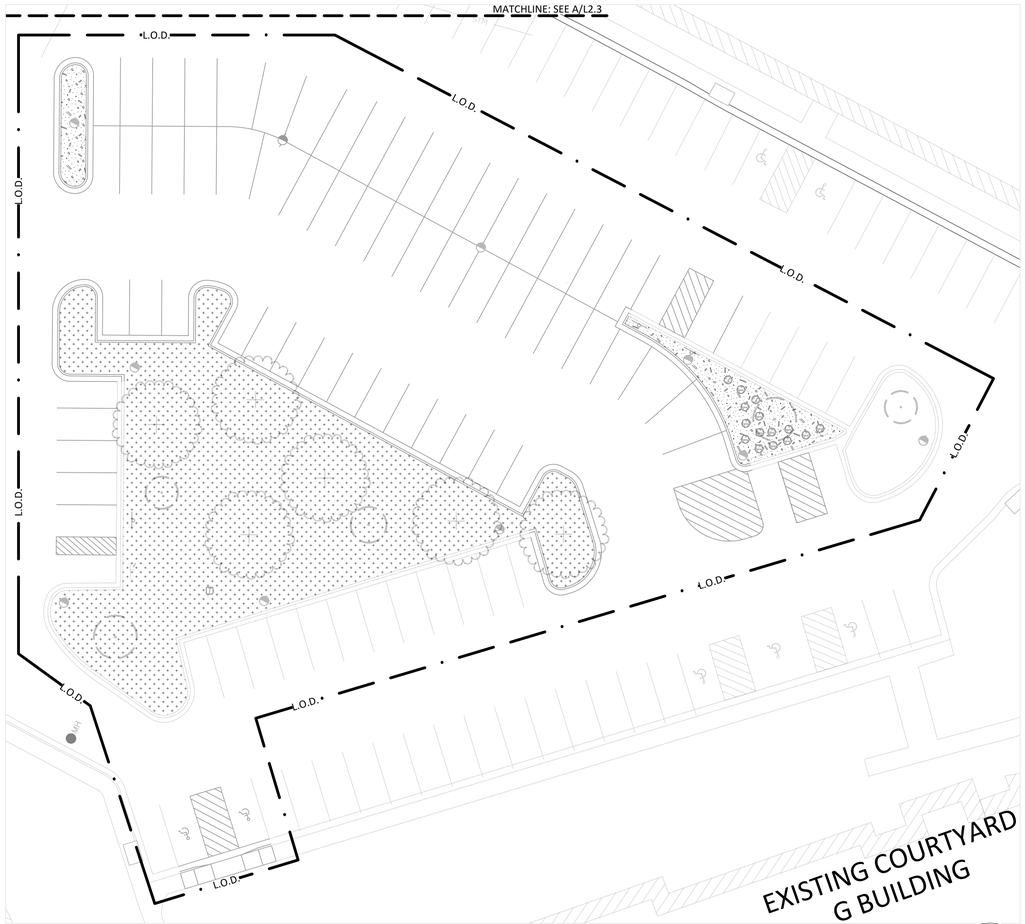
DRAWING TITLE

TURF & MULCH PLANTING - ADD ALT 01

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L2.3A

TURF & MULCH SCHEDULE
ADDITIVE ALTERNATE 02

SYMBOL	QTY	BOTANICAL / COMMON NAME	REMARKS
GROUND COVERS			
	845 sf	ORGANIC MULCH MIX	2" thick layer of Cedar Bark Mulch over 1-2" thick layer of long-needle pine straw mulch -- organic mulch to be natural with no added color or chemicals. The mulch shall smell of wood or compost with no sour, rotten, or unpleasant stench. Mulch to be spread evenly over all planting beds as indicated on plans. A 3-4" thick continuous layer of mulch to be maintained by Landscape Contractor through the one year warranty period. Mulch layer to be replenished with natural Cedar Bark Mulch only.
	7,163 sf	TURF SAVER RTF® – RHIZOMATOUS TALL FESCUE	Sod shall be RTF□ (U.S. Patent NO. 6,677,507) as produced by members of the RTF□ Turf Producers Association. Prior to installation, the contractor shall provide written submittal with verification from the RTF□ Turf Producers Association that the selected local grower is licensed to produce and sell RTF□ sod. In addition, an RTF SOD CERTIFICATE from the Association verifying the authenticity of the sod shall be provided with each delivery. Deliveries without the certificate will be rejected. No substitutions of sod will be accepted.



A - ADDITIVE ALTERNATE 02 PLAN

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ENGINEER	ERB	APPROVED	CDW

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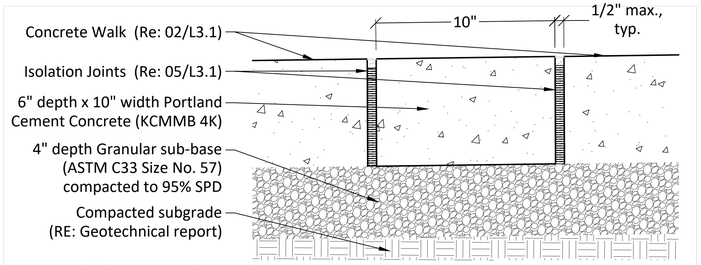
DRAWING TITLE

TURF & MULCH PLANTING - ADD ALT 02

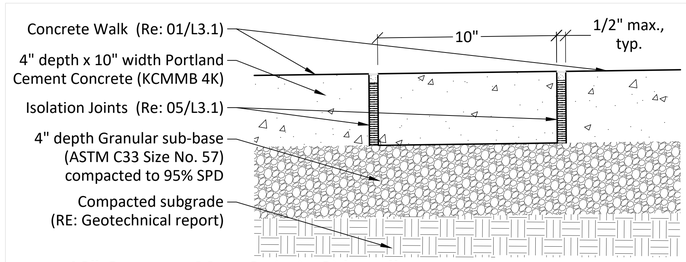
DATE: December 1, 2023

COMM. NO. 23104.00

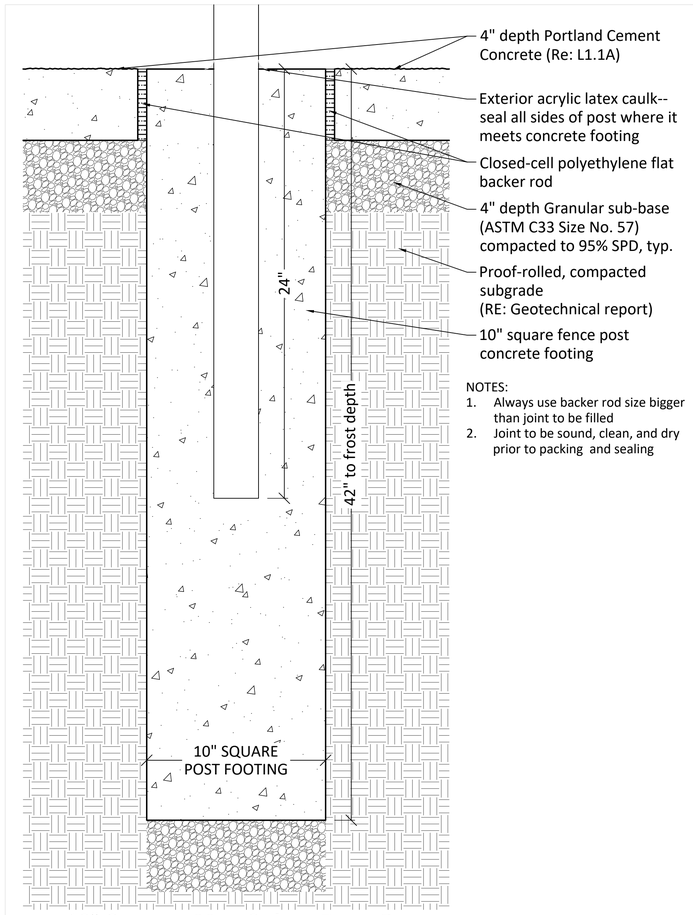
DRAWING L2.3B



11 10" Concrete Mow Strip in Heavy Duty Sidewalk

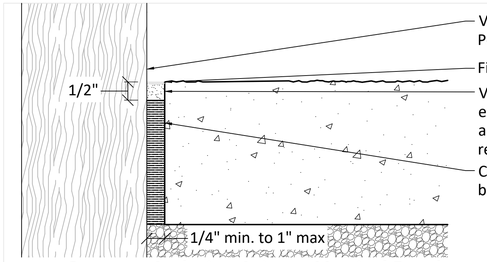


10 10" Concrete Mow Strip in Sidewalk

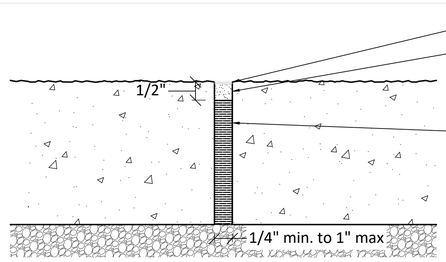


NOTES:
1. Always use backer rod size bigger than joint to be filled
2. Joint to be sound, clean, and dry prior to packing and sealing

07 10" Concrete Mow Strip at Fence Posts

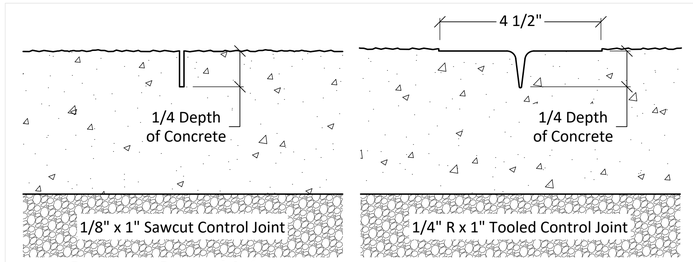


06 Concrete Isolation Joint at Vertical Break

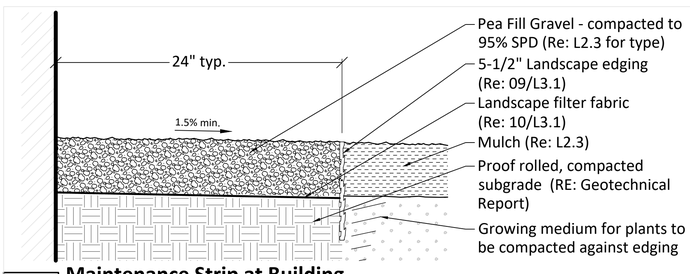


NOTES:
1. Always use backer rod size bigger than joint to be filled
2. Joint to be sound, clean, and dry prior to packing and sealing

05 Concrete Isolation Joint at Horizontal Break



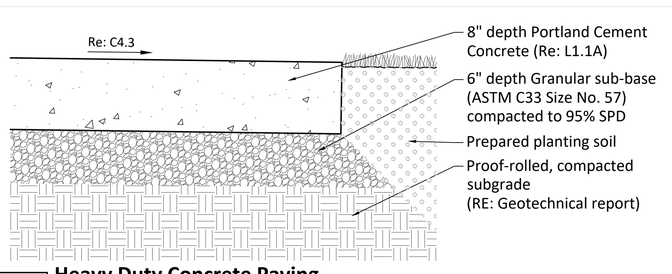
04 Concrete Control Joints



SURE-LOC ALUMINUM EDGING CORPORATION
494 EAST 64TH ST
HOLLAND, MI 49423
TOLL FREE: 1-800-787-3562
PHONE: (616) 392-3209
FAX: (616) 392-5134
www.surelocedging.com

Notes:
1. Compact grade adjact to edging to avoid settling
2. Top of edging to be no more than 1/2" above finish grade / surface
3. Top of stack designed to lock 1/2" below top of edging

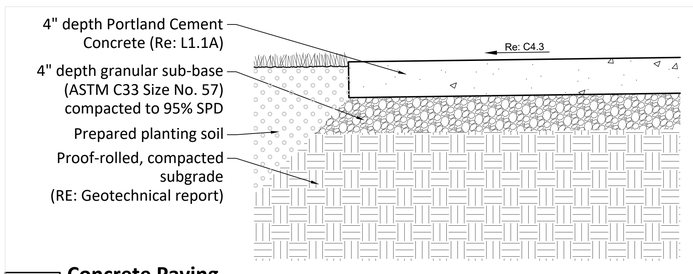
09 Sure-Loc Sure-Edge Aluminum Landscape Edging



08 10" Concrete Mow Strip

03 Maintenance Strip at Building

02 Heavy Duty Concrete Paving



01 Concrete Paving

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ENGINEER : ERB	APPROVED : CDW

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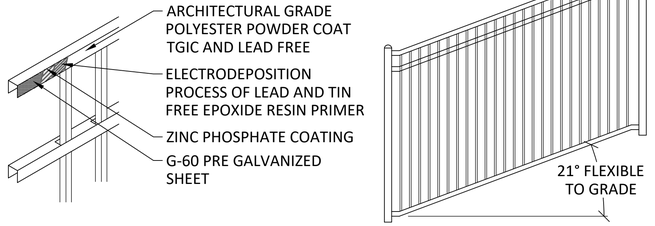
DRAWING TITLE

CONSTRUCTION DETAILS

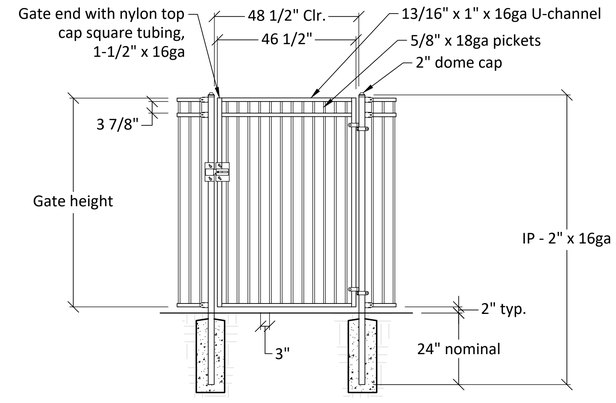
DATE: December 1, 2023

COMM. NO. 23104.00

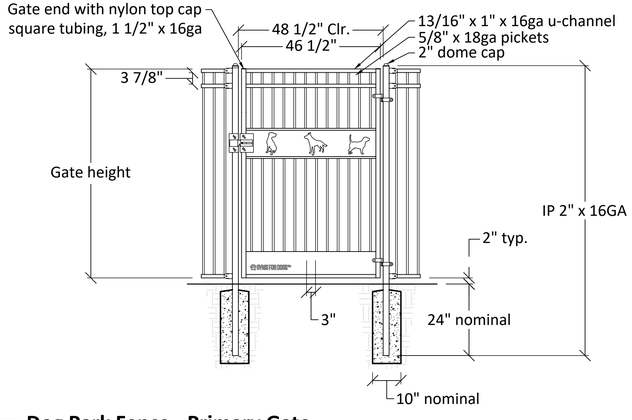
DRAWING L3.1



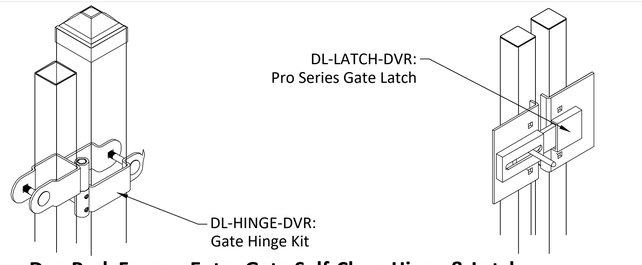
07 Dog Park Fence - Railing Detail



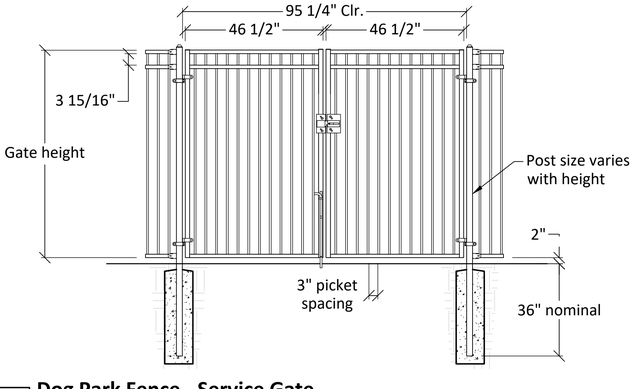
05 Dog Park Fence - Secondary Gate



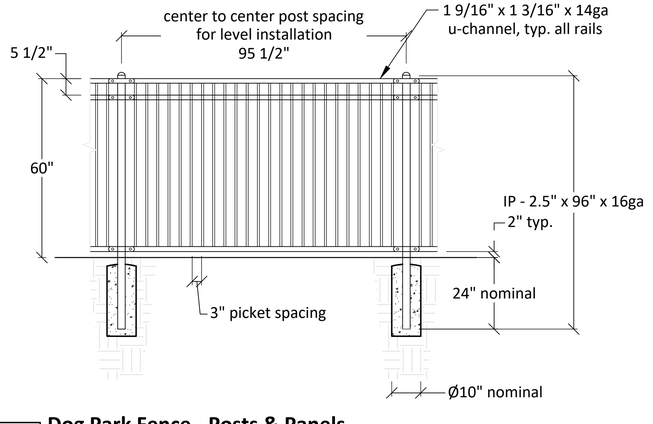
04 Dog Park Fence - Primary Gate



06 Dog Park Fence - Entry Gate Self-Close Hinge & Latch



03 Dog Park Fence - Service Gate



02 Dog Park Fence - Posts & Panels

GYMS FOR DOGS™
Natural Dog Park Products

GYMS FOR DOGS®
3815 RIVER CROSSING PKWY SUITE 100
INDIANAPOLIS, IN 46240
PHONE: (800) 931-1562
EMAIL: sales@GymsForDogs.com
www.GymsForDogs.com

DESIRED MOUNT:
☑IN-GROUND
☐SURFACE

DESIRED HEIGHT:
☐48"
☑60"
☐72"

DESIRED PICKET SPACING:
☑3" (SHOWN)
☐3.9"

DESIRED FENCE:
☐ALUMINUM
☑STEEL

Doggie DVR Fence Series

Item	Approx. Dimensions	Item Number
Panels – 90.5" wide	Fence Panel – 5' Tall	DL-FN5FP-DVR
Gates – 4' Wide	Entrance Gate – 5' Tall	DL-FN5EG-DVR
Gates – 4' Wide	(2) 4' Wide panels for a total opening of 8'	DL-FN5SG-DVR
Post – 2.5" x 2.5"	In-Ground Post (IG)	DL-FNIG5-DVR
Post – 2.5" x 2.5"	Post Top Cap – 1 per post	DL-FNPOST-DVR
Mounting Brackets	In-Line Brackets (2) Kit per post	DL-LBRACKT-DVR
Mounting Brackets	End, Corner, T Brackets (2) Kit per post	DL-TBRACKT-DVR
Gate Hinges and Latch	Hinge Kit – 2 Hinges per Kit	DL-HINGE-DVR
Gate Hinges and Latch	Latch for Entrance Gate	DL-LATCH-DVR
Gate Hinges and Latch	Drop Rod Kit for Service Gate	DL-DROPPN-DVR
Gate Hinges and Latch	Fork Latch for Service Gate	DL-FORKLTH-DVR

01 Dog Park Fence - Fence Selection

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
7101 College Blvd., Suite 400
Overland Park, Kansas 66210
p. (913) 663-1900
BHC is a trademark of Brungardt Honomichl & Company, P.A.

FINAL DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : ERDM	DRAWN : ERDM
ARCHITECT : DAS	CHECKED : ADM
ENGINEER : ERB	APPROVED : CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

CONSTRUCTION DETAILS

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L3.2

BHC
CIVIL ENGINEERING / SURVEYING / UTILITIES
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Overland Park, Kansas 66210
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FINAL
DEVELOPMENT PLAN

PROJECT TITLE

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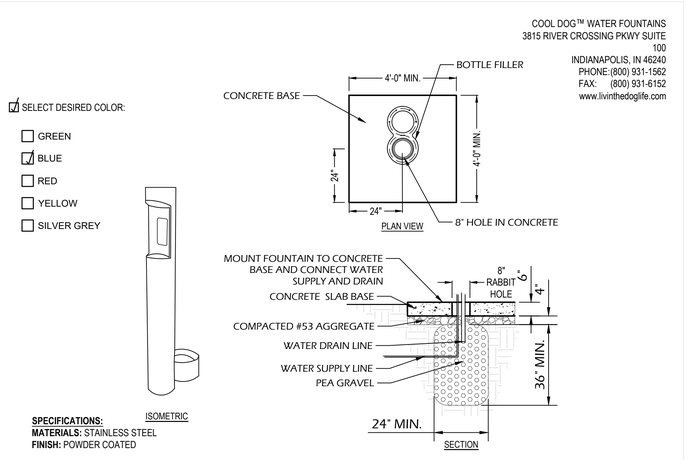
ENGINEER : ERB	APPROVED : CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

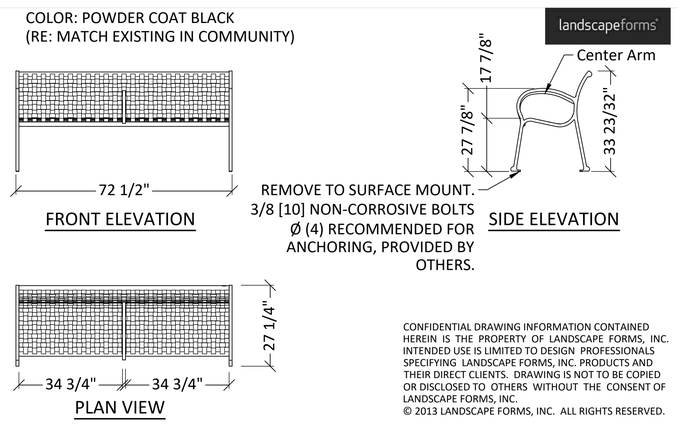
DRAWING TITLE

AMENITIES
DETAILS

DATE: December 1, 2023
COMM. NO. 23104.00
DRAWING L3.3



03 **DL-1000-BF: Cool Dog Water Fountain**

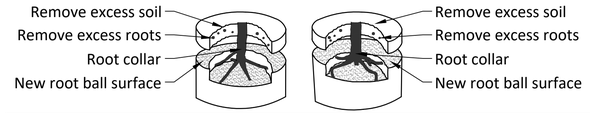


02 **Landscape Forms Scarborough 72" Woven Bench with Central Arm**

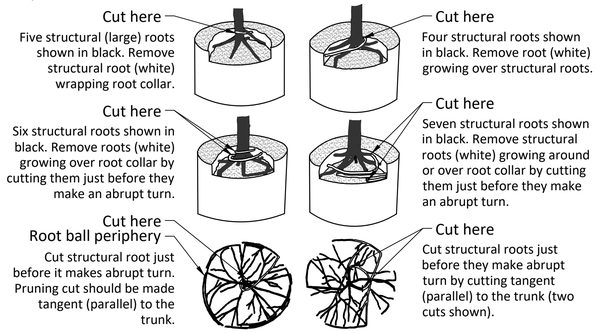
01 **ZEROWASTEUSA.COM The Gladiator Dog Waste Station**

Step 1 - Remove substrate over root collar

Plants planted too deeply in root ball. Remove excess substrate and roots to meet root inspection detail.



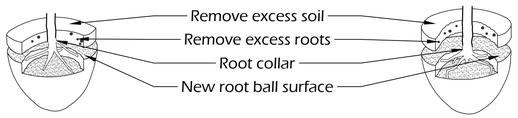
Step 2 - Remove defects.



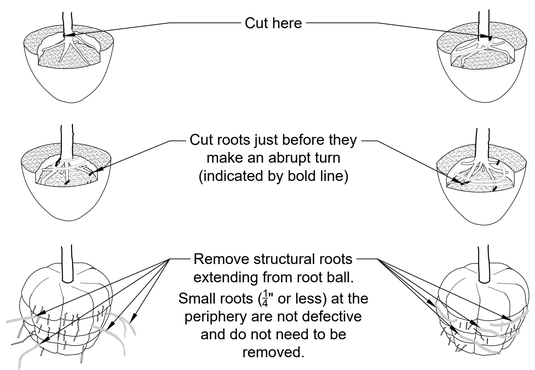
Notes:
1- All plants shown are rejectable unless they undergo recommended correction.
2- First Step 1, then Step 2. Roots and soil may be removed during the correction process; substrate/soil shall be replaced after correction has been completed.
3- Plants shall meet root observations detail following correction.
4- Small roots (1/4" or less) on the periphery of the root ball are common with container plant production. These small roots are not defined as "defects" and can be addressed at the time of installation.

05 Root Correction - Container Plants

Step 1 - When tree is planted too deeply in root ball, remove excess soil & roots to meet root inspection detail 212.

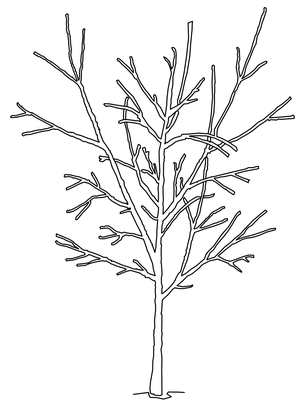


Step 2 - Remove defective roots.



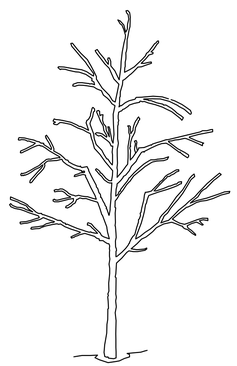
DETAIL NOTES:
1. Protect and maintain structural (large) roots while removing defective roots. Examples of defective roots as follows:
   1.1. Roots wrapping around root collar
   1.2. Roots growing over structural roots
   1.3. Roots growing around or over root collar
2. All trees shown are rejectable unless they undergo recommended correction.
3. First step 1, then step 2. Adjust hole depth to allow for the removal of excess soil and roots over the root collar.
4. Roots and soil may be removed during the correction process; substrate/ soil shall be replaced after the correction has been completed.
5. Trees shall pass root observations detail following correction.

03 Root Correction - Balled & Burlapped Plants



1. Before planting, tree has three codominant stems. The two that compete with the one in the center should be pruned to supress their growth.

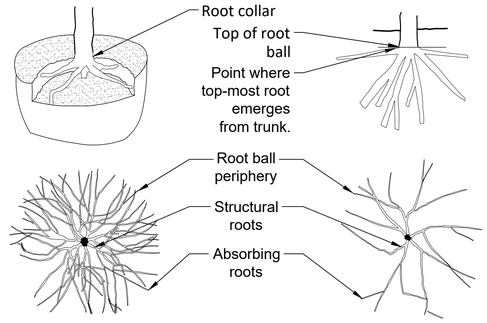
2. Two competing stems were reduced substantially, in this case remvoing about 70% of their foilage using reduction cuts.



3. After pruning, plant has only one dominant stem.

NOTES:
1. All trees shown are rejectable unless they undergo recommended treatment.
2. Tree shall meet crown observation detail following correction.

02 Crown Correction Example

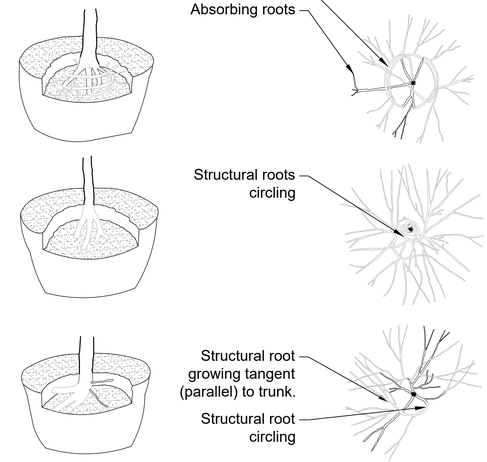


ACCEPTABLE

1. The point where top-most root(s) emerges from the trunk (root collar) should be within the top 2" of substrate. At least two (2) structural roots must be located within the top one to three inches (1-3") of soil.
2. The root collar and the root ball interior should be free of defects including circling, kinked, ascending, and stem girdling roots.
3. Structural roots shall reach the periphery near the top of the root ball.
4. Roots radiate from trunk and reach side of root ball without defecting down or around.

REJECTABLE

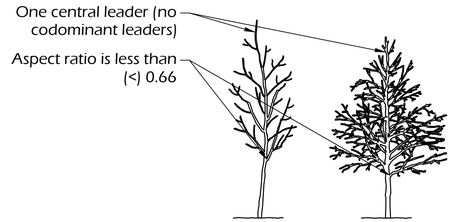
1. Structural roots circle interior of root ball.
2. No structural roots are horizontal and reach the root ball periphery near the top of the root ball.
3. Only absorbing roots reach the periphery near the top of the root ball. Structural roots mostly wrap or are deflected on the root ball interior.
4. Structural roots descend into root ball interior.
5. Structural roots circle and do not radiate from the trunk.
6. Structural roots primarily grow to one side.
7. Structural roots missing from one side, and/or grow tangent to trunk.



Notes:
A. Observations of roots shall occur prior to acceptance. Roots and soil may be removed during the observation process; substrate/soil shall be replaced after the observations have been completed.

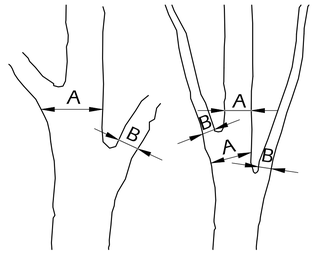
04 Root Inspection - Balled & Burlapped Plants

ACCEPTABLE

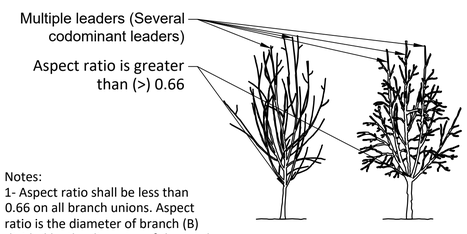


Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64

Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.

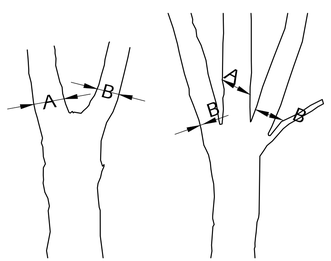


REJECTABLE



Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75

Aspect ratio of B:A greater than 0.66 as measured 1" above the top of the branch union.



Notes:
1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union.

2- Any plant not meeting this detail may be rejected.

01 Crown Inspections - High Branched

STATE OF MISSOURI
ERIC BYRD
NUMBER PE-2010013633
PROFESSIONAL ENGINEER

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FINAL DEVELOPMENT PLAN

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER : ERDM	DRAWN : ERDM
ARCHITECT : DAS	CHECKED : ADM
ENGINEER : ERB	APPROVED : CDW

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

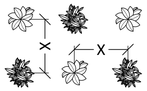
DRAWING TITLE

PLANT SELECTION DETAILS

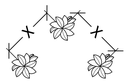
DATE: December 1, 2023

COMM. NO. 23104.00

DRAWING L3.4



Mixed Type

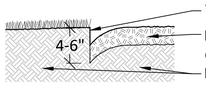


Single Type

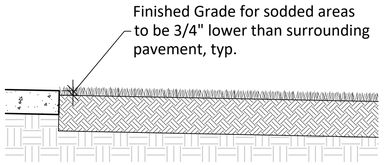
Notes:
1. See planting legend for species, size, and on center (O.C.) spacing.
2. Small roots (¼" or less) growing around, up, or down root ball periphery are normal in container production and acceptable; however, they should be eliminated at the time of planting.
3. Spread mulch layer in surrounding bed prior to planting groundcover plants to minimize damage after installation.

(X = O.C. spacing from plans)

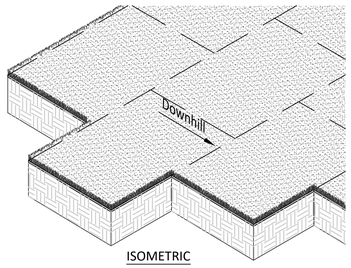
06 Groundcover Spacing Plan



05 Spade Cut Edge - Turf to Tree Bed



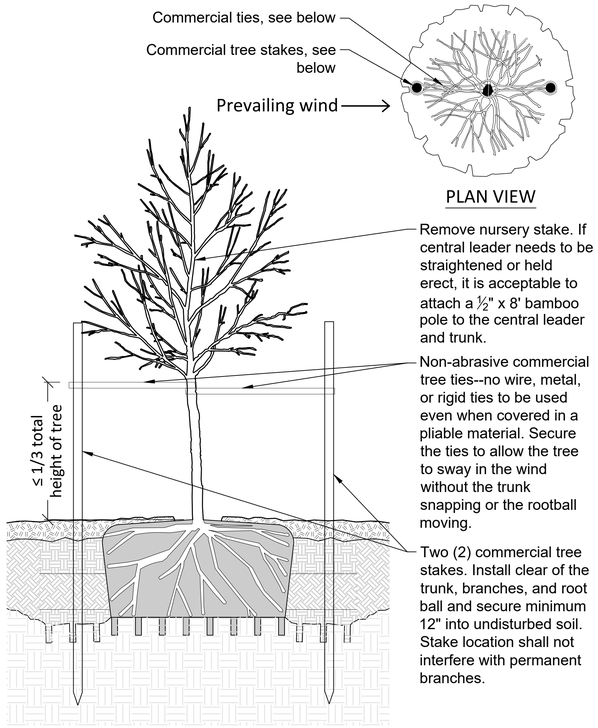
SECTION



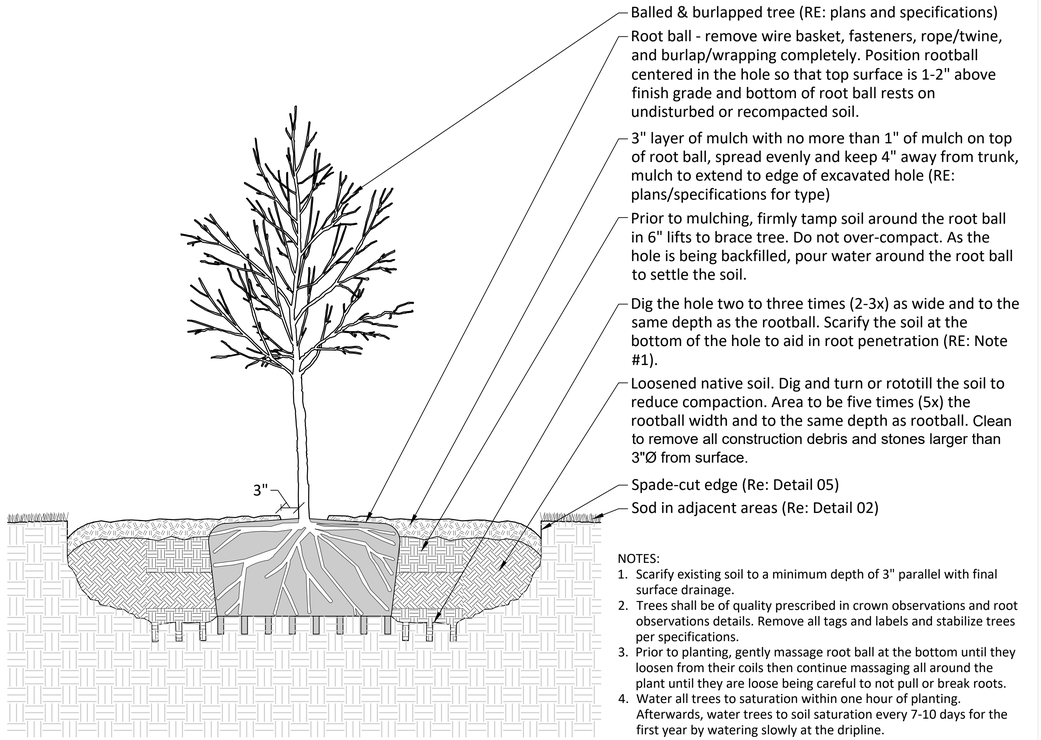
ISOMETRIC

INSTALLATION REQUIREMENTS:
1. After construction is complete, remove stones, roots, large soil clods, and other material from the areas to be sodded. Evenly spread the specified topsoil to the depth shown in the Soils Plan or six inches minimum. Ensure topsoil is sloping at a minimum of two percent (one foot of drop for every fifty feet of run).
2. Evenly apply 10-10-10 fertilizer using 10 pounds per 1,000 square feet and rake into the loosened topsoil.
3. Prior to laying sod, lightly moisten the soil.
4. Start laying sod along a long edge. Butt all edges without overlapping; don't leave gaps at seams. Lay all sod in a brick-like pattern. Unroll each piece of sod in the same direction.
3. Seam all the edges by firmly rolling them together.
5. Avoid walking or kneeling on the sod as you lay it to minimize air pockets and indentations beneath sod.
6. Lay sod horizontally across slopes as shown.
7. If necessary to prevent erosion, place brightly painted / clearly marked fabric staples where necessary to prevent erosion / movement of the sod.
8. Minimize use of cut / partial pieces.
9. Water newly laid sod within 30 minutes. Ensure good root contact by rolling the lawn.
10. Water sod thoroughly for the first two weeks. Do not allow sod to dry out at any point during this critical period. Do not overwater. As roots are established, water less frequently for longer periods to encourage deep, healthy root growth.
11. Once the sod is at least three inches tall, gently pull up on several areas to confirm sod roots are firmly attached to the soil. Once confirmed, mow lawn down to no shorter than two thirds of its height and never below two inches. Mow in different directional pattern each time to ensure even growth over the first growing season.
12. Four to six weeks after good root growth has been confirmed, fertilize the lawn with 10-10-10 fertilizer at the rate of 10 pounds per 1,000 square feet.

02 Sod Installation

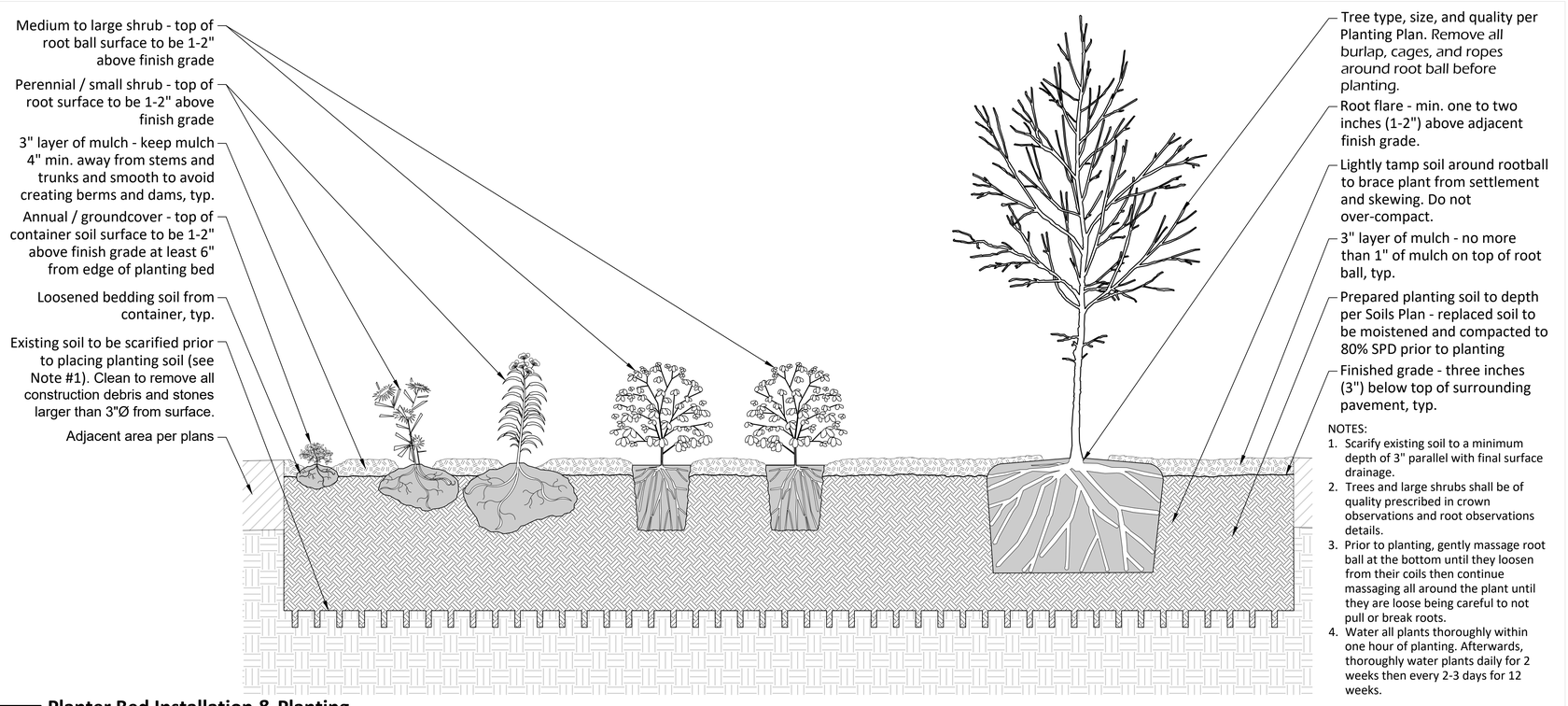


04 Dual Pole Tree Staking



NOTES:
1. Scarify existing soil to a minimum depth of 3" parallel with final surface drainage.
2. Trees shall be of quality prescribed in crown observations and root observations details. Remove all tags and labels and stabilize trees per specifications.
3. Prior to planting, gently massage root ball at the bottom until they loosen from their coils then continue massaging all around the plant until they are loose being careful to not pull or break roots.
4. Water all trees to saturation within one hour of planting. Afterwards, water trees to soil saturation every 7-10 days for the first year by watering slowly at the dripline.

03 Balled & Burlapped Tree Planting in Native Soil



NOTES:
1. Scarify existing soil to a minimum depth of 3" parallel with final surface drainage.
2. Trees and large shrubs shall be of quality prescribed in crown observations and root observations details.
3. Prior to planting, gently massage root ball at the bottom until they loosen from their coils then continue massaging all around the plant until they are loose being careful to not pull or break roots.
4. Water all plants thoroughly within one hour of planting. Afterwards, thoroughly water plants daily for 2 weeks then every 2-3 days for 12 weeks.

01 Planter Bed Installation & Planting

ERIC BYRD
NUMBER PE-2010013633
STATE OF MISSOURI
PROFESSIONAL ENGINEER

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ENGINEER : ERB		APPROVED : CDW	

NO.	REVISION DESCRIPTION	DATE
1	FDP RESUBMITTAL	2/16/2024

DRAWING TITLE

PLANTING DETAILS

DATE: December 1, 2023

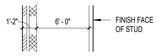
COMM. NO. 23104.00

DRAWING L3.5

ARCHITECTURAL ABBREVIATIONS

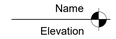
AB	ANCHOR BOLT
ADD	ADDENDUM
AFF	ABOVE FINISH FLOOR
ALT	ALTERNATE
ARCH	ARCHITECTURAL
BLDG	BUILDING
BLKG	BLOCKING
BR	BEDROOM
CG	CORNER GUARD
CI	CAST IRON
CJ	CONTROL JOINT
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CONF	CONFERENCE
CONT	CONTINUOUS
CONTR	CONTRACTOR
CORR	CORRIDOR
CR	CHAIR RAIL
CW	CASEWORK
DEFS	DIRECT APPLIED EXTERIOR FINISH SYSTEM
DIA	DIAMETER
DWG	DRAWING
EB	EXPANSION BOLT
EJ	EXPANSION JOINT
EL	ELEVATION
ELEC	ELECTRICAL
ELEV	ELEVATOR
EPS	EXTRUDED POLYSTYRENE
EQ	EQUAL
EQUIP	EQUIPMENT
EWC	ELECTRIC WATER COOLER
EXIST	EXISTING
EXT	EXTERIOR
F	FILLER
FE	FIRE EXTINGUISHER
FE	FINISHED END
FEC	FIRE EXTINGUISHER CABINET
FL	FLOOR
FRT	FIRE RETARDANT TREATED
FRP	FIBERGLASS REINFORCED POLYESTER
FSD	FIRE SEPARATION DISTANCE
GALV	GALVANIZED
GWB	GYPSUM WALL BOARD
HORZ	HORIZONTAL
HP	HIGH POINT
HR	HOUR
HR	HANDRAIL
ID	INSIDE DIAMETER
IL	INDEPENDENT LIVING
INT	INTERIOR
ISOL	ISOLATION
JAN	JANITOR CLOSET
LF	LINEAR FOOT
LOC	LIMITS OF CONSTRUCTION
LP	LOW POINT
MACH	MACHINE
MAINT	MAINTENANCE
MECH	MECHANICAL
MO	MASONRY OPENING
MTD	MOUNTED
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTSIDE DIAMETER
OH	OPPOSITE HAND
PD	PARKING DRAIN
PT	PRESSURE TREATED
R	RADIUS
RE	REFER
RECPT	RECEPTION
RES	RESIDENT
RM	ROOM
RO	ROUGH OPENING
SA	SELF-ADHERING
SCHED	SCHEDULED
SHT	SHEET
SIM	SIMILAR
SPEC	SPECIFICATION
STOR	STORAGE
STRUCT	STRUCTURAL
TLT	TOILET
TOJ	TOP OF JOIST
TOM	TOP OF MASONRY
TOS	TOP OF STEEL
TOW	TOP OF WALL
TRN	TRAINING
TYP	TYPICAL
UNO	UNLESS NOTED OTHERWISE
VEST	VESTIBULE
VIF	VERIFY IN FIELD
W/	WITH
WHL CHR	WHEELCHAIR
W/O	WITHOUT
WRB	WEATHER RESISTANT BARRIER

ARCHITECTURAL SYMBOLS



Dimension Line

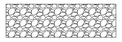
New Construction



Building Elevation

Limits Of Construction


Earth


Porous Fill
(Stone Or Gravel)

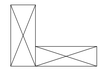

Cast-in-place Concrete


Brick


Concrete Masonry Units


Steel


Finish Wood


Wood Blocking


Plywood


Batt Insulation


Rigid Insulation


Gypsum Wall Board


Glass


Sand, Cement, Grout

NOTE: THESE ARE STANDARD SYMBOLS AND ALL SYMBOLS NOTED ON THIS SHEET MAY NOT APPLY.

ARCHITECTURAL SHEET NUMBERING SERIES

A0. GENERAL INFORMATION, FIRE PROTECTION PLANS

AD1. ARCHITECTURAL DEMOLITION PLANS

AS1. ARCHITECTURAL SITE PLANS

A1. FLOOR PLANS, ROOF PLAN

A2. ENLARGED PLANS

A3. REFLECTED CEILING PLANS

A4. SCHEDULES

A5. EXTERIOR ELEVATIONS, BUILDING SECTIONS

A6. WALL SECTIONS, EXTERIOR DETAILS

A7. INTERIOR ELEVATIONS, DETAILS, SECTIONS

A8. VERTICAL CIRCULATION

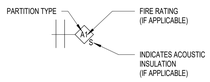
A9. SPECIAL CONSTRUCTION

NOTE: THESE ARE STANDARD SHEET SERIES NUMBERS AND ALL SHEET SERIES NOTED ON THIS SHEET MAY NOT APPLY.

ARCHITECTURAL SYMBOLS

North Symbol

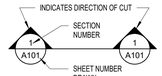
Column Grid Line



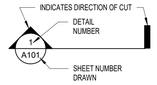
Partition Information

Door Information

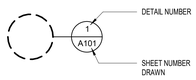
Room Information



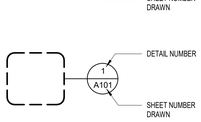
Plan & Vertical Section Reference



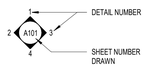
Section Detail Reference



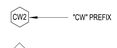
Plan Detail Reference



Enlarged Plan Reference



Elevation: Multiple Elevation



Curtain Wall Type

Glass Type

Window Type

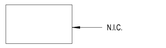
Storefront Type

Toilet Accessories

Revision Number

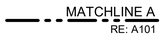
Plan Note

Supplemental Drawing Reference Number



Equipment Not In Contract

Equipment Number



Matchline

Center Line

Plan Spot Elevation

NOTE: THESE ARE STANDARD SYMBOLS AND ALL SYMBOLS NOTED ON THIS SHEET MAY NOT APPLY.

PROJECT DATA

PROJECT DESCRIPTION

THIS WORK CONSISTS OF A NEW COURTYARDS IL BUILDING WITH 52 APARTMENTS AND A NEW ATRIUM THAT CONNECT TO THE EXISTING COURTYARDS BUILDINGS B AND C. THESE BUILDINGS ARE ALSO INDEPENDENT LIVING (R-2) OCCUPANCY CLASSIFICATION.

DESIGN CRITERIA

2018 International Building Code
2018 International Plumbing Code
2018 International Mechanical Code
2018 International Fuel Gas Code
2018 International Residential Code
2018 International Fire Code
2017 National Electrical Code
ICC/ANSI A117.1-2009, Accessible and Usable Buildings and Facilities

SQUARE FOOTAGE

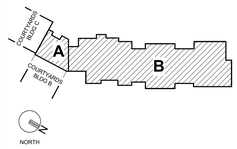
	INDEPENDENT LIVING (R-2)	ATRIUM (A-2)	TOTAL
FIRST FLOOR	15,744	2,814	18,558
SECOND FLOOR	15,434	2,210	17,644
THIRD FLOOR	15,434	2,210	17,644
FOURTH FLOOR	15,434	1,445	16,879
TOTAL	62,046 sf	8,679 sf	70,725 sf

CODE INFORMATION

BUILDING TYPE	Independent Living Apartments
USE & OCCUPANCY CLASSIFICATION	R-2/A-2
CONSTRUCTION TYPE	TYPE VA
MAX. NO. OF STORIES	4 Story (without height increase)
MAX. AREA PER FLOOR	12,000 (tabular area) 21,000 (after Frontage increase)
FULLY SPRINKLED	YES, PER NFPA 13R
ATTIC SPRINKLED	NO, (there is not an attic)
Table 601 STRUCTURAL FRAME	1 HOUR
EXTERIOR BEARING WALLS	1 HOUR
EXTERIOR NONBEARING WALLS	1 HR. (1 HR. 10' TO 20' SEPARATION)
INTERIOR BEARING WALLS	1 HOUR
INTERIOR NON-BEARING WALLS	0 HOUR
FLOOR CONSTRUCTION	1 HOUR
ROOF CONSTRUCTION	1 HOUR
Table 602	
FIRE WALLS (TABLE 706.4, Note a)	2 HOUR
FIRE BARRIERS (707.3.9)	2 HOUR (Between single occupancy fire areas)
SHAFTS (708.4)	1 HOUR connecting less than 4 stories
SLEEPING UNIT SEPARATION (709.1)	0 HOUR (Smoke Partition)
TRAVEL DISTANCE (TABLE 1016.1)	200' w/Sprinkler
TRAVEL DISTANCE WITHIN RESIDENT ROOMS TO EXIT ACCESS DOOR (1014.2.3.3)	50'

UNIT NAME	HEATED SF	FLOOR 1	FLOOR 2	FLOOR 3	FLOOR 4	TOTAL
UNIT B - BIRCH	810 SF	2	3	3	3	**11**
UNIT C - CEDAR	925 SF	6	6	5	6	**23**
UNIT D1 - HICKORY	1,145 SF	2	2	2	2	**8**
UNIT D2 - WILLOW	1,185 SF	1	1	1	1	**4**
UNIT D3 - CYPRESS	1,215 SF	1	1	1	1	**4**
ACCESSIBLE UNITS						
UNIT B - BIRCH (ADA) E123	810 SF	1	0	0	0	**1**
UNIT C - CEDAR (ADA) E316	925 SF	0	0	1	0	**1**
TOTAL		**13**	**13**	**13**	**13**	**52**

GENERAL NOTES



AREA A = ATRIUM
AREA B = INDEPENDENT LIVING APARTMENTS

CONSTRUCTION SET

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : DAS	DRAWN : DAS
ARCHITECT : DAS	CHECKED : AAT
ENGINEER :	APPROVED : CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

PROJECT DATA, SYMBOLS AND ABBREVIATIONS

DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING A0.0

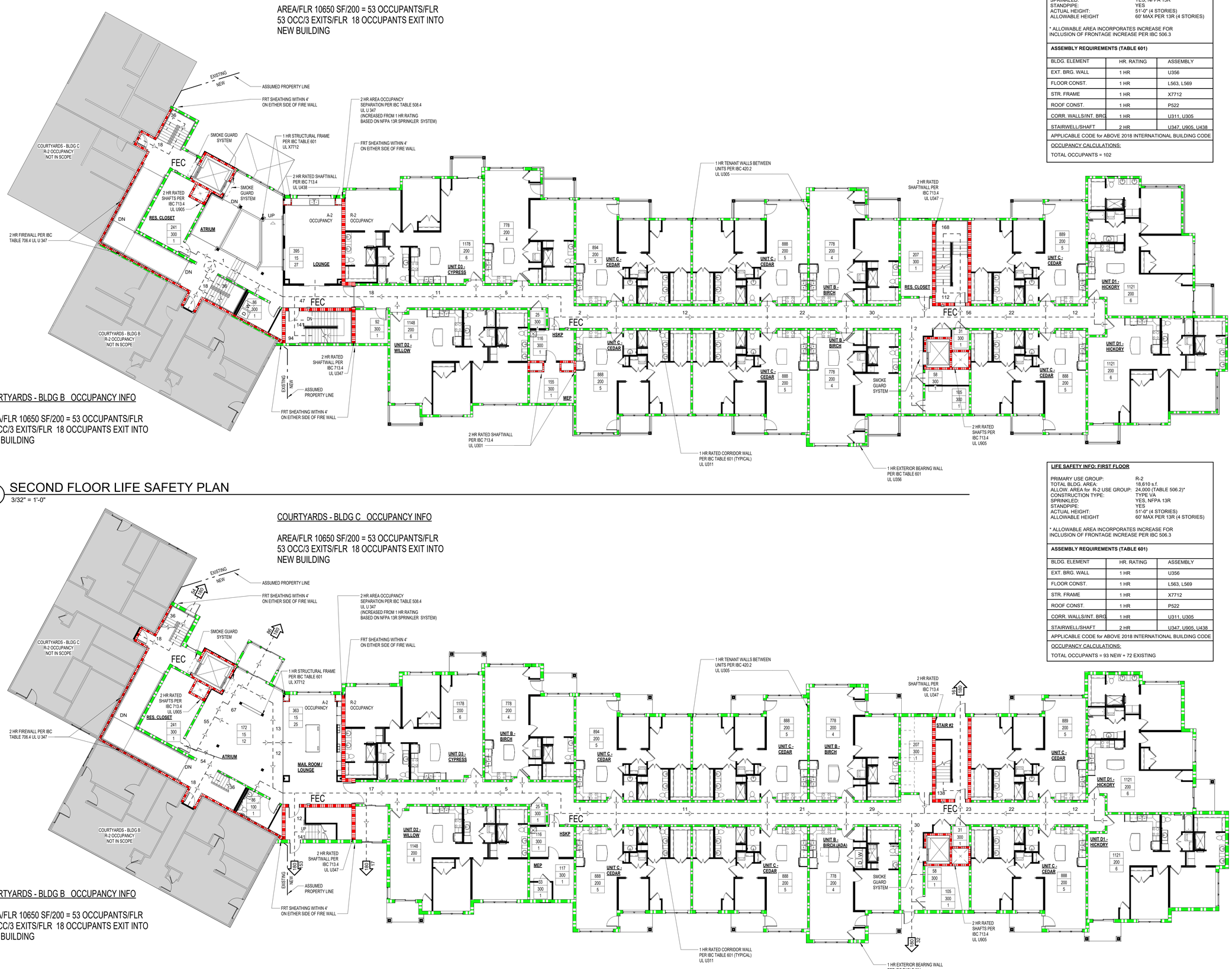
RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

COURTYARDS - BLDG C OCCUPANCY INFO

AREA/FLR 10650 SF/200 = 53 OCCUPANTS/FLR
53 OCC/3 EXITS/FLR 18 OCCUPANTS EXIT INTO
NEW BUILDING

COURTYARDS - BLDG B OCCUPANCY INFO

AREA/FLR 10650 SF/200 = 53 OCCUPANTS/FLR
53 OCC/3 EXITS/FLR 18 OCCUPANTS EXIT INTO
NEW BUILDING



2 SECOND FLOOR LIFE SAFETY PLAN
3/32" = 1'-0"

LIFE SAFETY INFO: SECOND FLOOR

PRIMARY USE GROUP:	R-2
TOTAL BLDG. AREA:	17,952 s.f.
ALLOW. AREA for R-2 USE GROUP:	24,000 (TABLE 506.2)*
CONSTRUCTION TYPE:	TYPE VA
SPRINKLED:	YES, NFPA 13R
STANDPIPE:	YES
ACTUAL HEIGHT:	51'-0" (4 STORIES)
ALLOWABLE HEIGHT	60' MAX PER 13R (4 STORIES)

* ALLOWABLE AREA INCORPORATES INCREASE FOR INCLUSION OF FRONTAGE INCREASE PER IBC 506.3

ASSEMBLY REQUIREMENTS (TABLE 601)

BLDG. ELEMENT	HR. RATING	ASSEMBLY
EXT. BRG. WALL	1 HR	U356
FLOOR CONST.	1 HR	L563, L569
STR. FRAME	1 HR	X7712
ROOF CONST.	1 HR	P522
CORR. WALLS/INT. BRG.	1 HR	U311, U305
STAIRWELL/SHAFT	2 HR	U347, U905, U438

APPLICABLE CODE for ABOVE 2018 INTERNATIONAL BUILDING CODE

OCCUPANCY CALCULATIONS:

TOTAL OCCUPANTS = 102

COURTYARDS - BLDG C OCCUPANCY INFO

AREA/FLR 10650 SF/200 = 53 OCCUPANTS/FLR
53 OCC/3 EXITS/FLR 18 OCCUPANTS EXIT INTO
NEW BUILDING

COURTYARDS - BLDG B OCCUPANCY INFO

AREA/FLR 10650 SF/200 = 53 OCCUPANTS/FLR
53 OCC/3 EXITS/FLR 18 OCCUPANTS EXIT INTO
NEW BUILDING

1 FIRST FLOOR LIFE SAFETY PLAN
3/32" = 1'-0"

LIFE SAFETY INFO: FIRST FLOOR

PRIMARY USE GROUP:	R-2
TOTAL BLDG. AREA:	18,610 s.f.
ALLOW. AREA for R-2 USE GROUP:	24,000 (TABLE 506.2)*
CONSTRUCTION TYPE:	TYPE VA
SPRINKLED:	YES, NFPA 13R
STANDPIPE:	YES
ACTUAL HEIGHT:	51'-0" (4 STORIES)
ALLOWABLE HEIGHT	60' MAX PER 13R (4 STORIES)

* ALLOWABLE AREA INCORPORATES INCREASE FOR INCLUSION OF FRONTAGE INCREASE PER IBC 506.3

ASSEMBLY REQUIREMENTS (TABLE 601)

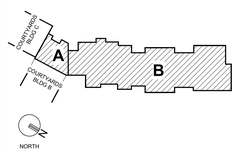
BLDG. ELEMENT	HR. RATING	ASSEMBLY
EXT. BRG. WALL	1 HR	U356
FLOOR CONST.	1 HR	L563, L569
STR. FRAME	1 HR	X7712
ROOF CONST.	1 HR	P522
CORR. WALLS/INT. BRG.	1 HR	U311, U305
STAIRWELL/SHAFT	2 HR	U347, U905, U438

APPLICABLE CODE for ABOVE 2018 INTERNATIONAL BUILDING CODE

OCCUPANCY CALCULATIONS:

TOTAL OCCUPANTS = 93 NEW + 72 EXISTING

KEYPLAN



LIFE SAFETY LEGEND

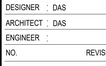
- SMOKE PARTITION
- 1 HR SMOKE BARRIER
- 1 HR FIRE PARTITION
- 1 HR FIRE BARRIER
- 2 HR FIRE BARRIER
- 2 HR RATED FIREWALL
- 3 HR RATED FIREWALL
- 4 HR RATED FIREWALL

EGRESS LEGEND

OCCUPANT LOAD CALCULATIONS

3000	FLOOR AREA IN S.F.
100	ALLOWABLE S.F. PER PERSON
30	OCCUPANT LOAD

MEANS OF EGRESS



EGRESS CAPACITY OF EXITS

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS B. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

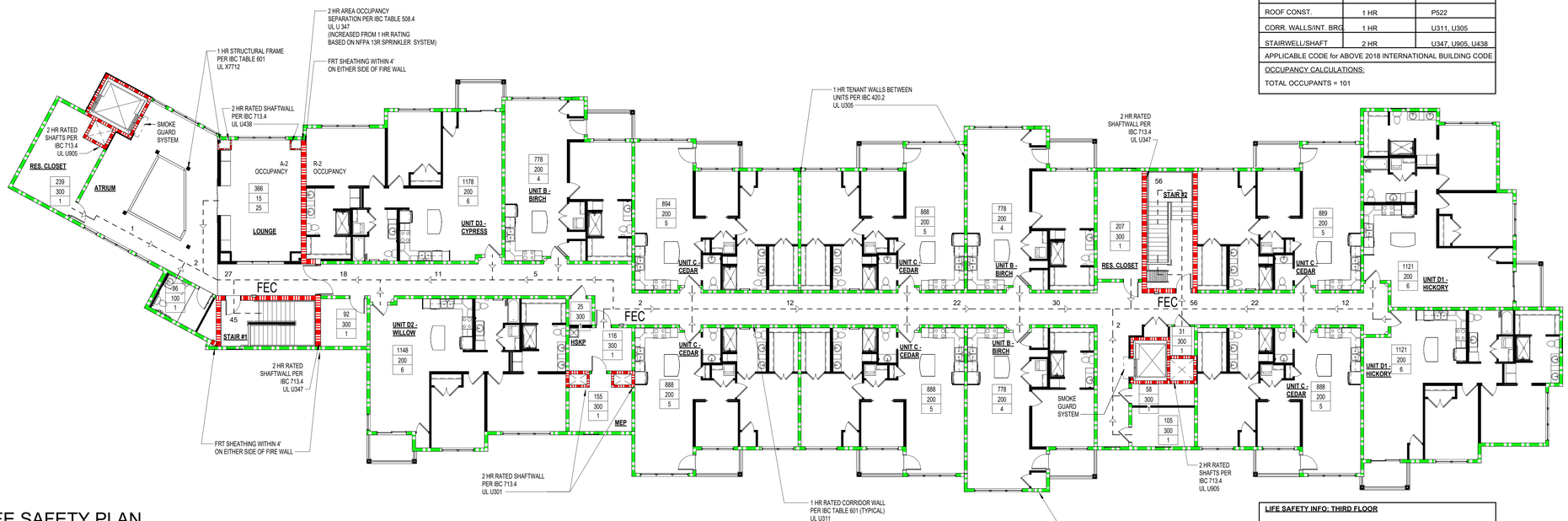
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FIRST AND SECOND FLOOR LIFE SAFETY PLAN

DATE:	January 5, 2024	DRAWING	A0.1
COMM. NO.	23104.00		

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024



2 FOURTH FLOOR LIFE SAFETY PLAN
3/32" = 1'-0"

LIFE SAFETY INFO: FOURTH FLOOR

PRIMARY USE GROUP:	R-2
TOTAL BLDG. AREA:	17,605 s.f.
ALLOW. AREA for R-2 USE GROUP:	24,000 (TABLE 506.2)*
CONSTRUCTION TYPE:	TYPE VA
SPRINKLED:	YES, NFPA 13R
STANDPIPE:	YES
ACTUAL HEIGHT:	51'-0" (4 STORIES)
ALLOWABLE HEIGHT	60' MAX PER 13R (4 STORIES)

* ALLOWABLE AREA INCORPORATES INCREASE FOR INCLUSION OF FRONTAGE INCREASE PER IBC 506.3

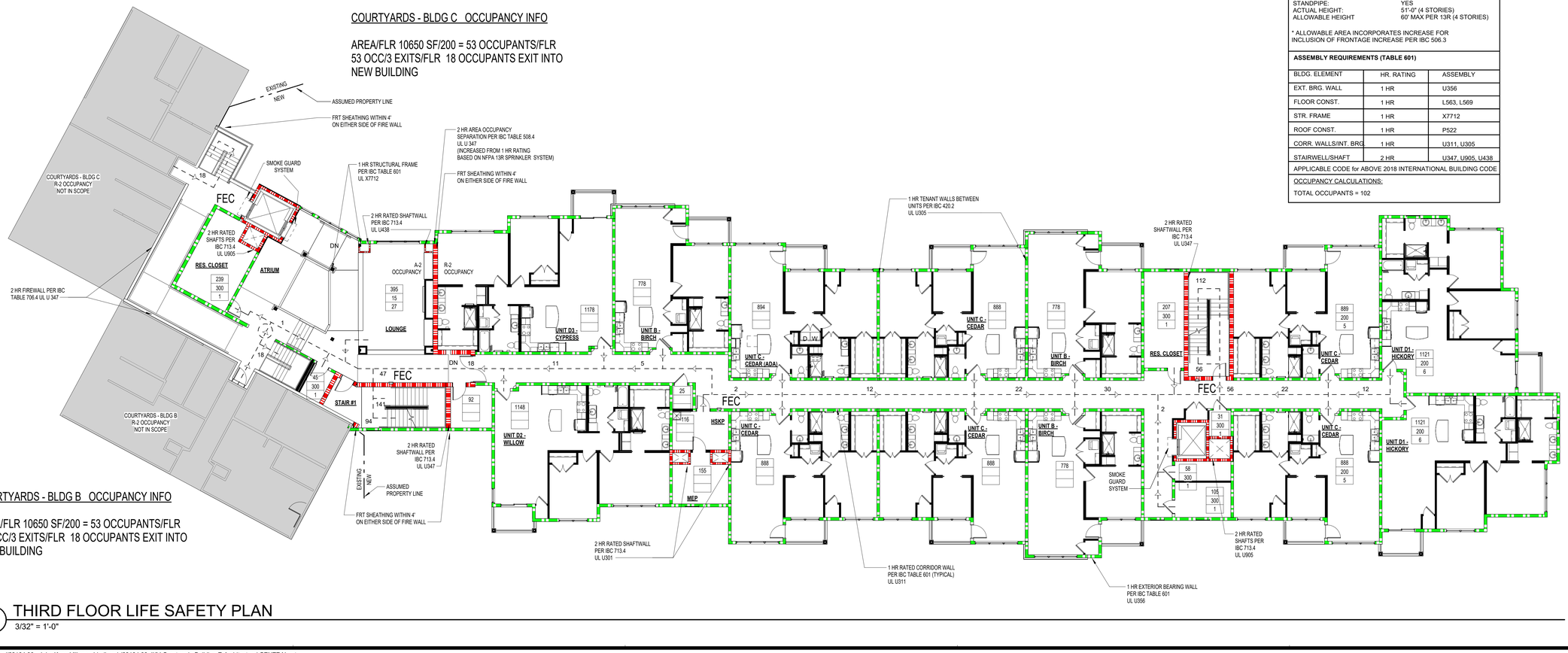
ASSEMBLY REQUIREMENTS (TABLE 601)

BLDG. ELEMENT	HR. RATING	ASSEMBLY
EXT. BRG. WALL	1 HR	U356
FLOOR CONST.	1 HR	L563, L569
STR. FRAME	1 HR	X7712
ROOF CONST.	1 HR	P522
CORR. WALLS/INT. BRG.	1 HR	U311, U305
STAIRWELL/SHAFT	2 HR	U347, U905, U438

APPLICABLE CODE for ABOVE 2018 INTERNATIONAL BUILDING CODE

OCCUPANCY CALCULATIONS:

TOTAL OCCUPANTS = 101



1 THIRD FLOOR LIFE SAFETY PLAN
3/32" = 1'-0"

COURTYARDS - BLDG C OCCUPANCY INFO

AREA/FLR 10650 SF/200 = 53 OCCUPANTS/FLR
53 OCC/3 EXITS/FLR 18 OCCUPANTS EXIT INTO NEW BUILDING

COURTYARDS - BLDG B OCCUPANCY INFO

AREA/FLR 10650 SF/200 = 53 OCCUPANTS/FLR
53 OCC/3 EXITS/FLR 18 OCCUPANTS EXIT INTO NEW BUILDING

LIFE SAFETY INFO: THIRD FLOOR

PRIMARY USE GROUP:	R-2
TOTAL BLDG. AREA:	17,952 s.f.
ALLOW. AREA for R-2 USE GROUP:	24,000 (TABLE 506.2)*
CONSTRUCTION TYPE:	TYPE VA
SPRINKLED:	YES, NFPA 13R
STANDPIPE:	YES
ACTUAL HEIGHT:	51'-0" (4 STORIES)
ALLOWABLE HEIGHT	60' MAX PER 13R (4 STORIES)

* ALLOWABLE AREA INCORPORATES INCREASE FOR INCLUSION OF FRONTAGE INCREASE PER IBC 506.3

ASSEMBLY REQUIREMENTS (TABLE 601)

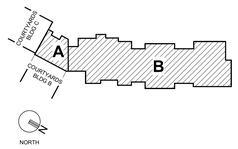
BLDG. ELEMENT	HR. RATING	ASSEMBLY
EXT. BRG. WALL	1 HR	U356
FLOOR CONST.	1 HR	L563, L569
STR. FRAME	1 HR	X7712
ROOF CONST.	1 HR	P522
CORR. WALLS/INT. BRG.	1 HR	U311, U305
STAIRWELL/SHAFT	2 HR	U347, U905, U438

APPLICABLE CODE for ABOVE 2018 INTERNATIONAL BUILDING CODE

OCCUPANCY CALCULATIONS:

TOTAL OCCUPANTS = 102

KEYPLAN



LIFE SAFETY LEGEND

- SMOKE PARTITION
- 1 HR SMOKE BARRIER
- 1 HR FIRE PARTITION
- 1 HR FIRE BARRIER
- 2 HR FIRE BARRIER
- 2 HR RATED FIREWALL
- 3 HR RATED FIREWALL
- 4 HR RATED FIREWALL

EGRESS LEGEND

OCCUPANT LOAD CALCULATIONS

3000 — FLOOR AREA IN S.F.
100 — ALLOWABLE S.F. PER PERSON
30 — OCCUPANT LOAD

MEANS OF EGRESS

123 — NUMBER OF OCCUPANTS ALONG EGRESS PATH
PATH OF EGRESS

EGRESS CAPACITY OF EXITS

45 / .2 = 123
ALONG EGRESS PATH WIDTH OF EGRESS COMPONENT
CODE ALLOWED WIDTH / PERSON
CAPACITY OF EGRESS COMPONENT

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. • 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	: DAS	DRAWN	: DAS
ARCHITECT	: DAS	CHECKED	: AAT
ENGINEER	:	APPROVED	: CRJ

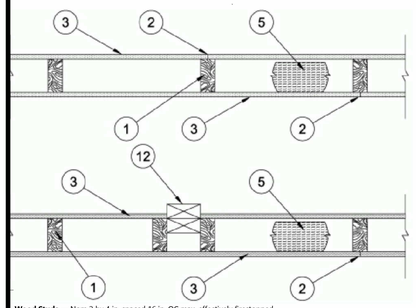
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

THIRD AND FOURTH FLOOR LIFE SAFETY PLAN

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A0.2

2/16/2024
2:51:50 PM



UL U305 - 1 HR ASSEMBLY

Design No. U305

July 15, 2020

Bearing Wall Rating — 1 Hr

Finish Rating — See Items 3, 3A, 3D, 3E, 3F, 3G, 3H, 3J and 3L.

STC Rating - 56 (See Item 9)

. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC max, effectively firestopped.

. **Joints and Nail-Heads —** Joints covered with joint compound and paper tape. Joint compound and paper tape may be mitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the ntire surface of Classified veneer baseboard with the joints reinforced with paper tape. Nailheads exposed or covered with oint compound.

. **Gypsum Board* —** 5/8 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally r vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. iam heads. When used in widths other than 48 in., gypsum panels are to be installed horizontally. For an alternate method of ttachment of gypsum panels, refer to Items 6 through 6F, **Steel Framing Members***.

When Items 6, 6B, 6C, 6D, 6E, or 6F, **Steel Framing Members***, are used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.

When Item 6A, **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers. One layer of gypsum board attached to opposite side of wood stud without furring channels as described in Item 3.

When Item 7, resilient channels are used, 5/8 in. thick, 4 ft wide gypsum panels applied vertically. Screw attached furring channels with 1 in. long, self-drilling, self-tapping Type S or S-12 steel screws spaced 8 in. OC, vertical joints located midway between studs.

When Item 5K, **Foamed Plastic** (CCVW) is used, 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field.

AMERICAN GYPSUM CO — Types AGX-1(finish rating 23 min.), M-Glass (finish rating 23 min.), Type AGX-11 (finish rating 26 min), Type AGX-12 (finish rating 22 min), Type LightRoc (finish rating 23 min.) or Type AG-C

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1 (finish rating 24 min)

CABOT MANUFACTURING ULC — Type X (finish rating 22 min), 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (finish rating 26 min); Type EGRG or GlasRoc (finish rating 23 min), GlasRoc-2, Type Habito (finish rating 26 min).

CGC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRC (finish rating 24 min), Type WRX (finish rating 24 min), Type ULIX (finish rating 20 min)

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 34 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX (finish rating 21 min), Type CLLX (finish rating 24 min)

GEORGIA-PACIFIC GYPSUM L L C — Type 5 (finish rating 26 min), Type 6 (finish rating 23 min), Type 9 (finish rating 26 min), Type C (finish rating 26 min), Type DGG (finish rating 20 min), Type GPFS1 (finish rating 20 min), Type GPFS2 (finish rating 20 min), Type GPFS6 (finish rating 26 min), Type DS, Type DAP, Type DD (finish rating 20 min), Type DA, Type DAPC, Type LS (finish rating 23 min), Type X, Veneer Plaster Base - Type X, Water Rated - Type X, Sheathing - Type X, Soffit - Type X, Type LWX (finish rating 22 min), Veneer Plaster Base-Type LWX (finish rating 22 min), Water Rated-Type LWX (finish rating 22 min), Sheathing Type-LWX (finish rating 22 min), Soffit-Type LWX (finish rating 22 min), Type DGLW (finish rating 22 min), Water Rated-Type DGLW (finish rating 22 min), Sheathing Type- DGLW (finish rating 22 min), Soffit-Type DGLW (finish rating 22 min), Type LWX (finish rating 22 min), Type LW2X (finish rating 22 min), Veneer Plaster Base - Type LW2X (finish rating 22 min), Water Rated - Type LW2X (finish rating 22 min), Sheathing - Type LW2X (finish rating 22 min), Soffit - Type LW2X (finish rating 22 min), Type DGL2W (finish rating 22 min), Water Rated - Type DGL2W (finish rating 22 min), Sheathing - Type DGL2W (finish rating 22 min)

NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min), Type FSW-8, Type FSLX (finish rating 21 min), Type RSX (finish rating 26 min).

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2 (finish rating 20 min), PG-3 (finish rating 20 min), Types PG-3W, PG-5W (finish rating 20 min), Type PG-4 (finish rating 20 min), Type PG-6 (finish rating 23 min), Types PG-3WS, PG-5WS, PGS-WRS (finish rating 20 min), Types PG-5, PG-9 (finish rating 26 min), PG-11 PG-13 (Nails increased to 2 in.), or Type PG-C

PANEL REY S A — Type GREX, GRIX, PRX, PRC, PRC2; Types RHX, Guard Rey, MDX, ETX (finish rating 22 min), PRX2 (finish rating 21 min)

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1 (finish rating 26 min)

THAI GYPSUM PRODUCTS PCL — Type C, Type X (finish rating 26 min)

UNITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type FRX-G (finish rating 29 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type ULX (finish rating 22 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type ULIX (finish rating 20 min)

USG BORAL DRYWALL SFZ LLC — Type SGX (finish rating 24 min).

USG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), SCX (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type ULX (finish rating 22 min)

3A. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LighttRoc (finish rating 25 min.)

ERTAINTEED GYPSUM INC — Type C, Type X or Type X-1 (finish rating 26 min)

GC INC — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SCX (finish rating 24 min), Type SHX (finish rating 24 min), ype WRC (finish rating 24 min), Type WRX (finish rating 24 min)

ATIONAL GYPSUM CO — Type FSW (finish rating 24 min)

NITED STATES GYPSUM CO — Type AR (finish rating 24 min), Type SCX (finish rating 24 min), Type SGX (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type FRX-G (finish rating 24 min), Type IP-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

SG BORAL DRYWALL SFZ LLC — Types C, SCX, SGX (finish rating 24 min).

SG MEXICO S A DE C V — Type AR (finish rating 24 min), Type C (finish rating 24 min), Type WRX (finish rating 24 min), Type WRC (finish rating 24 min), Type IP-X1 (finish rating 24 min), Type IP-X2 (finish rating 24 min), Type SHX (finish rating 24 min), Type SCX, Type P-AR (finish rating 24 min), Type IPC-AR (finish rating 24 min)

B. **Gypsum Board* —** (As an alternate to Item 3) — Nom 3/4 in. thick, installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-3/8 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A.
GC INC — Types AR, IP-AR

NITED STATES GYPSUM CO — Types AR, IP-AR

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

3C. **Gypsum Board* —** (As an alternate to Items 3, 3A and 3B) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally to one side of the assembly. Installed with 1-7/8 in. long cement coated nails as described in Item 3 or 1-1/4 in. long Type W coarse thread gypsum panel steel screws as described in Item 3A. Joint covering (Item 2) not required.
CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

3D. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, or 3C — Not Shown) — For Direct Application to Studs Only- Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RAY-BAR ENGINEERING CORP — Type RB-LBG (finish rating 24 min)

3E. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, and 3D) — 5/8 in. thick gypsum panels, with square edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last 2 screws 1 and 4 in. from edge of board or nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
GEORGIA-PACIFIC GYPSUM L L C — Type DGG (finish rating 20 min), GreenGlass Type X (finish rating 23 min)

3F. **Gypsum Board* —** (As an alternate to Items 3, 3A, 3B, 3C, 3D, and 3E) — 5/8 in. glass-mat faced with square edges, applied either horizontally or vertically. Gypsum panels nailed 7 in. OC around the perimeter and in the field with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Nails shall be placed 1 inch and 3 inch from horizontal joints and 7 inch OC thereafter.
CGC INC — Type USGX (finish rating 22 min)

UNITED STATES GYPSUM CO — Type USGX (finish rating 22 min.)

USG BORAL DRYWALL SFZ LLC — , Type USGX (finish rating 22 min.)

USG MEXICO S A DE C V — Type USGX (finish rating 22 min.)

3G. **Gypsum Board* —** (As an alternate to Items 3 through 3F) — 5/8 in. thick paper surfaced applied vertically. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board (finish rating 27 min)

3H. **Gypsum Board* —** (As an alternate to Items 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically only. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
NATIONAL GYPSUM CO — Type SBWB

3I. **Gypsum Board* —** (As an alternate to Items 3 through 3H, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES (finish rating 20 min)

3J. **Gypsum Board* —** (As an alternate to Item 3) — Not to be used with items 6 or 7. 5/8 in. thick paper surfaced applied vertically or horizontally. Gypsum panels secured per item 3 or 3A.
CERTAINTEED GYPSUM INC — Type SilentFX

3K. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 8 in. OC with the last screw 1 in. from the edge of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
NATIONAL GYPSUM CO — Type FSK (finish rating 20 min), Type FSK-G (finish rating 20 min), Type FSW (finish rating 20 min), Type FSW-2 (finish rating 24 min), Type FSW-3 (finish rating 20 min), Type FSW-5 (finish rating 22 min), Type FSW-G (finish rating 20 min), Type FSK-C (finish rating 20 min), Type FSW-C (finish rating 20 min), Type FSMR-C, Type FSW-6 (finish rating 20 min), Type FSL (finish rating 24 min).

3L. **Gypsum Board* —** (As an alternate to Item 3) — For Direct Application to Studs Only — Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick. compression fitted or adhered over the screw heads. Lead batten strips to have a purity of 99.5% meeting the Federal specification QQ-L-201f, Grades "B, C or D".
MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

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

3N. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick, 4 ft. wide, applied horizontally or vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 3 or 3A.
CERTAINTEED GYPSUM INC — Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2 (finish rating 24 min)

3O. **Wall and Partition Facings and Accessories* —** (As an alternate to Item 3, Not Shown) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically. Panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads. Panel joints covered with paper tape and two layers of joint compound. Nailheads covered with two layers of joint compound.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527 (finish rating 24 min).

3P. **Gypsum Board* —** (As an alternate to Item 3, Not Shown) — Two layers nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Horizontal edge joints and horizontal butt joints on opposite sides of studs need not be staggered or backed by wood studs. Horizontal joints on the same side between face and base layers need not be staggered. Base layer gypsum panels fastened to studs with 1-1/4 in. long drywall nails spaced 8 in. OC. Face layer gypsum panels fastened to studs with 1-7/8 in. long drywall nails spaced 8 in. OC starting with a 4" stagger.
NATIONAL GYPSUM CO — Type FSW (finish rating 25 min)

3Q. **Gypsum Board* —** (As an alternate to Item 3) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

3R. **Gypsum Board* —** (As an alternate to Item 3. For use with Item 5H) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 3 above. Applied either horizontally or vertically, and screwed to panels with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

3S. **Gypsum Board* —** 3/4 in. thick paper or vinyl surfaced, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels secured as described in Item 3 with nail length increased to 2 in.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-13

3T. **Wall and Partition Facings and Accessories* —** (As an alternate to 5/8 in. thick board as outlined in Item 3) — Nominal 1-3/8 in. thick, 4 ft wide panels, applied vertically or horizontally. Fastened with #6 x 2 in. long drywall screws spaced 8 in. OC along the perimeter and 12 in. OC in the field.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 545

3U. **Gypsum Board* —** (As an alternate to Item 3 - For use with Foamed Plastic products, Item 5J) — 5/8 in. thick, 4 ft. wide, applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels nailed 7 in. OC with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 15/64 in. diam heads.
AMERICAN GYPSUM CO — Types AGX-1

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X

CERTAINTEED GYPSUM INC — Type X

CGC INC — Type SCX

PANEL REY S A — Type PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X

UNITED STATES GYPSUM CO — Types SCX and SGX

USG BORAL DRYWALL SFZ LLC — Types SCX and SGX

USG MEXICO S A DE C V — Type SCX

4. **Steel Corner Fasteners —** (Optional) — For use at wall corners. Channel shaped, 2 in. long by 1 in. high on the back side with two 1/8 in. wide cleats protruding into the 5/8 in. wide channel, fabricated from 24 gauge galv steel. Fasteners applied only to the end or cut edge (not along tapered edges) of the gypsum board, no greater than 2 in. from corner of gypsum board, max spacing 16 in. OC. Nailed to adjacent stud through tab using one No. 6d cement coated nail per fastener. Corners of wall board shall be nailed to top and bottom plate using No. 6d cement coated nails.

5. **Batts and Blankets* —** (Optional — Required when Item 6A is used (RC-1)) — Glass fiber or mineral wool insulation. Placed to completely or partially fill the stud cavities. When Item 6A is used, glass fiber or mineral wool insulation shall be friction-fitted to completely fill the stud cavities.
CERTAINTEED CORP

JOHNS MANVILLE

KNAUF INSULATION LLC

MANSON INSULATION INC

ROCKWOOL — Types Acoustical Fire Batts and Type AFB, min. density 1.69 pcf / 27.0 kg/m^3

ROCKWOOL MALAYSIA SDN BHD — Type Acoustical Fire Batts

ROCK WOOL MANUFACTURING CO — Delta Board

THERMAFIBER INC — Type SAFB, SAFB FF

5A. **Fiber, Sprayed* —** (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product. When Item 6B is used, Fiber, Sprayed shall be INS735, INS745, INS750LD, INS765LD or INS773LD.
U S GREENFIBER L L C — INS735, INS745 and INS750LD for use with wet or dry application. INS515LD, INS541LD, INS735, INS765LD, and INS773LD are to be used for dry application only

5B. **Fiber, Sprayed* —** (Not Shown - Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. **Batts and Blankets* —** Required for use with resilient channels, Item 7, 3 in. thick mineral wool batts, friction-fitted to fill interior of wall.
THERMAFIBER INC — Type SAFB, SAFB FF

5D. **Glass Fiber Insulation —** (As an alternate to Item 5C) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

5E. **Batts and Blankets* —** (Required for use with Wall and Partition Facings and Accessories, Item 3D) — Glass fiber insulation, nom 3-1/2 in. thick, min. density of 0.80 pcf, with a flame spread of 25 or less and a smoke developed of 50 or less, friction-fitted to completely fill the stud cavities. See Batts and Blankets Category (BKNV) for names of manufacturers.

5F. **Fiber, Sprayed* —** (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D) — As an alternate to Batts and Blankets (Item 5) and Item 5A - Spray applied granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See **Fiber, Sprayed** (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5G. **Fiber, Sprayed* —** (Optional, Not Shown — Not for use with Items 6, 6A, 6B, 6C, or 6D). — As an alternate to Batts and Blankets (Item 5) and Item 5A - Brown Colored Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed stud cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5H. **Foamed Plastic* —** (Optional -For use with Item 3R) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
SES FOAM INC — Nexseal™ 2.0 or Nexseal™ 2.0 LE Spray Foam and Sucraseal Spray Foam.

5I. **Fiber, Sprayed* —** (Not Shown — Not for use with Item 6) — As an alternate to Batts and Blankets (Item 5) - Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft^3.
APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation

5J. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 3U) — Spray applied, foamed plastic insulation, to completely filling stud cavity.
GACO WESTERN L L C — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N, GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M

5K. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 3) — Spray applied, foamed plastic insulation completely filling stud cavity. The 5/8 in. thick, 4 ft. wide gypsum board described in item 3 shall only be applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Gypsum panels secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field.
CARLISLE SPRAY FOAM INSULATION — SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim, and SealTite Pro One Zero.

6. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75)

6A. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members on one side of studs as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Batts and Blankets placed in stud cavity as described in Item 5. Two layers of gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Aa) to one side of studs only. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax

6B. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ba) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

6C. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6D. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with a double strand of No. 18 AWG twisted steel wire. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

6E. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC - Type RC+ Assurance Clip

6F. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. or 1-1/2 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

7. **Furring Channel —** Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. **Caulking and Sealants —** (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.

9. **STC Rating —** The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

A. Item 2, above — Nailheads Shall be covered with joint compound.

B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above — Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing,

6E. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Philips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 6Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC - Type RC+ Assurance Clip

6F. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-23/32 in. wide by 7/8 in. or 1-1/2 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Fa) to studs. Clips spaced 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.
CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

7. **Furring Channel —** Optional — Not Shown — For use on one side of the wall - Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws. When resilient channels are used, insulation, Items 5C or 5D is required.

8. **Caulking and Sealants —** (Not Shown, Optional) — A bead of acoustical sealant applied around the partition perimeter for sound control.

9. **STC Rating —** The STC Rating of the wall assembly is 56 when it is constructed as described by Items 1 through 6, except:

A. Item 2, above — Nailheads Shall be covered with joint compound.

B. Item 2, above — Joints As described, shall be covered with fiber tape and joint compound.

C. Item 5, above — Batts and Blankets* The cavities formed by the studs shall be friction fit with R-19 unfaced fiberglass insulation batts measuring 6-1/4 in. thick and 15-1/4 in. wide.

D. Item 6, above — Steel Framing Members* Type RSIC-1 clips shall be used to attach gypsum board to studs on either side of the wall assembly.

E. Item 8, above — Caulking and Sealants (Not Shown) A bead of acoustical sealant shall be applied around the partition perimeter for sound control.

F. Steel Corner Fasteners (Item 4), Fiber, Sprayed (Items 5A and 5B) and Steel Framing Members (Item 6A), not evaluated as alternatives for obtaining STC rating.

10. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

11. **Cementitious Backer Units* —** (Optional Item Not Shown — For Use On Face Of 1 Hr Systems With All Standard Items Required) - 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC. When 4 ft. wide boards are used, horizontal joints need not be backed by framing.
NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Non-Bearing Wall Partition Intersection —** (Optional) —Two nominal 2 by 4 in. studs or nominal 2 by 6 in. studs nailed together with two 3 in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

13. **Mesh Netting —** (Not Shown) — Any thin, woven or non-woven fibrous netting material attached with staples to the outer face of one row of studs to facilitate the installation of the sprayed fiber from the opposite row.

14. **Mineral and Fiber Board* —** (Optional, Not Shown) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with 2 in. long Type W steel screws, spaced 12 in. OC. The required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

14A. **Mineral and Fiber Board* —** (Optional, Not Shown) — For use with Items 14B-14E) — For optional use as an additional layer on one side of wall. Nom 1/2 in. thick, 4 ft wide with long dimension parallel and centered over studs. Attached to framing with minimum 1-3/8 in. long ring shanked nails or 1-1/4 in. long Type W steel screws, spaced 12 in. OC along board edges and 24 in. OC in field of board along intermediate framing. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
HOMASOTE CO — Homasote Type 440-32

14B. **Glass Fiber Insulation —** (For use with Item 14A) — 3-1/2 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, placed to fill the interior of the wall. See Batts and Blankets (BKNV or BZJZ) categories for names of Classified companies.

14C. **Batts and Blankets* —** (As an alternate to Item 14B, For use with Item 14A), 3 in. thick mineral wool batts, placed to fill interior of wall, attached to the 3-1/2 in. face of the studs with staples placed 24 in. OC.
THERMAFIBER INC — Type SAFB, SAFB FF

14D. **Adhesive —** (For use with Item 14A) — Construction grade adhesive applied in vertical, serpentine, nominal 3/8 in. wide beads down the length of both vertical edges of Mineral and Fiber Board (Item 14A).

14E. **Gypsum Board* —** (For use with Item 14A) — 5/8 in. thick, 4 ft wide, applied vertically over Mineral and Fiber Board (Item 14A) with vertical joints located anywhere over stud cavities. Secured to mineral and fiber boards with 1-1/2 in. Type G Screws spaced 8 in. OC along edges of each vertical joint and 12 in. OC in intermediate field of the Mineral and Fiber Board (Item 14A). Secured to outermost studs and bearing plates with 2 in. long Type S screws spaced 8 in. OC. Gypsum Board joints covered with paper tape and joint compound. Screw heads covered with joint compound. Finish Rating 30 Min.
AMERICAN GYPSUM CO — Type AG-C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types FSK-C, FSW-C

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type PG-C

PANEL REY S A — Type PRC

THAI GYPSUM PRODUCTS PCL — Type C

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

USG BORAL DRYWALL SFZ LLC — Type C

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

14F. **Mineral and Fiber Board —** (Optional, Not Shown) — For optional use as an additional layer on one side of wall - Nom 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on one side of the wall in between the wood studs and the UL Classified Gypsum Board (Item 3). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 3) installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
BLUE RIDGE FIBERBOARD INC — SoundStop

UL X771 - 1 HR ASSEMBLY

Design No. X771

October 26, 2017

Ratings — 3/4, 1, 1-1/2, 2, 3 and 4 h

1. **Steel Pipe or Tube Column —** Steel circular pipe with diameter (OD) ranging from a minimum of 3 in. to a maximum of 32 in. with a minimum wall thickness of 3/16 in.
Steel square or rectangular tube with outside wall dimensions ranging from a minimum 3 in. to a maximum of 32 in. and a minimum wall thickness of 3/16 in.

The A/P ratio of the steel pipe or tube (see Item 2) shall range from 0.18 to 2.0.

2. **Spray-Applied Fire Resistive Materials* —** Applied by mixing with water and spraying in one or more coats to steel surfaces which must be clean and free of dirt, loose scale and oil. Min avg and ind density of 15/14 pcf respectively. Min avg and min ind density of 22/19 pcf respectively for Types Z-106, Z-106/G. Min avg and min ind density of 19/18 pcf respectively for Types 7GP and 7HD. For method of density determination, see Design Information Section, preceding these designs.
The hourly rating of the structural member is dependent upon the ratio of A/P and the thickness of Spray-Applied Fire Resistive Materials, where A is the cross sectional area of the pipe or tube and P is the heated perimeter.

The A/P ratio of a circular pipe is determined by:

$$A/P\ pipe = \frac{t\ (d - t)}{d}$$

Where:

d = the outer diameter of the pipe (in.)

t = the wall thickness of the pipe (in.)

The A/P ratio of a rectangular or square tube is determined by:

$$A/P\ tube = \frac{t\ (a + b - 2t)}{a + b}$$

Where:

a = the outer width of the tube (in.)

b = the outer length of the tube (in.)

t = the wall thickness of the tube (in.)

The thickness of Spray-Applied Fire Resistive Materials for ratings of 3/4, 1, 1-1/2, 2, 3 and 4 h of a steel pipe or tube can be determined by the equation:

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

CONSTRUCTION SET

CURTIS R. JENNINGS III
NUMBER
A-2023034555
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS
Architecture
Engineering
Planning
Interiors

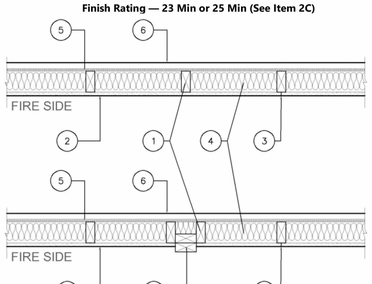
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

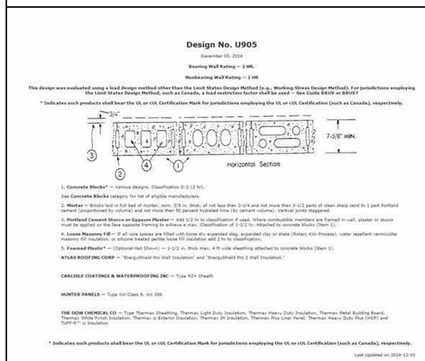
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

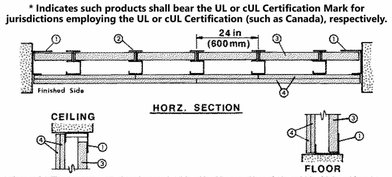
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
UL ASSEMBLIES

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING
A0.3







RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

$$h = \frac{R - 0.20}{4.43\ (A/P)}$$

Where:

R = the hourly rating (hrs).

h = the thickness of Spray-Applied Fire Resistive Materials, minimum 1/4 in., maximum 3-7/8 in.

ARABIAN VERMICULITE INDUSTRIES — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Sonophone 1, Sonophone 5, Z-106, Z-106/G.

GCP KOREA INC — Types MK-6/CBF, MK-6/ED, MK-6/HY, MK-6s, Monokote Acoustic 1, Monokote Acoustic 5, Z-106, Z-106/G.

PYROK INC — Type LD.

SOUTHWEST FIREPROOFING PRODUCTS CO — Types 4, 5, 5EF, 5GP, 5AR, 5GP/AR, 5EF/AR, 5MD/AR, 5MD, 7GP, 7HD, 8EF, 8GP, 8MD, 9EF, 9GP, 9MD.

GCP APPLIED TECHNOLOGIES INC — Types MK-6/HY, MK-6s, Monokote Acoustic 1, Monokote Acoustic 5, RG, Z-106, Z-106/G.

UL U356 - 1 HR ASSEMBLY

Design No. U356

March 11, 2020

Bearing Wall Rating - 1 Hr Rating Exposed to Fire on Interior Face Only

Bearing Wall Rating — 1 Hr Rating Exposed to Fire on Exterior Face (See Item 6E)

Finish Rating — 23 Min or 25 Min (See Item 2C)

1. **Wood Studs —** Nom 2 by 4 in. spaced 16 in. OC with two 2 by 4 in. top and one 2 by 4 in. bottom plates. Studs laterally-braced by wood structural panel sheathing (Item 5). When **Mineral and Fiber Boards*** (Item 5A) are considered as bracing for the studs, the load is restricted to 76% of allowable axial load. Walls effectively fire stopped at top and bottom of wall.

2. **Gypsum Board* — Any 5/8 in. thick UL Classified Gypsum Board that is eligible for use in Design Nos. L501, G512 or U305.** Nom 5/8 in. thick, 4 ft wide, applied vertically and nailed to studs and bearing plates 7 in. OC with 6d cement-coated nails, 1-7/8 in. long with 1/4 in. diam head.
When Item 7, 7B, 7C, 7D or 7E **Steel Framing Members***, is used, gypsum panels attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC.
When Item 7A **Steel Framing Members***, is used, two layers of gypsum panels attached to furring channels. Base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced 12 in. OC. Face layer attached to furring channels with 1-5/8 in. long Type S bugle-head steel screws spaced 12 in. OC. All joints in face layers staggered with joints in base layers.

AMERICAN GYPSUM CO (View Classification) — CKNX.R14196

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO (View Classification) — CKNX.R19374

CABOT MANUFACTURING ULC (View Classification) — CKNX.R25370

CERTAINTEED GYPSUM INC (View Classification) — CKNX.R3660

CGC INC (View Classification) — CKNX.R19751

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C (View Classification) — CKNX.R18482

GEORGIA-PACIFIC GYPSUM L L C (View Classification) — CKNX.R2717

LOADMASTER SYSTEMS INC (View Classification) — CKNX.R11809

NATIONAL GYPSUM CO (View Classification) — CKNX.R3501

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM (View Classification) — CKNX.R7094

PANEL REY S A (View Classification) — CKNX.R21796

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD (View Classification) — CKNX.R19262

THAI GYPSUM PRODUCTS PCL (View Classification) — CKNX.R27517

UNITED STATES GYPSUM CO (View Classification) — CKNX.R1319

USG BORAL DRYWALL SFZ LLC (View Classification) — CKNX.R38438

USG MEXICO S A DE C V (View Classification) — CKNX.R16089

2A. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — Any 5/8 in. thick 4 ft wide gypsum panels that are eligible for use in Design Nos. L501, G512 or U305, supplied by the Classified Companies listed below shown in the **Gypsum Board*** (CKNX) category. Applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
CGC INC

UNITED STATES GYPSUM CO

USG BORAL DRYWALL SFZ LLC

USG MEXICO S A DE C V

2B. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — 5/8 in. thick 4 ft wide gypsum panels applied vertically and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Type C, Type X, Type X-1, Easi-Lite Type X-2

GEORGIA-PACIFIC GYPSUM L L C — Types X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, Type X ComfortGuard Sound Deadening Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS.

THAI GYPSUM PRODUCTS PCL — Type C or Type X

2C. **Gypsum Board* —** (As an alternate to Item 2, Not Shown) — For Use with Item 5A only - 5/8 in. thick 4 ft wide gypsum panels applied horizontally and attached to studs and bearing plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screws 1 in.and 4 in. from edges of board. Finish Rating is 25 min.
CABOT MANUFACTURING ULC — 5/8 Type X, Type Blueglass Exterior Sheathing

GEORGIA-PACIFIC GYPSUM L L C — Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-11, PGS-WRS

2D. **Gypsum Board* —** (As an alternate to Item 2) — Not to be used with item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically only and fastened to the studs and plates with 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam and 1/4 in. diam heads, 7 in. OC.
NATIONAL GYPSUM CO — Type SBWB

2E **Gypsum Board* —** (As an alternate to Items 2 through 2D) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock ES.

2F. **Gypsum Board* —** (As an alternate to Item 2) — Not to be used with item 7. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally and fastened to the studs and plates with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board.
CERTAINTEED GYPSUM INC — Type SilentFX

2G. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 2 through 2F) — Nominal 5/8 in. thick, 4 ft wide panels, secured as described in Item 2.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527.

2H. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a maximum 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC6A (finish rating 21 min), Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

2I. **Gypsum Board* —** (As an alternate to Item 2) — 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths of other than 48 in., gypsum boards are to be installed horizontally.
AMERICAN GYPSUM CO — Types AGX-1 (finish rating 25 min.), M-Glass (finish rating 25 min.), AG-C (finish rating 25 min.), LightRoc (finish rating 25 min.)

NATIONAL GYPSUM CO — Type FSK, Type FSK-G, Type FSW, Type FSW-3, Type FSW-5, Type FSW-G, Type FSK-C, Type FSW-C, Type FSMR-C, Type FSW-6, Type FSL

2J. **Gypsum Board* —** (As an alternate to Item 2) - 5/8 in. thick gypsum panels, with beveled, square, or tapered edges, applied either horizontally or vertically. Gypsum panels fastened to framing with 1-1/4 in. long Type W coarse thread steel screws spaced a max 8 in. OC with the last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum boards are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type C, Type X or Type X-1(finish rating 26 min), Easi-Lite Type X (finish rating 24 min), Easi-Lite Type X-2, Type EGRG or GlasRoc or GlasRoc Sheathing (finish rating 23 min)

3. **Joints and Fastener Heads —** (Not Shown) — Gypsum board joints covered with tape and joint compound. Fastener heads covered with joint compound.

4. **Batts and Blankets* —** Mineral fiber or glass fiber insulation, 3-1/2 in. thick, pressure fit to fill wall cavities between studs and plates. Mineral fiber insulation to be unfaced and to have a min density of 3 pcf. Glass fiber insulation to be faced with aluminum foil or kraft paper and to have a min density of 0.9 pcf (min R-13 thermal insulation rating).
See **Batts and Blankets*** (BKNV) Category in the Building Materials Directory and **Batts and Blankets*** (BZJZ) Category in the Fire Resistance Directory for names of Classified Companies.

4A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735 and INS745 for use with wet or dry application. INS515LD, INS541LD, INS735, INS745, INS765LD, and INS773LD are to be used for dry application only.

4B. **Fiber, Sprayed* —** As an alternate to Item 4 and 4A — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft ^{3}.
NU-WOOL CO INC — Cellulose Insulation

4C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

4D. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied, granulated mineral fiber material. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

5. **Wood Structural Panel Sheathing —** Min 7/16 in. thick, 4 ft wide wood structural panels, min grade "C-D" or "Sheathing". Installed with long dimension of sheet (strength axis) or face grain of plywood parallel with or perpendicular to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 6d cement coated box nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs.

5A. **Mineral and Fiber Boards* —** As an alternate to Item 5 - Min 1/2 in. thick, 4 ft wide sheathing, installed vertically to studs. Vertical joints centered on studs. Horizontal joints backed with nom 2 by 4 in. wood blocking. Attached to studs on exterior side of wall with 1-1/2 in. long galvanized roofing nails spaced 6 in. OC at perimeter of panels and 12 in. OC along interior studs. As an option a weather resistive barrier may be applied over the Mineral and Fiber Boards.

6. **Exterior Facings —** Installed in accordance with the manufacturer's installation instructions. One of the following exterior facings is to be applied over the sheathing:

A. **Vinyl Siding — Molded Plastic* —** Contoured rigid vinyl siding having a flame spread value of 20 or less.
See **Molded Plastic** (BTAT) category in the Building Materials Directory for names of manufacturers.

B. **Particle Board Siding —** Hardboard exterior sidings including patterned panel or lap siding.

C. **Wood Structural Panel or Lap Siding —** APA Rated Siding, Exterior, plywood, OSB or composite panels with veneer faces and structural wood core, per PS 1 or APA Standard PRP-108, including textured, rough sawn, medium density overlay, brushed, grooved and lap siding.

D. **Cementitious Stucco —** Portland cement or synthetic stucco systems with self-furring metal lath or adhesive base coat. Thickness from 3/8 to 3/4 in., depending on system.

E. **Brick Veneer —** Any type on nom 4 in. wide brick veneer. When brick veneer is used, the rating is applicable with exposure on either face. Brick veneer fastened with corrugated metal wall ties attached over sheathing to wood studs with 8d nail per tie: ties spaced not more than each sixth course of brick and max 32 in. OC horizontally. One in. air space provided between brick veneer and sheathing.

F. **Exterior Insulation and Finish System (EIFS) —** Nom 1 in. **Foamed Plastic*** insulation bearing the UL Classification Marking, attached over sheathing and finished with coating system, or Portland cement or synthetic stucco systems, in accordance with manufacturer's instructions. See **Foamed Plastic** (BRYX and CCVW) categories for names of Classified companies.

G. **Siding —** Aluminum or steel siding attached over sheathing to studs.

H. **Fiber-Cement Siding —** Fiber-cement exterior sidings including smooth and patterned panel or lap siding.

I. **Wall and Partition Facings and Accessories* —** Stone veneer is mortar bonded to a lath, scratch coat and water resistant barrier applied to sheathing, installed in accordance with the manufacturers installation instructions, and meeting the requirements of local code agencies.
ELDORADO STONE OPERATIONS L L C — Type Eldorado Stone

J. **Cementitious Backer Units —** 1/2 in. or 5/8 in., min. 32 in. wide.- Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with cement board screws of adequate length to penetrate stud by a minimum 3/4 in., spaced a max of 8 in. OC. Horizontal joints need not be backed by framing. When Cementitious Backer Units are used, the rating is applicable with exposure on either face. Cementitious Backer Units for use as substrate for exterior finishes such as ceramic tile, slate, marble, natural stone, manufactured stone, thin brick, or Portland cement or synthetic stucco.
NATIONAL GYPSUM CO — Type PermaBase

6A. **Building Units* — As an alternate to Exterior Facing Item 6 —** Insulated steel panels, 12 through 42 in. wide. Attached over sheathing through retainer clips to studs or support steel with No. 14 hex head self-tapping screws located at each joint in the concealed lip of the units and spaced in accordance with the structural design requirements. KINGSPAN INSULATED PANELS INC — Types 200, 300, 400, 900, or KS series, 2 through 6 in. thickness; CWP-V, H, 2 through 3 in. nominal thickness or Designwall 2000 or Designwall 4000, 2 and 3 in. nominal thickness.

7. **Steel Framing Members* —** (Optional, Not Shown) — Furring Channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7A) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

7A. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. Two layers of gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Aa) to interior side of studs. Clips spaced 48 in. OC., and secured to studs with two No. 8 x 2-1/2 in. coarse drywall screws, one through the hole at each end of the clip. Furring channels are friction fitted into clips.
KINETICS NOISE CONTROL INC — Type Isomax.

7B. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

7C. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

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

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Ca) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

7D. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 7Db. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 2.

b. **Steel Framing Members* —** Used to attach furring channels (Item 7Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

7E. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:

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

b. **Steel Framing Members* —** Used to attach resilient channels (Item 7Ea) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

8. **Non-Bearing Wall Partition Intersection —** (Optional) — Two nominal 2 by 4 in. stud or nominal 2 by 6 in. stud nailed together with two 3in. long 10d nails spaced a max. 16 in. OC. vertically and fastened to one side of the minimum 2 by 4 in. stud with 3 in. long 10d nails spaced a max 16 in. OC. vertically. Intersection between partition wood studs to be flush with the 2 by 4 in. studs. The wall partition wood studs are to be framed by with a second 2 by 4 in. wood stud fastened with 3 in. long 10d nails spaced a max. 16 in. OC. vertically. Maximum one non-bearing wall partition intersection per stud cavity. Non-bearing wall partition stud depth shall be at a minimum equal to the depth of the bearing wall.

UL U905 - 2 HR ASSEMBLY

Design No. U905

December 03, 2014

Bearing Wall Rating — 2 HR.

Nonbearing Wall Rating — 2 HR

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

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

1. **Concrete Blocks*** — Various designs. Classification D-2 (2 hr).

See **Concrete Blocks** category for list of eligible manufacturers.

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

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

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

5. **Foamed Plastic*** — (Optional-Not Shown) — 1-1/2 in. thick max, 4 ft wide sheathing attached to concrete blocks (Item 1).

ATLAS ROOFING CORP — "EnergyShield Pro Wall Insulation" and "EnergyShield Pro 2 Wall Insulation."

CARLISLE COATINGS & WATERPROOFING INC — Type R2+ Sheath

HUNTER PANELS — Type Xci-Class A, Xci 286

THE DOW CHEMICAL CO — Type Thermax Sheathing, Thermax Light Duty Insulation, Thermax Heavy Duty Insulation, Thermax Metal Building Board, Thermax White Finish Insulation, Thermax ci Exterior Insulation, Thermax IH Insulation, Thermax Plus Liner Panel, Thermax Heavy Duty Plus (HDP) and TUFF-R™ ci Insulation

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

Last Updated on 2014-12-03

UL U438 - 2 HR ASSEMBLY

Design No. U438

March 12, 2020

Nonbearing Wall Rating — 2 HR.

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

1. **Floor and Ceiling Runners —** "J" -shaped runner, 2-1/2 in. wide with unequal legs of 1 in. and 2 in., fabricated from 24 MSG galv steel (min 20 MSG when Item 4B is used). Runners positioned with short leg toward finished side of wall. Runners attached to structural supports with steel fasteners located not greater than 2 in. from ends and not greater than 24 in. OC.

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

2A. **Steel Studs —** (Not shown)-"E" -shaped studs installed in place of "C-H" -shaped studs (Item 2) to secure the closure liner panels at the ends of walls. Fabricated from 25 MSG galv steel (min 20 MSG when Item 4B, 4D, or 4E is used), 2-1/2 in. wide, with one leg 1 in. long and two legs 3/4 in. long. Shorter legs 1 in. apart to engage gypsum liner panels. Cut to lengths 3/8 in. less than floor to ceiling height. Sill and lintel of opening formed with "J" -shaped runners (Item 1) secured to "E" -shaped studs with angle clips and steel screws.

3. **Gypsum Board* —** 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. or 600 mm (for metric spacing) widths. Panels cut 1 in. less in length than floor to ceiling height. Vertical edges inserted in "H" -shaped section of "C-H" studs. Free edge of end panels attached to long leg of "J" -runners with 1-5/8 in. long Type S steel screws spaced not greater than 12 in. OC.
CGC INC — Type SLX.

UNITED STATES GYPSUM CO — Type SLX.

USG BORAL DRYWALL SFZ LLC — Type SLX

USG MEXICO S A DE C V — Type SLX.

4. **Gypsum Board* —** 1/2 in. thick, 4 ft. or 1200 mm (for metric spacing) wide wallboard applied vertically in two layers. Inner or base layer attached to studs with 1 in. long Type S steel screws spaced 24 in. OC along the edges and in the field of the boards. Outer or face layer attached to studs and "J" -runners with 1-5/8 in. long Type S steel screws spaced 12 in. along the edges and in the field of the boards, staggered from screws in inner layer. Joints between inner and outer layers staggered. Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound.

As an alternate method, inner wallboard layer applied vertically, outer wallboard layer applied horizontally. Inner layer attached to studs with 1 in. Type S steel screws spaced 24 in. OC along vertical edges and in the field. Outer layer attached to the studs and "J" runners over the inner layer with 1-5/8 in. long Type S steel screws spaced 12 in. OC in the field, along the vertical edges and to the floor and ceiling runners. Outer layer secured to inner layer wallboard with 1-1/2 in. long Type G steel screws located midway between studs and 1 in. from the horizontal joint.

AMERICAN GYPSUM CO — Types AG-C .

CABOT MANUFACTURING ULC — Type C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Type C, IP-X2, or WRC.

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A.

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C.

NATIONAL GYPSUM CO — Types eXP-C, FSK-C, FSW-C, FSMR-C.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types PG-C.

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air

THAI GYPSUM PRODUCTS PCL — Type C.

UNITED STATES GYPSUM CO — Type C, IP-X2 or WRC.

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Type C, IP-X2 or WRC.

4A. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Inner or base layer attached to studs with 1 in. long Type S or S-12 steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S or S-12 steel screws spaced 12 in. OC when installed vertically and staggered 12 in. from base layer screws or 8 in. OC when installed horizontally and staggered 8 in. from base layer screws. Horizontal joints between inner and outer layers staggered a min of 12 in. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound. Paper tape and joint compound may be omitted when gypsum boards are supplied with square edges. When used in widths other than 48 in., gypsum panels to be installed horizontally.
CGC INC — Type AR, IP-AR, IP-X1, SCX, ULX, or WRX.

UNITED STATES GYPSUM CO — Type AR, FRX-G, IP-AR, IP-X1, SCX, ULX or WRX.

USG BORAL DRYWALL SFZ LLC — Type SCX

USG MEXICO S A DE C V — Type AR, IP-AR, IP-X1, SCX, ULX, or WRX.

4B. **Gypsum Board* —** (Not Shown) - May be used in lieu of Items 4 or 4A for the base layer - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips (Item 6) required behind vertical joints.
RAY-BAR ENGINEERING CORP — Type RB-LBG

4C. **Gypsum Board* —** (As an alternate to Item 4, 4A, 4B) — 5/8 in. thick. Two layers installed as described in Item 4.
NATIONAL GYPSUM CO — Type FSMR-C.

4D. **Gypsum Board* —** (Not Shown) - May be used in lieu of Items 4 for the base layer - Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints. To be used with Lead Batten Strips (see Item 6B) or Lead Discs (see Item 6C).
MAYCO INDUSTRIES INC — Type X-Ray Shielded Gypsum

4E. **Gypsum Board* —** (Not Shown) - May be used in lieu of Items 4 for the base layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-1/4 in. long Type S-12 steel screws gypsum panel steel screws spaced 8 in. OC at perimeter and 12 in. OC in the field. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations. Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws, one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick. Compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4F. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick gypsum panels with beveled, square or tapered edges, applied vertically or horizontally. Inner or base layer attached to studs with 1 in. long Type S or S-12 steel screws spaced 24 in. OC when installed vertically or 16 in. OC when installed horizontally. Outer or face layer attached to studs with 1-5/8 in. long Type S or S-12 steel screws spaced 8 in. OC when installed vertically and staggered min. 8 in. from base layer screws or 8 in. OC when installed horizontally and staggered min. 6 in. from base layer screws. Horizontal joints between inner and outer layers need not to be staggered. Horizontal joints need not be backed by steel framing. Vertical joints centered over studs and staggered 24 in. Outer layer joints covered with paper tape and joint compound. Exposed screw heads covered with joint compound. When used in widths other than 48 in., gypsum panels to be installed horizontally.
UNITED STATES GYPSUM CO — Type ULIX.

5. **Batts and Blankets* —** (Optional) — (Not shown) — Mineral wool or glass fiber batts partially or completely filling stud cavity. Any mineral wool or glass fiber batt material bearing the UL Classification Marking as to Fire Resistance.

5A. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) — (100% Borate Formulation) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735, INS745, INS750LD for use with wet or dry application. INS765LD and INS773LD are to be used for dry application only.

5B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose insulation material. The fiber is applied with water to interior surfaces in accordance with the application instructions supplied with the product. Applied to completely fill the enclosed cavity. Minimum dry density of 4.3 pounds per cubic ft.
NU-WOOL CO INC — Cellulose Insulation

5C. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) - Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5D. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 5) — Spray-applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. To facilitate the installation of the material, any thin, woven or non-woven netting may be attached by any means possible to the outer face the studs. The material shall reach equilibrium moisture content before the installation of materials on either face of the studs. The minimum dry density shall be 5.79 lbs/ft^3.
APPLEGATE HOLDINGS L L C — Applegate Advanced Stabilized Cellulose Insulation

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

6A. **Lead Discs or Tabs —** (Not Shown) - Used in lieu of or in addition to the lead batten strips (Item 6) or optional at other locations - Max 3/4 in. diam by max 0.125 in. thick lead discs compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards (Item 5) underneath screw locations prior to the installation of the screws. Lead discs or tabs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C".

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

6C. **Lead Discs —** (Not Shown, for use with Item 4D) Max 5/16 in. diam by max 0.140 in. thick lead discs compression fitted or adhered over steel screw heads. Lead discs to have a purity of 99.5% meeting the Federal Specification QQ-L-201f, Grades "B, C or D".

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

CONSTRUCTION SET

CURTIS R. JENNINGS III
NUMBER
A-2023034555
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS
Architecture
Engineering
Planning
Interiors

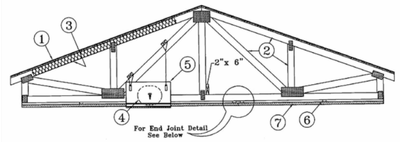
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

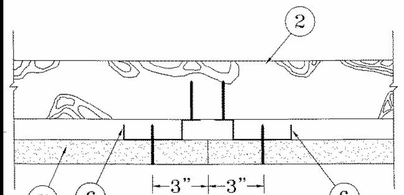
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

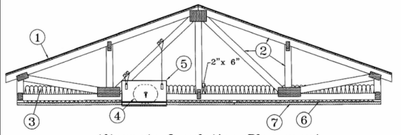
NO.	REVISION DESCRIPTION	DATE

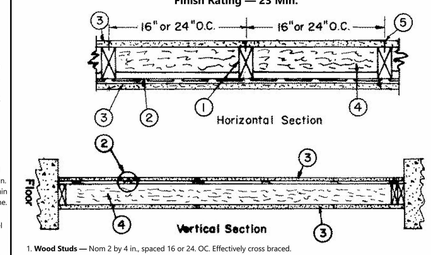
DRAWING TITLE
UL ASSEMBLIES

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING
A0.4









RELEASED FOR CONSTRUCTION
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
04/23/2024

UL P522 - 1 HR ASSEMBLY

Design No. P522

May 05, 2020

Unrestrained Assembly Rating — 1 Hr
Finish Rating — 25 Min (See Items 3 or 3A)

Alternate Insulation Placement

1. **Roofing System* —** Any UL Class A, B or C Roofing System (TGFU) or Prepared Roof Covering (TFWZ) acceptable for use over nom 15/32 in. thick wood structural panels, min. grade "C-D" or "Sheathing". Nom 15/32 in. thick wood structural panels secured to trusses with No. 6d ringed shank nails spaced 12 in. OC along each truss. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Construction adhesive may be used with either the nails or staples.

2. **Trusses —** Pitched or parallel chord wood trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Truss members secured together with min. 0.0356 in. thick galv steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tooth has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approximately 7/8 in. centers with four rows of teeth per inch of plate width. Where the truss intersects with the interior face of the exterior walls, the min truss depth shall be 5-1/4 in. with a min roof slope of 3/12 and a min. area in the plane of the truss of 21 sq/ft. Where the truss intersects with the interior face of the exterior walls, the min truss depth may be reduced to 3 in. if the batts and blankets (Item 3) are used as shown in the above illustration (Alternate Insulation Placement) and are firmly packed against the intersection of the bottom chords and the plywood sheathing.

3. **Batts and Blankets* —** (Optional) — Required when Item 6B is used — Glass fiber insulation, secured to the wood structural panels with staples spaced 12 in. OC or to the trusses with 0.090 in. diam galv steel wires spaced 12 in. OC. Any glass fiber insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance, having a min density of 0.5 pcf. As an option, the insulation may be fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. When **Steel Framing Members** (Item 6B) are used, max 3-1/2 in. thick insulation shall be draped over the furring channels (Item 6Ba) and gypsum board ceiling membrane, and friction-fitted between trusses and Steel Framing Members (Item 6Bd). The finished rating has only been determined when the insulation is secured to the decking.

3A. **Fiber, Sprayed* —** As an alternate to Item 3 (not evaluated for use with Item 6B) — Any thickness of spray-applied cellulose insulation material, having a min density of 0.5 lb/ft^3, applied with water, over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Fiber, Sprayed is applied with moisture in accordance with the application instructions supplied with the product. The finish rating when Fiber Sprayed is used has not been determined. Alternate application method: The fiber is applied without water or adhesive in accordance with the application instructions supplied with a minimum density of 0.5 lb/ft^3 over the resilient channel/gypsum board ceiling membrane when resilient channels and gypsum board attachment is modified as specified in Items 6 and 7. Alternate application method: The fiber is applied without water or adhesive to a nominal density of 3.5 lb/ft^3 behind netting (Item 9) stapled to the rafters. The netting is stapled at both lower edges of the rafters creating a cavity to accept the cellulose fiber.
U S GREENFIBER L L C — INS735, INS745, INS750LD, and SANCTUARY for use with wet or dry application. INS510LD, INS515LD, INS541LD, INS735, INS765LD, and INS773LD are to be used for dry application only.

3B. **Foamed Plastic* —** (As an alternate to Item 3 or 3A, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft^3 density, while maintaining a minimum 8-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board (Item 7) to be installed using 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
SES FOAM INC — Sucraseal

3C. **Cavity Insulation - Batts and Blankets* or Fiber, Sprayed* —** (As described above) in Items 3 and 3A — (For Use with Item 7B, Not Shown) — Min. 3-1/2 in thick with no limit on maximum thickness fitted in the concealed space, draped over the resilient channel (Item 6G)/gypsum board (Item 7B) ceiling membrane.

3D. **Foamed Plastic* —** (As alternate to Item 3, 3A, or 3B, Not Shown) — Spray foam insulation applied directly to the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 10 in. at a nominal 0.5 lb/ft^3 or 2.0 lb/ft^3 density, depending on the product installed. When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) spaced maximum 3 in. away from gypsum butt joints. Gypsum board (Item 7) to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5H) in the concealed space, minimum 1 in. clearance to be maintained between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
BASF CORP — Enertite® NM, Enertite® G, FE178®, Spraytite® 178, Spraytite® 81206, Walltite® 200, Walltite® US, Walltite® US-N, and Walltite® HP+

3E. **Foamed Plastic* —** (As an alternate to Item 3, 3A, 3B, 3C, or 3D, Not Shown) — Spray foam insulation applied directly to the underside of the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 17 in. at a nominal 0.5 lb/ft^3 density, while maintaining a minimum 1-1/2 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is used, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board (Item 7) installed at 6 in. OC to allow for maximum 3 in. spacing off ends of the gypsum board joints. Gypsum board (Item 7) to be installed using 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Not evaluated for use with Items 6A through 6F.
SES FOAM INC — EasySeal.5

3F. **Foamed Plastic* —** (As alternate to Item 3 - not to be used in combination with any alternates to item 3) — Spray foam insulation applied directly to the underside of the roofing system (Item 1). Spray foam insulation installed to a maximum thickness of 11 in. at a nominal 1.0 lb/ft^3 - 2.5 lb/ft^3 density, while maintaining a minimum 7 in. clearance between the spray foam insulation and the gypsum board (Item 7). When spray foam insulation is installed, resilient channels (Item 6) shall be installed maximum 12 in. OC, with channels adjacent to butt joints of gypsum board spaced maximum 3 in. away from gypsum butt joints. Gypsum board to be installed using minimum 1-1/4 in. long Type S screws, spaced maximum 8 in. OC, and butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. If used with a fire damper (Items 5 through 5K) in the concealed space, no clearance is necessary between damper housing and spray foam insulation. Only for use with item 6 not evaluated for use with alternates to item 6.
CARLISLE SPRAY FOAM INSULATION — SealTite Pro Closed Cell (CC), SealTite Pro Open Cell (OC), SealTite Pro OCX, SealTite Pro No Trim, and SealTite Pro One Zero.

4. **Air Duct* —** Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

5. **Ceiling Damper* —** Max nom area, 324 sq in. Max square size, 18 in. by 18 in. rectangular sizes not to exceed 324 sq in. with a max width of 18 in. Max damper height is 14 in. Installed in accordance with manufacturers installation instructions provided with the damper. Max damper openings not to exceed 162 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521

POTTORFF — Model CFD-521

5A. **Alternate Ceiling Damper* —** Max nom area, 196 sq in. Max square size, 14 in. by 14 in. Rectangular sizes not to exceed 196 sq in. with a max width of 26 in. Max overall damper height is 7 in. Installed in accordance with the manufacturers installation instructions provided with the damper. Max damper openings not to exceed 98 sq in. per 100 sq ft of ceiling area.
C&S AIR PRODUCTS — Model RD-521-BT

POTTORFF — Model CFD-521-BT.

5B. **Alternate Ceiling Damper* —** Max nom area shall be 256 sq in. with the length not to exceed 24 in. and the width not to exceed 20 in. Max height of damper shall be 17 in. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-IP, RD-521-NP

POTTORFF — Models CFD-521-IP, CFD-521-NP

5C. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly. Max nom area shall be 75 sq in. with the length not to exceed 8-9/16 in. and the width not to exceed 8-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 38 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturers installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Models CRD2, GBR-CRD, ITG-CRD

5D. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 75 sq in. with the length not to exceed 9-1/4 in. and the width not to exceed 9-3/4 in. Max height of damper shall be 9-7/8 in. Aggregate damper openings shall not exceed 45 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SIG-CRD

5E. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses. Max nom area shall be 144 sq in. with the length not to exceed 14 in. and the width not to exceed 12 in. Max height of damper shall be 17-7/8 in. Aggregate damper openings shall not exceed 74 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturers installation instructions provided with the damper. A steel grille shall be installed in accordance with installation instructions.
C&S AIR PRODUCTS — Model RD-521-90, RD-521-NP90

POTTORFF — Models CFD-521-90, CFD-521-90NP

5F. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 131 sq in. with the length not to exceed 11-1/16 in. and the width not to exceed 11-7/8 in. Aggregate damper openings shall not exceed 66 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
DELTA ELECTRONICS INC — Model SMT-CRD

5G. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 103 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 10-1/8 in. Aggregate damper openings shall not exceed 52 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
PANASONIC CORPORATION, PANASONIC CORPORATION OF NORTH AMERICA — Model PC-RD05C5

5H. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 113 sq in. with the length not to exceed 10-1/8 in. and the width not to exceed 11-1/8 in. Aggregate damper openings shall not exceed 57 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDFUWT

5I. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 79 sq in. with the length not to exceed 10 in. and the width not to exceed 7-15/16 in. Aggregate damper openings shall not exceed 40 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A metallic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Models RDJ1 and RDH

5J. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT

5K. **Alternate Ceiling Damper* —** Ceiling damper & fan assembly for use with min 18 in. deep trusses. Max nom area shall be 87 sq in. with the length not to exceed 9 in. and the width not to exceed 9-11/16 in. Aggregate damper openings shall not exceed 44 sq in. per 100 sq ft of ceiling area. Damper shall be installed in combination with one of the fan models described in, and in accordance with, the manufacturer's installation instructions provided with the damper. A plastic grille shall be installed in accordance with installation instructions.
BROAN-NUTONE L L C — Model RDMWT2

6. **Furring Channels —** Resilient channels formed of 25 MSG thick galv steel. Installed perpendicular to the trusses (Item 2), spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane, or when insulation (Item 3B, 3D or 3E) is applied to the underside of the roofing system (Item 1). Two courses of resilient channel positioned 6 in. OC at wallboard butt-joints (3 in. from each end of wallboard). Channels oriented opposite at wallboard butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.

6A. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6, furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to trusses when no insulation (Items 3 or 3A) is fitted in the concealed space or 12 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane or 24 in. OC when insulation (Items 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane and a second layer of gypsum board is attached as described in Item 7 for steel framing members. Channels secured to trusses as described in Item 6Ab. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.

b. **Steel Framing Members —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 by 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to alternating trusses with No. 8 by 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item 6Aa. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap,

6B. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6 and 6A.

a. **Furring Channels —** Hat-shaped furring channels, 7/8 in. deep by 2-5/8 in. wide at the base and 1-1/4 in. wide at the face, formed from No. 25 ga. galv steel, spaced max 16 in. OC perpendicular to trusses and Cold Rolled Channels (Item 6Bb). Furring channels secured to Cold Rolled Channels at every intersection with a 1/2 in. pan head self-drilling screw through each furring channel leg. Ends of adjoining channels overlapped 4 in. and tied together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap. Supplemental furring channels at base layer and outer layer gypsum board butt joints are not required. Batts and Blankets draped over furring channels as described in Item 3. Two layers of gypsum board attached to furring channels as described in Item 7.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Bd). Adjoining lengths of cold rolled channels lapped min. 6 in. and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 6 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the truss (Item 2) at the top and bottom of the blocking at each Steel Framing Member (Item 6Bd) location.

d. **Steel Framing Members* —** Hangers spaced 48 in. OC. max along truss, and secured to the Blocking (Item 6Bc) on alternating trusses with a single 5/16 in. by 2 in. hex head lag bolt or four #6 1-1/4 in. drywall screws through mounting hole(s) on the hanger bracket. The two 1/4 in. long steel teeth on the hanger are embedded in the side of the blocking. Hanger positioned on blocking and leveling bolt height adjusted such that furring channels are flush with bottom of trusses before gypsum board installation. Spring gauge of hanger chosen per manufacturer's instructions.
KINETICS NOISE CONTROL INC — Type ICW.

6C. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6, 6A and 6B.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep installed perpendicular to wood structural members. Channels spaced a max of 16 in. OC when no insulation (Item 3 or 3A) is fitted in the concealed space or a max of 12 in. OC when insulation (Item 3 or 3A) is fitted in the concealed space. Channels secured to trusses as described in Item 6Cb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item 6Ca) to trusses (Item 2). Clips secured to the bottom chord of each truss (24 in. OC) with one No. 8 by 2-1/2 in. long coarse drywall screw through center grommet. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item 6Ca. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PLITEQ INC — Type Genie Clip

6D. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6, 6A, 6B and 6C.

a. **Main runners —** Installed perpendicular to trusses — Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft OC. Main runners hung a min of 2 in. from bottom chord of trusses with 12 SWG galv steel wire. Wires located a max of 48 in. OC.

b. **Cross tees or channels —** Nom 4 ft long, 15/16 in. or 1-1/2 in. wide face or cross channels, nom 4 ft long, 1-1/2 wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or channels used at 8 in. from each side of butted gypsum board end joints. The cross tees or channels may be riveted or screw-attached to the wall angle or channel to facilitate the ceiling installation.

c. **Wall angles or channels —** Used to support steel framing member ends and for screw-attachment of the gypsum wallboard — Min 0.016 in. thick painted or galvanized steel angle with 1 in. legs or min. 0.016 in. thick painted or galvanized steel channel with a 1 by 1-1/2 by 1 in. profile, attached to walls at perimeter of ceiling with fasteners 16 in. OC.
CGC INC — Type DGL or RX

USG INTERIORS LLC — Type DGL or RX

6E. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 6, 6A, 6B, and 6C, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

6F. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6 through 6E- Not for use with Items 3 or 3A. Main runners nom 12 ft long, spaced 72 in. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Cross tees, nom 6 ft long, installed perpendicular to main runners and spaced 24 in. OC. Additional 6 ft long cross tees required at each gypsum board end joint with butted gypsum board end joints centered between cross tees spaced 8 in. OC. The main runners and cross tees may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.
USG INTERIORS LLC — Type DGL or RX

6G. **Resilient Channels —** For Use With Item 7B - Formed from min 25 MSG galv steel installed perpendicular to trusses and spaced 16 in. OC. Channels secured to each truss with 1-5/8 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint. Additional channels shall extend min 6 in. beyond each side edge of panel. Insulation, Item 3C is applied over the resilient channel/gypsum panel ceiling membrane.

6H. **Alternate Steel Framing Members* —** (Not Shown) — As an alternate to items 6 through 6G, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to trusses. When insulation, Items 3 or 3A is used, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in Item 7.
REGUPOL AMERICA — Type SonusClip

7. **Gypsum Board* —** One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to trusses. Attached to the resilient channels using 1 in. long Type S bugle-head screws. Screws spaced a max of 12 in. OC along butted end-joints and in the field when no insulation (Item 3 or 3A) is fitted in the concealed spaced, or a max of 8 in. OC along butted end-joints and in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the resilient channel/gypsum board ceiling membrane. When insulation (Item 3B, 3D or 3E) is installed in the concealed space, spray-applied to the underside of the roofing system (Item 1), screws are spaced a max of 8 in. OC along resilient channels, fasteners are increased in length to 1-1/4 in, and gypsum board butt joints shall be staggered min. 2 ft within the assembly, and occur between the main furring channels.
When **Steel Framing Members*** (Item 6A or 6C) are used, sheets installed with long dimension perpendicular to furring channels and side joints of sheet located beneath trusses. Gypsum board screws are driven through channel spaced 12 in. OC in the field when no insulation (Item 3 or 3A) is fitted in the concealed space, or 8 in. OC in the field when insulation (Item 3 or 3A) is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Gypsum board butt joints shall be staggered min. 2 ft within the assembly, and occur between the main furring channels. At the gypsum board butt joints, each end of the gypsum board shall be supported by a single length of furring channel equal to the width of the wallboard plus 6 in. on each end. The furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to the trusses with one clip at each end of the channel. Screw spacing along the butt joint to attach the gypsum board to the furring channels shall be 8 in. OC. Second (outer) layer of gypsum board required when furring channels (Item 6A, a) are spaced 24 in. OC and insulation is fitted in the concealed space, draped over the furring channel/gypsum board ceiling membrane. Outer layer of gypsum board attached to the furring channels using 1-5/8 in. long Type S bugle-head screws spaced 8 in. OC at butted joints and 12 in. OC in the field. Butted end joints of outer layer to be offset a minimum of 8 in. from base layer end joints. Butted side joints of outer layer to be offset minimum 18 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6B) are used, two layers of nom 5/8 in. thick, 4 ft wide gypsum board are installed with long dimensions perpendicular to furring channels (Item 6Ba). Base layer attached to the furring channels using 1 in. long Type S bugle head steel screws spaced 8 in. OC along butted end joints and 12 in. OC in the field of the board. Butted end joints centered on the continuous furring channels. Butted base layer end joints to be offset a min of 16 in. in adjacent courses. Outer layer attached to the furring channels using 1-5/8 in. long Type S bugle head steel screws spaced 8 in. OC at butted end joints and 12 in. OC in the field. Butted end joints centered on the continuous furring channels and offset a min of 16 in. from butted end joints of base layer. Butted side joints of outer layer to be offset min 16 in. from butted side joints of base layer.

When **Steel Framing Members** (Item 6C) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 72 in. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end, spaced approximately 2 in. in from joint. Screw spacing along the gypsum board butt joint shall be 8 in. OC. Butt joint furring channels shall be attached with a RESILMOUNT Sound Isolation Clip secured to underside of every truss that is located over the butt joint. Over all Gypsum Board side joints, approximately 20 in. lengths of furring channel shall be installed parallel to trusses (Item 2) between main furring channels. Side joint furring channels shall be attached to underside of the joist with RESILMOUNT Sound Isolation Clips - located approximately 2 in. from each end of the approximate 20 in. length of channel. Both Gypsum Boards at side joints fastened into channel with screws spaced 8 in. OC, approximately 1/2 in. from joint edge.

When **Steel Framing Members** (Item 6E) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from end joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel.

When alternate **Steel Framing Members*** (Item 6F) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board sheets installed with long dimension (side joints) perpendicular to the 6 ft long cross tees with the end joints staggered min 4 ft and centered between cross tees which are spaced 8 in. OC. Gypsum board side joints may occur beneath or between main runners. Prior to installation of the gypsum board sheets, backer strips consisting of nom 7-3/4 in. wide pieces of gypsum board are to be laid atop the cross tee flanges and centered over each butted end joint location. The backer strips are to be secured to the flanges of the cross tees at opposite corners of the backer strip with hold down clips to prevent the backer strips from being uplifted during screw-attachment of the gypsum board sheets. Gypsum board fastened to cross tees with 1 in. drywall screws spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board. The butted end joints are to be secured to the backer strip with No. 10 by 1-1/2 in. long Type G laminating screws located 1 in. from each side of the butted end joint and spaced 1 in. and 4 in. from the side joints and max 8 in. OC in the field of the board.

When **Steel Framing Members** (Item 6H) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint.

CGC INC — Types C, IP-X2, IPC-AR

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

USG BORAL DRYWALL SFZ LLC — Type C

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

7A. **Gypsum Board* —** For use with Steel Framing Members (Item 6D) when Batts and Blankets* (Item 3) are not used - One layer of nom 5/8 in. thick by 48 in. wide boards, installed with long dimension parallel to the main runners. Gypsum board fastened to each cross tee or channel with five wallboard screws, with one screw located at the midspan of the cross tee or channel, one screw located 12 in. from and on each side of the cross tee or channel mid span and one screw located 1-1/2 in. from each gypsum board side joint. Except at wallboard end joints, wallboard screws shall be located on alternating sides of cross tee flange. At gypsum board end joints, gypsum board screws shall be located 1/2 in. from the joint. Gypsum board fastened to main runners with wallboard screws 1/2 in. from side joints, midway between intersections with cross tees or channels (16 in. OC). End joints of adjacent gypsum board sheets shall be staggered not less than 32 in. Gypsum board sheets screw attached to leg of wall angle with wallboard screws spaced 12 in. OC. Joints treated as described in Item 7. For use with **Steel Framing Members*** (Item 6D) when **Batts and Blankets*** (Item 3) are used - Ratings limited to 1 Hour - 5/8 in. thick, 4 ft wide; installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Fastened to cross tees with 1 in. long steel gypsum board screws spaced 8 in. OC in the field and 8 in. OC along end joints. Fastened to main runners with 1 in. long gypsum board screws spaced midway between cross tees. Screws along sides and ends of boards spaced 3/8 to 1/2 in. from board edge. End joints of the sheets shall be staggered with spacing between joints on adjacent boards not less than 4 ft OC.
CGC INC — Type C or IP-X2

UNITED STATES GYPSUM CO — Type C or IP-X2

USG BORAL DRYWALL SFZ LLC — Type C

USG MEXICO S A DE C V — Type C or IP-X2

7B. **Gypsum Board* —** For use with Items 3C and 6G. Nom 5/8 in. thick, 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Finish Rating with this ceiling system is 20 min.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

8. **Finishing System —** (Not Shown) — Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads; paper tape, 2 in. wide, embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board. **Alternate Ceiling Membrane** — Not Shown.

9. **Netting —** Fibrous, woven netting material fastened to underside of each joist with staples, with side joints overlapped.

UL U311 - 1 HR ASSEMBLY

Design No. U311

March 11, 2020

Bearing Wall Rating — 1 HR.
Finish Rating — 23 Min.

1. **Wood Studs —** Nom 2 by 4 in., spaced 16 or 24. OC. Effectively cross braced.

2. **Resilient Channel —** 25 MSG galv steel. Resilient channels spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long Type W coarse thread gypsum panel steel screws.

2A. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 2, furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs (Item 1). Clips spaced 48 in. OC. and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

2B. **Steel Framing Members* —** Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to studs. Clips spaced 48 in. OC. Genie clips secured to studs with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
PLITEQ INC — Type Genie Clip

2C. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Ca) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips — Type A237R

2D. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Db. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 3.

b. **Steel Framing Members* —** Used to attach furring channels (Item 2Da) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips.
REGUPOL AMERICA — Type SonusClip

2E. **Steel Framing Members* —** (Optional, Not Shown) — Resilient channels and Steel Framing Members as described below:

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

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

2F. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Framing Members as described below:

a. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 2Fb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Two layers of gypsum board attached to furring channels as described in Item 3A.

b. **Framing Members* —** Used to attach furring channels (Item 2Fa) to studs (Item 1). Rafts secured to stud, spaced a maximum of 24 in. OC. horizontally, vertically spaced 3 in. from the top and bottom and 24 inch on center along each stud and secured with two 1-1/4 inch (No. 6) Type W drywall screws. One on each side of the core. Fasteners should not be placed closer than 1/4 inch to the edges of the mounts.
BCD LLC — Type HushFrame Raft Connector

3. **Gypsum Board* —** 5/8 in. thick, 4 ft wide. Screw attached on one side of wall to furring channels with 1 in. long, self-drilling, self-tapping steel screws spaced 12 in. OC, vertical joints located midway between studs and back blocked with furring channels, attached with 1 in. long, self-drilling, self-tapping screws, spaced 12 in. OC, along each edge. Gypsum board on opposite side of wall attached directly to studs with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced 12 in. OC. Vertical joints shall be located over studs on this side of the wall.
AMERICAN GYPSUM CO — Types AG-C

CERTAINTEED GYPSUM INC — Type C

CGC INC — Types C, IP-X2, IPC-AR, ULIX

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

GEORGIA-PACIFIC GYPSUM L L C — Types 5, DAPC, TG-C

NATIONAL GYPSUM CO — Types -eXP-C, FSK-C, FSW-C, FSW-G

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type C or PG-C

SAINT-GOBAIN GYPROC MIDDLE EAST FZE — Type Gyproc FireStop, Gyproc FireStop MR, Gyproc FireStop M2TECH, Gyproc FireStop ACTIV'Air, Gyproc FireStop MR ACTIV'Air, Gyproc FireStop M2TECH ACTIV'Air, Gyproc DuraLine, Gyproc DuraLine MR, Gyproc DuraLine M2TECH, Gyproc DuraLine ACTIV'Air, Gyproc DuraLine MR ACTIV'Air, Gyproc DuraLine M2TECH ACTIV'Air

THAI GYPSUM PRODUCTS PCL — Type C

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

USG BORAL DRYWALL SFZ LLC — Type C

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

3A. **Gypsum Board* —** (For use with Item 2F) - Any 5/8 in. thick, 4 ft. wide, Gypsum Board UL Classified for Fire Resistance (CKNX) eligible for use in Design No. G512. Two layers, applied vertically, and attached to furring channels (Item 2Fa). Vertical gypsum board side joints offset 24 inches between layers. Horizontal butt joints offset 48 inches from adjacent board horizontal joints and 24 inches from base layer butt joint. Vertical joints staggered one stud cavity on opposite sides of studs. Type S steel screws used to attach gypsum board to furring channels. First layer - 1 in. long, 3 inches from the edge and 24 in. OC. Second layer- 1-5/8 in. long, spaced 1 inch from the edge and 12 in. OC.

4. **Batts and Blankets* —** 3-1/2 in. thick mineral wool batts, placed to fill interior of wall, attached to the 4-in. face of the studs with staples placed 24 in. OC.
JOHNS MANVILLE

ROCKWOOL — Types Acoustical Fire Batts and AFB, min. density 1.69 pcf / 27.0 kg/m^3

ROCKWOOL MALAYSIA SDN BHD — Type Acoustical Fire Batts.

ROCK WOOL MANUFACTURING CO — Type Delta Board

THERMAFIBER INC — Type SAFB, SAFB FF.

4A. **Glass Fiber Insulation —** (As an alternate to Item 4) — 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the interior of the wall. See **Batts and Blankets** (BKNV or BZJZ) Categories for names of Classified companies.

4B. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — INS735, INS745 and INS750LD for use with wet or dry application. INS515LD, INS541LD, INS735, INS765LD and INS773LD are to be used for dry application only

4C. **Fiber, Sprayed* —** As an alternate to Items 4, 4A, and 4B — Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. Nominal dry density of 4.58 lb/ft^3.
NU-WOOL CO INC — Cellulose Insulation

4D. **Fiber, Sprayed* —** As an alternate to Batts and Blankets (Item 4) — Spray applied cellulose fiber. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. The minimum dry density shall be 4.30 lbs/ft^3.
INTERNATIONAL CELLULOSE CORP — Celbar-RL

5. **Joints and Screw Heads —** Wallboard joints covered with paper tape and joint compound. Screw heads covered with joint compound. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with joints reinforced with paper tape.

6. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels, for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 and QR-510

7. **Mineral and Fiber Board —** (Optional, Not Shown) — 1/2 in. thick, 4 ft wide, square edge fiber boards applied vertically to studs on the side of the wood framing without the resilient channels, in between the wood framing and the UL Classified gypsum board (Item 3). Fiber boards installed with 1-1/4 in. long, Type W, bugle head, coarse thread gypsum board screws spaced 12 in. OC max, with the last screws spaced 2 in. and 6 in. from edge of board. Gypsum board (Item 3) installed horizontally or vertically and fastened through the fiber boards to wood framing with 2 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. Gypsum board joints staggered from fiber board joints. Fiber boards not evaluated or intended as a substitute for the required layer of UL Classified Gypsum Board.
BLUE RIDGE FIBERBOARD INC — SoundStop

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

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CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER
A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village
COURTYARDS - BUILDING E

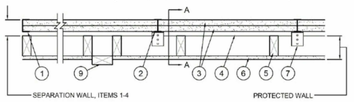
SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

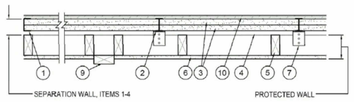
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

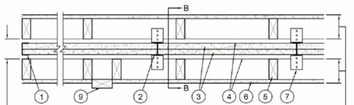
NO.	REVISION DESCRIPTION	DATE

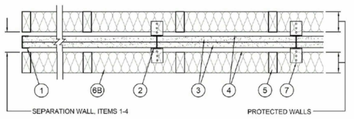
DRAWING TITLE
UL ASSEMBLIES

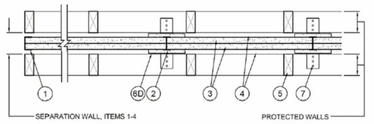
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING
A0.5

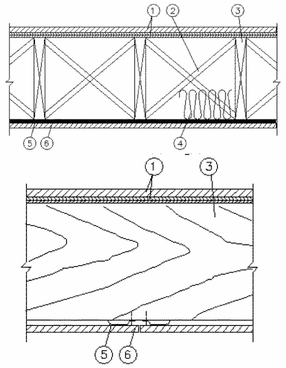












UL U347 - 2 HR ASSEMBLY

Design No. U347

July 17, 2020

Nonbearing Wall Rating — 2 Hr (See Items 5, 5A and 5B) (Separation Wall, See Items 1,2 and 3)

Bearing Wall Rating 2 Hr. (Protected Wall, See Items 5 and 5A)

Nonbearing Wall Rating 2-Hr (Protected Wall, See Item 5, 5A and 5B)

Finish Rating — 120 Min (See Item 5)

STC Ratings — 61, 69, 70 (See Items 8, 8A and 8B)

CONFIGURATION A
EXPOSED TO FIRE FROM AREA SEPARATION WALL SIDE ONLY

CONFIGURATION B
EXPOSED TO FIRE FROM AREA SEPARATION WALL SIDE ONLY

CONFIGURATION C
EXPOSED TO FIRE FROM EITHER SIDE

CONFIGURATION D
EXPOSED TO FIRE FROM EITHER SIDE

CONFIGURATION E
EXPOSED TO FIRE FROM EITHER SIDE

SEPARATION WALL: (Non-bearing, Max Height - 66 ft - see Item 6)

1. **Steel Track —** Floor, sidewall or top wall track. Nom 2 in. wide channel shaped with nom 1 in. long legs, formed from No. 25 MSG galv steel, secured with suitable fasteners spaced 24 in. OC.

2. **Steel Studs —** "H" shaped studs formed from No. 25 MSG galv steel having an overall depth of approximately 2 in. and flange width 1-3/8 in.

3. **Gypsum Board* —** Two layers of 1 in. thick gypsum wallboard liner panels, supplied in nom 24 in. widths. Vertical edges of panels friction fit into "H" shaped studs.
NATIONAL GYPSUM CO — Types FSW, FSW-B, FSW-7, FSW-9

PROTECTED WALL: (Bearing or Nonbearing Wall, as indicated in Items 4, 4A and 4B. When Bearing, Load Restricted for Canadian Applications — See Guide BXUV7.)

4. **Air Space —** Minimum 3/4-in. air space.

5. **Wood Studs —** For Bearing or Nonbearing Wall Rating — Nom 2 by 4 in. max spacing 24 in. OC. Studs cross braced at mid-height where necessary for clip attachment. Min 3/4 in. separation between wood framing and fire separation wall. Finish rating evaluated for wood studs only.

5A. **Steel Studs —** (As an alternate to Item 5, not shown) — For Bearing Wall Rating — Corrosion protected steel studs, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min 3- 1/2 in. wide, min No. 20 GSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, cold formed, shall be designed in accordance with the current edition of the Specification for the Design of Cold-Formed Steel Structural Members by the American Iron and Steel Institute. All design details enhancing the structural integrity of the wall assembly, including the axial design load of the studs, shall be as specified by the steel stud designer and/or producer, and shall meet the requirements of all applicable local code agencies. The max stud spacing of wall assemblies shall not exceed 24 in. OC. Studs attached to floor and ceiling tracks with 1/2 in. long Type S-12 steel screws on both sides of studs or by welded or bolted connections designed in accordance with the AISI specifications. Top and bottom tracks shall consist of steel members, min No. 20 MSG (0.0329 in., min bare metal thickness) steel or min No. 20 GSG (0.036 in. thick) galv steel or No. 20 MSG (0.033 in. thick) primed steel, that provide a sound structural connection between steel studs, and to adjacent assemblies such as a floor, ceiling, and/or other walls. Attached to floor and ceiling assemblies with steel fasteners spaced not greater than 24 in. O.C. Studs cross-braced with stud framing at midheight where necessary for clip attachment. Min 3/4 in. separation between steel framing and area separation wall. Finish rating has not been evaluated for Steel Studs.

5B. **Steel Studs —** (As an alternate to Items 5 and 5A, for use in Configuration B only, not shown) — For Nonbearing Wall Rating — Channel shaped, fabricated from min 25 MSG corrosion-protected steel, min 3-1/2 in. wide, min 1-1/4 in. flanges and 1/4 in. return, spaced a max of 24 in. OC. Studs to be cut 3/8 to 3/4 in. less than assembly height. Top and bottom tracks shall be channel shaped, fabricated from min 25 MSG corrosion-protected steel, min width to accommodate stud size, with min 1 in. long legs, attached to floor and ceiling with fasteners 24 in. OC max. Studs cross-braced with stud framing at midheight where necessary for clip attachment. Min 3/4 in. separation between steel framing and area separation wall. Finish rating has not been evaluated for Steel Studs.

6. **Gypsum Board — Classified or Unclassified —** Min 1/2 in. thick, 4 ft wide, applied horizontally or vertically. Wallboard attached to wood studs (Item 5) with 1-1/4 in. long steel drywall screws spaced 12 in. OC. Wallboard attached to steel studs (Item 5A or 5B) with 1 in. long Type S steel screws spaced 12 in. OC. Vertical joints located over studs. Horizontal joints shall be butted tight to form a closed joint. As an option, joints covered with paper tape and joint compound. As an option, screw heads covered with joint compound.

6A. **Plywood Sheathing or OSB —** (not shown) — As an alternate to Item 6, Min 1/2 in. thick plywood or OSB applied horizontally or vertically to wood or steel studs. Vertical joints located over studs. Horizontal joints shall be butted tight to form a closed joint. Fastened to studs with nails or screws of sufficient length, spaced 12 in. OC. Joints and fastener heads are not required to be treated. Aluminum clips shall be spaced as described in Item 7.

6B. **Batts and Blankets* —** (Not shown) — As an alternate to Items 6 and 6A, Glass fiber or mineral wool insulation, min. 3-1/2 in. thick, placed to completely fill the wood or steel stud cavities. When Batts and Blankets are used in place of Items 6 and 6A, the max height is 54 ft and the aluminum clips (Item 7) shall be spaced a max of 5 ft OC vertically. Min 3/4 in. separation between insulation and area separation wall. See Batts and Blankets (BKNV) category in the Building Materials Directory and Batts and Blankets (BZJZ) category in the Fire Resistance Directory for name of Classified Companies.

6C. **Wall and Partition Facings and Accessories* —** (not shown) — As an alternate to Items 6, 6A and 6B, 4 ft wide panels, applied vertically. Panels attached to wood studs (Item 4) with 1-5/8 in. long steel drywall screws spaced 16 in. OC. Vertical joints located over studs. Joints covered with paper tape and joint compound. As an option, screw heads covered with joint compound.
NATIONAL GYPSUM CO — Type SoundBreak Gypsum Board.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock QR-500, QuietRock QR-510, QuietRock QR-525

6D. **Gypsum Board* —** As an alternate to Item 6 - Min 5/8 in. thick, min. 6 in. wide batten strips, applied on both sides of Steel Studs (Item 2) and horizontal back to back Steel Track (Item 1). Min. 5/8 in. thick, min. 3 in. wide batten strips applied on both sides of single Steel Track (Item 1) at perimeter of assembly. Batten strips secured to studs with 1-1/4 in. long Type S steel screws spaced 12 in. OC. Batten joints shall be butted tight to form a closed joint. As an option, entire sheet of gypsum board may be used in lieu of the battens. Clip placement as in item 7, 7A, 7B, or 7C.
NATIONAL GYPSUM CO — Type FSW-3, FSW, FSW-6.

6E. **Fiber, Sprayed* —** Optional - Not Shown. - Spray applied cellulose material. The fiber is applied with water to completely fill the enclosed cavity in accordance with the application instructions supplied with the product with a nominal dry density of 2.7 lb/ft^3. Alternate Application Method: The fiber is applied without water or adhesive at a nominal dry density of 3.5 lb/ft^3, in accordance with the application instructions supplied with the product.
U S GREENFIBER L L C — SANCTUARY, FRM, INS735, NS745 and INS750LD for use with wet or dry application. INS515LD, INS541LD, INS510LD, INS765LD and INS773LD are to be used for dry application only.

7. **Aluminum Clips —** Aluminum angle, 0.049 in. thick, 2 in. wide with 2 in. and 2-1/2 in. legs. Clips secured with Type S screws 3/8 in. long to "H" studs and with 1-1/4 in. long screws to wood framing or steel framing through holes provided in clip.

7A. Clip placement for separation walls up to 23 ft high: Space clips a max of 10 ft OC vertically between wood or steel framing and "H" studs.

7B. Clip placement for separation walls up to 54 ft high: Space clips as described in Item 6A for upper 24 ft. Remaining wall area below requires clips spaced a max of 5 ft OC vertically between wood or steel framing and "H" studs.

8. **STC Rating —** The STC Rating of the wall assembly is 61 when it is constructed as described by Items 1 through 6, except:
   - A. Item 5, above — Wood Studs — Shall be spaced 16 in. OC.
   - B. Item 6, above — Gypsum Board — Min. weight 1.5 psf. Shall be applied vertically and attached to studs with 1-1/4 in. long steel drywall screws spaced 16 in. OC. Joints and screwheads shall be covered with paper tape and joint compound.
   - C. Item 7, above — Aluminum Clips — Spaced a max of 10 ft OC vertically.
   - D. Batts and Blankets* - The cavities formed by the wood studs shall be friction fit with 3-1/2 in. thick fiberglass insulation batts, min. 0.80 pcf. See Batts and Blankets (BKNV) category in the Building Materials Directory and Batts and Blankets (BZJZ) category in the Fire Resistance Directory for name of Classified Companies.
   - E. Max Height of Separation Wall is 23 ft.
   - F. The STC rating applies to Configuration B only.
   - G. Steel Studs (Items 5A, 5B), Plywood Sheathing or OSB (Item 5A and Item 9) and Batts and Blankets (Items 6B) not evaluated as alternatives for obtaining STC rating.

8A. **STC Rating —** The STC Rating of the wall assembly is 69 when it is constructed as described by Items 1 through 6, except:
   - A. Item 5, above — Wood Studs — Shall be spaced 16 in. OC.
   - B. Item 6C, above — Wall and Partition Facings and Accessories* — Type QuietRock QR-510 panels shall be installed.
   - C. Item 7, above — Aluminum Clips — Spaced a max of 10 ft OC vertically.
   - D. Batts and Blankets* - The cavities formed by the wood studs shall be friction fit with 3-1/2 in. thick fiberglass insulation batts, min. 1.0 pcf. See Batts and Blankets (BKNV) category in the Building Materials Directory and Batts and Blankets (BZJZ) category in the Fire Resistance Directory for name of Classified Companies.
   - E. Max Height of Separation Wall is 23 ft.
   - F. The STC rating applies to Configuration B only.
   - G. Steel Studs (Items 5A, 5B), Plywood Sheathing or OSB (Item 6A and Item 10) and Batts and Blankets (Items 6B) not evaluated as alternatives for obtaining STC rating.

8B. **STC Rating —** The STC Rating of the wall assembly is 70 when it is constructed as described by Items 1 through 7, except:
   - A. Item 5, above - Wood Studs - Shall be spaced 16 in. OC.
   - B. Item 6C, above - Wall and Partition Facings and Accessories* - Type QuietRock QR-525 panels shall be installed as described in Item 5C.
   - C. Item 7, above — Aluminum Clips - Spaced a max of 10 ft OC vertically.
   - D. Batts and Blankets* — The cavities formed by the wood studs shall be friction fit with 3-1/2 in. thick fiberglass insulation batts, min. 1.0 pcf. See Batts and Blankets (BKNV) category in the Building Materials Directory and Batts and Blankets (BZJZ) category in the Fire Resistance Directory for name of Classified Companies.
   - E. Max Height of Separation Wall is 23 ft.
   - F. The STC rating applies to Configuration B only.
   - G. Steel Studs (Items 5A, 5B), Plywood Sheathing or OSB (Item 6A and Item 10) and Batts and Blankets (Items 6B) not evaluated as alternatives for obtaining STC rating.

9. **Non-Bearing Wall Partition Intersection —** (Optional) Wall system consisting of nominal 2 by 4 in. stud or nominal 2 by in. stud. Maximum one non-bearing wall partition intersection per stud cavity.

10. **Plywood Sheathing or OSB —** (Optional) — Min 1/2 in. thick plywood or OSB applied horizontally or vertically to "H" studs on area separation wall side of Configuration A or Configuration C. Vertical joints located over studs. Fastened to "H" studs with screws of sufficient length, spaced a maximum of 12 in. OC.

UL L569 - 1 HR ASSEMBLY

Design No. L569

July 01, 2020

Unrestrained Assembly Rating — 1 Hr.

1. **Flooring System —** The flooring system shall consist of one of the following:

System No. 1

Subflooring — Nom 15/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) - Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Floor — Min 1 by 4 in. T & G lumber installed perpendicular to the joists, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.

System No. 2

Subflooring — Nom 15/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* —Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

LATICRETE SUPERCAP L L C — Types LRK, HSLRK

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* — (Optional) - Floor mat material loosely laid over the subfloor. Refer to manufacturer's instructions regarding minimum thickness of floor topping over floor mat.

GRASSWORX L L C — SC Types

Alternate Floor Mat Material* — (Optional) - Floor mat material nominal 3/8 in. thick loose laid over the subfloor. Floor topping shall be a min 1/2 in. thick.

System No. 3

Subflooring — Min 15/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 4

Subflooring — Nom 15/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
MAXXON CORP — Type Maxxon Standard and Maxxon High Strength

Floor Mat Materials* — (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
MAXXON CORP — Type Encapsulated Sound Mat.

Floor Mat Reinforcement — (Optional) Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

System No. 5

Deleted.

System No. 6

Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer\'s instructions regarding the minimum thickness of floor topping over each floor mat material.
UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

System No. 7

Sub-flooring — Min 19/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered.**Floor Mat Materials* — (Optional) —** Floor mat material nom 1/8 in. (3mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19mm)
HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25mm)
HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/8 in. (10mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32mm)
HACKER INDUSTRIES INC — FIRM-FILL SCM 400

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/4 in. (19mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38mm)**130869004 —** Type FIRM-FILL SCM 750**Alternate Floor Mat Materials - (Optional) —** Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of floor-topping mixture. Floor topping thickness a min 1 in. over the floor mat.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat.(HSM1.02)

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32mm) of floor-topping mixture.
HACKER INDUSTRIES INC — Type Hacker Sound-Mat II. (HSM2.06)

Metal Lath (Optional) — For use with 3/8 in. (10 mm) or greater floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.**Finish Flooring - Floor Topping Mixture* —**

Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 8

Subflooring — Nom 15/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring* — Floor Topping Materials — Min 3/4 in. to 1-1/2 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance with a minimum compressive strength of 1500 psi.
See **Floor- and Roof-Topping Mixtures** (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) — Floor mat material nom 1/8 in. to 3/4 in. thick. Loose laid over the subfloor. When used, Acousti-flor CSM (crack suppression mat) is loose laid over the floor mat material. Floor topping material thickness is dependent on thickness of floor mat used.
WALFLOR INDUSTRIES INC — Type Acousti-flor, Acousti-flor CSM. Floor topping thickness depends on products used as follows:

Acousti-flor (1/8 in. thick) - Floor topping thickness shall be a minimum of 3/4 in.

Acousti-flor (1/4 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/8 in. thick) - Floor topping thickness shall be a minimum of 1 in.

Acousti-flor (3/4 in. thick) - Floor topping thickness shall be a minimum of 1-1/2 in.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

System No. 9

Structural Cement-Fiber Units* — For use with **UNITED STATES GYPSUM CO** gypsum boards only. Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to wood trusses with end joints staggered a min of 2 ft and centered over the trusses. Panels secured to wood trusses with 1-5/8 in. long, No. 8, self- countersinking wood screw spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the end edges of the panel.
UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

System No. 10

Subflooring — Nom 15/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring - Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
SIKA DEUTSCHLAND GMBH — Type SCHONOX AP Rapid Plus

System No. 11

Subflooring — Nom 15/32 in. thick wood structural panels installed perpendicular to the joists with end joints staggered. Plywood or panels secured to joists with construction adhesive and No. 6d ringed shank nails, spaced 12 in. OC along each joist. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750 and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

2. **Cross Bridging —** 1 by 3 in.

3. **Wood Joists —** 2 by 10 in., spaced 16 in. OC, firestopped. Spacing may increase to 24 in. OC when Item 7, Battens, are used.

4. **Batts and Blankets* —** (Optional) — Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. - When the resilient channels (Item 5) or furring channels (Item 5B) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 12 in. OC. When the resilient channels (Item 5) or furring channels (Item 5B) are spaced a max of 12 in. OC or when the Steel Framing Members (Item 5A) are used, there is no limit in the overall thickness of insulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient channels (or Steel Framing Members) and gypsum panel membrane.

4A. **Loose Fill Material* —** As an alternate to Item 4, when the resilient channels (Item 5) or furring channels (Item 5B) are spaced a max of 12 in. OC or when the Steel Framing Members (Item 5A) are used - Any loose fill material bearing the UL Classification Marking for Surface Burning Characteristics. There is no limit in the overall thickness of insulation.

4B. **Batts and Blankets* —** (Not Shown) - Not for Direct Attachment - For use with Items 5E and 6A. As an alternative to Items 4 and 4A, any thickness of glass fiber or mineral wool insulation, nom. 0.5 pcf, fitted in the concealed space, draped over the resilient channels and gypsum board ceiling membrane (or Steel Framing Members/gypsum panel). Any glass fiber insulation bearing the UL Classification Marking for Surface Burning Characteristics.
See Batts and Blankets (BKNV) category in the Building Materials Directory for names of manufacturers.

5. **Furring Channels —** Resilient channels formed of 25 MSG thick galv steel. Installed perpendicular to the wood joists, spaced a max of 24 in. OC when no insulation is fitted in the concealed space. Otherwise, the spacing shall be as specified under Item 4 or 4A. Two courses of resilient channel positioned 6 in. OC at gypsum panel butt-joints (3 in. from each end of panel). Channels oriented opposite at panel butt-joints. Channel splices overlapped 4 in. beneath wood trusses. Channels secured to each truss with 1-1/4 in. long Type S screws.

5A. **Alternate Steel Framing Members —** (Not Shown) - As an alternate to Item 5, main runners, cross tees, cross channels and wall angle as listed below.
   - a. **Main Runners —** Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to side of joists at least 5 in. above the bottom face.
   - b. **Cross Tees —** Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum panel end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.
   - c. **Cross Channels —** Nom 4 or 12 ft long, installed perpendicular to main runners, spaced 16 in. OC.
   - d. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panels.
     CGC INC — Type DGL or RX.

     USG INTERIORS LLC — Type DGL or RX.

5B. **Alternate Steel Framing Members —** (Not Shown)* — As an alternate to Items 5 and 5A, furring channels and Steel Framing Members as described below.
   - a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, installed perpendicular to the wood joists, spaced a max of 24 in. OC when no insulation is fitted in the concealed space. Otherwise, the spacing shall be as specified under Item 4 or 4A. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
   - b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). RSIC-1 and RSIC-1 (2.75) clips secured to consecutive joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. RSIC-V and RSIC-V (2.75) clips secured to consecutive joists with No. 8 x 1-1/2 in. coarse drywall screw through the center hole. Furring channels are friction-fitted into clips. RSIC-1 and RSIC-V clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) and RSIC-V (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum panel butt joints, as described in Item 8.
     PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-V, RSIC-1 (2.75), RSIC-V (2.75).

5C. **Alternate Steel Framing Members —** (Not Shown)* — As an alternate to Items 5 and 5A, furring channels and Steel Framing Members as described below.
   - a. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-3/8 in. wide by 7/8 in. deep, installed perpendicular to the wood joists, spaced a max of 24 in. OC when no insulation is fitted in the concealed space. When batt insulation (Items 4) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC. Channels secured to joists as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap.
   - b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). GenieClips secured to consecutive joists with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. When insulation, Items 4, is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive joists. Furring channels are friction-fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum panel butt joints, as described in Item 6. Not evaluated for use with Item 4A.
     PLITEQ INC — Type GENIECLIP

5D. **Alternate Steel Framing Members —** (Not Shown)* - As an alternate to items 5-5C, furring channels and Steel Framing Members as described below.
   - a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 24 in OC, perpendicular to joists when no insulation is fitted in the concealed space. Otherwise, the spacing shall be as specified under item 4 or 4A. When batt insulation (Items 4) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC Channels secured to joists as described in Item b.
   - b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). Clips spaced at 48" OC and secured to the bottom of the joists with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire.Additional clips are required to hold the Gypsum Butt joints as described in item 6.
     STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237 or A237R

5E. **Resilient Channels —** (Not Shown) - For Use With Items 4B and 6A - Resilient channels formed of 25 MSG galv steel, installed perpendicular to the joists spaced max 16 in. OC. Channels secured to each joist with 1-5/8 in. long Type S steel screws. Channel splices located beneath joists and overlapped 4 in. Two channels, spaced 6 in. OC, oriented opposite each gypsum board end joint as shown in end joint detail. Additional channels shall extend min 6 in. beyond each side edge of board. Insulation, Item 4B is applied over the resilient channel/gypsum panel ceiling membrane.

5F. **Alternate Steel Framing Members —** (Not Shown)* - As an alternate to items 5-5E, furring channels and Steel Framing Members as described below.
   - a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in deep, spaced 24 in OC, perpendicular to joists when no insulation is fitted in the concealed space. Otherwise, the spacing shall be as specified under item 4 or 4A. When batt insulation (Items 4) is draped over the resilient channel/gypsum board ceiling membrane, the resilient channel spacing shall be reduced to 12 in. OC Channels secured to joists as described in Item b.
   - b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the wood joists (Item 2). Clips spaced at 48" OC and secured to the bottom of the joists with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in item 6.
     REGUPOL AMERICA — Type SonusClip

5G. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 5.
   - a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 5, perpendicular to the joists. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 6), each extending a min of 6 in. beyond both side edges of the board.
   - b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to joists, friction-fitted into the channel caddy on the Steel Framing Members (Item 5Gc) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.
   - c. **Steel Framing Members* —** Spaced 48 in. OC. max along joist, and secured to the joist on alternating joists with two, #10 x 1-1/2 in. screws through mounting holes on the hanger bracket.
     PAC INTERNATIONAL L L C — Type RSIC-SI-CRC EZ Clip

5H. **Steel Framing Members* —** (Optional, Not Shown) — As an alternate to Item 5.
   - a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 5, perpendicular to joists and friction fit into Steel Framing Members (Item 5Hb). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 6). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.
   - b. **Steel Framing Members* —** Used to attach furring channels (Item 5Ha) to joists. Clips spaced 48 in. OC and secured along joist webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 1-1/2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips.
     PAC INTERNATIONAL L L C — Type RSIC-S1-1 Ultra

5I. **Steel Framing Members* —** (Optional - Not Shown) — Used to attach resilient channels (Item 5) to joists (Item 2). Clips spaced 48 in. OC and secured to joists with one No. 8 x 2-1/2 in. coarse drywall screw through center grommet hole. Channels secured to clips with one #10 x 1/2 in. pan-head self-drilling screw. Ends of adjoining channels overlapped 6 in. and secured together with two #8 15 x 1/2 in. Philips Modified screws spaced 2-1/2 in. from the center of the overlap. Gypsum board butt joints require additional resilient channels spaced 1-1/2 in. from the butt joint on either side. One edge of the extra channels will extend to an adjacent joist where it is secured with a clip.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Items 5) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from end joints. End joints secured to both resilient channels as shown in end joint detail. When Steel Framing Members (Item 5B, 5C) are used, gypsum panels installed with long dimensions perpendicular to furring channels. Panels attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and in the field of the panels. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum panel shall be supported by a single length of furring channel equal to the width of the gypsum panel plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the joist with one clip at each end of the channel. When Steel Framing Members (Item 5A) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field and 8 in. OC along end joints. Panels fastened to main runners with 1 in. long Type S bugle-head steel screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from panel edge. End joints of panels staggered on adjacent panels not less than 12 in. When **Steel Framing Members** (Item 5D) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel. .
When **Steel Framing Members** (Item 5F) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one joist beyond the width of the gypsum panel and be attached to the adjacent joists with one SonusClip at every joist involved with the butt joint.

When **Steel Framing Members** (Item 5G) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 6. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 5H) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 6. Butt joints staggered minimum 24 in. OC.

CGC INC — Types C, IP-X2, IPC-AR.

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

USG BORAL DRYWALL SFZ LLC — Type C

6A. **Gypsum Board* —** (Not Shown) - For use with Items 4B and 5E. Nom 5/8 in. thick, 48 in. wide gypsum board installed with long dimension perpendicular to resilient channels (5E) - Gypsum board screw-attached to the resilient channels with 1 in. long Type S screws spaced 8 in. OC, starting 1 in. from the side edges. At the end joints, the screws were located 3 in. from the edge.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

7. **Battens —** Nom 6 by 22-1/2 by 5/8 in. thick pieces of gypsum board (Item 6) centered under subfloor joints and fastened with staples spaced 7 in. OC along each edge. Staples formed of 16 SWG (0.062 in. thick) steel with 1-1/8 in. legs and 1/2 in. crown, driven flush with gypsum board batten strips. The battens and staples are optional when the finish flooring consists of **Floor Topping Mixture***.

8. **Finishing System —** (Not shown) - Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum panels.

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

CONSTRUCTION SET

CURTIS R. JENNINGS III
NUMBER A-2020034555
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS
Architecture
Engineering
Planning
Interiors

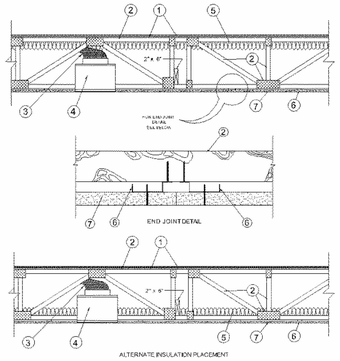
SFCS Inc. • 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 • Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
UL ASSEMBLIES

DATE: January 5, 2024
DRAWING A0.6
COMM. NO. 23104.00



RELEASED FOR
CONSTRUCTION
As Noted on Plans Review

Development Services Department
Lee's Summit, Missouri
04/23/2024

UL L563 - 1 HR ASSEMBLY

Design No. L563

February 05, 2021

Unrestrained Assembly Rating - 1 Hr

Finish Rating - 25 Min (See Items 5 or 5A and 7), 20 Min. (See Items 6E and 7A)

END JOINT DETAIL

ALTERNATE INSULATION PLACEMENT

1. **Flooring System —** The flooring system shall consist of one of the following:

System No. 1

Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Min 1 by 4 in. T & G lumber fastened diagonally to trusses, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

System No. 2

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with end joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Floor Mat Materials* - (Optional) — Floor mat material nom 5/64 in. (2 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1 in. of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 1/4 in. (6 mm) thick adhered to subfloor with Hacker Floor Primer. Primer to be applied to the surface of the mat prior to the placement of a min 1-1/4 in. (32 mm) of floor-topping mixture.

HACKER INDUSTRIES INC — Type Hacker Sound-Mat II.

Alternate Floor Mat Materials - (Optional)— Floor mat material nom 1/8 in. (3 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 3/4 in. (19 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 125

Alternate Floor Mat Materials - (Optional)— Floor mat material nom 1/4 in. (6 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1 in. (25 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 250, Quiet Qurl 55/025

Alternate Floor Mat Materials - (Optional)— Floor mat material nom 3/8 in. (10 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/4 in. (32 mm)

HACKER INDUSTRIES INC — FIRM-FILL SCM 400, Quiet Qurl 60/040

Alternate Floor Mat Materials - (Optional) — Floor mat material nom 3/4 in. (19 mm) thick loose laid over the subfloor. Floor topping thickness shall be a min of 1-1/2 in. (38 mm)

HACKER INDUSTRIES INC — Type FIRM-FILL SCM 750, Quiet Qurl 65/075

Metal Lath (Optional) — For use with 3/8 in. (10 mm) floor mat materials, 3/8 in. expanded steel diamond mesh, 3.4 lbs/sq yd placed over the floor mat material. Hacker Floor Primer to be applied prior to the placement of the metal lath. When metal lath is used, floor topping thickness a nom 1-1/4 in. over the floor mat.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1100 psi. Mixture shall consist of 6.8 gal of water to 80 lbs of floor topping mixture to 1.9 cu ft of sand.

HACKER INDUSTRIES INC — Firm-Fill Gypsum Concrete, Firm-Fill 2010, Firm-Fill 3310, Firm-Fill 4010, Firm-Fill High Strength, Gyp-Span Radiant

System No. 3

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with end joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Floor - Mineral and Fiber Board* — Min 1/2 in. thick, supplied in sizes ranging from 3 ft by 4 ft to 8 ft by 12 ft. All joints to be staggered a min of 12 in. with adjacent sub-floor joints.

HOMASOTE CO — Type 440-32 Mineral and Fiber Board

System No. 4

Subflooring — Min Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood or panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier - (Optional) — Nom 0.010 in. thick commerical asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1800 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

UNITED STATES GYPSUM CO — Types LRK, HSLRK, CSD

LATICRETE SUPERCAP L L C — Types LRK, HSLRK

USG MEXICO S A DE C V — Types LRK, HSLRK, CSD

Floor Mat Materials* — (Optional) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

UNITED STATES GYPSUM CO — Types SAM, LEVELROCK® Brand Sound Reduction Board, LEVELROCK® Brand Floor Underlayment SRM-25

Alternate Floor Mat Materials* - (Optional) — Nom 3/8 in. thick floor mat material loose laid over the subfloor.

GRASSWORX L L C — Type SC50

System No. 5

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with end joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.4 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5-1/2 gal of water.

ELASTIZELL CORP OF AMERICA — Type FF

System No. 6

Deleted.

System No. 7

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with end joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 1-1/2 in. thickness of floor topping mixture having a min compressive strength of 1000 psi and a cast density of 100 plus or minus 5 pcf. Foam concentrate mixed 40:1 by volume with water and expanded at 100 psi through nozzle. Mixture shall consist of 1.2 cu feet of preformed foam concentrate to 94 lbs Type I Portland cement, 300 lbs of sand with 5.5 gal of water.

AERIX INDUSTRIES — Floor-Topping Mixture

System No. 8

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with end joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Mixture shall consist of 5 to 8 gal of water to 80 lbs of floor topping mixture to 2.1 cu ft of sand.

ULTRA QUIET FLOORS — Types UQF-A, UQF-Super Blend, UQF-Plus 200

System No. 9

Subflooring — Min 23/32 in. thick T & G wood structural panels installed perpendicular to trusses with joints staggered 4 ft. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ring shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a minimum compressive strength of 1500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

MAXXON CORP — Type Maxxon Standard and Maxxon High Strength

Floor Mat Materials* - (Optional) — Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.

MAXXON CORP — Type Encapsulated Sound Mat.

Floor Mat Reinforcement — (Optional) Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath - (Optional) 3/8 in. expanded galvanized steel diamond mesh, 3.4 lbs/sq yd loose laid over the floor mat material.

Fiber Glass Reinforcement — (Optional) - 0.015 in. thick PVC coated non-woven fiberglass mesh, 0.368 lbs./sq. yd loose laid over the floor mat material.

System No. 10

Subflooring — Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue, or non-veneer APA Rated "Sturd-I-Floor" T & G panels per APA specifications PRP-108. Plywood or non-veneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

FORMULATED MATERIALS LLC — Types FR-25, FR-30, and SiteMix

Floor Mat Material* — (Optional) Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

FORMULATED MATERIALS LLC — Types M1, M2, M3, Elite, Duo, R1, and R2

System No. 11

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 12

Subflooring — Min 23/32 in. thick wood structural panels, min grade "C-D" or "Sheathing". Face grain of plywood or strength axis of panels to be perpendicular to the joists with joints staggered.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Vapor Barrier — (Optional) - Nom 0.010 in. thick commercial rosin-sized building paper.

Finish Flooring — Min 3/4 in. thickness of lightweight insulating concrete with **Perlite Aggregate*** or **Vermiculite Aggregate***, or gypsum concrete.

See **Perlite Aggregate** (CFFX) and **Vermiculite Aggregate** (CJZZ) categories for names of manufacturers.

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 13

Subflooring — Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue, or nonveneer APA Rated "Sturd-I-Floor" T & G panels per APA specifications PRP-108. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

ACG MATERIALS — AccuCrete® Types NexGen, Green, Prime and PrePour, AccuRadiant®, AccuLevel® Types G40, G50 and SD30

Floor Mat Material* — (Optional) — Floor mat material nominal 2 - 9.5 mm thick loose laid over the subfloor. Floor topping shall be a min of 3/4 in.

ACG MATERIALS — AccuQuiet® Types D13, D-18, D25, DX38, EM.125, EM.125S, EM.250, EM.250S, EM.375, EM.375S, EM.750, and EM.750S.

System No. 14

Subflooring — Min 23/32 in. thick plywood with T & G edges along the 8 ft sides and exterior glue, or nonveneer APA Rated "Sturd-I-Floor" T & G panels per APA specifications PRP-108. Plywood or nonveneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of floor topping mixture having a min compressive strength of 1000 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.

DEPENDABLE LLC — GSL M3.4, GSL K2.6, GSL-CSD and GSL RH.

Floor Mat Materials* — (Optional) - Nom. 1/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 55/025 and Quiet Qurl 55/025 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 60/040 and Quiet Qurl 60/040 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 3/4 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 1-1/2 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 65/075, Quiet Qurl 65/075 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/8 in. thick loose laid over the subfloor. Floor topping thickness shall be a minimum of 3/4 in.

KEENE BUILDING PRODUCTS CO INC — Type Quiet Qurl 52/013 and Quiet Qurl 52/013 N

Alternate Floor Mat Materials* — (Optional) - Floor mat material Nom. 1/4 in. entangled net core with a compressible fabric attached to the bottom loose laid over the subfloor. Floor topping thickness shall be a minimum of 1 in.

KEENE BUILDING PRODUCTS CO INC — Quiet Qurl 55/025 MT and Quiet Qurl 55/025 N MT

System No. 15

Subflooring — Min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Plywood or non-veneer APA rated panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss.

Wall and Partition Facings and Accessories* - Sound Barrier (Optional) — Acoustic Sleeper pads stapled to the top of the subfloor, the bottom of the finish floor, or to 5/16 in. thick by 1-1/2 in. wide wood strips and centered over wood trusses. Acoustic Sleeper pads are to be spaced appropriately so that the finish floor panels are fastened through Acoustic Sleeper pads to trusses.
STC ARCHITECTURAL PRODUCTS L L C DBA STC SOUND CONTROL — Acoustic Sleeper

Finish Floor — Min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single-Floor". Face grain of plywood or strength axis of panel to be perpendicular to joists with joints staggered. Butt joints of panels have the option of being sealed with any UL Classified caulk or sealant found under - Fill, Void or Cavity Materials* (XHHW).

System No. 16

Subflooring - Structural Cement-Fiber Units* — Nominal 19 mm (3/4 in.) thick tongue and groove structural cement-fiber units. Long dimension of panels to be perpendicular to trusses with end joints staggered. Panels fastened to the trusses with #10 self-drilling, self-tapping cement board screws 1-3/4 in. long. Screws shall be spaced 6 in. OC along the perimeter of each sheet and 12 in. OC in the field of each sheet. Screws shall be spaced 1/2 in. from end joints and 1 in. from side joints.
ECTEK INTERNATIONAL INC — Armoroc Panel

Subflooring (Alternate) — Building Units* — Nom 3/4 in. thick, tongue and grooved boards. Long dimension of boards to be perpendicular to trusses with end joints staggered a min of 4 ft. and centered over the trusses. Boards secured to trusses with 1-1/4 in. long self-drilling, self- tapping screws spaced a max of 12 in. OC in the field with screws located 1 in. from long edge, and max 8 in. OC along the end joints with screws located 1/2 in. from end joint.
ECTEK INTERNATIONAL INC — Type MegaBoard

Vapor Barrier - (Optional) — Nom 0.030 in. thick commercial asphalt saturated felt.

Finish Flooring — Min 1 by 4 in. T & G lumber fastened diagonally to trusses, or min 15/32 in. thick wood structural panels, min grade "Underlayment" or "Single Floor". Face grain of plywood or strength axis of panel to be perpendicular to trusses with joints staggered.

System No. 17

Structural Cement-Fiber Units* — For use with **UNITED STATES GYPSUM CO** Types C, IP-X2, IPC-AR and ULIX gypsum boards only. Nom 3/4 in. thick, with long edges tongue and grooved. Long dimension of panels to be perpendicular to wood trusses with end joints staggered a min of 2 ft and centered over the trusses. Panels secured to wood trusses with 1-5/8 in. long, No. 8, self- countersinking wood screw spaced a max of 12 in. OC in the field with a screw located 1 in. and 2 in. from each edge, and 8 in. OC on the perimeter with a screw located 2 in. from each edge, located 1/2 in. from the end edges of the panel.
UNITED STATES GYPSUM CO — Types STRUCTO-CRETE, USGSP

System No. 18

Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Finish Flooring - Floor Topping Mixture* — Min 1 in. thickness of floor topping mixture having a min compressive strength of 4500 psi. Refer to manufacturer's instructions accompanying the material for specific mix design.
SIKA DEUTSCHLAND GMBH — Type SCHONOX AP Rapid Plus

System No. 19

Subflooring — Nom 23/32 in. thick wood structural panels installed perpendicular to trusses with end joints staggered. Plywood panels secured to trusses with construction adhesive and No. 6d ringed shank nails spaced 12 in. OC along each truss. TetraGRIP™ nails measuring 2-3/8 in. long, 0.113 in. diameter, 0.272 in. round head, and helically threaded shank with barbed features on the helix meeting ASTM F1667 and having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails. Staples having equal or greater withdrawal and lateral resistance strength may be substituted for the 6d nails.

Vapor Barrier — (Optional) - Commercial asphalt saturated felt, 0.030 in. thick.

Finish Flooring - Floor Topping Mixture* — Min 3/4 in. thickness of any Floor Topping Mixture bearing the UL Classification Marking as to Fire Resistance. See Floor- and Roof-Topping Mixtures (CCOX) category for names of Classified Companies.

Floor Mat Materials* — (Optional, Not Shown) - Floor mat material loose laid over the subfloor. Refer to manufacturer's instructions regarding the minimum thickness of floor topping over each floor mat material.
LOW & BONAR INC — EnkaSonic® by Colbond a member of the Low & Bonar group Types 125, 250, 250 Plus, 400, 400 Plus, 750 and 750 Plus.

Floor Mat Reinforcement — (Optional) - Refer to manufacturer's instructions regarding minimum thickness of floor topping for use with floor mat reinforcement.

Metal Lath — (Optional) — Expanded steel diamond mesh, 2.5 lb / sq yd loose laid over floor mat material.

Fiberglass Mesh Reinforcement — (Optional) — Coated non-woven glass fiber mesh grid loose laid over floor mat material.

2. **Trusses —** Parallel chord trusses, spaced a max of 24 in. OC, fabricated from nom 2 by 4 lumber, with lumber oriented vertically or horizontally. Min truss depth is 12 in. when Ceiling Dampers* are not used. Min truss depth is 18 in. when Ceiling Damper* is used. Truss members secured together with min 0.036 0356 in. thick galvanized steel plates. Plates have 5/16 in. long teeth projecting perpendicular to the plane of the plate. The teeth are in pairs facing each other (made by the same punch), forming a split tooth type plate. Each tool has a chisel point on its outside edge. These points are diagonally opposite each other for each pair. The top half of each tooth has a twist for stiffness. The pairs are repeated on approx. 7/8 in. centers with four rows of teeth per inch of plate width.

3. **Air Duct* (Optional) —** Any UL Class 0 or Class 1 flexible air duct installed in accordance with the instructions provided by the damper manufacturer.

4. **Ceiling Damper* (Optional). To be used with Air Duct Item 3. —** For use with min 18 in. deep trusses Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.
AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot.

LLOYD INDUSTRIES INC — Model CRD 50-BT, CRD 50-EA-BT, CRD 55-BT, CRD 55 EA-BT

UNITED ENERTECH CORP — Model C-S/R-WT-L, C-S/R-EA-L, C-S/R-BT, C-S/R-EA-BL

4A. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max plenum box size nom 13 in. long by 13 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model CRD 50-BT-6, CRD 50-EA-BT-6, CRD 55-BT-6, CRD 55 EA-BT-6, CRD50-^{W} X-BT-6

4B. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max size ceiling outlet in plenum box nom 12 in. long by 12 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturer's installation instructions provided with the damper.
AIRE TECHNOLOGIES INC — Models: CRD model 50 w/Boot, CRD model 50EA w/Boot, CRD model 55 w/Boot, CRD model 55 EA w/Boot.

LLOYD INDUSTRIES INC — Model CRD 50-95BT, CRD 50-EA-95BT, CRD 55-95BT, CRD 55 EA-95BT

4C. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses. Max size ceiling outlet in plenum box nom 16 in. long by 16 in. wide. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.
CROWN PRODUCTS CO INC — Models CRD50-FGPB-4.2-CP, -6.0-CP; CRD50-FGPB-4.2-EA-CP, -6.0-EA-CP.

LLOYD INDUSTRIES INC — Models CRD 50- FGPB-4.2, - 4.2 NI, -6.0, -6.0 NI; CRD50-EA-FGPB-4.2, -4.2 NI, -6.0, -6.0 NI.

4D. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max plenum box size nom 15 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 72 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Models 45-CRD-LT-BT and 45-CRD-LTD-BT

4E. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max size ceiling outlet in plenum box nom 10 in. long by 10 in. wide. Plenum box fabricated from galv steel. Aggregate damper openings shall not exceed 50 sq in. per 100 sq ft of ceiling area. Installed in accordance with the manufacturer's installation instructions provided with the damper.
LLOYD INDUSTRIES INC — Model 45-LTD-95-BT-4

4F. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max plenum box size nom 19 in. long by 15 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 96 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.

LLOYD INDUSTRIES INC — Model CRD50-^{W} X-BT

4G. **Alternate Ceiling Damper* —** For use with min. 18 in. deep trusses. Max. nom area shall be 349 sq in. Max. overall length and width shall not exceed 18-11/16 in. by 18-11/16 in. with max. 16 in. by 16 in. register opening. Aggregate damper openings shall not exceed 175 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper. An aluminum or steel grille (Item 9) shall be installed in accordance with installation instructions.
MIAMI TECH INC — Model Series RxCRD, RxCRDS or RxCRPD

4H. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max plenum box size nom 19 in. long by 19 in. wide and 11-7/8 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 128 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.
METAL-FAB INC — Models MSCD-HC and MRCD-HC

4I. **Alternate Ceiling Damper* —** For use with min 18 in. deep trusses Max plenum box size nom 14 in. long by 16 in. wide and 15 in. high fabricated from galv steel. Aggregate damper openings shall not exceed 112 sq in. per 100 sq ft of ceiling area. Damper installed in accordance with the manufacturer's installation instructions provided with the damper.
METAL-FAB INC — Model MCCD

5. **Batts and Blankets* —** (Optional) - Glass fiber or mineral wool insulation bearing the UL Classification Marking as to Surface Burning Characteristics and/or Fire Resistance. When no insulation is installed in the concealed space resilient channels (Item 6) are spaced 24 in. OC. When the resilient channels (Item 6) are spaced 16 in. OC, the insulation shall be a max of 3-1/2 in. thick, and shall be secured against the subflooring with staples at 12 in. OC or held suspended in the concealed space with 0.090 in. diam galv steel wires attached to the wood trusses at 12 in. OC. When the resilient channels are spaced a max of 12 in. OC or when the Steel Framing Members (Item 6A) are used, there is no limit in the overall thickness of insulation, and the insulation can be secured against the subflooring, held suspended in the concealed space or draped over the resilient channels (or Steel Framing Members) and gypsum panel membrane. The finished rating has only been determined when the insulation is secured to the subflooring.

5A. **Loose Fill Material* —** (Optional) - As an alternate to Item 5, when the resilient channels (Item 6) are spaced a max of 12 in. OC, or when the Steel Framing Members (Item 6A) are used - Any loose fill material bearing the UL Classification Marking for Surface Burning Characteristics. There is no limit in the overall thickness of insulation. The finished rating when loose fill material is used has not been determined

5B. **Cavity Insulation - Batts and Blankets* or Loose Fill Material* - (Not Shown) —** (As described above in Items 5 and 5A) — For Use with Item 7A — Min. 3-1/2 in thick with no limit on maximum thickness fitted in the concealed space, draped over the resilient channel (Item 6E)/gypsum board (Item 7A) ceiling membrane.

6. **Resilient Channels —** Formed from min 25 MSG galv steel installed perpendicular to the trusses. When insulation (Item 5) is secured to the underside of the subfloor, the resilient channels are spaced 16 in. OC. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane, the resilient channels are spaced 12 in. OC. Channels secured to each truss with 1-1/4 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint as shown in the above illustration. Additional channels shall extend min 6 in. beyond each side edge of panel.

6A. **Alternate Steel Framing Members —** (Not Shown) - As an alternate to Items 6, main runners, cross tees, cross channels and wall angle as listed below:

A. **Main Runners —** Nom 10 or 12 ft long, 15/16 in. or 1-1/2 in. wide face, spaced 4 ft. OC. Main runners suspended by min 12 SWG galv steel hanger wires spaced 48 in. OC. Hanger wires to be located adjacent to main runner/cross tee intersections. Hanger wires wrapped and twist-tied on 16d nails driven in to side of trusses at least 5 in. above the bottom face.

B. **Cross Tees —** Nom 4 ft long, 1-1/2 in. wide face, installed perpendicular to the main runners, spaced 16 in. OC. Additional cross tees or cross channels used at 8 in. from each side of butted gypsum panel end joints. The cross tees or cross channels may be riveted or screw attached to the wall angle or channel to facilitate the ceiling installation.

C. **Cross Channels —** Nom 4 or 12 ft long, installed perpendicular to main runners, spaced 16 in. OC.

D. **Wall Angle or Channel —** Painted or galv steel angle with 1 in. legs or channel with 1 in. legs, 1-9/16 in. deep attached to walls at perimeter of ceiling with fasteners 16 in. OC. To support steel framing member ends and for screw-attachment of the gypsum panel.
CGC INC — Type DGL or RX.

USG INTERIORS LLC — Type DGL or RX.

6B. **Steel Framing Members* —** (Not Shown) — As an alternate to Items 6 and 6A.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-3/8 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC, and secured to the bottom chord of alternating trusses with one No. 8 x 2-1/2 in. coarse drywall screw through center grommet. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the clip spacing shall be reduced to 24 in. OC and secured to consecutive trusses. Furring channels are friction fitted into clips. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PLITEQ INC — Type Genie Clip

6C. **Steel Framing Members* —** (Not Shown) - As an alternate to Items 6, 6A and 6B.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 16 in. OC perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to trusses (Item 2). Clips spaced 48 in. OC. RSIC-1 and RSIC-1 (2.75) clips secured to alternating trusses with No. 8 x 2-1/2 in. course drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clips for use with 2-9/16 in. wide furring channels. RSIC-1 (2.75) clips for use with 2-23/32 in. wide furring channels. Adjoining channels are overlapped as described in Item a. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping No. 6 framing screws, min 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Additional clips required to hold furring channel that supports the gypsum board butt joints, as described in Item 7.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75).

6D. **Alternate Steel Framing Members* —** (Not Shown) As an alternate to items 6 to 6C, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-5/8 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire.Additional clips are required to hold the Gypsum Butt joints as described in item 7.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips - Type A237R

6E. **Resilient Channels - (Not Shown) —** For Use With Item 7A - Formed from min 25 MSG galv steel installed perpendicular to trusses and spaced 16 in. OC. Channels secured to each truss with 1-5/8 in. long Type S bugle head steel screws. Channels overlapped 4 in. at splices. Two channels, spaced 6 in. OC, oriented opposite each gypsum panel end joint. Additional channels shall extend min 6 in. beyond each side edge of panel. Insulation, Item 5B is applied over the resilient channel/gypsum panel (Item 7A) ceiling membrane.

6F. **Alternate Steel Framing Members* —** (Not Shown) As an alternate to items 6 to 6E, furring channels and Steel Framing Members as described below.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, 2-1/2 in. wide by 7/8 in deep, spaced 16 in OC, perpendicular to wood structural members. When insulation, Items 5 or 5A is applied over the furring channel/gypsum panel ceiling membrane, the furring channel spacing shall be reduced to 12 in. OC. Channels secured to trusses as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galv steel wire near each end of overlap.

b. **Steel Framing Members* —** Used to attach furring channels (Item a) to the trusses (Item 2). Clips spaced at 48" OC and secured to the bottom of the trusses with one 2-1/2 in. Coarse Drywall Screw with 1 in. diam washer through the center hole. Furring channels are then friction fitted into clips. Ends of channels are overlapped 6" and tied together with double strand of No. 18 AWG galvanized steel wire. Additional clips are required to hold the Gypsum Butt joints as described in item 7.
REGUPOL AMERICA — Type SonusClip

6G. **Steel Framing Members* —** — (Optional, Not Shown) — As an alternate to Item 6.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to the trusses. Channels secured to Cold Rolled Channels at every intersection with a 3/4 in. TEK screw through each furring channel leg. Ends of adjoining channels overlapped 12 in. and fastened together with two double strand No. 18 SWG galv steel wire ties, one at each end of overlap, or with two 3/4 in. TEK screws in each leg of the overlap section. Two furring channels used at end joints of gypsum board (Item 7), each extending a min of 6 in. beyond both side edges of the board.

b. **Cold Rolled Channels —** 1-1/2 in. by 1/2 in., formed from No. 16 ga. galv steel, positioned vertically and parallel to trusses, friction-fitted into the channel caddy on the Steel Framing Members (Item 6Gd) and secured with two 3/4 in. TEK screws. Adjoining lengths of cold rolled channels lapped min. 12 in. and secured along bottom legs with four 3/4 in. TEK screws and wire-tied together with two double strand 18 SWG galv steel wire ties, one at each end of overlap.

c. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Gd) location with 16d nails or minimum 2-1/2 in. screws.

d. **Steel Framing Members* —** Spaced 48 in. OC. max along truss, and secured to the truss on alternating trusses with two, #10 x 1-1/2 in. screws through mounting holes on the hanger bracket.
PAC INTERNATIONAL L L C — Type RSIC-SI-CRC EZ Clip

6H. **Steel Framing Members* —** (Not Shown) — As an alternate to Item 6.

a. **Furring Channels —** Formed of No. 25 MSG galv steel, nominal 2-1/2 in. wide by 7/8 in. deep, spaced as indicated in Item 6, perpendicular to trusses and friction fit into Steel Framing Members (Item 6Hc). Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap or with two TEK screws along each leg of the 6 in. overlap. Two furring channels used at end joints of gypsum board (Item 7). Butt joint channels held in place by strong back channels placed upside down, on top of, and running perpendicular to primary furring channels, extending 6 in. longer than length of gypsum side joint. Strong back channels spaced maximum 48 in. OC. Strong back channels secured to every intersection of primary furring channels with four 7/16 in. pan head screws, two along each of the legs at intersections. Butt joint channels run perpendicular to strong back channels and shall be minimum 6 in. longer than length of joint, secured to strong back channels with 7/16 in. pan head screws, two along each of the legs at intersection with strong back channels.

b. **Blocking —** Where truss design does not permit direct, full contact of the hanger bracket, a piece of nominal 2 by 4 in. lumber (blocking), min. 12 in. long to permit full contact of the hanger bracket, to be secured vertically to the side of the trusses at the top and bottom of the blocking at each Steel Framing Member (Item 6Hc) location with 16d nails or minimum 2-1/2 in. screws.

c. **Steel Framing Members* —** Used to attach furring channels (Item 6Ha) to trusses. Clips spaced 48 in. OC and secured along truss webs at each furring channel intersection with min. 3/4 in. long self-drilling #10 x 1-1/2 in. screws through each of the provided hole locations. Furring channels are friction fitted into clips.
PAC INTERNATIONAL L L C — Type RSIC-S1-1 Ultra

6I. **Steel Framing Members* —** (Optional - Not Shown) — Used to attach resilient channels (Item 6) to trusses (Item 2). Clips spaced 48 in. OC and secured to trusses with one No. 8 x 2-1/2 in. coarse drywall screw through center grommet hole. Channels secured to clips with one #10 x 1/2 in. pan-head self-drilling screw. Ends of adjoining channels overlapped 6 in. and secured together with two #8 15 x 1/2 in. Philips Modified screws spaced 2-1/2 in. from the center of the overlap. Gypsum board butt joints require additional resilient channels spaced 1-1/2 in. from the butt joint on either side. One edge of the extra channels will extend to an adjacent truss where it is secured with a clip.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6J. **Steel Framing Members* —** (Optional, Not Shown) — Used as an alternate method to attach resilient channels to structural members. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions. Gypsum Board butt joints staggered minimum 24 in. OC and Gypsum Board screws spaced 8 in. OC when used.
PAC INTERNATIONAL L L C — Type RC-1 Boost

7. **Gypsum Board* —** Nom 5/8 in. thick, 48 in. wide gypsum panels. When resilient channels (Item 6) are used, gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 12 in. OC and located a min of 1/2 in. from side joints and 3 in. from end joints. When insulation (Items 5 or 5A) is applied over the resilient channel/gypsum panel ceiling membrane the screw spacing shall be reduced to 8 in. OC. End joints secured to both resilient channels as shown in end joint detail. When Steel Framing Members (Item 6A) are used, gypsum panels installed with long dimension perpendicular to cross tees with side joints centered along main runners and end joints centered along cross tees. Panels fastened to cross tees with 1 in. long Type S bugle-head screws spaced 8 in. OC in the field and along end joints. Panels fastened to main runners with 1 in. long Type S bugle-head screws spaced midway between cross tees. Screws along sides and ends of panels spaced 3/8 to 1/2 in. from board edge. End joints of panels shall be staggered with spacing between joints on adjacent panels not less than 2 ft OC. When **Steel Framing Members** (Item 6B) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long No. 6 Type S bugle-head steel screws spaced 12 in. OC in the field of the board. Screw spacing is reduced to 8 in. OC when insulation is applied over the furring channel/gypsum panel ceiling membrane. Gypsum board butted end joints shall be staggered minimum 16 in. within the assembly. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 6 in. on each end. These additional furring channels shall be attached to underside of the truss with Genie clips as described in Item 6B. Screw spacing along the gypsum board butt joint shall be 6 in. OC. When **Steel Framing Members** (Item 6C) are used, gypsum panels installed with long dimensions perpendicular to furring channels. Panels attached to the furring channels using 1 in. long Type S bugle-head steel screws spaced 8 in. OC along butted end joints and in the field of the panel. Butted end joints shall be staggered min. 2 ft within the assembly, and occur midway between the continuous furring channels. Each end of each gypsum panel shall be supported by a single length of furring channel equal to the width of the gypsum panel plus 6 in. on each end. The two support furring channels shall be spaced approximately 3-1/2 in. OC, and be attached to underside of the truss with one clip at each end of the channel. When **Steel Framing Members** (Item 6D) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, each end of each gypsum board shall be supported by a single length of furring channel equal to the width of the gypsum board plus 3 in. on each end joint. The two support furring channels shall be spaced approximately 3 in. in from joint. Screw spacing along the gypsum board butt joint and along both additional channels shall be 8 in. OC. Additional screws shall be placed in the adjacent section of gypsum board into the aforementioned 3 in. extension of the extra butt joint channels as well as into the main channel that runs between. Butt joint furring channels shall be attached with one RESILMOUNT Sound Isolation Clip at each end of the channel. When **Steel Framing Members** (Item 6F) are used, one layer of nom 5/8 in. thick, 4 ft wide gypsum board is installed with long dimensions perpendicular to furring channels. Gypsum board secured to furring channels with nom 1 in. long Type S bugle-head steel screws spaced 8 in. OC in the field of the board. Gypsum board butted end joints shall be staggered minimum 48 in. and centered over main furring channels. At the gypsum board butt joints, an additional single length of furring channel shall be installed and be spaced approximately 3 in. from the butt joint (6 in. from the continuous furring channels) to support the floating end of the gypsum board. Each of these shorter sections of furring channel shall extend one truss beyond the width of the gypsum panel and be attached to the adjacent trusses with one SonusClip at every truss involved with the butt joint.

When **Steel Framing Members** (Item 6G) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Adjacent butt joints staggered minimum 48 in. OC.

When **Steel Framing Members** (Item 6H) are used, nom 5/8 in. thick, 4 ft wide gypsum board, installed as described in Item 7. Butt joints staggered minimum 24 in. OC.

AMERICAN GYPSUM CO — Type AG-C

CGC INC — Types C, IP-X2, IPC-AR

CONTINENTAL BUILDING PRODUCTS OPERATING CO, L L C — Type LGFC-C/A

NATIONAL GYPSUM CO — Types eXP-C, FSW-G, FSW-C, FSK-G, FSK-C.

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

USG BORAL DRYWALL SFZ LLC — Type C

7A. **Gypsum Board* - (Not Shown) —** For use with Items 5B and 6E. Nom 5/8 in. thick, 48 in. wide gypsum panels installed with long dimension perpendicular to resilient channels. Gypsum panels secured with 1 in. long Type S bugle head steel screws spaced 8 in. OC and located a min of 1/2 in. from side joints and 3 in. from the end joints. Finish Rating with this ceiling system is 20 min.
CGC INC — Type ULIX

UNITED STATES GYPSUM CO — Type ULIX

8. **Finishing System - (Not Shown) —** Vinyl, dry or premixed joint compound, applied in two coats to joints and screw-heads. Nom 2 in. wide paper tape embedded in first layer of compound over all joints. As an alternate, nom 3/32 in. thick veneer plaster may be applied to the entire surface of gypsum board.

9. **Grille —** Aluminum or Steel grille, installed in accordance with the installation instructions provided with the ceiling damper.

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

Last Updated on 2021-02-05

CONSTRUCTION SET

CURTIS R. JENNINGS III
NUMBER
A-2023034555
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS
Architecture
Engineering
Planning
Interiors

SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
UL ASSEMBLIES

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A0.7

2/16/2024
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Autodesk Docs://23104.00 - John Knox Village - Lindbergh/23104.00-JKV-Courtyards-Building E-Architectural CENTRAL.rvt

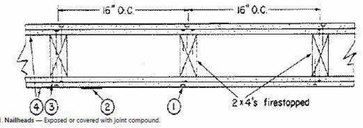
UL U301 - 2 HR ASSEMBLY

Design No. U301

November 21, 2023

Bearing Wall Rating — 2 Hr.
Finish Rating — 66 Min.
This design was evaluated using a load design method other than the Limit States Design Method (e.g., Working Stress Design Method). For jurisdictions employing the Limit States Design Method, such as Canada, a load restriction factor shall be used — See Guide BXUV or BXUV7

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



1. **Nailheads —** Exposed or covered with joint compound.

2. **Joints —** Exposed joints covered with joint compound and paper tape. Joint compound and paper tape may be omitted when square edge boards are used. As an alternate, nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard with the joints reinforced with paper tape.

3. **Nails —** 6d cement coated nails 1-7/8 in. long, 0.0915 in. shank diam, 1/4 in. diam heads; and 8d cement coated nails 2-3/8 in. long, 0.113 in. shank diam, 9/32 in. diam heads.

4. **Gypsum Board* —** 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with the 1-7/8 in. nails spaced 6 in. OC. Outer layer attached to studs over inner layer with the 2-3/8 in. long nails spaced 8 in. OC. Vertical joints located over studs. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
When used in widths other than 48 in., gypsum board to be installed horizontally.

When **Steel Framing Members*** (Item 6 or any alternate clips) are used, base layer attached to furring channels with 1 in. long Type S bugle-head steel screws spaced max 24 in. OC; face layer attached with 1-5/8 in. long Type S bugle-head steel screws spaced max 12 in. OC.

AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, AGX-11, LightRoc

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — Type X, 5/8 Type X, Moisture Resistant Type X, Gypsum Sheathing Type X, Mold & Mildew Resistant Type X and Mold & Mildew Resistant AR Type X, Type Blueglass Exterior Sheathing

CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, GlasRoc-2, Type C, Type X-1, Type LWTX

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

CERTAINTEED GYPSUM INC — Types LGFC2A, LGFC6A, LGFC-C/A, LGFC-WD, LGLLX, CLLX

GEORGIA-PACIFIC GYPSUM L L C — Types 5, 6, 9, C, DAP, DD, DX, DAPC, DGG, DS, GPFSX, LS, TG-C, Type X, Veneer Plaster Base-Type X, Water Rated-Type X, Sheathing Type-X, Soffit-Type X, GreenGlass Type X, Type LWX, Veneer Plaster Base-Type LWX, Water Rated-Type LWX, Sheathing Type-LWX, Soffit-Type LWX, Type DGLW, Water Rated-Type DGLW, Sheathing Type- DGLW, Soffit-Type DGLW, Type LWX2X, Veneer Plaster Base - Type LWX1X, Water Rated - Type LWX2X, Sheathing - Type LWX2X, Soffit - Type LWX2X, Type DGLX2W, Water Rated - Type DGLX2W, Sheathing - Type DGLX2W

NATIONAL GYPSUM CO — Types eXP-C, FSX, FSX-C, FSX-G, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSW-C, FSW-G, FSMR-C, FSL, RSX

NATIONAL GYPSUM CO — Riyadh, Saudi Arabia — Type FR, or WR.

PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types C, PG-2, PG-3, PG-3W, PG-4, PG-5, PG-5W, PG-5WS, PG-9, PG-11, PG-C, PGS-WRG, PGI

PANEL REY S A — Types PRC, PRC2, PRX, RHX, MDX, ETX, GREX, GRIX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type C or Type X

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

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

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

4A. **Gypsum Board* —** (As an alternate to Item 4) — Nom 3/4 in. thick, installed as described in Item 4.
CGC INC — Types AR, IP-AR

UNITED STATES GYPSUM CO — Types AR, IP-AR

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

4B. **Gypsum Board* —** (As an alternate to Items 4 and 4A) — 5/8 in. thick, 2 ft wide, tongue and groove edge, applied horizontally as the outer layer to one side of the assembly. Secured as described in Item 4. Joint covering (Item 2) not required.
CGC INC — Type SHX

UNITED STATES GYPSUM CO — Type SHX

USG MEXICO S A DE C V — Type SHX

4C. **Gypsum Board* —** (As an alternate to Items 4, 4A or 4B — Not Shown) — For Direct Application to Studs Only- For use on one or both sides of the wall as the base layer or one or both sides of the wall as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations: Lead batten strips, min 1-1/2 in. wide, max 10 ft long with a max thickness of 0.125 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-12 pan head steel screws; F4Jone at the top of the strip and one at the bottom of the strip. Lead discs or tabs may be used in lieu of or in addition to the lead batten strips or optional at other locations. Max 3/4 in. diam by max 0.125 in. thick lead disco compression fitted or adhered over steel screw heads or max 1/2 in. by 1-1/4 in. by max 0.125 in. thick lead tabs placed on gypsum boards underneath screw locations prior to the installation of the screws. Lead batten strips to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RAY-BAR ENGINEERING CORP — Type RB-LBG.

4D. **Gypsum Board* —** As an Alternate to Item 4 — 5/8 in. thick applied either horizontally or vertically. Inner layers fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. Outer layers fastened to framing with 1-7/8 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, LightRoc

4E. **Gypsum Board* —** (As an alternate to Items 4 through 4D) — 5/8 in. thick, 4 ft. wide, paper surfaced applied vertically and secured as described in Item 4.
GEORGIA-PACIFIC GYPSUM L L C — Type X ComfortGuard Sound Deadening Gypsum Board

4F. **Gypsum Board* —** (As an alternate to Item 4) — Not to be used with Item 6, 6A, 6B or 6C. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically and secured as described in Item 4.
NATIONAL GYPSUM CO — Type SBWB

4G. **Gypsum Board * —** (As an alternate to Items 4 through 4F) — Nominal 5/8 in. thick, 4 ft wide panels; applied vertically and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Types QuietRock ES

4H. **Gypsum Board* —** (As an alternate to Item 4) — Not to be used with Item 6, 6A, 6B, or 6C. 5/8 in. thick, 4 ft. wide, paper surfaced, applied vertically or horizontally and secured as described in Item 4.
CERTAINTEED GYPSUM INC — Type SilentFX

4I. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 1-1/4 in. long Type W steel screws spaced 8 in. OC. Outer layer attached to studs over inner layer with 2 in. long Type W steel screws spaced 8 in. OC offset 6 in. from base layer. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with joint tape and compound, screwheads covered with joint compound. As an alternate to the joint compound nom 3/32 in. thick gypsum veneer plaster may be applied to the entire surface of Classified veneer baseboard. Joints reinforced. Wallboard other than 48 in. wide must be applied horizontally. The SoundBreak XP Type X Gypsum Board is not to be used with Item 6, 6A, 6B, or 6C.
NATIONAL GYPSUM CO — Types eXP-C, FSX, FSX-C, FSX-G, FSW, FSW-3, FSW-5, FSW-6, FSW-8, FSW-C, FSW-G, FSMR-C, SBWB

4J. **Gypsum Board* —** (As an alternate to Items 4) — For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations: Lead batten strips, min 2 in. wide, max 10 ft long with a max thickness of 0.140 in. placed on the face of studs and attached to the stud with two 1 in. long Type S-8 pan head steel screws; one at the top of the strip and one at the bottom of the strip. Lead discs, max 5/16 in. diam by max 0.140 in. thick, compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grades "B, C or D". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
MAYCO INDUSTRIES INC — "X-Ray Shielded Gypsum"

4K. **Gypsum Board* —** For use with Item 7 — 5/8 in. thick, two layers applied vertically. Inner layer attached to resilient channels with 1 in. long steel screws spaced 8 in. OC. Outer layer attached to resilient channels over inner layer with 1-5/8 in. long steel screws spaced 8 in. OC. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side. Insulation, Items 8 or 9 is required.
AMERICAN GYPSUM CO — Types AGX-1, M-Glass, AG-C, AGX-11

NATIONAL GYPSUM CO — Types eXP-C, FSX, FSX-C, FSX-G, FSW, FSW-3, FSW-5, FSW-6, FSW-C, FSW-G, FSMR-C, SBWB.

CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, GlasRoc-2, Type C, Type X-1, Easi-Lite Type X, SilentFX

4L. **Gypsum Board* —** (As an alternate to Items 4) — For Direct Application to Studs Only- For use as the base layer or as the face layer. Nom 5/8 in. thick lead backed gypsum panels with beveled, square or tapered edges, applied vertically. Vertical joints centered over studs and staggered min 1 stud cavity on opposite sides of studs. Wallboard secured to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field when applied as the base layer. When applied as the face layer screw length to be increased to 2-1/2 in. Lead batten strips required behind vertical joints of lead backed gypsum wallboard and optional at remaining stud locations: Lead batten strips, min 2 in. wide, max 8 ft long with a max thickness of 0.14 in. placed on the face of studs and attached to the stud with construction adhesive and two 1 in. long Type S-12 pan head steel screws; one at the top of the strip and one at the bottom of the strip. Lead discs, nominal 3/8 in. diam by max 0.085 in. thick; compression fitted or adhered over the screw heads. Lead batten strips and discs to have a purity of 99.9% meeting the Federal specification QQ-L-201f, Grade "C". Fasteners for face layer gypsum panels (Items 4, 4A or 4B) when installed over lead backed board to be min 2-1/2 in. Type S-12 bugle head steel screws spaced as described in Item 4.
RADIATION PROTECTION PRODUCTS INC — Type RPP - Lead Lined Drywall

4M. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, 4 ft. wide, two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. Secured as described in Item 4.
CERTAINTEED GYPSUM INC — 5/8" Easi-Lite Type X

4N. **Gypsum Board* —** (As an alternate to 5/8 in. Type FSW in Items 4 or 4I) — Nom. 5/16 in. thick gypsum panels applied vertically or horizontally. Two layers of 5/16 in. for every single layer of 5/8 in. gypsum board described in Item 4 or 4I. Horizontal joints on the same side need not be staggered. Inner layer of each double 5/16 in. layer attached with fasteners; as described in Item 4 or 4I, spaced 24 in. OC. Outer layer of each double 5/16 in. layer attached per Item 4 or 4I.
NATIONAL GYPSUM CO — Type FSW

4O. **Wall and Partition Facings and Accessories* —** (As an alternate to Items 4 through 4N) — Nominal 5/8 in. thick, 4 ft wide panels, applied vertically and secured as described in Item 4.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock 527

4P. **Gypsum Board* —** (As an alternate to Item 4) — 5/8 in. thick, two layers applied either horizontally or vertically. Inner layer attached to studs with 1-1/4 in. long Type W steel screws spaced 10 in. OC with the last two screws 4 and 1 in. from the edges of the board. Outer layer attached to studs over inner layer with 1-7/8 in. long Type W steel screws spaced 10 in. OC offset 5 in. from base layer with the last two screws 4 and 1 in. from the edges of the board. Vertical joints located over studs. Vertical and horizontal joints between inner and outer layers staggered. Outer layer joints covered with joint tape and compound; screwheads covered with joint compound. When used in widths other than 48 in., gypsum panels are to be installed horizontally.
CERTAINTEED GYPSUM INC — Type LGFC6A, Type LGFC2A, Type LGFC-C/A, Type LGFC-WD, Type LGLLX

4Q. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13) — Am 5/8 in. thick, 4 ft. wide, Gypsum Board UL Classified for Fire Resistance (CKNX) eligible for use in Design Nos. U305 and L501 or G512. Two layers; applied either horizontally or vertically, and screwed to studs with 1-5/8 in. long Type W coarse thread steel screws at 8 in. OC at perimeter and in the field with the last two screws 4 and 3/4 in. from the edges of the board when applied as the base layer. For the face layer, screw length to be increased to 2-1/2 in. All joints in face layers staggered with joints in base layers. When used in widths other than 48 in., gypsum panels are to be installed horizontally.

4R. **Gypsum Board* —** As an Alternate to Item 4 — 5/8 in. thick applied either horizontally or vertically. Inner layers fastened to framing with 1-1/4 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. Outer layers fastened to framing with 1-7/8 in. long Type W coarse thread gypsum panel steel screws spaced a max 8 in. OC, with last screw 1 in. from edge of board. When used in widths other than 48 in., gypsum board to be installed horizontally. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
CERTAINTEED GYPSUM INC — Types EGRG, GlasRoc, GlasRoc-2, Type C, Type X-1, Easi-Lite Type X, SilentFX

4S. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13A) — 5/8 in. thick, two layers applied vertically. Inner layer attached to studs with the 1-7/8 in. nails spaced 6 in. OC. Outer layer attached to studs over inner layer with the 2-3/8 in. long nails spaced 8 in. OC. Vertical joints located over studs. All joints in face layers staggered with joints in base layers. Joints of each base layer offset with joints of base layer on opposite side.
AMERICAN GYPSUM CO — Types AGX-1

BEIJING NEW BUILDING MATERIALS PUBLIC LTD CO — Type DBX-1

CABOT MANUFACTURING ULC — "5/8 Type X"

CGC INC — Type SCX

PANEL REY S A — Type PRX

SIAM GYPSUM INDUSTRY (SARABURI) CO LTD — Type EX-1

THAI GYPSUM PRODUCTS PCL — Type X

UNITED STATES GYPSUM CO — Type SCX

USG BORAL DRYWALL SFZ LLC — Types SCX

USG MEXICO S A DE C V — Type SCX

4T. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13B) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 4 above. Two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. All joints in outer layers staggered with joints in inner layers. Inner layer attached to studs with 1-5/8 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC at perimeter and in the field. Outer layer attached to studs over inner layer with the 2-1/2 in. long Type W coarse thread gypsum panel steel screws spaced 8 in. OC.

4U. **Gypsum Board* —** (As an alternate to Item 4. For use with Item 13C) — Any 5/8 in. thick, 4 ft. wide, Gypsum Board listed in Item 4 above. Two layers applied vertically with vertical joints centered over studs and staggered one stud cavity on opposite sides of studs. All joints in outer layers staggered with joints in inner layers. Inner layer attached to studs with 1-1/4 in. long Type W screws spaced 8 in. OC at perimeter and in the field. Outer layer attached to studs over inner layer with 1-7/8 in. long Type W screws spaced 8 in. OC.

5. **Molded Plastic* —** Not Shown, Optional — Solid vinyl siding mechanically secured over the outer layer to framing members in accordance with manufacturer's recommended installation details.
ALSIDE, DIV OF ASSOCIATED MATERIALS INC

GENTEK BUILDING PRODUCTS LTD

VYTEC CORP

6. **Steel Framing Members* —** (Optional, Not Shown) — Furring channels and Steel Framing Members as described below:
A. **Furring Channels —** Formed of No. 25 MSG galv steel. 2-9/16 in. or 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Wallboard attached to furring channels as described in Item 4.

B. **Steel Framing Members* —** Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels; RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
PAC INTERNATIONAL L L C — Types RSIC-1, RSIC-1 (2.75)

6A. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
A. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

B. **Steel Framing Members* —** Used to attach furring channels (Item 6Aa) to studs. Clips spaced 48 in. OC., and secured to studs with 2 in. coarse drywall screw with 1 in. diam washer through the center hole. Furring channels are friction fitted into clips.
STUDCO BUILDING SYSTEMS — RESILMOUNT Sound Isolation Clips – Type A237R

6B. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
A. **Furring Channels —** Formed of No. 25 MSG galv steel. Spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item 6Bb. Ends of adjoining channels overlapped 6 in. and tied together with double strand of No. 18 AWG galvanized steel wire. Gypsum board attached to furring channels as described in Item 4.

8. **Steel Framing Members* —** Used to attach furring channels (Item 6a) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Furring channels are friction fitted into clips. RSIC-1 clip for use with 2-9/16 in. wide furring channels; RSIC-1 (2.75) clip for use with 2-23/32 in. wide furring channels.
REGUPOL AMERICA — Type SonusClip

6C. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) —Resilient channels and Steel Framing Members as described below:
a. **Resilient Channels —** Formed of No. 25 MSG galv steel, spaced 24 in. OC, and perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels overlapped 6 in. and secured in place with two No. 8 15 x 1/2 in. Phillips Modified Truss screws spaced 2-1/2 in. from the center of the overlap. Gypsum board attached to resilient channels as described in Item 4.

b. **Steel Framing Members* —** Used to attach resilient channels (Item 6Ca) to studs. Clips spaced 48 in. OC., and secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center hole. Resilient channels are secured to clips with one No. 10 x 1/2 in. pan-head self-drilling screw.
KEENE BUILDING PRODUCTS CO INC — Type RC+ Assurance Clip

6D. **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Used as an alternate method to attach resilient channels to wall studs. A resilient sound isolation accessory shall be used at each attachment point of the resilient channels and spaced max 24 in. O.C. Channel ends butted and centered under the structural members and attached with one accessory at each end. Additional accessories used to hold resilient channels that support the gypsum board end joints. The accessory envelops the mounting edge of the resilient channel. The accessory and resilient channel are fastened to the structural members with the screws supplied with the accessory and per the accessory manufacturer's installation instructions.
PAC INTERNATIONAL L L C — Type RC-1 Boost

6E **Steel Framing Members* —** (Optional, Not Shown, As an alternate to Item 6) — Furring channels and Steel Framing Members as described below:
a **Furring Channels —** Formed of No. 25 MSG galv steel, 2-23/32 in. wide by 7/8 in. deep, spaced 24 in. OC perpendicular to studs. Channels secured to studs as described in Item b. Ends of adjoining channels are overlapped 6 in. and tied together with double strand of No. 18 SWG galv steel wire near each end of overlap. As an alternate, ends of adjoining channels may be overlapped 6 in. and secured together with two self-tapping #6 framing screws, min. 7/16 in. long at the midpoint of the overlap, with one screw on each flange of the channel. Gypsum board attached to furring channels as described in Item 4.

b **Steel Framing Members* —** Used to attach furring channels (Item 6Ea) to studs. Clips spaced maximum 48 in. OC. Clips secured to studs with No. 8 x 2-1/2 in. coarse drywall screw through the center grommet. Furring channels are friction fitted into clips.

CLARKDIETRICH BUILDING SYSTEMS — Type ClarkDietrich Sound Clip

7. **Furring Channel —** Optional — Not Shown — For use on one side of the wall with Item 4K — Resilient channels, 25 MSG galv steel, spaced vertically 24 in. OC, flange portion screw attached to one side of studs with 1-1/4 in. long diamond shaped point, double lead Phillips head steel screws; When resilient channels are used, insulation, Item 8 or 9 is required.

8. **Batts and Blankets* —** Required for use with resilient channels, Item 7, min. 3 in. thick mineral wool batts; placed to fill interior of wall, attached to the nom 4 in. face of the studs with staples placed 24 in. OC.
ROCKWOOL — Type SAFEnSOUND, min. 1.8 pcf.

THERMAFIBER INC — Type SAFB, SAFB FF

9. **Batts and Blankets* —** (As an alternate to Item 8) — Min. 3 in. thick glass fiber batts bearing the UL Classification Marking as to Surface Burning and/or Fire Resistance, friction-fitted to fill the stud cavities. See Batts and Blankets (BKNV or BZJZ) Categories for names of Classified companies.

9A. **Fiber, Sprayed* —** (Optional) — As an alternate to Batts and Blankets (Item 8). Required for use with resilient channels, Item 7. Not for use with Item 6, 6A, 6B, or 6C. — Spray applied mineral wool insulation. The fiber is applied with adhesive, at a minimum density of 4.0 pcf, to completely fill the enclosed cavity in accordance with the application instructions supplied with the product. See Fiber, Sprayed (CCAZ).
AMERICAN ROCKWOOL MANUFACTURING, LLC — Type Rockwool Premium Plus

10. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) — Nominal 1/2 in. thick, 4 ft wide panels; for optional use as an additional layer on one or both sides of the assembly. Panels attached in accordance with manufacturer's recommendations. When the QR-500 or QR-510 panel is installed between the wood framing and the UL Classified gypsum board, the required UL Classified gypsum board layer(s) is/are to be installed as indicated as to fastener type and spacing, except that the required fastener length shall be increased by a minimum of 1/2 in. Not evaluated or intended as a substitute for the required layer(s) of UL Classified Gypsum Board.
PABCO BUILDING PRODUCTS L L C, DBA PABCO GYPSUM — Type QuietRock QR-500 or QR-510

11. **Cementitious Backer Units* —** (Optional Item Not Shown — For Use On Face Of 2 Hr Systems With All Standard Items Required) — 7/16 in., 1/2 in., 5/8 in., 3/4 in. or 1 in. thick, min. 32 in. wide. Applied horizontally or vertically with vertical joints centered over studs. Face layer fastened over gypsum board to studs and runners with cement board screws of adequate length to penetrate stud by a minimum of 3/8 in. for steel framing members, and a minimum of 3/4 in. for wood framing members spaced a max of 8 in. OC.
NATIONAL GYPSUM CO — Type DuraBacker, PermaBase, DuraBacker Plus, or PermaBase Plus

12. **Wall and Partition Facings and Accessories* —** (Optional, Not Shown) - When the Wall Assembly is used as an External Wall, on the External side of the wall one of the following Wall and Partition and Facing Accessories may be used, refer to items (A) to (C) below:
A. **Non Insulated system with metal channels —** Install moisture barrier over the Gypsum Board Item 4 and Install Acry Metal Channels vertically at a horizontal spacing not greater than 24 inches OC., over the moisture barrier. Acry Metal Channels attached through the moisture barrier and the Gypsum Board to the Wood Studs using fasteners specified by the manufacturer and fasteners spaced max., 24 in. OC. Install Acrytec Panels on Acry Metal Channels using 1-1/4" long corrosion coated stainless steel screws spaced at a max spacing of 24 inches OC, along with manufacturer's approved adhesive (3M 540 or Tremco Vulcum 116). Adhesive to be applied in a zigzag pattern along every channel. Joint treatment in between panels shall be Tremco illmod 600 pre compressed polyurethane foam sealant.

B. **Insulated system with metal channels —** Install moisture barrier over the Gypsum Board Item 4. Install galvanized Z girt channels specified by the manufacturer over the moisture barrier and the Gypsum Board Item 4. Z girt channels to be installed horizontally at a max. spacing of 24" OC. Z girt channels attached through the Gypsum Board and the moisture barrier to the wood studs with screws provided by the manufacturer at a max spacing of 24 inches OC. Install mineral wool insulation between the Z girts. Maximum thickness of mineral wool insulation not to exceed 6 in. As per manufacturer's instructions install Acry Metal Channels vertically over the Z girts at a max horizontal spacing of 24 in. OC. Acrytec Panels installed on Acry channel with 1-1/4" long corrosion coated stainless steel screws at a max spacing of 24 in. OC, along with manufacturers approved adhesive (3M 540 or Tremco Vulcum 116). Adhesive to be applied in a zigzag pattern along every channel. Joint treatment in between panels to be Tremco illmod 600 pre compressed polyurethane foam sealant.

C. **Non insulated wood strapping system —** Install moisture barrier over the Gypsum Board Item 4 and Install 1" x 3" wood strapping vertically at a horizontal spacing not greater than 24 inches OC., over the moisture barrier. 1" x 3" wood strapping attached through the moisture barrier and the Gypsum Board to the Wood studs using fasteners specified by the manufacturer and fasteners spaced max., 24 in. OC. Acrytec Panels to be installed on the 1" x 3" wood strapping using manufacturers approved stainless steel fasteners spaced at maximum 24 inches OC along with Tremco Vulcum 116 adhesive applied in a zigzag pattern along every wood strap. Joint treatment in between panels to be Tremco illmod 600 pre compressed polyurethane foam sealant.

D. **Insulated Wood Strapping System —** Install moisture barrier over the Gypsum Board Item 4. Install Extruded Polystyrene insulation over moisture barrier and the Gypsum Board Item 4, max thickness of insulation not to exceed 4 inches. Install 1" x 3" wood strapping vertically at a horizontal spacing not greater than 24 inches OC. Wood strapping attached through the Insulation, the Gypsum Board and moisture barrier to the Wood Studs using fasteners specified by the manufacturer and fasteners spaced max. 24 in. OC. Acrytec Panels to be installed over the wood strapping using manufacturers approved stainless steel fasteners at a max spacing of 24 in. OC and Tremco Vulcum 116 adhesive applied in a zigzag pattern along every wood strap. Joint treatment in between panels to be Tremco illmod 600 pre compressed polyurethane foam sealant.

ACRYTEC PANEL INDUSTRIES — Nominal 5/8 inch thick Acrytec Panel.

13. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 4Q) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
SES FOAM INC — Nexseal™ 2.0 or Nexseal™ 2.0 LE Spray Foam and Sucraseal Spray Foam. For use in Bearing and Non-Load Bearing Walls.

13A. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 4S) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
HOLCIM SOLUTIONS AND PRODUCTS US, LLC — Types GacoEZSpray F4500, GacoProFill FR6500R, Gaco 052N; GacoOnePass F1850, GacoOnePass Low GWP F1880, and Gaco WallFoam 183M.

13B. **Foamed Plastic* —** (Optional, Not Shown - For use with Item 4T) — Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
CARLISLE SPRAY FOAM INSULATION — Types SealThe ONE, SealThe Pro Closed Cell (CC), SealThe Pro Open Cell (OC), SealThe Pro OCX, SealThe Pro No Trim 21, SealThe Pro One Zero, Foamulate Closed Cell, Foamulate OCX, Foamulate 70, and Foamulate HFO..

13C. **Foamed Plastic* -** (Optional, Not Shown – For use with Item 4U) - Spray applied, foamed plastic insulation, at any thickness from partial fill to completely filling stud cavity.
BASF CORP – Types Enertite® NM, Enertite® G, FE170®, Spraytite® 17B, Spraytite® 81206, Walltite® 200, Walltite® US , Walltite® US-N, Walltite® HF+, Spraytite® Comfort XL, and Walltite® XL

14. **Foamed Plastic* —** (Optional, Not Shown - For use over Gypsum Board, Item 4) - Polyisocyanurate foamed plastic boards, any thickness applied vertically with vertical joints located over studs. May be used with Molded Plastic, Item 5 or any exterior facing, as authorized by the Authority Having Jurisdiction and installed in accordance with the manufacturer's installation instructions.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci Class A", "Xci 286", "Xci Foil (Class A)", "Xci CG", "Xci Foil", "Xci CG NH", "Xci Foil NH"

15. **Building Units* —** (Optional, Not Shown - For use over Gypsum Board, Item 4) Polyisocyanurate composite foamed plastic boards, any thickness, applied vertically with vertical joints located over studs. May be used with Molded Plastic, Item 5 or any exterior facing, as authorized by the Authority Having Jurisdiction and installed in accordance with the manufacturer's installation instructions.
HUNTER PANELS, A DIVISION OF CARLISLE CONSTRUCTION MATERIALS, LLC — "Xci NB", "Xci Fly"

16. **Building Units -** (Optional Item Not Shown – For use over Gypsum Board, Item 4) 1 in., 2 in, or 3 in. thick, 4 ft. wide – Applied vertically or horizontally with vertical joints centered over studs. Fastened to studs and runners with wafer head screws of adequate length to penetrate framing by a minimum of of ¾ in., spaced a max 8 in. o.c.

NATIONAL GYPSUM CO – Type PBCI

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

Last Updated on 2023-11-21

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS B. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS | Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : DAS		DRAWN : DAS	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER :		APPROVED : CRJ	

NO.	REVISION DESCRIPTION	DATE

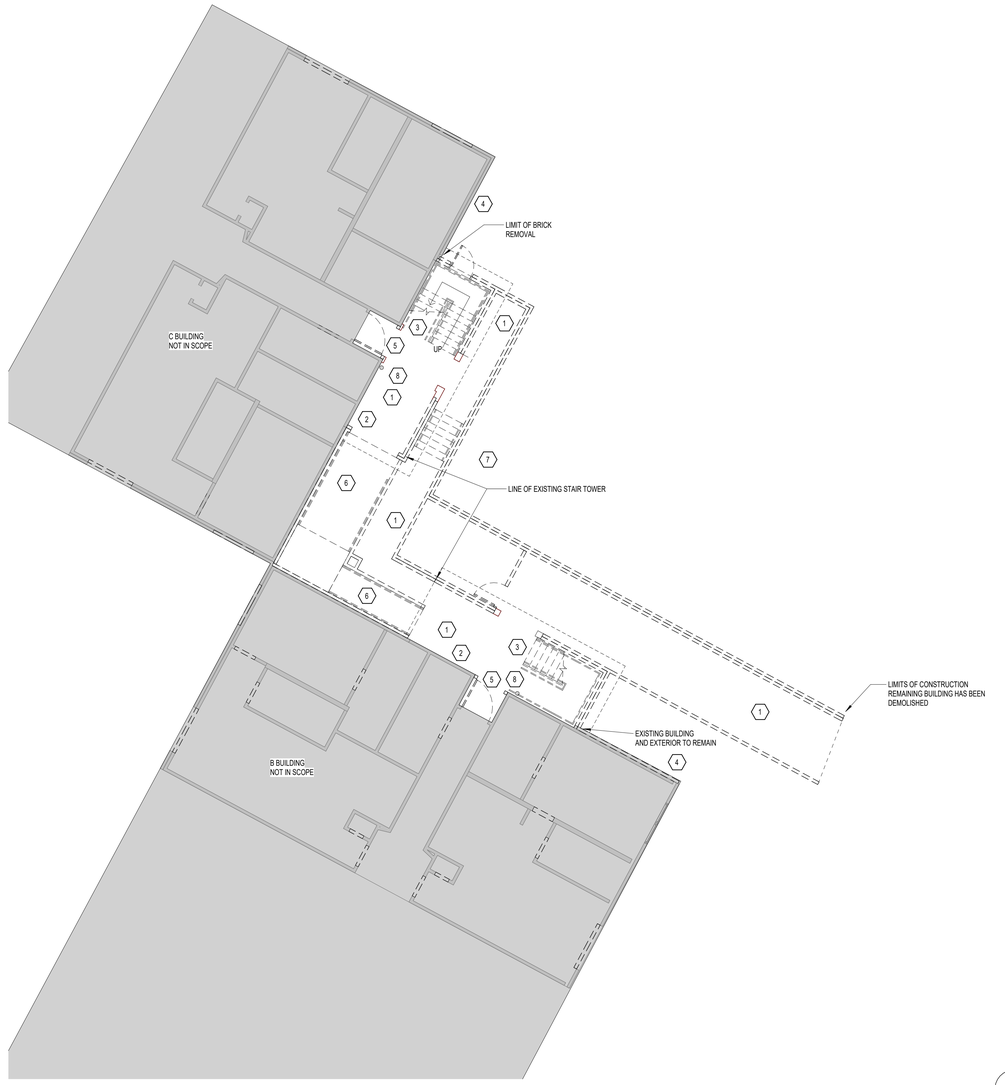
DRAWING TITLE
UL ASSEMBLIES

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A0.8

4 WEST ELEVATION
1 1/2" = 1'-0"

3 WEST ELEVATION - CORNER
1 1/2" = 1'-0"

2 EAST ELEVATION
1 1/2" = 1'-0"

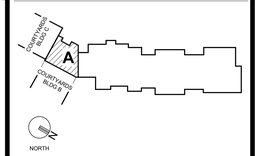


1 ATRIUM - FIRST FLOOR PLAN - DEMOLITION
1/8" = 1'-0"

GENERAL DEMOLITION NOTES

1. BEFORE WORK HAS BEGUN, CONTRACTORS SHALL MAKE A THOROUGH SURVEY OF THE BUILDING AND NOTIFY THE OWNER IN WRITING OF ALL DISCREPANCIES BETWEEN EXISTING CONDITIONS AND THOSE SHOWN ON THE DRAWINGS. FAILURE BY THE CONTRACTOR TO HAVE ACQUAINTED HIMSELF WITH AVAILABLE INFORMATION CONCERNING EXISTING CONDITIONS SHALL NOT RELIEVE THE CONTRACTOR OF RESPONSIBILITIES OF PERFORMANCE OF WORK IN ACCORDANCE WITH REQUIREMENTS OF THE CONTRACT DOCUMENTS.
2. THESE DRAWINGS HAVE BEEN DEVELOPED FROM EXISTING DRAWINGS AND MAY NOT REFLECT ACTUAL FIELD CONDITIONS THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AND NOTIFY THE ARCHITECT IN WRITING OF ANY WORK DESCRIBED IN THE CONTRACT DOCUMENTS WHICH CANNOT BE PERFORMED DUE TO EXISTING CONDITIONS.
3. PROTECT FROM DAMAGE ALL MATERIALS TO REMAIN.
4. CONTRACTOR SHALL USE CAUTION WHEN PERFORMING DEMOLITION AT OR NEAR FIRE-RATED WALLS OR SHAFTS SO AS NOT TO DISRUPT INTEGRITY OF THE FIRE RATING OF THE WALLS OR SHAFTS AND REPAIR DAMAGE TO WALLS OR SHAFTS AS REQUIRED, TO ENSURE CONDITIONS RATINGS REPAIR ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISH.
5. DEMOLITION WORK INCLUDES, BUT IS NOT NECESSARILY LIMITED TO THOSE ITEMS NOTED. OTHER ITEMS OF A MINOR NATURE WHICH MAY EXIST BUT ARE NOT SPECIFICALLY NOTED ON THE DRAWINGS ARE TO BE REMOVED AS REQUIRED, TO PROVIDE ACCESS AND ALLOW ALTERATION OR NEW WORK TO PROCEED. REPAIR ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISHES.
6. NOT ALL MECHANICAL, ELECTRICAL AND PLUMBING, EQUIPMENT WHICH IS REQUIRED TO BE REMOVED IS SHOWN. CONTRACTOR SHALL REMOVE ALL SUCH EQUIPMENT WHICH WILL INTERFERE WITH NEW CONSTRUCTION. EQUIPMENT WHICH WILL NO LONGER BE USED (EG. PIPES, CONDUITS AND DUCTS) SHALL BE REMOVED COMPLETELY BACK TO THE POINT OF SERVICE AND CAPPED OR PLUGGED. ALSO SEE MECHANICAL, PLUMBING AND ELECTRICAL DRAWINGS FOR ADDITIONAL DEMOLITION NOTES.
7. IF ANY HAZARDOUS MATERIALS ARE ENCOUNTERED BY THE GENERAL CONTRACTOR, INCLUDING BUT NOT LIMITED TO MATERIALS CONTAINING ASBESTOS, LEAD PAINT, ETC., WORK IS TO BE STOPPED AND THE ARCHITECT IMMEDIATELY NOTIFIED.
8. WHERE PLUMBING FIXTURES ARE NOTED TO BE REMOVED, ALL ASSOCIATED TOILET ACCESSORIES SHALL ALSO BE REMOVED.
9. REMOVE OR MODIFY EXISTING CONSTRUCTION AS SHOWN. TYPICAL WALL AND CEILING REMOVAL INCLUDES FINISHES, TRIM, BASES, DOORS AND FRAMES, MECHANICAL, PLUMBING AND ELECTRICAL SYSTEMS CONTAINED THERIN UNLESS NOTED OTHERWISE. REMOVE ALL EXISTING DEVICES (SWITCHES, RECEPTACLES, TELEPHONE, CONDUIT, WIRE, ETC.) IN EXISTING WALLS TO BE REMOVED. REMOVE EXISTING LIGHT FIXTURES, DIFFUSERS, SPEAKERS, CONDUIT, WIRE, ETC. WHERE EXISTING CEILING IS TO BE REMOVED. SAW CUT SLAB ON GRADE AS REQD TO ACCOMODATE NEW UNDERGROUND UTILITY LINES AND PATCH SLABS FLUSH W/ EXIST. DOWEL NEW/ EXIST AS REQD TO PREVENT SETTLEMENT.
10. AREAS OF EXISTING SURFACES NOT SCHEDULED FOR DEMOLITION WHICH BECOME DAMAGED, SHALL BE PATCHED OR REPAIRED TO MATCH ADJACENT SURFACE THICKNESS, FINISH AND TEXTURE.NEW WORK SHALL BE PRIMED PRIOR TO RECEIVING FINISH COATS.
11. ALL EXISTING WALLS AND PARTITIONS THAT ARE SCHEDULED TO REMAIN AND RECEIVE NEW FINISHES SHALL BE PATCHED, REPAIRED, OR RESURFACED AS REQUIRED TO PROVIDE A SMOOTH SURFACE FOR THE NEW FINISHES. REPAIR ADJACENT SURFACES AS REQUIRED TO RECEIVE NEW FINISH.
12. ALL EXISTING FLOOR AND WALL SURFACES THAT HAVE BEEN DAMAGED BY THIS RENOVATION SHALL BE REPAIRED OR PATCHED TO MATCH THEIR FINISH PRIOR TO THE START OF CONSTRUCTION.
13. CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF DEMOLITION OF EXISTING CONCRETE SLAB FOR THE INSTALLATION OF PLUMBING WORK. REFER TO PLUMBING DRAWINGS FOR EXTENT OF WORK.
14. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL SHORING AND BRACING NECESSARY TO PROTECT EXISTING CONSTRUCTION TO REMAIN. CONTRACTOR SHALL PROVIDE SUITABLE SHORING AND BRACING AS REQUIRED TO SUPPORT LOADS IMPOSED OR RESULTING FROM DEMOLITION WORK. REFER TO SPECIFACTION SECTION 02150 AND STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION.

KEYPLAN



DEMOLITION NOTES

1. REMOVE THE REMAINING BUILDING IN ITS ENTIRETY. REMOVE ALL MEP AND FOUNDATIONS.
2. REMOVE EXTERIOR BRICK. REPAIR EXTERIOR WALL AND FOUNDATIONS AS REQUIRED.
3. REMOVE EXISTING STAIRS. SALVAGE FOR RE-INSTALLATION.
4. BRICK TO REMAIN.
5. REMOVE DOOR AND FEC. RE-INSTALL FEC PER PLANS.
6. REMOVE EXISTING RAMPS AND FOUNDATIONS IN ENTIRETY.
7. REMOVE SOLAR PANELS AND ASSOCIATED IN ITS ENTIRETY. RE: ELECTRICAL.
8. PROTECT AND MAINTAIN STANDPIPE DURING CONSTRUCTION.

CONSTRUCTION SET

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

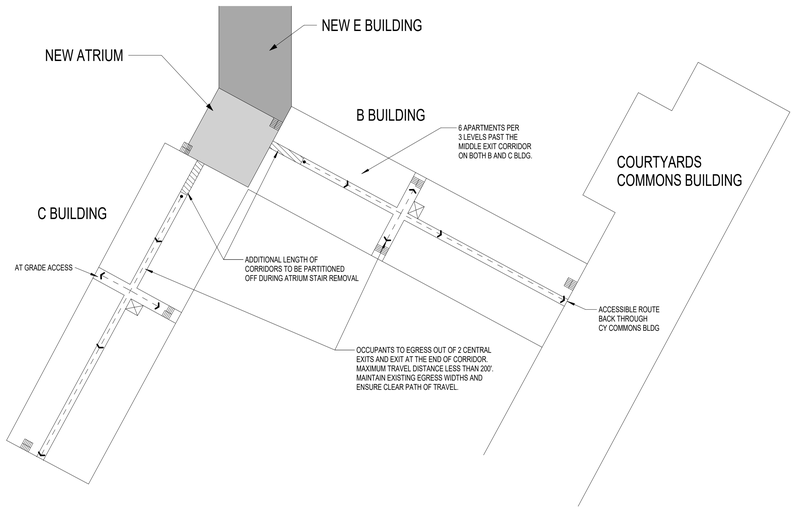
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

DEMOLITION PLAN

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING AD1.1

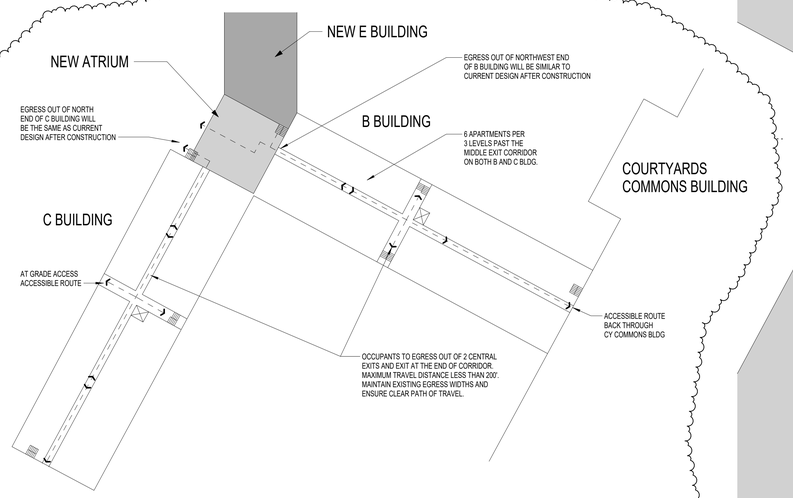


2 TEMPORARY EGRESS PLAN

1" = 40'-0"

EGRESS COORDINATION DURING CONSTRUCTION

1. FINAL PLANS TO BE WORKED OUT WITH THE GENERAL CONTRACTOR
2. MAINTAIN EXISTING STAIRS AND EGRESS PATH (PROTECTED) AS LONG AS POSSIBLE.
3. EGRESS BACK THROUGH EXISTING B AND C BUILDINGS TO BE MAINTAINED THROUGHOUT CONSTRUCTION
4. TEMPORARY CONVENIENCE ACCESS TO MOORE ST PARKING LOT WILL BE DISCUSSED WITH GENERAL CONTRACTOR AND JOHN KNOX VILLAGE AT A LATER DATE.

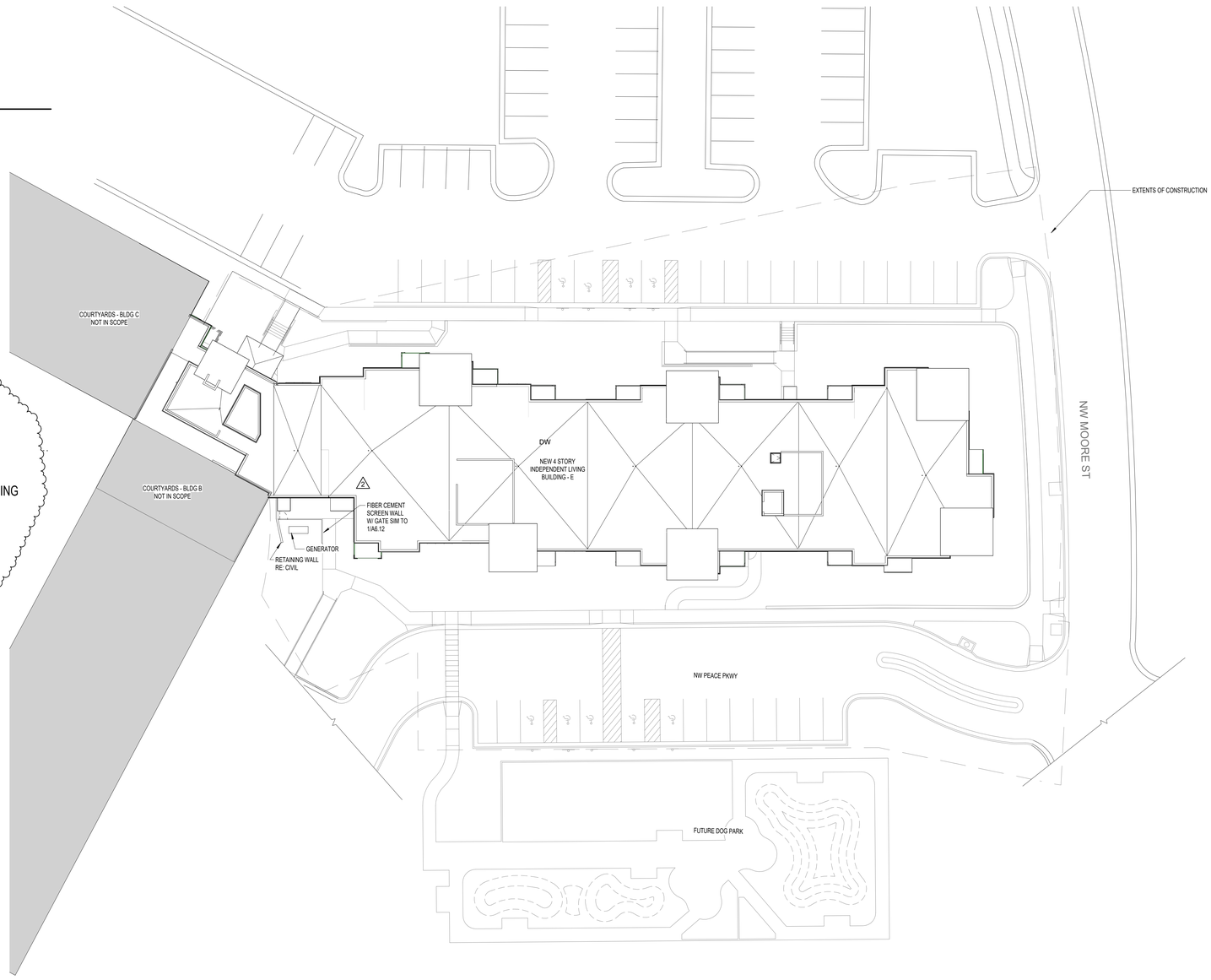


3 FINAL EGRESS PLAN

1" = 40'-0"

EGRESS AFTER CONSTRUCTION

1. EGRESS FROM B AND C BUILDINGS WILL BE SIMILAR OR THE SAME AS THE DESIGN BEFORE CONSTRUCTION
2. REFER TO PLAN 1/A0.1 FOR OVERALL EGRESS PLAN AND HOW EXISTING BUILDINGS RELATE TO NEW CONSTRUCTION



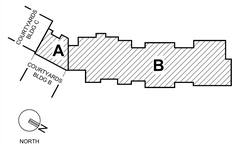
1 SITE PLAN

1" = 20'-0"

NORTH

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

KEYPLAN



GENERAL NOTES

ARCHITECTURAL SITE PLAN IS FOR RERENCE ONLY. RE: CIVIL DRAWINGS FOR ACTUAL CONDITIONS.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
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www.sfcs.com

DESIGNER : DAS		DRAWN : DAS	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER :		APPROVED : CRJ	

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24
4	Addendum 2	03/29/24

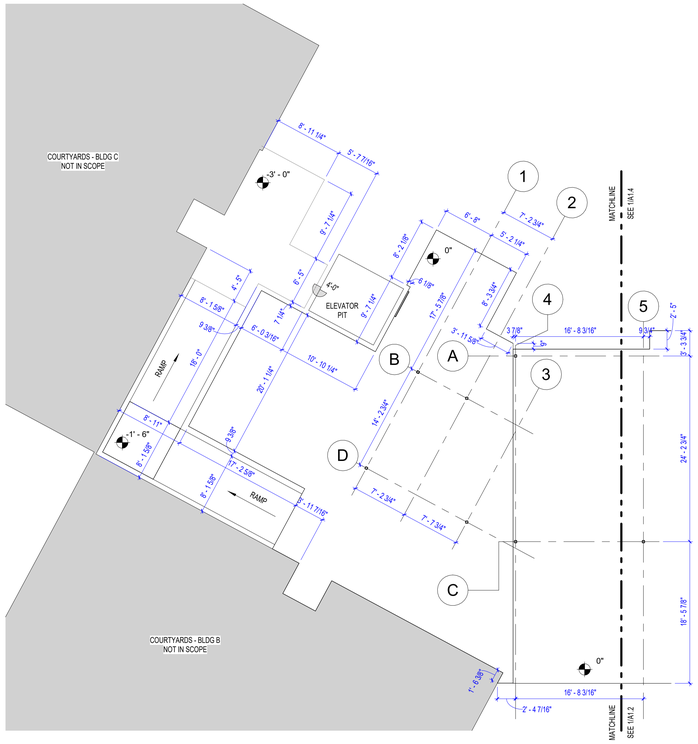
DRAWING TITLE

ARCHITECTURAL SITE PLAN

DATE: January 5, 2024

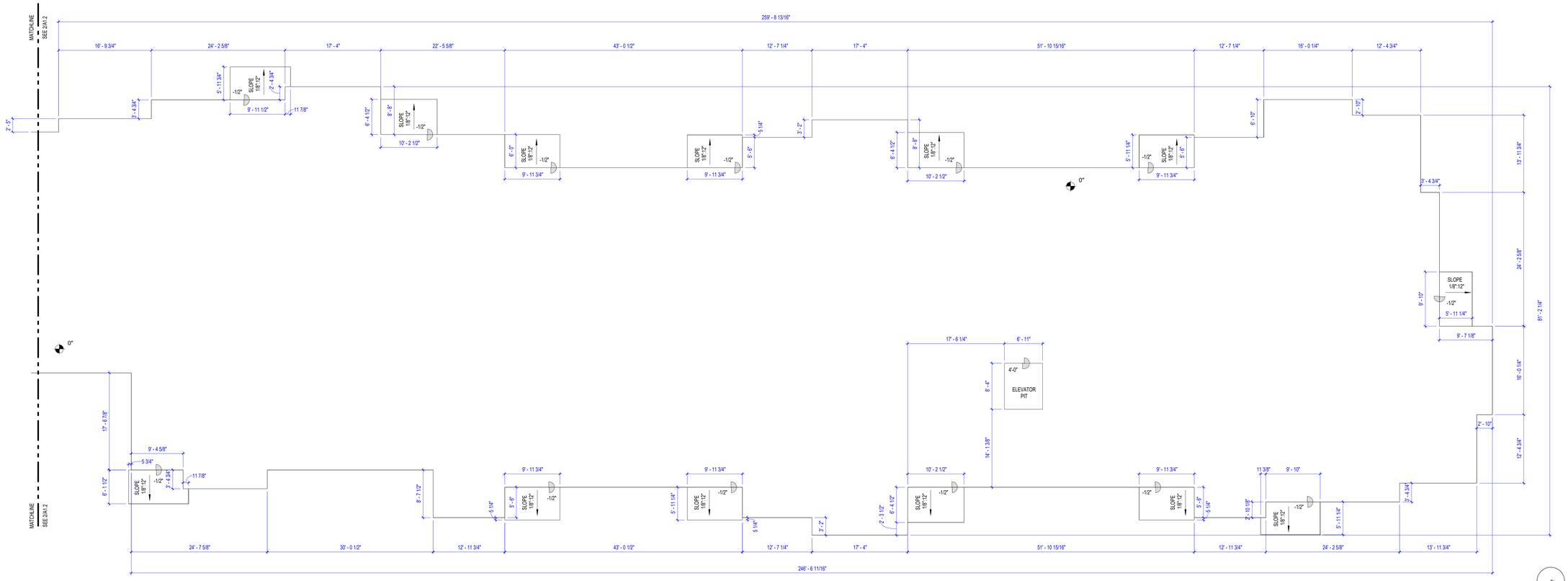
COMM. NO. 23104.00

DRAWING A1.1



ATRIUM - FIRST FLOOR PLAN EDGE OF SLAB

2 1/8" = 1'-0"

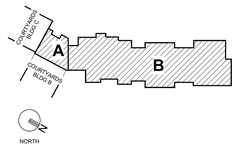


FIRST FLOOR PLAN - IL UNITS EDGE OF SLAB

1 1/8" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED 2

KEYPLAN



GENERAL NOTES

1. EDGE OF SLAB DIMENSIONS ARE ALIGNED WITH OUTSIDE FACE OF STUDS.
2. BUILDING RELIEF DIMENSIONS NOTED ON THIS PLAN TO BE CONSISTENT ON ALL FLOORS. 2

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS
Architecture
Engineering
Planning
Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
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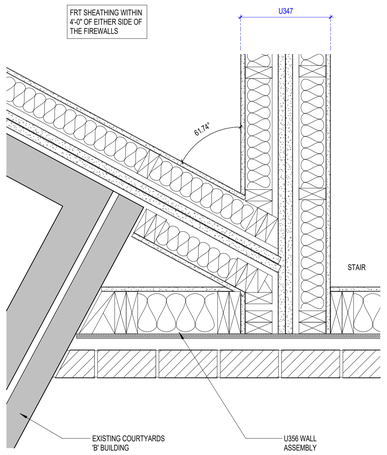
DESIGNER	: DAS	DRAWN	: DAS
ARCHITECT	: DAS	CHECKED	: AAT
ENGINEER	:	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

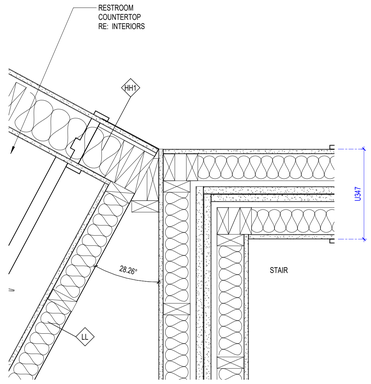
DRAWING TITLE

FIRST FLOOR PLAN - IL UNITS EDGE OF SLAB

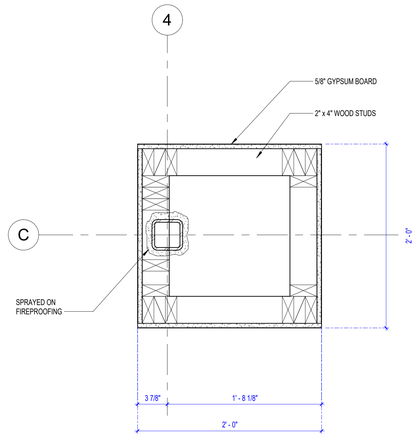
DATE:	January 5, 2024	DRAWING	A1.2
COMM. NO.	23104.00		



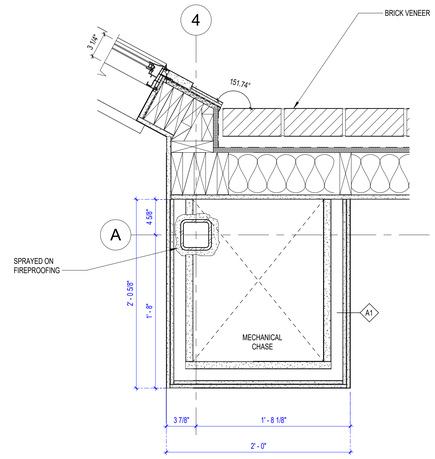
5 ATRIUM CONNECTION 2
1 1/2" = 1'-0"



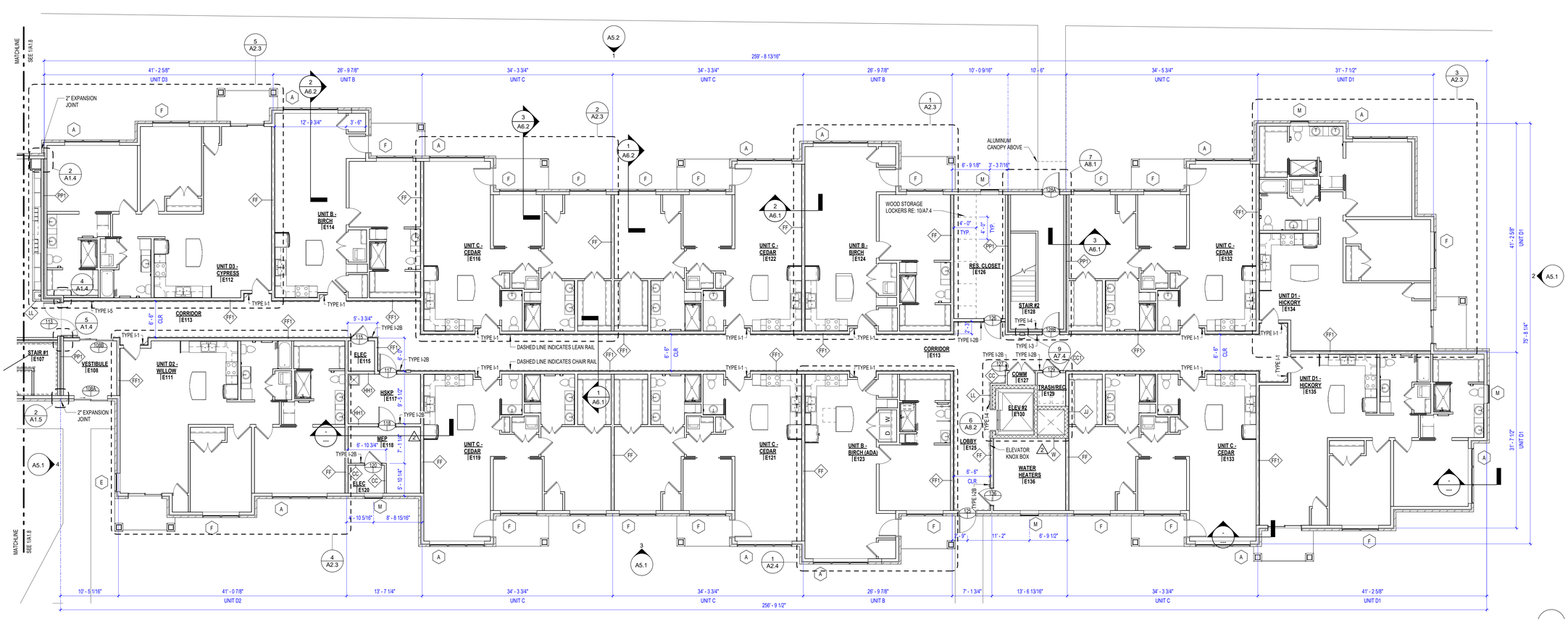
4 ATRIUM CONNECTION 1
1 1/2" = 1'-0"



3 INTERIOR COLUMN
1 1/2" = 1'-0"



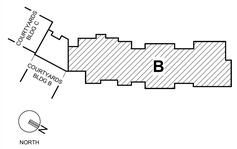
2 EXTERIOR CORNER/INTERIOR COLUMN DETAIL
1 1/2" = 1'-0"



1 FIRST FLOOR PLAN - IL UNITS
1/8" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED
SIGNAGE ADDED
CHAIR/LEAN RAIL ADDED
2

KEYPLAN



GENERAL NOTES

1. ALL UNDIMENSIONED DOORS TO BE CENTERED OR 4" OFF SIDE WALL.
2. ALL UNDESIGNATED DIMENSIONED WALLS TO BE 3 1/2" WOOD STUD.
3. DIMENSIONS ARE TO FACE OF STUD OR CENTER OF DEMISING WALL UNLESS OTHERWISE NOTED.
4. CORRIDOR WALLS AT UNIT AND DEMISING WALLS BETWEEN UNITS SHALL BE TREATED AS SOUND RATED WALLS.
5. REFER TO A1.2 FOR BUILDING RELIEF DIMENSIONS AND PATIO/BALCONY DIMENSIONS.

2

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS | Architecture Engineering Planning Interiors
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Charlotte, North Carolina 28203.4633
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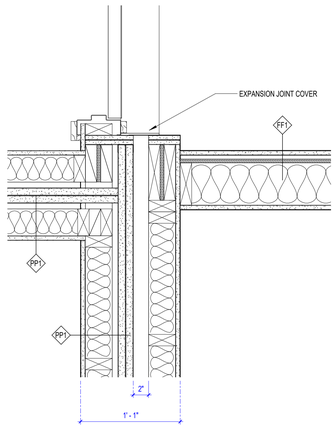
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

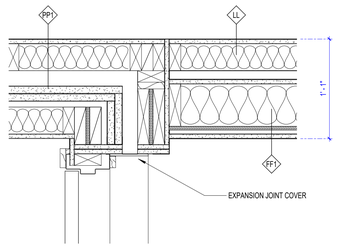
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
FIRST FLOOR PLAN - IL UNITS

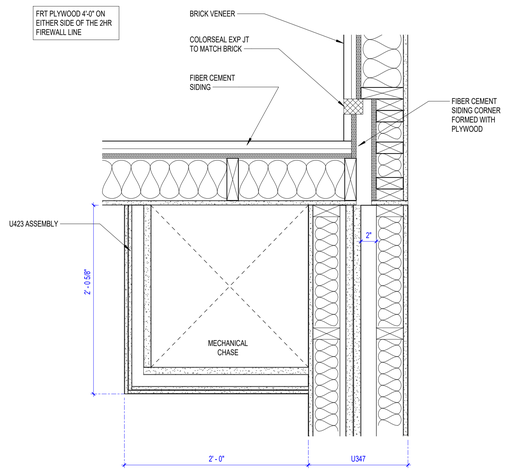
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A1.3



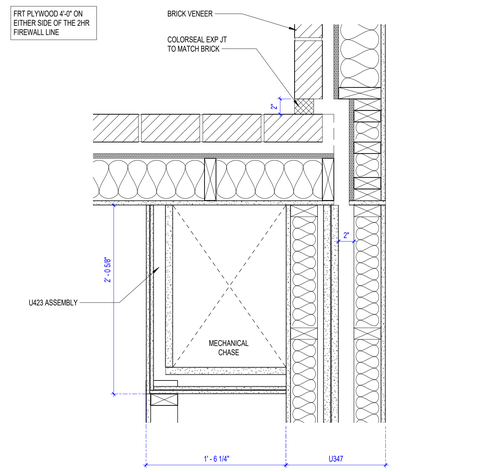
5 EXPANSION JOINT - INTERIOR - TYPICAL 2
1 1/2" = 1'-0"



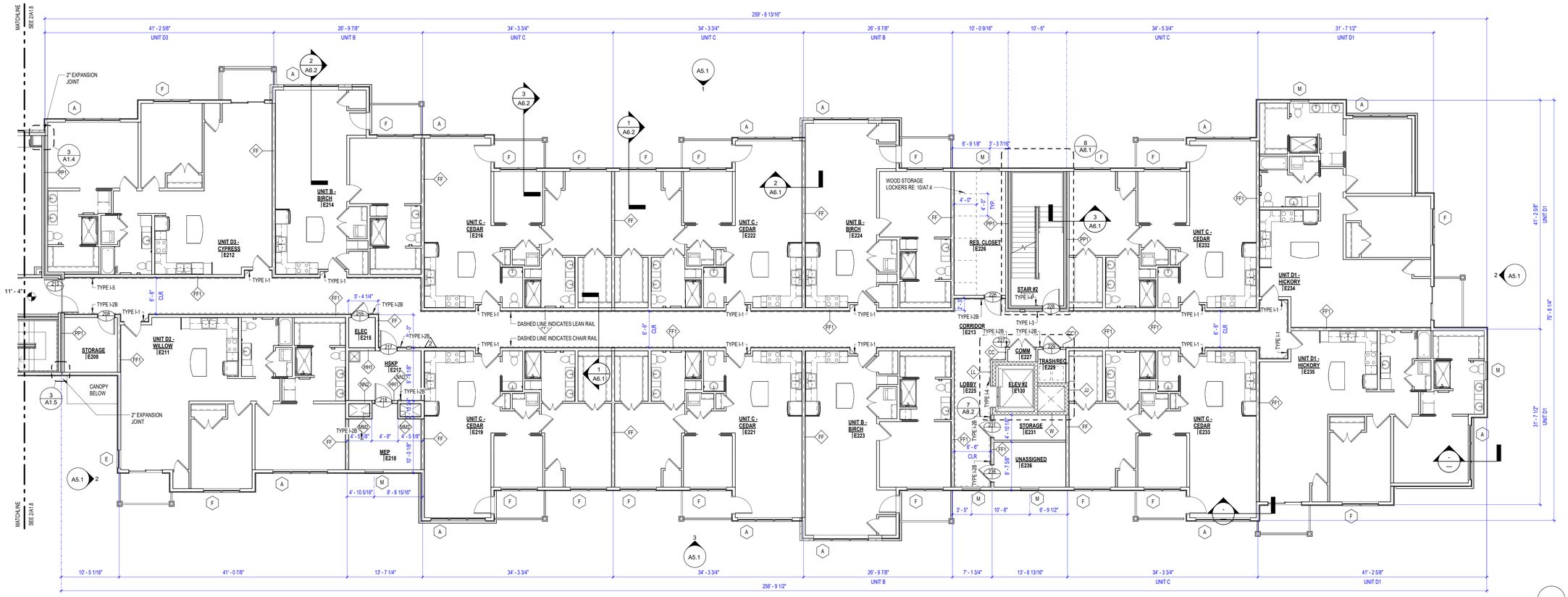
4 EXPANSION JOINT - INTERIOR - TYPICAL 1
1 1/2" = 1'-0"



3 EXPANSION JOINT - EXT/UPPER FLOORS 1
1 1/2" = 1'-0"



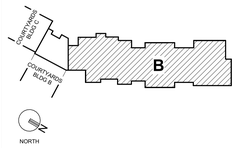
2 EXPANSION JOINT - EXT/1ST FLR 1
1 1/2" = 1'-0"



DIMENSIONS ADDED AND ADJUSTED
SIGNAGE ADDED
CHAIR/LEAN RAIL ADDED
2

1 SECOND FLOOR PLAN - IL UNITS
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. ALL UNDIMENSIONED DOORS TO BE CENTERED OR 4" OFF SIDE WALL.
2. ALL UNDESIGNATED DIMENSIONED WALLS TO BE 3 1/2" WOOD STUD.
3. DIMENSIONS ARE TO FACE OF STUD OR CENTER OF DEMISING WALL UNLESS OTHERWISE NOTED.
4. CORRIDOR WALLS AT UNIT AND DEMISING WALLS BETWEEN UNITS SHALL BE TREATED AS SOUND RATED WALLS.
5. REFER TO A1.2 FOR BUILDING RELIEF DIMENSIONS AND PATIO/BALCONY DIMENSIONS.

2

CONSTRUCTION SET

STATE OF MISSOURI · CURTIS B. JENNINGS III · NUMBER A-2023034555 · ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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SFCS Inc. ▪ 305 South Jefferson Street
Roanoke, Virginia 24011.2003
540.344.6664 ▪ Fax 540.343.6925
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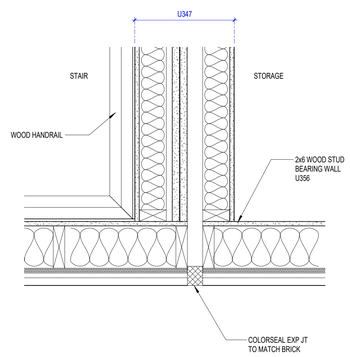
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

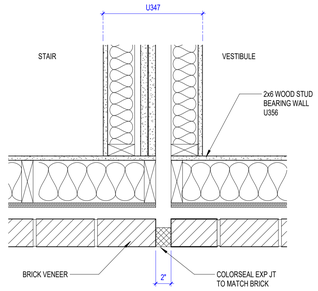
DRAWING TITLE

SECOND FLOOR PLAN - IL UNITS

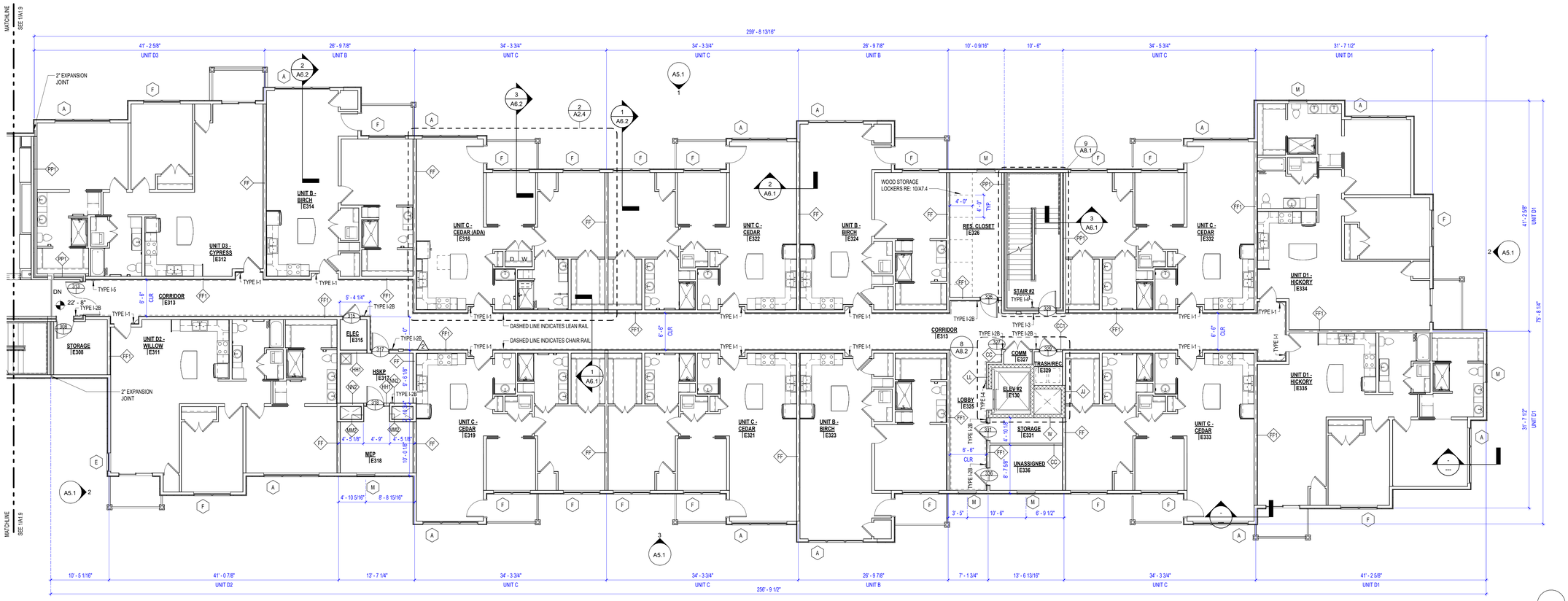
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A1.4



3 EXPANSION JOINT - EXT/UPPER FLOORS
1 1/2" = 1'-0"



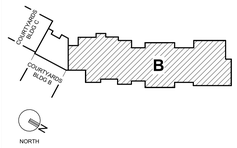
2 EXPANSION JOINT - EXT/1ST FLR 2
1 1/2" = 1'-0"



1 THIRD FLOOR PLAN - IL UNITS
1/8" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED
SIGNAGE ADDED
CHAIRLEAN RAIL ADDED
2

KEYPLAN



GENERAL NOTES

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CONSTRUCTION SET

STATE OF MISSOURI
CURTIS B. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	DRW
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

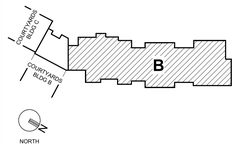
DRAWING TITLE

THIRD FLOOR PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A1.5

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

KEYPLAN



GENERAL NOTES

1. ALL UNDIMENSIONED DOORS TO BE CENTERED OR 4" OFF SIDE WALL.
2. ALL UNDESIGNATED DIMENSIONED WALLS TO BE 3 1/2" WOOD STUD.
3. DIMENSIONS ARE TO FACE OF STUD OR CENTER OF DEMISING WALL UNLESS OTHERWISE NOTED.
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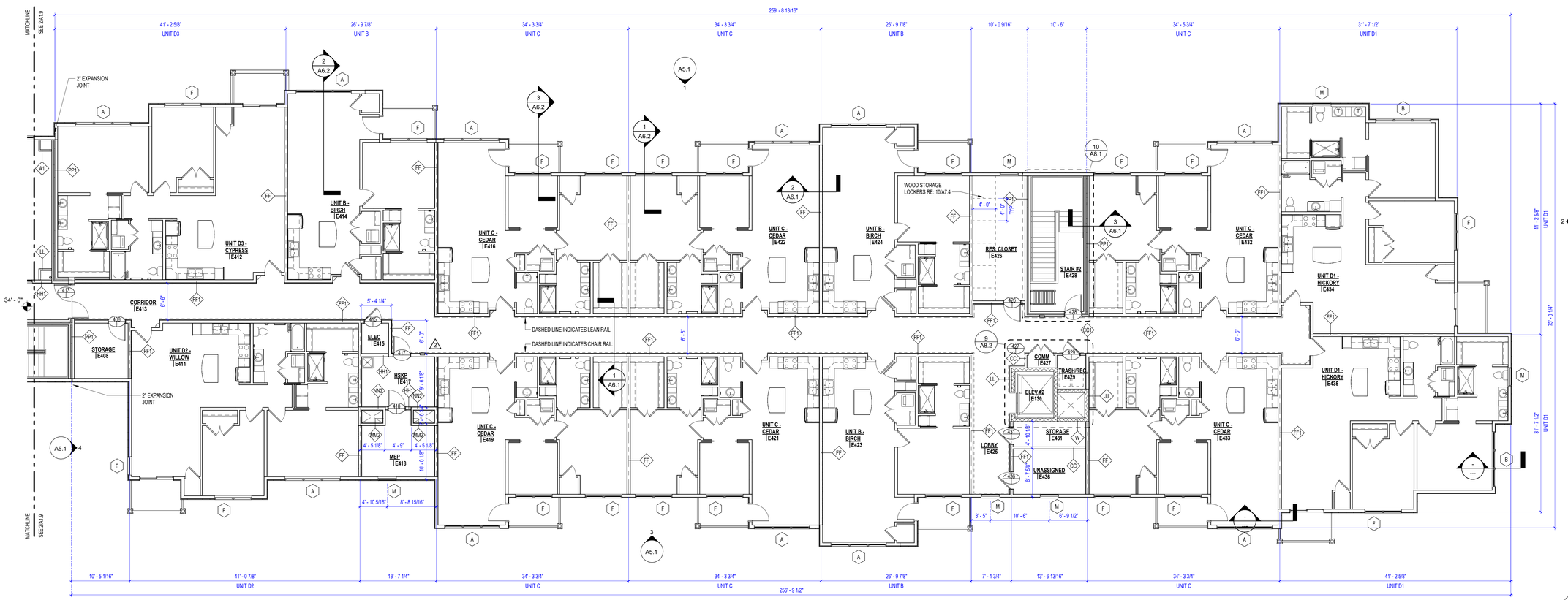
5. REFER TO A1.2 FOR BUILDING RELIEF DIMENSIONS AND PATIO/BALCONY DIMENSIONS.



1 FOURTH FLOOR PLAN - IL UNITS
1/8" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED
SIGNAGE ADDED
CHAIR/LEAN RAIL ADDED
2

CONSTRUCTION SET

STATE OF MISSOURI · CURTIS B. JENNINGS III · NUMBER A-2023034555 · ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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Charlotte, North Carolina 28203.4633
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SFCS Architecture Engineering Planning Interiors

DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

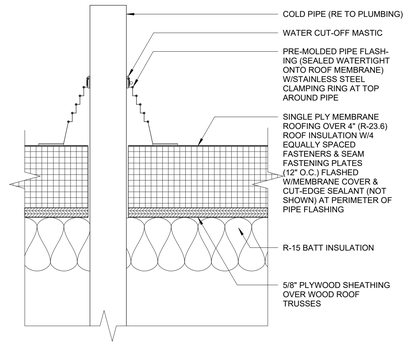
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE

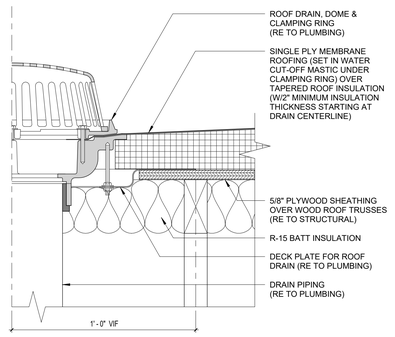
FOURTH FLOOR PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A1.6

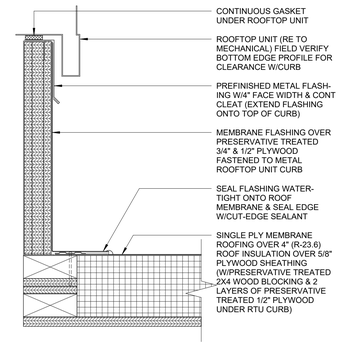
2/16/2024 3:15:11 PM
Autodesk Docs://23104.00 - John Knox Village - Lindbergh/23104.00-JKV-Courtyards-Building E-Architectural CENTRAL.rvt



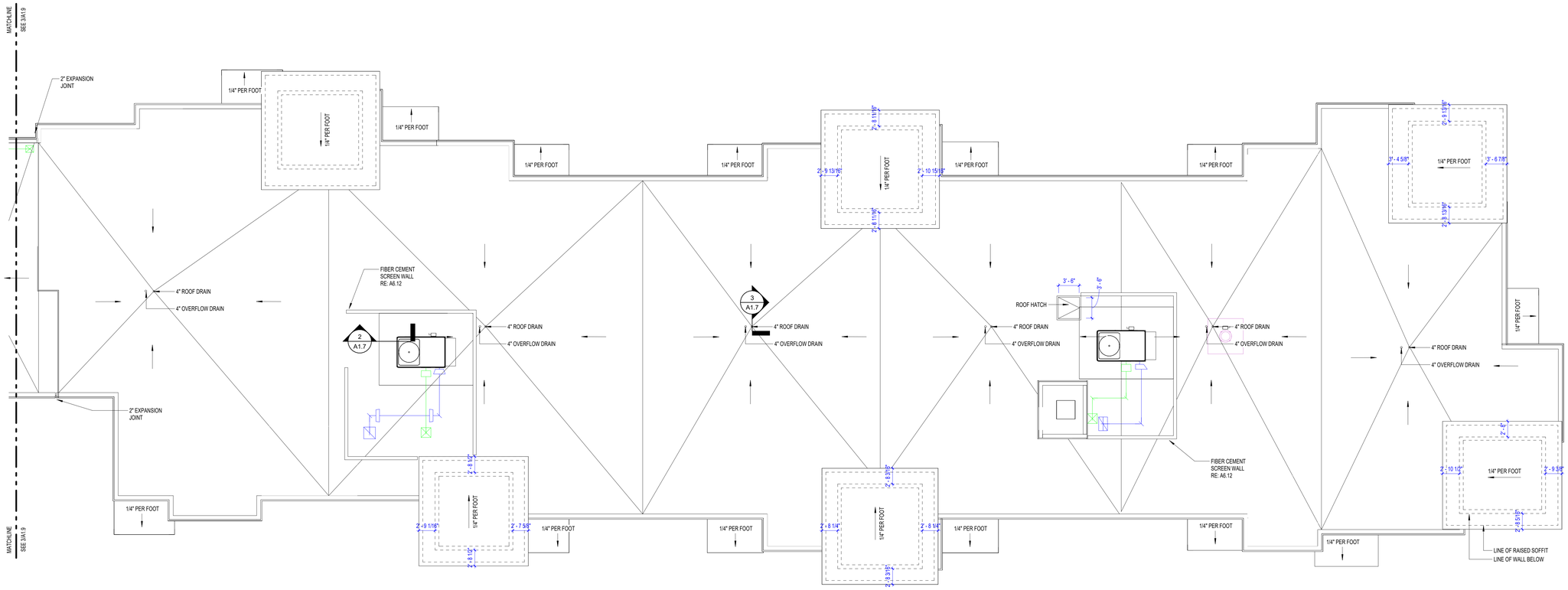
4 PIPE FLASHING AT ROOF
3" = 1'-0"



3 ROOF DRAIN
3" = 1'-0"

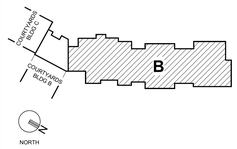


2 RTU CURB FLASHING AT ROOF
3" = 1'-0"



1 ROOF PLAN - IL UNITS
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. SLOPE TO BE 1/4" PER FOOT UNLESS OTHERWISE NOTED
2. ROOFING MATERIAL IS TO BE SINGLE PLY MEMBRANE ROOF OVER INSULATION UNLESS OTHERWISE NOTED

CONSTRUCTION SET

STATE OF MISSOURI · CURTIS R. JENNINGS III · NUMBER A-2023034555 · ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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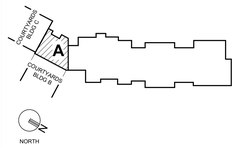
DESIGNER	: DAS	DRAWN	: DAS
ARCHITECT	: DAS	CHECKED	: AAT
ENGINEER	:	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE

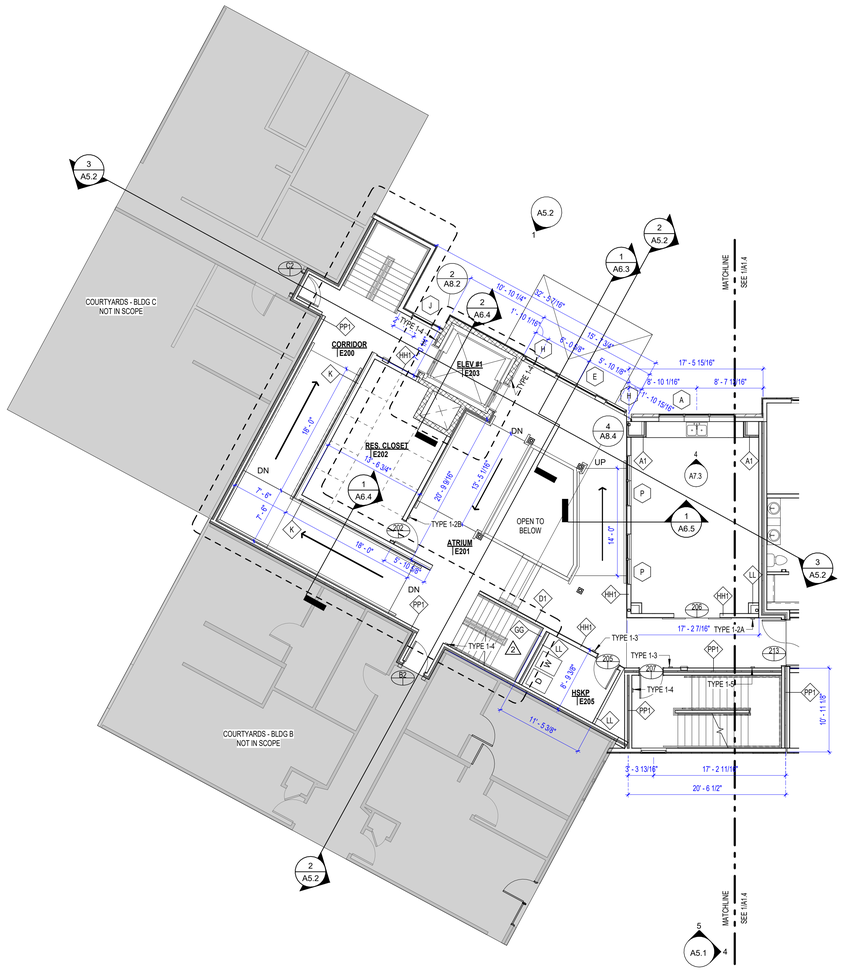
DRAWING TITLE
ROOF PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A1.7

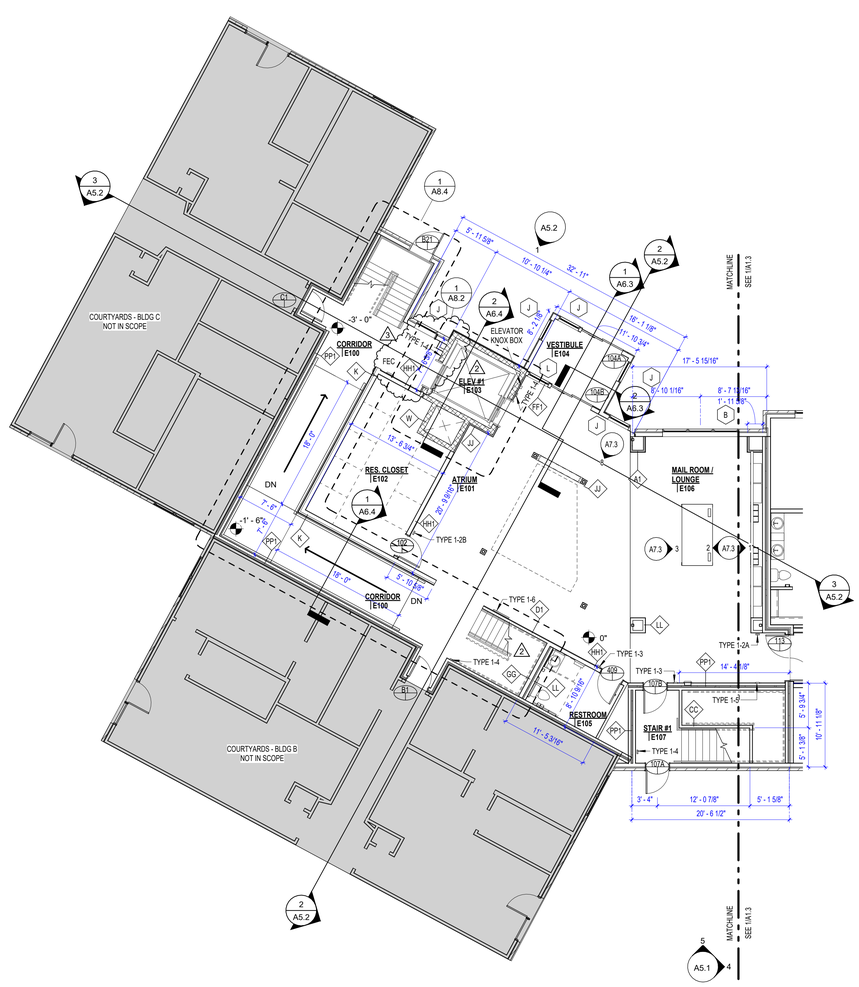
KEYPLAN



GENERAL NOTES



2 ATRIUM - SECOND FLOOR PLAN
1/8" = 1'-0"



1 ATRIUM - FIRST FLOOR PLAN
1/8" = 1'-0"

NORTH

DIMENSIONS ADDED AND ADJUSTED 2

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24
3	Addendum 1	03/07/24

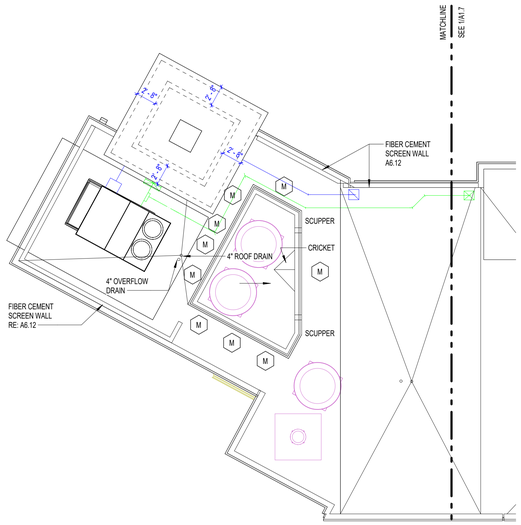
DRAWING TITLE

FIRST AND SECOND FLOOR PLANS - ATRIUM

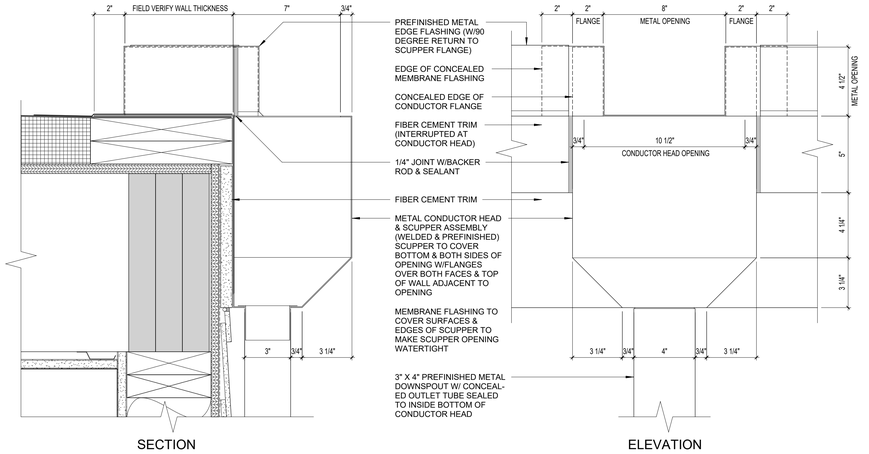
DATE: January 5, 2024

COMM. NO. 23104.00

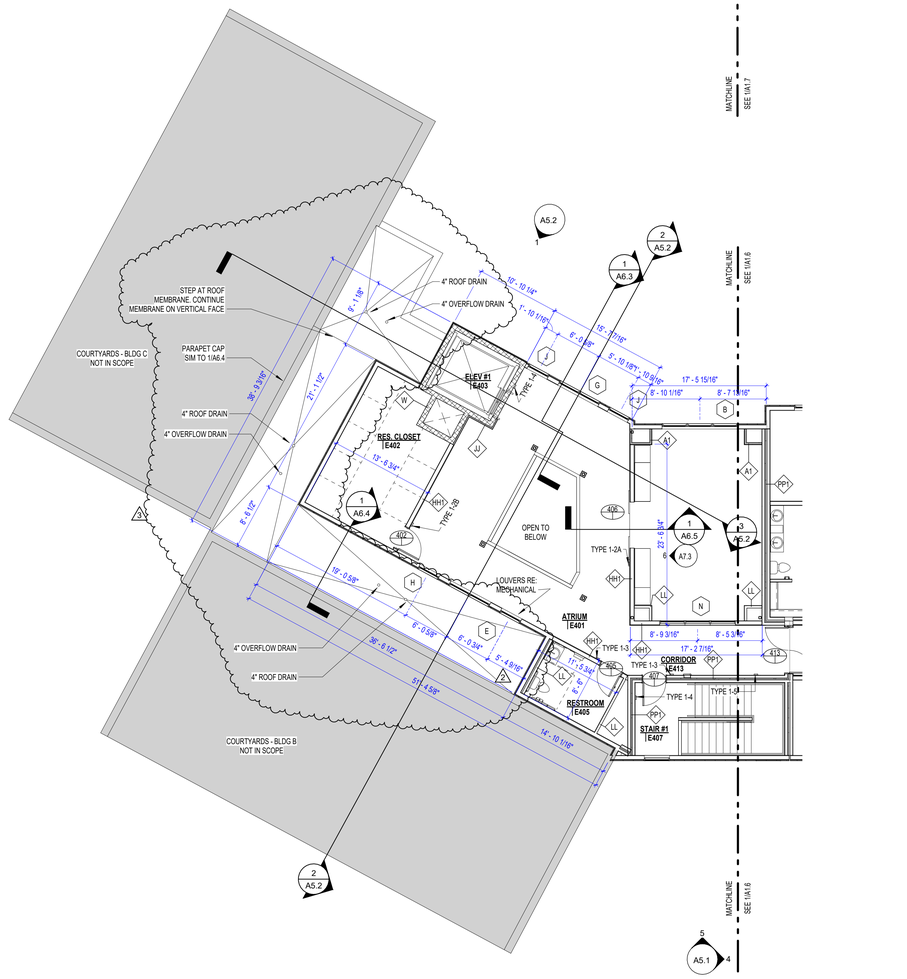
DRAWING A1.8



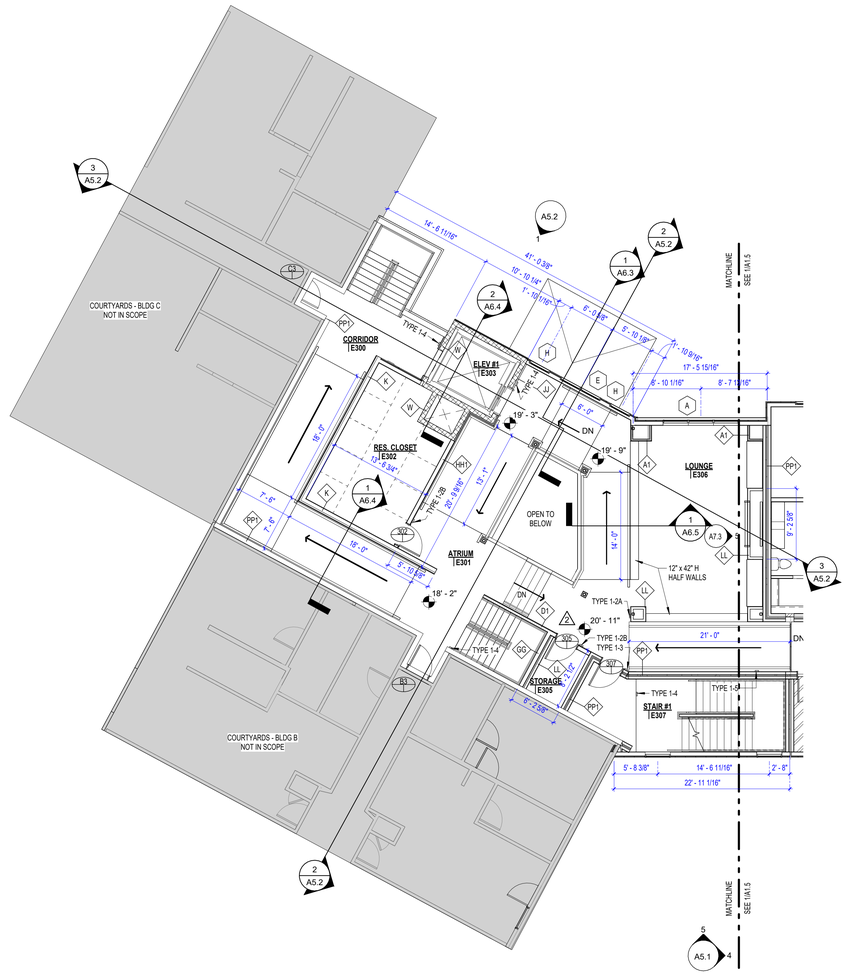
3 ROOF PLAN - ATRIUM
1/8" = 1'-0"



4 SCUPPER & DOWNSPOUTS CONDUCTOR HEAD
3" = 1'-0"



2 ATRIUM - FOURTH FLOOR PLAN
1/8" = 1'-0"

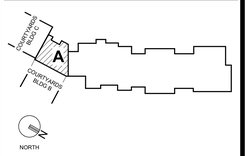


1 ATRIUM - THIRD FLOOR PLAN
1/8" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED
SIGNAGE ADDED
2

NORTH

KEYPLAN



GENERAL NOTES

1. SLOPE TO BE 1/4" PER FOOT UNLESS OTHERWISE NOTED
2. ROOFING MATERIAL IS TO BE SINGLE PLY MEMBRANE ROOF OVER INSULATION UNLESS OTHERWISE NOTED

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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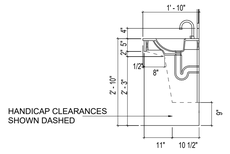
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24
3	Addendum 1	03/07/24

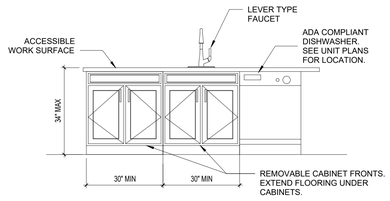
DRAWING TITLE

THIRD, FOURTH AND ROOF FLOOR PLANS - ATRIUM

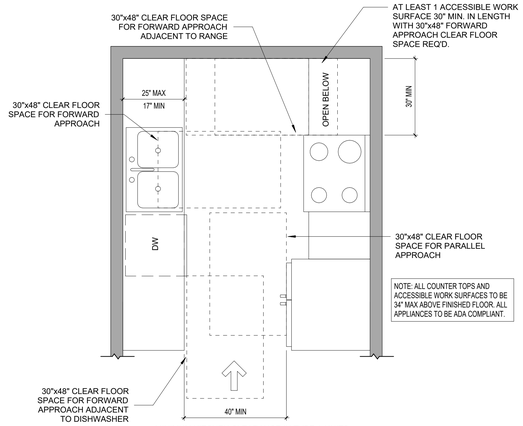
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A1.9



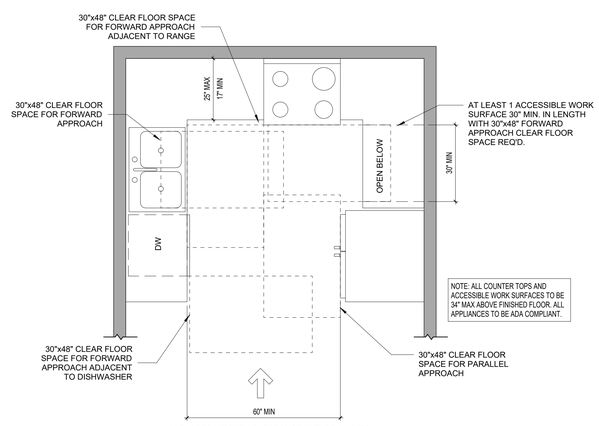
KNEE/TOE CLEARANCE



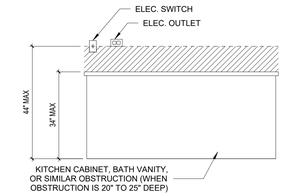
SINK/ACCESSIBLE WORK SURFACE ELEVATION



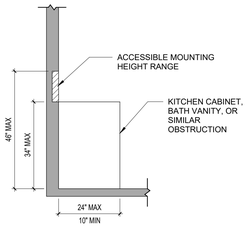
MINIMUM KITCHEN CLEARANCE IN TYPE A UNITS



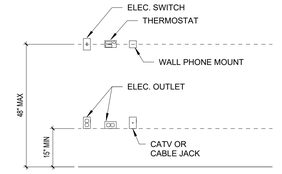
U-SHAPED KITCHEN CLEARANCE IN TYPE A UNITS



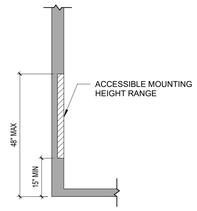
OBSTRUCTED HIGH FORWARD REACH



OBSTRUCTED HIGH SIDE REACH



UNOBSTRUCTED FORWARD REACH



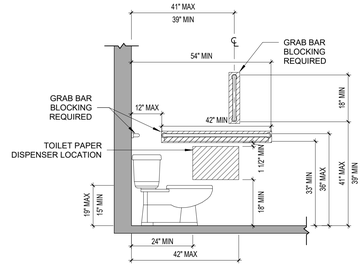
UNOBSTRUCTED SIDE REACH

7 ACCESSIBLE KITCHENS (ICC/ANSI A117.1-2009)

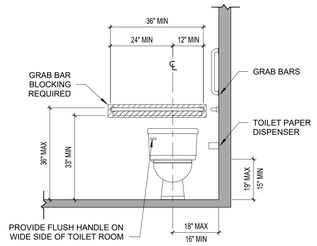
1/2" = 1'-0"

3 ACCESSIBLE MOUNTING HEIGHTS (ICC/ANSI A117.1-2009)

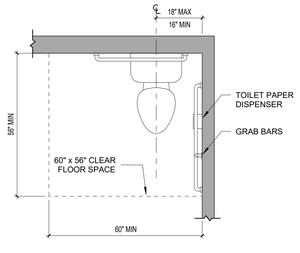
1/2" = 1'-0"



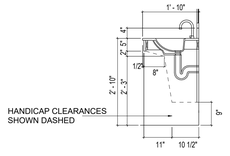
SIDE WALL



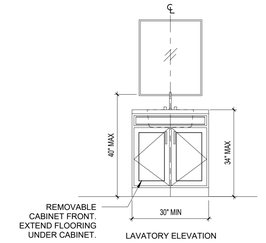
END WALL



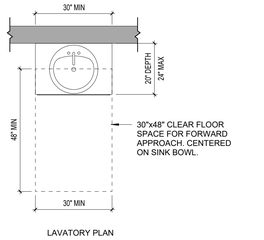
PLAN



KNEE/TOE CLEARANCE



LAVATORY ELEVATION



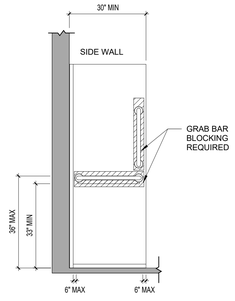
LAVATORY PLAN

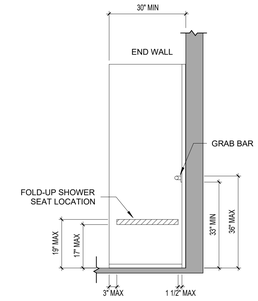
6 ACCESSIBLE WATER CLOSETS (ICC/ANSI A117.1-2009)

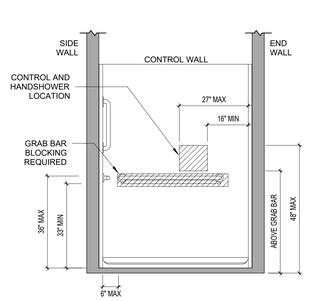
1/2" = 1'-0"

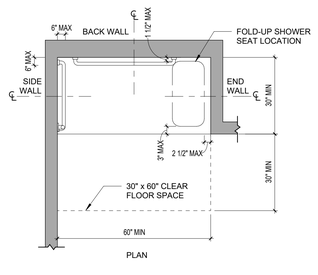
2 ACCESSIBLE LAVATORIES (ICC/ANSI A117.1-2009)

1/2" = 1'-0"





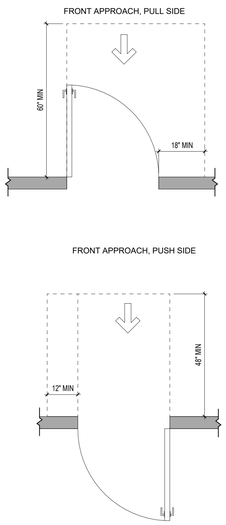




PLAN

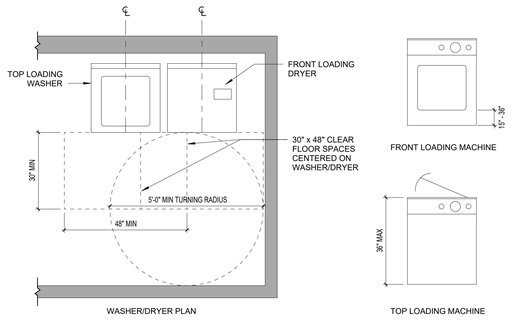
5 ACCESSIBLE SHOWERS (STANDARD ROLL-IN TYPE) (ICC/ANSI A117.1-2009)

1/2" = 1'-0"



4 ACCESSIBLE ENTRANCES

1/2" = 1'-0"



WASHER/DRYER PLAN

1 ACCESSIBLE LAUNDRY EQUIPMENT (ICC/ANSI A117.1-2009)

1/2" = 1'-0"

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

GENERAL NOTES

NOTE:
TYPE A ACCESSIBILITY DETAILS APPLY TO UNIT E123 AND E316. SEE BUILDNG PLANS FOR UNIT LOCATION.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

Architecture
Engineering
Planning
Interiors

DESIGNER : DAS	DRAWN : DAS
ARCHITECT : DAS	CHECKED : AAT
ENGINEER :	APPROVED : CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

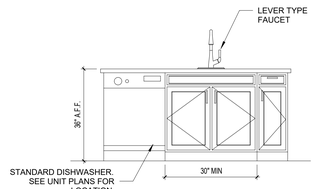
ANSI TYPE A UNIT ACESSIBILITY DETAILS

DATE: January 5, 2024

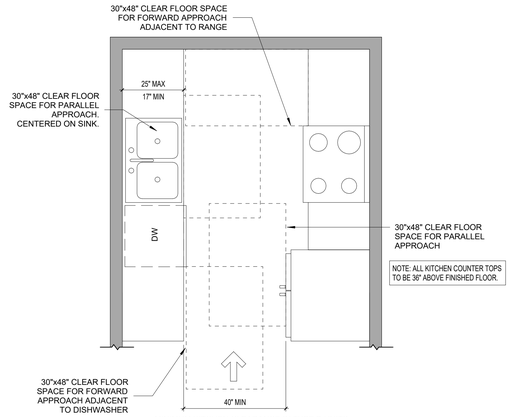
COMM. NO. 23104.00

DRAWING A2.1

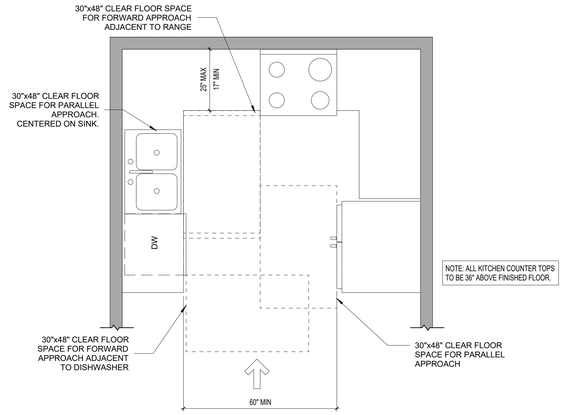
2/16/2024
3:22:49 PM



TYPE B - KITCHEN SINK ELEVATION



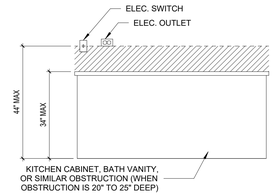
MINIMUM KITCHEN CLEARANCE IN TYPE B UNITS



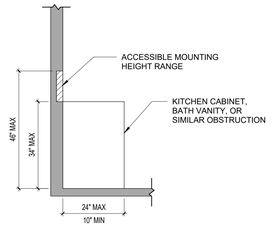
U-SHAPED KITCHEN CLEARANCE IN TYPE B UNITS

8 ACCESSIBLE KITCHENS (ICC/ANSI A117.1-2009) - TYPE B

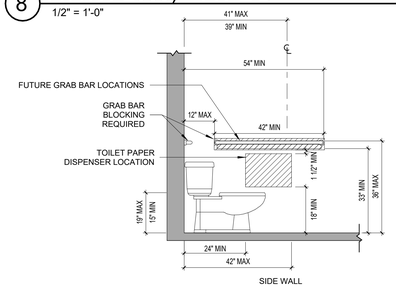
1/2" = 1'-0"



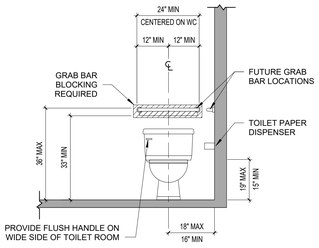
OBSTRUCTED HIGH FORWARD REACH



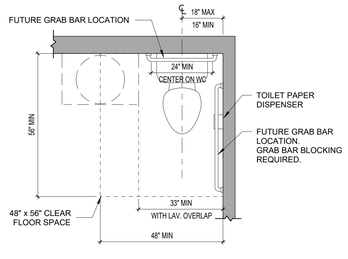
OBSTRUCTED HIGH SIDE REACH



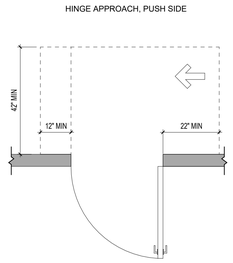
SIDE WALL



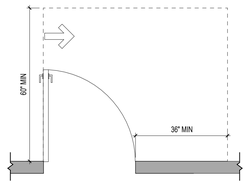
END WALL



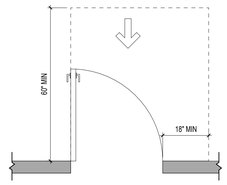
PLAN



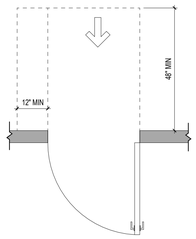
HINGE APPROACH, PULL SIDE



FRONT APPROACH, PULL SIDE

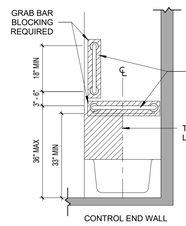


FRONT APPROACH, PUSH SIDE

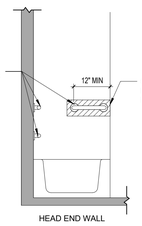


7 ACCESSIBLE WATER CLOSETS (ICC/ANSI A117.1-2009) - TYPE B

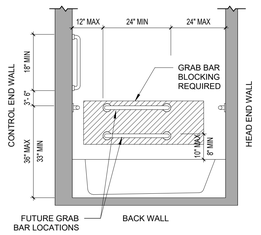
1/2" = 1'-0"

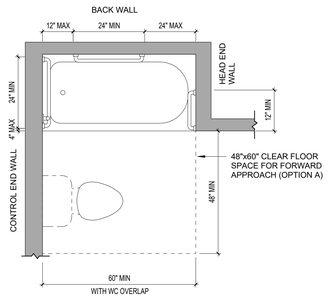


CONTROL END WALL



HEAD END WALL

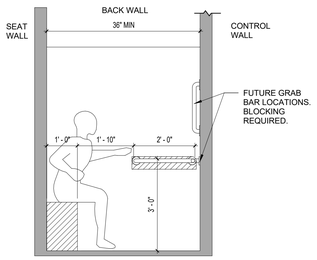


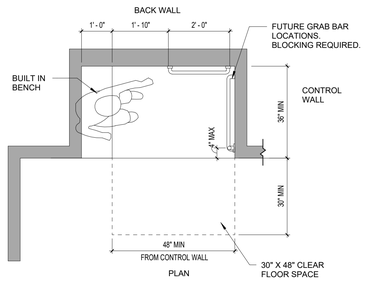


PLAN

6 ACCESSIBLE BATHTUBS W/O PERMANENT SEAT (ICC/ANSI A117.1-2009) - TYPE B

1/2" = 1'-0"





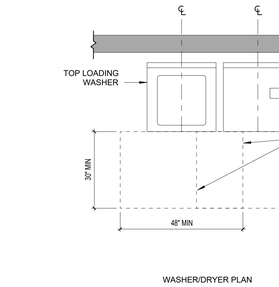
PLAN

5 ACCESSIBLE TRANSFER TYPE SHOWER COMPARTMENT (ICC/ANSI A117.1-2009) - TYPE B

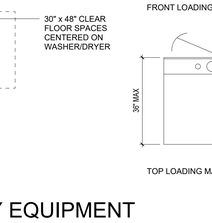
1/2" = 1'-0"

4 ACCESSIBLE ENTRANCES - TYPE B

1/2" = 1'-0"



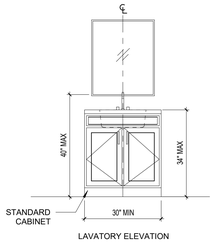
UNOBSTRUCTED FORWARD REACH



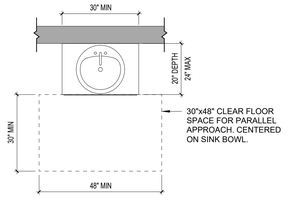
UNOBSTRUCTED SIDE REACH

3 ACCESSIBLE MOUNTING HEIGHTS (ICC/ANSI A117.1-2009) - TYPE B

1/2" = 1'-0"



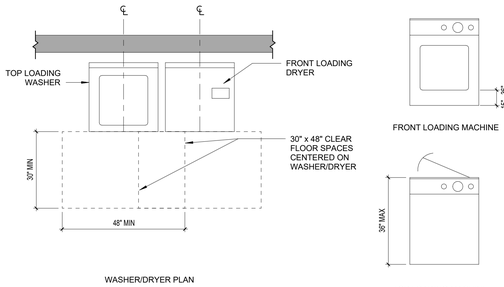
LAVATORY ELEVATION



LAVATORY PLAN

2 ACCESSIBLE LAVATORIES (ICC/ANSI A117.1-2009) - TYPE B

1/2" = 1'-0"



WASHER/DRYER PLAN

FRONT LOADING MACHINE

TOP LOADING MACHINE

1 ACCESSIBLE LAUNDRY EQUIPMENT (ICC/ANSI A117.1-2009) - TYPE B

1/2" = 1'-0"

GENERAL NOTES

NOTE:
TYPE B ACCESSIBILITY DETAILS APPLY TO ALL RESIDENT UNITS, BESIDES TYPE A ACCESSIBLE UNITS. SEE BUILDNG PLANS FOR UNIT LOCATION.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. • 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 • Fax 704.372.7369
www.sfcs.com

DESIGNER : DAS		DRAWN : DAS	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER :		APPROVED : CRJ	

NO.	REVISION DESCRIPTION	DATE

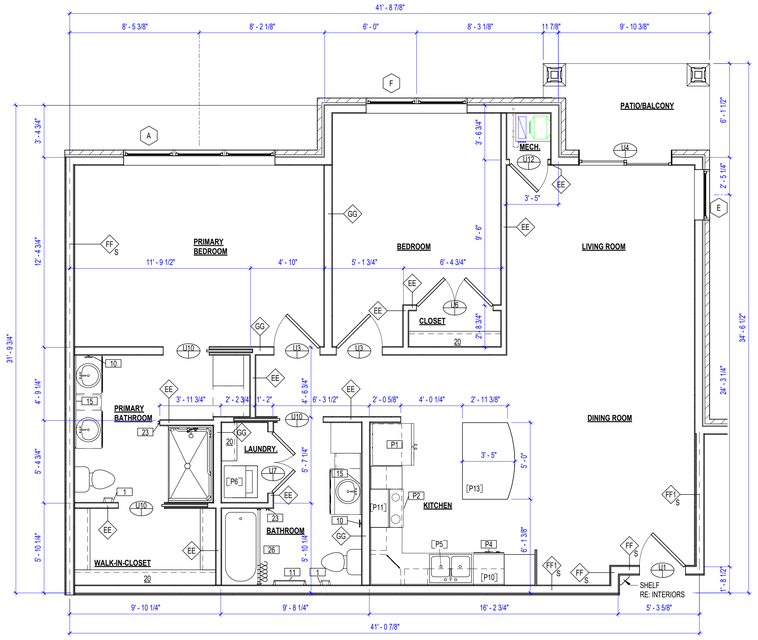
DRAWING TITLE

ANSI TYPE B UNIT ACCESSIBILITY DETAILS

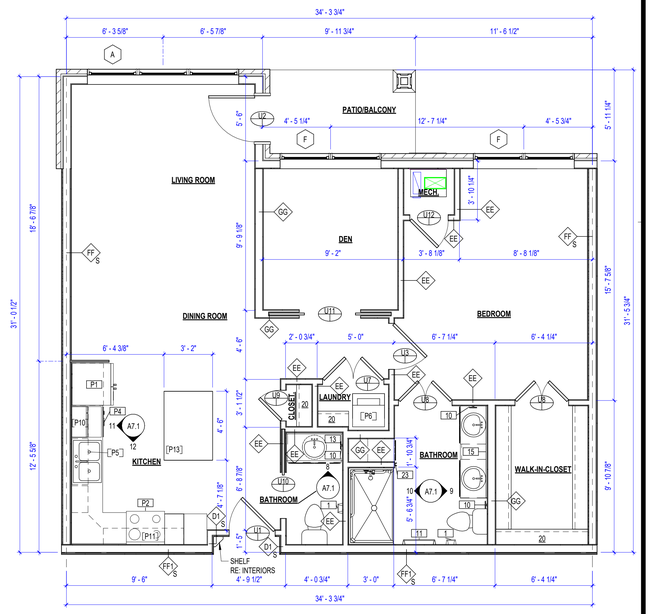
DATE: January 5, 2024

COMM. NO. 23104.00

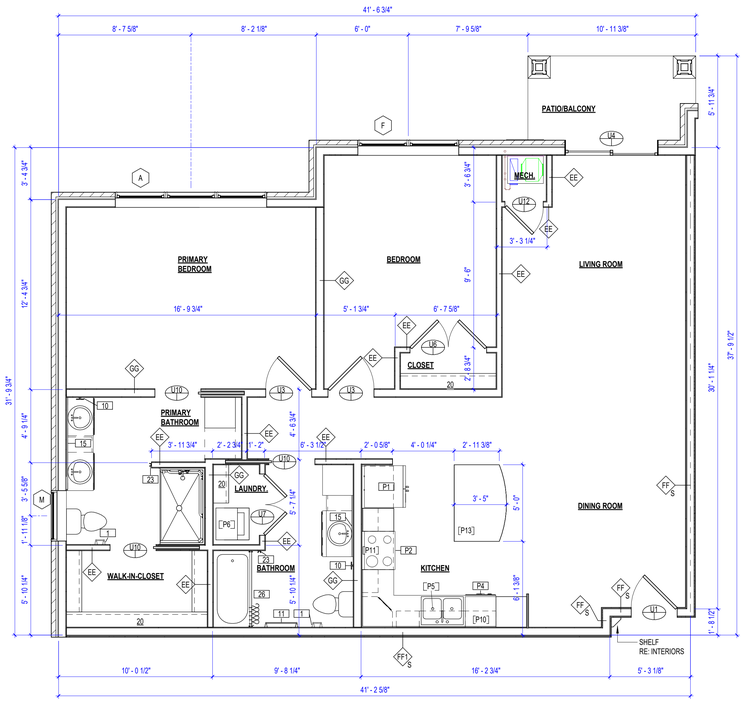
DRAWING A2.2



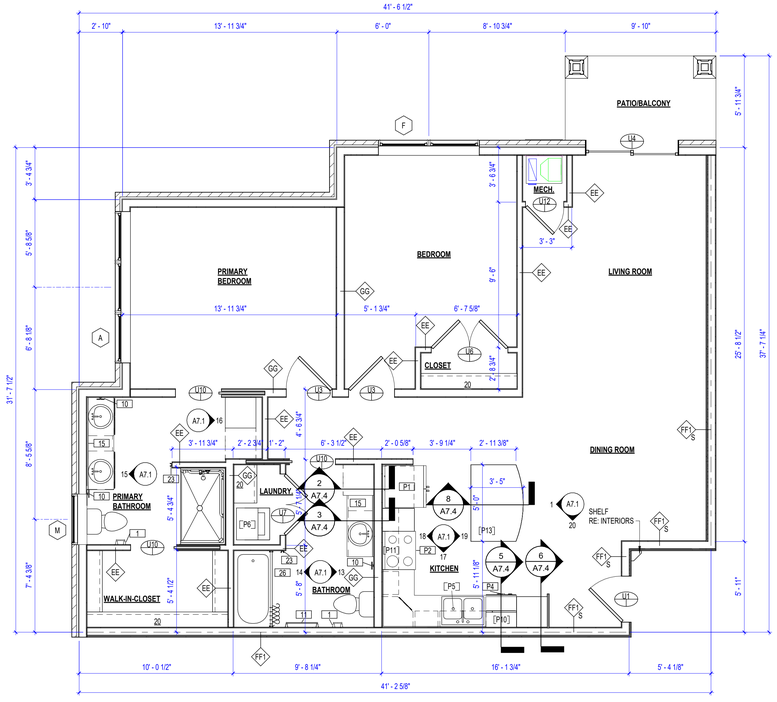
4 UNIT D2 - WILLOW (1185 SF)
1/4" = 1'-0"



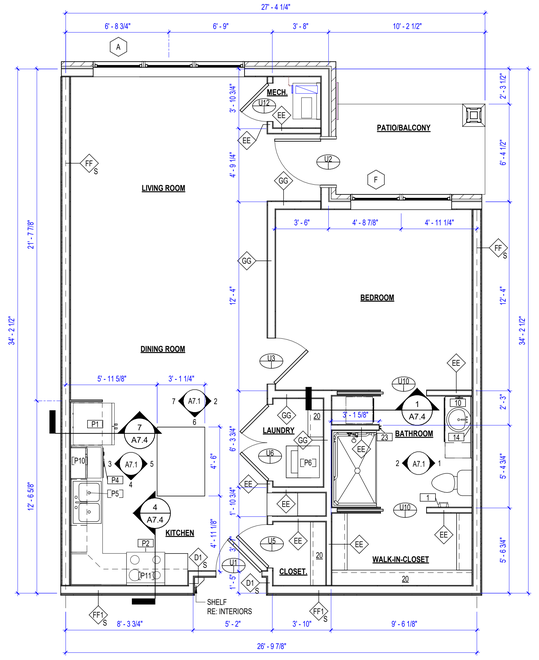
2 UNIT C - CEDAR (925 SF)
1/4" = 1'-0"



5 UNIT D3 - CYPRESS (1215 SF)
1/4" = 1'-0"



3 UNIT D1 - HICKORY (1145 SF)
1/4" = 1'-0"



1 UNIT B - BIRCH (810 SF)
1/4" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED 2

GENERAL NOTES

1. ALL RESIDENT ROOMS SHALL COMPLY WITH ANSI TYPE B ACCESSIBILITY STANDARDS FOR ACCESSIBLE UNITS. SEE A2.2 FOR ACCESSIBILITY DETAILS.
   UNIT B 123 AND C 316 SHALL ALSO COMPLY WITH ANSI TYPE A ACCESSIBILITY STANDARDS FOR ACCESSIBLE UNITS - SEE SHEET A2.1 FOR ACCESSIBILITY DETAILS.
2. ALL UNITS TO CONTAIN THE FOLLOWING TOILET ACCESSORIES: (1) 24" TOWEL BAR, 1 TOILET PAPER HOLDER, 1 TOWEL RING, 1 ROBE HOOK.
3. INSTALL ALL GRAB BAR BLOCKING AT TIME OF CONSTRUCTION. GRAB BARS TO BE INSTALLED AT RESIDENT REQUEST, TYP. INSTALL MASTER SHOWER 18" VERTICAL GRAB BARS AND WRAP AROUND GRAB BARS AT TIME OF CONSTRUCTION.
4. ALL UNDIMENSIONED DOORS TO BE CENTERED OR 4" OFF SIDE WALL.
5. ALL UNDESIGNATED DIMENSIONED WALLS TO BE 3 1/2" WOOD STUD.
6. SEE ELECTRICAL DRAWINGS FOR ELECTRICAL LAYOUTS.
7. REFER TO INTERIOR FINISH PLANS & LEGEND FOR ALL UNIT INTERIORS.
8. DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.
9. CORRIDOR WALLS AT UNIT AND DEMISING WALLS BETWEEN UNITS SHALL BE TREATED AS SOUND RATED WALLS.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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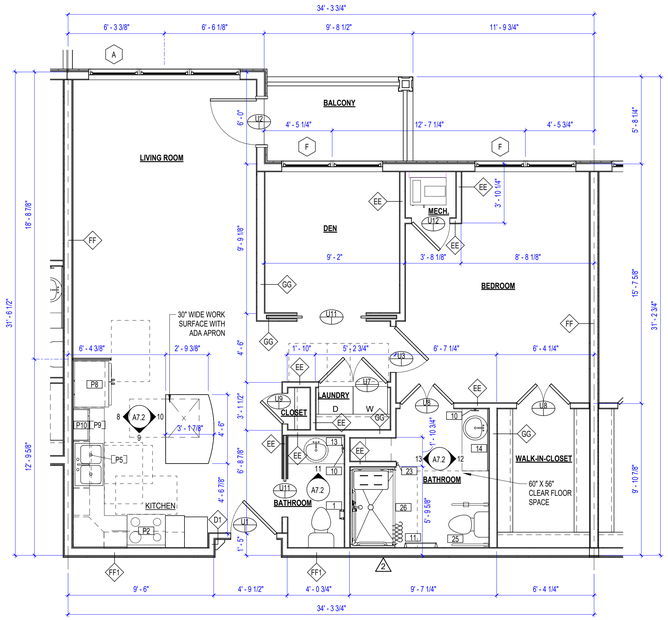
DESIGNER : DAS		DRAWN : DAS/CRW	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER : DES		APPROVED : CRJ	

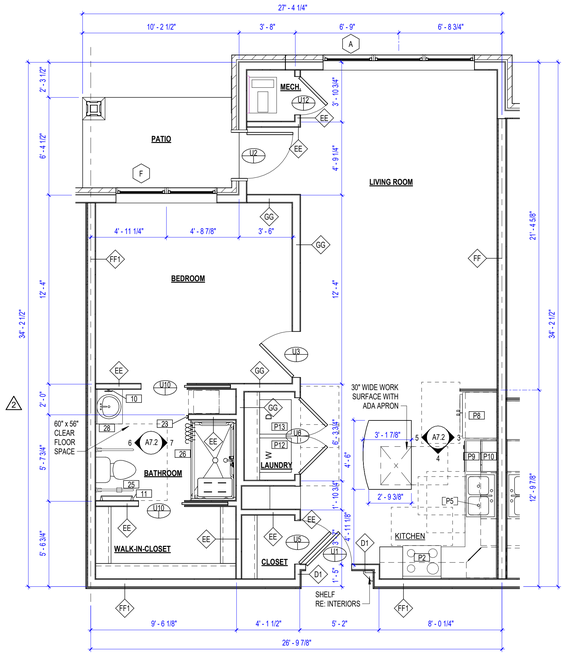
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
ENLARGED PLANS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A2.3



2 E316 - UNIT C - CEDAR (ADA)
1/4" = 1'-0"



1 E123 - UNIT B - BIRCH (ADA)
1/4" = 1'-0"

DIMENSIONS ADDED AND ADJUSTED 2

GENERAL NOTES

1. ALL RESIDENT ROOMS SHALL COMPLY WITH ANSI TYPE B ACCESSIBILITY STANDARDS FOR ACCESSIBLE UNITS. SEE A2.2 FOR ACCESSIBILITY DETAILS. UNIT B 123 AND C 316 SHALL ALSO COMPLY WITH ANSI TYPE A ACCESSIBILITY STANDARDS FOR ACCESSIBLE UNITS - SEE SHEET A2.1 FOR ACCESSIBILITY DETAILS.
2. ALL UNITS TO CONTAIN THE FOLLOWING TOILET ACCESSORIES: (1) 24" TOWEL BAR, 1 TOILET PAPER HOLDER, 1 TOWEL RING, 1 ROBE HOOK.
3. INSTALL ALL GRAB BAR BLOCKING AT TIME OF CONSTRUCTION. GRAB BARS TO BE INSTALLED AT RESIDENT REQUEST, TYP. INSTALL MASTER SHOWER 18" VERTICAL GRAB BARS AND WRAP AROUND GRAB BARS AT TIME OF CONSTRUCTION.
4. ALL UNDIMENSIONED DOORS TO BE CENTERED OR 4" OFF SIDE WALL.
5. ALL UNDESIGNATED DIMENSIONED WALLS TO BE 3 1/2" WOOD STUD.
6. SEE ELECTRICAL DRAWINGS FOR ELECTRICAL LAYOUTS.
7. REFER TO INTERIOR FINISH PLANS & LEGEND FOR ALL UNIT INTERIORS.
8. DIMENSIONS ARE TO FACE OF STUD UNLESS OTHERWISE NOTED.
9. CORRIDOR WALLS AT UNIT AND DEMISING WALLS BETWEEN UNITS SHALL BE TREATED AS SOUND RATED WALLS.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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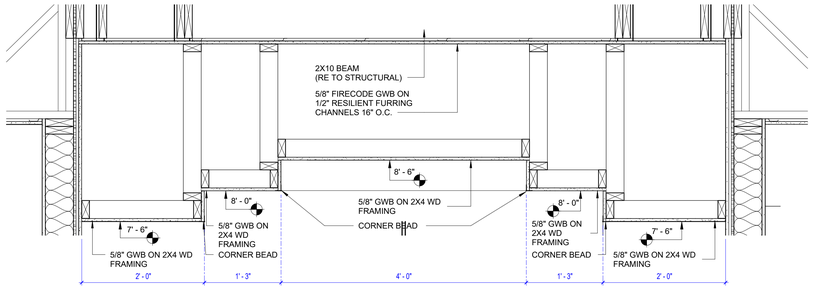
DESIGNER : DAS		DRAWN : DAS/CRW	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER : DES		APPROVED : CRJ	

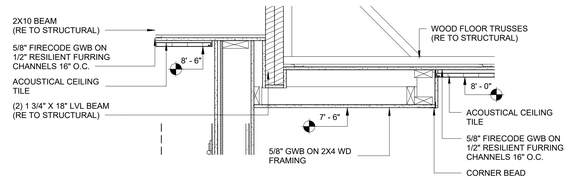
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
ENLARGED PLANS

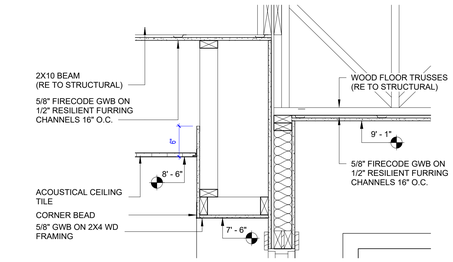
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A2.4



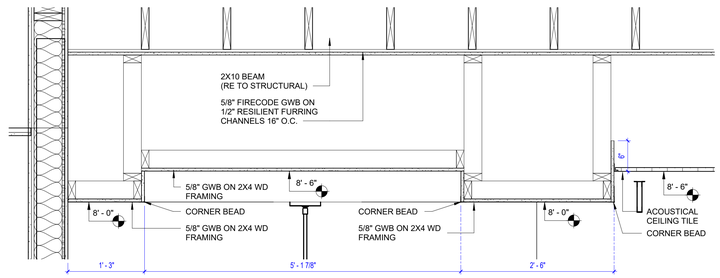
7 CORRIDOR BULKHEAD AT END
1" = 1'-0"



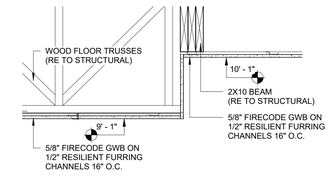
5 LOUNGE BULKHEAD
1" = 1'-0"



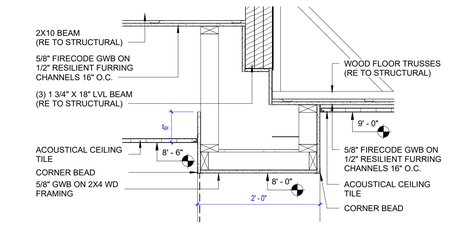
3 UNIT ENTRY
1" = 1'-0"



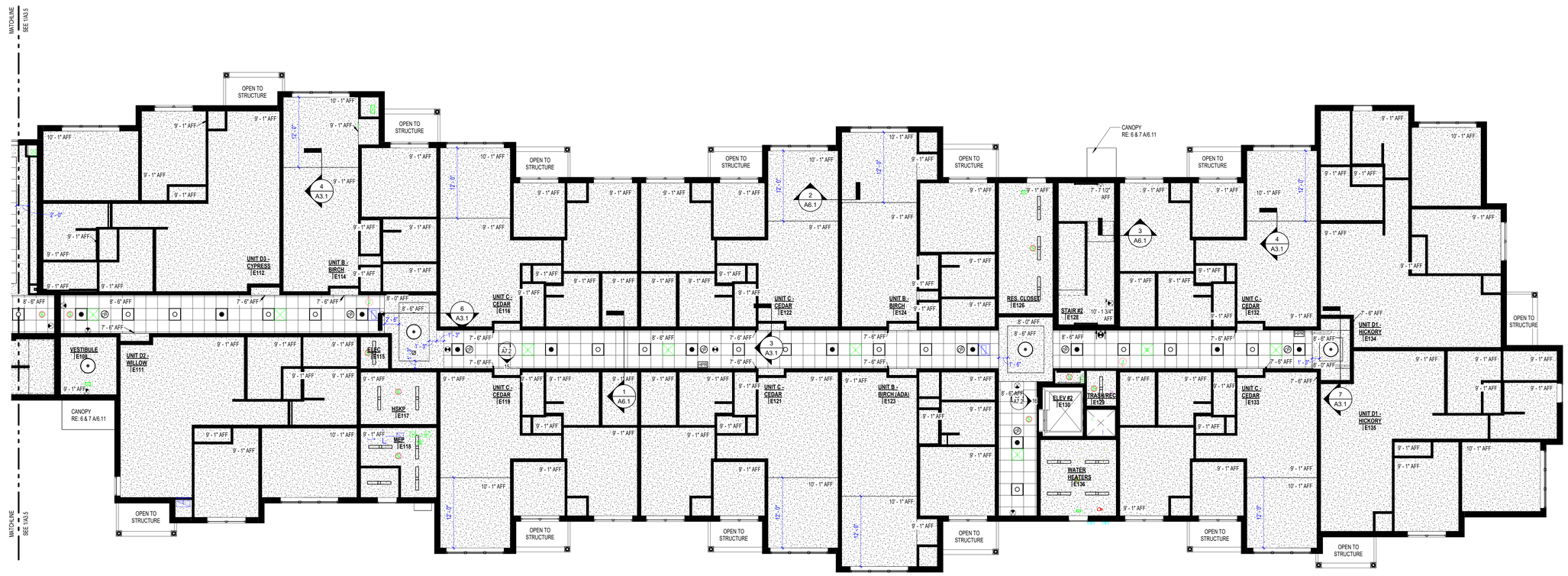
6 CORRDIOR BULKHEAD
1" = 1'-0"



4 UNIT STEP UP AT LIVING ROOM
1" = 1'-0"

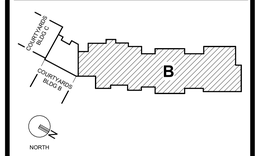


2 MAILROOM/LOUNGE BULKHEAD
1" = 1'-0"



1 FIRST FLOOR IL UNITS REFLECTED CEILING PLAN
1/8" = 1'-0"

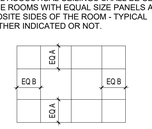
KEYPLAN



REFLECTED CEILING PLAN LEGEND

- PAINTED GYPSUM BOARD
- SUSPENDED ACOUSTIC CEILING SYSTEM
- RECESSED TROFFER
- DOWNLIGHT
- SURFACE FIXTURE LIGHT
- CEILING DIFFUSER
- CEILING OUTLET
- CEILING DATA
- SMOKE DETECTOR
- SPEAKER
- SPRINKLER
- HEAT DETECTOR
- FIRE ALARM SPEAKER
- EXIT SIGN
- SUSPENDED LINEAR LIGHT FIXTURE
- LINEAR DIFFUSER
- STRUCTURAL BEAM - RE: STRUCT.

1. ALL ACOUSTICAL CEILINGS SHALL BE CENTERED IN THE ROOMS WITH EQUAL SIZE PANELS AT OPPOSITE SIDES OF THE ROOM - TYPICAL WHETHER INDICATED OR NOT.



2. ACOUSTICAL CEILINGS IN ADJACENT EXT DOORS SHALL HAVE HOLD DOWN CLIPS - TYP

3. ROOMS WITHOUT CEILING HEIGHTS INDICATED ARE 9'-1" AFF UNLESS NOTED OTHERWISE.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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DESIGNER	DAS	DRAWN	LW/DAS/GMJ
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

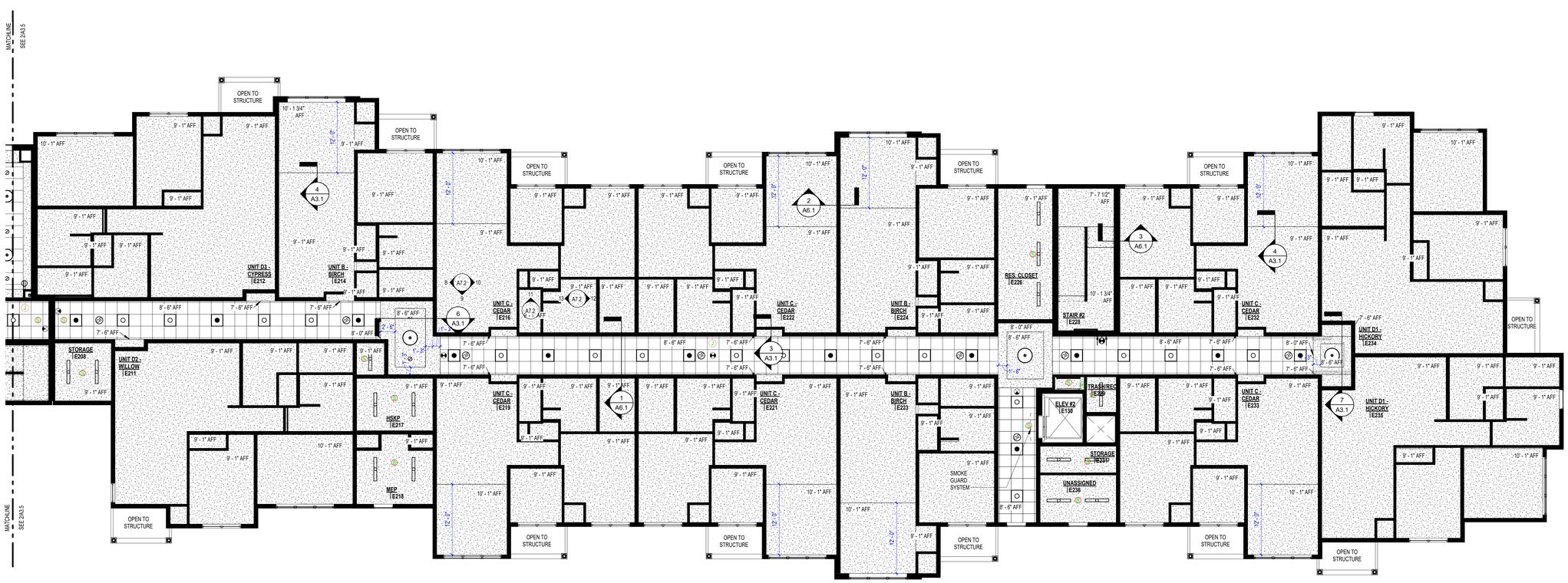
FIRST FLOOR IL UNITS REFLECTED CEILING PLAN

DATE: January 5, 2024

COMM. NO. 23104.00

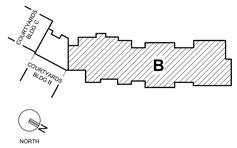
DRAWING A3.1

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024



1 SECOND FLOOR IL UNITS
REFLECTED CEILING PLAN
1/8" = 1'-0"

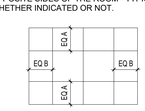
KEYPLAN



REFLECTED CEILING PLAN LEGEND

- PAINTED GYPSUM BOARD
- SUSPENDED ACOUSTIC CEILING SYSTEM
- RECESSED TROFFER
- DOWNLIGHT
- SURFACE FIXTURE LIGHT
- CEILING DIFFUSER
- CEILING OUTLET
- CEILING DATA
- (S) SMOKE DETECTOR
- SPEAKER
- (SP) SPRINKLER
- (H) HEAT DETECTOR
- (F) FIRE ALARM SPEAKER
- EXIT SIGN
- SUSPENDED LINEAR LIGHT FIXTURE
- LINEAR DIFFUSER
- STRUCTURAL BEAM - RE: STRUCT.

1. ALL ACOUSTICAL CEILINGS SHALL BE CENTERED IN THE ROOMS WITH EQUAL SIZE PANELS AT OPPOSITE SIDES OF THE ROOM - TYPICAL WHETHER INDICATED OR NOT.



2. ACOUSTICAL CEILINGS IN ADJACENT EXT DOORS SHALL HAVE HOLD DOWN CLIPS - TYP

3. ROOMS WITHOUT CEILING HEIGHTS INDICATED ARE 9'-1" AFF UNLESS NOTED OTHERWISE.

CONSTRUCTION SET

PROJECT TITLE

John Knox Village

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ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

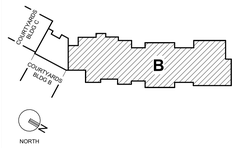
DRAWING TITLE

SECOND FLOOR IL UNITS
REFLECTED CEILING PLAN

DATE:	January 5, 2024	DRAWING	A3.2
COMM. NO.	23104.00		

2/16/2024
3:36:48 PM

KEYPLAN



REFLECTED CEILING PLAN LEGEND

- PAINTED GYPSUM BOARD
- SUSPENDED ACOUSTIC CEILING SYSTEM
- RECESSED TROFFER
- DOWNLIGHT
- SURFACE FIXTURE LIGHT
- CEILING DIFFUSER
- CEILING OUTLET
- CEILING DATA
- (S) SMOKE DETECTOR
- SPEAKER
- (SP) SPRINKLER
- (H) HEAT DETECTOR
- (F) FIRE ALARM SPEAKER
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- LINEAR DIFFUSER
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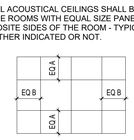

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CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

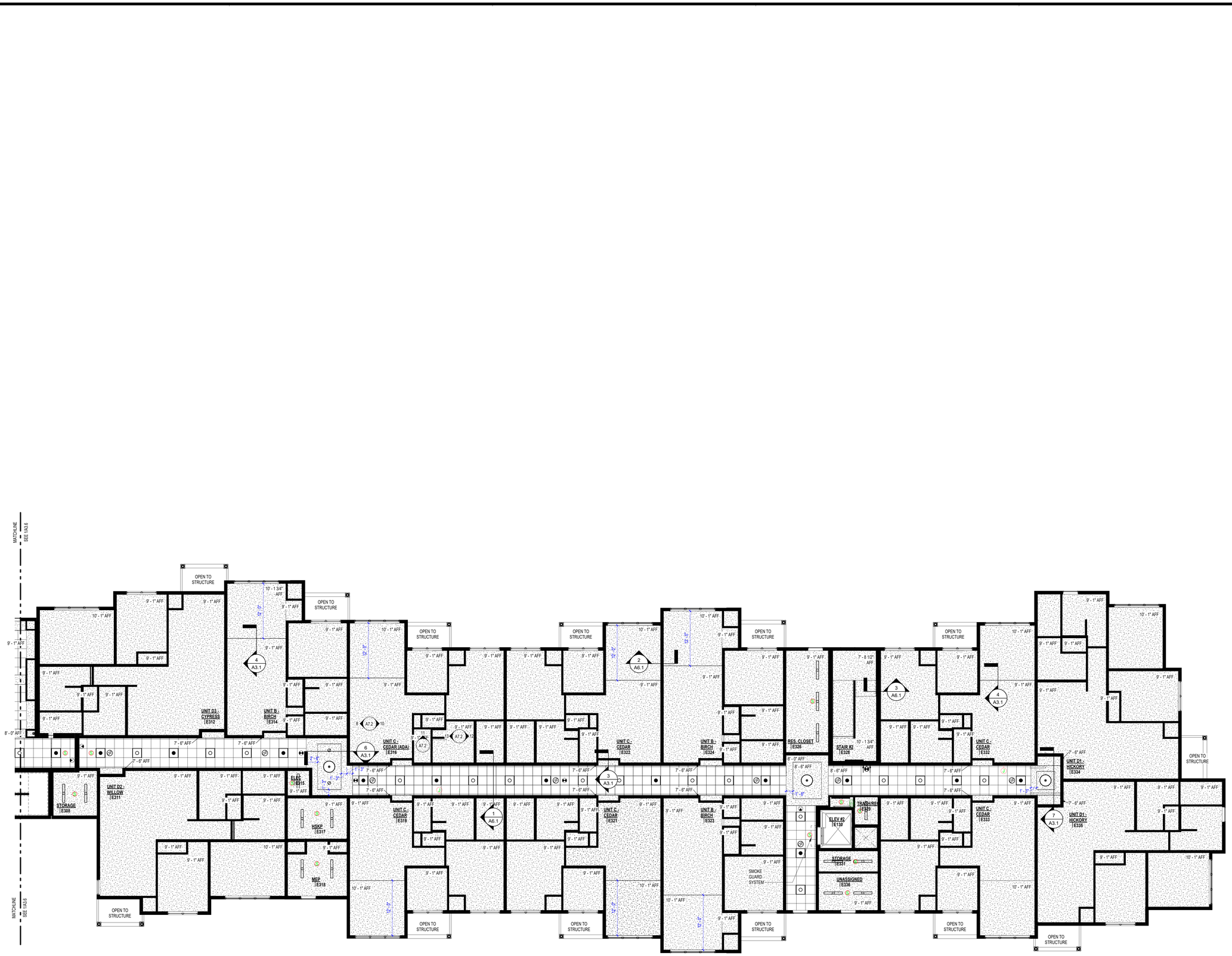
DRAWING TITLE

THIRD FLOOR IL UNITS REFLECTED CEILING PLAN

DATE: January 5, 2024

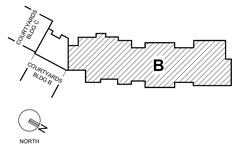
COMM. NO. 23104.00

DRAWING A3.3



1 THIRD FLOOR IL UNITS REFLECTED CEILING PLAN
1/8" = 1'-0"

KEYPLAN



REFLECTED CEILING PLAN LEGEND

- PAINTED GYPSUM BOARD
- SUSPENDED ACOUSTIC CEILING SYSTEM
- RECESSED TROFFER
- DOWNLIGHT
- SURFACE FIXTURE LIGHT
- CEILING DIFFUSER
- CEILING OUTLET
- CEILING DATA
- SMOKE DETECTOR
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- SPRINKLER
- HEAT DETECTOR
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CONSTRUCTION SET

STATE OF MISSOURI
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ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

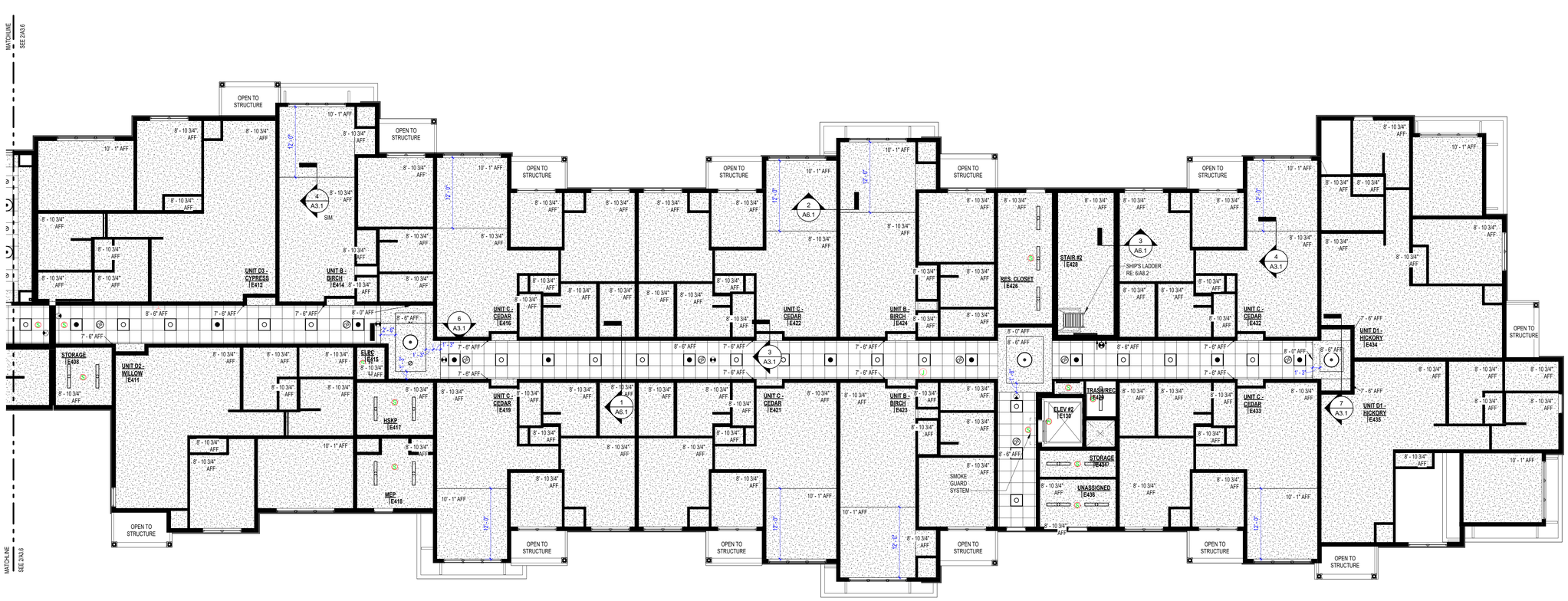
DRAWING TITLE

FOURTH FLOOR IL UNITS REFLECTED CEILING PLAN

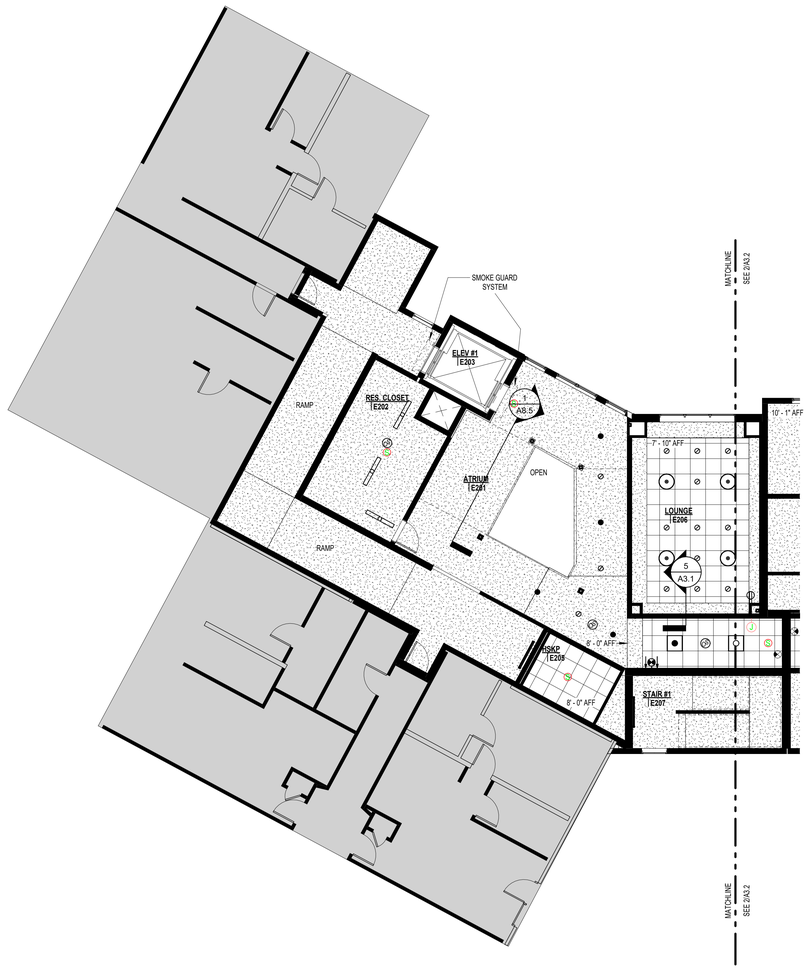
DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING A3.4

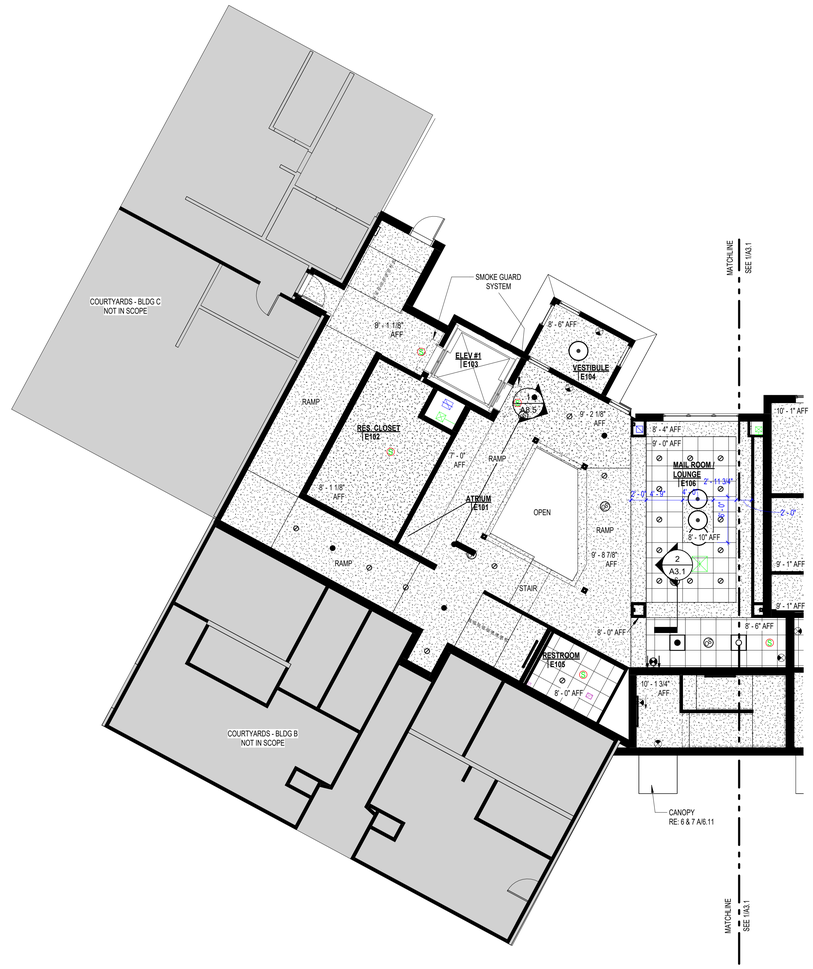


1 FOURTH FLOOR IL UNITS REFLECTED CEILING PLAN
1/8" = 1'-0"



2 ATRIUM - SECOND FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

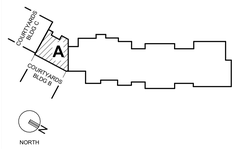


1 ATRIUM - FIRST FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

NORTH

KEYPLAN



REFLECTED CEILING PLAN LEGEND

- PAINTED GYPSUM BOARD
- SUSPENDED ACOUSTIC CEILING SYSTEM
- RECESSED TROFFER
- DOWNLIGHT
- SURFACE FIXTURE LIGHT
- CEILING DIFFUSER
- CEILING OUTLET
- CEILING DATA
- SMOKE DETECTOR
- SPEAKER
- SPRINKLER
- HEAT DETECTOR
- FIRE ALARM SPEAKER
- EXIT SIGN
- SUSPENDED LINEAR LIGHT FIXTURE
- LINEAR DIFFUSER
- STRUCTURAL BEAM - RE: STRUCT.

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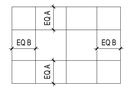

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CONSTRUCTION SET

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PROJECT TITLE

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DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

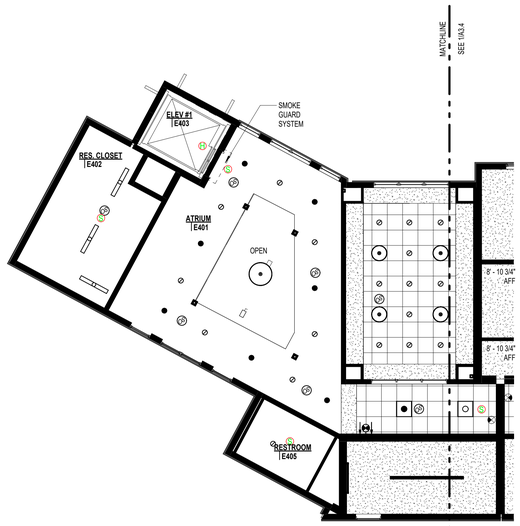
DRAWING TITLE

FIRST AND SECOND FLOOR ATRIUM REFLECTED CEILING PLAN

DATE: January 5, 2024

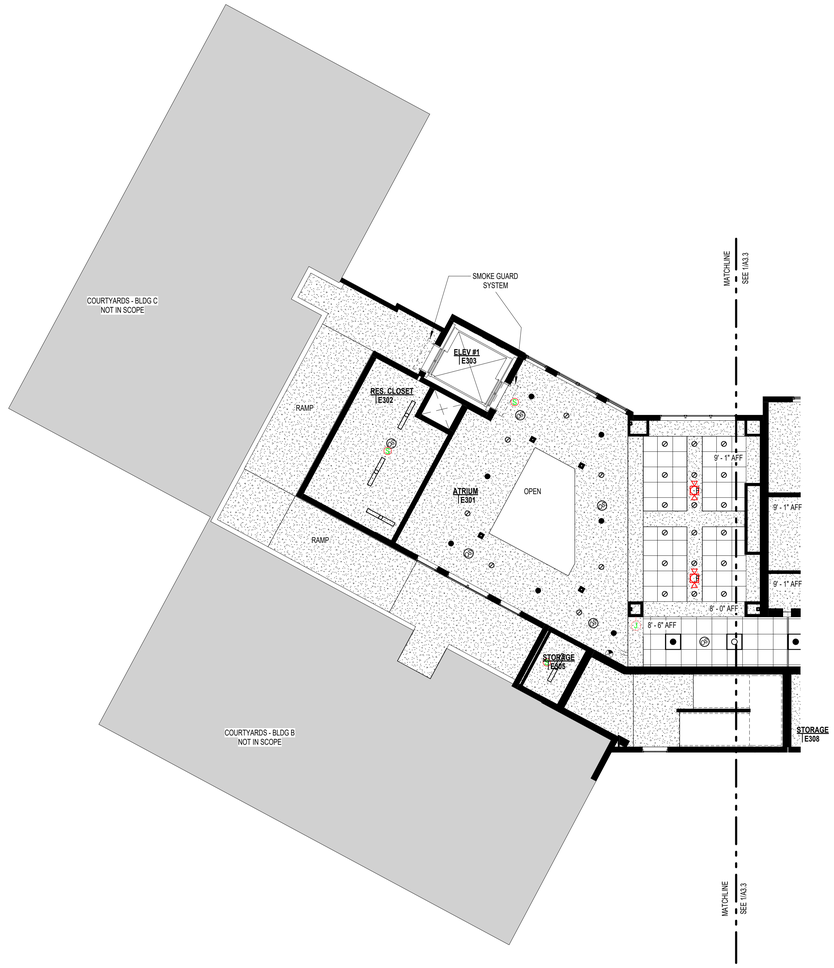
COMM. NO. 23104.00

DRAWING A3.5



2 ATRIUM - FOURTH FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

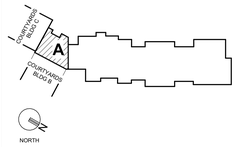


1 ATRIUM - THIRD FLOOR REFLECTED CEILING PLAN

1/8" = 1'-0"

NORTH

KEYPLAN



REFLECTED CEILING PLAN LEGEND

- PAINTED GYPSUM BOARD
- SUSPENDED ACOUSTIC CEILING SYSTEM
- RECESSED TROFFER
- DOWNLIGHT
- SURFACE FIXTURE LIGHT
- CEILING DIFFUSER
- CEILING OUTLET
- CEILING DATA
- (S) SMOKE DETECTOR
- SPEAKER
- (SP) SPRINKLER
- (H) HEAT DETECTOR
- (F) FIRE ALARM SPEAKER
- EXIT SIGN
- SUSPENDED LINEAR LIGHT FIXTURE
- LINEAR DIFFUSER
- STRUCTURAL BEAM - RE: STRUCT.

1. ALL ACOUSTICAL CEILINGS SHALL BE CENTERED IN THE ROOMS WITH EQUAL SIZE PANELS AT OPPOSITE SIDES OF THE ROOM - TYPICAL WHETHER INDICATED OR NOT.

2. ACOUSTICAL CEILINGS IN ADJACENT EXT DOORS SHALL HAVE HOLD DOWN CLIPS - TYP

3. ROOMS WITHOUT CEILING HEIGHTS INDICATED ARE 9'-1" AFF UNLESS NOTED OTHERWISE.

CONSTRUCTION SET

STATE OF MISSOURI
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PROJECT TITLE

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DESIGNER	: DAS	DRAWN	: DAS
ARCHITECT	: DAS	CHECKED	: AAT
ENGINEER	:	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE

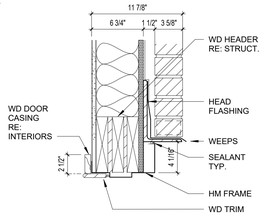
DRAWING TITLE

THIRD AND FOURTH FLOOR ATRIUM REFLECTED CEILING PLAN

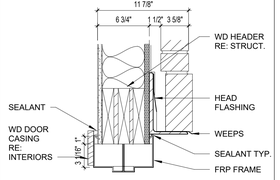
DATE: January 5, 2024

COMM. NO. 23104.00

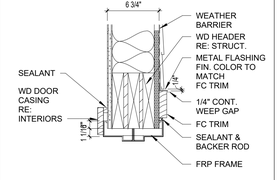
DRAWING A3.6



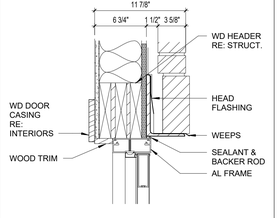
H1 - HM HEAD @ BRICK



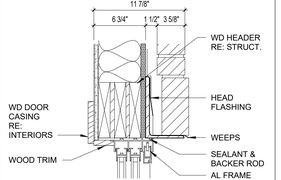
H2 - FBG HEAD @ BRICK



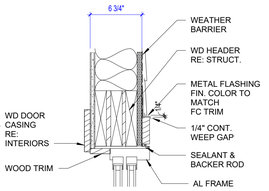
H3 - FBG HEAD @ SIDING



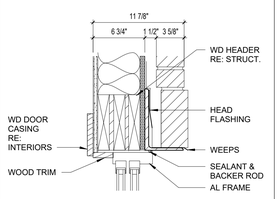
H4 - AL HEAD @ ENTRY



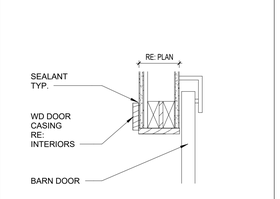
H5 - AL SLIDING HEAD @ BRICK



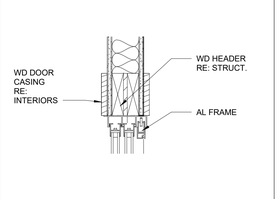
H6 - AL SLIDING HEAD @ SIDING



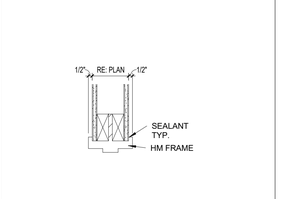
H7 - FBG HEAD @ BRICK



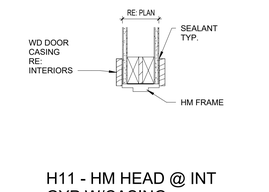
H8 - HEAD @ BARN DOOR



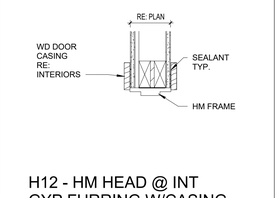
H9 - AL SLIDING HEAD @ GYP WALL



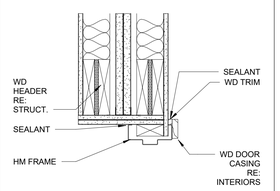
H10 - HM HEAD @ INT GYP



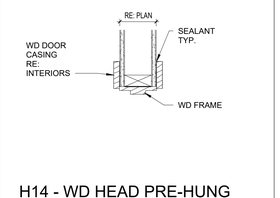
H11 - HM HEAD @ INT GYP W/CASING



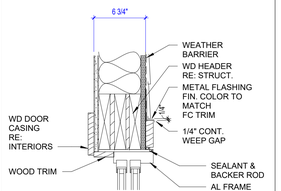
H12 - HM HEAD @ INT GYP FURRING W/CASING



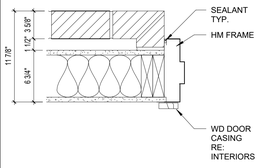
H13 - HM HEAD @ INT GYP SHAFT WALL



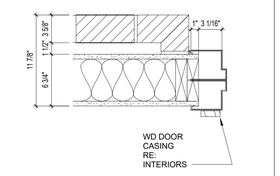
H14 - WD HEAD PRE-HUNG



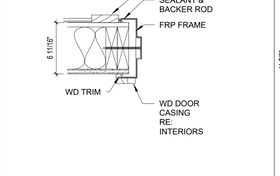
H15 - FBG HEAD @ SIDING



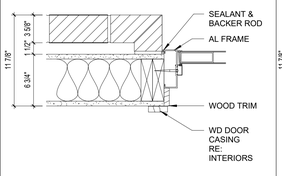
J1 - HM JAMB @ BRICK



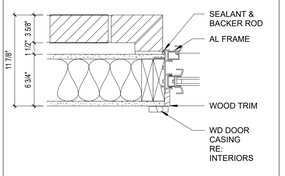
J2 - FBG JAMB @ BRICK



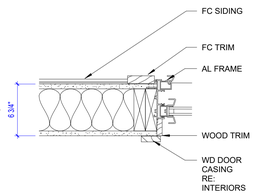
J3 - FBG JAMB @ SIDING



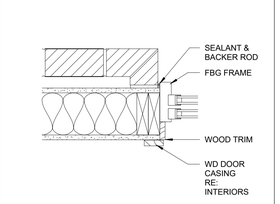
J4 - AL JAMB @ BRICK



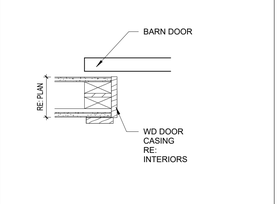
J5 - AL SLIDING JAMB @ SIDING



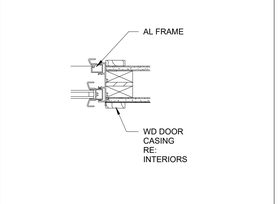
J6 - AL SLIDING JAMB @ SIDING



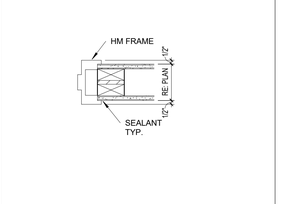
J7 - FBG SLIDING JAMB @ BRICK



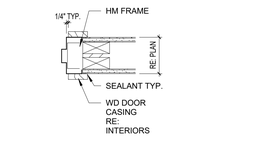
J8 - JAMB @ BARN DOOR



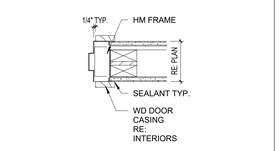
J9 - AL SLIDING JAMB @ GYP CASING



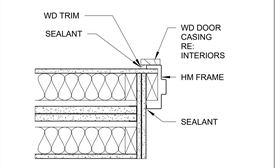
J10 - HM JAMB @ GYP NO CASING



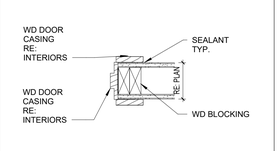
J11 HM JAMB @ GYP W/CASING



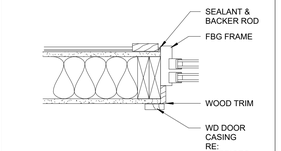
J12 - HM JAMB @ GYP W/FURRING CASING



J13 - HM JAMB @ INT CYP SHAFT WALL



J14 - WD JAMB PRE-HUNG



J15 - FBG SLIDING JAMB @ SIDING

DOOR SCHEDULE

ROOM	DOOR ELEV	DOOR TYPE	DOOR WIDTH	DOOR HEIGHT	FIRE RATING	FRAME ELEV	FRAME HEAD	FRAME JAMB	HARDWARE LOCK	HARDWARE CLOS	HARDWARE ACCESS CNTRL	Comments
102	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		2
104A	FG	AL	6' - 0"	7' - 0"		2	H6	J6	8			Integrated with Smoke Control System
104B	FG	AL	6' - 0"	7' - 0"		2	H9	J9	8		X	Integrated with Smoke Control System
107A	F	HM	3' - 0"	7' - 0"		2	H1	J1	7	X	X	
107B	FG	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6			
108A	FG	AL	6' - 0"	7' - 0"		2	H1	J1	8	X		
108B		AL	6' - 0"	7' - 0"		2	H9	J9	8	X	X	
113	F	HM	(2) 3' - 0"	6' - 8"	90 MIN	3	H13	J13	5	X		
115	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X 2		
117	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	11A	X		
118	F	WD	3' - 0"	6' - 8"		1	H10	J10	11A	X		
120	FG	WD	3' - 0"	6' - 8"		1	H11	J11	10	X		
125		AL		7' - 0"		2	H4	J4	9		X	
126	F	WD	5' - 6"	6' - 8"	20 MIN	1	H12	J12	2	X		
127		WD		6' - 8"		1	H10	J10	4			
128A	F	HM	3' - 0"	7' - 0"		1	H1	J1	7	X	X	
128B	F	HM	3' - 0"	6' - 8"	90 MIN	1	H12	J12	6	X		
129	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
136	F	WD	3' - 0"	6' - 8"	45 MIN	1	H12	J12	10	X		
202	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
205	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	1	X		
206		WD	(2) 3' - 0"	6' - 8"			H8	J8	11			
207	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
208	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
213	F	HM	(2) 3' - 0"	6' - 8"	90 MIN	3	H13	J13	5	X		
215	F	WD	3' - 0"	6' - 8"		1	H12	J12	10			
217	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X		
218	F	WD	3' - 0"	6' - 8"		1	H10	J10	10			
226	F	WD	2' - 0" 4' - 6"	6' - 8"	20 MIN	1	H12	J12	2	X		
227		WD		6' - 8"		1	H10	J10	4			
228	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
229	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
231	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
236	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	1	X		
302	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
305	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X		
307	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
308	F	WD	3' - 0"	6' - 8"	90 MIN	1	H13	J13	10	X		
313	F	HM	(2) 3' - 0"	6' - 8"	90 MIN	3	H13	J13	5	X		
315	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X		
317	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X		
318	F	WD	3' - 0"	6' - 8"		1	H10	J10	10			
326	F		5' - 6"	6' - 8"	20 MIN	1	H12	J12	2	X		
327		WD		6' - 8"		1	H10	J10	4			
328	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
329	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
331	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
336	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	1	X		
402	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
405	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	3	X		
406		WD	(2) 3' - 0"	6' - 8"			H8	J8	11			
407	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
408	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
409	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	3	X		
413	F	HM	(2) 3' - 0"	6' - 8"	90 MIN	1	H13	J13	5	X		
415	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X		
417	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	10	X		
418	F	WD	5' - 6"	6' - 8"		1	H10	J10	10			
426	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
427		WD		6' - 8"			H10	J10	4			
428	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
429	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
431	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	2	X		
436	F	WD	3' - 0"	6' - 8"	20 MIN	1	H12	J12	1	X		
B1	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
B2	FG	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
B3	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
B21		AL		7' - 0"			H4	J4	9	X		
C1	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
C2	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		
C3	F	HM	3' - 0"	6' - 8"	90 MIN	1	H13	J13	6	X		

MARK	DOOR TYPE	DOOR MATERIAL	DOOR WIDTH	DOOR PAIR	DOOR HEIGHT	FIRE RATING	FRAME ELEV	FRAME HEAD	FRAME JAMB	HW SET	COMMENTS
U1	PD	MDF	3'-0"		6'-8"	20 MIN		H12	J12	12	
U2	FG-1	FBG	3'-0"		6'-8"			H2/H3	J2/J3	16	EXTERIOR - INTEGRAL BLINDS, SCREENED DOOR 3
U3	PD	DF	3'-0"		6'-8"			H14	J14	15	
U4	FG-1	FBG	3'-0"		6'-8"			H7/H15	J7/J15	20	EXTERIOR - INTEGRAL BLINDS
U5	PD-1	DF	2'-10"		6'-8"			H14	J14	13	
U6	PD-1	DF	PAIR 2'-6"		6'-8"			H14	J14	14	
U7	PD-1	DF	PAIR 2'-0"		6'-8"			H14	J14	14	
U8	PD-1	DF	PAIR 1'-9"		6'-8"			H14	J14	21	
U9	PD-1	DF	2'-0"		6'-8"			H14	J14	13	
U10	PD/PKT	DF	2'-10"		6'-8"			H14	J14	17	
U11	PD/PKT	DF	PAIR 2'-4"		6'-8"			H14	J14	18	
U12	PD	DF	2'-6"		6'-8"			H14	J14	16	

FIBERGLASS DOORS BASIS OF DESIGN - JELD WEN DESIGN-PRO SERIES

GENERAL NOTES

1. DOORS ARE TO BE INSTALLED SO THE BACK OF THE FRAME IS 4", TYP. TO FACE OF WALL AT INSIDE CORNER, UNLESS NOTED OTHERWISE.
2. PROVIDE LARSON SIGNATURE CLASSIC STORM DOOR (SANDSTONE) AT ALL SWING TYPE BALCONY DOORS. PROVIDE STANDARD HW.

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS | Architecture Engineering Planning Interiors

SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER : DAS	DRAWN : DAS
ARCHITECT : DAS	CHECKED : AAT
ENGINEER : DES	APPROVED : CRJ

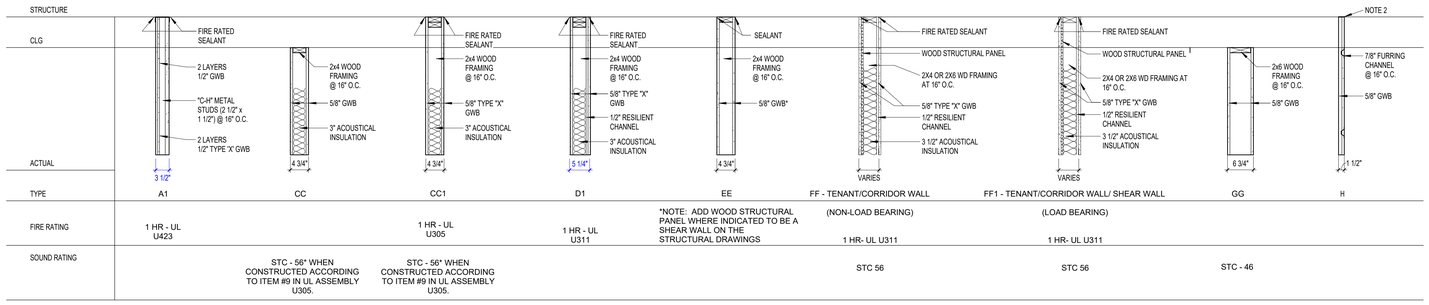
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24
3	Addendum 1	03/07/24

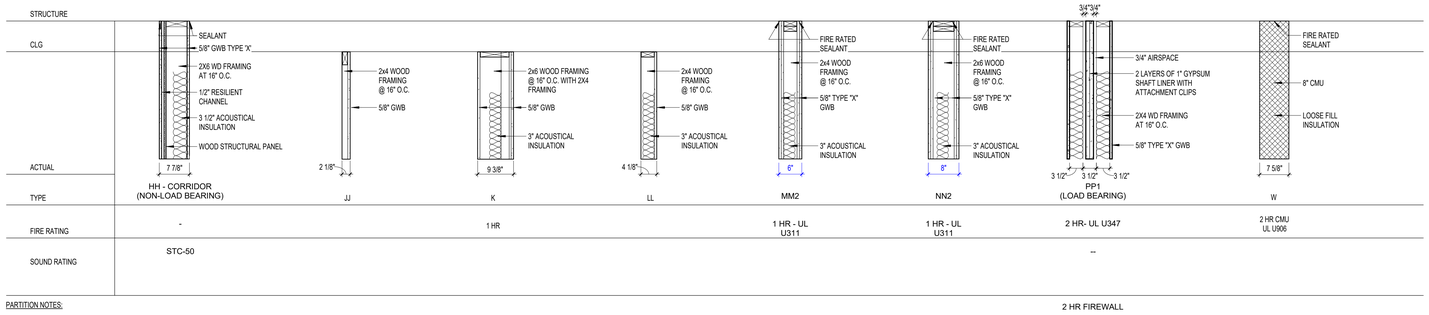
DRAWING TITLE

DOOR SCHEDULE

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A4.1

3/8/2024
7:29:13 AM





PARTITION NOTES:

NOTE 1: SOUND RATING WHERE NOTED ON PLANS.

NOTE 2: LINE OF SUBSTRATE.

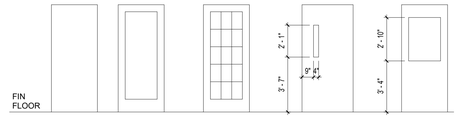
NOTE 3: GWB SHALL BE ACOUSTICALLY SEALED TO STRUCTURE AT SOUND RATED PARTITIONS. APPLY SEALANT AROUND ALL CUT OUTS IN GWB WALL. CAULK SIDES AND BACK OF ELECTRICAL BOXES.

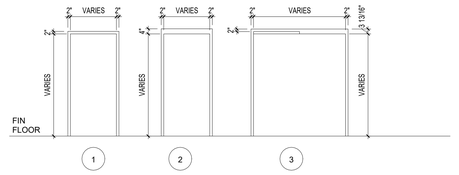
NOTE 4: PROVIDE DEEP LEG TOP TRACK RUNNERS FOR MINIMUM 5/8" DEFLECTION GAP.

NOTE 5: DESIGNATED STC RATINGS APPLY TO SOUND RATED PARTITIONS.

PARTITIIONS TYPES-
3/4" = 1'-0"

NOTE: ALL GLAZING IN FIXED AND OPERABLE PANELS OF DOORS SHALL BE SAFETY GLAZING PER SECTION 2406.





DOOR ELEVATIONS
1/4" = 1'-0"

APPLIANCE SCHEDULE

MARK	ITEM	MANUF	MODEL #	DESCRIPTION
P1	REFRIGERATOR	GENERAL ELECTRIC	GSS23	HSHSS STAINLESS STEEL
P2	RANGE	GENERAL ELECTRIC	JS645	SJSS STAINLESS STEEL
P3	NOT USED			
P4	DISHWASHER	GENERAL ELECTRIC	GDF645	SSNSS STAINLESS STEEL
P5	GARBAGE DISPOSAL	GENERAL ELECTRIC	GFC530V	
P6	WASHER DRYER	LG	WKE100H_A/WKG101_A	WHITE SEE UNIT PLANS FOR LOCATION
P7	UNDERCOUNTER REFRIGERATOR	GENERAL ELECTRIC	GCE06GSHSB	SLSS STAINLESS STEEL
P8	REFRIGERATOR	GENERAL ELECTRIC	GZS22DSJSS	ACCESSIBLE UNITS (SS = STAINLESS STEEL) - COUNTER-DEPTH
P9	DISHWASHER	GENERAL ELECTRIC	GLDA696F	ACCESSIBLE UNITS (SS = STAINLESS STEEL)
P10	MICROWAVE	GENERAL ELECTRIC	PEM31	SLSS STAINLESS STEEL
P11	UNDER THE CABINET HOOD	GENERAL ELECTRIC	JVX3300	SJSS STAINLESS STEEL
P12	WASHER	GENERAL ELECTRIC	GFW550	SSNWW WHITE SEE UNIT PLANS FOR LOCATION
P13	DRYER	GENERAL ELECTRIC	GFD55E	SSNWW WHITE SEE UNIT PLANS FOR LOCATION

APPLIANCE SCHEDULE
12" = 1'-0"

TOILET ACCESSORY SCHEDULE

MARK	ITEM	MODEL #/FIN	MANUF	MT.HT.	SIZE	REMARKS
1	TOILET PAPER HOLDER	YB5408BN	MOEN: KINGSLEY SERIES/BRUSHED NICKEL	CENTERLINE AT 21" AFF		TO BE INSTALLED IN ALL RESIDENT UNIT TOILETS
2	TOILET PAPER DISPENSER	56798	GEORGIA PACIFIC	CENTERLINE AT 19" AFF		TO BE INSTALLED IN ALL PUBLIC TOILETS
3	VERTICAL GRAB BAR	YG5418BN	MOEN: KINGSLEY SERIES/BRUSHED NICKEL	BOTTOM AT 41" AFF	18"	PROVIDE BLOCKING ALL UNITS AND INSTALL WHERE NOTED IN CUSTOMIZATION
4	GRAB BAR	YG5436BN	MOEN: KINGSLEY SERIES/BRUSHED NICKEL	TOP AT 36" AFF	36"	PROVIDE BLOCKING ALL UNITS AND INSTALL WHERE NOTED IN CUSTOMIZATION
5	GRAB BAR	YG5442BN	MOEN: KINGSLEY SERIES/BRUSHED NICKEL	TOP AT 36" AFF	42"	PROVIDE BLOCKING ALL UNITS AND INSTALL WHERE NOTED IN CUSTOMIZATION
6	VERTICAL GRAB BAR	B-6806X18	BOBRICK/SATIN FINISH	BOTTOM AT 41" AFF	18"	INSTALL AT ALL UNIT MASTER BATH SHOWERS
7	GRAB BAR	B-6806X36	BOBRICK/SATIN FINISH	TOP AT 36" AFF	36"	PROVIDE BLOCKING/TO BE INSTALLED IN ALL PUBLIC TOILETS
8	GRAB BAR	B-6806X42	BOBRICK/SATIN FINISH	TOP AT 36" AFF	42"	PROVIDE BLOCKING/TO BE INSTALLED IN ALL PUBLIC TOILETS
9	COMBINATION GRAB BAR	CUSTOM-SEE PLAN	BY SHOWER MANUFACTURER	TOP AT 36" @ SHOWER FF		INSTALL AT ALL UNIT MASTER BATH SHOWERS
10	TOWEL RING	YB5486BN	MOEN: KINGSLEY SERIES/BRUSHED NICKEL	CENTERLINE AT 50" AFF		PROVIDE BLOCKING/TO BE INSTALLED IN ALL RESIDENT UNIT TOILETS
11	TOWEL BAR	YG5424BN	MOEN: KINGSLEY SERIES/BRUSHED NICKEL	CENTERLINE AT 46" AFF	24"	PROVIDE BLOCKING/TO BE INSTALLED IN ALL RESIDENT UNIT TOILETS
12	MIRROR	CUSTOM	GUARDIAN INDUSTRIES W/ 2" FLAT STOCK FRAME	MIRROR BOTTOM AT 40" AFF	36"W X 38" H	MIRROR BOTTOM AT 38" AFF IN ACCESSIBLE UNITS
13	MIRROR	CUSTOM	GUARDIAN INDUSTRIES W/ 2" FLAT STOCK FRAME	MIRROR BOTTOM AT 40" AFF	44"W X 38" H	MIRROR BOTTOM AT 38" AFF IN ACCESSIBLE UNITS
14	MIRROR	CUSTOM	GUARDIAN INDUSTRIES W/ 2" FLAT STOCK FRAME	MIRROR BOTTOM AT 40" AFF	48"W X 38" H	MIRROR BOTTOM AT 38" AFF IN ACCESSIBLE UNITS
15	MIRROR	CUSTOM	GUARDIAN INDUSTRIES W/ 2" FLAT STOCK FRAME	MIRROR BOTTOM AT 40" AFF	72"W X 38" H	MIRROR BOTTOM AT 38" AFF IN ACCESSIBLE UNITS
16	SHOWER DOOR		SOUTHEASTERN ALUMINUM SLIDING BYPASS			FINISH 16 (ARCHITECTURAL) TO BE INSTALLED IN ALL RESIDENT UNIT SHOWERS
17	SOAP DISPENSER	52054	GEORGIA PACIFIC			TO BE INSTALLED IN ALL PUBLIC TOILETS
18	SANITARY NAPKIN DISPOSAL	B-270	BOBRICK/SATIN FINISH	TOP AT 30" AFF		PROVIDE BLOCKING/TO BE INSTALLED IN ALL WOMENS PUBLIC TOILETS AND UNI-SEX TOILETS
19	TOWEL DISPENSER/WASTE REC.	59451	GEORGIA PACIFIC	TOWEL DISPENSER AT 48" AFF		TO BE INSTALLED IN ALL PUBLIC TOILETS
20	CLOSET SHELF AND ROD	CLOSETMAID VINYL	COATED STEEL 12" DEPTH SHELF & ROD WIRE SHELF	CENTERLINE AT 66" AFF		PROVIDE BLOCKING/TO BE INSTALLED IN ALL RESIDENT UNITS. CENTERLINE AT 48" AFF AT ALL ACCESSIBLE UNITS
21	CLOSET SHELF AND ROD	CLOSETMAID VINYL	COATED STEEL 8" DEPTH SHELF & ROD WIRE SHELF	CENTERLINE AT 66" AFF		PROVIDE BLOCKING/TO BE INSTALLED IN ALL RESIDENT UNITS. CENTERLINE AT 48" AFF AT ALL ACCESSIBLE UNITS
22	DOUBLE ROBE HOOK	6727	BOBRICK/SATIN FINISH	CENTERLINE AT 48" AFF		TO BE INSTALLED IN ALL PUBLIC TOILETS
23	DOUBLE ROBE HOOK		LIBERTY HARDWARE WINDEMERE (STAINLESS)	CENTERLINE AT 66" AFF		PROVIDE BLOCKING/TO BE INSTALLED IN ALL RESIDENT UNITS. CENTERLINE AT 48" AFF AT ALL ACCESSIBLE UNITS
24	FOLDING SHOWER SEAT	B-5191	BOBRICK/SATIN FINISH			TO BE INSTALLED IN BOTH ADA SHOWERS
25	FOLD DOWN GRAB BARS	3413-25	ASI			W/INTEGRAL TOILET PAPER HOLDER
26	SHOWERCURTAIN ROD	DN2160BN	MOEN/BRUSHED NICKEL	CENTERLINE AT 76" AFF		TO BE INSTALLED IN RESIDENT UNIT TUBS
27	MIRROR	CUSTOM	GUARDIAN INDUSTRIES W/ BEVELED EDGE	MIRROR BOTTOM AT 40" AFF	30"W X 36" H	FRAMELESS; TO BE INSTALLED IN ALL PUBLIC TOILETS, PROVIDE BACKING TO INSTALL MIRROR FLUSH WITH TILE
28	MIRROR	CUSTOM	GUARDIAN INDUSTRIES W/ 2" FLAT STOCK FRAME	MIRROR BOTTOM AT 40" AFF	27"W X 38" H	MIRROR BOTTOM AT 38" AFF IN ACCESSIBLE UNITS

2

TOILET ACCESSORY SCHEDULE
12" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS B. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER	: DAS	DRAWN	: DAS
ARCHITECT	: DAS	CHECKED	: AAT
ENGINEER	:	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE

PARTITION TYPES, APPLIANCE SCH. & TOILET ACCESSORY SCH.

DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING A4.2

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

ALL EXTERIOR WINDOWS ARE CLAY IN COLOR

EXTERIOR WINDOW ELEVATIONS

3/8" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

WINDOW ELEVATIONS

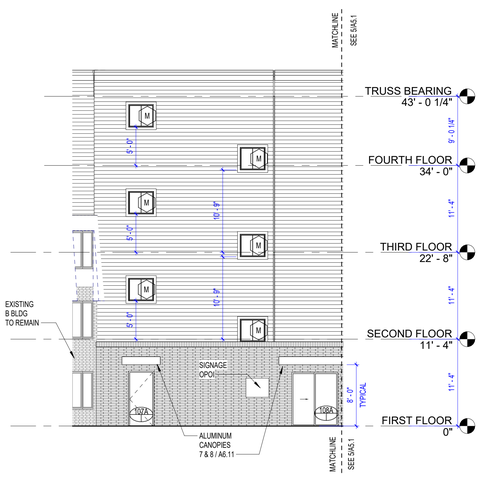
DATE: January 5, 2024

COMM. NO. 23104.00

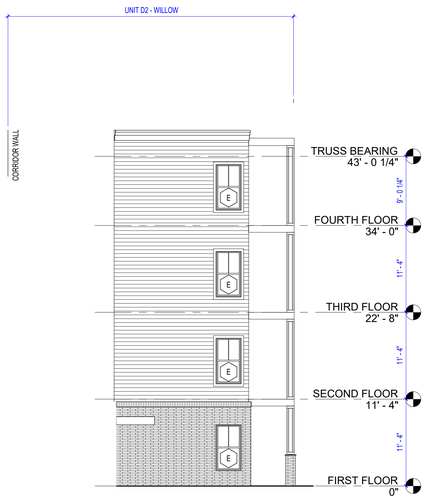
DRAWING A4.3

2/16/2024
3:44:13 PM

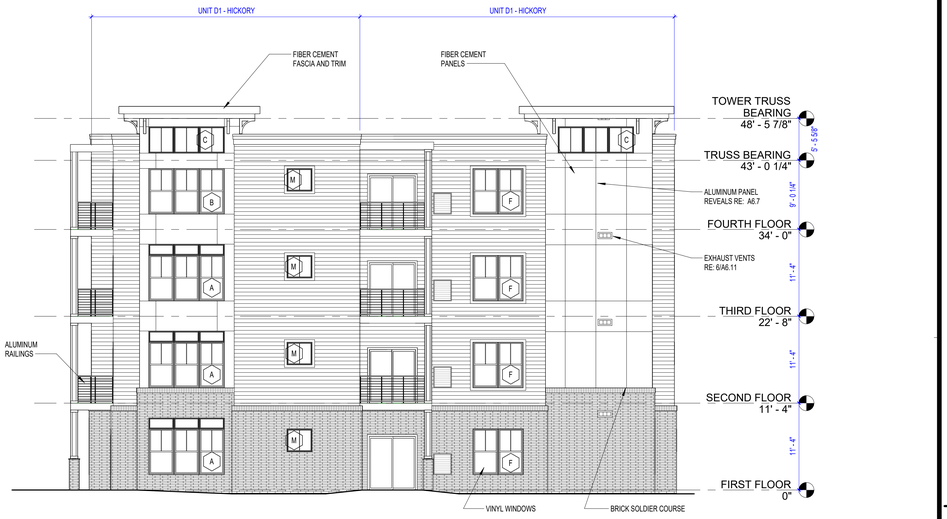
3 EAST ELEVATION A
1/8" = 1'-0"



5 EAST ELEVATION B
1/8" = 1'-0"



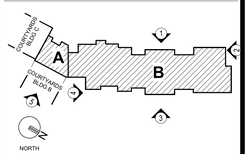
4 SOUTH ELEVATION
1/8" = 1'-0"



2 NORTH ELEVATION
1/8" = 1'-0"

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

KEYPLAN



CONSTRUCTION SET

PROJECT TITLE

John Knox Village

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ARCHITECT	DAS	CHECKED	DAS
ENGINEER		APPROVED	

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

EXTERIOR ELEVATIONS

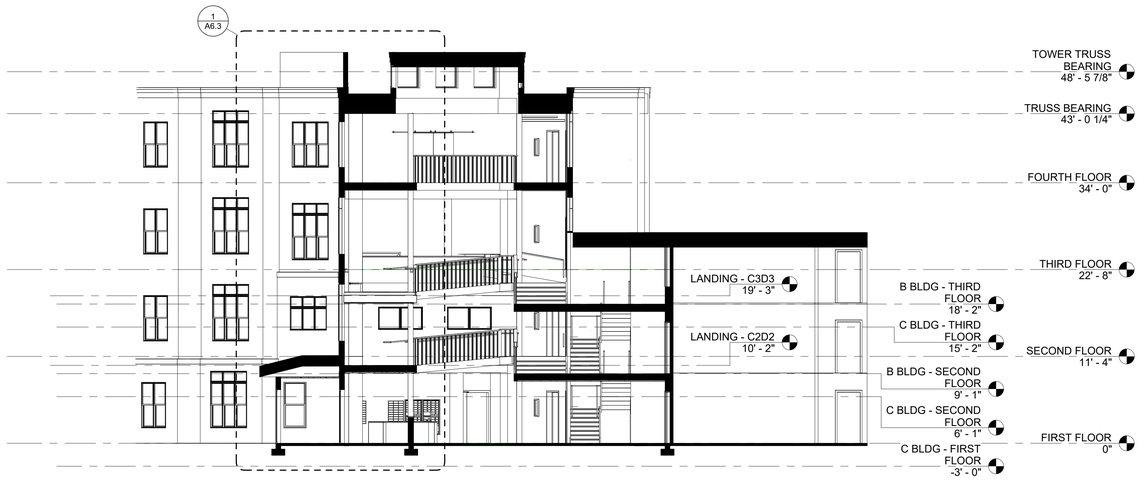
DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING A5.1

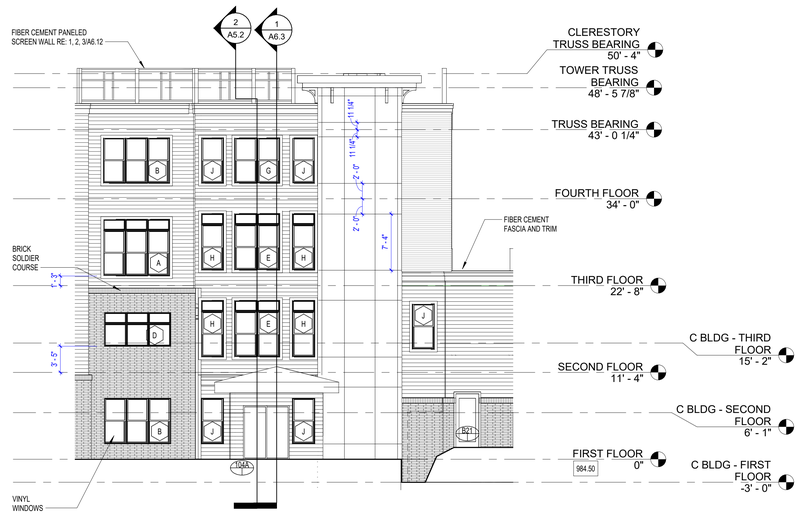
3 ATRIUM - LONGITUDINAL SECTION

1/8" = 1'-0"



2 ATRIUM CROSS SECTION

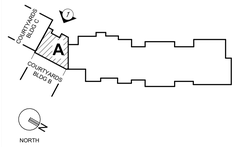
1/8" = 1'-0"



1 WEST ELEVATION ATRIUM

1/8" = 1'-0"

KEYPLAN



CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
REGISTERED ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

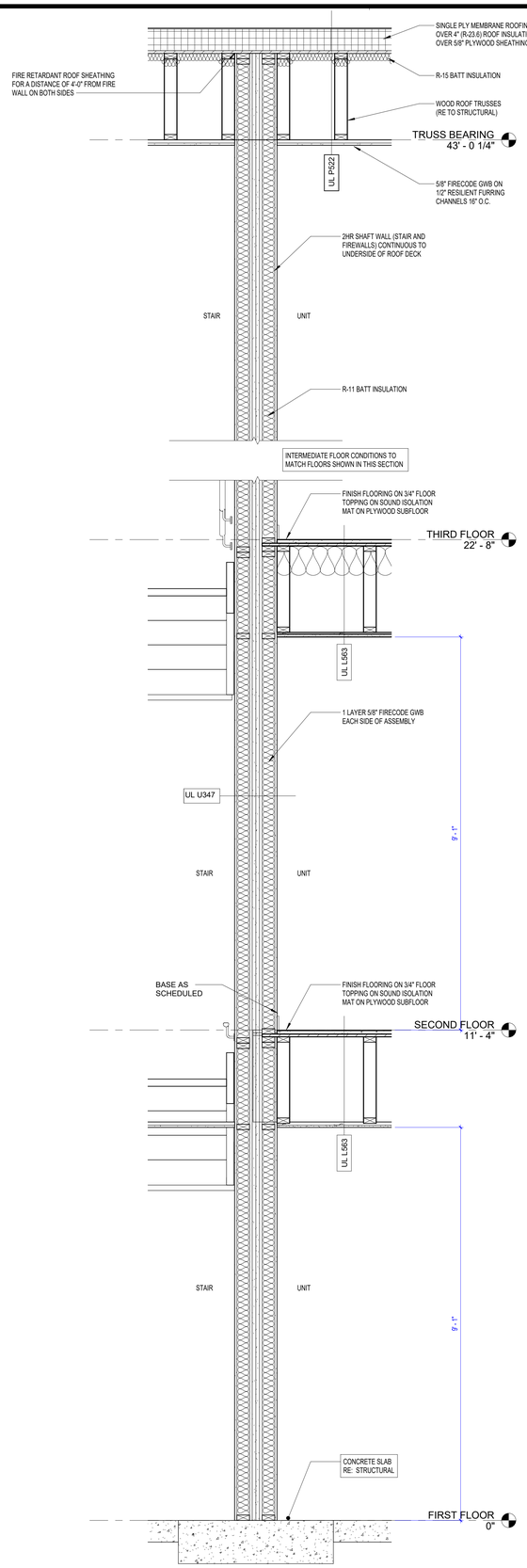
DRAWING TITLE

EXTERIOR ELEVATIONS & BUILDING SECTIONS

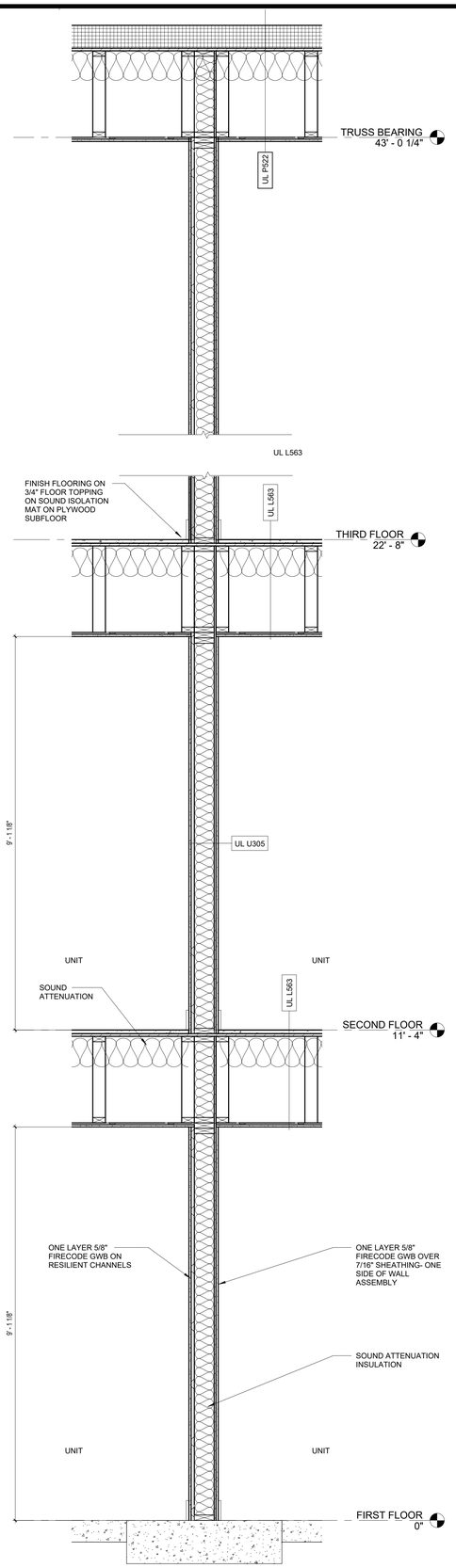
DATE: January 5, 2024

COMM. NO. 23104.00

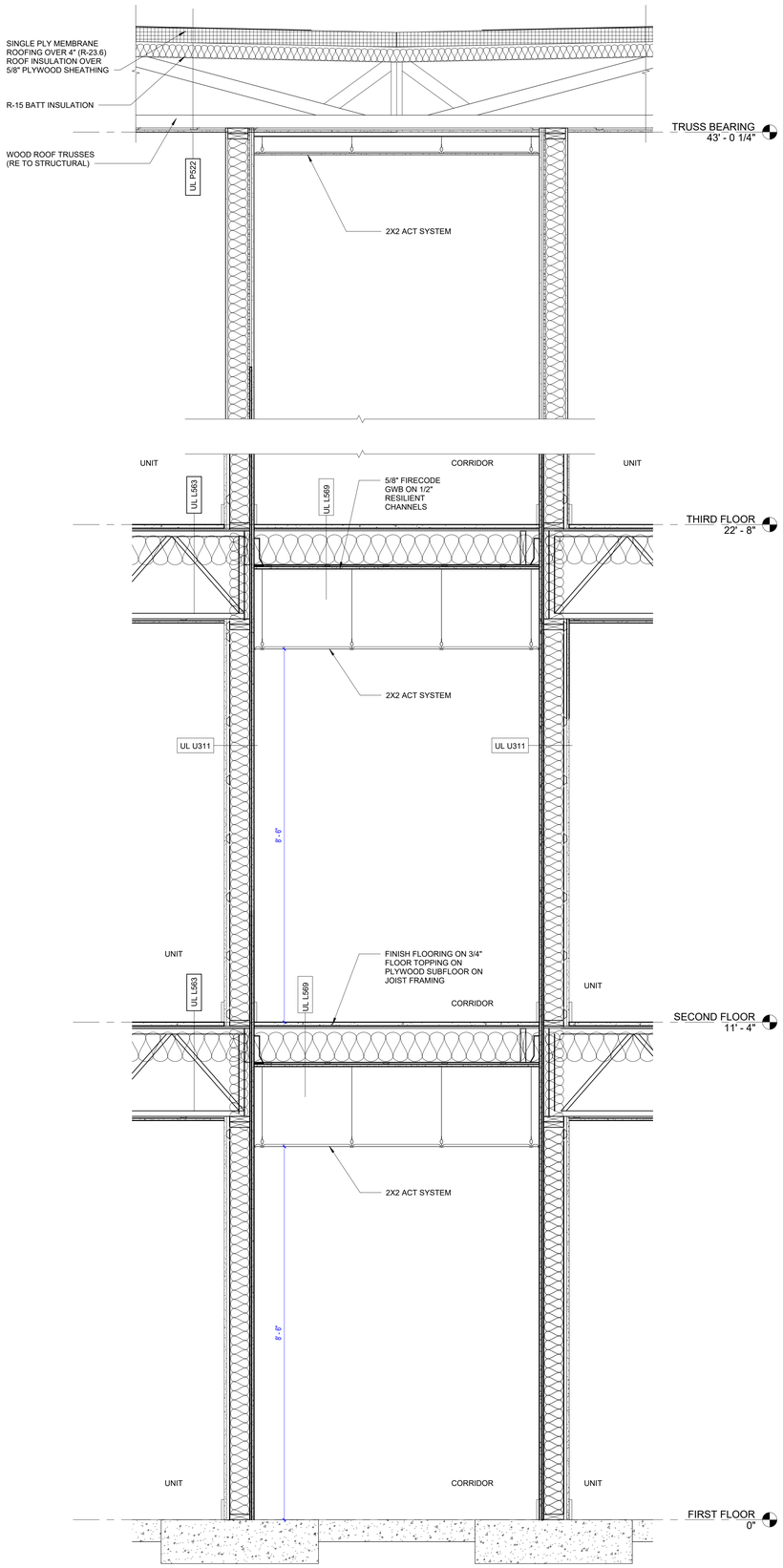
DRAWING A5.2



3 TYPICAL SHAFT WALL
3/4" = 1'-0"



2 TYPICAL TENANT WALL SECTION
3/4" = 1'-0"



1 TYPICAL WALL SECTION AT CORRIDOR
3/4" = 1'-0"

GENERAL NOTES

1. DETAILS / SECTIONS SHOWN ON DRAWINGS ARE TYPICAL AND MAY APPLY TO LOCATIONS OTHER THAN WHERE SPECIFICALLY MARKED ON THE PLANS. IF SECTIONS OR DETAILS DO NOT REPRESENT ALL REQUIRED CONDITIONS, THE ARCHITECT SHALL BE CONTACTED FOR CLARIFICATION BY THE GENERAL CONTRACTOR.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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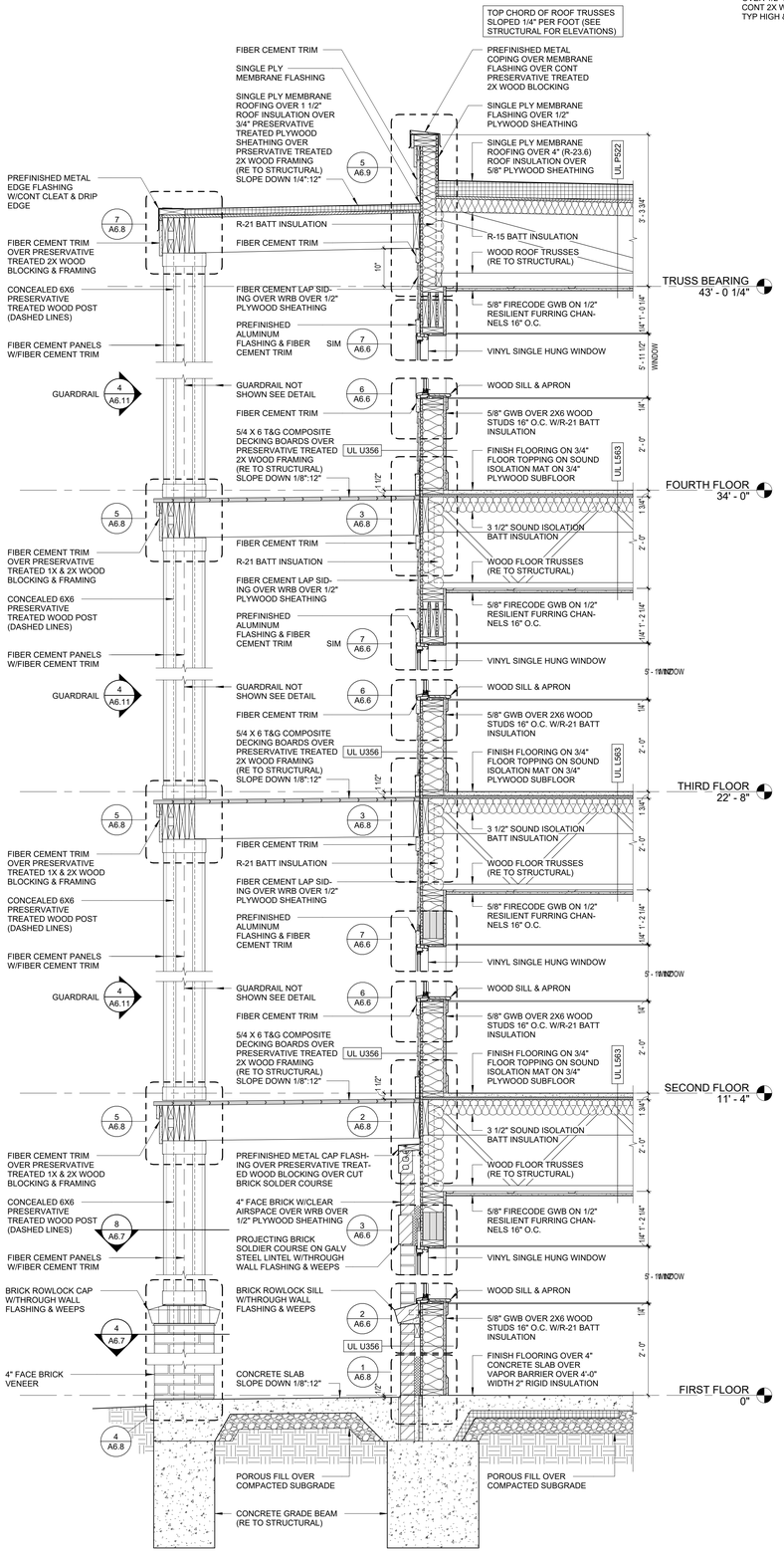
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

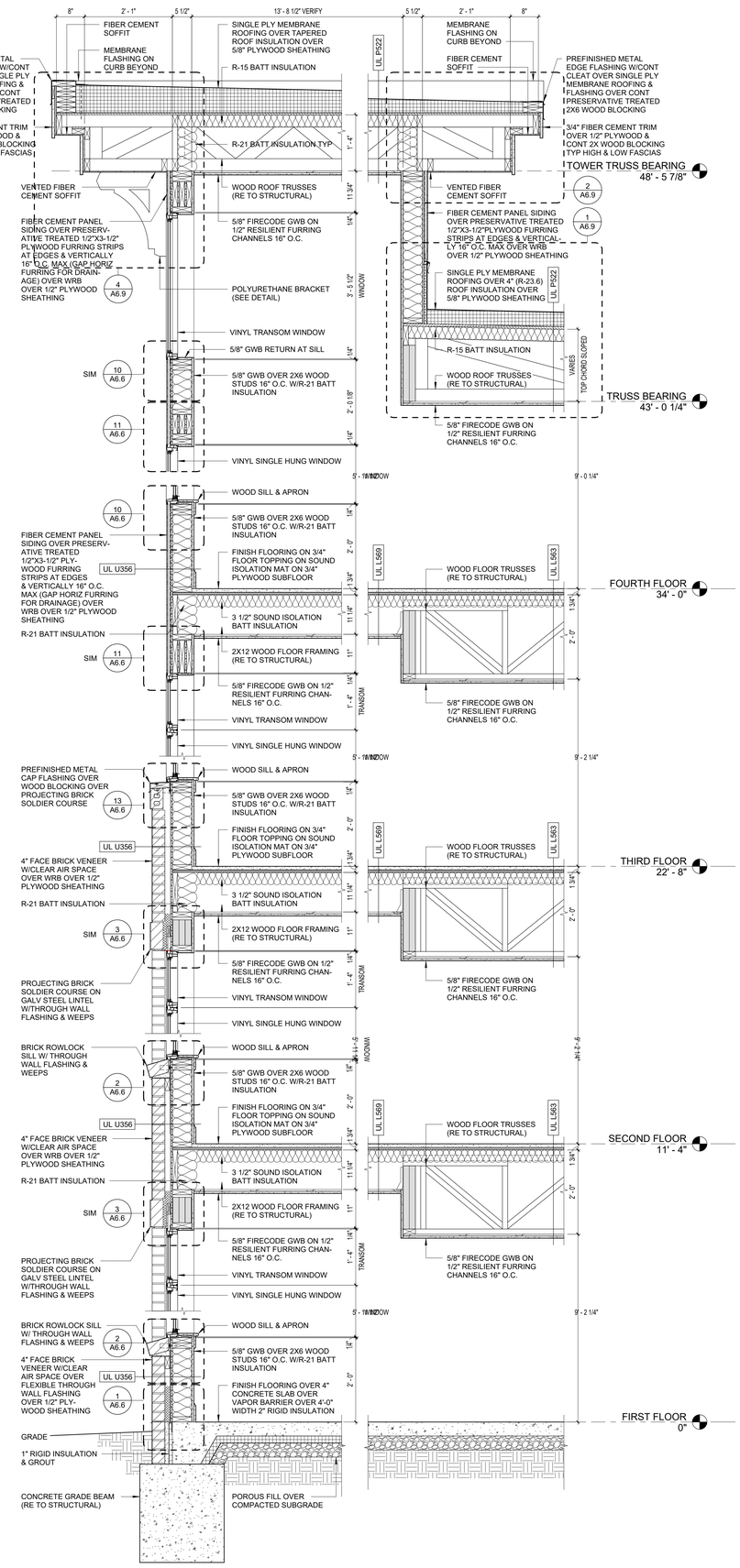
DRAWING TITLE

WALL SECTIONS - TYPICAL

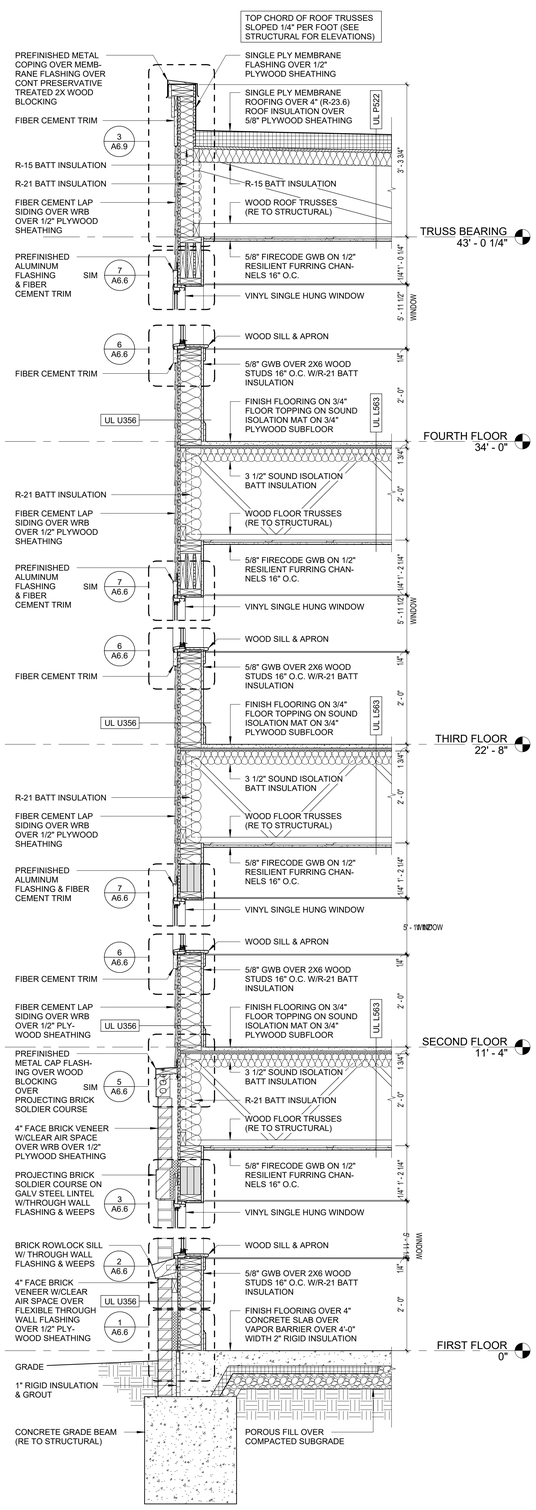
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.1



3 WALL SECTION 3
3/4" = 1'-0"



2 WALL SECTION 2
3/4" = 1'-0"



1 WALL SECTION 1
3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
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NUMBER A-2023034555
ARCHITECT
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ARCHITECT	: DAS	CHECKED	: AAT
ENGINEER	:	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

WALL SECTIONS

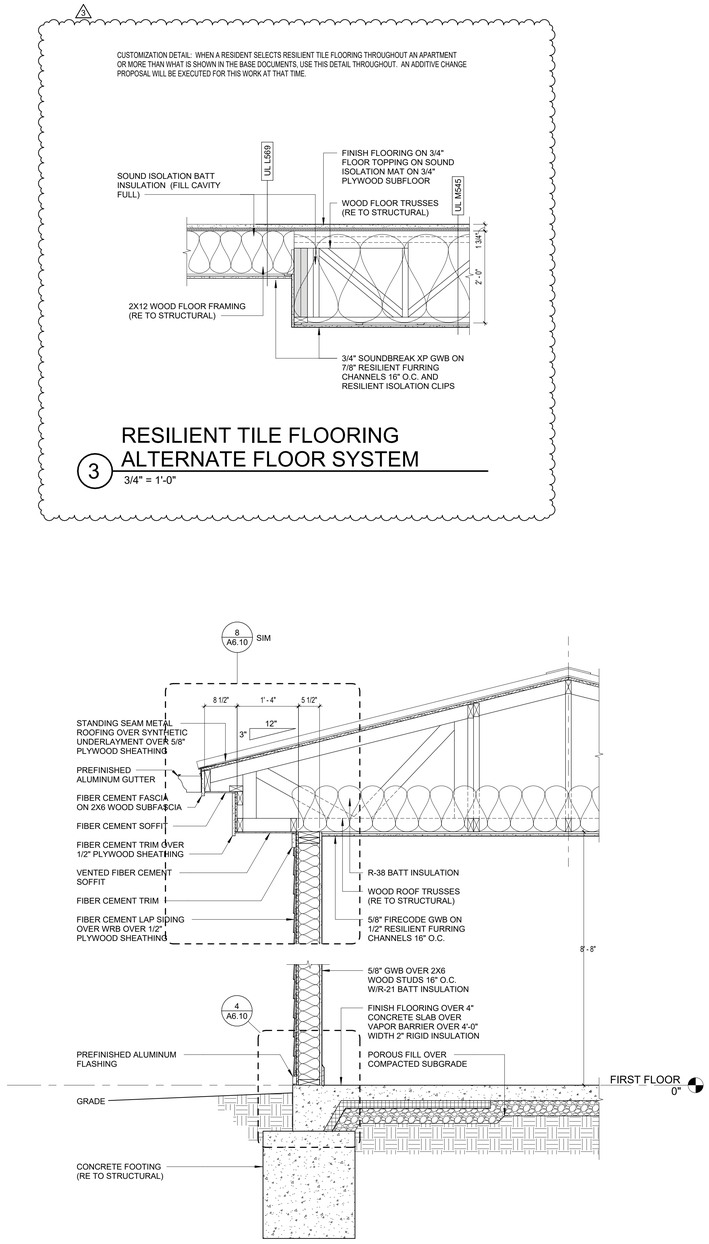
DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING A6.2

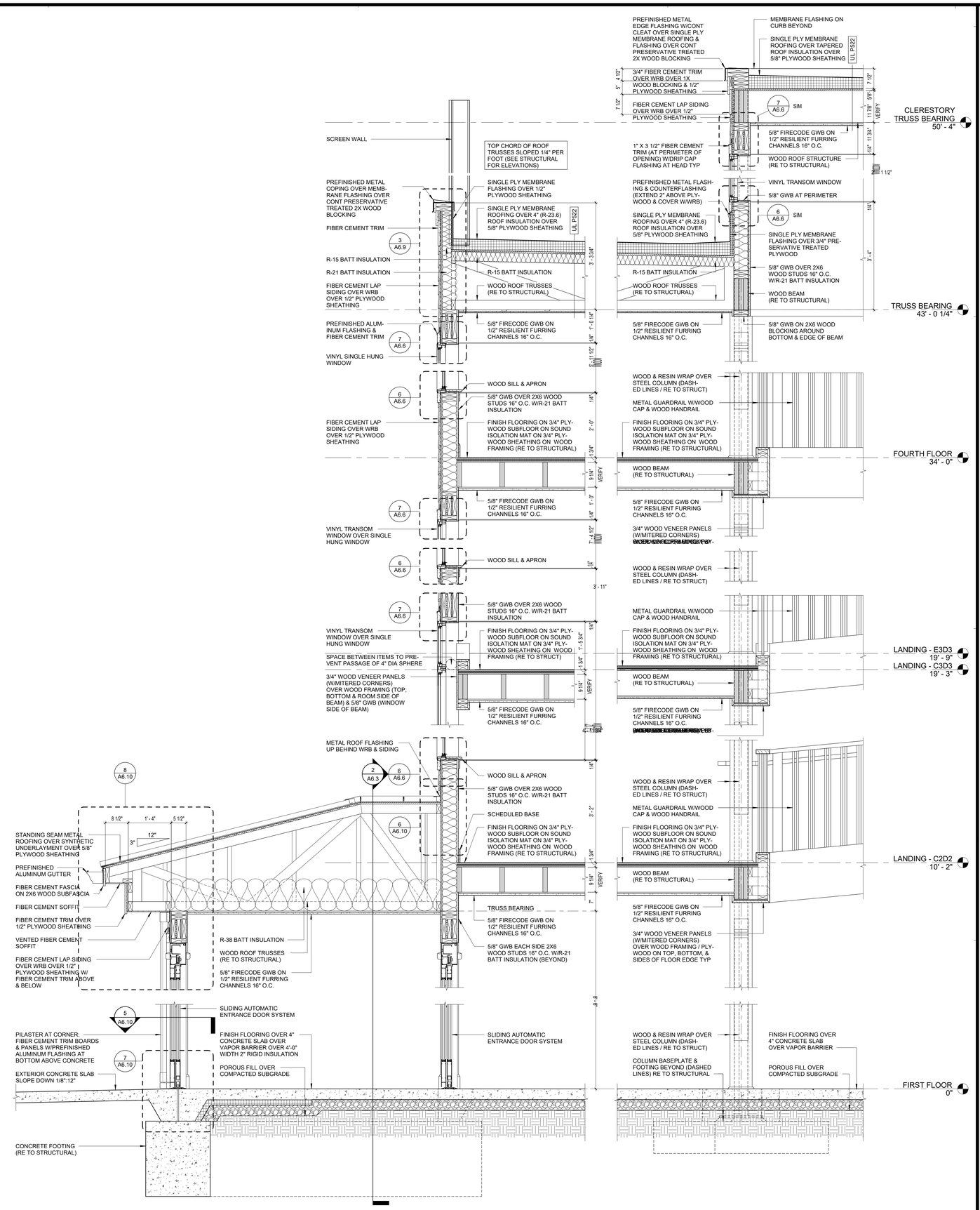
RESILIENT TILE FLOORING ALTERNATE FLOOR SYSTEM

3 3/4" = 1'-0"



MAIN ENTRANCE SIDE SECTION

2 3/4" = 1'-0"



MAIN ENTRANCE VESTIBULE

1 3/4" = 1'-0"

CONSTRUCTION SET

CURTIS R. JENNINGS III NUMBER A-2023034555 ARCHITECT — STATE OF MISSOURI

01-05-2024

PROJECT TITLE

John Knox Village

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DESIGNER : DAS	DRAWN : JAM
ARCHITECT : DAS	CHECKED : AAT
ENGINEER :	APPROVED :

NO.	REVISION DESCRIPTION	DATE
3	Addendum 1	03/07/24

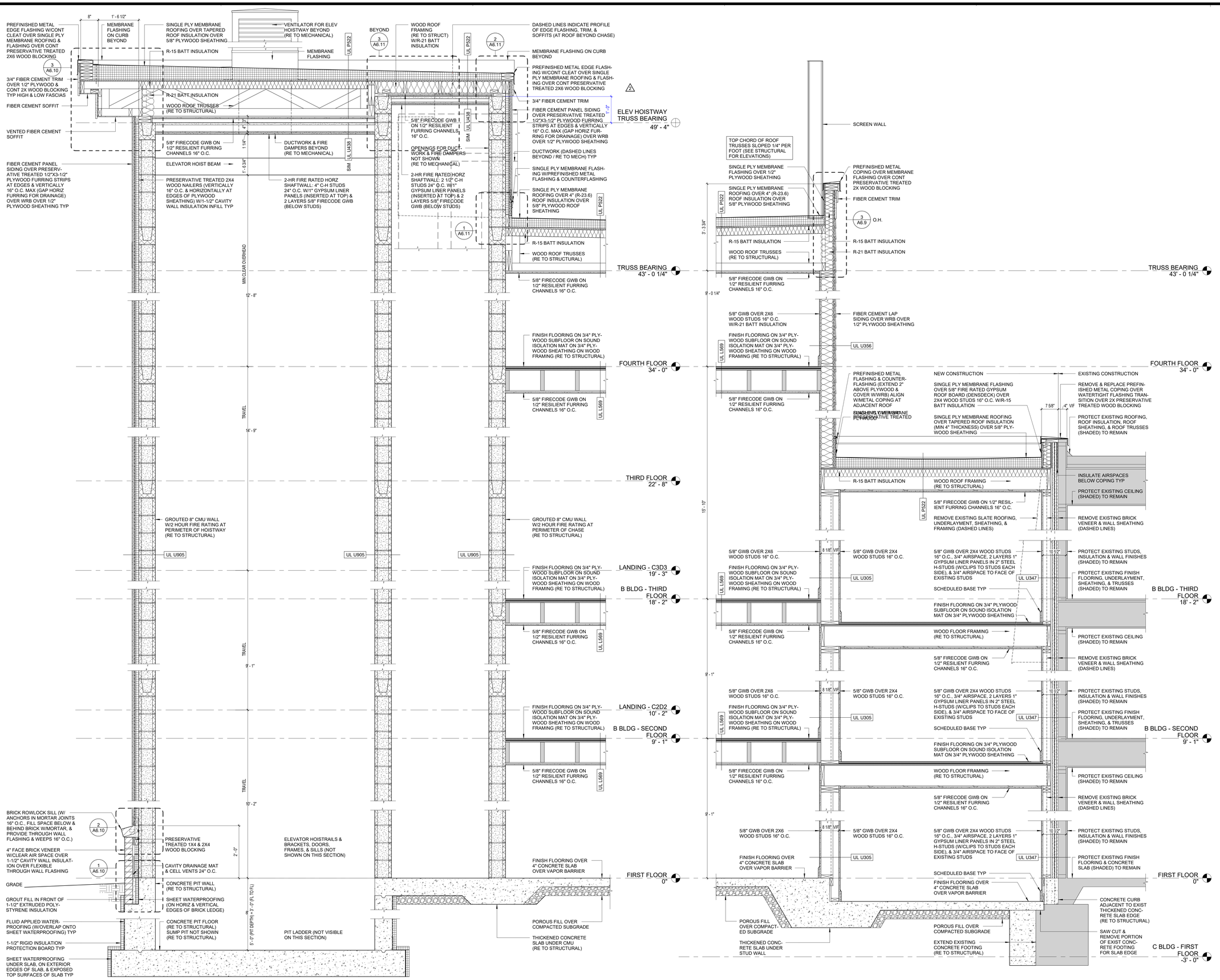
DRAWING TITLE

WALL SECTIONS

DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING A6.3



2 ELEVATOR #1 HOISTWAY SECTION
3/4" = 1'-0"

1 CORRIDOR SECTION
3/4" = 1'-0"

CONSTRUCTION SET

CURTIS R. JENNINGS III NUMBER A-2023034555 ARCHITECT — STATE OF MISSOURI
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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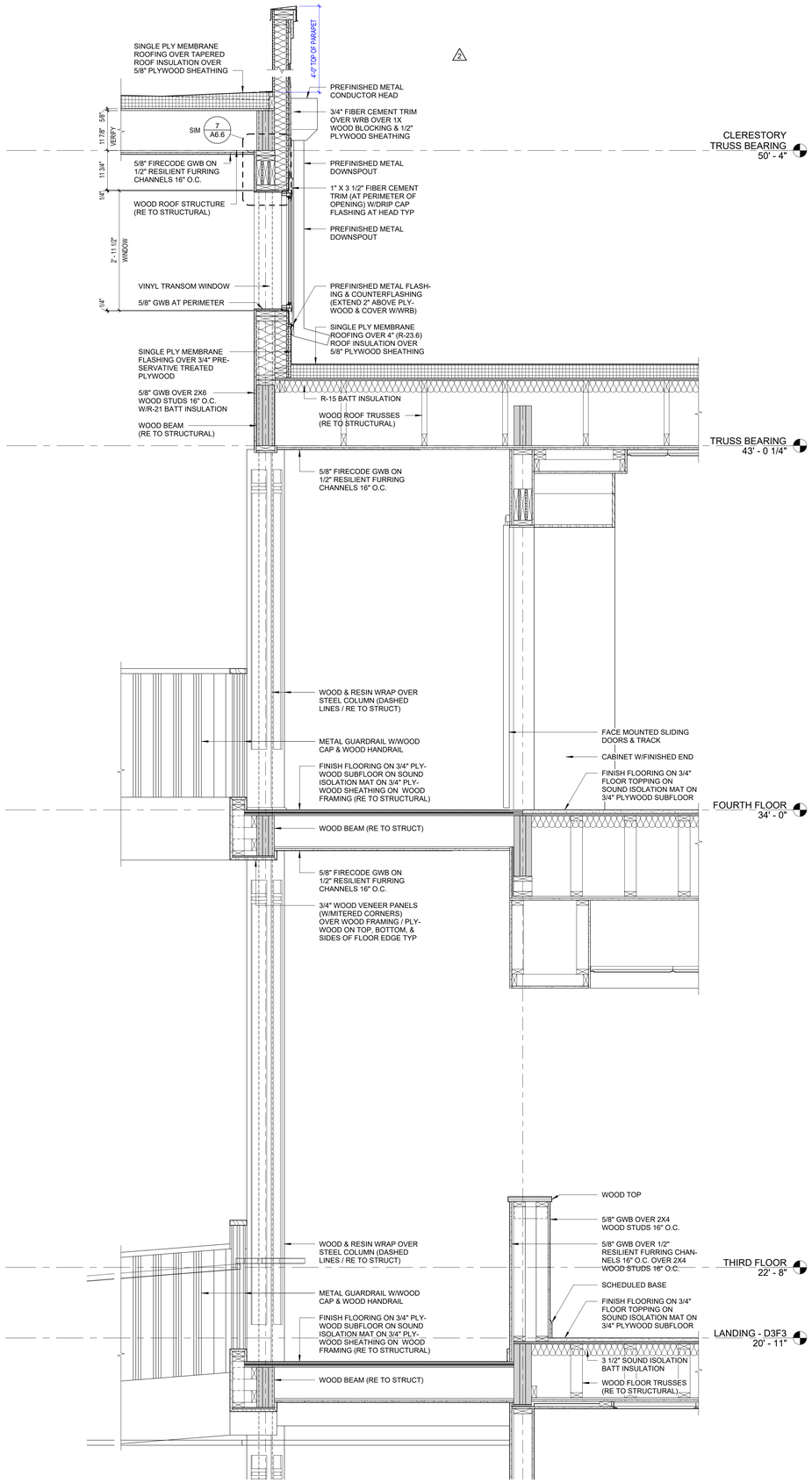
DESIGNER : DAS		DRAWN : JAM	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER :		APPROVED :	

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
WALL SECTIONS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.4



1 ATRIUM SECTION
3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

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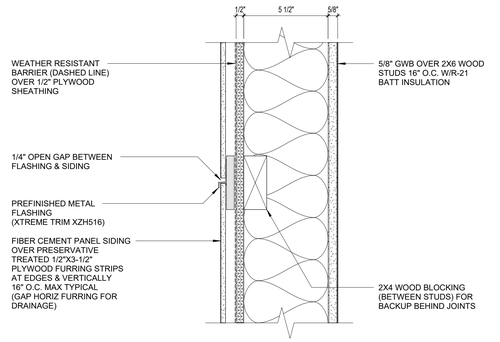
DESIGNER	DAS	DRAWN	JAM
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	

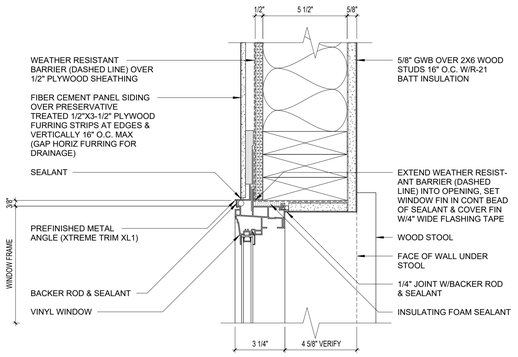
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
WALL SECTIONS

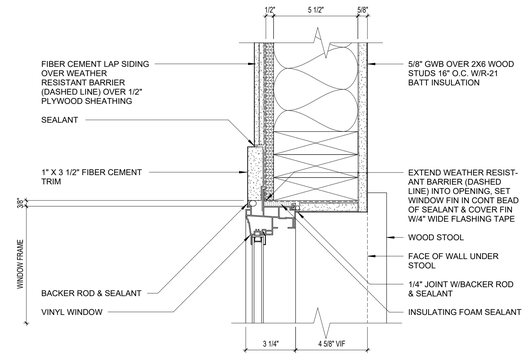
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.5



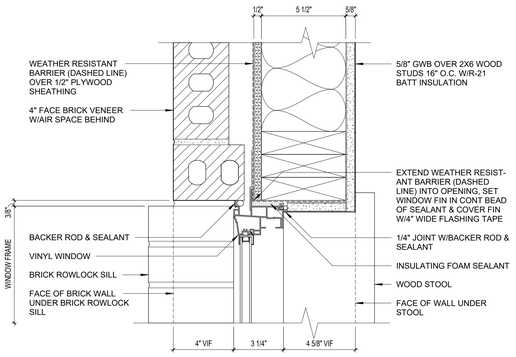
16 PANEL SIDING HORIZONTAL JOINT
3" = 1'-0"



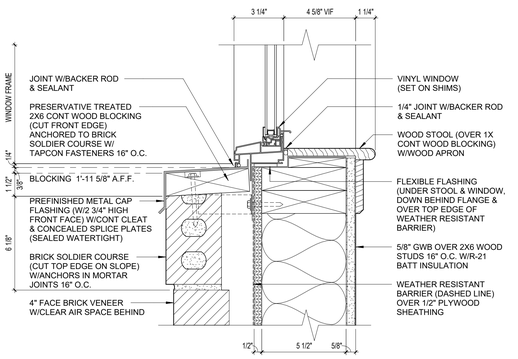
12 WINDOW JAMB AT PANEL SIDING
3" = 1'-0"



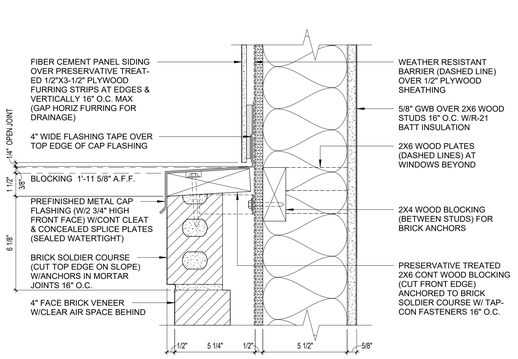
8 WINDOW JAMB AT LAP SIDING
3" = 1'-0"



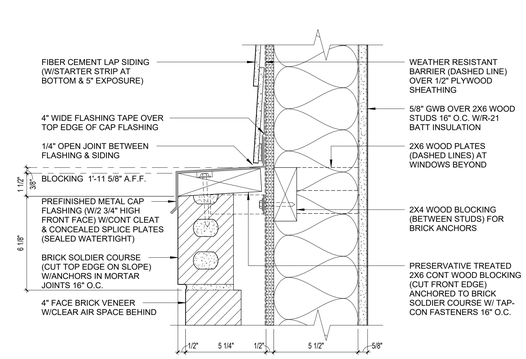
4 WINDOW JAMB AT BRICK
3" = 1'-0"



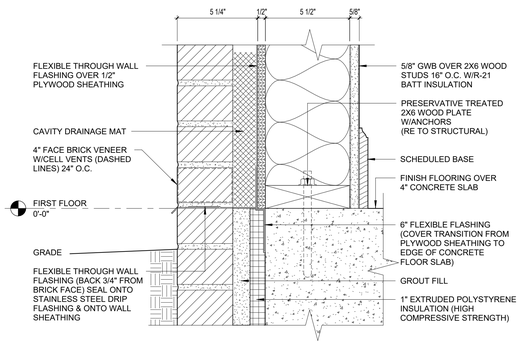
15 FAN OR DRYER VENT AT LAP SIDING
3" = 1'-0"



11 WINDOW HEAD AT PANEL SIDING
3" = 1'-0"



7 WINDOW HEAD AT LAP SIDING
3" = 1'-0"



3 WINDOW HEAD / BRICK SOLDIER
3" = 1'-0"

14 FAN OR DRYER VENT AT BRICK
3" = 1'-0"

10 WINDOW SILL AT PANEL SIDING
3" = 1'-0"

6 WINDOW SILL AT LAP SIDING
3" = 1'-0"

2 WINDOW SILL / BRICK ROWLOCK
3" = 1'-0"

13 WINDOW SILL AT SOLDIER BRICK
3" = 1'-0"

9 PANEL SIDING AT SOLDIER BRICK
3" = 1'-0"

5 LAP SIDING AT SOLDIER BRICK
3" = 1'-0"

1 BRICK WALL AT GRADE
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
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Charlotte, North Carolina 28203.4633
704.372.7327 • Fax 704.372.7369
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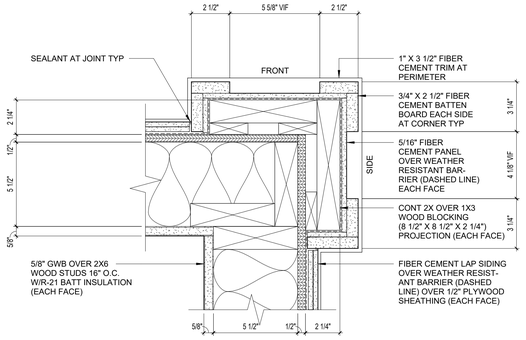
DESIGNER	DAS	DRAWN	JAM
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	

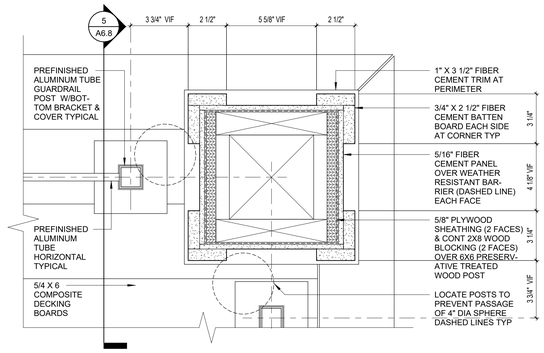
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
EXTERIOR DETAILS

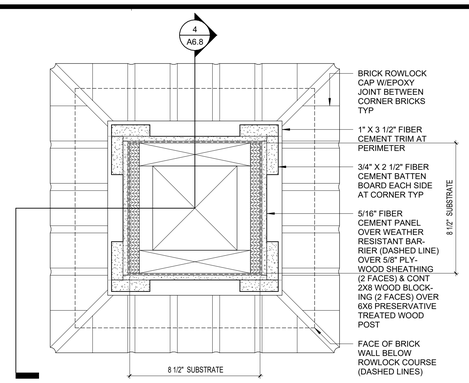
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.6



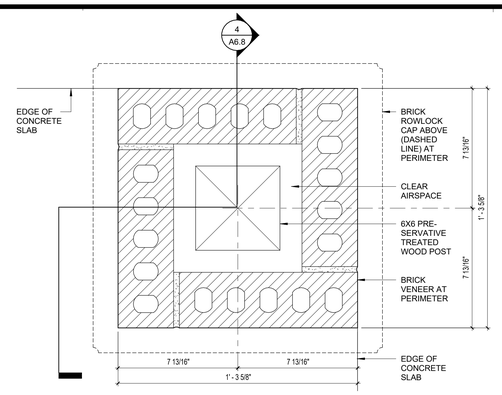
14 PILASTER AT ENTRANCE VESTIBULE
3" = 1'-0"



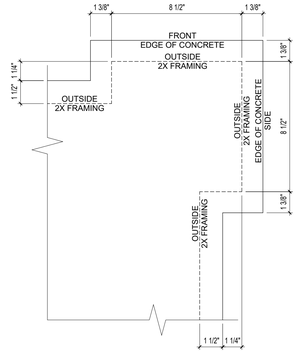
12 COLUMN PLAN ABOVE DECK
3" = 1'-0"



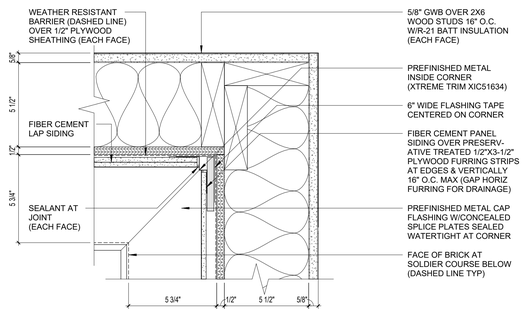
8 COLUMN PLAN ABOVE BRICK BASE
3" = 1'-0"



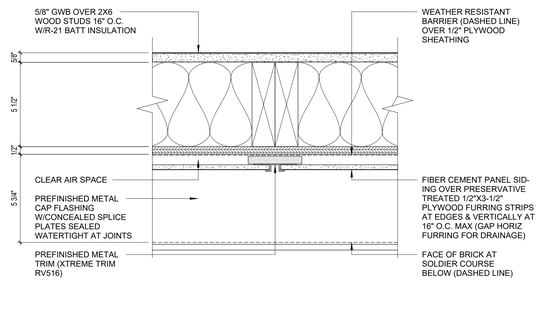
4 COLUMN PLAN AT BRICK BASE
3" = 1'-0"



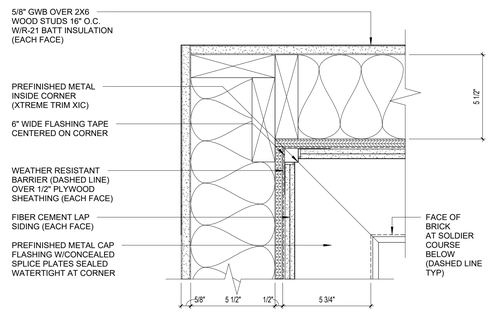
13 EDGE OF CONCRETE AT PILASTER
3" = 1'-0"



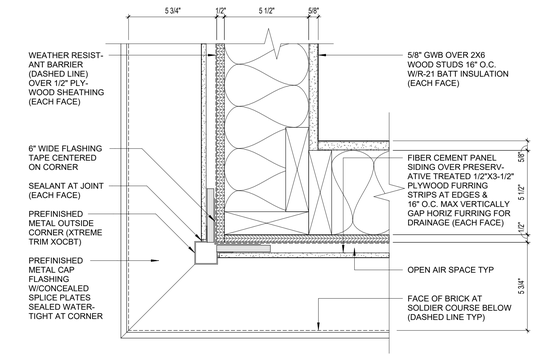
11 LAP - PANEL SIDING INSIDE CORNER
3" = 1'-0"



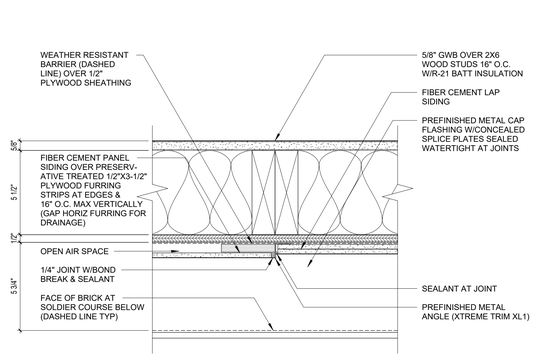
7 PANEL SIDING / PANEL SIDING
3" = 1'-0"



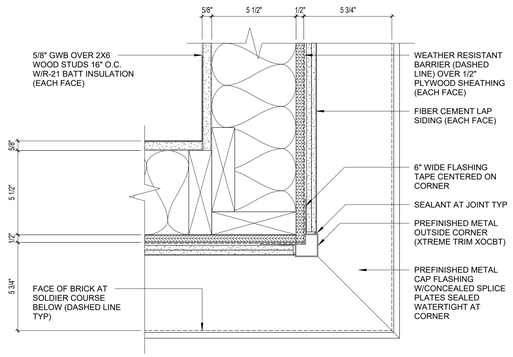
3 LAP SIDING INSIDE CORNER
3" = 1'-0"



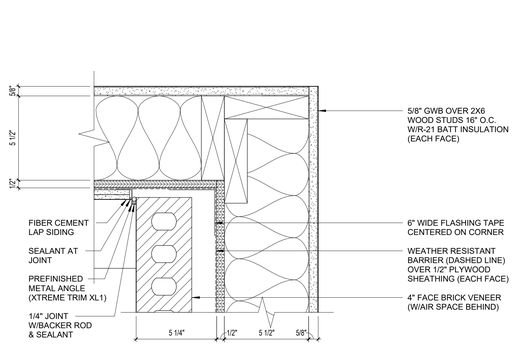
10 PANEL SIDING OUTSIDE CORNER
3" = 1'-0"



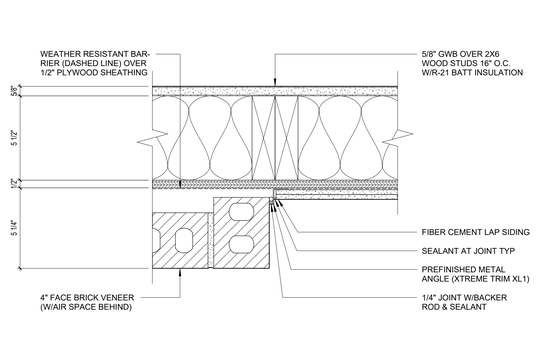
6 PANEL SIDING / LAP SIDING
3" = 1'-0"



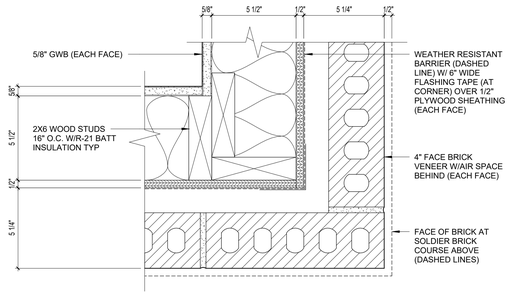
2 LAP SIDING OUTSIDE CORNER
3" = 1'-0"



9 LAP SIDING / BRICK INSIDE CORNER
3" = 1'-0"



5 BRICK VENEER / LAP SIDING
3" = 1'-0"



1 BRICK VENEER OUTSIDE CORNER
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER	DAS	DRAWN	JAM
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

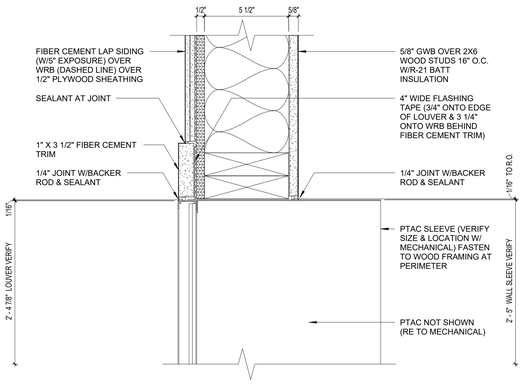
DRAWING TITLE

EXTERIOR DETAILS

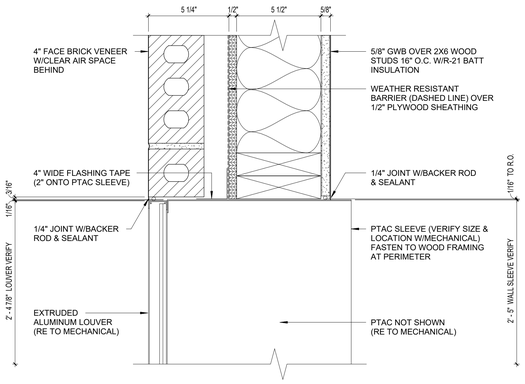
DATE: January 5, 2024

COMM. NO. 23104.00

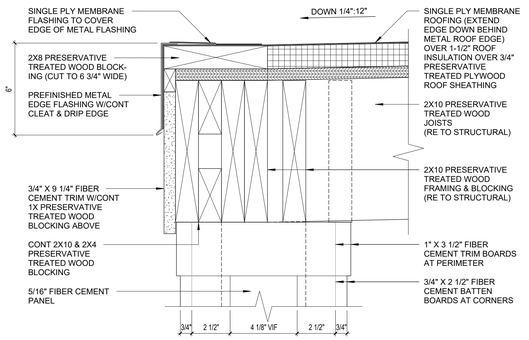
DRAWING A6.7



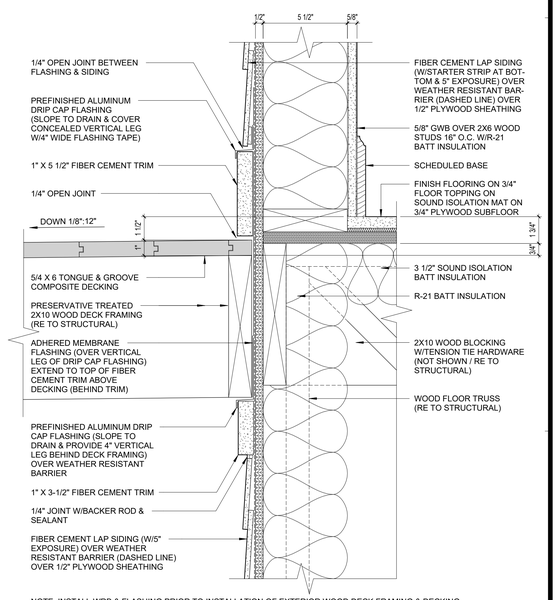
15 PTAC LOUVER IN SIDING AT JAMB
3" = 1'-0"



11 PTAC LOUVER IN BRICK AT JAMB
3" = 1'-0"

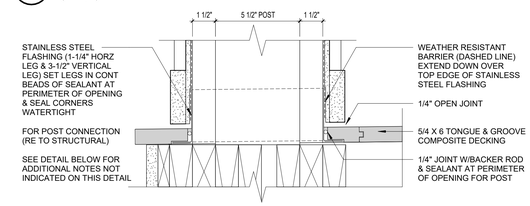


7 EDGE OF BALCONY ROOF
3" = 1'-0"

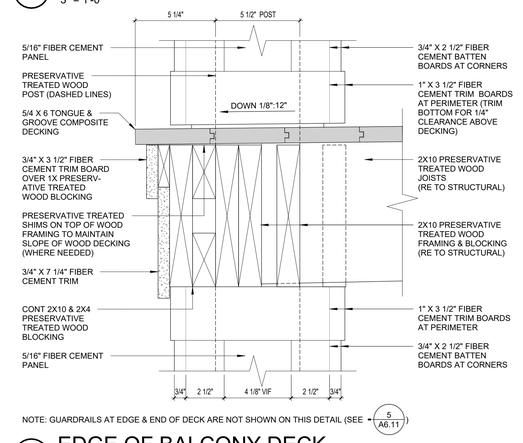


NOTE: INSTALL WRB & FLASHING PRIOR TO INSTALLATION OF EXTERIOR WOOD DECK FRAMING & DECKING

3 BALCONY DECK ABOVE SIDING
3" = 1'-0"

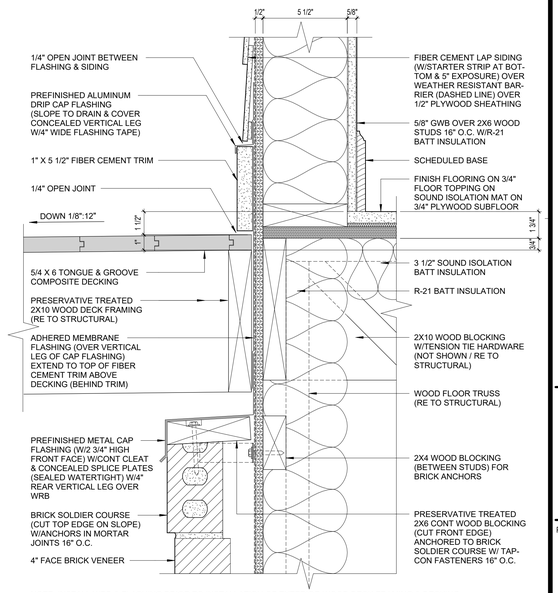


6 BALCONY DECK AT POST BASE
3" = 1'-0"



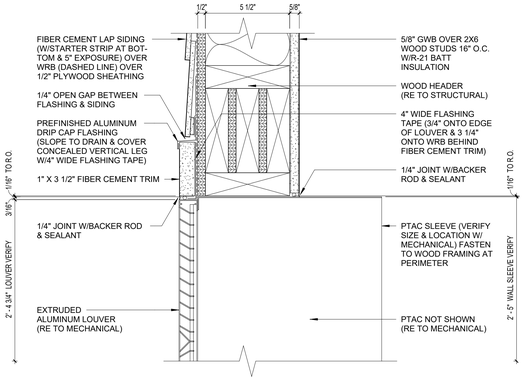
NOTE: GUARDRAILS AT EDGE & END OF DECK ARE NOT SHOWN ON THIS DETAIL (SEE 5/A6.11)

5 EDGE OF BALCONY DECK
3" = 1'-0"

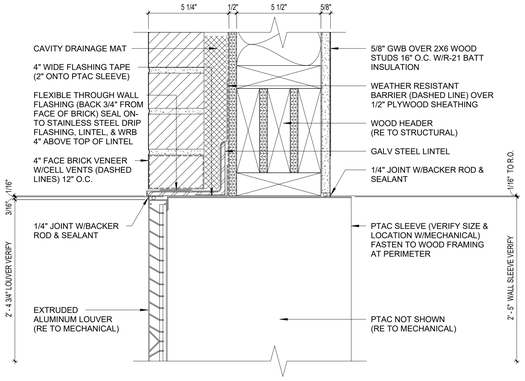


NOTE: INSTALL WRB & FLASHING PRIOR TO INSTALLATION OF EXTERIOR WOOD DECK FRAMING & DECKING

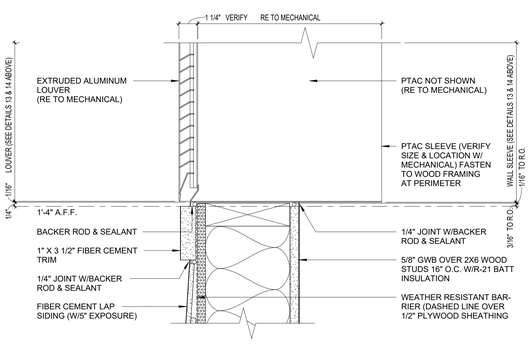
2 BALCONY DECK ABOVE BRICK
3" = 1'-0"



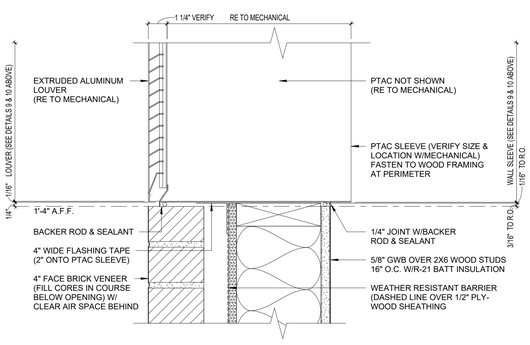
13 PTAC LOUVER IN SIDING AT HEAD 1
3" = 1'-0"



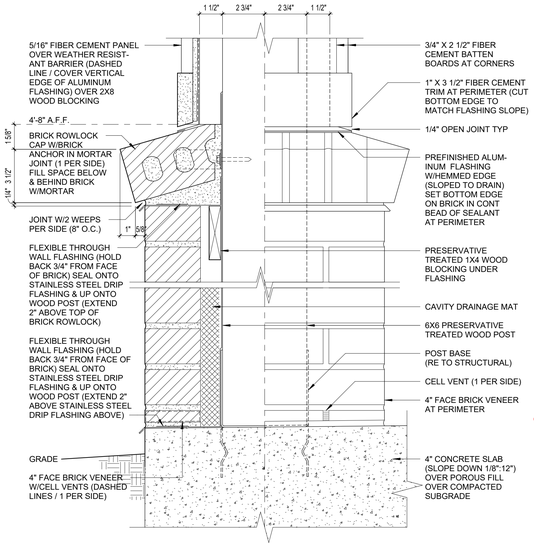
9 PTAC LOUVER IN BRICK AT HEAD 1
3" = 1'-0"



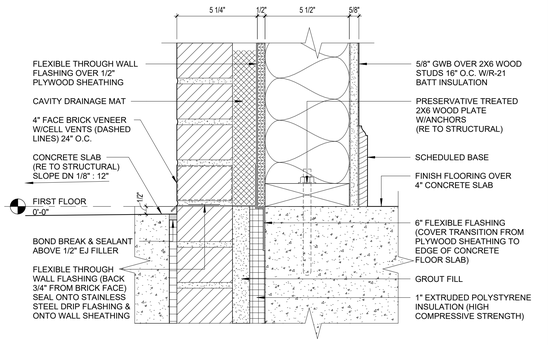
12 PTAC LOUVER IN SIDING AT SILL
3" = 1'-0"



8 PTAC LOUVER IN BRICK AT SILL
3" = 1'-0"



4 SECTION / EL AT BRICK BASE
3" = 1'-0"



1 BRICK WALL AT CONCRETE SLAB
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034855
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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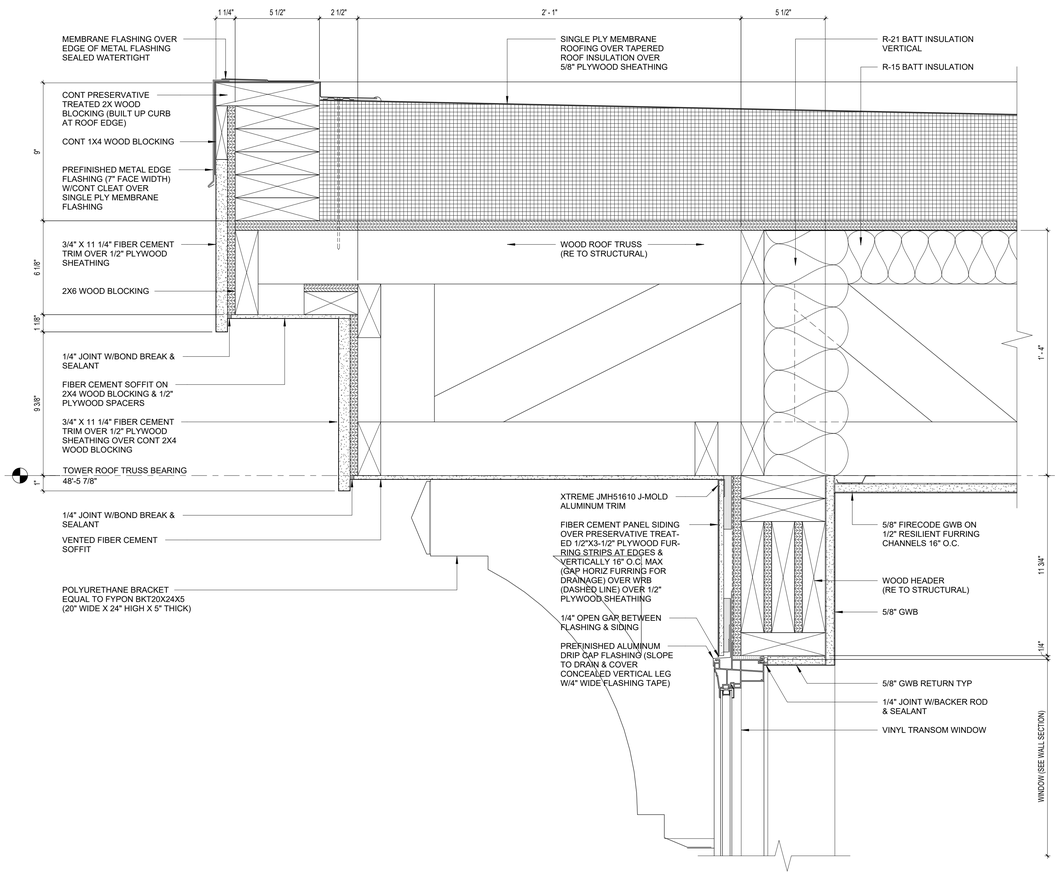
DESIGNER	DAS	DRAWN	JAM
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

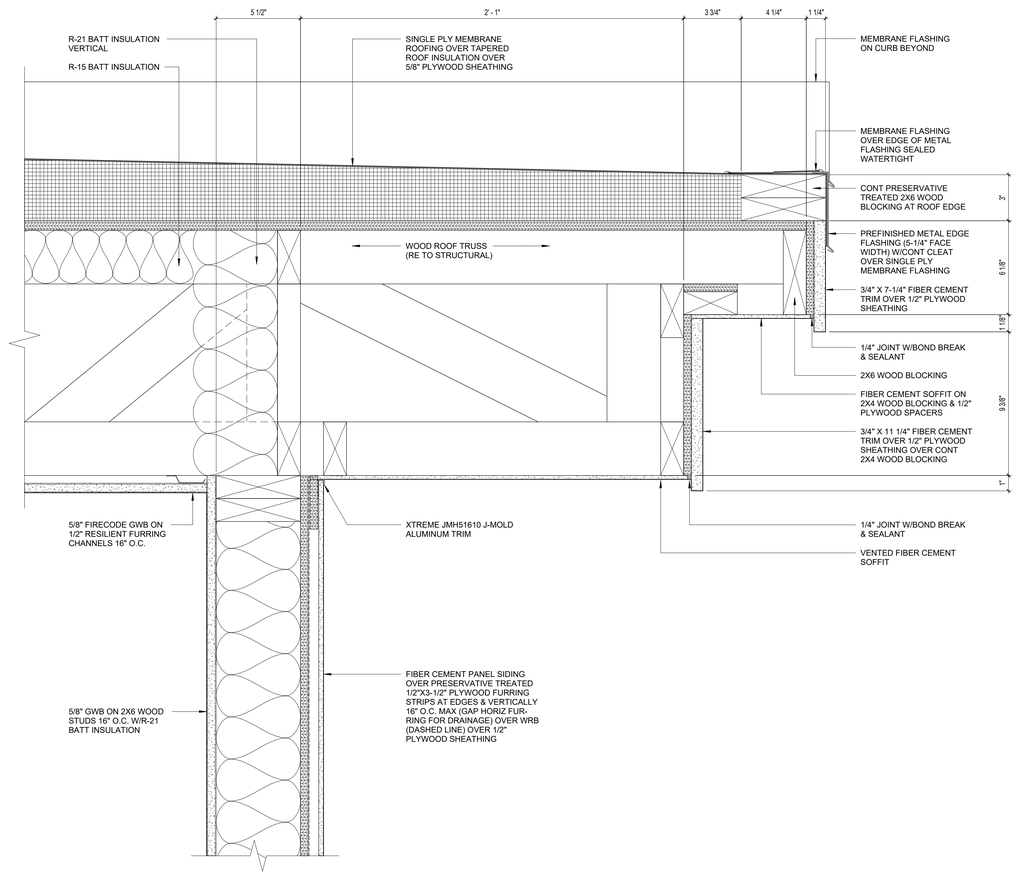
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
EXTERIOR DETAILS

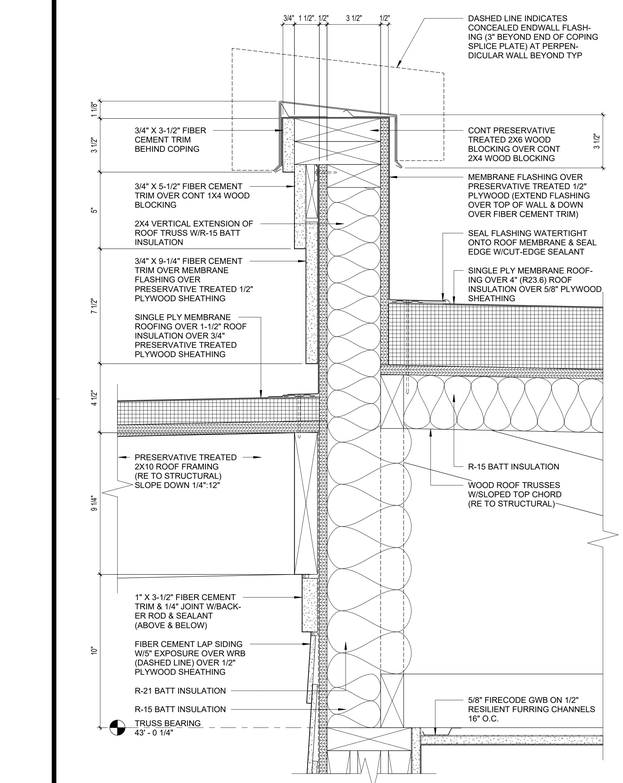
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.8



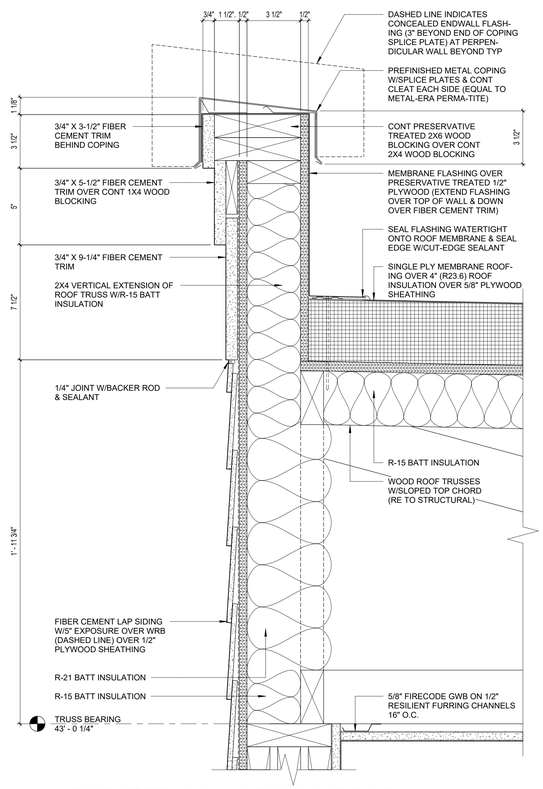
4 TOWER ROOF FRONT EDGE
3" = 1'-0"



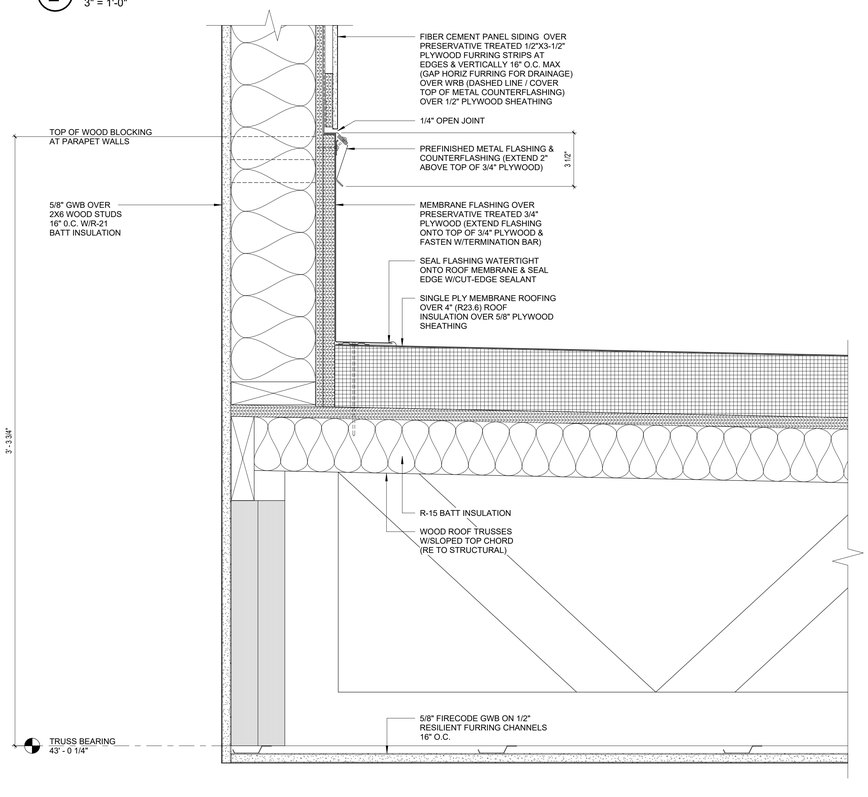
2 TOWER ROOF REAR EDGE
3" = 1'-0"



5 PARAPET WALL AT DECK ROOF
3" = 1'-0"



3 PARAPET WALL AT MAIN ROOF
3" = 1'-0"



1 TOWER WALL AT MAIN ROOF
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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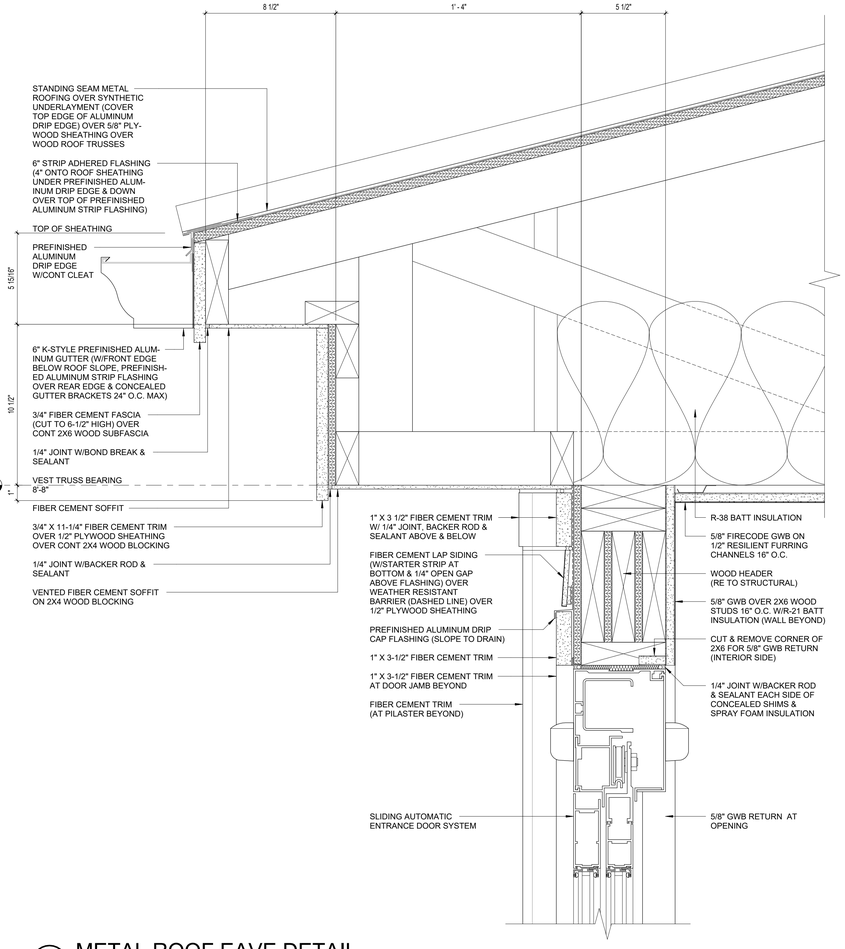
DESIGNER : DAS	DRAWN : JAM
ARCHITECT : DAS	CHECKED : AAT
ENGINEER :	APPROVED : CRJ

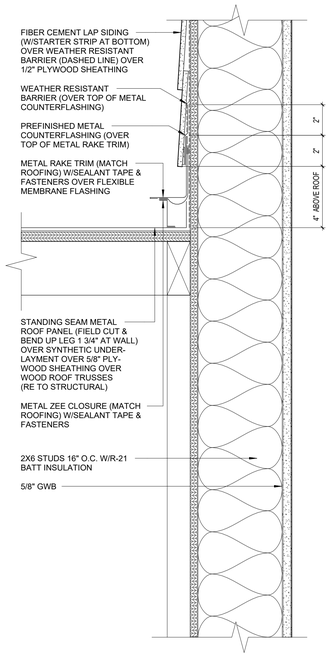
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
EXTERIOR DETAILS

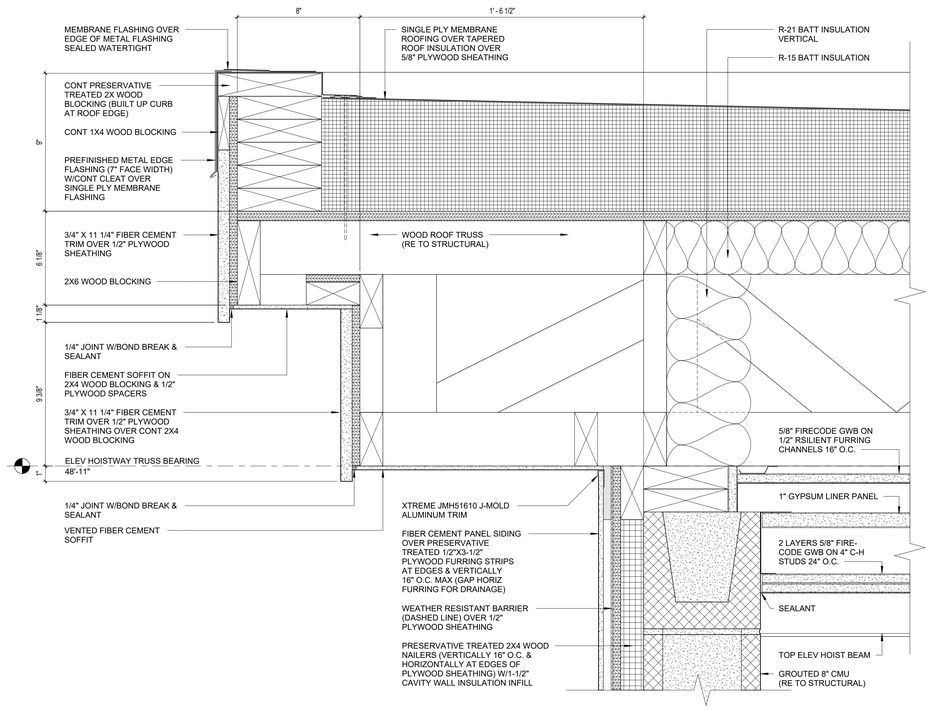
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.9



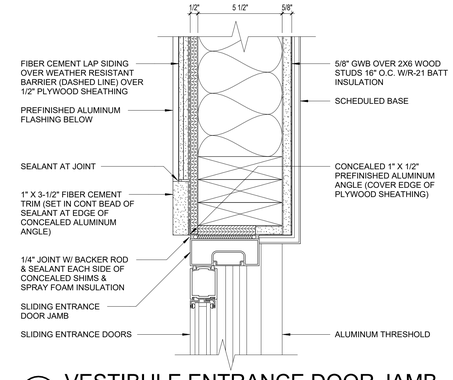
8 METAL ROOF EAVE DETAIL
3" = 1'-0"



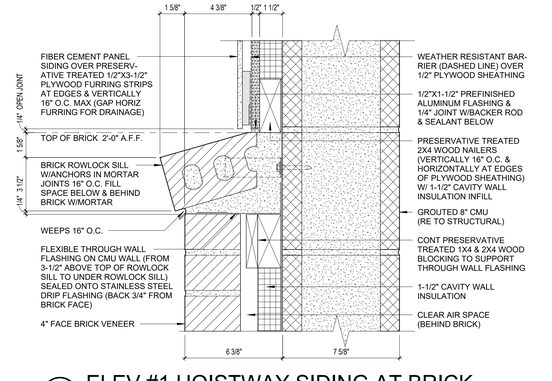
6 METAL ROOF FLASHING AT WALL
3" = 1'-0"



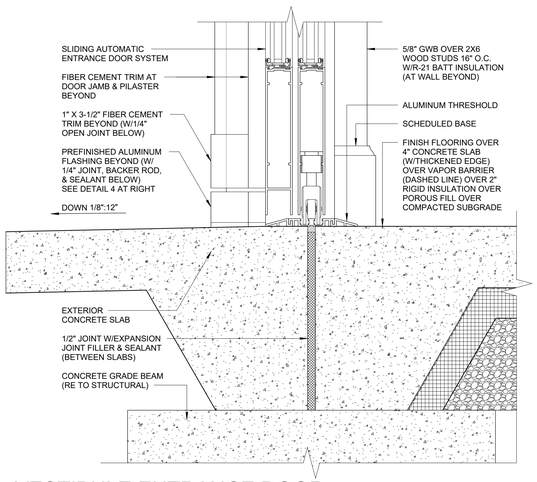
3 ELEV #1 HOISTWAY ROOF EDGE
3" = 1'-0"



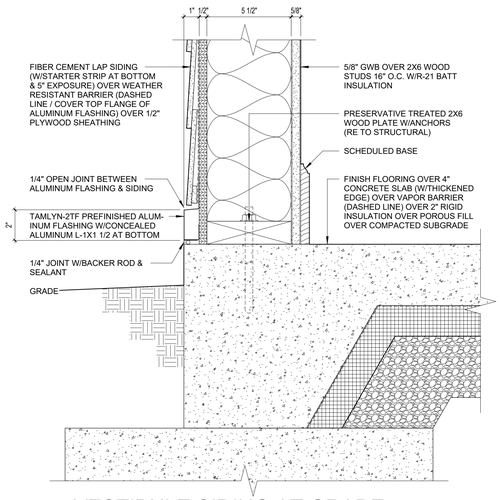
5 VESTIBULE ENTRANCE DOOR JAMB
3" = 1'-0"



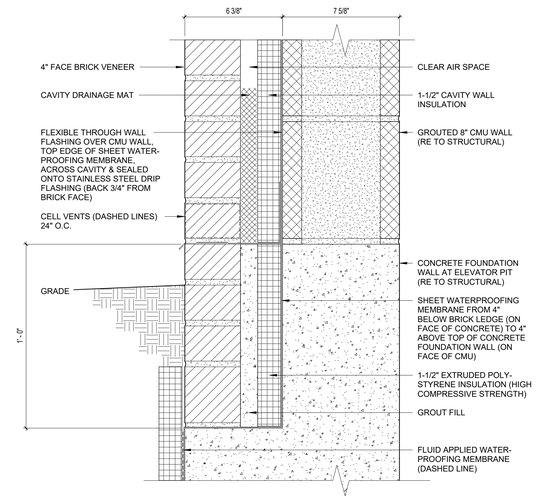
2 ELEV #1 HOISTWAY SIDING AT BRICK
3" = 1'-0"



7 VESTIBULE ENTRANCE DOOR
3" = 1'-0"



4 VESTIBULE SIDING AT GRADE
3" = 1'-0"



1 ELEV #1 HOISTWAY PIT AT GRADE
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
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NUMBER A-2023034555
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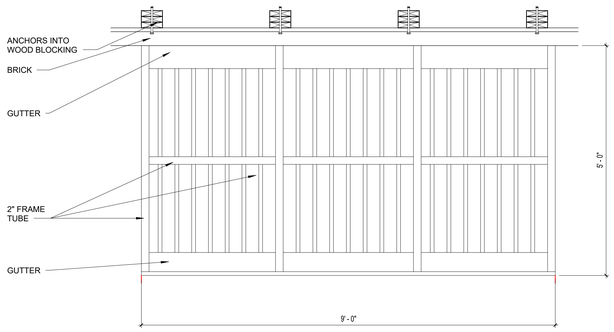
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

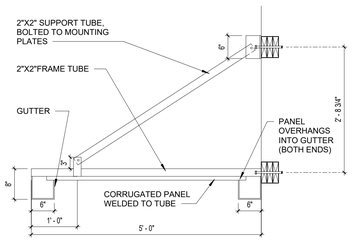
DRAWING TITLE

EXTERIOR DETAILS

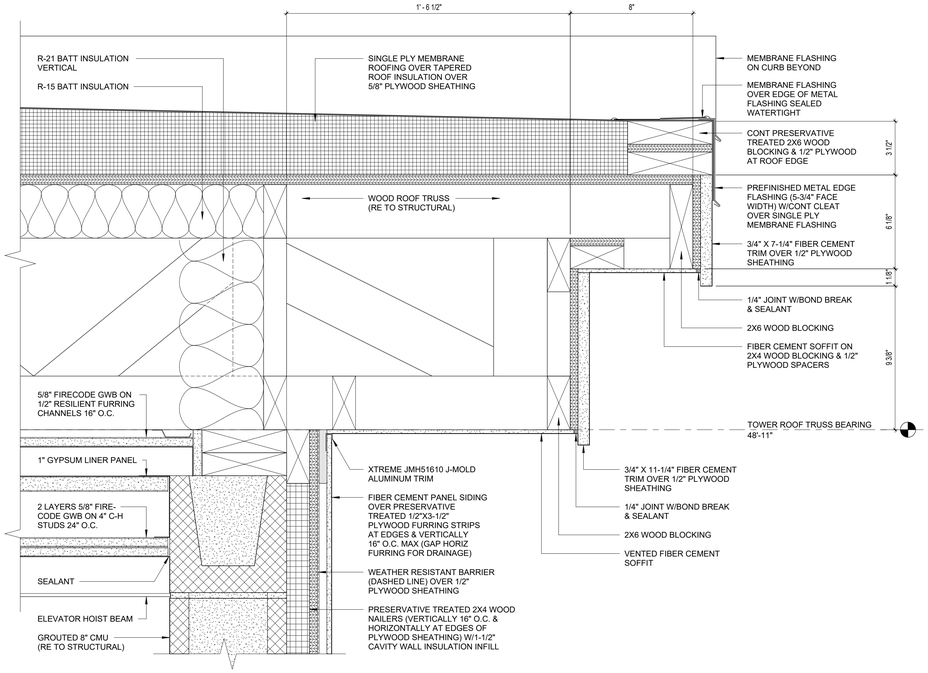
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.10



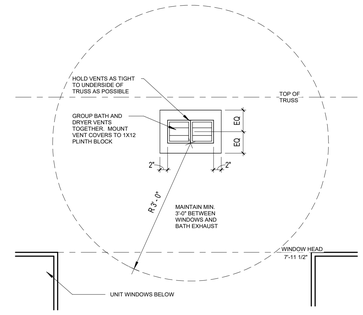
8 ALUMINUM CANOPY PLAN
3/4" = 1'-0"



7 ALUMINUM CANOPY SECTION
3/4" = 1'-0"

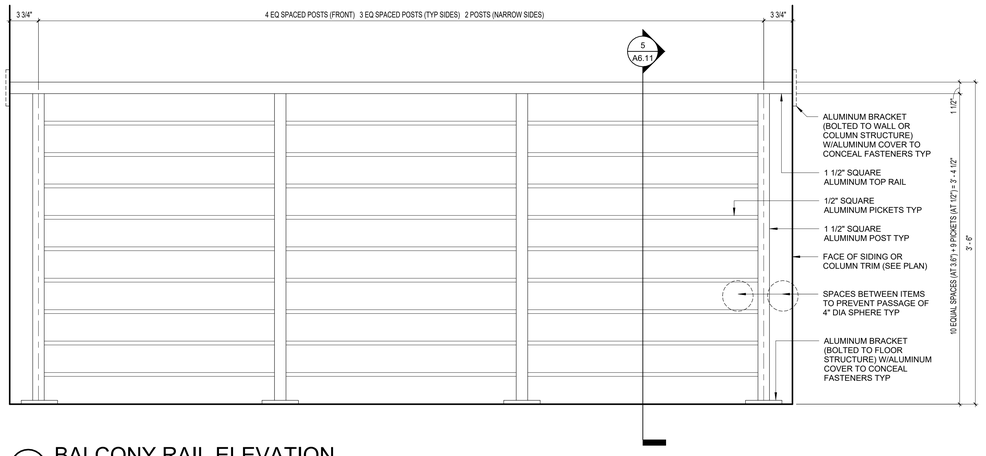


3 ELEV #1 HOISTWAY LOW ROOF EDGE
3" = 1'-0"

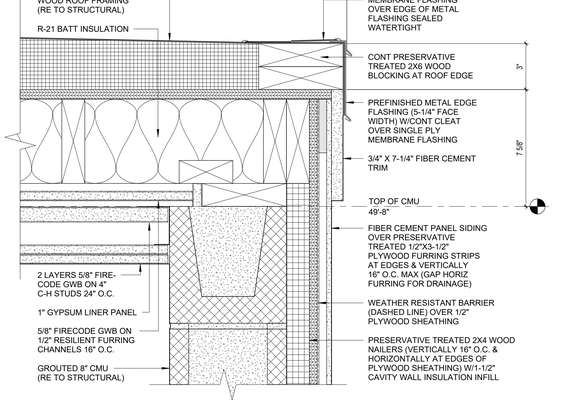


6 DRYER VENT DETAIL
3/4" = 1'-0"

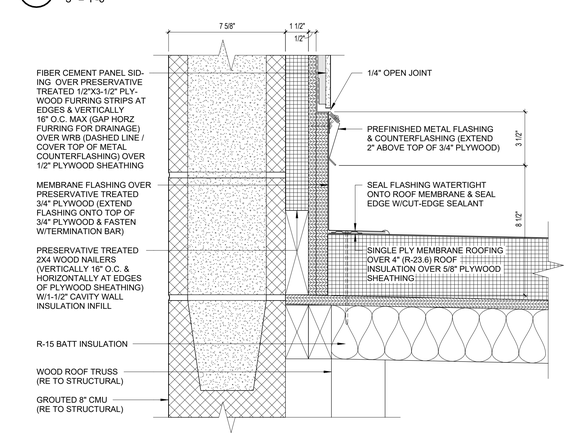
5 BALCONY RAIL SECTION
1 1/2" = 1'-0"



4 BALCONY RAIL ELEVATION
1 1/2" = 1'-0"



2 MECH CHASE LOW ROOF EDGE
3" = 1'-0"



1 MECH CHASE WALL AT ROOF
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

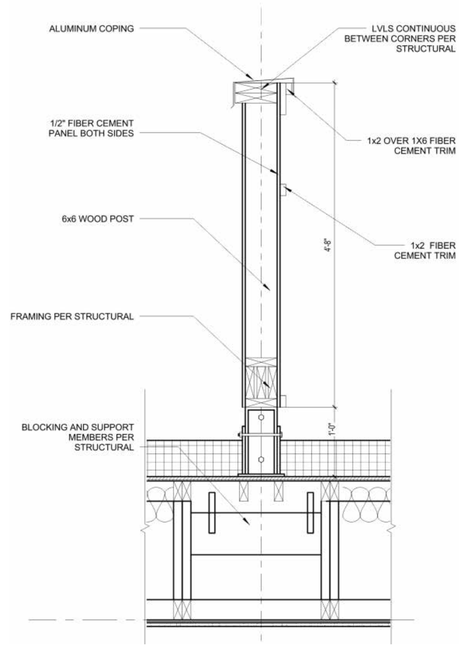
SFCS Architecture Engineering Planning Interiors
SFCS Inc. • 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 • Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	JAM
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	

NO.	REVISION DESCRIPTION	DATE

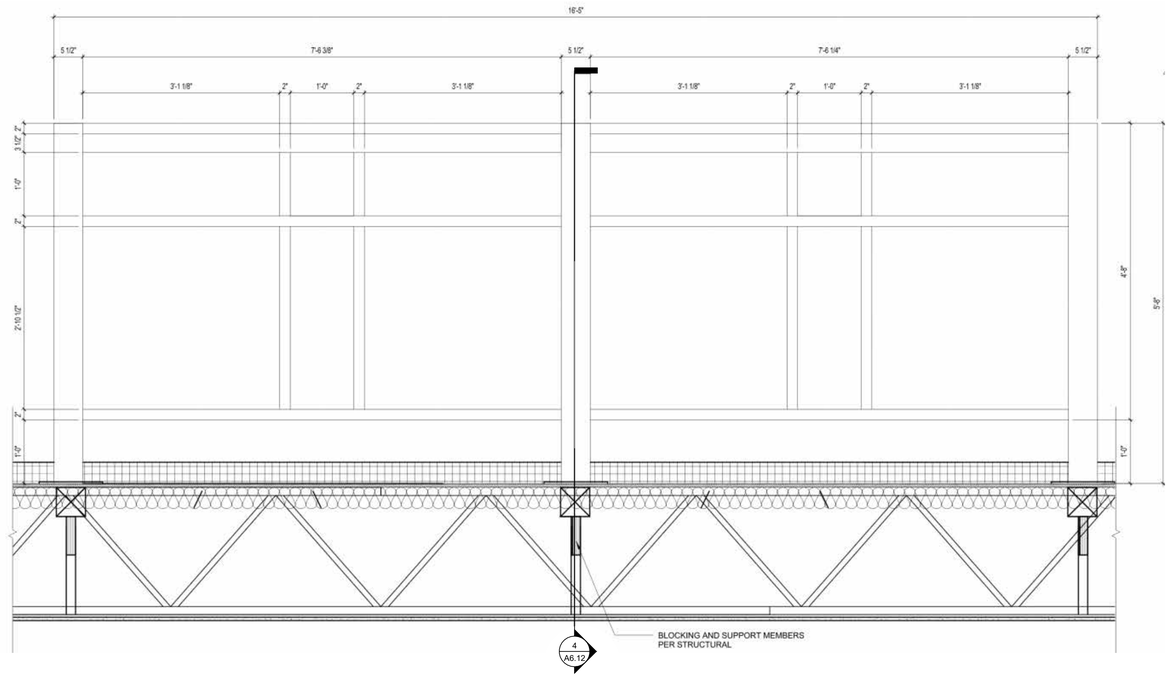
DRAWING TITLE
EXTERIOR DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A6.11



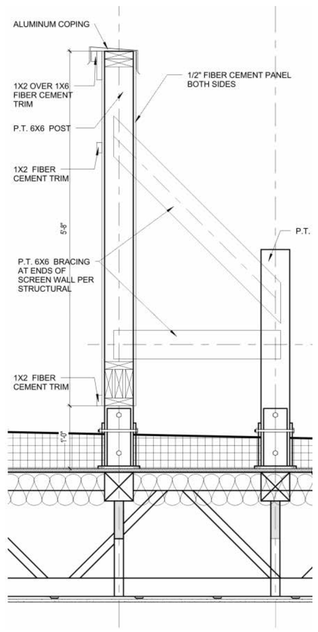
4 SCREEN WALL SECTION PERPENDICULAR TO TRUSS

3" = 1'-0"



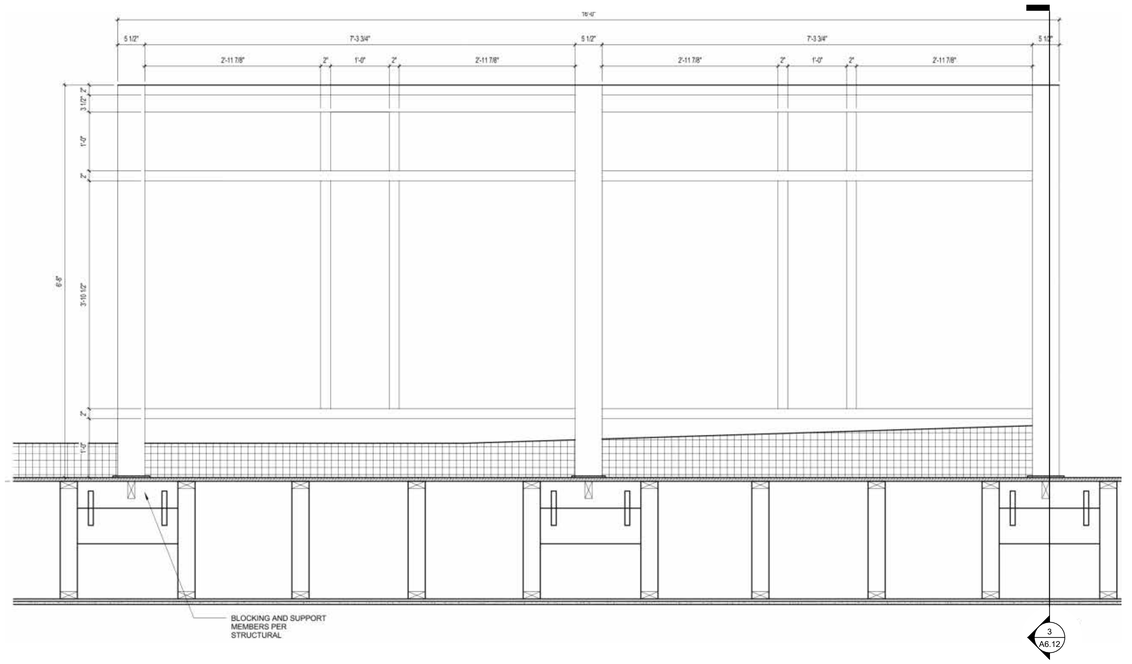
2 SCREEN WALL ELEVATION PERPENDICULAR TO TRUSS

3" = 1'-0"



3 SCREEN WALL SECTION PARALLEL TO TRUSS

3" = 1'-0"



1 SCREEN WALL ELEVATION PARALLEL TO TRUSS

3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
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DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

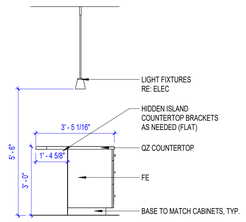
DRAWING TITLE

EXTERIOR DETAILS

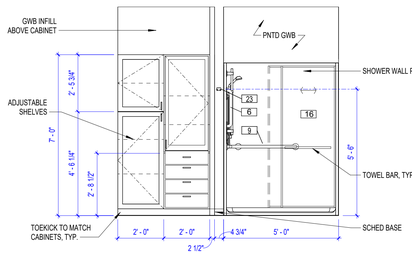
DATE: January 5, 2024

COMM. NO. 23104.00

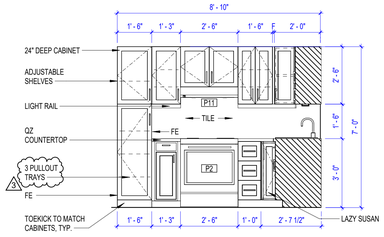
DRAWING A6.12



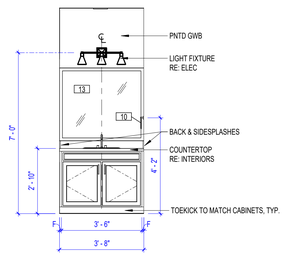
20 UNIT D1-D2-D3 KIT. ISLAND 2
3/8" = 1'-0"



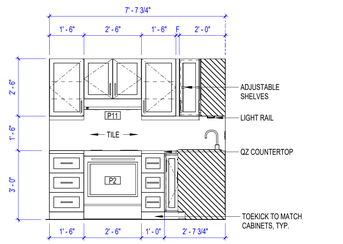
16 UNIT D1-D2-D3 PR. SHOWER
3/8" = 1'-0"



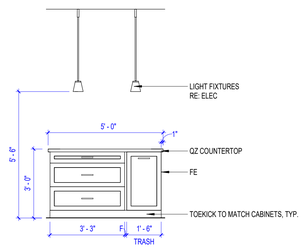
12 UNIT C KITCHEN STOVE
3/8" = 1'-0"



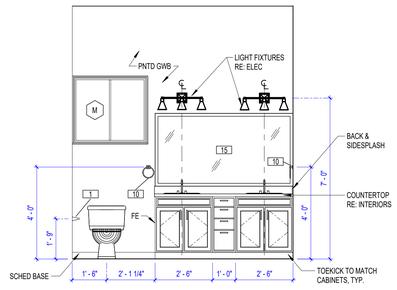
8 UNIT C HALF BATH
3/8" = 1'-0"



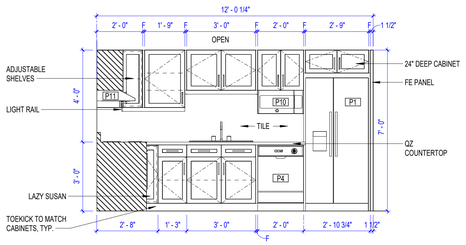
4 UNIT B KITCHEN STOVE
3/8" = 1'-0"



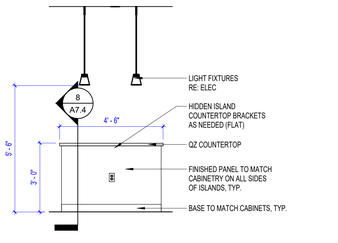
19 UNIT D1-D2-D3 KIT. ISLAND
3/8" = 1'-0"



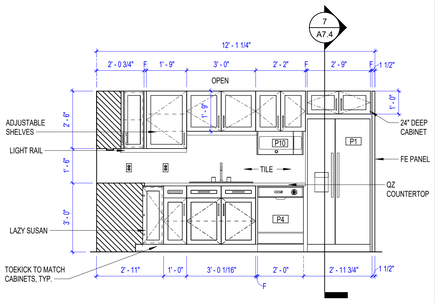
15 UNIT D1-D2-D3 PR. VANITY
3/8" = 1'-0"



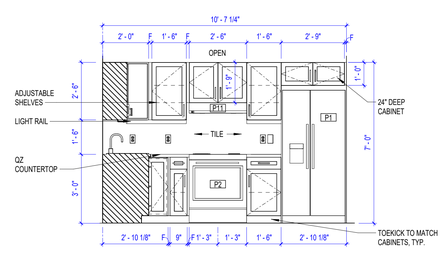
11 UNIT C KITCHEN SINK
3/8" = 1'-0"



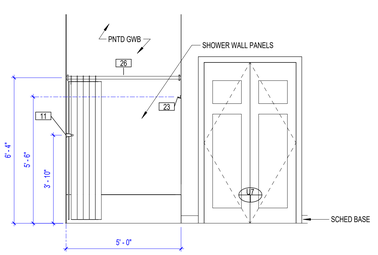
7 UNIT B-C KITCHEN ISLAND 3
3/8" = 1'-0"



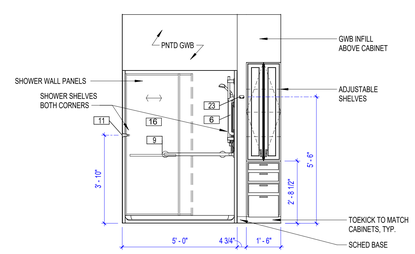
3 UNIT B KITCHEN SINK
3/8" = 1'-0"



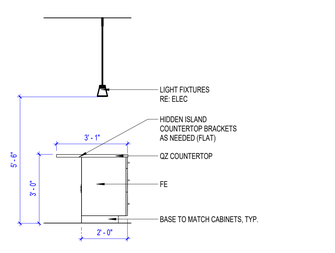
18 UNIT D1-D2-D3 KIT. STOVE
3/8" = 1'-0"



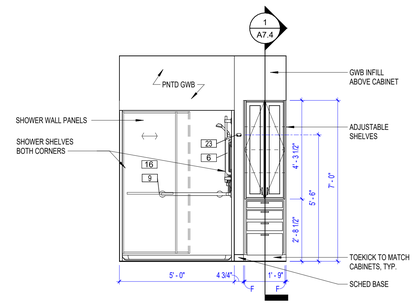
14 UNIT D1-D2-D3 BATHTUB
3/8" = 1'-0"



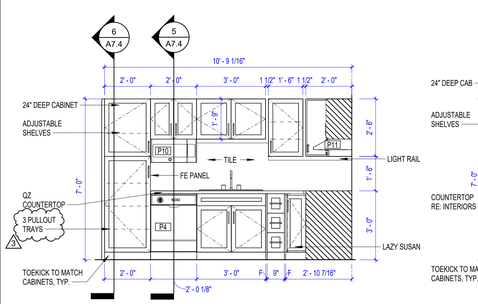
10 UNIT C SHOWER
3/8" = 1'-0"



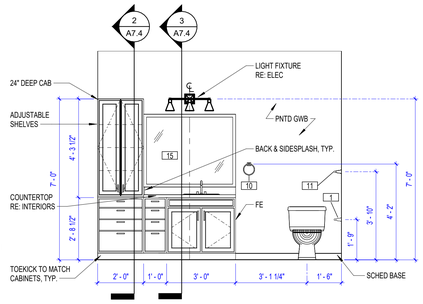
6 UNIT B-C KITCHEN ISLAND 2
3/8" = 1'-0"



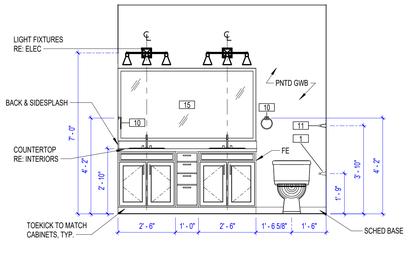
2 UNIT B SHOWER
3/8" = 1'-0"



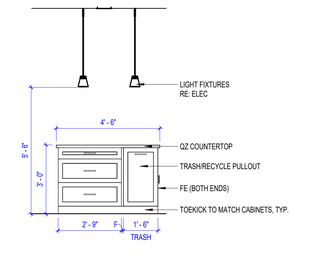
17 UNIT D1-D2-D3 KIT. SINK
3/8" = 1'-0"



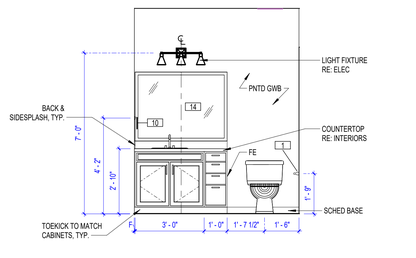
13 UNIT D1-D2-D3 BATH VAN.
3/8" = 1'-0"



9 UNIT C BATH VANITY
3/8" = 1'-0"



5 UNIT B-C KITCHEN ISLAND 1
3/8" = 1'-0"



1 UNIT B BATH VANITY
3/8" = 1'-0"

GENERAL NOTES

1. PROVIDE BLOCKING FOR FUTURE INSTALLATION OF GRAB BARS IN ALL ANSI TYPE B UNITS PER ANSI REQUIREMENTS. (ALL UNITS ARE TYPE B UNITS BESIDES 2029, WHICH IS A TYPE A UNIT)
2. PROVIDE BLOCKING AND GRAB BARS FOR 18" VERTICAL GRAB BAR AND WRAP AROUND GRAB BAR AT ALL MASTER BATHROOM SHOWERS.
3. PROVIDE GRAB BARS AT TIME OF CONSTRUCTION IN ANSI TYPE A (HC) UNIT PER ANSI REQUIREMENTS.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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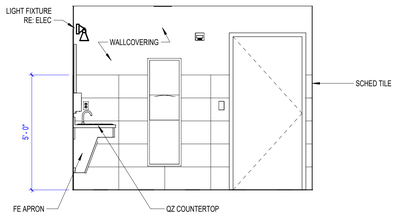
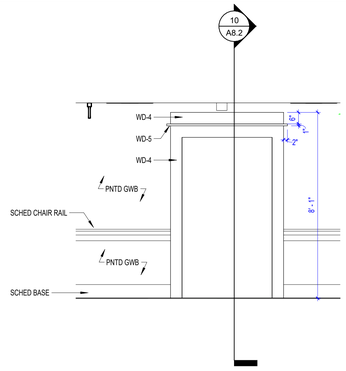
DESIGNER : DAS		DRAWN : DAS/CLH/CRW	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER :		APPROVED : CRJ	
NO.	REVISION DESCRIPTION		DATE
3	Addendum 1		03/07/24

DRAWING TITLE
INTERIOR ELEVATIONS

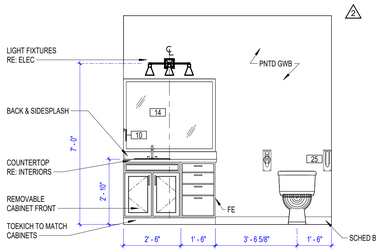
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A7.1



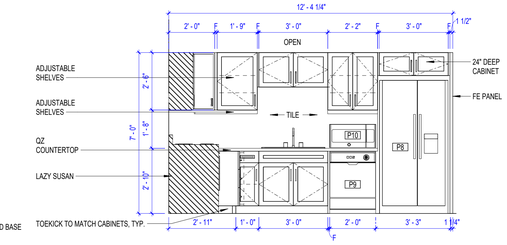
20 RESTROOMS E105/E405 4
3/8" = 1'-0"



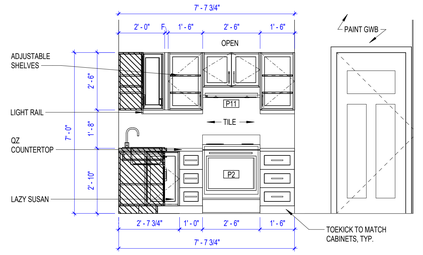
16 TYP. ELEVATOR
3/8" = 1'-0"



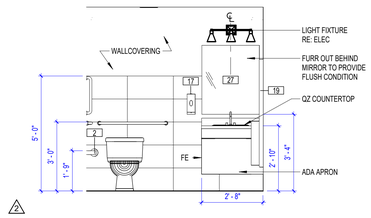
12 UNIT C (ADA) E316 - BATHROOM VANITY
3/8" = 1'-0"



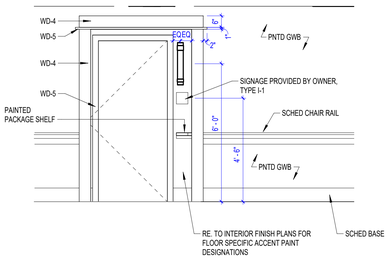
8 UNIT C (ADA) E316 KITCHEN SINK
3/8" = 1'-0"



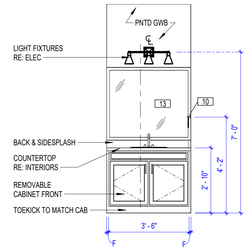
4 UNIT B (ADA) E123 KITCHEN STOVE
3/8" = 1'-0"



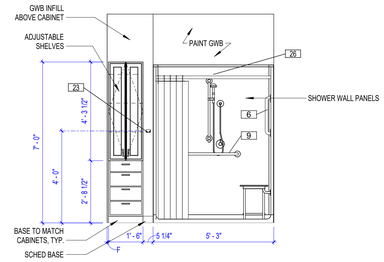
19 RESTROOMS E105/E405 3
3/8" = 1'-0"



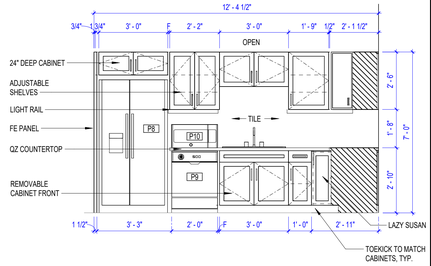
15 RESIDENT ENTRY & TYP. CORRIDOR
3/8" = 1'-0"



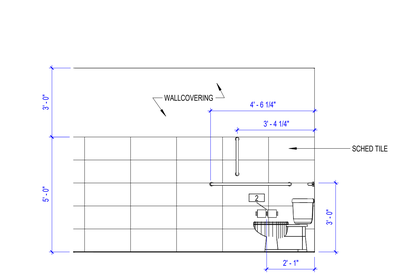
11 UNIT C (ADA) E316 HALF BATH
3/8" = 1'-0"



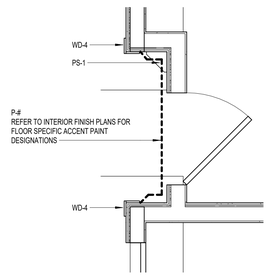
7 UNIT B (ADA) E123 BATHROOM SHOWER
3/8" = 1'-0"



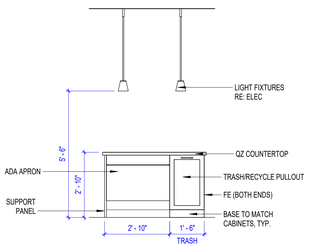
3 UNIT B (ADA) E123 KITCHEN SINK
3/8" = 1'-0"



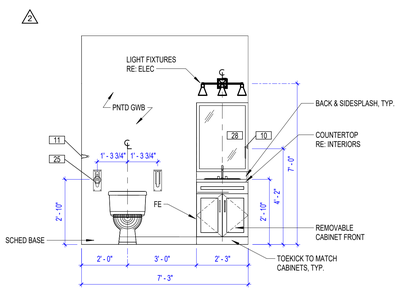
18 RESTROOMS E105/E405 2
3/8" = 1'-0"



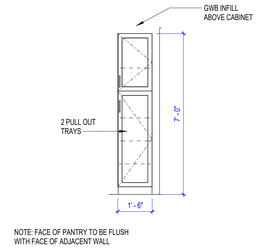
14 RESIDENT UNIT ENTRY, TYP
1/2" = 1'-0"



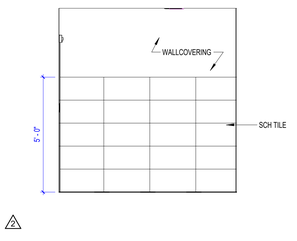
10 UNIT C (ADA) E316 KITCHEN ISLAND
3/8" = 1'-0"



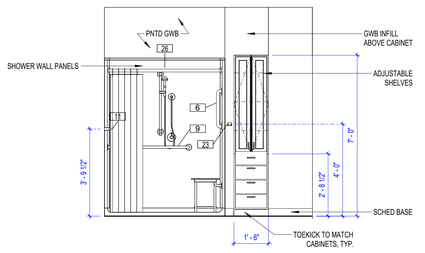
6 UNIT B (ADA) E123 BATHROOM VANITY
3/8" = 1'-0"



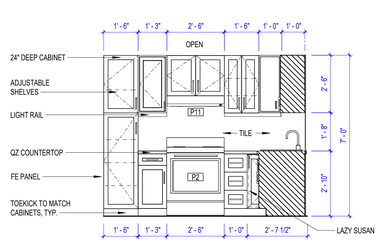
2 UNIT B - PANTRY
3/8" = 1'-0"



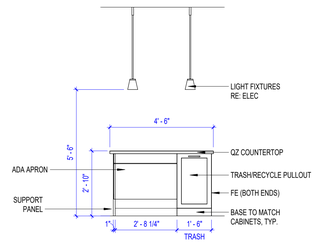
17 RESTROOMS E105/E405 1
3/8" = 1'-0"



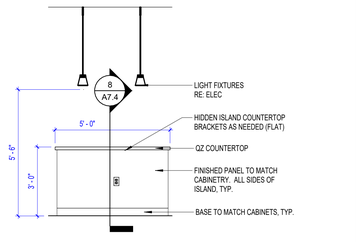
13 UNIT C (ADA) E316 - BATHROOM SHOWER
3/8" = 1'-0"



9 UNIT C (ADA) E316 KITCHEN STOVE
3/8" = 1'-0"



5 UNIT B (ADA) E123 KITCHEN ISLAND
3/8" = 1'-0"



1 UNIT D1-D2-D3 KIT. ISLAND 3
3/8" = 1'-0"

GENERAL NOTES

1. PROVIDE BLOCKING FOR FUTURE INSTALLATION OF GRAB BARS IN ALL ANSI TYPE B UNITS PER ANSI REQUIREMENTS. (ALL UNITS ARE TYPE B UNITS BESIDES 2029, WHICH IS A TYPE A UNIT)
2. PROVIDE BLOCKING AND GRAB BARS FOR 18" VERTICAL GRAB BAR AND WRAP AROUND GRAB BAR AT ALL MASTER BATHROOM SHOWERS.
3. PROVIDE GRAB BARS AT TIME OF CONSTRUCTION IN ANSI TYPE A (HC) UNIT PER ANSI REQUIREMENTS.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. • 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 • Fax 704.372.7369
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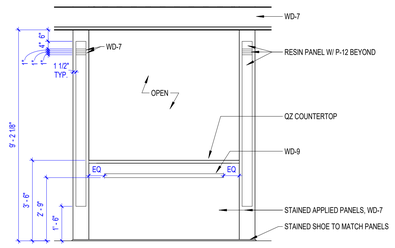
DESIGNER : DAS		DRAWN : DAS/CLH/CRW	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER : DES		APPROVED : CRJ	

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE

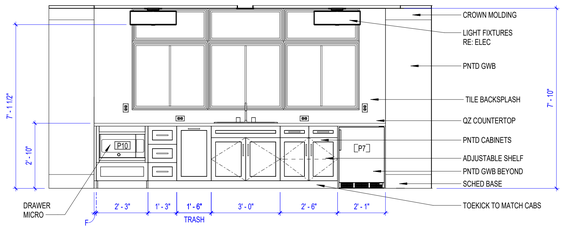
INTERIOR ELEVATIONS & DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A7.2



8 ATRIUM & TYP. SMALL COLUMNS

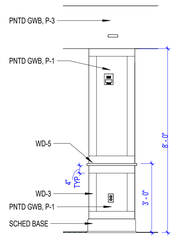
3/8" = 1'-0"



4 2ND FLOOR LOUNGE

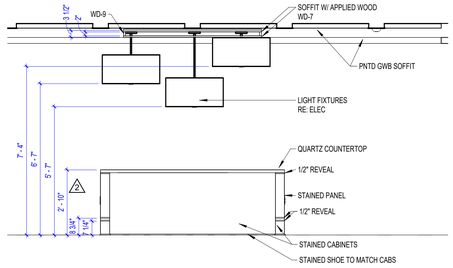
3/8" = 1'-0"

WOOD VENEER ARCH MILLWORK



7 TYP. LARGE COLUMNS

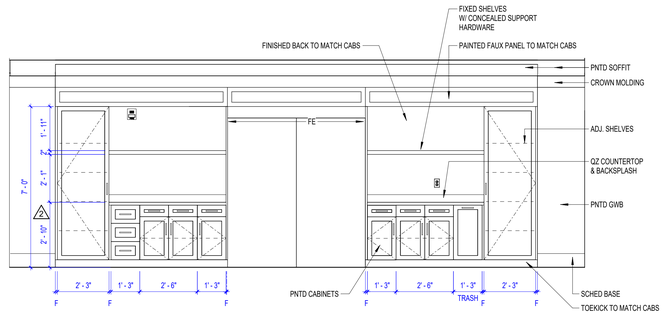
3/8" = 1'-0"



3 MAIL ROOM - LOUNGE

3/8" = 1'-0"

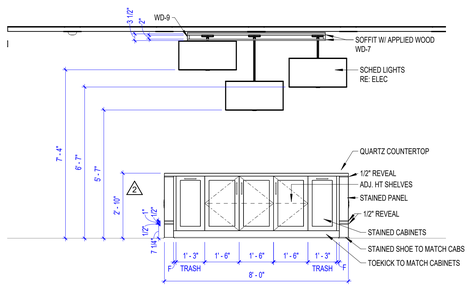
WOOD VENEER ARCH MILLWORK



6 4TH FLOOR LOUNGE BUILT-INS

3/8" = 1'-0"

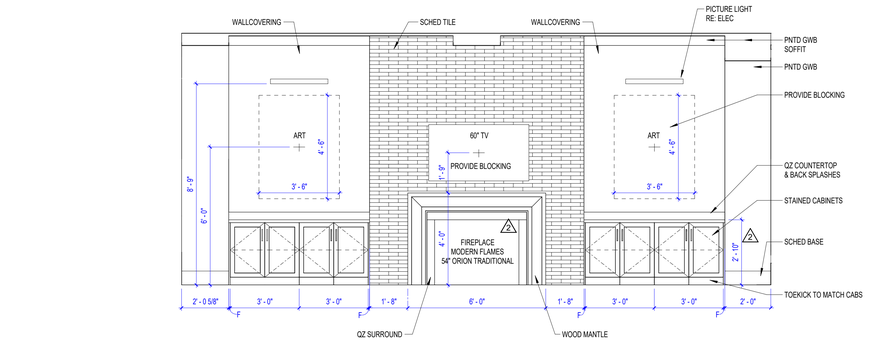
WOOD VENEER ARCH MILLWORK



2 MAIL ROOM - SORT

3/8" = 1'-0"

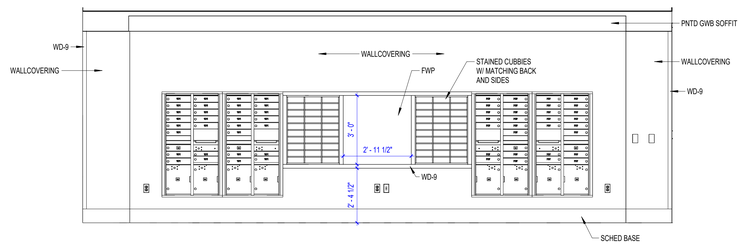
WOOD VENEER ARCH MILLWORK



5 3RD FLOOR FIREPLACE

3/8" = 1'-0"

WOOD VENEER ARCH MILLWORK



1 MAIL ROOM - BOXES

3/8" = 1'-0"

GENERAL NOTES

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER : DAS		DRAWN : DAS/CLH/CRW	
ARCHITECT : DAS		CHECKED : AAT	
ENGINEER :		APPROVED : CRJ	
NO.	REVISION DESCRIPTION		DATE
2	Rev 1 - Permit Comments		02/15/24

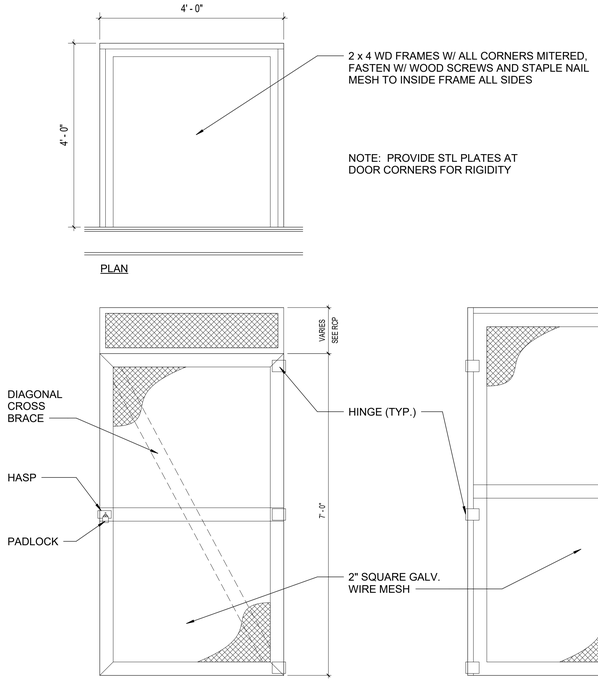
DRAWING TITLE

INTERIOR ELEVATIONS & DETAILS

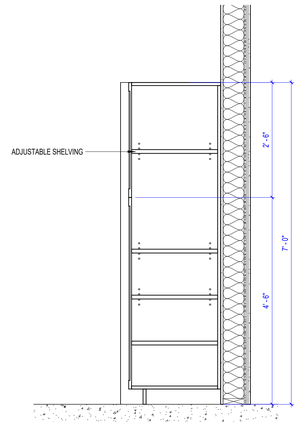
DATE: January 5, 2024

COMM. NO. 23104.00

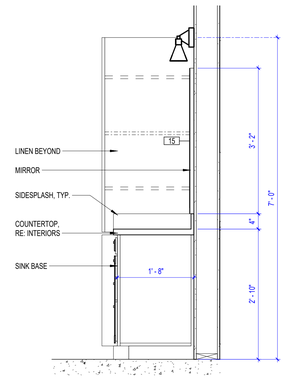
DRAWING A7.3



10 STORAGE LOCKERS
3/4" = 1'-0"



6 TYP SECTION AT PANTRY
3/4" = 1'-0"

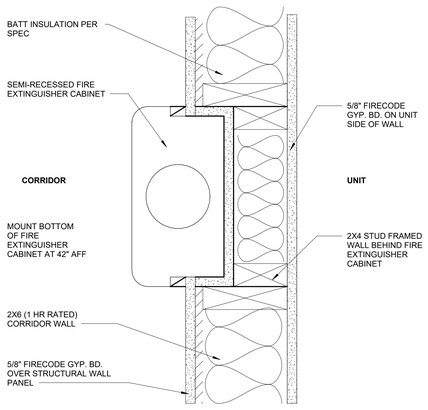


3 TYP SECTION AT BATH VANITY
3/4" = 1'-0"

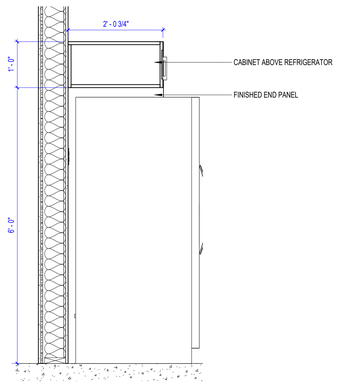
8 TYP SECTION AT KITCHEN ISLAND
3/4" = 1'-0"

5 TYP SECTION AT DISHWASHER
3/4" = 1'-0"

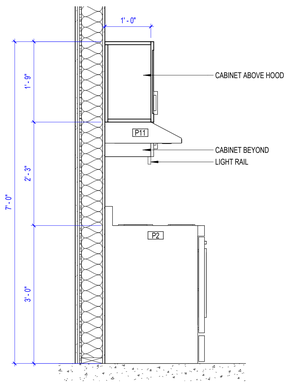
2 TYP SECTION AT BATH LINEN D
3/4" = 1'-0"



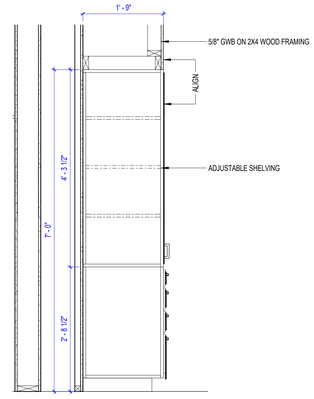
9 FIRE EXTINGUISHER CABINET
3" = 1'-0"



7 TYP SECTION AT REFRIGERATOR
3/4" = 1'-0"



4 TYP SECTION AT RANGE
3/4" = 1'-0"



1 TYP SECTION AT BATH LINEN B/C
3/4" = 1'-0"

CONSTRUCTION SET

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

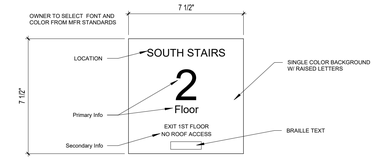
DRAWING TITLE

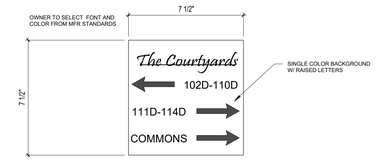
INTERIOR DETAILS

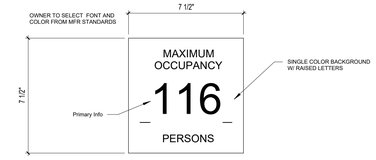
DATE: January 5, 2024

COMM. NO. 23104.00

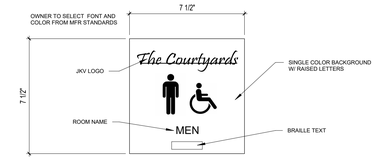
DRAWING A7.4

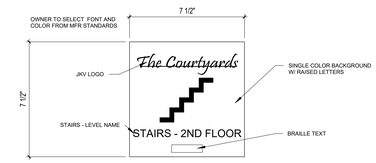




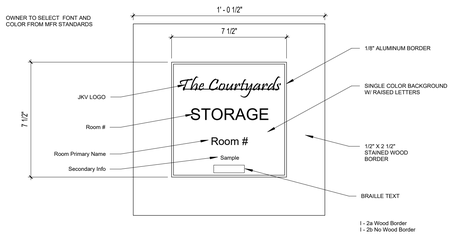


4 TYPE I-4 INFORMATION
3" = 1'-0"

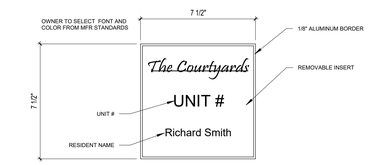




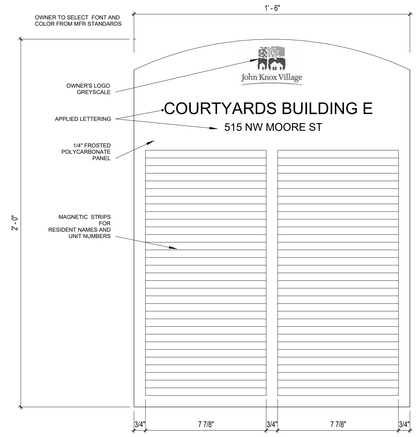
3 TYPE I-3 STAIR/RESTROOM
3" = 1'-0"



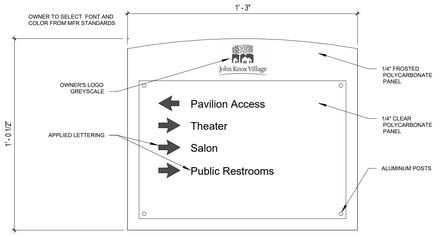
2 TYPE I-2 ROOM
3" = 1'-0"



1 TYPE I-1 UNIT
3" = 1'-0"



6 TYPE I-6 DIRECTORY
3" = 1'-0"



5 TYPE I-5 WAYFINDING
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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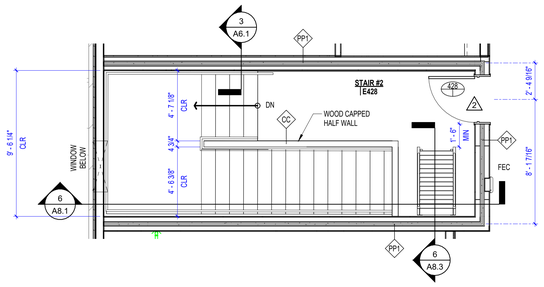
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

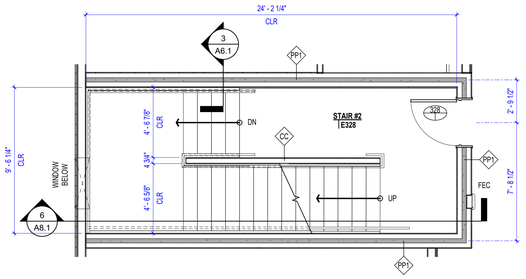
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
BUILDING SIGNAGE

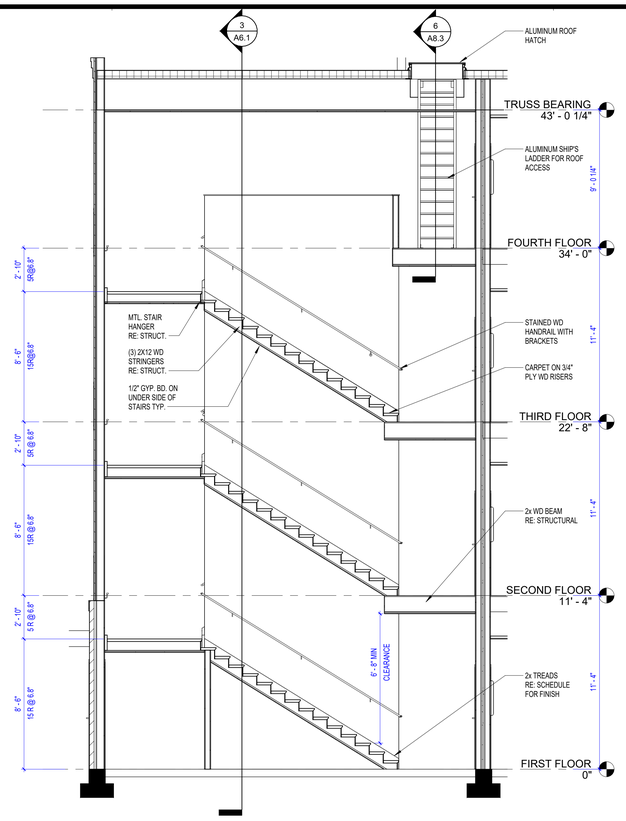
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A7.5



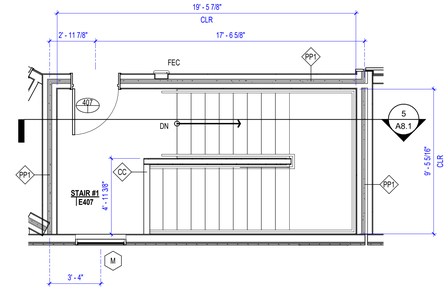
10 STAIR 2 - FOURTH FLOOR PLAN
1/4" = 1'-0"



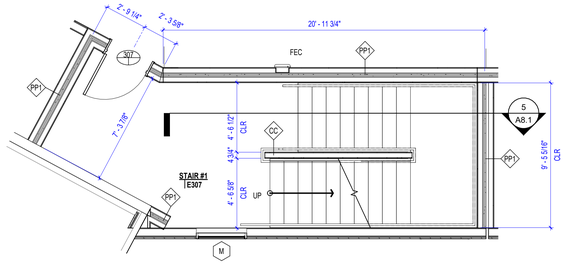
9 STAIR 2 - THIRD FLOOR PLAN
1/4" = 1'-0"



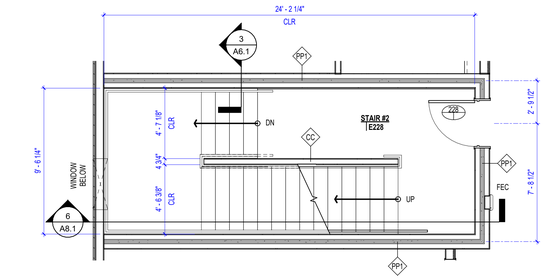
6 STAIR 2 SECTION
1/4" = 1'-0"



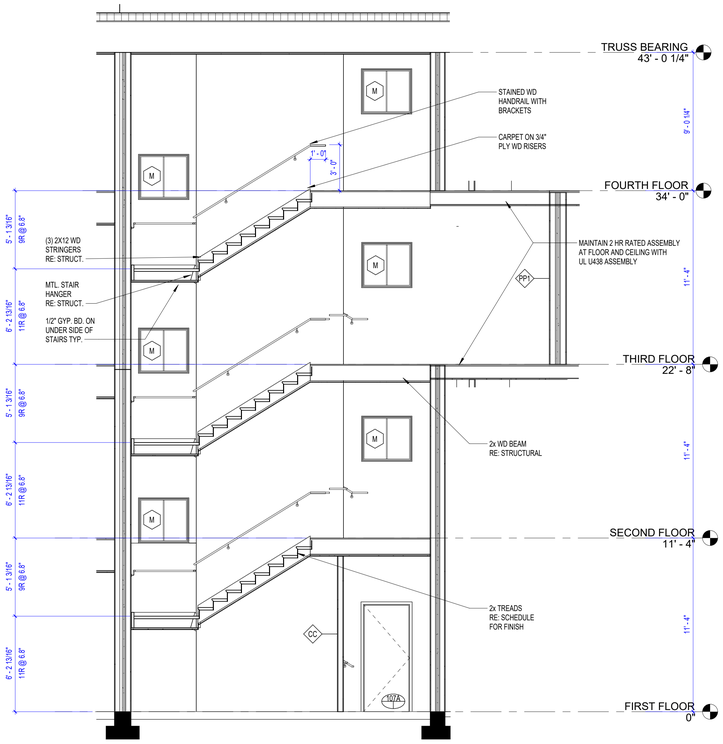
4 STAIR 1 - FOURTH FLOOR PLAN
1/4" = 1'-0"



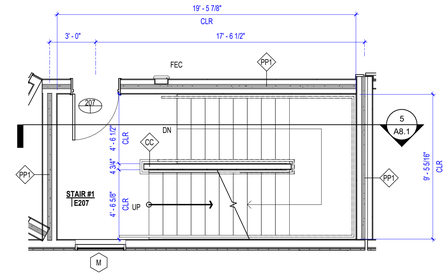
3 STAIR 1 - THIRD FLOOR PLAN
1/4" = 1'-0"



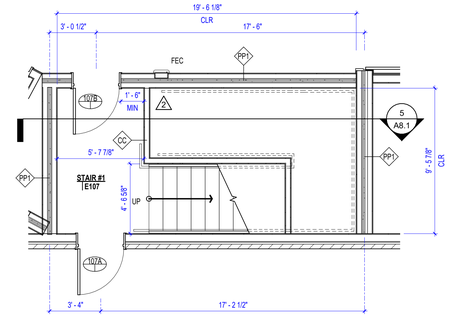
8 STAIR 2 - SECOND FLOOR PLAN
1/4" = 1'-0"



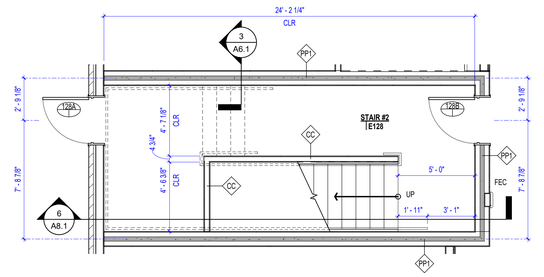
5 STAIR 1 SECTION
1/4" = 1'-0"



2 STAIR 1 - SECOND FLOOR PLAN
1/4" = 1'-0"



1 STAIR 1 - FIRST FLOOR PLAN
1/4" = 1'-0"



7 STAIR 2 - FIRST FLOOR PLAN
1/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER : DAS		DRAWN : DAS	
ARCHITECT : DAS		CHECKED : CHK	
ENGINEER : DES		APPROVED : APP	

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
STAIR PLANS & SECTONS

DATE: January 5, 2024
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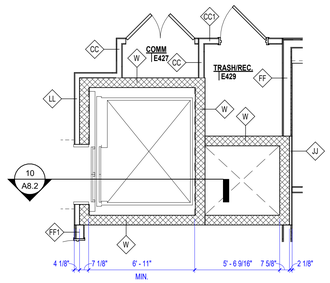
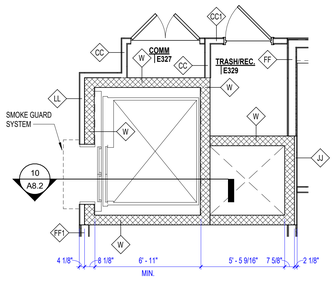
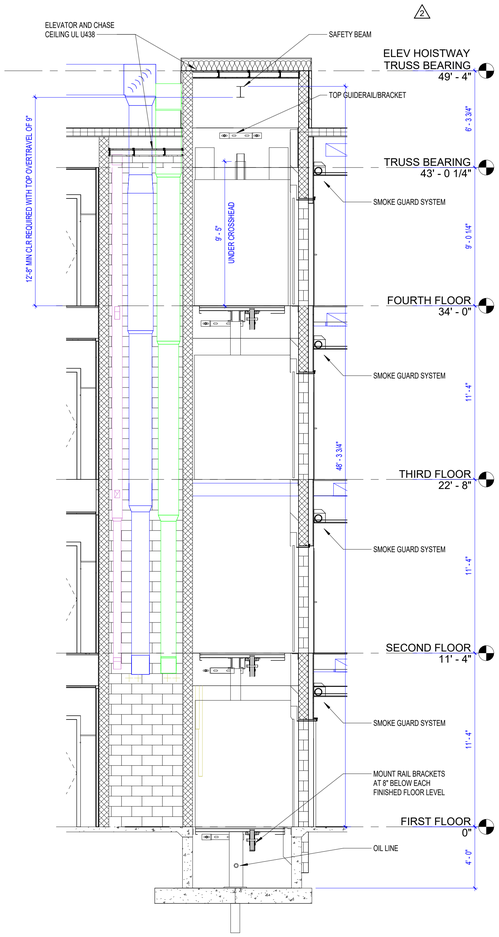
DRAWING A8.1



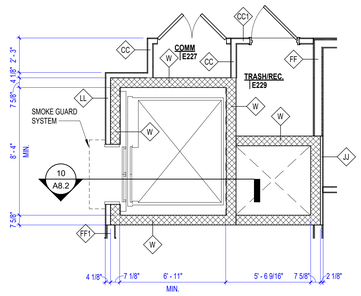
9 ELEV 2 - FOURTH FLOOR PLAN
1/4" = 1'-0"



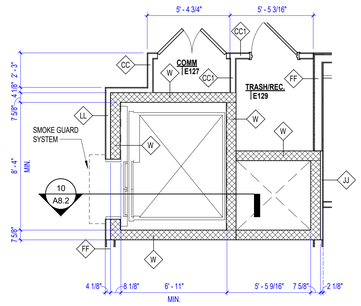
8 ELEV 2 - THIRD FLOOR PLAN
1/4" = 1'-0"



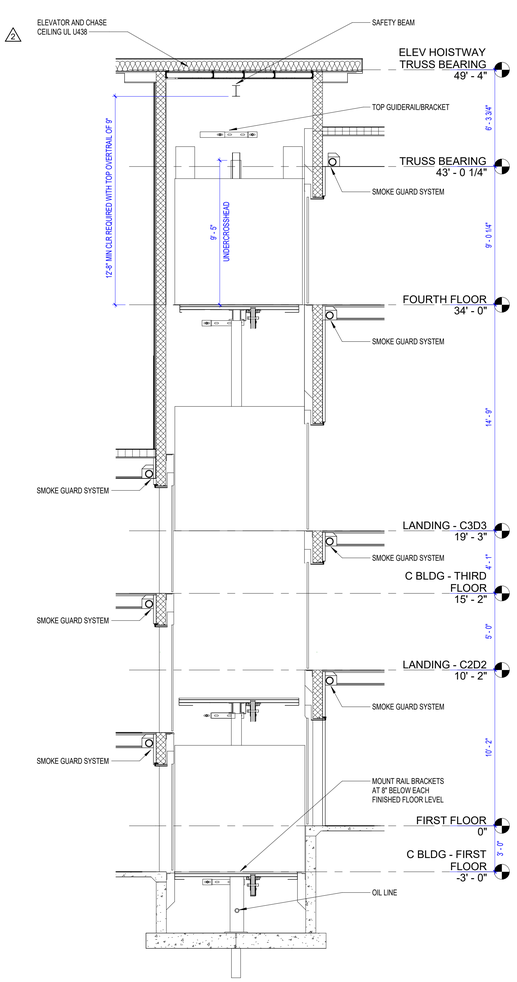
10 ELEV 2 - SECTION
1/4" = 1'-0"



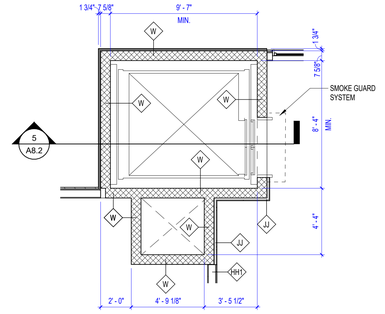
7 ELEV 2 - SECOND FLOOR PLAN
1/4" = 1'-0"



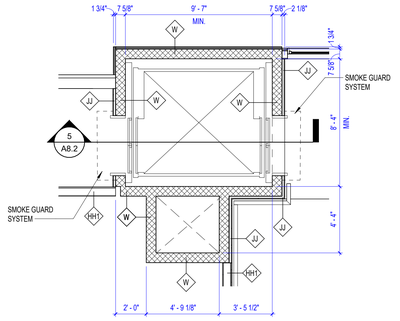
6 ELEV 2 - FIRST FLOOR PLAN
1/4" = 1'-0"



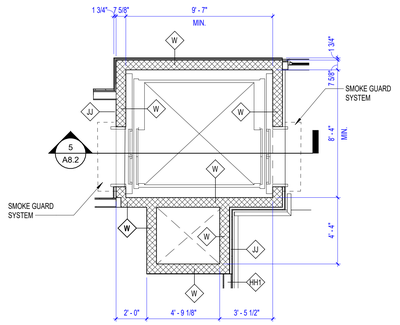
5 ELEV 1 - SECTION
1/4" = 1'-0"



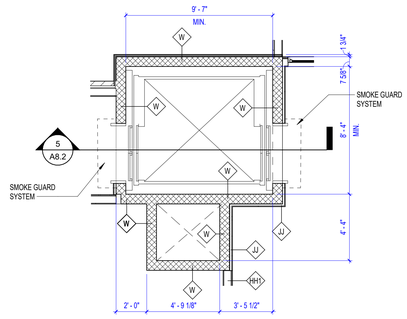
4 ELEV 1 - FOURTH FLOOR PLAN
1/4" = 1'-0"



3 ELEV 1 - THIRD FLOOR PLAN
1/4" = 1'-0"



2 ELEV 1 - SECOND FLOOR PLAN
1/4" = 1'-0"



1 ELEV 1 - FIRST FLOOR PLAN
1/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
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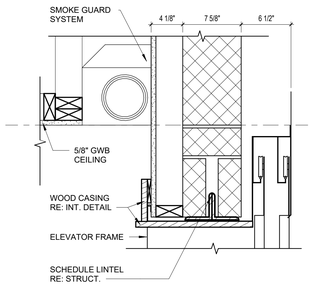
DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

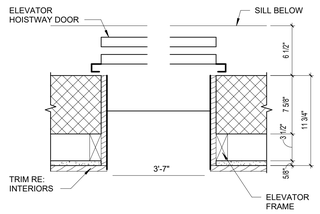
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
ELEVATOR PLANS & SECTIONS

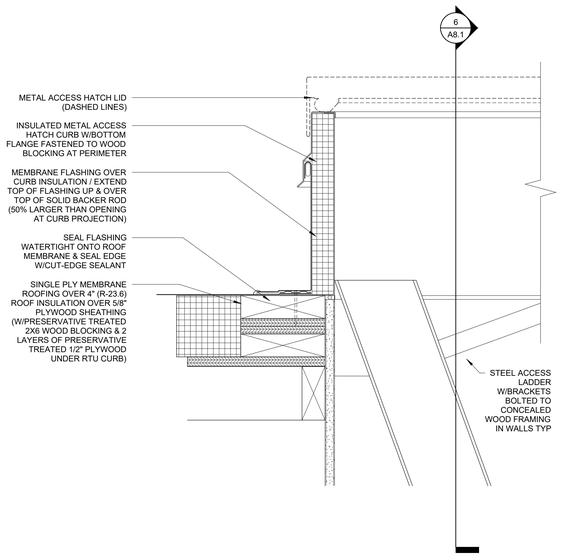
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A8.2



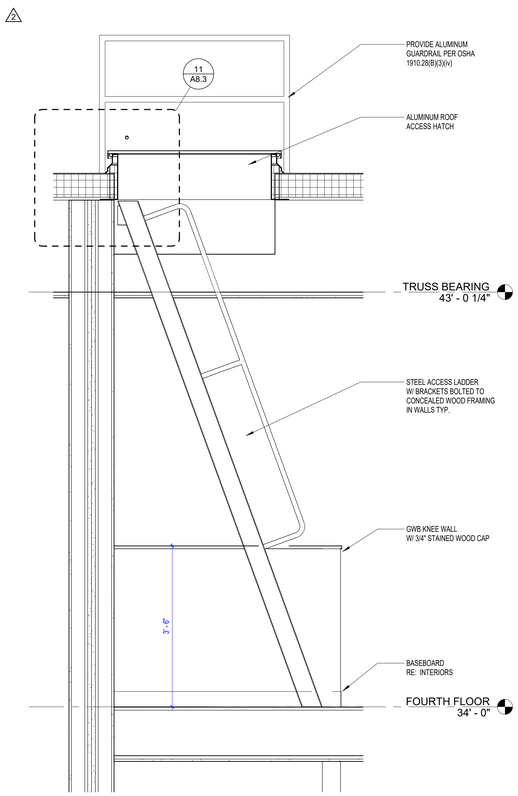
13 ELEVATOR SMOKE GUARD HEAD DETAIL
1 1/2" = 1'-0"



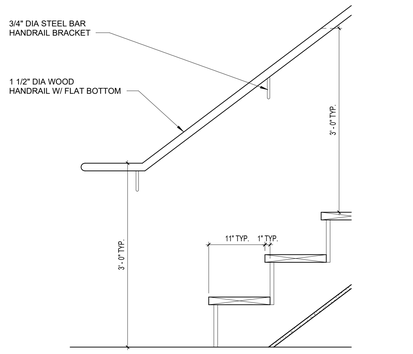
12 ELEVATOR JAMB DETAIL
1 1/2" = 1'-0"



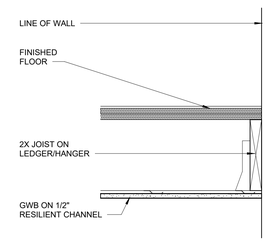
11 ROOF HATCH DETAIL
3" = 1'-0"



6 SHIP'S LADDER
3/4" = 1'-0"



4 STAIR SECTION DETAIL
1" = 1'-0"

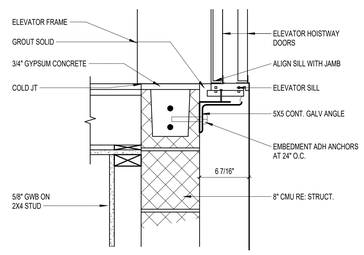


3 LANDING DETAIL
1 1/2" = 1'-0"

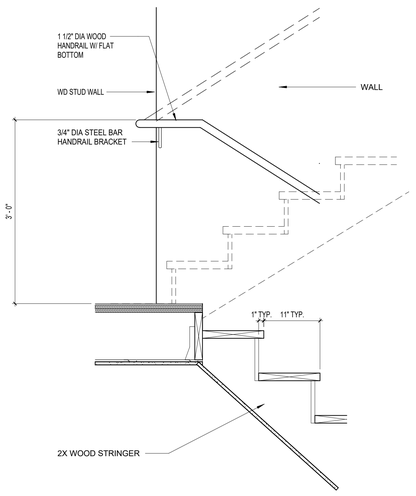
GENERAL NOTES

NOTE 1: 1/2" GAP BETWEEN STRINGERS. GUARDRAILS SHALL BE MOUNTED ON STRINGER CENTERLINES. PROVIDE 1 1/2" CLEAR DIMENSION FROM HANDRAIL TO GUARDRAIL.

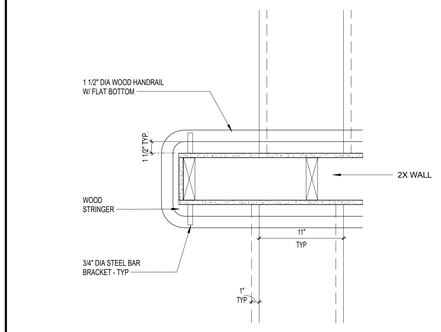
10 ELEVATOR HEAD DETAIL
1 1/2" = 1'-0"



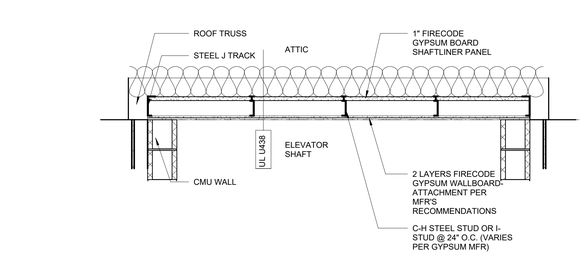
8 ELEVATOR SILL DETAIL
1 1/2" = 1'-0"



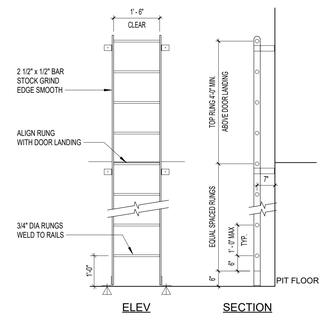
5 LANDING SECTION
1" = 1'-0"



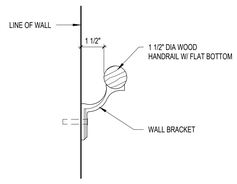
2 CENTER RAIL PLAN
1 1/2" = 1'-0"



9 DETAIL AT 2 HOUR SHAFT LID
3/4" = 1'-0"



7 PIT LADDER DETAIL
1/2" = 1'-0"



1 STAIR HANDRAIL DETAIL
3" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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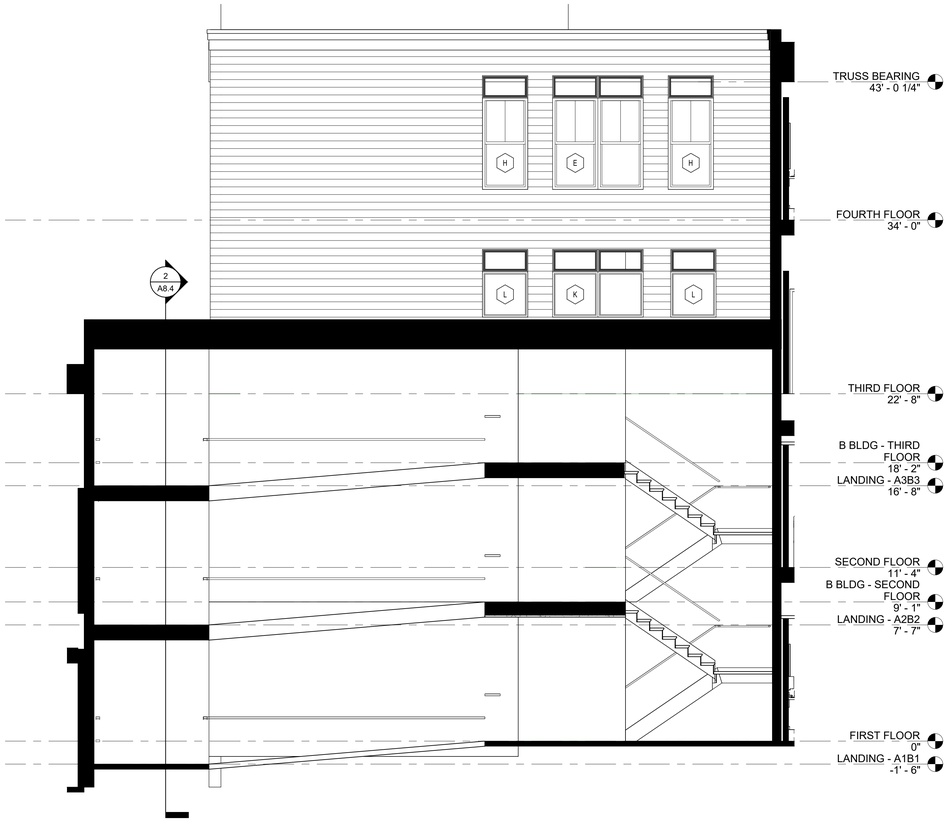
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

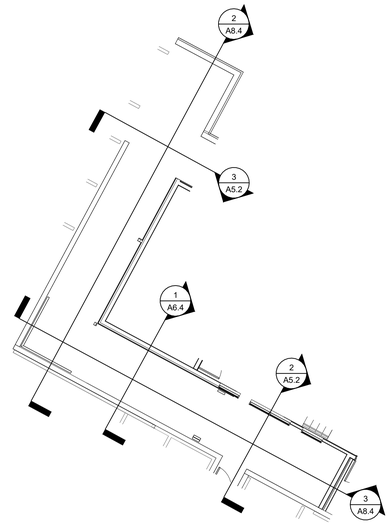
NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE
STAIR & ELEVATOR DETAILS

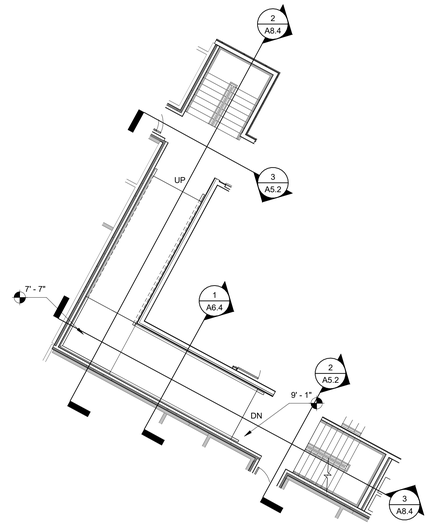
DATE: January 5, 2024
DRAWING A8.3
COMM. NO. 23104.00



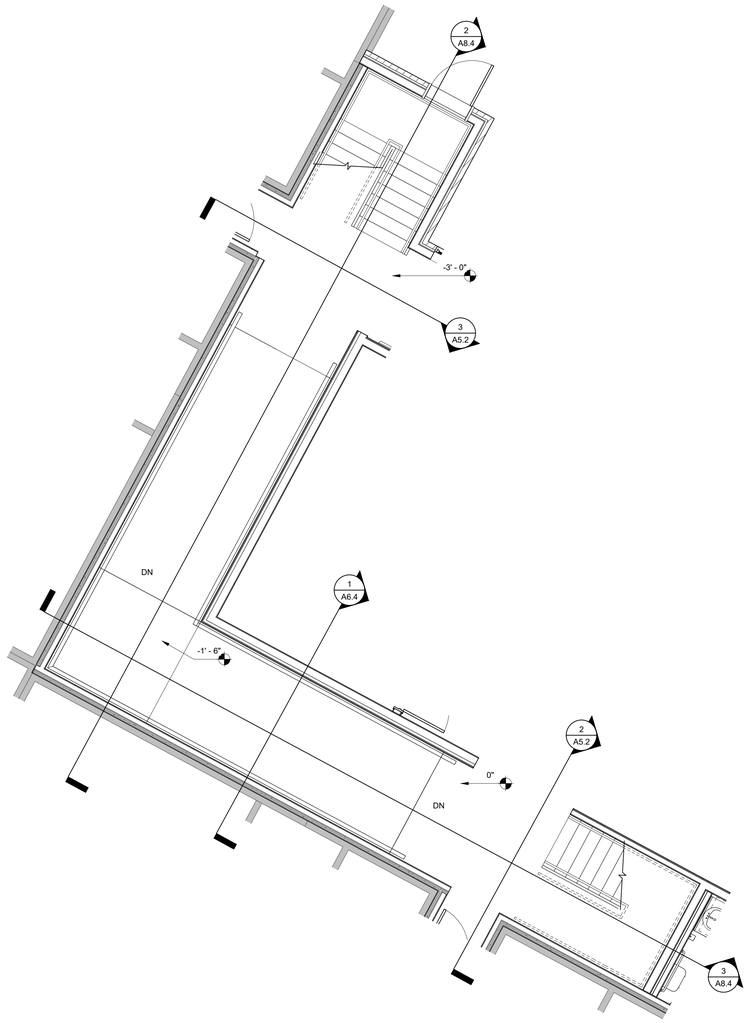
3 RAMPS - B
1/4" = 1'-0"



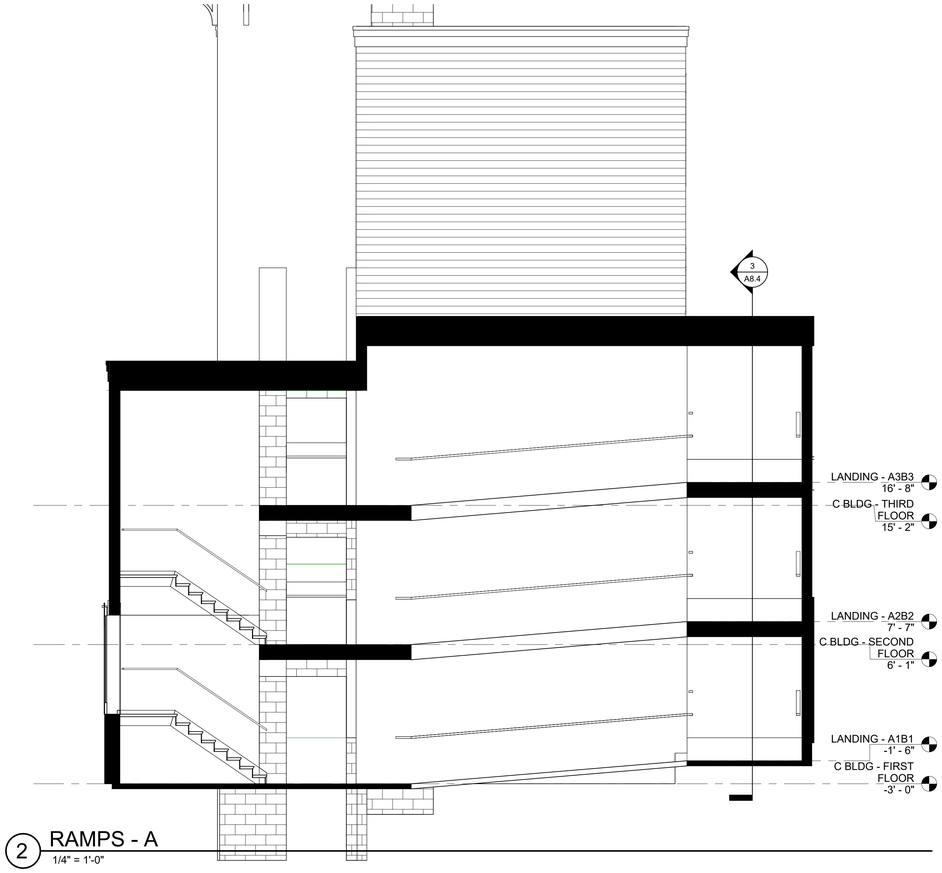
5 ATRIUM - RAMPS A & B - THIRD FLOOR
1/8" = 1'-0"



4 ATRIUM - RAMPS A & B - SECOND FLOOR
1/8" = 1'-0"



1 ATRIUM - RAMPS A & B - FIRST FLOOR
1/4" = 1'-0"



2 RAMPS - A
1/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

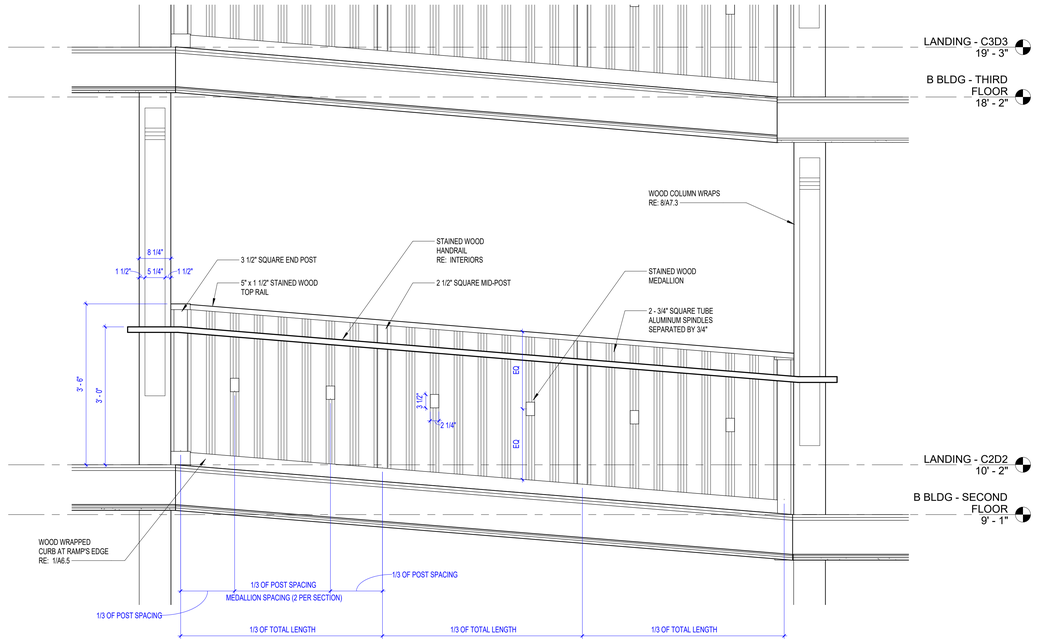
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
RAMPS A & B

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A8.4

2/16/2024
3:56:53 PM
Autodesk Docs://23104.00 - John Knox Village - Lindbergh/23104.00-JKV-Courtyards-Building E-Architectural CENTRAL.rvt

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024



1 TYPICAL RAILING SECTION
3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER	DAS	DRAWN	DAS
ARCHITECT	DAS	CHECKED	AAT
ENGINEER		APPROVED	CRJ

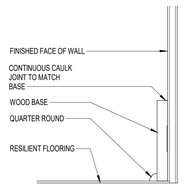
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE
ATRIUM DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING A8.5

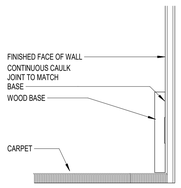
2/16/2024
3:57:14 PM
Autodesk Docs://23104.00 - John Knox Village - Lindbergh/23104.00-JKV-Courtyards-Building E-Architectural CENTRAL.rvt

FLOOR BASE DETAILS



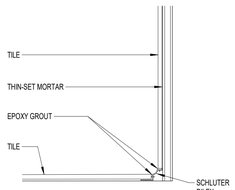
WOOD BASE ON HARD SURFACE FLOORING

NOTE: GENERIC BASE PROFILE SHOWN FOR REFERENCE ONLY

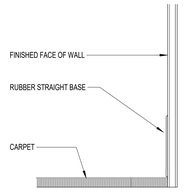


WOOD BASE ON CARPET FLOORING

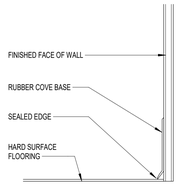
NOTE: GENERIC BASE PROFILE SHOWN FOR REFERENCE ONLY



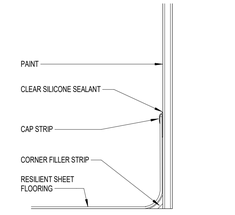
WALL TILE



CARPET

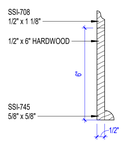


RESILIENT FLOORING

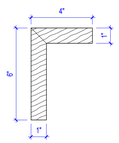


RESILIENT SHEET TO PAINT

TRIM PROFILES



WDB-1



WD-1

RB-1
REVEAL

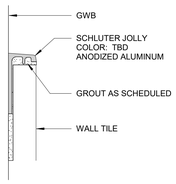
SSI-1354
3/4" x 4 1/4"
S-WDB-1

S-WDB-2
1/2" X 3 1/2"

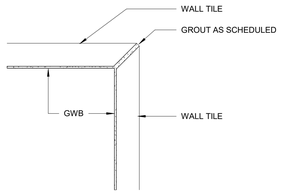
EDGE PROFILE

EASED EDGE

WALL TILE TERMINATION DETAIL

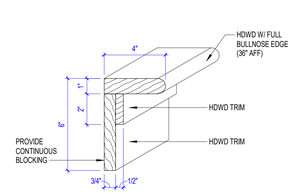


TERMINATION: STRAIGHT EDGE
DS-1

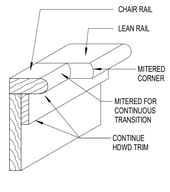


TERMINATION: MITERED CORNER
T-1 & T-2

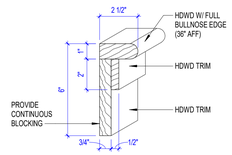
LEAN RAIL DETAILS



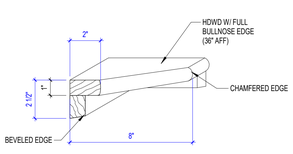
LEAN RAIL (LR-1)



CHAIR RAIL TO LEAN RAIL TRANSITION

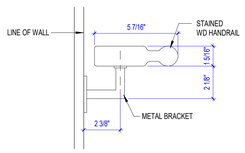


CHAIR RAIL (CR-1)



PACKAGE SHELF (PS-1)

HAND RAIL DETAILS



FINISH KEY PLAN

* AN ASTERISK FOLLOWING ANY FINISH AS NOTED ABOVE SIGNALS TO LOOK FOR MORE INFORMATION ON EITHER CURRENT SHEET OR ANOTHER SHEET, TYPICALLY MEANS THAT THERE IS MORE THAN ONE FINISH ON A GIVEN WALL/BASE/CEILING (1)

EX: P/ CR/ WC

IF ANY FINISH BOX AS SHOWN IN THE KEY ABOVE CONTAINS MORE THAN ONE FINISH CODE THE PROGRESSION OF FINISHES GOES FROM THE FLOOR TO THE CEILING

S-T-1A GUIDE TO READING IL FINISH CODES. THE FIRST DIGIT INDICATED WHETHER A FINISH IS A "S"- STANDARD / "U" - UPGRADE / "P" - PREMIUM PACKAGE FINISH. THE NEXT GROUPING INDICATES A SPECIFIC FINISH AND NUMBER "T-1", THE LAST DIGIT WILL INDICATE WHICH PALETTE PACKAGE THE RESIDENT HAS SELECTED, "A", "B", ETC. THIS LAST DIGIT IS NOT INCLUDED ON FLOOR PLANS. MOST PLANS WILL INDICATE STANDARD FINISH LOCATIONS. FOR EXAMPLES S-T-1.

INDICATES A CHANGE OF MATERIALS, REFERENCE TRANSITION SCHEDULE FOR DETAILS

INDICATES EXTENTS OF "WALL FINISH

INDICATES THE WALL FINISH ASSOCIATED WITH A DASHED LINE

CNTR CAB — INDICATES COUNTER / CABINETRY FINISHES

DIRECTION OF GRAIN

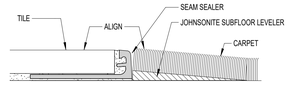
CG-# — INDICATES A CORNERGUARD

NOT IN CONTRACT

NOTE: THESE ARE STANDARD SYMBOLS AND ALL SYMBOLS NOTED ON THIS SHEET MAY NOT APPLY.

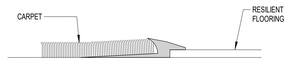
FLOOR TRANSITION SCHEDULE

DS-3



N.T.S.

DS-4 & DS-7

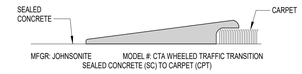


N.T.S.

DS-5

N.T.S.

DS-6



N.T.S.

INTERIOR ABBREVIATIONS

ACT	ACOUSTICAL CEILING TILE
ADJ	ADJUSTABLE
AP	ACOUSTICAL PANEL
B	BLINDS
BAR	BALLET BARRE
BB	BEADBOARD
BOH	BACK OF HOUSE
BQ	BANQUETTE
BR	BRICK
CAB	WOOD CUSTOM CABINET
CAS	RESIDENTIAL CASEWORK
CC	CUBICLE CURTAIN
CG	CORNER GUARD
CM	CULTURED MARBLE
CMP	TOILET COMPARTMENT
CONT.	CONTINUOUS/CONTINUED
CORR.	CORRIDOR
CPT	CARPET
CR	CHAIR RAIL
CRM	CROWN MOULDING
CT	CURTAIN
DM	DECORATIVE METAL
DP	DEEP
DS	DIVIDER STRIP
EFS	ENTRY FLOOR SYSTEM
EQ	EQUAL / EQUIPMENT
EVS	ELEVATOR FINISH
EXIST	EXISTING
F	FILLER
FE	FINISHED END
FL	FLOOR
FRP	FIBER REINFORCED PANEL
FWP	FABRIC WRAPPED PANEL
G	GROUT
GF	GLASS FILM
GR	GRANITE
GL	GLASS
HP	HARDIE PLANK
HR	HAND RAIL
HRD	DOOR HARDWARE
HT	HEIGHT
HW	CABINET HARDWARE
ID	INTERIOR DESIGN
INT	INTERIOR
LL	LOWER LEVEL
LOC	LOCKER
LR	LEAN RAIL
MI	MIRROR
NA	NOT APPLICABLE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
PAR	PARTITION
PATN	PATTERN
PL	PLASTIC LAMINATE
PLAM	PLASTIC LAMINATE
PNTD	PAINTED
P	PAINT
QZ	QUARTZ
RB	RUBBER BASE
RBT	RUBBER STAIR TREAD
REF	REFERENCE
RES	RESINOUS FLOORING
RF	RESILIENT FLOORING
RM	ROOM
RS	ROLLER SHADE
RUB	RUBBER FLOORING
SC	SEALED CONCRETE
SCHED	SCHEDULED
SH	SHOWER CURTAIN
SN	STONE
SP	SPECIALITY WALL PANEL
SPEC	SPECIFICATION
SS	SOLID SURFACE
ST / STND	STAIN
STD	STANDARD
STC	STAINED CONCRETE
STR	STAIR RISER
STS	STAIR STRETCHER
T	TILE
TBD	TO BE DETERMINED
TR	TOILET ROOM
TRM	TRIM
TYP	TYPICAL
TZ	TERRAZZO
TZB	TERRAZZO BASE
UNO	UNLESS NOTED OTHERWISE
W/	WITH
WDB	WOOD BASE
WDF	WOOD FLOORING
WC	WALL COVERING
WD	WOOD TRIM
WDC	WOOD CEILING
WOC	WALK OFF CARPET
W/O	WITHOUT
WP	WALL PROTECTION
WT	WINDOW TREATMENT

NOTE: THESE ARE STANDARD ABBREVIATIONS AND ALL ABBREVIATIONS NOTED ON THIS SHEET MAY NOT APPLY.

GENERAL ID NOTES

1. REFER TO FINISH LEGEND FOR MATERIAL SPECIFICATIONS.
2. REFER TO FINISH PLANS AND ELEVATIONS FOR EXTENTS OF FLOOR PATTERNS, WALL FINISHES AND CABINET MATERIALS.
3. ALL PRODUCTS / MATERIALS TO BE SOURCED FROM SAME LOTS TO ENSURE COLOR MATCH.
4. ALL PRODUCTS INSTALLED PER MANUFACTURERS REQUIREMENTS AND RECOMMENDATIONS.
5. CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXTENTS OF MATERIALS IN THE FIELD WITH EXISTING CONDITIONS AND ADVISE THE ARCHITECT OF ANY CONFLICT.
6. CONTRACTOR TO COORDINATE MEP REQUIREMENTS WITH ALL NEW/AND/OR REUSED EQUIPMENT/FIXTURES AND ADVISE THE ARCHITECT OF ANY CONFLICT.
7. ALL PAINT TO BE EGGSHELL FOR WALLS U.N.O., FLAT FINISH FOR CEILING U.N.O., & SEMI-GLOSS FOR TRIM U.N.O. & ALL PAINT TO BE EPOXY FOR WALLS IN WET AREAS AS SPECIFIED ON FINISH PLANS U.N.O.
8. CORNER GUARDS TO INSTALL FROM (FLOOR) (TOP OF BASE) TO UNDERSIDE OF CHAIR RAIL/LEAN RAIL ON SPLIT FINISH WALLS AND FULL HEIGHT ON WALLS WITH ONLY ONE FINISH. FIRE RATED CORNER GUARDS TO BE INSTALLED IN FIRE RATED WALLS. GC TO ADVISE OF ANY CONFLICTS.
9. FINISHES NOTES IN CORRIDORS ARE TYPICAL CONDITIONS THAT ARE TO BE USED THROUGH REMAINING CORRIDOR.
10. REFER TO DOOR SCHEDULE FOR DOOR TYPE, DOOR FINISH, JAMB AND HARDWARE FINISH SPECIFICATION.
11. CHAIR RAIL IS TO EXTEND AROUND ENTIRE PERIMETER OF A SPACE IN ORDER TO CREATE A CLEAN SEPARATION FOR SPLIT WALL FINISHES.
12. WHERE CABINET BASE MEETS HARD SURFACE FLOOR, INSTALL QUARTER ROUND TO MATCH CABINET FINISH.
13. ALL ARCHITECTURAL MILLWORK AND RESIDENTIAL CASEWORK TO HAVE DECORATIVE HARDWARE AS NOTED IN FINISH LEGEND PER CAB OR PLAM SPECIFICATIONS.
14. TOE KICK SHALL MATCH CABINET FINISH.
15. CABINET CROWN MOLDING IS TO MATCH CABINET FINISH, U.N.O.
16. ALL EXPOSED END PANELS, BACK PANELS AND INTERIOR SIDE PANELS SHALL BE FINISHED TO MATCH CABINETS.
17. ALL EXPOSED INTERIOR OF CABINETS TO MATCH CABINET FACE.
18. REFER TO REFLECTED CEILING PLANS FOR EXTENT OF CROWN MOLDING.
19. (3) ALL MECHANICAL, ELECTRICAL PANELS, DIFFUSERS & GRILLES ARE TO BE PAINTED TO MATCH ADJACENT FINISH IN ALL RESIDENT ROOMS AND PUBLIC/COMMON AREAS.
20. ANY EXPOSED PIPING AND GRILLES TO MATCH ADJACENT WALL FINISH.
21. FIELD VERIFY LOCATION OF ALL WIRING DEVICES WITH ARCHITECT PRIOR TO ROUGH-IN.
22. ALL OUTSIDE EDGES AND CORNERS OR MID WALL TERMINATION OF TILE TO RECEIVE A DIVIDER/TRANSITION STRIP, REFERENCE FINISH LEGEND.
23. ALL CERAMIC TILE SHALL HAVE NECESSARY ACCESSORIES TO MATCH (SATIN NICKEL FINISH) U.N.O.
24. CONTRACTOR TO DETERMINE THE APPROPRIATE HEIGHT PRODUCT FOR THE TRANSITIONING MATERIALS HEIGHT IN ORDER TO HAVE A FLUSH TRANSITION.
25. TRANSITIONS ARE TO BE USED WITH A CONCEALED RUBBER SUBFLOOR LEVELER SYSTEM SCORED AT APPROPRIATE DEPTH FOR SMOOTH, FLUSH TRANSITION FROM ONE MATERIAL TO ANOTHER.
26. HEAVY SEAM SEAL CARPET EDGE AT TRANSITION.
27. REFER TO LEGEND FOR TRANSITION FINISH SELECTION.

PROJECT NOTES

1. IF ADDITIONAL RESILIENT TILE FLOORING IS SELECTED IN CUSTOMIZATION WITHIN RESIDENT UNITS, REFER TO ARCH DRAWINGS FOR ADDITIONAL SOUND PROOFING REQUIREMENTS.

GENERAL NOTES

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

PERMIT SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors

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DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	DES	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE
3	Addendum 1	03/07/24

DRAWING TITLE

GENERAL NOTES, FINISH KEY AND ABBREVIATIONS

DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING I0.0

COMMONS FINISH LEGEND

Code	Rev. Date	Manufacturer	Pattern	Color	Details	Remarks
DIVISION 06: WOODS, PLASTICS, AND COMPOSITES						
060660 Translucent Resin Panel System						
SP-1		3-Form	Varia Vita Prose	Sandstone F01	1/4" Gauge	Railing & Column Accents
062023 Interior Finish Carpentry						
WD-1		Custom		P-1	Refer I0.0 for details	Crown
WD-2		Realstone	Reclaimed Wood	Dark Panel	12"x24" Panel, Vertical Install	Accent Wall
WD-3		1" X 4"		P-1	Paintable hardwood	Columns
WD-4		1" x 6"		P-1	Paintable hardwood	Door Casing
WD-5		1" x 2"		P-1	Paintable hardwood	Door Casing
WD-7		3/4" x varies		ST-1	Stained Hardwood	Atrium Applied Accent
WD-8		Custom		ST-1	Stained Hardwood; Ref: A7.3 for dimensions/details	Atrium Column Wraps
WD-9		1 x 2"		ST-1	Stained Hardwood	Mail Room Trim
WD-10		1" x 1'-2"		P-1	Paintable hardwood w/ bullnose edge, 1/2" overhang	Wood topcap
WDB-1		Custom		P-1	Ref: I0.0 for dimensions/details	General Base
CR-1		Custom		P-1	Ref: I0.0 for dimensions/details	Chair Rail
LR-1		Custom		P-1	Ref: I0.0 for dimensions/details	Lean Rail
PS-1		Custom		P-1	Ref: I0.0 for dimensions/details	Package Shelf
HR-1		Tague Lumber	TL-4048	ST-1	Turn horizontal; Bracket Basis-of-Design Inline Design Magnetar Square Slim, Oil Rubbed Bronze	Handrail
064113 Wood-Veneer-Faced Architectural Cabinets (As noted on Interior Elevations as - WOOD VENEER ARCH MILLWORK)						
CAB-1		Custom to match Merillat Masterpiece	To match Portrait w/ 5 piece drawer	Translucent Driftwood	Species: Maple Hardware: Richelieu Modern Metal Pull 107 Brushed Nickel 4"	Mail Room & 3rd Floor Lounge, Restrooms
CAB-2		Custom to match Merillat Classic	To match Portrait w/ 5 piece drawer	Midnight	Species: Maple Hardware: Richelieu Modern Metal Pull 107 Brushed Nickel 4"	2nd Floor Lounge
CAB-3		Custom to match Merillat Classic	To match Portrait w/ 5 piece drawer	Cotton	Species: Maple Hardware: Richelieu Modern Metal Pull 107 Brushed Nickel 4"	4th Lounge
DIVISION 09: FINISHES						
093013 Ceramic Tiling						
T-1		Mosaic Tile	Organic Clay	45ORGTAU210G	2"x10" Glossy, 70%, random mix throughout with T-2, Miter edges at outside corners	3rd Floor Lounge Fireplace
T-2		Mosaic Tile	Organic Clay	45ORGTAU210	2"x10" Matte 30% random mix throughout with T-1, Miter edges at outside corners	3rd Floor Lounge Fireplace
T-3		Mosaic Tile	Urban Living	04URLSAN2448C	12"x24", Chiseled, Stacked, 5' H UNO	Restroom
T-4		Marazzi	Treverkchic	Americano	6"x48", Running bond install	Atrium & Restroom
T-5		Marazzi	Treverkchic	Francese	6"x48", Running bond install	Atrium Border
T-6		Garden State Tile	Hexagon Mix	Cotton Candy Mix GSPHXCCMIXSAM	1" Hex Fabric Mix	2nd Floor Backsplash
G-1		Custom Building Products		#5004 Bahama Beige	Unsanded	T-1 & T-2
G-2		Custom Building Products		#172 Urban Putty	Epoxy	T-3
G-3		Custom Building Products		#59 Saddle Brown	Epoxy	T-4, T-5
G-4		Custom Building Products		#366 Oyster Gray	Epoxy	T-6
DS-1		Schluter	Schiene / Jolly	Brushed Nickel	Use accompaning inside/outside 90 degree corner pieces and connectors to ensure there are no sharp edges. All metal edges to be sanded and sealed with no sharp edges.	Wall Tile Termination
DS-2		Schluter	Dilex	Brushed Nickel	Use accompaning inside/outside 90 degree corner pieces and connectors to ensure there are no sharp edges.	Cove base between tile floors and tile walls.
095113 Acoustical Panel Ceilings						
ACT-1		Armstrong	Ultima Tegular 1902	White	24"x24", AirGuard, 9/16" Supraline XL Grid, White	Commons
ACT-2		Armstrong	Fine Fissured Square Lay-In 1728	White	24"x24", 15/16" Prelude XL Grid, White	BOH
096513 Resilient Base and Accessories						
RB-1		Johnsonite	Reveal MW-XX-F	TBD	4" coil	BOH
DS-3		Schluter	Scheine			CPT to T
DS-4		Johnsonite	Slim Line SLT-XX-A	TBD		VCT to CPT
DS-5		Johnsonite	Wheeled Traffic Transition CTA-XX-D			Epoxy Floor to CPT
DS-6		Johnsonite	Wheeled Traffic Transition CTA-XX-JL	TBD		CPT to SC
DS-7		Johnsonite	Slim Line SLT-XX-A	TBD		CPT to RF (Vinyl Tile)
096516 Resilient Sheet Flooring						
RF-2		Mannington	Paradigm Intersect	Basis PAR100	Heat weld with matching seams, Integral 4" cove	BOH
096519 Resilient Tile Flooring						
RF-1		Tarkett	VCT II	556 Sandstone W	12"x12"	Resident Closet
RF-3		Cobalt Surfaces	Katanga K12-802	Sand Dune	7"x48", Glue-down;	2nd & 4th Floor Lounge
096813 Tile Carpeting						
CPT-1		Interface	Viva Colores	Gris 101170	20"x20", quarter turn	Border
096816 Sheet Carpeting						
CPT-2		Tarkett	Lido 40033	Spring Azure	12' 6" roll, 32 oz	Stairs
CPT-3		Tarkett	Buccato 40030	Spring Azure-01950	12' 6" roll, 32 oz	Inserts, Lounges
CPT-4		Tarkett	Vetro 40032	Spring Azure-01950	12' 6" roll, 32 oz	Ramps, Corridors
CPT-5		Custom Sbemco International Inc.	#176 #178	Fossil Thundercloud	Sbemco Quote #26401	Vestibules
097200 Wall Covering						
WC-1		Innovations Wallcovering	Glint GLN-009	Ore	54"W, Type II, 20 oz; Non-match repeat, microperforated	Mail Room
WC-2		MDC	Eclipse JEC6010	Goldfinger	54"W, Type II, 20 oz; Reversible half drop match, 3.5"Vertical repeat, microperforated	Restrooms
WC-3		Momentum	Stella 2VSTL-08	Cognac	54"W, Type II, 20 oz; Straight match	3rd Floor Lounge
097723 Fabric-Wrapped Panel						
FWP-1			Maharam - Lumen	TBD	1/2" Fabric Wrapped Homasote Tackboard	Mail Room
099123 Interior Painting						
P-1		Sherwin Williams	SW7551	Greek Villa	Semi-Gloss	General Trim, Columns
P-2		Sherwin Williams	SW7551	Greek Villa	1/2"	General Ceiling
P-3		Sherwin Williams	SW7638	Jogging Path	Eggshell	General Wall
P-4		Sherwin Williams	SW7638	Jogging Path	Semi-Gloss	BOH Wet Areas
P-5		Sherwin Williams	SW6370	Saucy Gold	Eggshell	1st Floor Resident Corridor Accent
P-6		Sherwin Williams	SW6342	Spicy Hue	Eggshell	2nd Floor Resident Corridor Accent
P-7		Sherwin Williams	SW7604	Smoky Blue	Eggshell	3rd Floor Resident Corridor Accent
P-8		Sherwin Williams	SW6286	Mature Grape	Eggshell	4th Floor Resident Corridor Accent
P-9		Sherwin Williams	SW7631	City Loft	Eggshell	2nd Floor Lounge
P-10		Sherwin Williams	SW7605	Gale Force	Eggshell	4th Floor Lounge
P-11		Sherwin Williams	SW7507	Stone Lion	Semi-Gloss	Stairwell Handrails
P-12		Sherwin Williams	TBD	TBD	TBD	Column Accent
P-13		Sherwin Williams	SW9183	Dark Clove	Eggshell	Paint behind WD-2
099300 Staining and Transparent Finishings						
ST-1		Custom		Match CAB-1		Lounge Built-Ins, Columns, Railing Handrail
DIVISION 12: FURNISHINGS						
122113 Horizontal Louver Blinds						
B-1		SWF Contract	Graber Lake Forest	5304 Textured Milky Way	2" Faux Wood, 2 1/2" Classic Valance	Windows
123661.19 Quartz Agglomerate Countertops						
QZ-1		Cambria		New Quay	3cm, Eased Edge	Restrooms, 3rd & 4th Floor Lounge
QZ-2		Cambria		Brittanicca Gold Warm	3cm, Eased Edge	Mail Room & 2nd Floor Lounge
QZ-3		Cambria		TBD	2cm	Fireplace Surround
DIVISION 14: CONVEYING EQUIPMENT						

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ARCHITECT
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PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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ARCHITECT	: DAS	CHECKED	: KED
ENGINEER	: DES	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE
2	Rev 1 - Permit Comments	02/15/24

DRAWING TITLE

FINISH LEGEND

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING I0.1

FINISH LEGEND - PACAKGE A (SAND PALETTE)

Code	Rev. Date	Manufacturer	Pattern	Color	Details	Remarks
DIVISION 06: WOODS, PLASTICS, AND COMPOSITES						
062023 Interior Finish Carpentry						
S-WDB-1		SSI Wood Products	SSI-1354	P-1	3/4" x 4 1/4"	Unit Base
S-CAS-1		1" x 3"		P-1	Hardwood, paint grade	Unit Door Casing
S-WD-1		Tague Lumber	TL-1167	P-1	1" x 5 1/2", Hardwood, paint grade	Unit Window Sill
S-WD-2		Custom		P-1	1/2" x 3 1/2", Hardwood, paint grade	Unit Window Apron
DIVISION 09: FINISHES						
093013 Ceramic Tiling						
S-T-1A		Daltile	Classic Color Wheel	Arctic White	3" x 6", Gloss, Brick Install	Backsplash
S-T-2A		Daltile	Classic Color Wheel	Biscuit	3" x 6", Gloss, Brick Install	Backsplash
S-T-3A		Emser Tile	Influence Hex	Gray	1" Hexagon	Backsplash
S-T-4A		Emser Tile	Influence Hex	White	1" Hexagon	Backsplash
S-G-1A		Mapei		5221 Moonbeam	Unsanded	ST-T-1A, ST-T-4A
S-G-2A		Mapei		5014 Biscuit	Unsanded	ST-T-2A
S-G-3A		Mapei		5093 Warm Gray	Unsanded	ST-T-3A
DS-1		Schluter	Schiene / Jolly	Brushed Nickel	Use accompaning inside/outside 90 degree corner pieces and connectors to ensure there are no sharp edges. All metal edges to be sanded and sealed with no sharp edges.	Wall Tile Termination
096516 Resilient Sheet Flooring						
S-RF-2A		Patcraft	Sense I624V	Ease 001000	78.72", Heat weld with matching seams	Bathroom
096519 Resilient Tile Flooring						
S-RF-1A		Mohawk	Vivid Step Wood CR705	Vintage Oak W723	6" x 48", 2mm, 1/3 Brick Install	Kitchen
096816 Sheet Carpeting						
S-CPT-1A		Tarkett	Influence	Enchant 859	12' , cushion per owner's standard	Living Room & Bedroom
099123 Interior Painting						
S-P-1A		Sherwin Williams	SW7551	Greek Villa	Semi-Gloss	General Trim
S-P-2A		Sherwin Williams	SW7551	Greek Villa	Flat	General Ceiling
S-P-3A		Sherwin Williams	SW7036	Accessible Beige	Eggshell	General Wall
S-P-4A		Sherwin Williams	SW7036	Accessible Beige	Semi-Gloss	Bathroom
DIVISION 12: FURNISHINGS						
122113 Horizontal Louver Blinds						
S-B-1A		SWF Contract	Graber Lake Forest	5304 Textured Milky Way	2" Faux Wood, 2 1/2" Classic Valance	All unit windows
123530 Residential Casework (As noted on Interior Elevations as - RESIDENTIAL CASEWORK)						
S-CAS-1A		Merillat	Portrait	Cotton	Maple, Franklin Brass Lombard 3" Hardware, Brushed Nickel	Kitchen & Bath
S-CAS-2A		Merillat	Portrait	Pecan	Maple, Franklin Brass Lombard 3" Hardware, Brushed Nickel	Kitchen & Bath
123661.13 Cultured Marble Countertops						
S-CM-1A		Virginia Marble		White Vein on White	3cm, Eased Edge, Polished	Bathroom
123661.19 Quartz Agglomerate Countertops						
S-QZ-1A		Consentino	Silestone	Etheral Glow	3cm, Eased Edge, Polished	Kitchen & Bath
S-QZ-2A		Consentino	Silestone	Lusso	3cm, Eased Edge, Polished	Kitchen & Bath

FINISH LEGEND - PACAKGE B (RAIN PALETTE)

Code	Rev. Date	Manufacturer	Pattern	Color	Details	Remarks
DIVISION 06: WOODS, PLASTICS, AND COMPOSITES						
062023 Interior Finish Carpentry						
S-WDB-1		SSI Wood Products	SSI-1354	P-1	3/4" x 4 1/4"	Unit Base
S-CAS-1		1" x 3"		P-1	Hardwood, paint grade	Unit Door Casing
S-WD-1		Tague Lumber	TL-1167	P-1	1" x 5 1/2", Hardwood, paint grade	Unit Window Sill
S-WD-2		Custom		P-1	1/2" x 3 1/2", Hardwood, paint grade	Unit Window Apron
DIVISION 09: FINISHES						
093013 Ceramic Tiling						
S-T-1A		Daltile	Classic Color Wheel	Arctic White	3" x 6", Gloss, Brick Install	Backsplash
S-T-2A		Daltile	Classic Color Wheel	Desert Gray	3" x 6", Gloss, Brick Install	Backsplash
S-T-3A		Emser Tile	Influence Hex	Gray	1" Hexagon	Backsplash
S-T-4A		Emser Tile	Influence Hex	White	1" Hexagon	Backsplash
S-G-1A		Mapei		5221 Moonbeam	Unsanded	ST-T-1A, ST-T-4A
S-G-2A		Mapei		5027 Silver	Unsanded	ST-T-2A
S-G-3A		Mapei		5093 Warm Gray	Unsanded	ST-T-3A
DS-1		Schluter	Schiene / Jolly	Brushed Nickel	Use accompaning inside/outside 90 degree corner pieces and connectors to ensure there are no sharp edges. All metal edges to be sanded and sealed with no sharp edges.	Wall Tile Termination
096516 Resilient Sheet Flooring						
S-RF-2A		Patcraft	Sense I624V	Engage 00550	78.72", Heat weld with matching seams	Bathroom
096519 Resilient Tile Flooring						
S-RF-1A		Mohawk	Vivid Step Wood CR705	Grounded Hatch W132	6" x 48", 2mm, 1/3 Brick Install	Kitchen
096816 Sheet Carpeting						
S-CPT-1A		Tarkett	Influence	Enchant 859	12' , cushion per owner's standard	Living Room & Bedroom
099123 Interior Painting						
S-P-1A		Sherwin Williams	SW7551	Greek Villa	Semi-Gloss	General Trim
S-P-2A		Sherwin Williams	SW7551	Greek Villa	Flat	General Ceiling
S-P-3A		Sherwin Williams	SW7029	Agreeable Gray	Eggshell	General Wall
S-P-4A		Sherwin Williams	SW7029	Agreeable Gray	Semi-Gloss	Bathroom
DIVISION 12: FURNISHINGS						
122113 Horizontal Louver Blinds						
S-B-1A		SWF Contract	Graber Lake Forest	5304 Textured Milky Way	2" Faux Wood, 2 1/2" Classic Valance	All unit windows
123530 Residential Casework (As noted on Interior Elevations as - RESIDENTIAL CASEWORK)						
S-CAS-1A		Merillat	Portrait	Cotton	Maple, Franklin Brass Lombard 3" Hardware, Brushed Nickel	Kitchen & Bath
S-CAS-2A		Merillat	Portrait	Basalt	Maple, Franklin Brass Lombard 3" Hardware, Brushed Nickel	Kitchen & Bath
123661.13 Cultured Marble Countertops						
S-CM-1A		Virginia Marble		White Vein on White	3cm, Eased Edge, Polished	Bathroom
123661.19 Quartz Agglomerate Countertops						
S-QZ-1A		Consentino	Silestone	Pietra	3cm, Eased Edge, Polished	Kitchen & Bath
S-QZ-2A		Consentino	Silestone	Helix	3cm, Eased Edge, Polished	Kitchen & Bath

GENERAL NOTES

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DESIGNER : DAS	DRAWN : CLH, CRW
ARCHITECT : DAS	CHECKED : KED
ENGINEER : DES	APPROVED : APP

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FINISH LEGEND CONTINUED

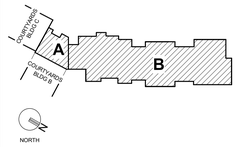
DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING I0.2

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

KEYPLAN

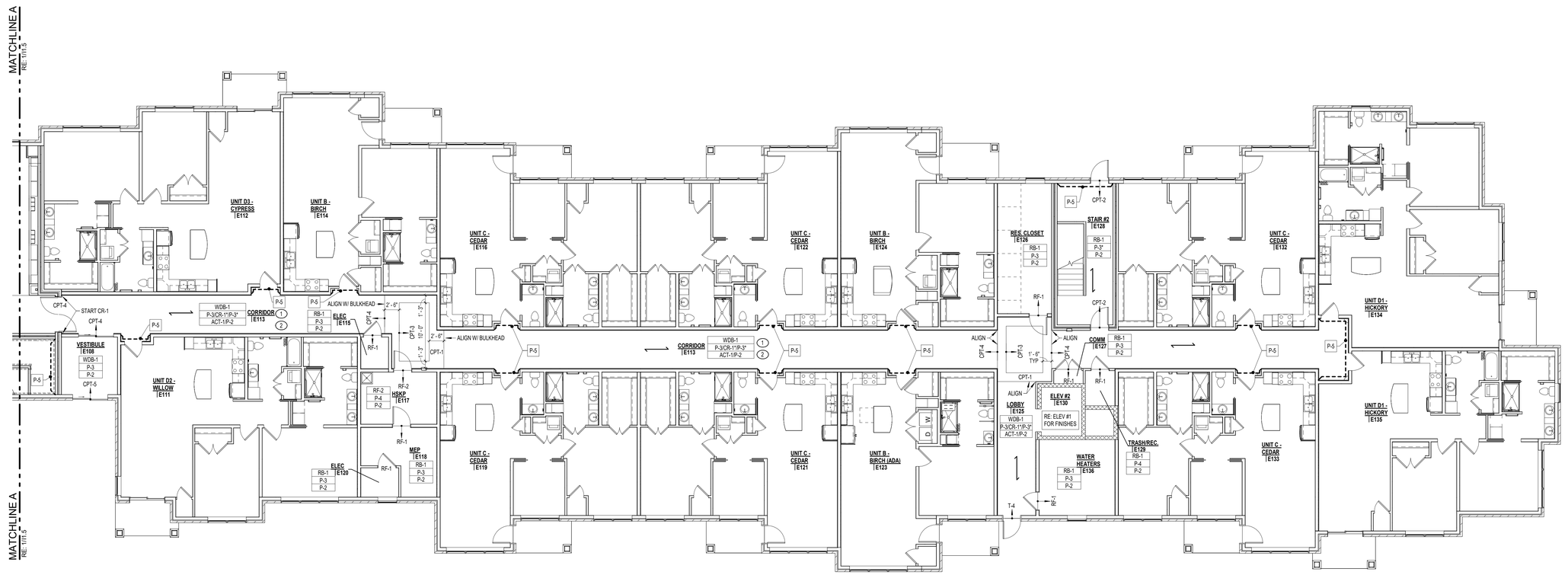


GENERAL NOTES

1. REFER TO I0.0 FOR GENERAL NOTES, FINISH KEY, AND ABBREVIATIONS.
2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
3. REFER TO I0.2 FOR UNIT FINISH LEGEND.

(1) LEAN RAIL TO BE INSTALLED ON PLAN NORTH WALL OF CORRIDOR.

(2) VERTICAL PORTION OF BULKHEAD TO MATCH ROOM WALL COLOR.



1 FIRST FLOOR PLAN - IL UNITS
1/8" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
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PROJECT TITLE

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DESIGNER	: DAS	DRAWN	: CLH, CRW
ARCHITECT	: DAS	CHECKED	: KED
ENGINEER	: ENG	APPROVED	: CRJ

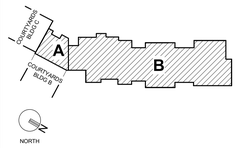
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FIRST FLOOR FINISH PLAN - IL UNITS

DATE:	January 5, 2024	DRAWING	I1.1
COMM. NO.	23104.00		

KEYPLAN



GENERAL NOTES

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2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
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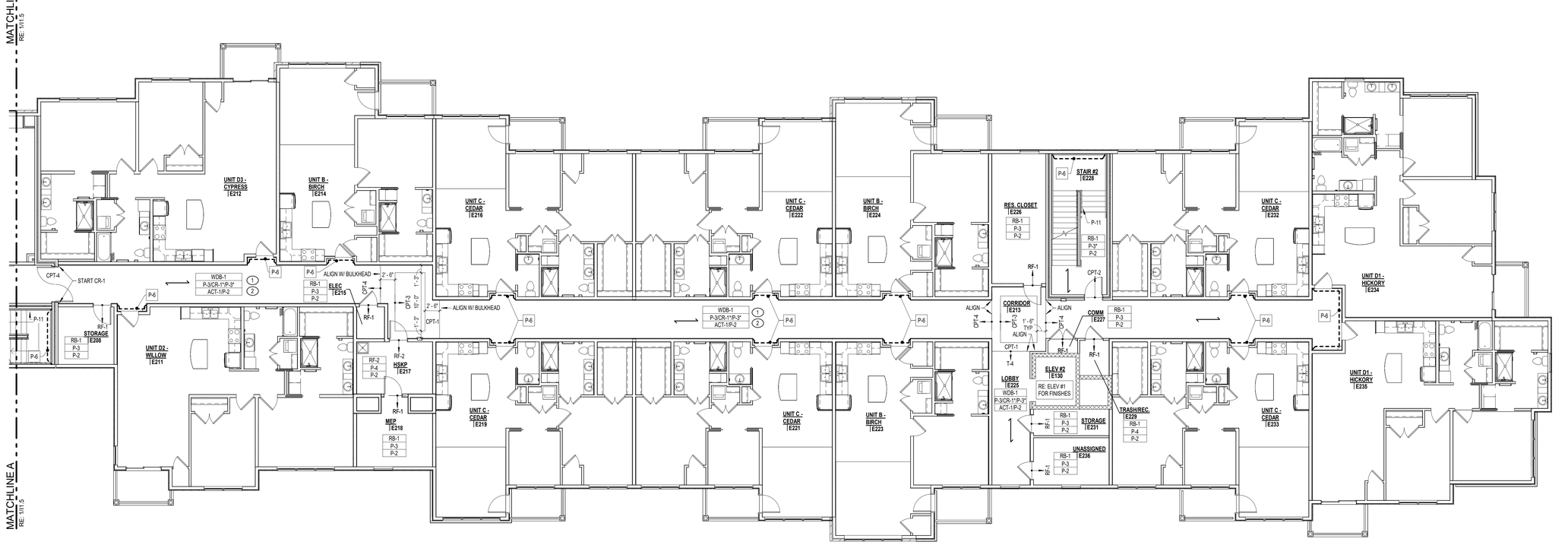
(1) LEAN RAIL TO BE INSTALLED ON PLAN NORTH WALL OF CORRIDOR.

(2) VERTICAL PORTION OF BULKHEAD TO MATCH ROOM WALL COLOR.



1 SECOND FLOOR PLAN - IL UNITS
1/8" = 1'-0"

CONSTRUCTION SET

PROJECT TITLE

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DESIGNER : DAS	DRAWN : CLH, CRW
ARCHITECT : DAS	CHECKED : KED
ENGINEER : DES	APPROVED : CRJ

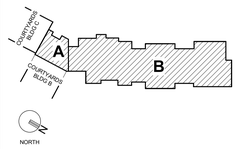
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

SECOND FLOOR FINISH PLAN - IL UNITS

DATE: January 5, 2024	DRAWING I1.2
COMM. NO. 23104.00	

KEYPLAN

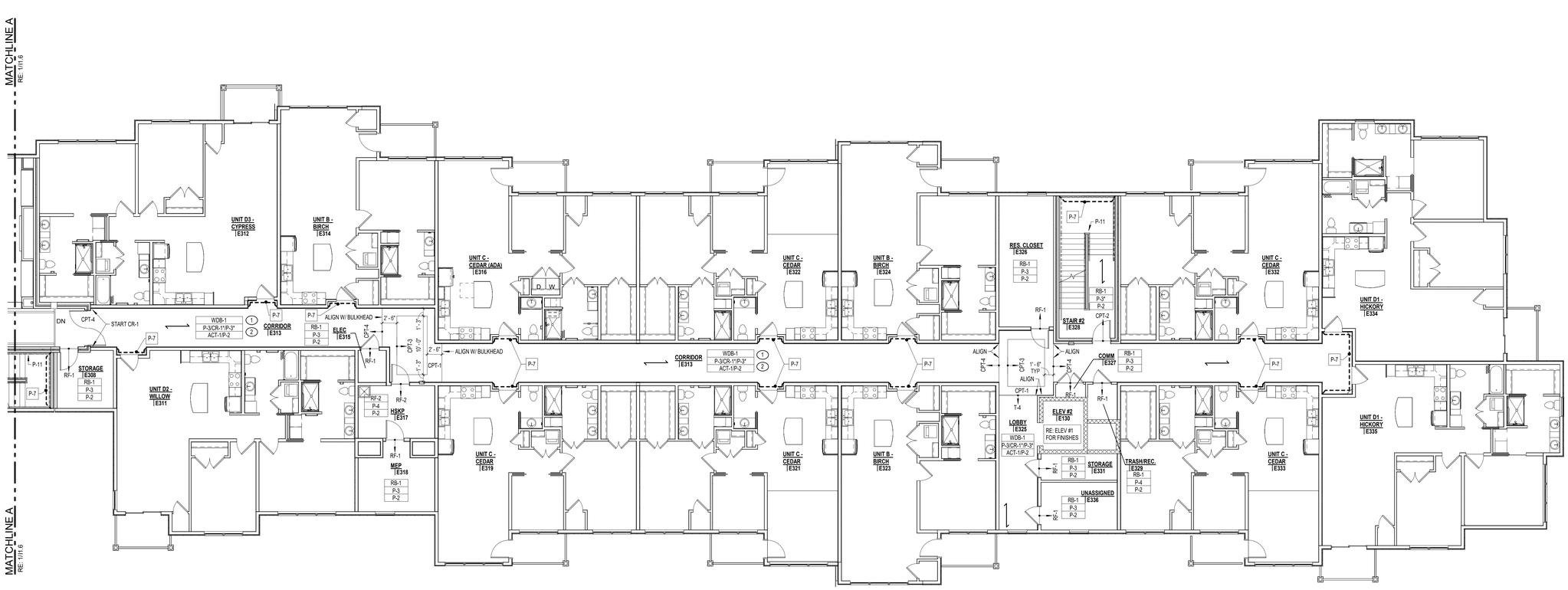


GENERAL NOTES

1. REFER TO I0.0 FOR GENERAL NOTES, FINISH KEY, AND ABBREVIATIONS.
2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
3. REFER TO I0.2 FOR UNIT FINISH LEGEND.

PLAN NOTES

1. LEAN RAIL TO BE INSTALLED ON PLAN NORTH WALL OF CORRIDOR.
2. VERTICAL PORTION OF BULKHEAD TO MATCH ROOM WALL COLOR.



1 THIRD FLOOR PLAN - IL UNITS
1/8" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	: DAS	DRAWN	: CLH, CRW
ARCHITECT	: DAS	CHECKED	: KED
ENGINEER	: DES	APPROVED	: CRJ

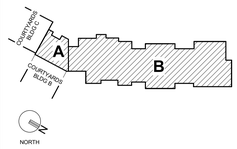
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

THIRD FLOOR FINISH PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING I1.3

KEYPLAN

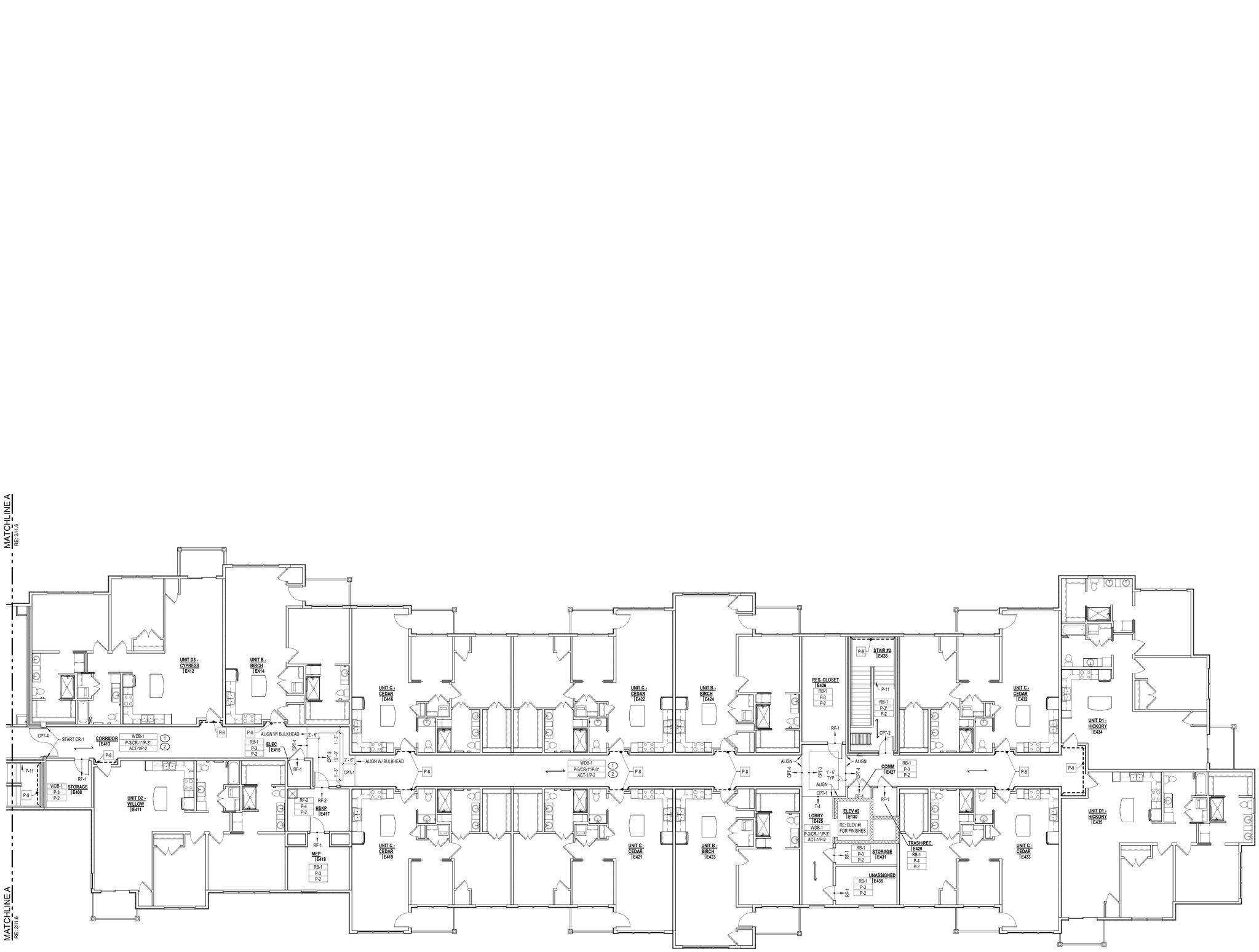


GENERAL NOTES

1. REFER TO I0.0 FOR GENERAL NOTES, FINISH KEY, AND ABBREVIATIONS.
2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
3. REFER TO I0.2 FOR UNIT FINISH LEGEND.

(1) LEAN RAIL TO BE INSTALLED ON PLAN NORTH WALL OF CORRIDOR.

(2) VERTICAL PORTION OF BULKHEAD TO MATCH ROOM WALL COLOR.



1 FOURTH FLOOR FINISH PLAN - IL UNITS
1/8" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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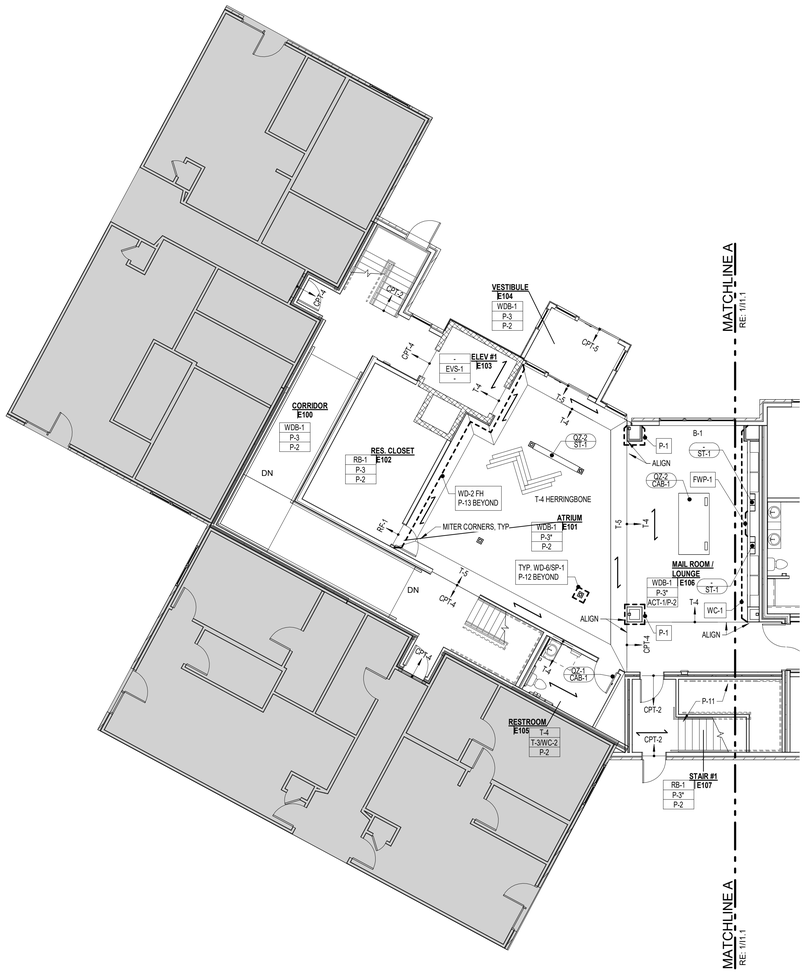
DESIGNER : DAS	DRAWN : CLH, CRW
ARCHITECT : DAS	CHECKED : KED
ENGINEER : DES	APPROVED : CRJ

NO.	REVISION DESCRIPTION	DATE

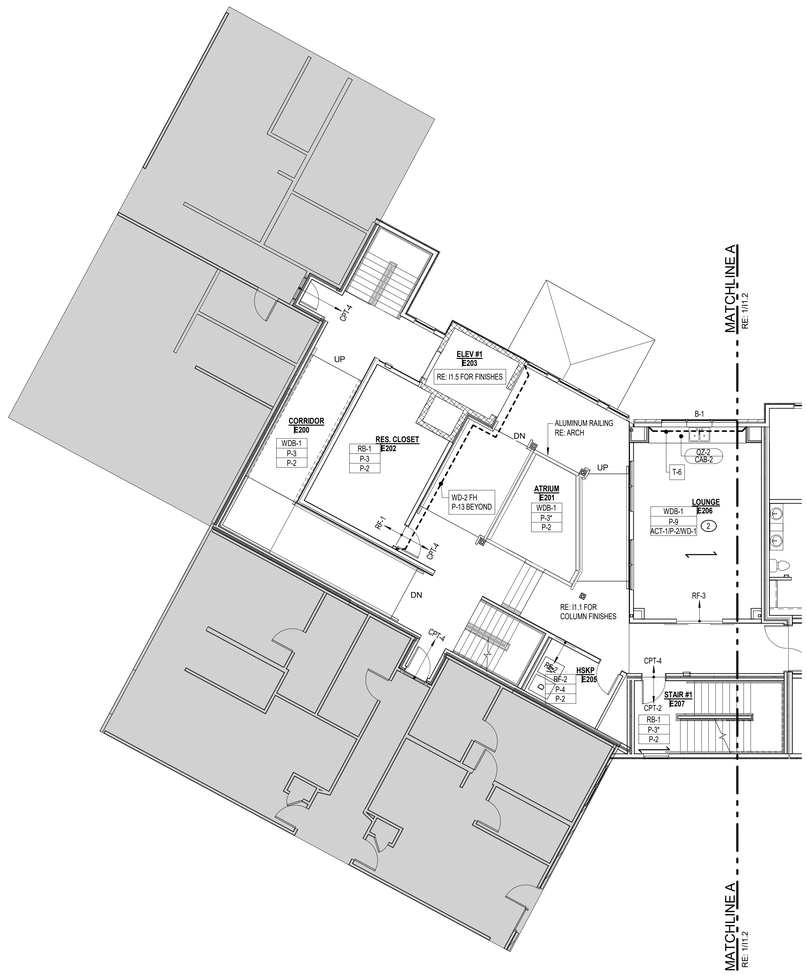
DRAWING TITLE

FOURTH FLOOR FINISH PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING I1.4

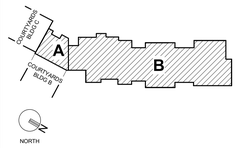


1 FIRST FLOOR FINISH PLAN - ATRIUM
1/8" = 1'-0"



2 SECOND FLOOR FINISH PLAN - ATRIUM
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. REFER TO I0.0 FOR GENERAL NOTES, FINISH KEY, AND ABBREVIATIONS.
2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
3. REFER TO I0.2 FOR UNIT FINISH LEGEND.

(1) LEAN RAIL TO BE INSTALLED ON PLAN NORTH WALL OF CORRIDOR.

(2) VERTICAL PORTION OF BULKHEAD TO MATCH ROOM WALL COLOR.

NORTH

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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DESIGNER	: DAS	DRAWN	: CLH, CRW
ARCHITECT	: DAS	CHECKED	: KED
ENGINEER	: Designer	APPROVED	: CRJ

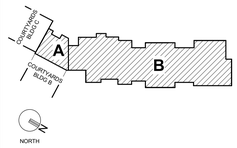
NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FIRST AND SECOND FLOOR FINISH PLANS - ATRIUM

DATE:	January 5, 2024	DRAWING	I1.5
COMM. NO.	23104.00		

KEYPLAN

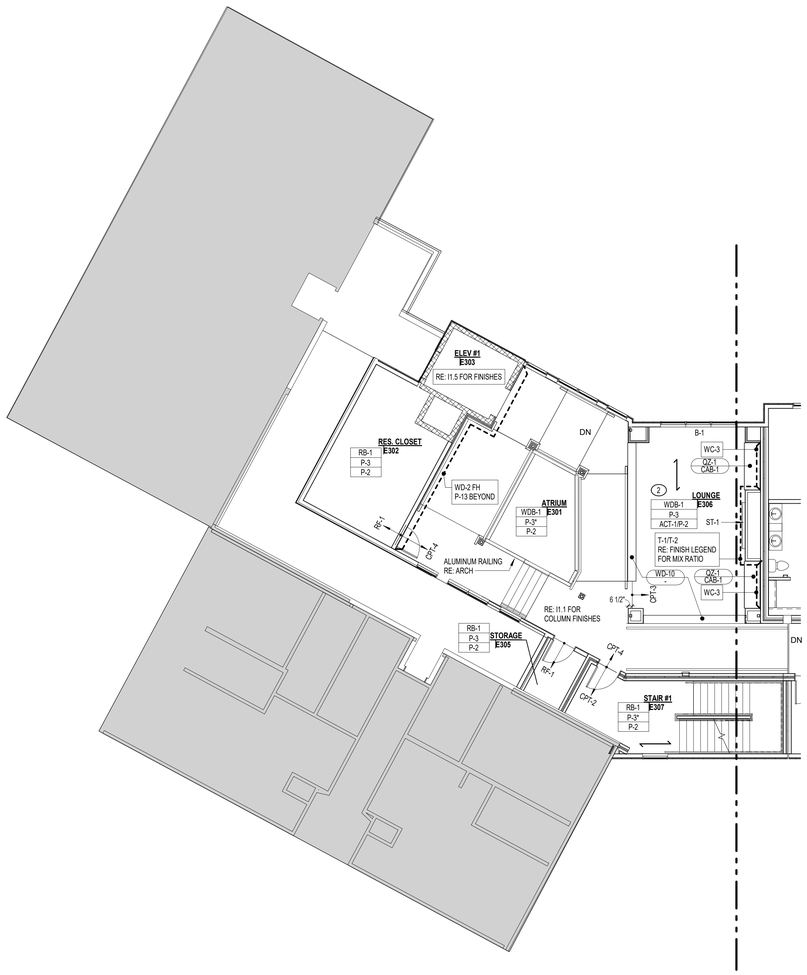


GENERAL NOTES

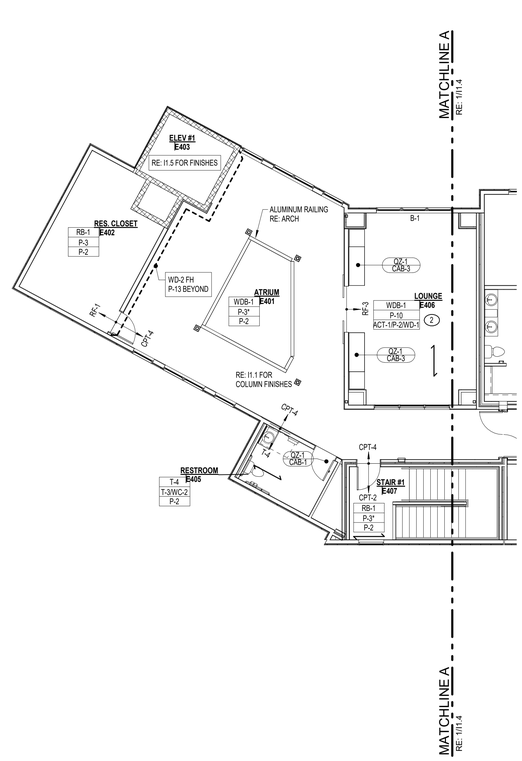
1. REFER TO I0.0 FOR GENERAL NOTES, FINISH KEY, AND ABBREVIATIONS.
2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
3. REFER TO I0.2 FOR UNIT FINISH LEGEND.

(1) LEAN RAIL TO BE INSTALLED ON PLAN NORTH WALL OF CORRIDOR.

(2) VERTICAL PORTION OF BULKHEAD TO MATCH ROOM WALL COLOR.



1 THIRD FLOOR FINISH PLAN - ATRIUM
1/8" = 1'-0"



2 FOURTH FLOOR FINISH PLAN - ATRIUM
1/8" = 1'-0"

NORTH

CONSTRUCTION SET

CURTIS R. JENNINGS III
NUMBER A-2002034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

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DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	Designer	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

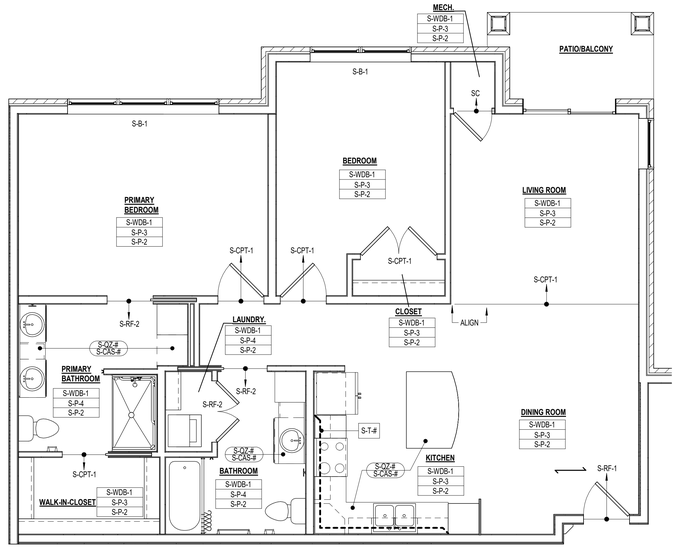
DRAWING TITLE

THIRD & FOURTH FLOOR FINISH PLANS - ATRIUM

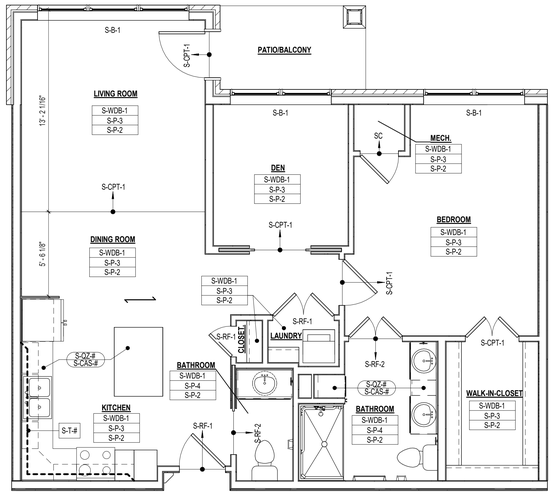
DATE: January 5, 2024

COMM. NO. 23104.00

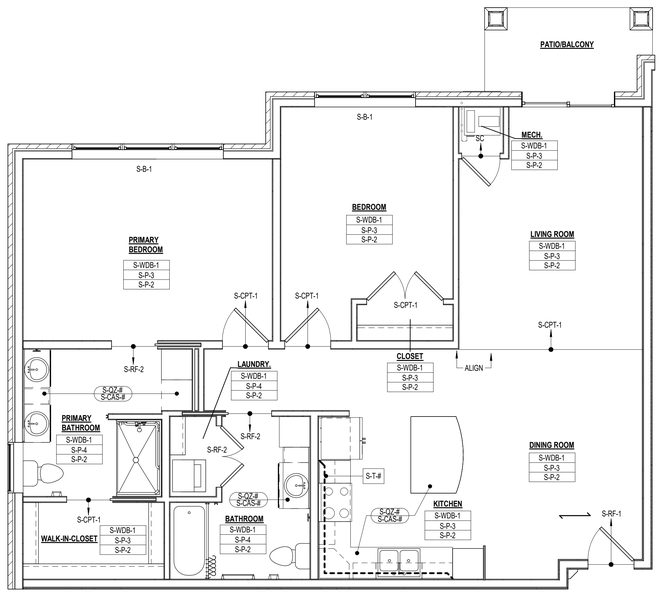
DRAWING I1.6



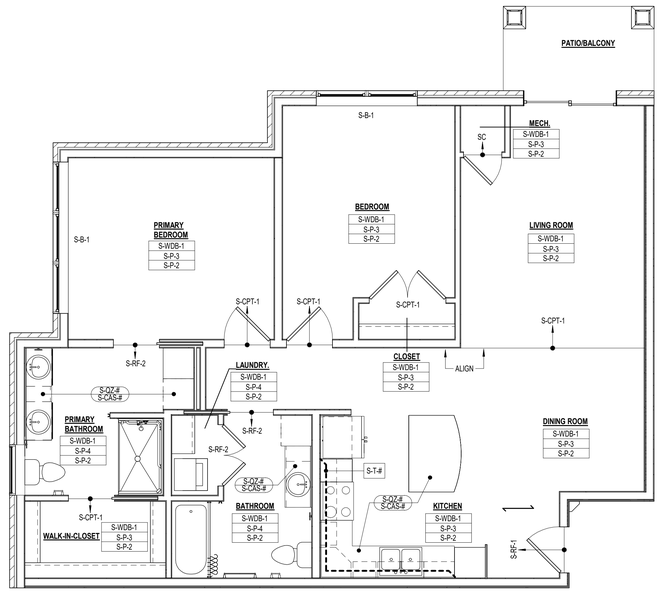
4 UNIT D2 - WILLOW
1/4" = 1'-0"



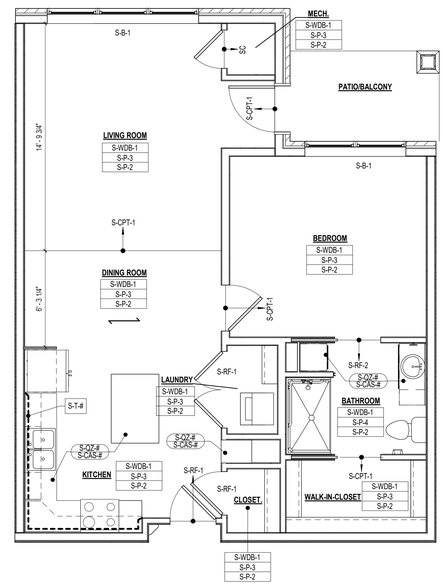
2 UNIT C - CEDA
1/4" = 1'-0"



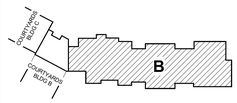
5 UNIT D3 - CYPRESS
1/4" = 1'-0"



3 UNIT D1 - HICKORY
1/4" = 1'-0"



1 UNIT B - BIRCH
1/4" = 1'-0"



GENERAL NOTES

1. REFER TO I0.0 FOR GENERAL NOTES, FINISH KEY, AND ABBREVIATIONS.
2. REFER TO I0.1 FOR COMMONS FINISH LEGEND.
3. REFER TO I0.2 FOR UNIT FINISH LEGEND.
4. APARTMENT FINISHES ARE SHOWN AS STANDARD PACKAGE FOR PRICING. FINAL FINISH PACKAGE TO BE DETERMINED BY RESIDENT PER EACH UNIT.

CONSTRUCTION SET

01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	DES	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

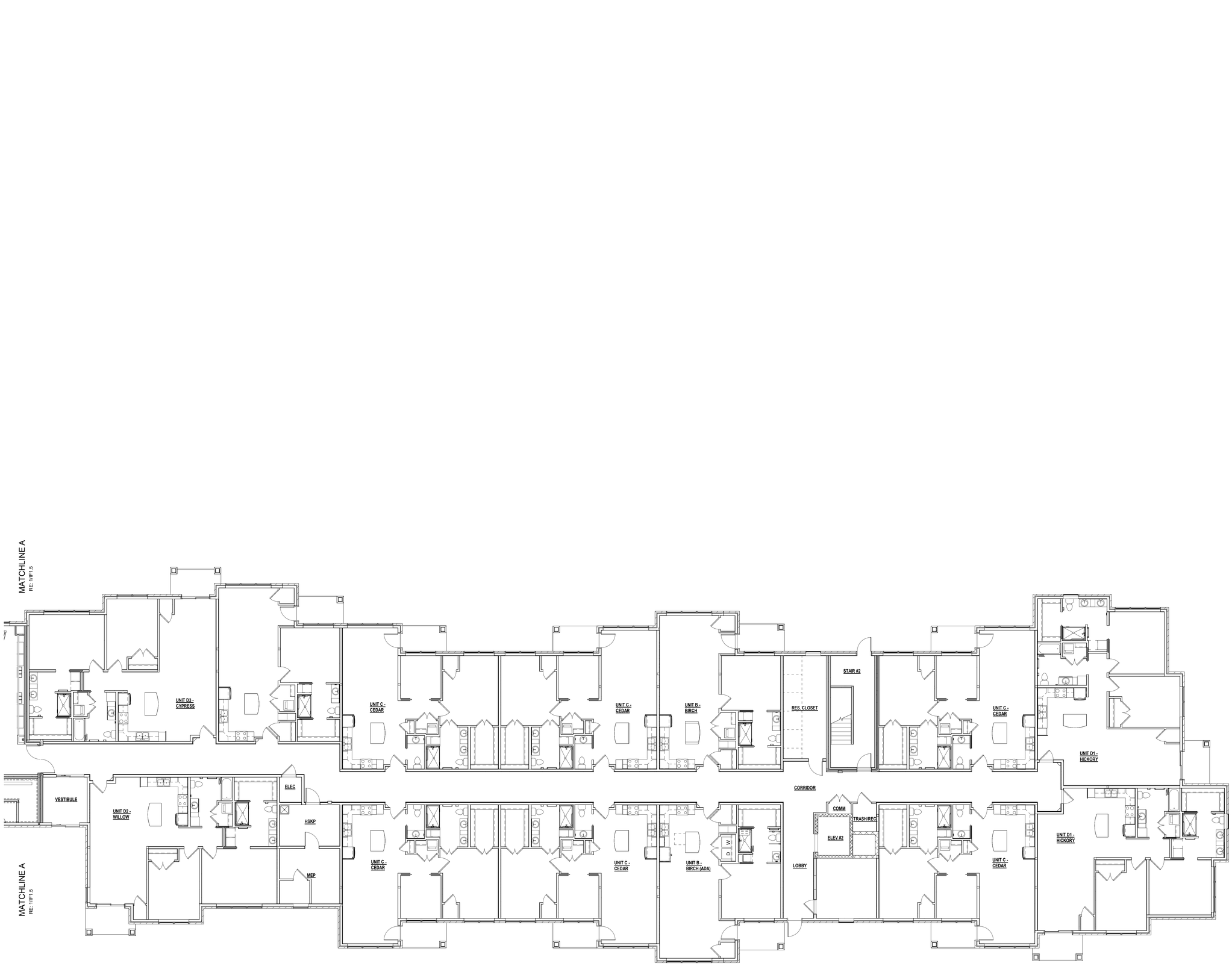
DRAWING TITLE

ENLARGED FINISH PLANS - IL UNITS

DATE: January 5, 2024

COMM. NO. 23104.00

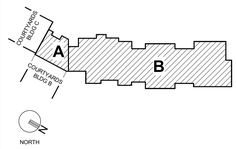
DRAWING I2.1



1 FIRST FLOOR FURNITURE PLAN - IL UNITS
1/8" = 1'-0"

NORTH

KEYPLAN



GENERAL NOTES

1. FURNITURE N.I.C.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

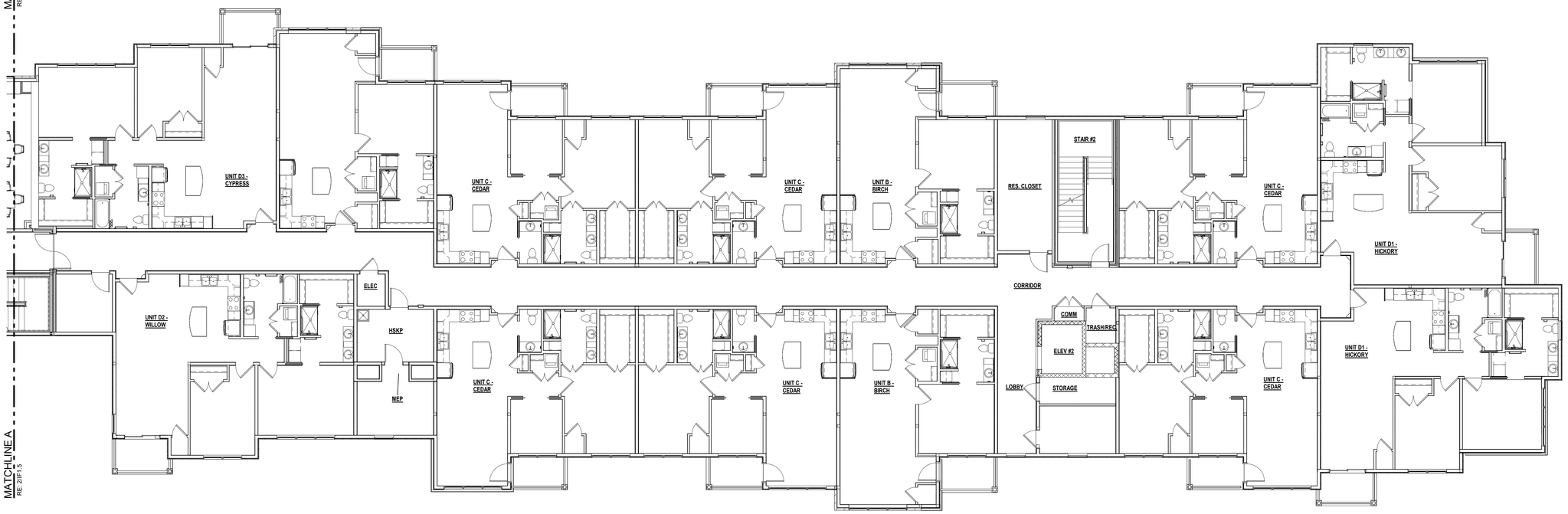
DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	Designer	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FIRST FLOOR FURNITURE PLAN - IL UNITS

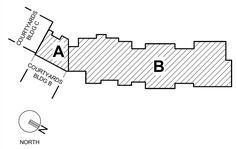
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING IF1.1



1 SECOND FLOOR FURNITURE PLAN - IL UNITS
1/8" = 1'-0"

NORTH

KEYPLAN



GENERAL NOTES

1. FURNITURE N.I.C.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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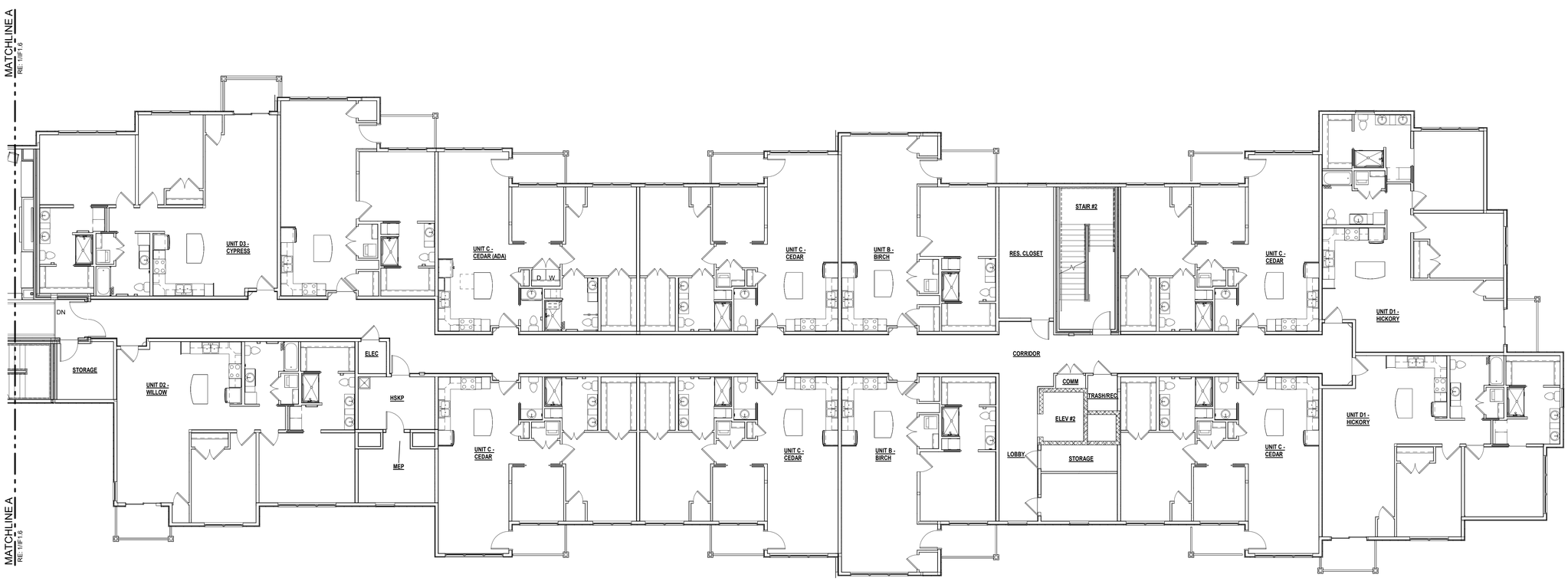
DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	Designer	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

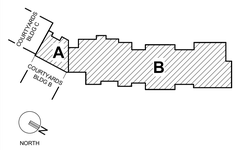
SECOND FLOOR FURNITURE PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING IF1.2



1 THIRD FLOOR FURNITURE PLAN - IL UNITS
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FURNITURE N.I.C.

CONSTRUCTION SET

01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER	: DAS	DRAWN	: CLH, CRW
ARCHITECT	: DAS	CHECKED	: KED
ENGINEER	: Designer	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

THIRD FLOOR FURNITURE PLAN - IL UNITS

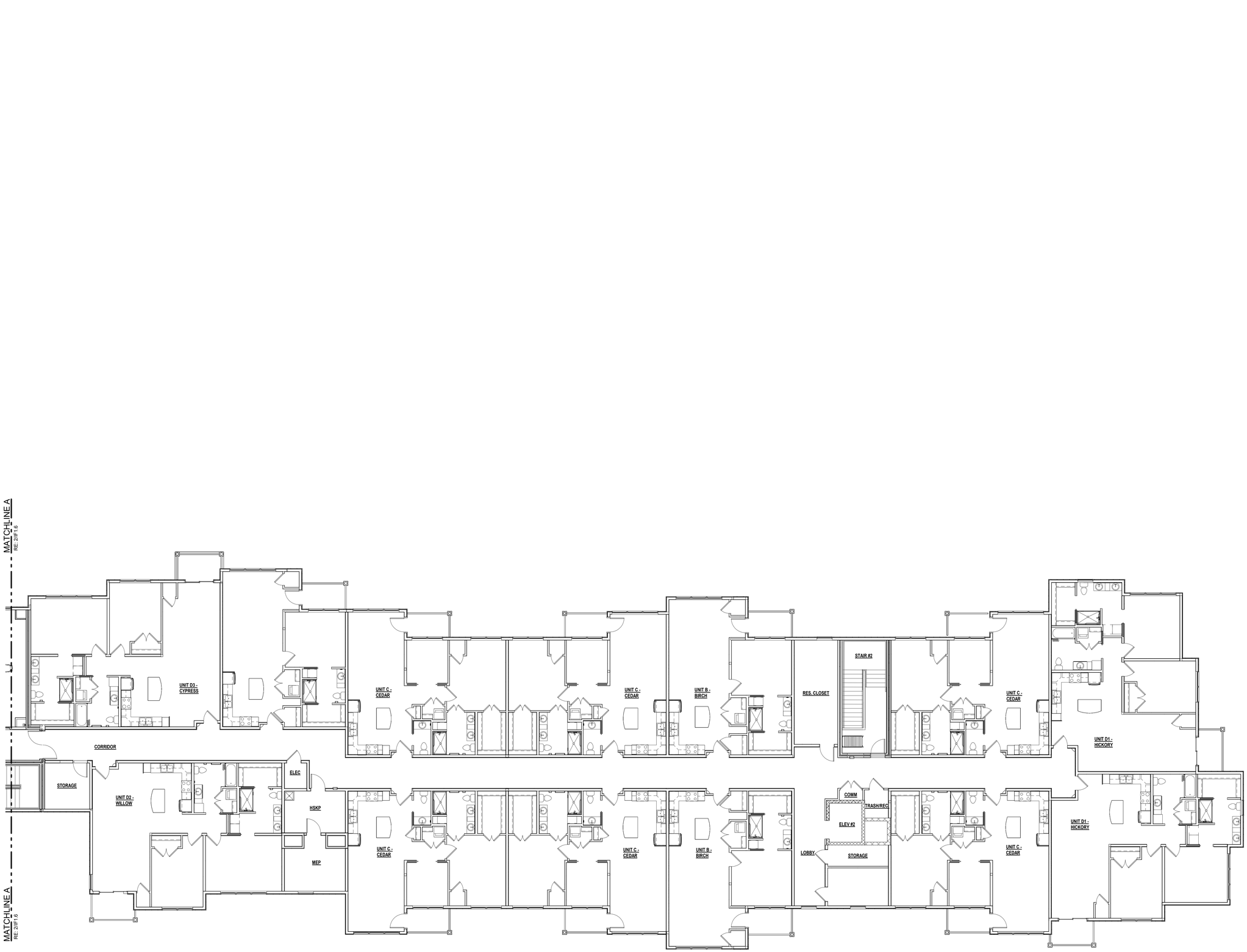
DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING IF1.3

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

MATCHLINE A
RE: 2/IF1.6

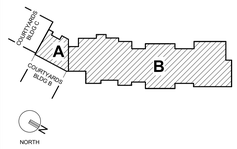


MATCHLINE A
RE: 2/IF1.6

1 FOURTH FLOOR FURNITURE PLAN - IL UNITS
1/8" = 1'-0"

NORTH

KEYPLAN



GENERAL NOTES

1. FURNITURE N.I.C.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	Designer	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

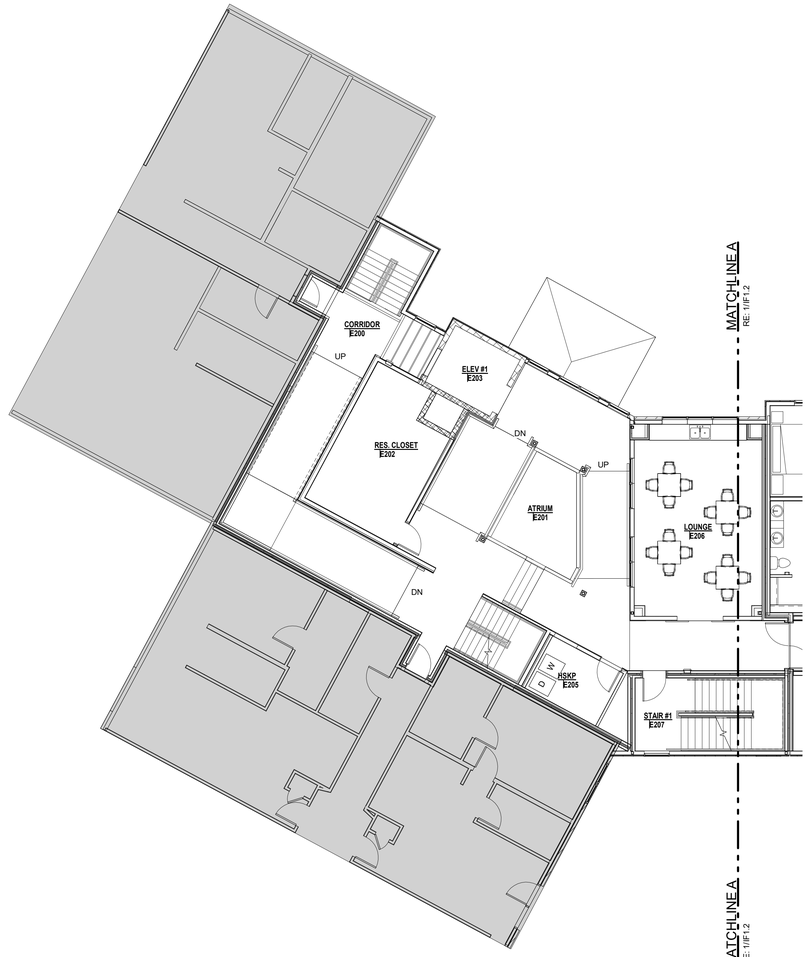
DRAWING TITLE

FOURTH FLOOR FURNITURE PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING IF1.4

1 FIRST FLOOR FURNITURE PLAN - ATRIUM

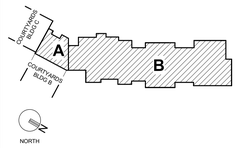
1/8" = 1'-0"



2 SECOND FLOOR FURNITURE PLAN - ATRIUM

1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FURNITURE N.I.C.

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	Designer	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

FIRST AND SECOND FLOOR FURNITURE PLANS - ATRIUM

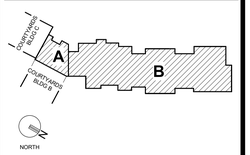
DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING IF1.5

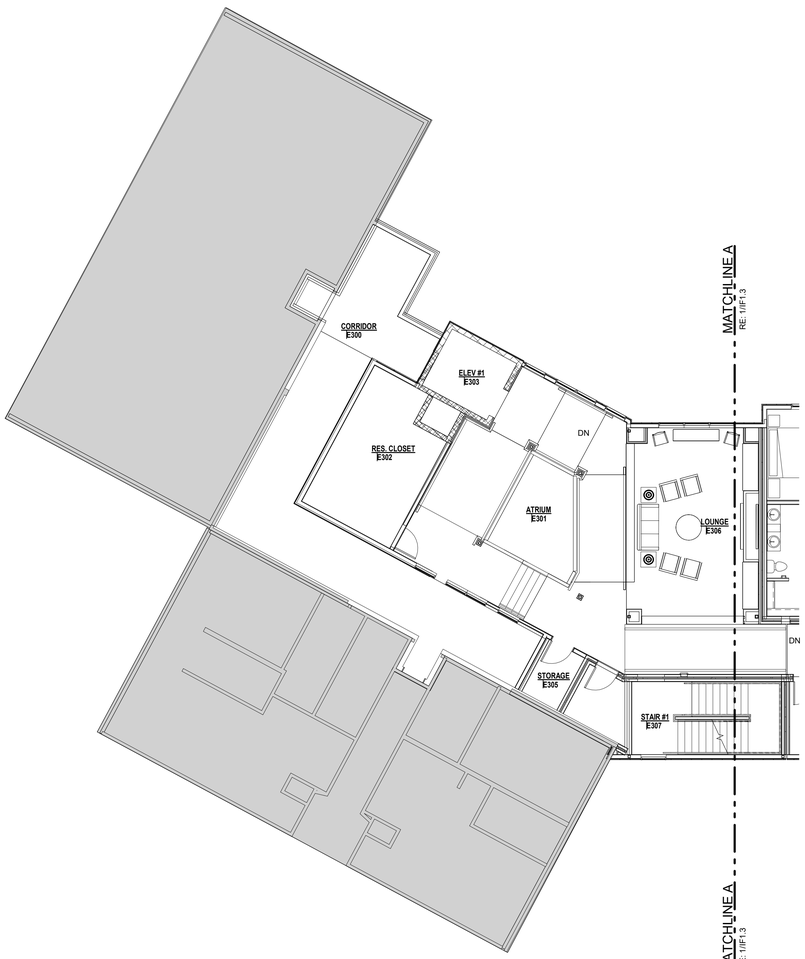
NORTH

KEYPLAN

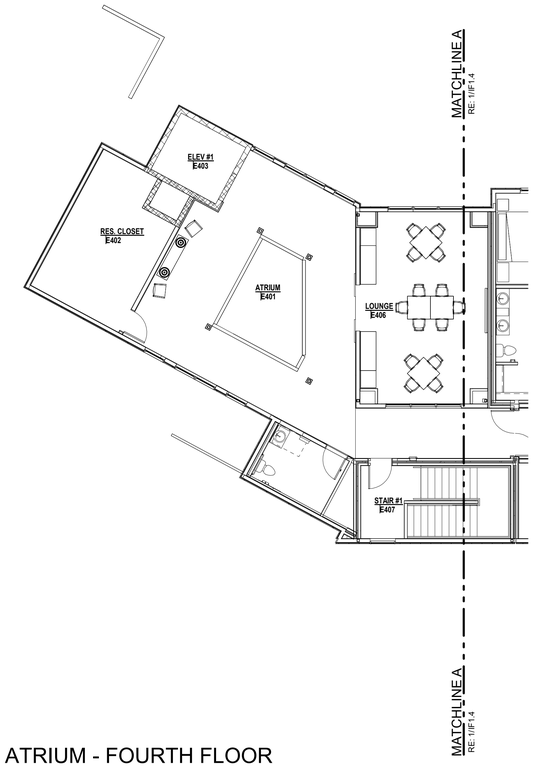


GENERAL NOTES

1. FURNITURE N.I.C.



1 THIRD FLOOR FURNITURE PLAN - ATRIUM
1/8" = 1'-0"



2 ATRIUM - FOURTH FLOOR FURNITURE PLAN
1/8" = 1'-0"

NORTH

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

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www.sfcs.com

DESIGNER	: DAS	DRAWN	: CLH, CRW
ARCHITECT	: DAS	CHECKED	: KED
ENGINEER	: Designer	APPROVED	: CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

THIRD AND FOURTH FLOOR FURNITURE PLANS - ATRIUM

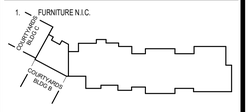
DATE: January 5, 2024

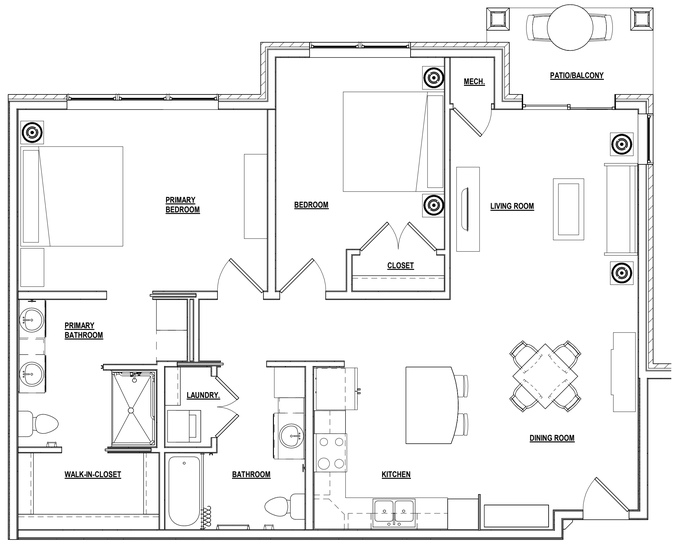
COMM. NO. 23104.00

DRAWING IF1.6

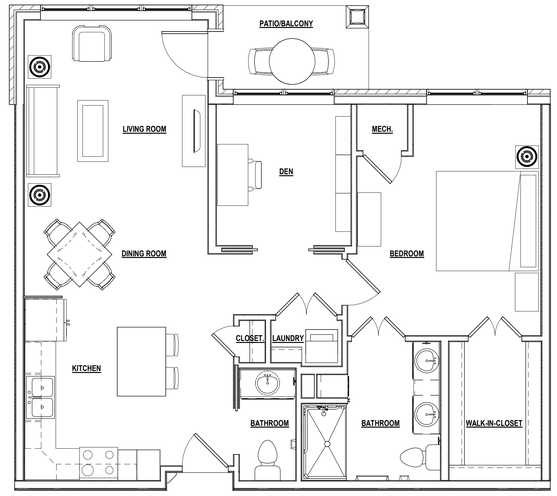
GENERAL NOTES

1. FURNITURE N.I.C.

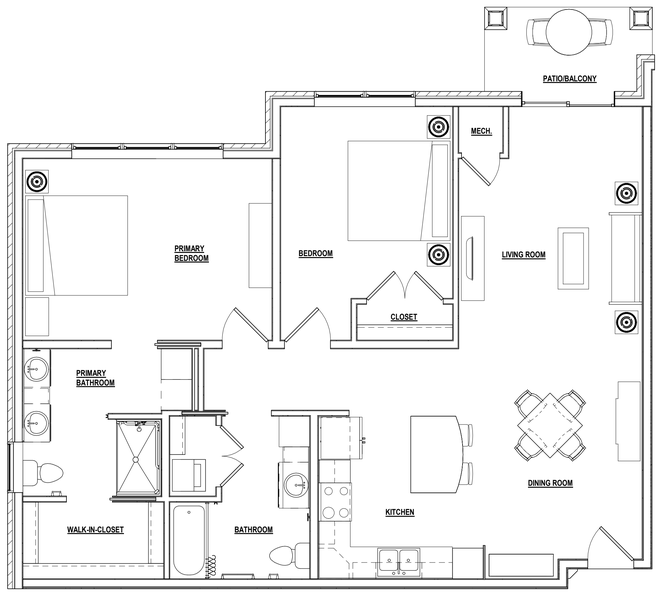




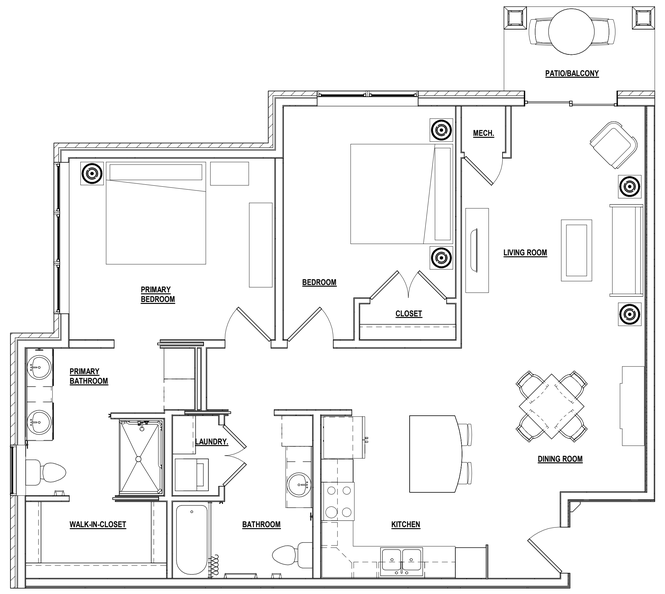
4 UNIT D2 - WILLOW
1/4" = 1'-0"



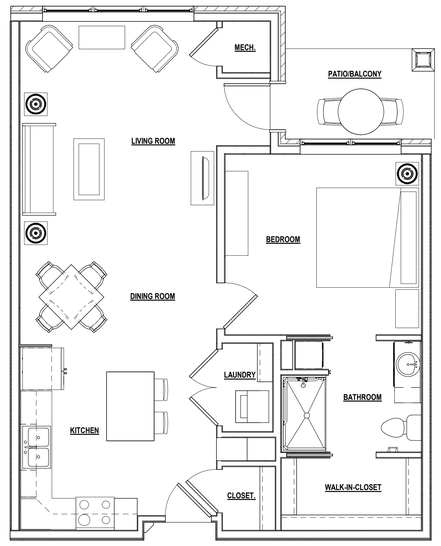
2 UNIT C - CEDA
1/4" = 1'-0"



5 UNIT D3 - CYPRESS
1/4" = 1'-0"



3 UNIT D1 - HICKORY
1/4" = 1'-0"



1 UNIT B - BIRCH
1/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
CURTIS R. JENNINGS III
NUMBER A-2023034555
ARCHITECT
01-05-2024

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
SFCS Inc. • 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 • Fax 704.372.7369
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DESIGNER	DAS	DRAWN	CLH, CRW
ARCHITECT	DAS	CHECKED	KED
ENGINEER	Designer	APPROVED	CRJ

NO.	REVISION DESCRIPTION	DATE

DRAWING TITLE

ENLARGED FURNITURE PLANS - IL UNITS

DATE: January 5, 2024

COMM. NO. 23104.00

DRAWING IF2.1

GENERAL STRUCTURAL NOTES

BASIS OF DESIGN

DESIGN IS IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE (ASCE 7-16).

DESIGN OF CONCRETE STRUCTURES IS BASED ON THE REQUIREMENTS OF ACI 318 "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE," EDITION AS REFERENCED IN GOVERNING BUILDING CODE.

DESIGN OF STRUCTURAL STEEL IS BASED ON THE REQUIREMENTS OF AISC 360 "SPECIFICATION FOR STRUCTURAL STEEL BUILDINGS," EDITION AS REFERENCED IN GOVERNING BUILDING CODE AND AISC MANUAL OF STEEL CONSTRUCTION, 14TH EDITION.

DESIGN OF MASONRY STRUCTURES IS BASED ON THE REQUIREMENTS OF TMS 402 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES" AND TMS 602 "SPECIFICATIONS FOR MASONRY STRUCTURES," EDITIONS AS REFERENCED IN GOVERNING BUILDING CODE.

DESIGN OF WOOD STRUCTURES IS BASED ON THE REQUIREMENTS OF ANSI/AF&PA NDS "NATIONAL DESIGN SPECIFICATION FOR WOOD CONSTRUCTION" AND AWC SDPWS "SPECIAL DESIGN PROVISIONS FOR WIND AND SEISMIC," EDITION AS REFERENCED IN GOVERNING BUILDING CODE.

DESIGN LOADS:

FLOOR LIVE LOAD

CORRIDORS	100 PSF
RESIDENTIAL	55 PSF (INCLUDES 15 PSF PARTITION LOAD)
BALCONY	60 PSF
STORAGE AREAS	125 PSF

UNIFORM LIVE LOADS HAVE BEEN REDUCED.

ROOF LIVE LOAD: FLAT: 30 PSF.

ROOF SNOW LOAD
- GROUND SNOW LOAD (Pg): 20 PSF
- FLAT-ROOF SNOW LOAD (Pf): 14 PSF+5 PSF RAIN ON SNOW SURCHARGE
- SNOW EXPOSURE FACTOR (Ce): 1.0
- THERMAL FACTOR (Ct): 1.0
- SNOW LOAD IMPORTANCE FACTOR (I): 1.0

WIND DESIGN DATA
- ULTIMATE WIND SPEED, Vult: 109 MPH (3-SECOND GUST)
- NOMINAL WIND SPEED, Vasd: 85 MPH (3-SECOND GUST)
- RISK CATEGORY: II
- EXPOSURE CATEGORY: B
- INTERNAL PRESSURE COEFFICIENT (GCpi): +/- 0.18
- COMPONENTS AND CLADDING DESIGN PRESSURES (ULTIMATE, FOR REFERENCE ONLY. SPECIFIC DESIGN PRESSURES FOR EACH COMPONENT SHALL BE CALCULATED BY THE LICENSED PROFESSIONAL ENGINEER RESPONSIBLE FOR THE COMPONENT'S DESIGN):
- ROOF PRESSURES:

	EFFECTIVE WIND AREA (SF)		
ZONE	10	50	100
1	+16/-36	+16/-32	+16/-30
1'	+16/-22	+16/-22	+16/-22
2	+16/-50	+16/-43	+16/-40
3	+16/-68	+16/-53	+16/-47

- WALL PRESSURES:

	EFFECTIVE WIND AREA (SF)		
ZONE	10	50	100
4	+22/-24	+20/-22	+19/-21
5	+22/-29	+20/-25	+19/-23

SEE ASCE 7 FOR ZONE LOCATIONS. EDGE DISTANCE "0.2h" = 8.6 FT.

EARTHQUAKE DESIGN DATA
- SEISMIC IMPORTANCE FACTOR (I): 1.0
- RISK CATEGORY: II
- MAPPED SPECTRAL RESPONSE ACCELERATIONS: Ss: 9.9%g, S1: 6.8%g
- SITE CLASS: C
- DESIGN SPECTRAL RESPONSE ACCELERATIONS: SDS: 8.6%g, SDI: 6.8%g
- SEISMIC DESIGN CATEGORY: B
- BASIC SEISMIC-FORCE-RESISTING SYSTEM: LIGHT FRAMED WALLS SHEATHED WITH WOOD STRUCTURAL PANELS
- DESIGN BASE SHEAR: 44 KIPS
- SEISMIC RESPONSE COEFFICIENT, Cs: 0.0132
- RESPONSE MODIFICATION COEFFICIENT, R: 6.5
- ANALYSIS PROCEDURE – EQUIVALENT LATERAL FORCE PROCEDURE

RAIN DESIGN DATA
- i=RAIN INTENSITY= 3.67 IN/HOUR
- R= RAIN DESIGN LOAD=19 PSF

MECHANICAL EQUIPMENT LOADS SHOWN ARE DESIGN MINIMUMS. NO PROVISIONS HAVE BEEN MADE FOR MECHANICAL EQUIPMENT LOADS EXCEPT AS SHOWN. CONTRACTOR SHALL ESTABLISH AND COORDINATE ACTUAL LOADS OF ALL SELECTED EQUIPMENT. SUBMIT ALL SELECTED EQUIPMENT AND ALL ADDITIONAL EQUIPMENT REQUIREMENTS FOR APPROVAL. COORDINATE ALL EQUIPMENT LOADS WITH MATERIAL FABRICATORS.

DESIGN INCLUDES NO PROVISION FOR FUTURE VERTICAL EXPANSION OF THE STRUCTURE. FUTURE HORIZONTAL CONSTRUCTION SHALL BE STRUCTURALLY INDEPENDENT AND SEPARATED BY A BUILDING JOINT.

SPECIAL INSPECTIONS

TESTING AND INSPECTION OF THE FOLLOWING BUILDING ELEMENTS IS TO BE PROVIDED IN ACCORDANCE WITH THE 2018 INTERNATIONAL BUILDING CODE, CHAPTER 17. (SEE SPECIFICATIONS FOR DETAILED INSPECTION REQUIREMENTS):

1. PREPARED FILL: SITE PREPARATION, FILL PLACEMENT, AND EVALUATION OF IN-PLACE DENSITY.
2. CONCRETE CONSTRUCTION: MATERIALS, REINFORCING STEEL, FOUNDATION SUBGRADE AND PLACMENT OPERATIONS.
3. MASONRY CONSTRUCTION: MATERIALS, STRENGTH, AND CONSTRUCTION OPERATIONS.
4. WOOD CONSTRUCTION: FLOOR AND ROOF TRUSS FABRICATION.
5. STRUCTURAL STEEL CONSTRUCTION: MATERIALS AND ERECTION, INCLUDING CONNECTIONS, BOLTING AND WELDING.

GENERAL REQUIREMENTS AND CONDITIONS

WHERE A SECTION OR DETAIL IS SHOWN FOR ONE CONDITION, IT SHALL APPLY TO ALL LIKE CONDITIONS EVEN THOUGH NOT SPECIFICALLY MARKED ON THE PLANS.

DIMENSIONS AND ELEVATIONS SHOWN FOR EXISTING CONSTRUCTION ARE BASED ON EXISTING CONSTRUCTION DRAWINGS AND ARE NOT FIELD-MEASURED. CONTRACTOR SHALL FIELD VERIFY ALL DIMENSIONS, ELEVATIONS, AND GEOMETRY AT EXISTING CONSTRUCTION. REPORT DISCREPANCIES TO THE ARCHITECT IMMEDIATELY.

WHERE ATTACHMENTS (BOLTS, WELDS, STRAPS, ETC…) ARE DENOTED AS "ON-CENTER" ALONG A MEMBER LENGTH, IT IS IMPLIED THAT AT LEAST ONE (1) ATTACHMENT IS PLACED AT THE BEGINNING AND END OF SUCH MEMBER (WITHIN 6". UNLESS NOTED OTHERWISE).

THE CONTRACTOR SHALL PROTECT THE STRUCTURE DURING CONSTRUCTION AGAINST EARTH PRESSURE, WIND AND OTHER FORCES UNTIL PERMANENT SUPPORTS ARE IN PLACE.

RELATED WORK SPECIFIED OR SHOWN ELSEWHERE
REFER TO PROJECT SPECIFICATIONS AND OTHER PROJECT DRAWINGS FOR RELATED WORK SPECIFIED OR SHOWN ELSEWHERE INCLUDING BUT NOT LIMITED TO THE FOLLOWING:

1. PENETRATIONS, SLEEVES, OPENINGS.
2. INSERTS, EMBEDS, ANCHOR BOLTS AND ANCHORAGE FOR ATTACHMENT OF NON-STRUCTURAL ITEMS.
3. SIZE AND LOCATION OF EQUIPMENT FOUNDATIONS AND PADS
4. ROOF CURBS FOR ROOF MOUNTED EQUIPMENT.
5. RETAINING WALLS, UTILITY STRUCTURES, PAVEMENT, WALKS AND OTHER STRUCTURES OUTSIDE THE BUILDING LINE.
6. FLOOR DEPRESSIONS, FLOOR SLOPES, AND FLOOR SLOPES TO DRAIN.
7. STAIRS, STAIR DETAILS AND STAIR DIMENSIONS.

FOUNDATIONS

STRIP AND SPREAD FOOTINGS ARE DESIGNED IN ACCORDANCE WITH THE RECOMMENDATIONS FOUND IN THE "REPORT OF GEOTECHNICAL EXPLORATION; JKV COURTYARD E BUILDING" PREPARED BY KRUGER TECHNOLOGIES, INC DATED SEPTEMBER 25, 2023. KTI PROJECT NUMBER: 223164G.

SPREAD FOOTINGS ARE DESIGNED FOR AN ALLOWABLE SOIL BEARING PRESSURE OF 2500 PSF.

THE PREPARED FOUNDATION BEARING SOILS SHALL NOT BE LEFT EXPOSED DURING INCLEMENT WEATHER OR OPEN AND EXPOSED LONGER THAN 24 HOURS. PLACE A 2-1/2" THICK UNREINFORCED CONCRETE PAD OVER BEARING SOILS IF EXCAVATION WILL BE OPEN MORE THAN 24 HOURS OR INCLEMENT WEATHER IS EXPECTED.

ALL FOUNDATIONS SHALL BE CENTERED UNDER SUPPORTED WALLS AND COLUMNS, UNLESS NOTED OTHERWISE.

STRUCTURAL FILL MATERIAL AND COMPACTION PROCEDURES SHALL CONFORM TO THE ABOVE-REFERENCED GEOTECHNICAL REPORT.

CONCRETE

AS FOLLOWS:

DESCRIPTION	UNIT WEIGHT (P C F)	F'C AT 28 DAYS (P S I)
FOOTINGS AND GRADE BEAMS	150	3000
SLABS ON GRADE	150	3000
EXTERIOR FLAT WORK	150	4500

REINFORCING STEEL SHALL MEET ASTM A615, GRADE 60, DEFORMED.

MINIMUM LAP SPLICES FOR REINFORCING BARS SHALL BE CLASS B, TENSION LAP CONFORMING TO ACI 318. STAGGER LAP SPLICES, UNLESS INDICATED OTHERWISE.

PROVIDE THE FOLLOWING MINIMUM CONCRETE COVER FOR REINFORCING BARS:
- CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH: 3"
- CONCRETE EXPOSED TO EARTH OR WEATHER:
  - #6 AND LARGER: 2"
  - #5 AND SMALLER: 1-1/2 "
- CONCRETE NOT EXPOSED TO WEATHER OR IN CONTACT WITH GROUND:
  - SLABS, WALLS
    - #11 AND SMALLER: ¾"

CONCRETE WALLS INTERSECTING CONCRETE PIERS SHALL BE CAST MONOLITHICALLY WITH PIERS, UNLESS INDICATED OTHERWISE.

CONCRETE MASONRY UNITS

CONCRETE UNIT MASONRY SHALL DEVELOP AN INSTALLED COMPRESSIVE STRENGTH (f'm) AT 28 DAYS OF 2000 PSI.

GROUT FOR CONCRETE UNIT MASONRY SHALL HAVE A MINIMUM ULTIMATE COMPRESSIVE STRENGTH OF 2000 PSI.

GROUT SOLID ALL CELLS BELOW GRADE.

GROUT SOLID ALL CELLS BETWEEN FOOTINGS AND SLAB ON GRADE.

IN ALL GROUTED AND/OR REINFORCED MASONRY, PROVIDE MASONRY UNITS WHICH HAVE CORES THAT ALIGN VERTICALLY TO PROVIDE CONTINUOUS UNOBSTRUCTED CELLS FOR GROUTING AND REINFORCING STEEL PLACEMENT.

WHERE MASONRY IS INDICATED TO BE FULLY GROUTED OR GROUTED SOLID, ALL CORES WITH AND WITHOUT REINFORCEMENT SHALL BE GROUTED.

LAP SPLICE REINFORCEMENT IN CONCRETE UNIT MASONRY AS FOLLOWS:

BAR SIZE	LAP LENGTH
#3	18"
#4	24"
#5	30"
#6	43"

ALL CONCRETE MASONRY UNIT WALLS SHALL HAVE CONTINUOUS HORIZONTAL JOINT REINFORCEMENT AS SPECIFIED.

STRUCTURAL STEEL

STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING:
"W" SHAPES, BEAMS AND COLUMNS: ASTM A992.
COLD-FORMED STRUCTURAL STEEL TUBING: ASTM A 500, GRADE C.
OTHER SHAPES, PLATES AND BARS: ASTM A36, (Fy=36KSI).

ALL BOLTS SHALL BE ¾" DIAMETER, ASTM A325-N, TYPE 1, UNLESS NOTED OTHERWISE.

MINIMUM WELDS SHALL BE 3/16" FILLET WELD ALL AROUND UNLESS INDICATED OTHERWISE.

ALL BEAM CONNECTIONS SHALL BE DOUBLE-ANGLE OR SINGLE-PLATE SHEAR CONNECTIONS DESIGNED FOR THE MINIMUM FACTORED END REACTIONS INDICATED, OR WHERE NO REACTION IS INDICATED, DESIGNED FOR LESS THAN FIFTEEN (15) KIPS.

ALL STRUCTURAL STEEL BELOW GRADE SHALL HAVE 3" CONCRETE PROTECTION.

DO NOT USE THERMAL CUTTING OF STRUCTURAL STEEL DURING ERECTION.
DO NOT ENLARGE UNFAIR HOLES IN MEMBERS BY BURNING OR BY USING DRIFT PINS.

PROVIDE CAP PL 3/8" AT ALL STEEL COLUMNS UNLESS NOTED OTHERWISE.

ROUGH CARPENTRY AND ENGINEERED LUMBER PRODUCTS

LUMBER: NOMINAL SIZES ARE INDICATED, EXCEPT AS SHOWN BY DETAIL DIMENSIONS. PROVIDE DRESSED LUMBER, S4S, UNLESS NOTED OTHERWISE. PROVIDE LUMBER WITH 19 PERCENT MOISTURE CONTENT AT TIME OF DRESSING AND SHIPMENT FOR SIZES 2" OR LESS IN NOMINAL THICKNESS, UNLESS NOTED OTHERWISE.

DIMENSION LUMBER (SPECIES AND GRADE):
- LOAD BEARING STUDS: NO.1/ NO. 2 SPRUCE PINE FIR
- STRUCTURAL FRAMING AND SILL AND TOP PLATES: SOUTHERN PINE NO. 2, KILN DRIED

ALL STUD-FRAMED WALLS SHALL BE FRAMED CONTINUOUS, WITHOUT INTERRUPTION, FROM FOUNDATION TO FLOOR OR ROOF MEMBER BEARING (PLATFORM FRAMED).

ALL 4x4 AND 6x6 WOOD POSTS SHALL BE PRESSURE-TREATED SOUTHERN PINE NO. 2, UNO.

LAMINATED VENEER LUMBER (LVL) PRODUCTS SHALL MEET OR EXCEED ALL MATERIAL PROPERTIES FOR I-LEVEL BY WEYERHAUSER: E=1900 KSI (1.9E).

LAMINATED STRAND LUMBER (LSL) PRODUCTS SHALL MEET OR EXCEED ALL MATERIAL PROPERTIES FOR TIMBERSTRAND BY WEYERHAUSER: E=1550 KSI (1.55E).

PARALLEL STRAND LUMBER (PSL) PRODUCTS SHALL MEET OR EXCEED ALL MATERIAL PROPERTIES FOR I-LEVEL BY WEYERHAUSER: E=2000 KSI (2.0E) FOR BEAMS AND HEADERS, AND E=1800 KSI (1.8E) FOR COLUMNS.

ALL FASTENERS, FRAMING HARDWARE, AND CONNECTOR PLATES FASTENING PRESSURE PRESERVATIVE-TREATED (PT) LUMBER SHALL BE HOT DIPPED GALVANIZED OR STAINLESS STEEL IN ACCORDANCE WITH SPECIFICATION 061000-ROUGH CARPENTRY.

ALL NAILS SHALL BE CONSIDERED "COMMON NAILS" UNLESS NOTED OTHERWISE.

WOOD SHEATHING

CONSTRUCTION STANDARD: PS1 "US PRODUCT STANDARD FOR CONSTRUCTION AND INDUSTRIAL PLYWOOD" FOR PLYWOOD PANELS AND WITH AMERICAN PLYWOOD ASSOCIATION (APA) "PERFORMANCE STANDARD AND POLICIES FOR STRUCTURAL-USE PANELS."

EXTERIOR WALL SHEATHING:	APA RATED SHEATHING, EXPOSURE I, SPAN RATING 32/16.
INTERIOR WALL SHEATHING:	APA RATED SHEATHING, EXPOSURE I, SEE SCHEDULE FOR SPAN RATING
FLOOR SHEATHING:	APA RATED TONGUE-AND-GROOVE STURD-I-FLOOR, EXPOSURE 1, SPAN RATING 24" OC.
ROOF SHEATHING:	APA RATED SHEATHING, EXPOSURE I, SPAN RATING 40/20.
PLYWOOD CLIPS:	18-GAUGE, HOT-DIPPED GALVANIZED "H" CLIPS.

ATTACH SHEARWALL WALL SHEATHING TO FRAMING AS INDICATED IN SHEARWALL SCHEDULE. ATTACH REMAINING WALL, FLOOR, AND ROOF SHEATHING TO FRAMING WITH 8d COMMON NAILS @ 6" OC AT PANEL PERIMETER AND 12" OC IN FIELD. PROVIDE BLOCKING AT HORIZONTAL PANEL EDGES OF WALL SHEATHING.

PREFABRICATED WOOD TRUSSES

TRUSSES SHALL BE DESIGNED FOR ALL LOADS AS REQUIRED BY ABOVE REFERENCED BUILDING CODE, INCLUDING WIND, SNOW AND SEISMIC BUT SHALL NOT BE LESS THAN THE FOLLOWING MINIMUM LOADS:
ROOF LIVE LOADS:
- TOP CHORD, LIVE LOAD: VARIES, SEE "BASIS OF DESIGN" ABOVE
- BOTTOM CHORD, LIVE LOAD: 10 PSF, NONCONCURRENT WITH ROOF LIVE LOAD

FLOOR LIVE LOADS:
- TOP CHORD, LIVE LOAD: VARIES, SEE "BASIS OF DESIGN" ABOVE

ROOF SUPERIMPOSED DEAD LOADS:
DEAD LOADS SHALL BE COMPUTED FOR BUILDING MATERIALS AS INDICATED AND SHALL NOT BE LESS THAN:
TOP CHORD, DEAD LOAD: 15 PSF
BOTTOM CHORD, DEAD LOAD: 10 PSF
FLOOR SUPERIMPOSED DEAD LOADS:
DEAD LOADS SHALL BE COMPUTED FOR BUILDING MATERIALS AS INDICATED AND SHALL NOT BE LESS THAN:
TOP CHORD, DEAD LOAD: 20 PSF
BOTTOM CHORD, DEAD LOAD: 10 PSF

TRUSS DESIGN SHALL ACCOUNT FOR SPECIAL LOADING CONDITIONS THAT REQUIRE APPLICATION OF ADDITIONAL DISTRIBUTED AND CONCENTRATED LOADS FROM MECHANICAL EQUIPMENT, DORMERS, VALLEY FRAMING, OVER BUILDING, AND DRIFTING SNOW. DRIFTING SNOW LOADS SHALL BE COMPUTED BASED ON THE GROUND SNOW LOAD LISTED ABOVE.

TRUSS BOTTOM CHORD DOES RECEIVE CONTINUOUS SHEATHING

ROOF TRUSSES SHALL BE SPACED AT 24" O.C. MAXIMUM, UNLESS INDICATED OTHERWISE.

FLOOR TRUSSES SHALL BE SPACED AT 16" O.C. MAXIMUM, UNLESS INDICATED OTHERWISE.

ROOF TRUSSES SHALL BE CONNECTED TO BEARING PLATE WITH SIMPSON TYPE H HURRICANE TIES OR OTHER HOLD DOWN ANCHOR DEVICES FOR THE REACTION SHOWN ON THE TRUSS SHOP DRAWINGS, BUT NOT LESS THAN ONE SIMPSON H3 HURRICANE ANCHOR PER BEARING LOCATION, UNLESS NOTED OTHERWISE.
MULTIPLE ANCHORS ARE ACCEPTABLE AT LOCATIONS WHERE REACTION EXCEEDS CAPACITY OF SINGLE CONNECTOR.

ALL TRUSSES WHICH CANNOT BE SHIPPED WHOLE AND REQUIRE A FIELD CONNECTION SHALL BE DESIGNED, DETAILED AND FABRICATED WITH BOLTED OR PLYWOOD GUSSETED JOINTS.

STEEL LINTELS AT BRICK AND CMU

ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS.

UNLESS NOTED OTHERWISE, PROVIDE ONE L4x3-1/2x1/4" FOR SPANS LESS THAN 6'-0" AND ONE L6x3-1/2"x3/8" FOR SPANS BETWEEN 6'-0" AND 11'-6" FOR EACH NOMINAL 4" MASONRY THICKNESS AS LINTELS FOR BRICK OPENINGS, AND OVER ALL OPENINGS IN CMU WALLS AT DOORS, DUCTS, RECESSED HEATING UNITS, PANELS, GRILLS OR LOUVERS.

LINTELS SUPPORTING BRICK AND LINTELS SUPPORTING EXTERIOR CMU SHALL BE HOT-DIPPED GALVANIZED.

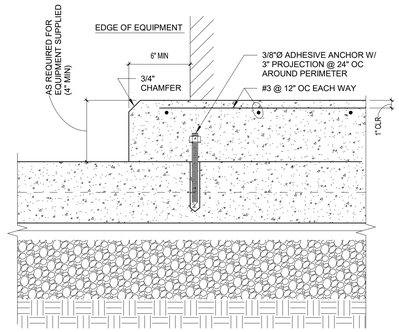
SUBMIT SHOP DRAWINGS FOR APPROVAL SHOWING SCHEDULES, DETAILS, SIZE AND LOCATION FOR ALL STEEL LINTELS.

EXPANSION & ADHESIVE ANCHORS

ALL EXPANSION ANCHORS SHALL BE 5/8" DIAMETER WITH 4" MINIMUM EMBEDMENT UNLESS NOTED OTHERWISE. INSTALL PER MANUFACTURER'S REQUIREMENTS IN CONCRETE OR FULLY GROUTED MASONRY.

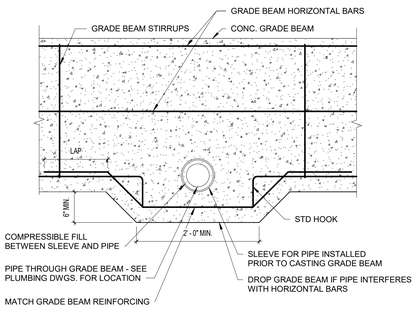
ALL ADHESIVE ANCHORS SHALL BE 5/8" DIAMETER WITH 5" MINIMUM EMBEDMENT UNLESS NOTED OTHERWISE. INSTALL PER MANUFACTURER'S REQUIREMENTS IN CONCRETE OR FULLY GROUTED MASONRY.

NO ANCHOR SHALL BE INSTALLED PRIOR TO RECEIVING PROPER INSTALLATION TRAINING FROM A MANUFACTURER'S REPRESENTATIVE. ALL ANCHORS SHALL BE INSTALLED BY PERSONNEL TRAINED BY MANUFACTURER'S REPRESENTATIVE.

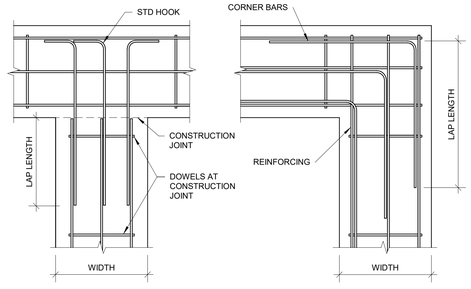


NOTES:
1. SEE MECHANICAL, PLUMBING & ELECTRICAL DRAWINGS FOR EQUIPMENT LOCATIONS REQUIRING EQUIPMENT PADS.

8 S0.1 TYP INTERIOR EQUIPMENT PAD
1 1/2" = 1'-0"



7 S0.1 TYP PIPE THROUGH GRADE BEAM
1" = 1'-0"

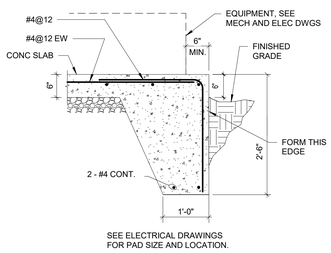


PLAN DETAIL - INTERSECTION

PLAN DETAIL - CORNER

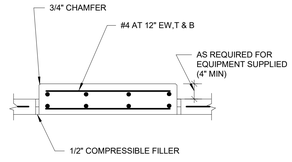
1. LAP REINFORCING AT SPLICES ACCORDING TO SCHEDULE 2/S0.1.
2. PROVIDE CORNER BARS TO MATCH SIZE AND NUMBER OF REINFORCING BAR AT ALL GRADE BEAM CORNERS

6 S0.1 TYP GRADE BEAM DETAILS
3/4" = 1'-0"



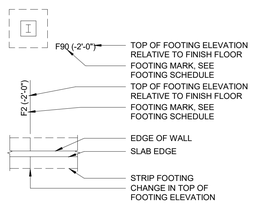
SEE ELECTRICAL DRAWINGS FOR PAD SIZE AND LOCATION.

10 S0.1 TYP GENERATOR EQUIPMENT PAD
3/4" = 1'-0"

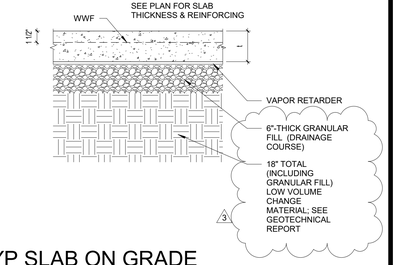


NOTE: SEE MECHANICAL AND ELECTRICAL DRAWINGS FOR TYPE, SIZE, AND LOCATION OF EQUIPMENT PADS.

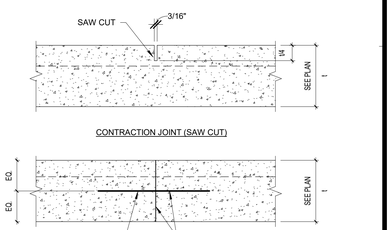
9 S0.1 TYP ISOLATED EQUIP PAD DETAIL
3/4" = 1'-0"



5 S0.1 FOUNDATION LEGEND
N.T.S.



4 S0.1 TYP SLAB ON GRADE
1 1/2" = 1'-0"



NOTE:
LOCATE JOINTS LESS THAN 15'-0" APART, WITH THE LENGTH OF A SLAB PANEL NOT EXCEEDING THE WIDTH BY MORE THAN 50%. SUBMIT JOINT LAYOUT FOR APPROVAL PER SPECIFICATIONS.

3 S0.1 TYP SLAB ON GRADE JOINTS
3" = 1'-0"

TENSION LAP SPLICE LENGTH

BAR SIZE	f'c = 3000psi		f'c = 4000psi	
	TOP BAR	OTHER BAR	TOP BAR	OTHER BAR
#3	28	22	25	19
#4	38	29	32	25
#5	47	36	41	31
#6	56	43	49	37
#7	81	63	71	54
#8	93	72	81	62
#9	105	81	91	70
#10	116	90	101	78
#11	128	98	111	85

TOP BARS ARE HORIZONTAL BARS WITH 12" OR MORE OF FRESH CONCRETE CAST BENEATH THE BARS.

2 S0.1 TENSION LAP SPLICE LENGTH SCHED
1 1/2" = 1'-0"

ABV	ABOVE	JST	JOIST
ADH AHR	ADHESIVE ANCHOR	JT	JOINT
ADJ	ADJACENT		
AFF	ABOVE FINISHED FLOOR	K	KIP (1000 POUNDS)
APPROX	APPROXIMATE	KSI	KIPS PER SQUARE INCH
ARCH.	ARCHITECTURAL		
		LBS	POUNDS
BLDG	BUILDING	LLH	LONG LEG HORIZONTAL
BLW	BELOW	LLV	LONG LEG VERTICAL
BM	BEAM		
BOT	BOTTOM	MAX.	MAXIMUM
BRG	BEARING	MECH	MECHANICAL
BTWN	BETWEEN	MEP	MECHANICAL, ELECTRICAL, PLUMBING
CIP	CAST-IN-PLACE	MFR	MANUFACTURER
CJ	CONTROL JOINT	MID	MIDDLE
CL	CENTERLINE	MIN	MINIMUM
CLR	CLEAR	MTL	METAL
CMU	CONCRETE MASONRY UNITS		
COL	COLUMN	NTS	NOT TO SCALE
CONC	CONCRETE		
CONN	CONNECTION	OC (O/C)	ON CENTER
CONT	CONTINUOUS	OPNG	OPENING
DIA	DIAMETER	PAF	POWER-ACTUATED FASTENER
DIAG	DIAGONAL	PERP	PERPENDICULAR
DIM.	DIMENSION	PL	PLATE
DWG(S)	DRAWING(S)	PSF	POUNDS PER SQUARE FOOT
		PSI	POUNDS PER SQUARE INCH
EA	EACH	PT	POINT
EF	EACH FACE		
EJ	EXPANSION JOINT	R	RADIUS
ELEC	ELECTRICAL	REINF	REINFORCEMENT, REINFORCED
ELEV	ELEVATION	REQ'D	REQUIRED
EMBED	EMBEDMENT		
EOS	EDGE OF SLAB	SCHED	SCHEDULE
EQ	EQUAL	SHT	SHEET
EQUIP.	EQUIPMENT	SIM	SIMILAR
EW	EACH WAY	SOG	SLAB ON GRADE
EXST	EXISTING	STD	STANDARD
EXT	EXTERIOR	STIFF.	STIFFENER
EXPN AHR	EXPANSION ANCHOR	STL	STEEL
		STRL	STRUCTURAL
FIN. FLR	FINISHED FLOOR	SYM	SYMMETRICAL
FFE	FINISHED FLOOR ELEVATION		
FLG	FLANGE	T&B	TOP AND BOTTOM
FRMG	FRAMING	THK	THICK
FTG	FOOTING	TOF	TOP OF FOOTING
		TOS	TOP OF STEEL
GA	GAUGE	TRANSV	TRANSVERSE
GALV	GALVANIZED	TYP	TYPICAL
GB	GRADE BEAM		
		UNO	UNLESS NOTED OTHERWISE
HDU	HOLD DOWN UNIT		
HORIZ	HORIZONTAL	VERT	VERTICAL
		VIF	VERIFY IN FIELD
INFO	INFORMATION		
INT	INTERIOR	W/	WITH
		WP	WORKING POINT
		WWF	WELDED WIRE FABRIC

1 S0.1 STRUCTURAL ABBREVIATIONS
N.T.S.

CONSTRUCTION SET
STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE
John Knox Village
COURTYARDS - BUILDING E

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ARCHITECT : DAS		CHECKED : BDT	
ENGINEER : LBF		APPROVED : Approver	
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3	ADDENDUM 1		03/07/24

DRAWING TITLE
GENERAL NOTES AND TYPICAL DETAILS

DATE: January 5, 2024
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DRAWING S0.1

3/7/2024
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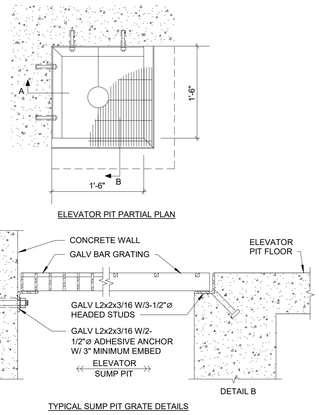


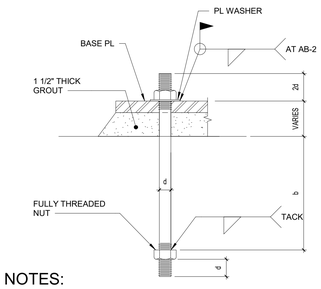
ELEVATOR PIT PARTIAL PLAN

TYPICAL SUMP PIT GRATE DETAILS

12 TYPICAL SUMP PIT AND GRATE DETAIL
S0.2 1" = 1'-0"

HEADER SCHEDULE			
MARK	SIZE	JAMB STUD	KING STUD
H1	(2)-1.75X9.25 LVL	2-2x6	3-2x6
H2	(2)-1.75X9.25 LVL	2-2x6	2-2x6
H3	(2)-1.75X9.25 LVL	2-2x6	1-2x6
H4	(3)-1.75X11.25 LVL	2-2x6	1-2x6
H5	(2)-2x8	2-2x6	1-2x6
H6	(2)-2x10	2-2x6	1-2x6
H7	(3)-2x8	2-2x6	1-2x6
H8	(3)-2x8	2-2x6	2-2x6
H9	(3)-2x10	2-2x6	1-2x6
H10	(3)-2x16	1-2x6	3-2x6
H11	(2)-2x8	2-2x4	1-2x4

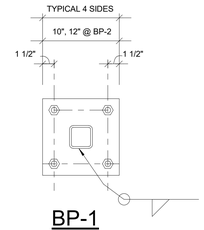
9 HEADER SCHEDULE
S0.2 N.T.S.



NOTES:
1) ANCHOR BOLTS - ASTM F1554
2) NUTS - ASTM A563, GRADE A, HEAVY HEX
3) PLATE - ASTM A36
4) PROVIDE HOLE IN PLATE WASHER = BOLT DIAMETER + 1/16".

MARK	d	b	PLATE WASHER SIZE	HOLE DIA @ BASE PL
AB-1 AB-2	3/4" DIA	8"	STD WASHER	1 5/16" DIA

5 STEEL COL ANCHOR BOLTS
S0.2 3/4" = 1'-0"



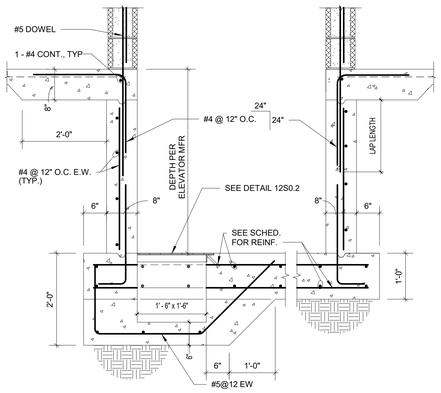
BP-1

4 STEEL COLUMN BASE PLATES
S0.2 1 1/2" = 1'-0"

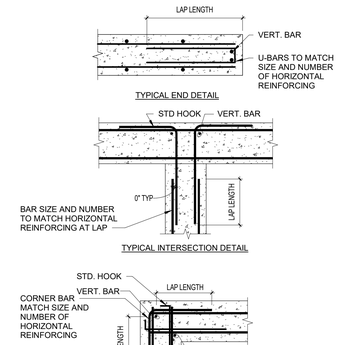
LINTEL SCHEDULE			
MARK		SIZE	BEARING
L1		8" WIDE x 8" DEEP CMU LINTEL W/ 2 - #5 BOTTOM	8"

LINTEL NOTES:
1. ALL LINTELS SHALL CONFORM TO ARCHITECTURAL HEAD DETAILS.

8 CMU LINTEL SCHEDULE
S0.2 N.T.S.



14 ELEVATOR 2 PIT SECTION
S0.2 3/4" = 1'-0"



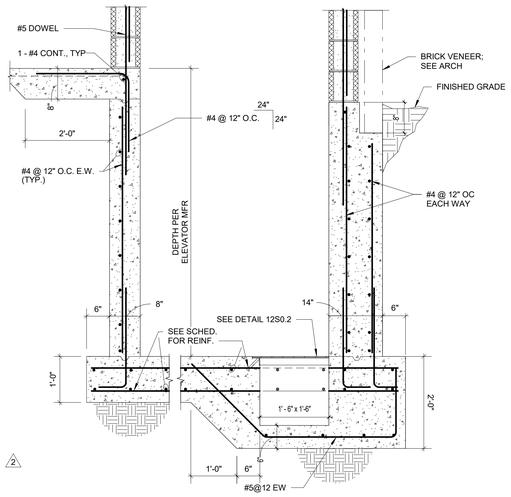
11 TYP CONC WALL REINF. @ END, CORNER & INTERSECTION
S0.2 1" = 1'-0"

POST SCHEDULE	
MARK	SIZE
P1	6 X 6 SOUTHERN PINE
P2	5.25 X 5.25 PSL
P3	3.5 X 3.5 PSL
P4	7 X 7 PSL

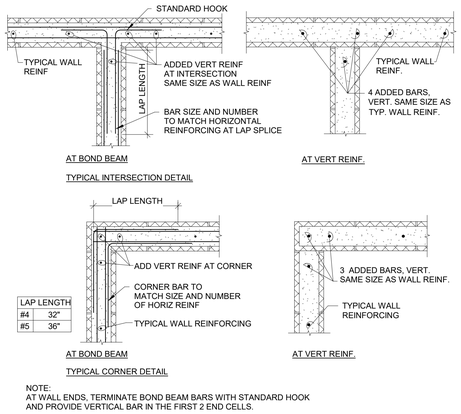
7 WOOD POST SCHEDULE
S0.2 N.T.S.

COLUMN SCHEDULE					
MARK	DESCRIPTION	BASE PLATE	BASE PL THK	ANCHOR BOLT	REMARKS
C1	HSS 4x4x3/8	BP-1	3/4"	AB-1	--
C2	HSS 6x6x1/2	BP-2	3/4"	AB-2	--

3 STEEL COLUMN SCHEDULE
S0.2 N.T.S.



13 ELEVATOR 1 PIT SECTION
S0.2 3/4" = 1'-0"



NOTE:
AT WALL ENDS, TERMINATE BOND BEAM BARS WITH STANDARD HOOK AND PROVIDE VERTICAL BAR IN THE FIRST 2 END CELLS.

10 CMU BOND BEAM REINF DETAILS
S0.2 3/4" = 1'-0"

LOAD-BEARING WALL STUD SCHEDULE			
LOCATION	STORY	STUD SIZE & SPACING	WOOD SPECIES AND GRADE
EXTERIOR WALLS	ALL FLOORS	2X6 @ 16" OC	SPRUCE PINE FIR, NO. 1/NO. 2
STAIR SHAFT WALLS AT CORRIDOR	1ST FLOOR	2-2X4 @ 16" OC	
OTHER STAIR SHAFT WALLS	ALL FLOORS	2X4 @ 16" OC	
CORRIDOR WALLS	2ND, 3RD & 4TH FLOORS	2X6 @ 16" OC	
	1ST FLOOR	2-2X6 @ 16" OC	
2X4 CORRIDOR WALLS	2ND, 3RD & 4TH FLOORS	2X4 @ 16" OC	
	1ST FLOOR	2-2X4 @ 16" OC	
OTHER INTERIOR WALLS	ALL	2X6 @ 16" OC	

6 BEARING WALL STUD SCHEDULE
S0.2 N.T.S.

GRADE BEAM SCHEDULE		
MARK	SIZE (WIDTH X DEPTH)	REINFORCING
GB-1	16" X 28"	SEE SECTION 4/S2.1
GB-2	24" X 28"	SEE SECTION 2/S2.1
GB-26	30" X 28"	SEE SECTION 3/S2.1

2 GRADE BEAM SCHEDULE
S0.2 N.T.S.

FOOTING SCHEDULE			
MARK	SIZE	THICKNESS	REINFORCING (BOTTOM U.N.O.)
F3.0	3'-0" SQUARE	12"	3 - #5 EA WAY
F4.0	4'-0" SQUARE	12"	4 - #5 EA WAY
F5.0	5'-0" SQUARE	14"	5 - #5 EA WAY
MAT #1	SEE PLAN	12"	#5@12 EA WAY, TOP & BOTTOM

1 FOOTING SCHEDULE
S0.2 3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2023006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

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ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

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DRAWING TITLE
TYPICAL SECTIONS AND DETAILS

DATE: January 5, 2024
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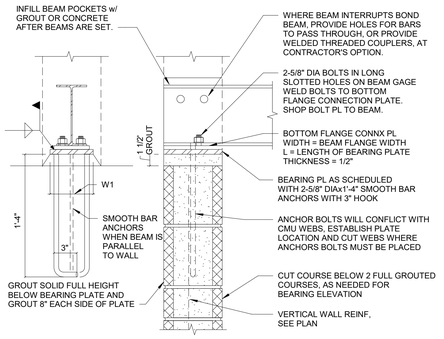
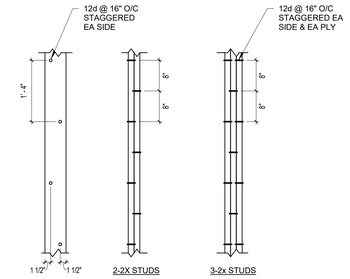
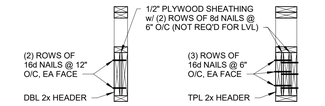


BEARING PLATE SCHEDULE				
BEARING PLATE MARK	BEARING PLATE THICKNESS	W1	L	REMARKS
W8	1/2"	7"	7"	----

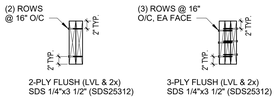
7 S0.3 BEARING PLATE SCHEDULE
N.T.S.



4 S0.3 TYP BUILT-UP COLUMN STUDS
3/4" = 1'-0"

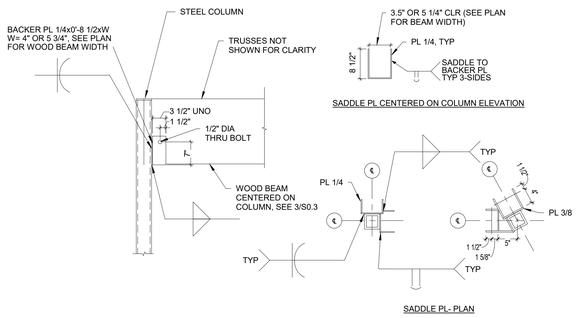


CONNECTION REQUIREMENTS FOR MULTI-PLY HEADERS

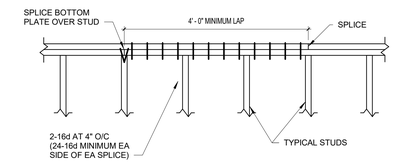


CONNECTION REQUIREMENTS FOR MULTI-PLY FLUSH BEAMS (ALL SCREWS ARE SIMPSON STRONG-DRIVE)

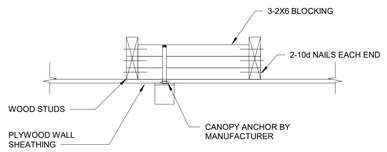
3 S0.3 MULTI PLY FLUSH BEAMS
3/4" = 1'-0"



6 S0.3 TYP WOOD BEAM TO STL COL
3/4" = 1'-0"

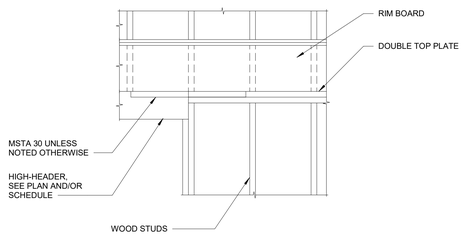


2 S0.3 TYPICAL TOP PLATE SPLICE
3/4" = 1'-0"

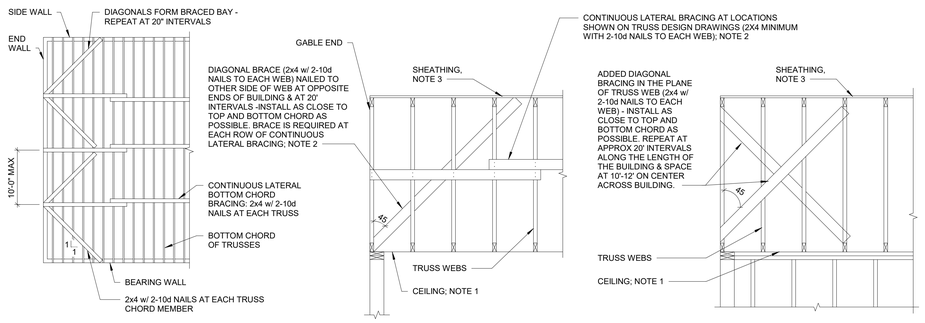


9 S0.3 TYPICAL ALUMINUM CANOPY ANCHORAGE
N.T.S.

2

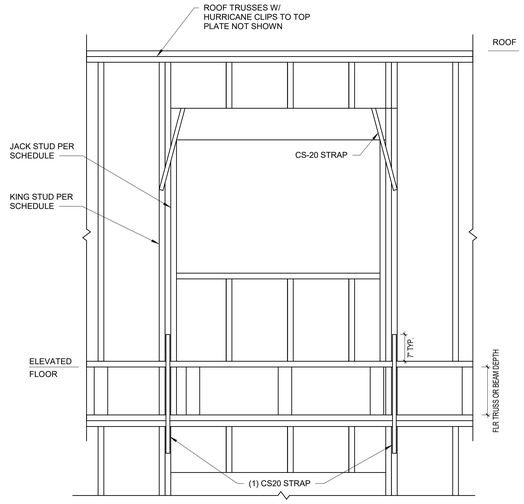


8 S0.3 TYPICAL HEADER INTERRUPTING TOP PLATE
3/4" = 1'-0"



NOTES:
1. BOTTOM CHORD BRACING IS NOT REQUIRED WHERE 5/8" GYPSUM IS DIRECTLY FASTENED AT 12" OC OR LESS TO TRUSS BOTTOM CHORD OR WHERE RESILIENT CHANNEL IS SPACED 12" OC OR LESS WITH 5/8" GYPSUM FASTENED AT 12" OC OR LESS.
2. PERMANENT DIAGONAL BRACING BRACING IS FOR OVERALL BUILDING STABILITY AND SHALL BE INSTALLED IN ADDITION TO THE CONTINUOUS PERMANENT LATERAL BRACING AT LOCATIONS SHOWN BY THE DELEGATED TRUSS DESIGNER TO RESIST BUCKLING OF COMPRESSION TRUSS MEMBERS. SEE BCSI-B3 FOR ALTERNATIVE WEB REINFORCEMENT OPTIONS WHEN INSTALLING CONTINUOUS LATERAL BRACING AND DIAGONAL BRACING IS NOT PRACTICAL OR DESIRED.
3. WHERE TRUSSES DO NOT RECIEVE CONTINUOUS PLYWOOD SHEATHING NAILED TO THE TOP CHORD, PROVIDE TOP CHORD BRACING PER BCSI-B3.
4. SWAY BRACING IS REQUIRED AT TRUSSES WHERE CONTINUOUS LATERAL BRACING AND DIAGONAL BRACING ARE NOT PROVIDED.

5 S0.3 PERMANENT LATERAL BRACING FOR WOOD TRUSSES
N.T.S.



1 S0.3 TYPICAL HEADERS AT ROOF
3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
07/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

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ARCHITECT : DAS		CHECKED : BDT	
ENGINEER : LBF		APPROVED : Approver	

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TYPICAL SECTIONS AND DETAILS

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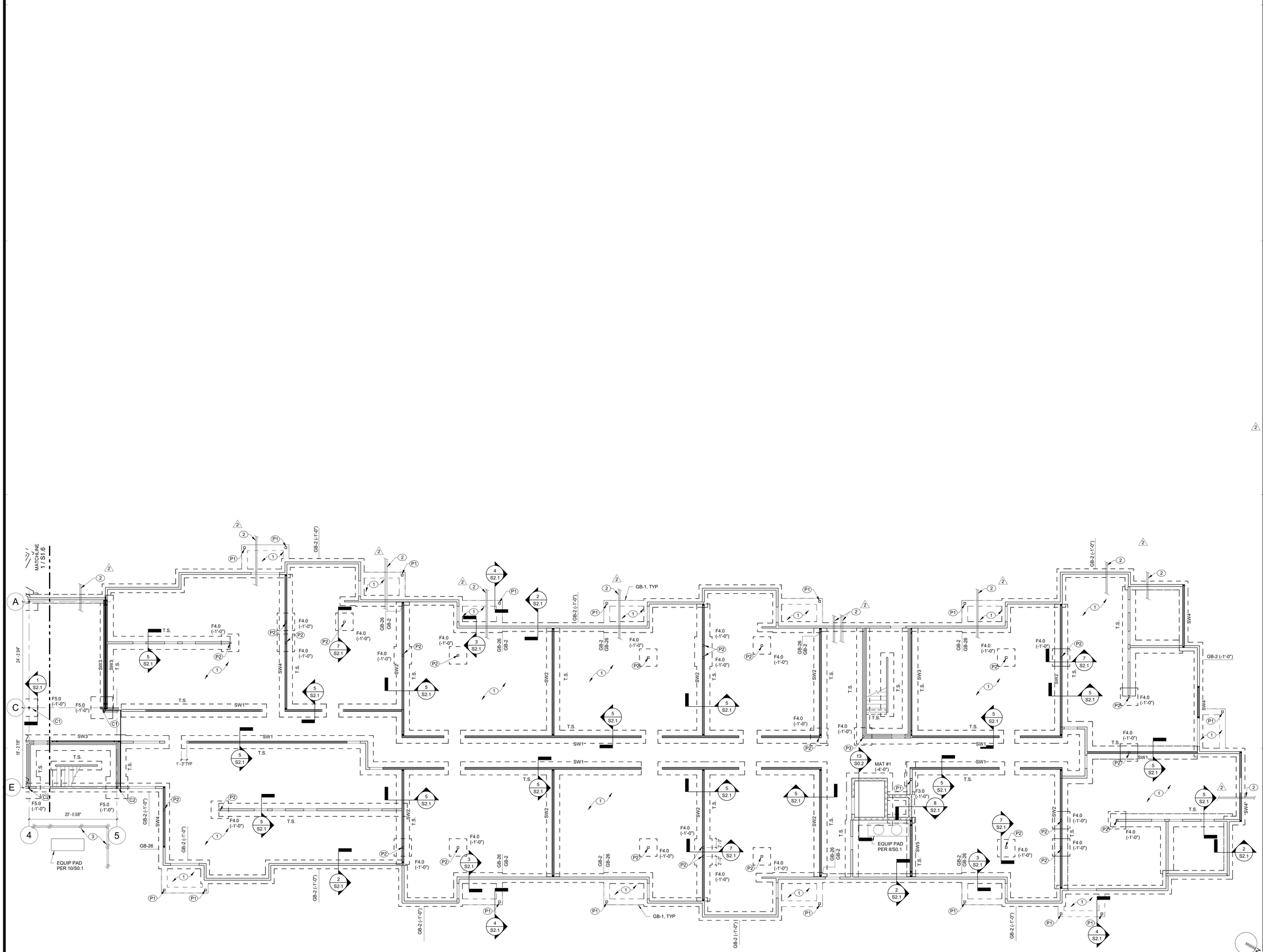
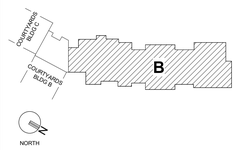
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024



1 S1.1 FOUNDATION PLAN - IL UNITS
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. REFERENCE FIRST FLOOR CONCRETE SLAB ELEVATION = (+0'-0"), UNLESS NOTED OTHERWISE.
2. TOP OF GRADE BEAM ELEVATION= (-1'-0") BELOW REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE.
3. REINFORCE ALL CMU WALLS WITH #5 VERTICAL BARS AT 32" OC, UNLESS NOTED OTHERWISE.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL DETAILS AND HOLDOWN LOCATIONS. ■ INDICATES HDU LOCATION ON PLAN.
5. SEE S0.2 FOR LOAD BEARING WALL STUD, STEEL COLUMN, WOOD POST, FOOTING, AND GRADE BEAM SCHEDULES.
6. "T.S." INDICATES THICKENED SLAB UNDER WALL OR STAIR STRINGER, SEE SECTION 5/S2.1, 6/S2.1 AND 8S2.1.

PLAN NOTES

1. 4"-THICK CONCRETE SLAB ON GRADE ON VAPOR RETARDER AND GRANULAR FILL, REINFORCED WITH 6x6-W1.4xW1.4 WELDED WIRE FABRIC. VAPOR RETARDER NOT REQUIRED AT EXTERIOR SLABS.
2. UNDERGROUND UTILITY. SEE S0.1 AND PLUMBING DRAWINGS. THICKEN GRADE BEAM TO MAINTAIN 8" CONCRETE BELOW BOTTOM OF PIPE.
3. AT EACH FENCE POST: 12" DIAMETER X 4'-0" POST FOOTING REINFORCED WITH 4-#5 VERTICAL AND #3 STIRRUPS AT 12" OC

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
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ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

NO.	REVISION DESCRIPTION	DATE
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FOUNDATION PLAN - IL UNITS

DATE: January 5, 2024
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Lee's Summit, Missouri
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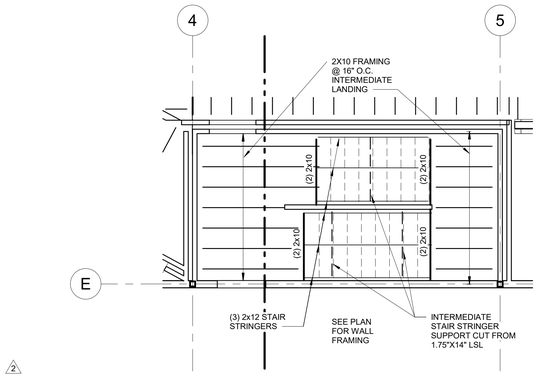
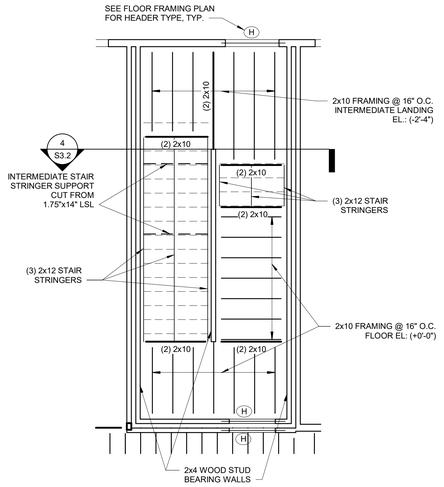
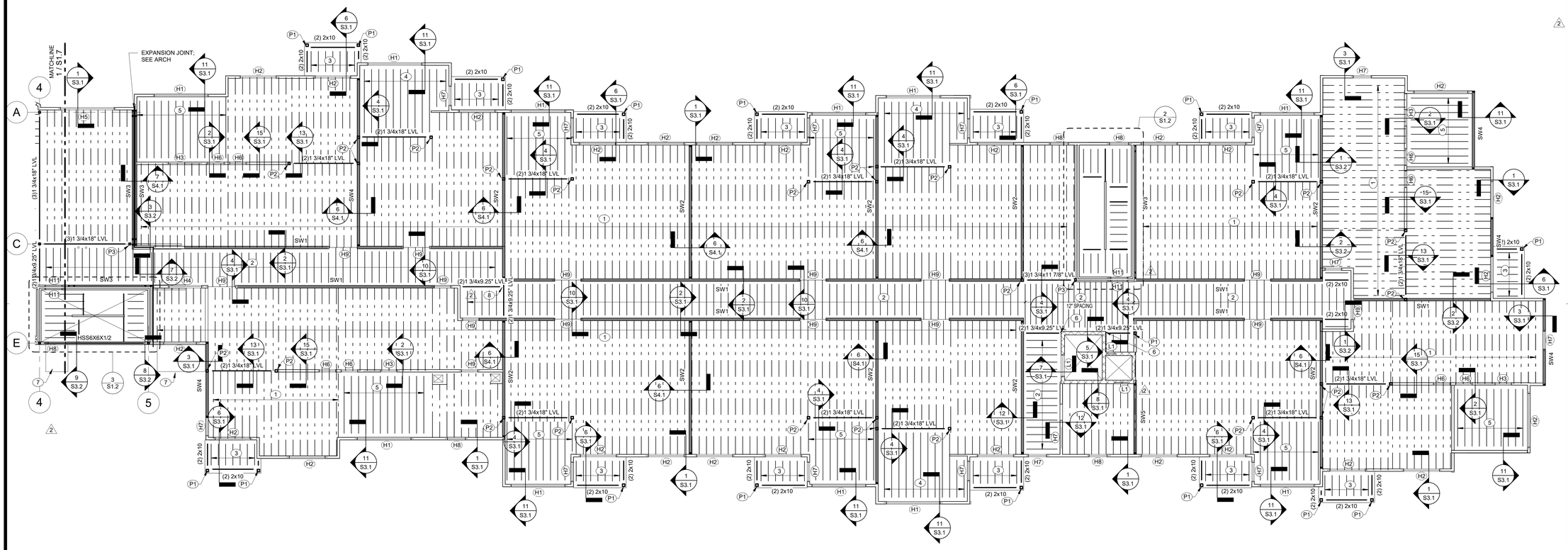


3 S1.2 TYPICAL STAIR 1 FRAMING
1/4" = 1'-0"

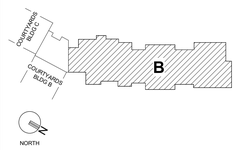


2 S1.2 TYPICAL STAIR 2 FRAMING
1/4" = 1'-0"



1 S1.2 SECOND FLOOR FRAMING PLAN - IL UNITS
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FINISHED SECOND FLOOR ELEVATION= (+11'-4") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF SECOND FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
2. TOP OF WOOD BEAM ELEV. AT BALCONIES= SEE ARCH. TOP OF WOOD BEAMS AT APARTMENT FLOORS = (-0'-6 1/4") BELOW FINISHED FLOOR ELEVATION, U.N.O.
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP. ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE S0.2 FOR BEARING WALL SCHEDULE AND HEADER SCHEDULE. PROVIDE H7 HEADER AT LOUVERS WITH 2'-8" MAX ROUGH OPENING.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. TYPICAL FLOOR CONSTRUCTION: 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 24" DEEP FLOOR TRUSSES @ 16" O/C MAX UNLESS NOTED OTHERWISE.
2. TYPICAL CORRIDOR CONSTRUCTION: 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2X10 @ 16" O/C, UNLESS NOTED OTHERWISE.
3. TYPICAL BALCONY CONSTRUCTION: 5/4" COMPOSITE DECKING ON SLOPED TREATED 2X10 JOISTS @ 16" O/C UNLESS NOTED OTHERWISE.
4. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 1.75X9.25 LVL JOISTS @ 16" O/C MAX UNLESS NOTED OTHERWISE.
5. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2x12 JOISTS @ 16" O/C MAX UNLESS NOTED OTHERWISE.
6. SIMPSON HUC48 HANGER AT BEAM TO CMU WITH (14) TNT25214H TITEN TURBO MASONRY SCREW ANCHORS.
7. ALUMINUM CANOPY, SEE ARCH. SEE 9S0.3 FOR BLOCKING AT ANCHORAGE LOCATIONS.
8. SIMPSON HHUS48 HANGER

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
PROFESSIONAL ENGINEER
04/05/24

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
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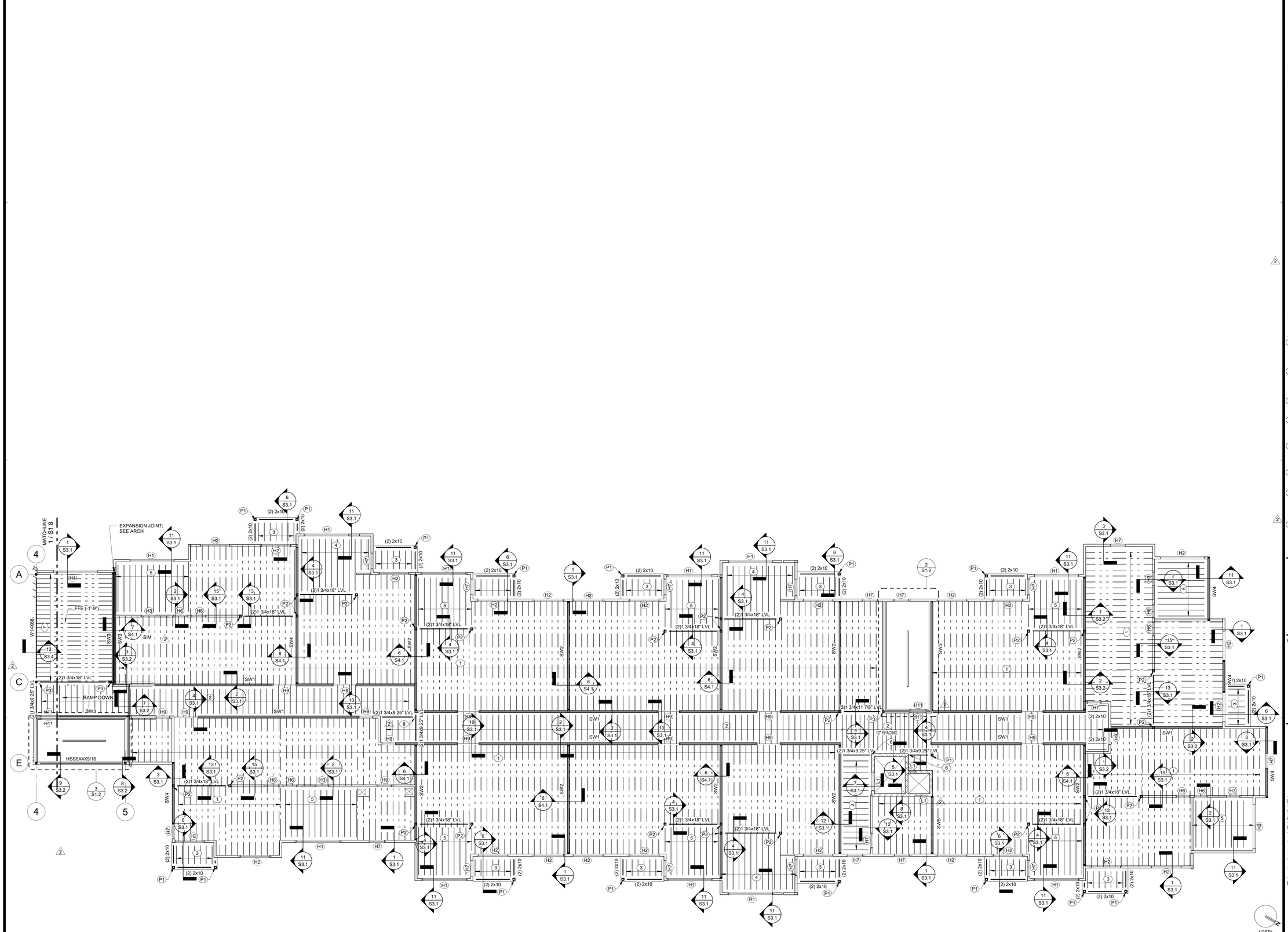
ARCHITECT	: DAS	CHECKED	: BDT
ENGINEER	: LBF	APPROVED	: Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

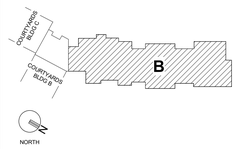
SECOND FLOOR FRAMING PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.2



1 S1.3 THIRD FLOOR FRAMING PLAN - IL UNITS
1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FINISHED THIRD FLOOR ELEVATION= (+22'-8") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF THIRD FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
2. TOP OF WOOD BEAM ELEV. AT BALCONIES= SEE ARCH. TOP OF WOOD BEAMS AT APARTMENT FLOORS = (-0'-6 1/4") BELOW FINISHED FLOOR ELEVATION, U.N.O.
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP, ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE S0.2 FOR BEARING WALL SCHEDULE AND HEADER SCHEDULE. PROVIDE H7 HEADER AT LOUVERS WITH 2'-8" MAX ROUGH OPENING.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE. POSTS SHOWN ARE BELOW 3RD FLOOR.
9. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. TYPICAL FLOOR CONSTRUCTION: 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 24" DEEP FLOOR TRUSSES @ 16" O/C MAX UNLESS NOTED OTHERWISE.
2. TYPICAL CORRIDOR CONSTRUCTION: 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2X10 @ 16" O/C, UNLESS NOTED OTHERWISE.
3. TYPICAL BALCONY CONSTRUCTION: 5/4" COMPOSITE DECKING ON SLOPED TREATED 2X10 JOISTS @ 16" O/C UNLESS NOTED OTHERWISE.
4. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 1.75X9.25 LVL JOISTS @ 16" O/C MAX UNLESS NOTED OTHERWISE.
5. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2x12 JOISTS @ 16" O/C MAX UNLESS NOTED OTHERWISE.
6. SIMPSON HUC48 HANGER AT BEAM TO CMU WITH (14) TNT25214H TITEN TURBO MASONRY SCREW ANCHORS.
7. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 16" DEEP FLOOR TRUSSES @ 12" O/C MAX UNLESS NOTED OTHERWISE.
8. SIMPSON HHUS48 HANGER

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY E. FASNACHT
NUMBER PE-2022006433
07/06/22
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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ARCHITECT	: DAS	CHECKED	: BDT
ENGINEER	: LBF	APPROVED	: Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

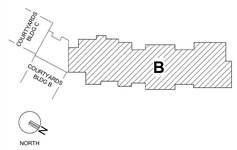
DRAWING TITLE

THIRD FLOOR FRAMING PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.3

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

KEYPLAN



GENERAL NOTES

1. FINISHED FOURTH FLOOR ELEVATION= (+34'-0") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF FOURTH FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
2. TOP OF WOOD BEAM ELEV. AT BALCONIES= SEE ARCH. TOP OF WOOD BEAMS AT APARTMENT FLOORS = (-0'-6 1/4") BELOW FINISHED FLOOR ELEVATION, U.N.O.
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP, ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE S0.2 FOR BEARING WALL SCHEDULE AND HEADER SCHEDULE. PROVIDE H7 HEADER AT LOUVERS WITH 2'-8" MAX ROUGH OPENING.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. TYPICAL FLOOR CONSTRUCTION: 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 24" DEEP FLOOR TRUSSES @ 16" O/C MAX UNLESS NOTED OTHERWISE.
2. TYPICAL CORRIDOR CONSTRUCTION: 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2X10 @ 16" O/C, UNLESS NOTED OTHERWISE.
3. TYPICAL BALCONY CONSTRUCTION: 5/4" COMPOSITE DECKING ON SLOPED TREATED 2X10 JOISTS @ 16" O/C UNLESS NOTED OTHERWISE.
4. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 1.75X9.25 LVL JOISTS @ 16" O/C MAX UNLESS NOTED OTHERWISE.
5. 3/4" SELF-LEVELING GYPCRETE TOPPING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2x12 JOISTS @ 16" O/C MAX UNLESS NOTED OTHERWISE.
6. SIMPSON HUC48 HANGER AT BEAM TO CMU WITH (14) TNT25214H TITEN TURBO MASONRY SCREW ANCHORS.
7. SIMPSON HHUS48 HANGER

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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ARCHITECT	: DAS	CHECKED	: BDT
ENGINEER	: LBF	APPROVED	: Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

FOURTH FLOOR FRAMING PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.4

1 S1.4 FOURTH FLOOR FRAMING PLAN - IL UNITS
1/8" = 1'-0"

2/16/2024 3:39:35 PM
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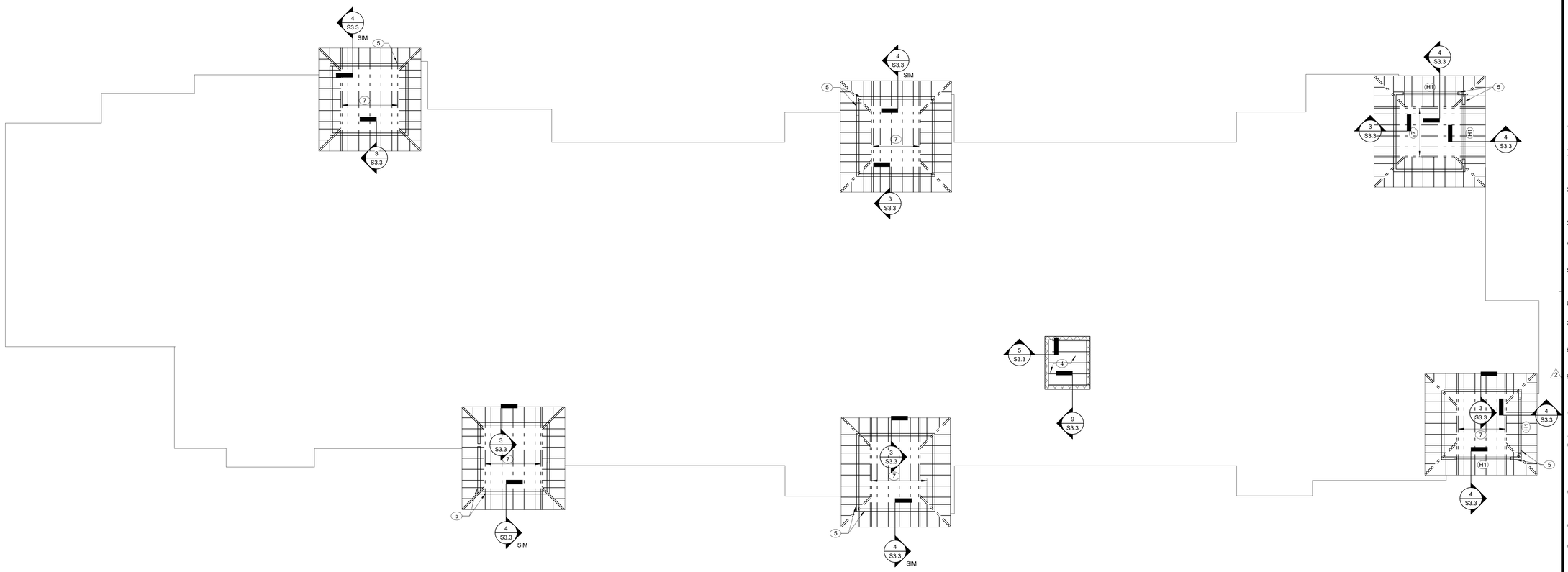
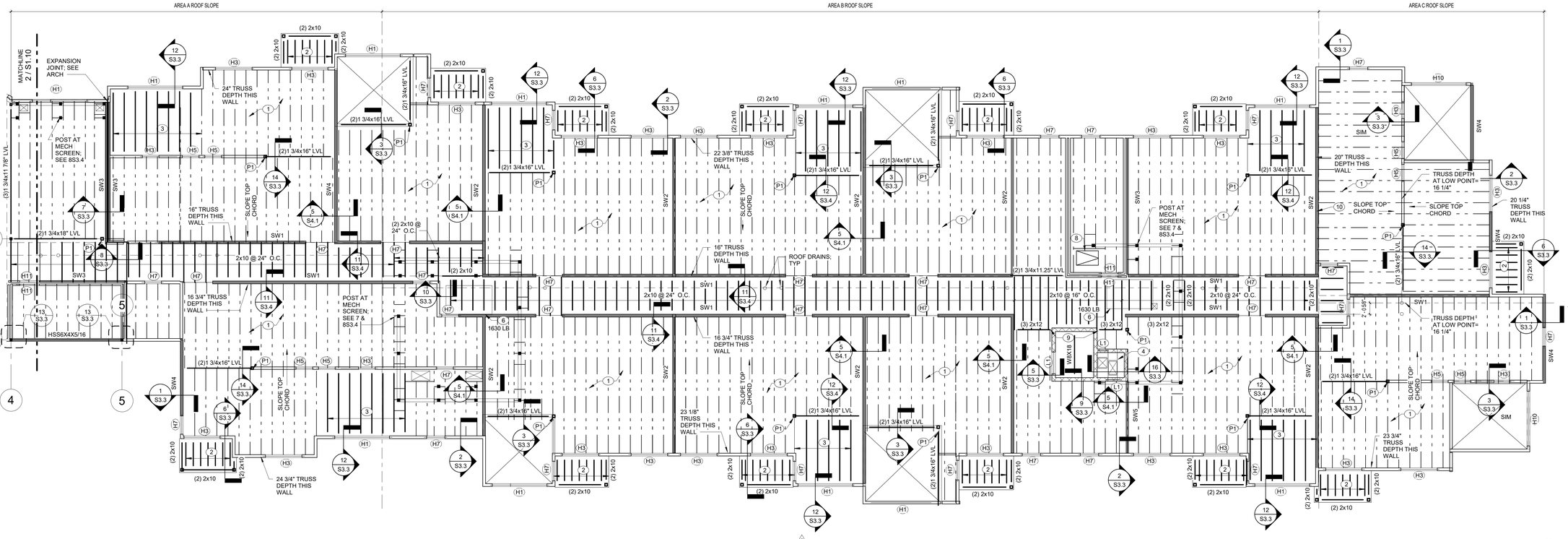
RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

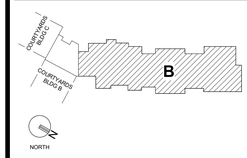


2 HIGH ROOF FRAMING PLAN
S1.5 1/8" = 1'-0"



1 ROOF FRAMING PLAN
S1.5 1/8" = 1'-0"

KEYPLAN



GENERAL NOTES

1. ROOF TRUSS BEARING ELEVATION= (+43'-0 1/4") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. HIGH ROOF TRUSS BEARING ELEVATION= (+ 48'-5 7/8"), U.N.O.
2. TOP OF WOOD BEAM ELEV. AT BALCONIES= (+44'-6 1/4"), U.N.O. AT INTERIOR BEAMS, BOTTOM OF BEAM= ROOF TRUSS BEARING ELEVATION. TOP OF STL AT HOIST BEAM= (+48'-3 3/4"). 2
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL ROOF TRUSS FRAMING INTERFERENCES WITH MEP, ADD GIRDER TRUSSES AND HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE S0.2 FOR BEARING WALL SCHEDULE AND HEADER SCHEDULE. PROVIDE H7 HEADER AT LOUVERS WITH 2'-8" MAX ROUGH OPENING.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. TYPICAL ROOF FRAMING: 5/8" THICK PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD ROOF TRUSSES WITH TOP CHORD AT 1/4"/FOOT SLOPE SPACED @ 24" OC MAX SPACING, UNLESS NOTED OTHERWISE. SEE PLAN FOR TRUSS DEPTHS AT CORRIDOR AND EXTERIOR WALLS.
2. 5/8" THICK PLYWOOD ROOF SHEATHING ON 2X10 JOISTS @ 16" OC MAX SPACING SLOPED AT 1/4"/FOOT. TREATED SHEATHING AND 2X AT BALCONIES.
3. 5/8" THICK PLYWOOD ROOF SHEATHING ON 2X12 JOISTS @ 24" OC MAX SPACING.
4. 5/8" THICK PLYWOOD ROOF SHEATHING ON 2X10 JOISTS @ 24" OC MAX SPACING OVER HORIZONTAL SHAFTLINER CAP; SEE ARCH. DWGS.
5. WALL STUDS ARE CONTINUOUS FROM 4TH FLOOR TO HIGH TRUSS BEARING. PROVIDE SIMPSON H10A HURRICANE TIES MINIMUM THIS WALL.
6. DESIGN TRUSSES FOR RTU WEIGHT INDICATED ON PLAN. FINAL LOCATION OF POINT LOADS SHALL BE COORDINATED WITH ACTUAL SELECTED RTU CURB DIMENSIONS. SEE 10/S3.3 AT CURB.
7. TYPICAL HIGH ROOF FRAMING: 5/8" THICK PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD ROOF TRUSSES SPACED @ 24" OC MAX SPACING, UNLESS NOTED OTHERWISE. TRUSS DEPTH= 16" DEEP.
8. FRAME AROUND ROOF HATCH WITH GIRDER TRUSSES; SEE ARCH FOR LOCATION.
9. SIMPSON HUC210-3 HANGER AT BEAM TO CMU WITH (14) TNT25214H TITEN TURBO MASONRY SCREW ANCHORS
10. PROVIDE SHEAR PANELS TIGHT TO ALL 4 SIDES BETWEEN EACH TRUSS

2 CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
07/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

ROOF FRAMING PLAN - IL UNITS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.5

2/16/2024 3:39:40 PM
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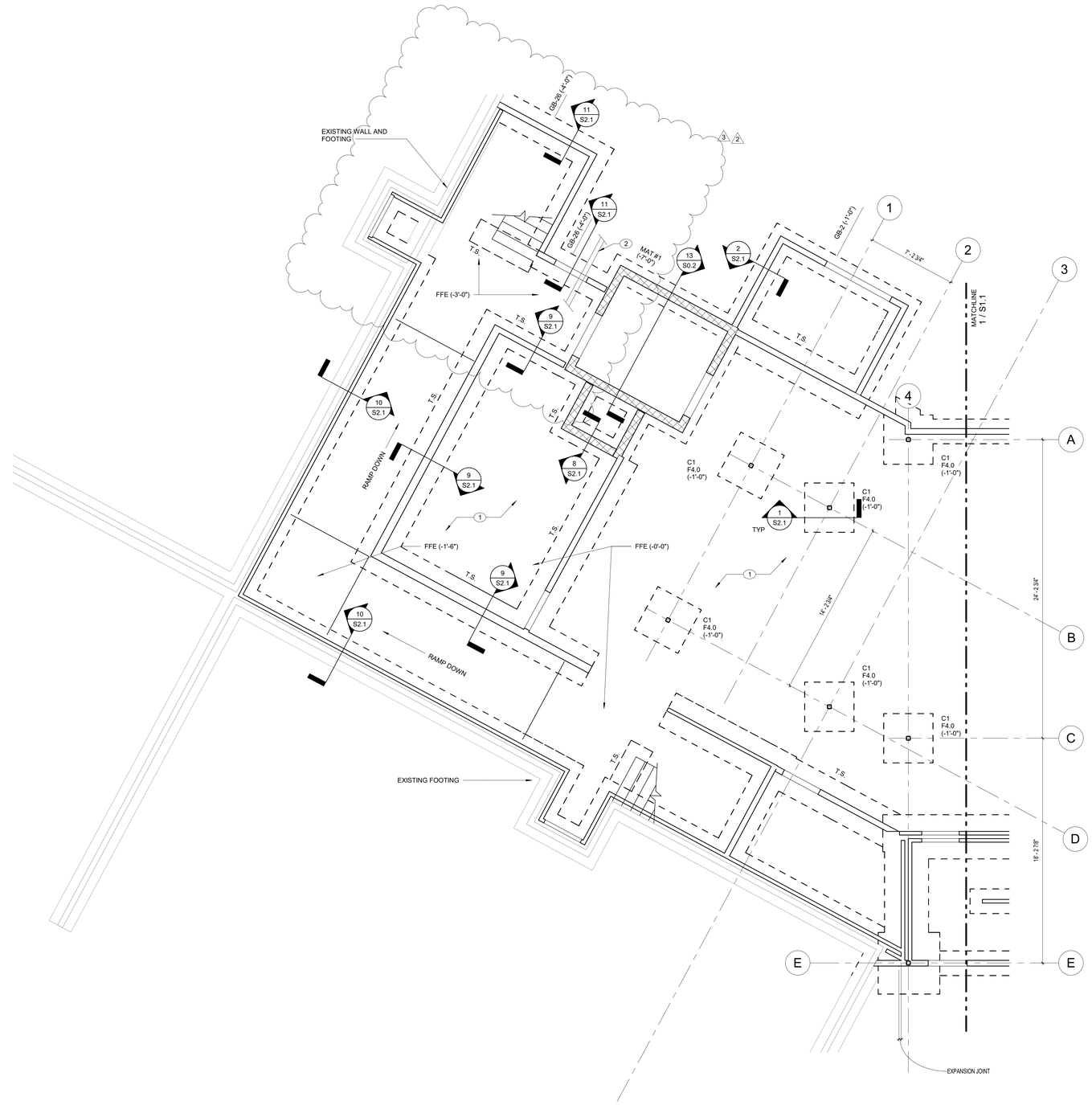
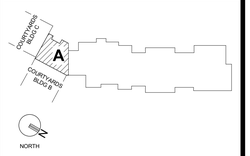


1 S1.6 ATRIUM - FIRST FLOOR PLAN
1/4" = 1'-0"

KEYPLAN



GENERAL NOTES

1. TOP OF FIRST FLOOR CONCRETE SLAB ELEVATION = (+0'-0"), UNLESS NOTED OTHERWISE.
2. TOP OF FOOTING ELEVATION= (-1'-0") BELOW REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE.
3. FINISHED SECOND FLOOR ELEVATION= (+11'-4") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF SECOND FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
4. TRUSS BEARING ELEV. AT VESTIBULE VARIES WITH LANDING ELEVATIONS, AS REFERENCE FROM BUILDING E SECOND FLOOR ELEVATION. SEE PLAN.
5. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
6. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
7. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP. ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
8. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
9. SEE 6S0.2 FOR BEARING WALL SCHEDULE.
10. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
11. "T.S." INDICATES THICKENED SLAB UNDER WALL OR STAIR STRINGER.

PLAN NOTES

1. 4"-THICK CONCRETE SLAB ON GRADE ON VAPOR RETARDER AND GRANULAR FILL, REINFORCED WITH 6x6-W1.4xW1.4 WELDED WIRE FABRIC.
2. UNDERGROUND UTILITY. SEE S0.1 AND PLUMBING DRAWINGS. THICKEN GRADE BEAM TO MAINTAIN 8" CONCRETE BELOW BOTTOM OF PIPE.

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B FASNACHT
NUMBER PE-2023006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
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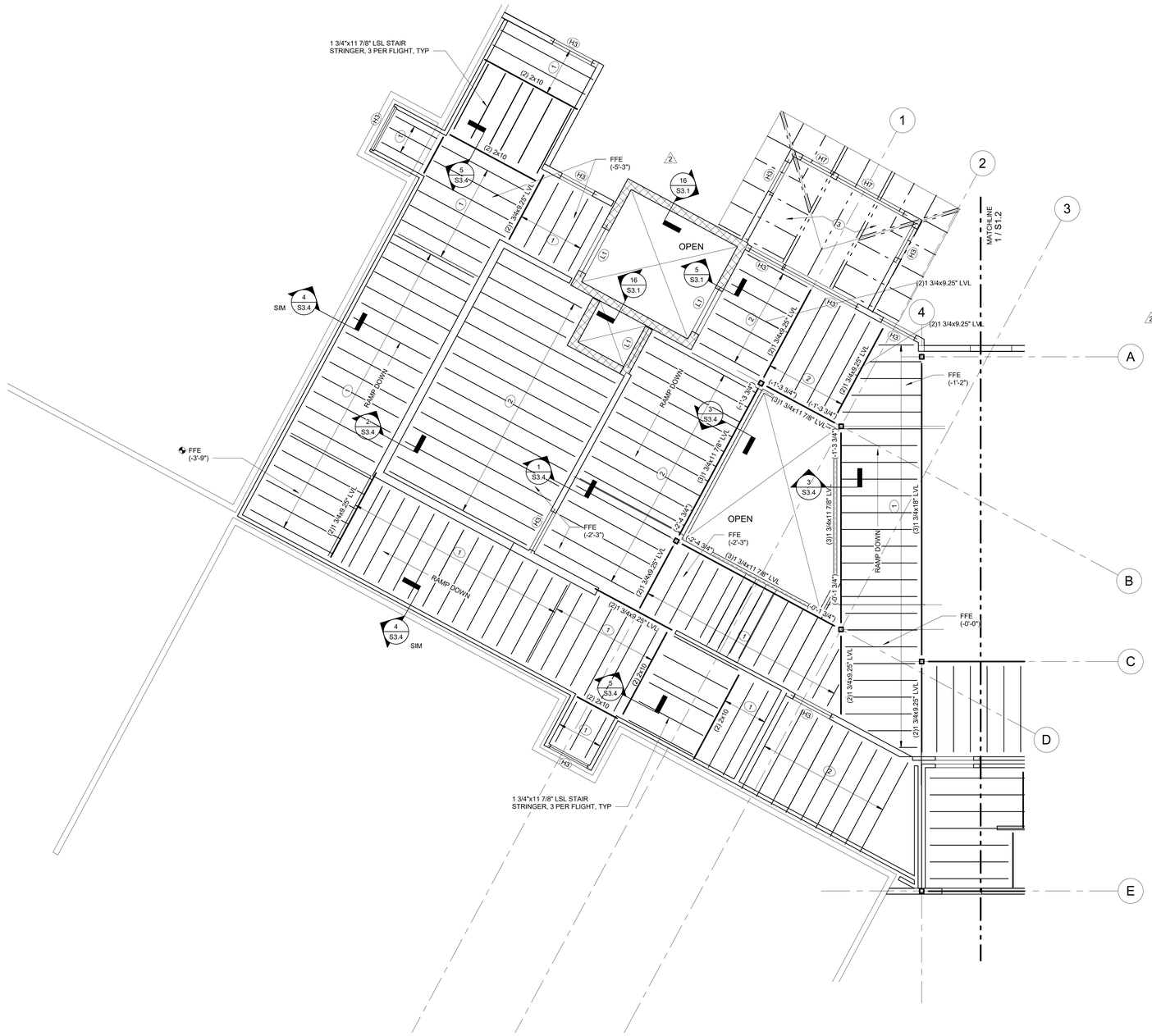
DESIGNER : DAS	DRAWN : BSW
ARCHITECT : DAS	CHECKED : BDT
ENGINEER : LBF	APPROVED : Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24
3	ADDENDUM 1	03/07/24

DRAWING TITLE

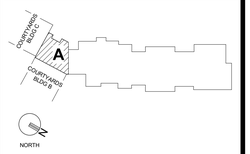
FOUNDATION PLAN - ATRIUM

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.6



1 SECOND FLOOR FRAMING PLAN - ATRIUM
S1.7 1/4" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FINISHED SECOND FLOOR ELEVATION= (+11'-4") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF SECOND FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
2. TOP OF BEAM=TOP OF JOIST=(-0'-1 3/4") BELOW FINISHED FLOOR. FINISHED FLOOR ELEVATION VARIES. SEE PLAN FOR FINISHED FLOOR ELEVATION REFERENCED TO FINISHED THIRD FLOOR ELEVATION.
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP, ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE 6S0.2 FOR BEARING WALL SCHEDULE.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. SIMPSON LU28 OR HU28 SKEWED BEAM HANGER AT 2X10 JOISTS TO BEAM. SIMPSON HUS1.81/10 AT LVL JOISTS TO BEAM. SIMPSON LUS410 AT 2 PLY LVL TO LVL BEAM.
10. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2X10 @ 16" O/C, UNLESS NOTED OTHERWISE.
2. 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 1.75X9.25" LVL @ 16" O/C, UNLESS NOTED OTHERWISE.
3. TYPICAL ROOF FRAMING: 5/8" THICK PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD ROOF TRUSSES SPACED @ 24" O/C MAX SPACING, UNLESS NOTED OTHERWISE.

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B FASNACHT
NUMBER PE-2022006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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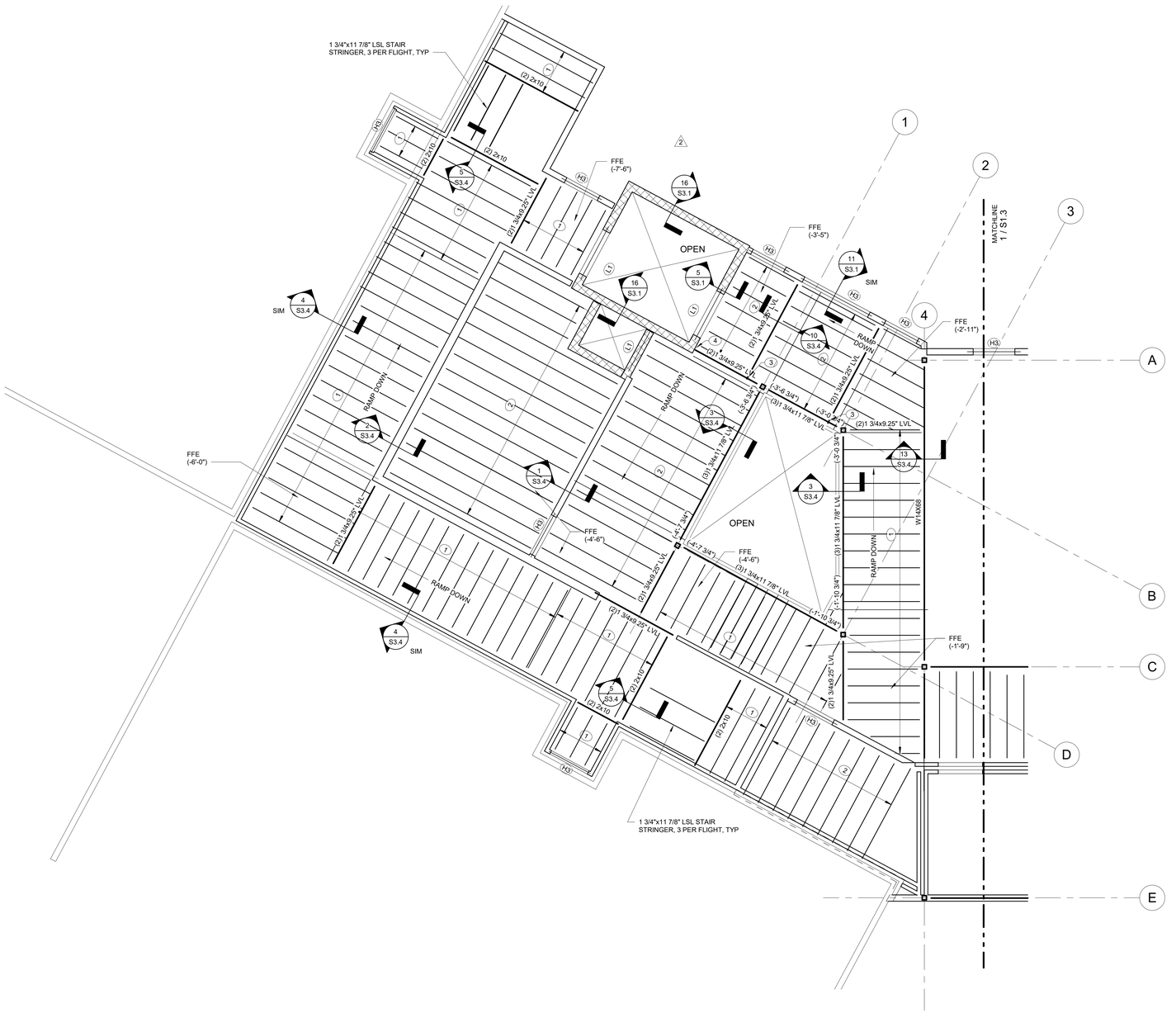
DESIGNER : DAS	DRAWN : BSW
ARCHITECT : DAS	CHECKED : BDT
ENGINEER : LBF	APPROVED : Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

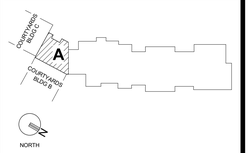
SECOND FLOOR FRAMING PLAN - ATRIUM

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.7



1 S1.8 THIRD FLOOR FRAMING PLAN - ATRIUM
1/4" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FINISHED THIRD FLOOR ELEVATION= (+22'-8") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF THIRD FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
2. TOP OF BEAM=TOP OF JOIST=(-0'-1 3/4") BELOW FINISHED FLOOR. FINISHED FLOOR ELEVATION VARIES. SEE PLAN FOR FINISHED FLOOR ELEVATION REFERENCED TO FINISHED THIRD FLOOR ELEVATION.
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP. ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE 6S0.2 FOR BEARING WALL SCHEDULE.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. SIMPSON LU28 OR HU28 SKEWED BEAM HANGER AT 2X10 JOISTS TO BEAM. SIMPSON HUS1.81/10 AT LVL JOISTS TO BEAM. SIMPSON LUS410 AT 2 PLY LVL TO LVL BEAM, UNO.
10. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2X10 @ 16" O/C, UNLESS NOTED OTHERWISE.
2. 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 1.75X9.25" LVL @ 16" O/C, UNLESS NOTED OTHERWISE.
3. SIMPSON HHUS48 HANGER.
4. SIMPSON HUC48 WITH (10) TNT25214H TITEN TURBO MASONRY SCREW ANCHORS.

CONSTRUCTION SET

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

SFCS Architecture Engineering Planning Interiors
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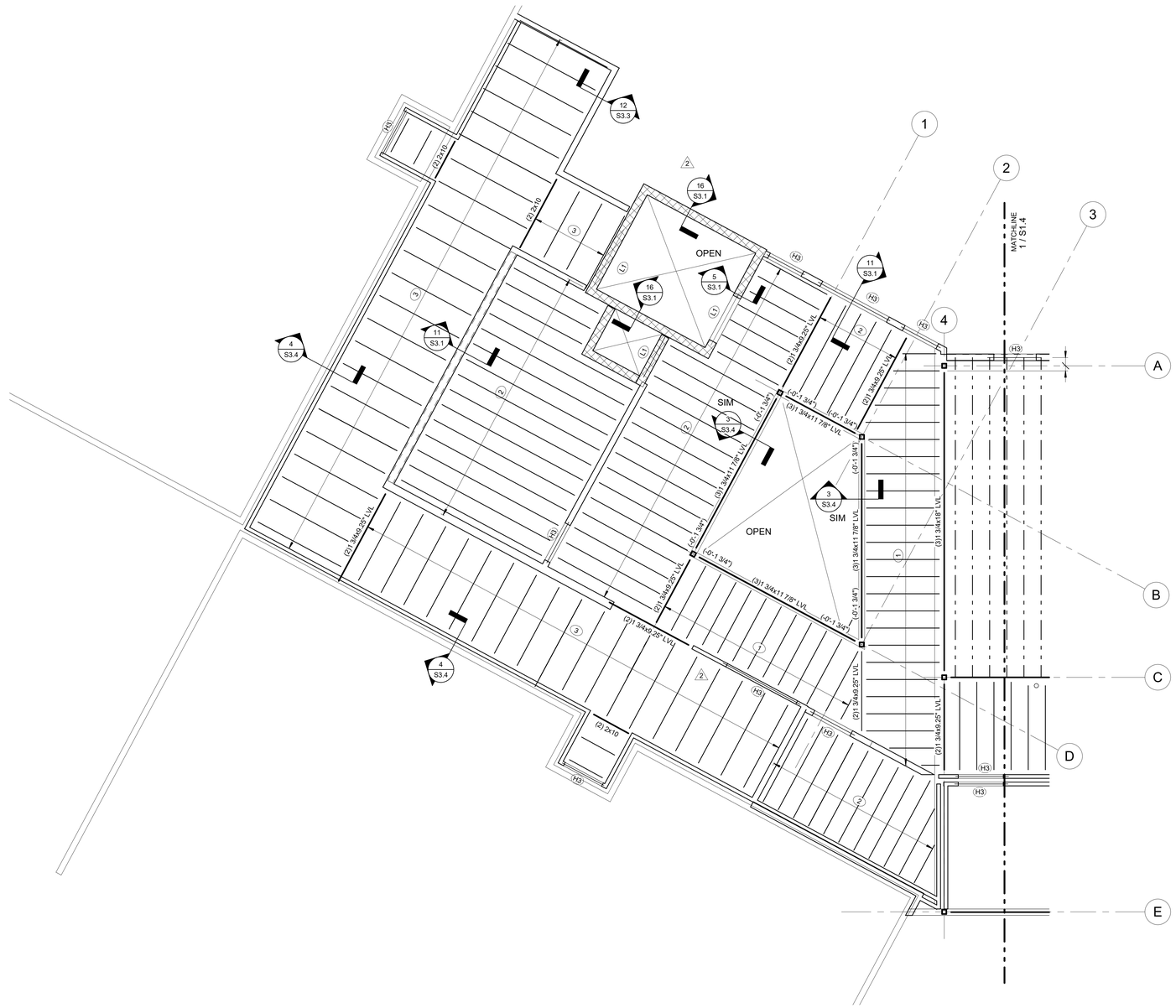
ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

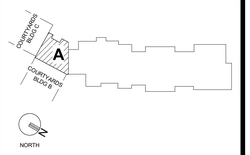
THIRD FLOOR FRAMING PLAN - ATRIUM

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.8



2 FOURTH FLOOR FRAMING PLAN - ATRIUM
S1.9 1/4" = 1'-0"

KEYPLAN



GENERAL NOTES

1. FINISHED FOURTH FLOOR ELEVATION= (+34'-0") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. TOP OF FOURTH FLOOR PLYWOOD ELEV= (-0'-1") BELOW FINISHED FLOOR ELEVATION.
2. TOP OF BEAM=TOP OF JOIST=(-0'-1 3/4") BELOW FINISHED FLOOR.
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL FLOOR FRAMING INTERFERENCES WITH MEP. ADD HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE 6S0.2 FOR BEARING WALL SCHEDULE.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS. UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. SIMPSON LU28 OR HU28 SKEWED BEAM HANGER AT 2X10 JOISTS TO BEAM. SIMPSON HUS1.81/10 AT LVL JOISTS TO BEAM. SIMPSON LUS410 AT 2 PLY LVL TO LVL BEAM.
10. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 2X10 @ 16" O/C, UNLESS NOTED OTHERWISE.
2. 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING ON 1/4" SOUND MAT ON 3/4" THICK TONGUE AND GROOVE PLYWOOD SHEATHING SUPPORTED BY 1.75X9.25" LVL @ 16" O/C, UNLESS NOTED OTHERWISE.
3. 5/8" THICK PLYWOOD SHEATHING ON 2X10 JOISTS @ 24" O/C, UNLESS NOTED OTHERWISE. LOW ROOF JOIST BEARING=(+26'-0 3/4") ABOVE REFERENCED FIRST FLOOR.

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B FASNACHT
NUMBER PE-2023006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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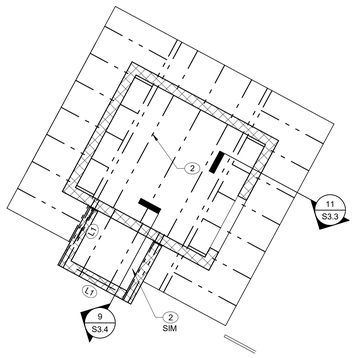
ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

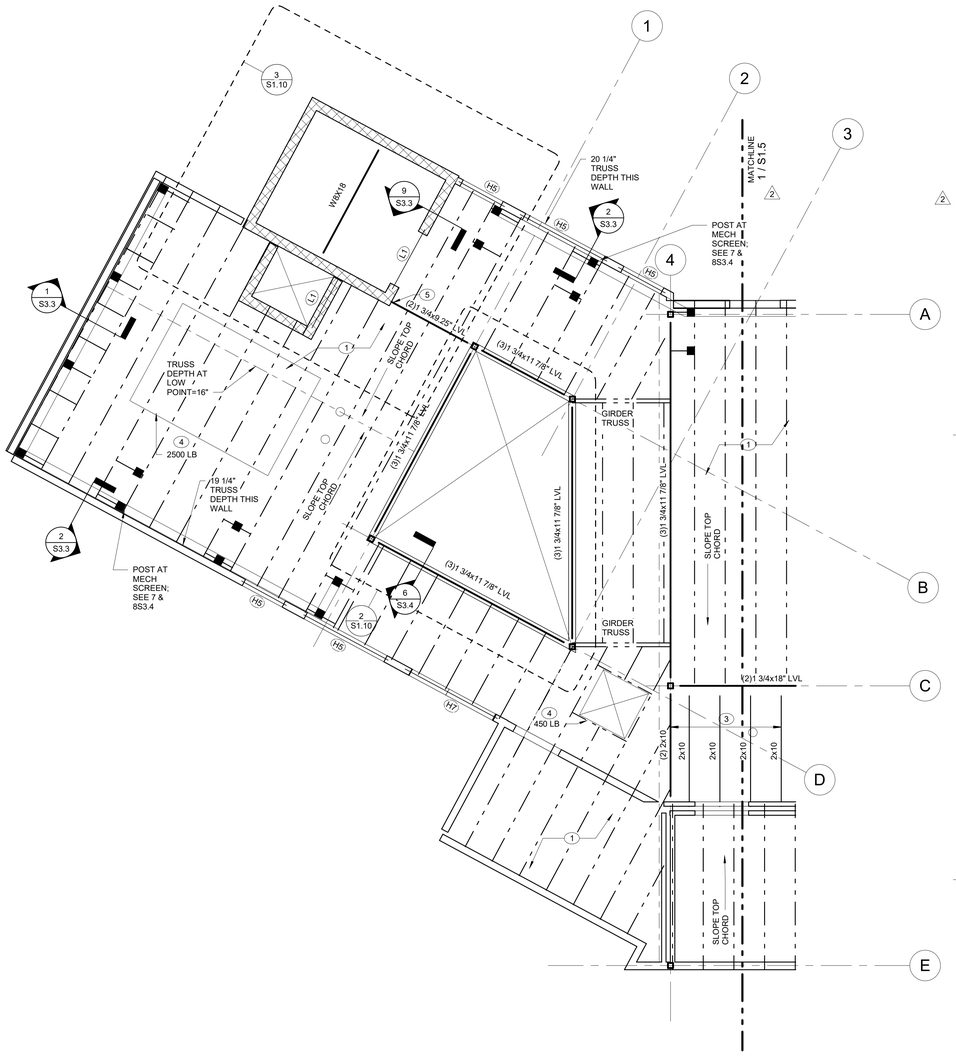
FOURTH FLOOR FRAMING PLAN - ATRIUM

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.9

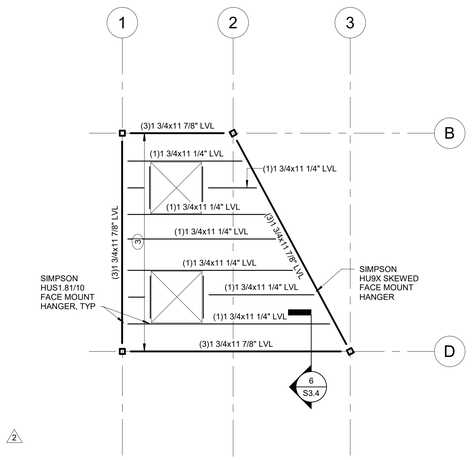


TOP OF CMU AT ELEVATOR HOISTWAY=(+49'-4").
TOP OF CMU AT SHAFT=(+50'-4")

3 S1.10 ELEVATOR HOISTWAY ROOF
1/4" = 1'-0"

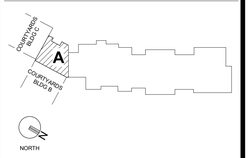


1 S1.10 ROOF FRAMING PLAN - ATRIUM
1/4" = 1'-0"



2 S1.10 CLERESTORY ROOF FRAMING
1/4" = 1'-0"

KEYPLAN



GENERAL NOTES

1. ROOF TRUSS BEARING ELEVATION= (+43'-0 1/4") ABOVE REFERENCE FIRST FLOOR, UNLESS NOTED OTHERWISE. CLERESTORY JOIST BEARING ELEVATION=(+50'-4"), U.N.O. ELEVATOR HOISTWAY JOIST BEARING=(+48'-11").
2. BOTTOM OF WOOD BEAM= ROOF TRUSS BEARING ELEVATION. TOP OF STL AT HOIST BEAM= (+48'-3 3/4").
3. REINFORCE ALL CMU WALLS W/ #5 VERTICAL @ 32" O/C, U.N.O.
4. SHADING INDICATES SHEARWALL LOCATION. SEE S4.1 FOR SHEARWALL ELEVATIONS AND LOCATIONS OF SIMPSON HOLDDOWN AT EACH END OF SHEARWALL.
5. CONTRACTOR SHALL COORDINATE ALL ROOF TRUSS FRAMING INTERFERENCES WITH MEP, ADD GIRDER TRUSSES AND HEADERS AS REQUIRED TO PROVIDE NECESSARY CLEARANCES.
6. SEE SECTION 6S0.3 FOR WOOD BEAM TO STEEL COLUMN CONNECTION.
7. SEE 6S0.2 FOR BEARING WALL SCHEDULE.
8. BEAMS SHALL BE SUPPORTED BY 3-2X WALL STUDS, UNLESS NOTED OTHERWISE. SEE 7S0.2 FOR POST SCHEDULE.
9. PROVIDE FRT SHEATHING WITHIN 4'-0" OF FIREWALLS. SEE ARCH.

PLAN NOTES

1. TYPICAL ROOF FRAMING: 5/8" THICK PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD ROOF TRUSSES WITH TOP CHORD AT 1/4"/FOOT SLOPE SPACED @ 24" O/C MAX SPACING, UNLESS NOTED OTHERWISE. MINIMUM TRUSS DEPTH=16" DEEP.
2. TYPICAL HIGH ROOF FRAMING: 5/8" THICK PLYWOOD ROOF SHEATHING ON PRE-ENGINEERED WOOD ROOF TRUSSES SPACED @ 24" OC MAX SPACING OVER HORIZONTAL SHAFTLINER CAP. SEE ARCH. TRUSS DEPTH= 16" DEEP. 2X6 @ 24" OC AT SIM.
3. 5/8" THICK PLYWOOD ROOF SHEATHING ON JOISTS @ 24" OC MAX SPACING.
4. DESIGN TRUSSES FOR RTU WEIGHT INDICATED ON PLAN. FINAL LOCATION OF POINT LOADS SHALL BE COORDINATED WITH ACTUAL SELECTED RTU CURB DIEMSNIONS. SEE 10/S3.3 AT CURB.
5. SIMPSON HUC48 HANGER AT BEAM TO CMU WITH (14) TNT25214H TITEN TURBO MASONRY SCREW ANCHORS

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

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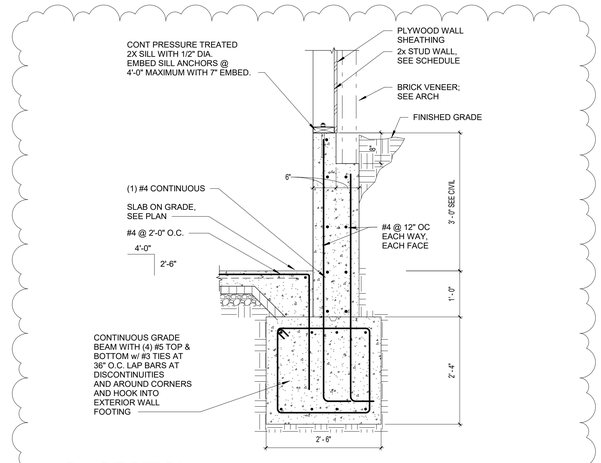
ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

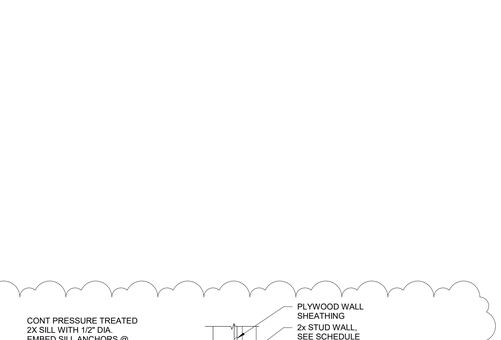
DRAWING TITLE

ROOF FRAMING PLAN - ATRIUM

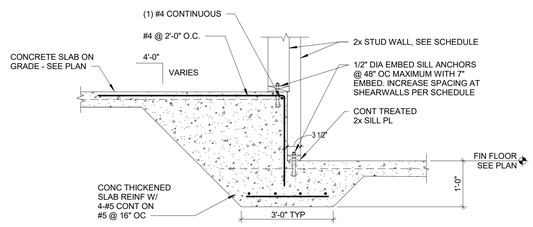
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S1.10



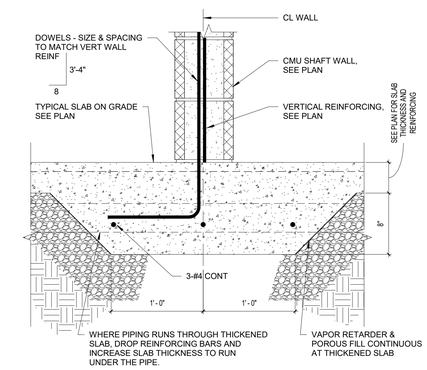
11 S2.1 SECTION
3/4" = 1'-0"



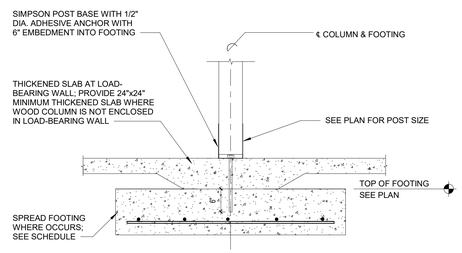
10 S2.1 SECTION
3/4" = 1'-0"



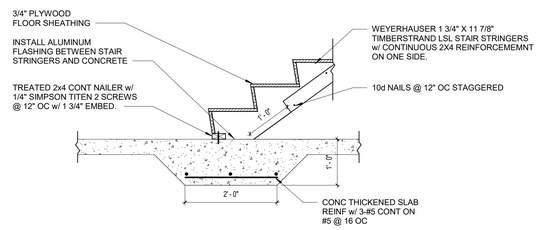
9 S2.1 SECTION
3/4" = 1'-0"



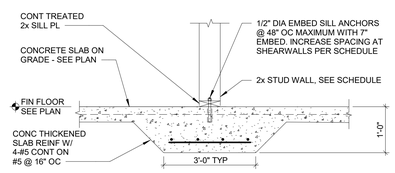
8 S2.1 TYP THICKENED SLAB AT CMU
1 1/2" = 1'-0"

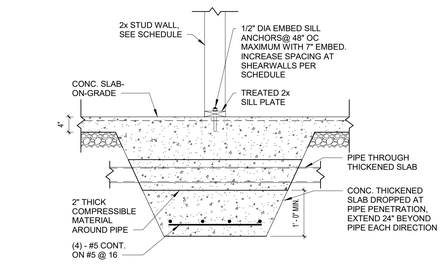


7 S2.1 TYP INTERIOR POST FOOTING
3/4" = 1'-0"



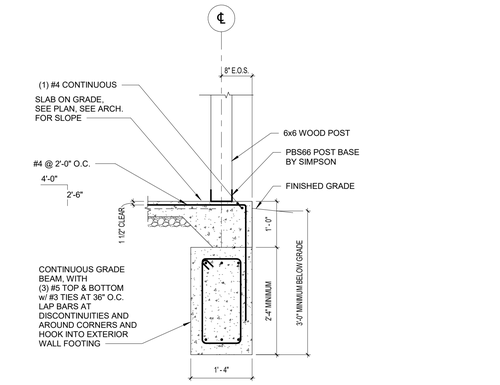
6 S2.1 STAIR ATTACHMENT TO SLAB
3/4" = 1'-0"



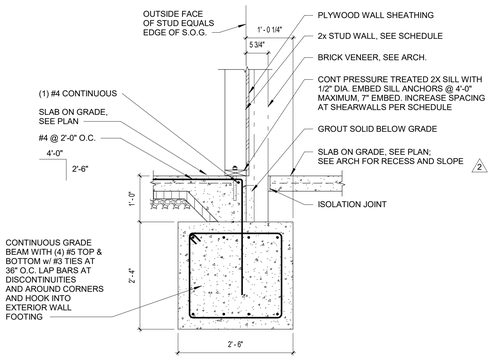


TYP THK SLAB UNDER WOOD STUD BEARING WALL

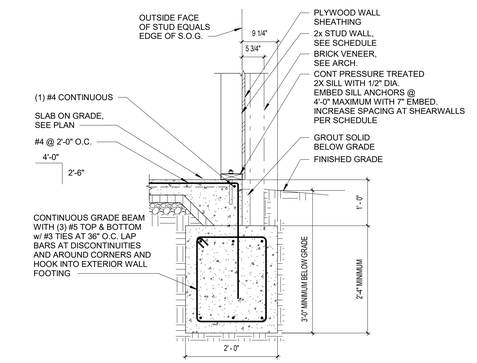
5 S2.1 3/4" = 1'-0"



4 S2.1 TYP PORCH POST ON GRADE BEAM
3/4" = 1'-0"

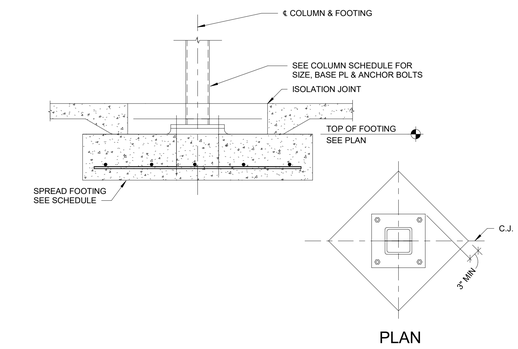


3 S2.1 TYP GRADE BEAM WITH EXTERIOR SLAB
3/4" = 1'-0"



TYP BEARING WALL ON PERIMETER GRADE BEAM

2 S2.1 3/4" = 1'-0"



1 S2.1 TYP STEEL COLUMN ON INTERIOR FOOTING
3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B FASNACHT
NUMBER PE-2022006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

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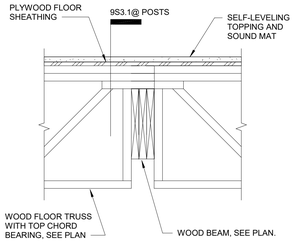
ARCHITECT : DAS		CHECKED : BDT	
ENGINEER : LBF		APPROVED : Aprover	

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24
3	ADDENDUM 1	03/07/24

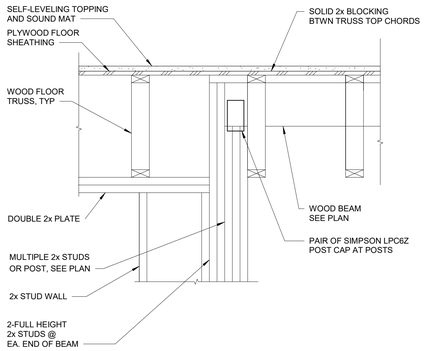
DRAWING TITLE

FOUNDATION SECTIONS AND DETAILS

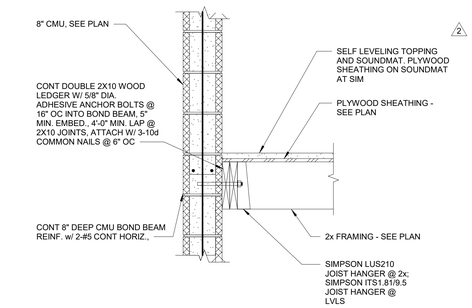
DATE:	January 5, 2024	DRAWING	S2.1
COMM. NO.	23104.00		



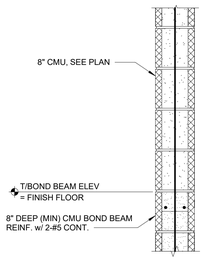
13 S3.1 SECTION
1" = 1'-0"



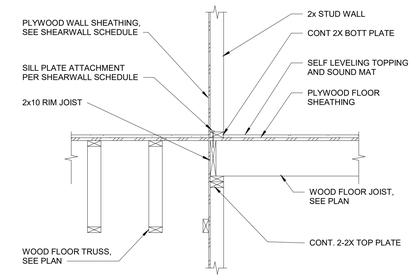
9 S3.1 TYP BEAM BEARING
1" = 1'-0"



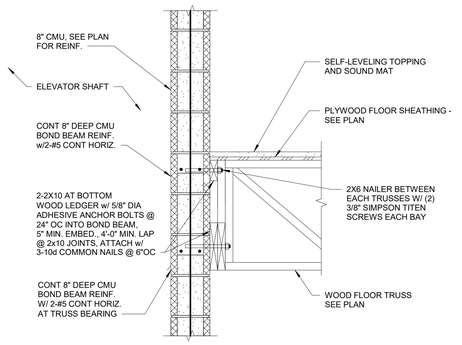
5 S3.1 TYP CORRIDOR FRAMING AT CMU WALL
1" = 1'-0"



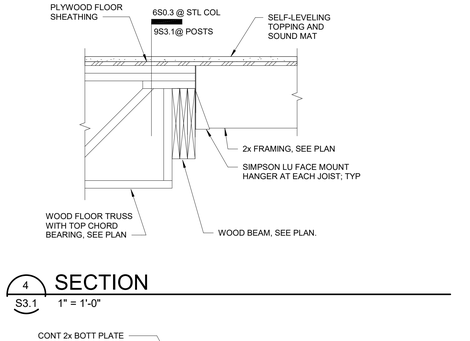
2 16 S3.1 SECTION
1" = 1'-0"



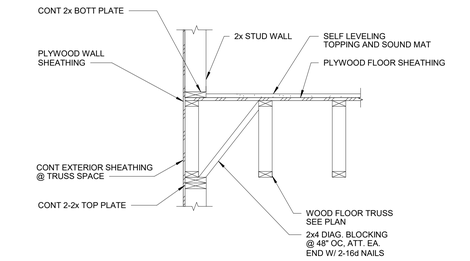
12 S3.1 SECTION
3/4" = 1'-0"



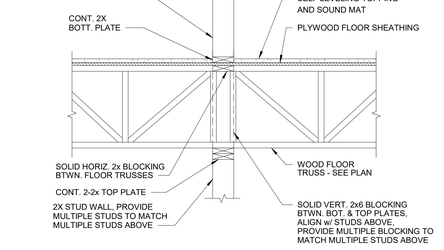
8 S3.1 TYP TRUSS AT CMU WALL
1" = 1'-0"



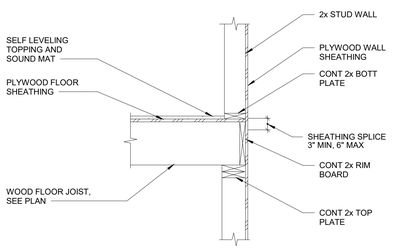
4 S3.1 SECTION
1" = 1'-0"



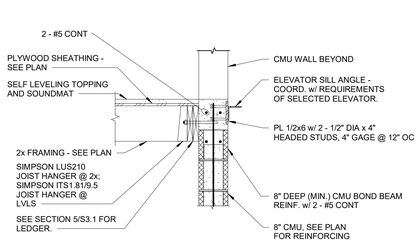
3 S3.1 TYP TRUSS PARALLEL TO BRG WALL
3/4" = 1'-0"



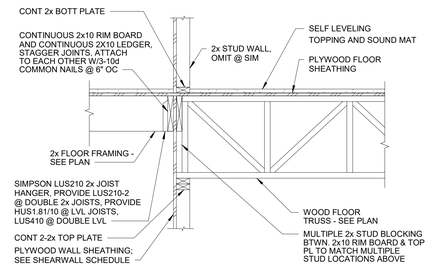
15 S3.1 SECTION
3/4" = 1'-0"



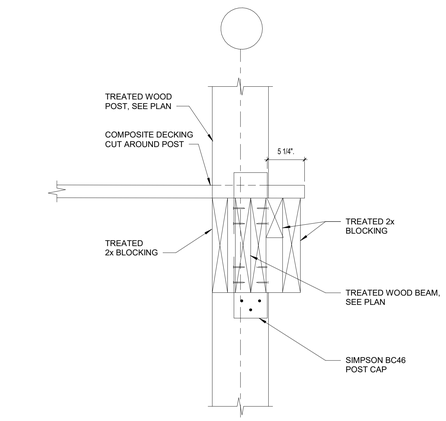
11 S3.1 SECTION
3/4" = 1'-0"



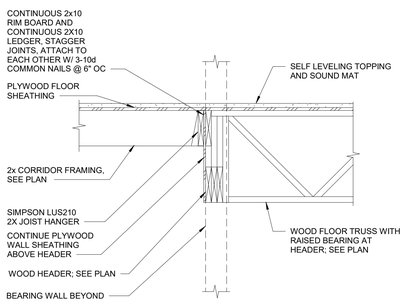
7 S3.1 TYP ELEVATOR DOOR
3/4" = 1'-0"



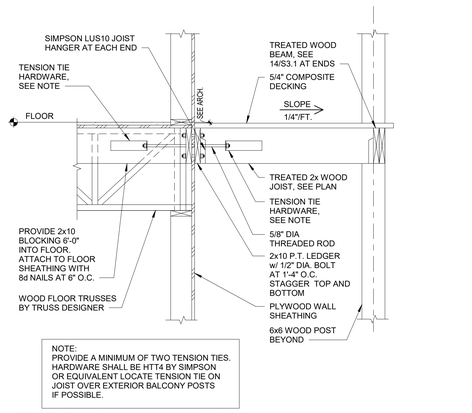
2 S3.1 SECTION
3/4" = 1'-0"



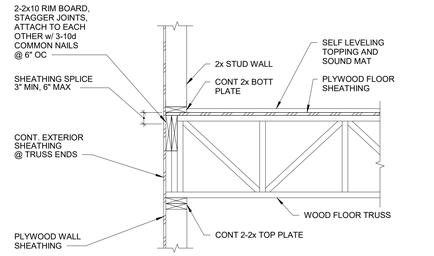
14 S3.1 PORCH BEAM AT POST
1" = 1'-0"



10 S3.1 TYPICAL CORRIDOR WALL OPENING
3/4" = 1'-0"



6 S3.1 TYP BALCONY WALL
3/4" = 1'-0"



1 S3.1 TYP TRUSS PERP TO BEARING WALL
3/4" = 1'-0"

CONSTRUCTION SET
STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2022006433
04/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE
John Knox Village
COURTYARDS - BUILDING E

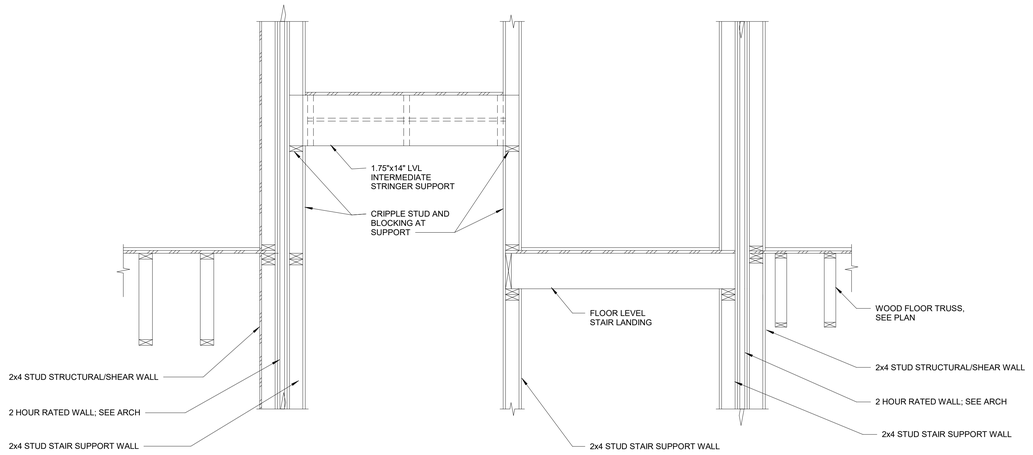
SFCS Architecture Engineering Planning Interiors
SFCS Inc. ▪ 1927 South Tryon St. - Suite 207
Charlotte, North Carolina 28203.4633
704.372.7327 ▪ Fax 704.372.7369
www.sfcs.com

DESIGNER	DAS	DRAWN	BSW
ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

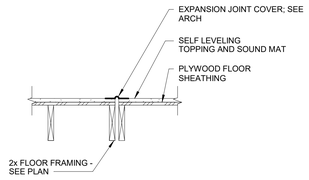
NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE
FRAMING SECTIONS AND DETAILS

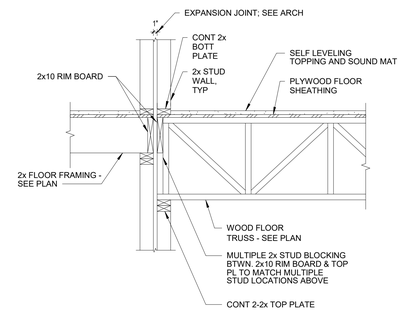
DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S3.1



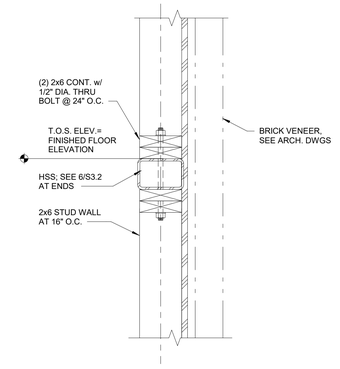
4 S3.2 SECTION AT STAIRS
3/4" = 1'-0"



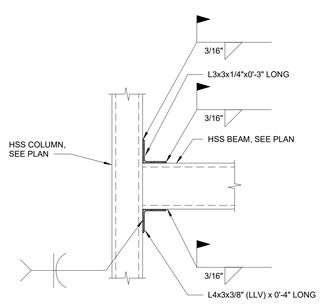
7 S3.2 TYP FLOOR EXPANSION JOINT
3/4" = 1'-0"



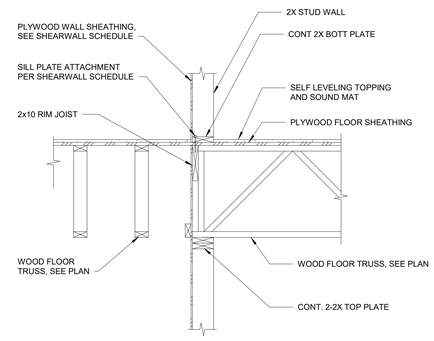
3 S3.2 TYP EXPANSION JOINT AT CORRIDOR WALL
3/4" = 1'-0"



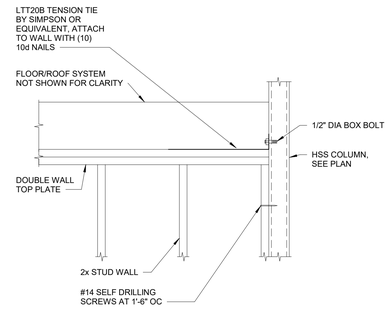
9 S3.2 WIND GIRT IN STAIR WALL
1 1/2" = 1'-0"



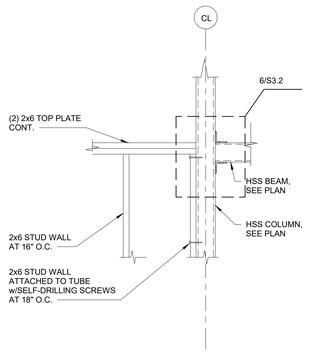
6 S3.2 SECTION
3/4" = 1'-0"



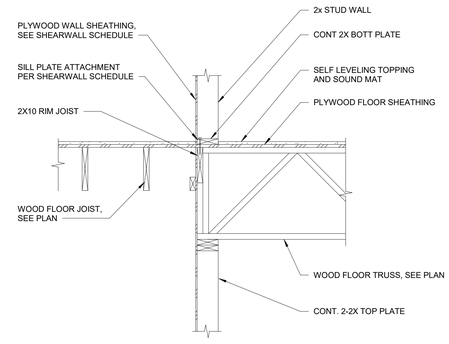
2 S3.2 SECTION
3/4" = 1'-0"



8 S3.2 SECTION
1/2" = 1'-0"



5 S3.2 SECTION
3/4" = 1'-0"



1 S3.2 SECTION
3/4" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
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PROJECT TITLE

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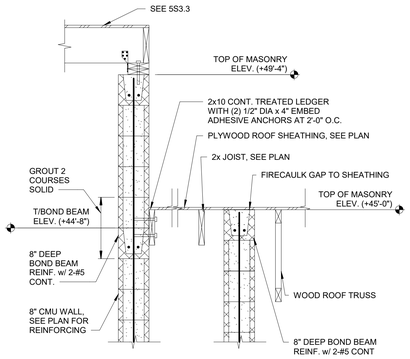
DESIGNER : DAS	DRAWN : BSW
ARCHITECT : DAS	CHECKED : BDT
ENGINEER : LBF	APPROVED : Approver

NO.	REVISION DESCRIPTION	DATE

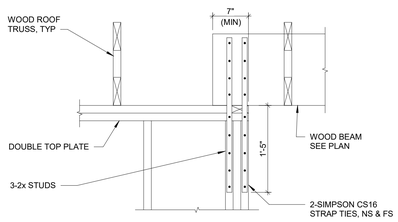
DRAWING TITLE

FRAMING SECTIONS AND DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S3.2



16 S3.3 SECTION
3/4" = 1'-0"



15 S3.3 SECTION
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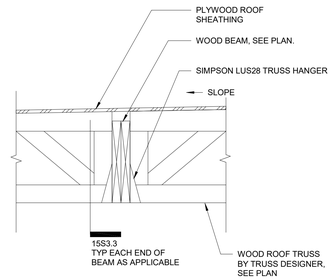
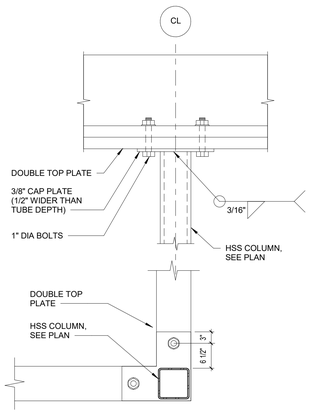
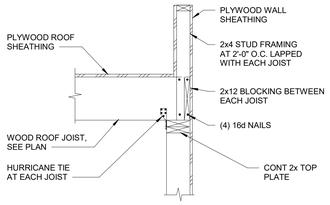


14 S3.3 SECTION
1" = 1'-0"

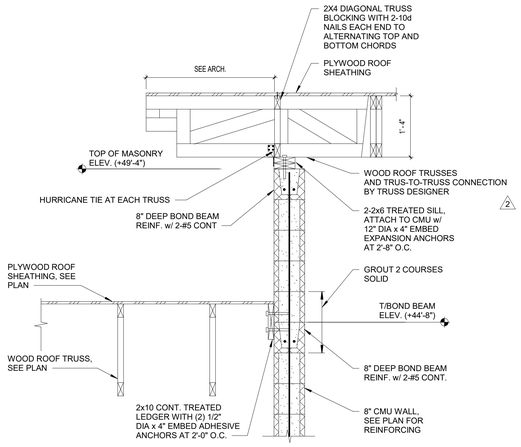


PLAN DETAIL AT CORNER COLUMN

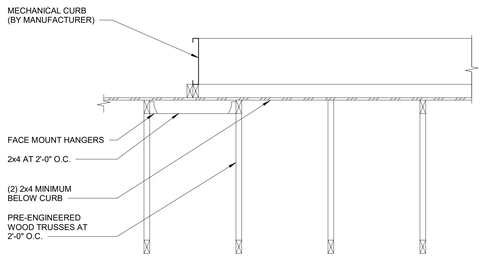
13 S3.3 DETAIL
3/4" = 1'-0"



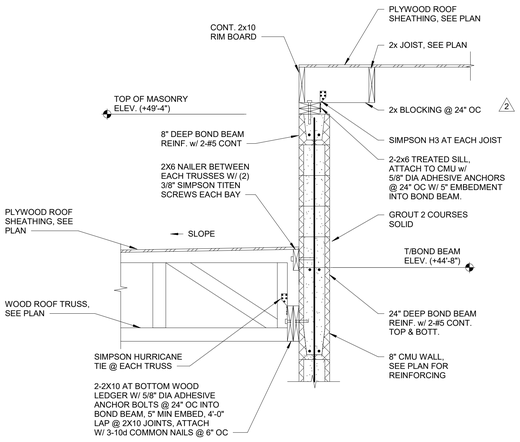
12 S3.3 SECTION
3/4" = 1'-0"



11 S3.3 ELEVATOR #1 CAP SECTION
3/4" = 1'-0"



10 S3.3 TYPICAL ROOF CURB
3/4" = 1'-0"



9 S3.3 ELEVATOR #2 CAP SECTION
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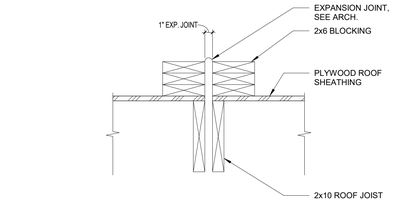
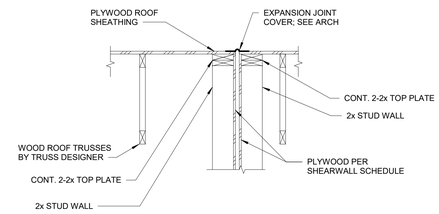
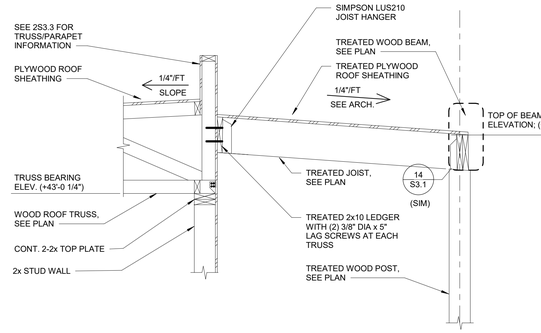


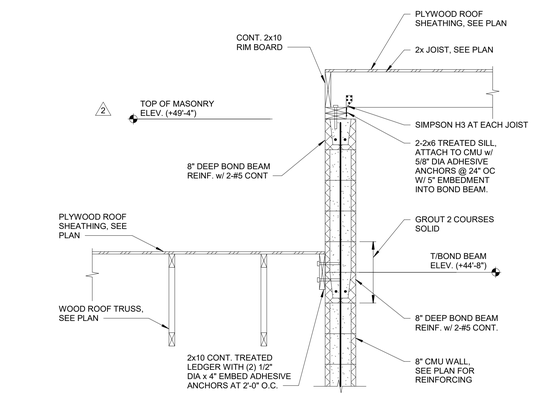
8 S3.3 SECTION
3/4" = 1'-0"



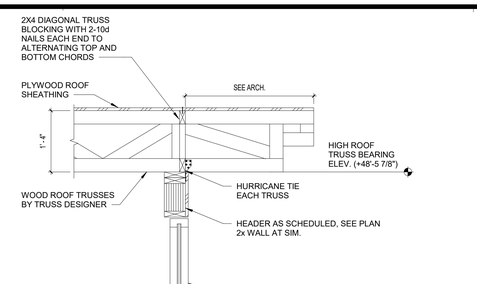
7 S3.3 TYP ROOF EXPANSION JOINT
3/4" = 1'-0"



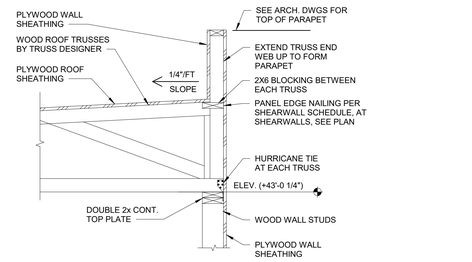
6 S3.3 BALCONY ROOF SECTION
3/4" = 1'-0"



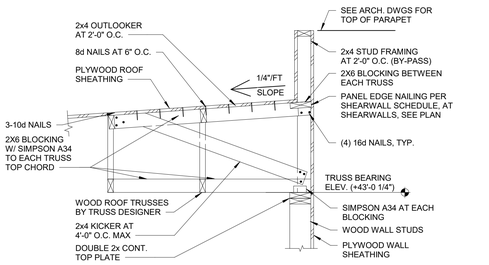
5 S3.3 ELEVATOR #2 CAP SECTION
3/4" = 1'-0"



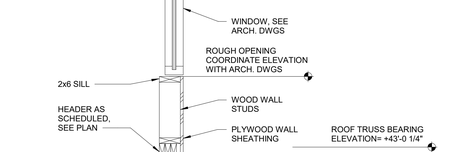
3 S3.3 TYP INT WALL HIGH ROOF TRUSS BRG
3/4" = 1'-0"



2 S3.3 TYP ROOF TRUSS ON BRG WALL
3/4" = 1'-0"



1 S3.3 TYP ROOF TRUSS PARALLEL TO BRG WALL
3/4" = 1'-0"



4 S3.3 TYP EXT. WALL HIGH ROOF TRUSS BRG
3/4" = 1'-0"

GENERAL NOTES

RELEASED FOR CONSTRUCTION
As Noted on Plans Review
Development Services Department
Lee's Summit, Missouri
04/23/2024

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2023006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

COURTYARDS - BUILDING E

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DESIGNER : DAS		DRAWN : BSW	
ARCHITECT : DAS		CHECKED : BDT	
ENGINEER : LBF		APPROVED : Approver	

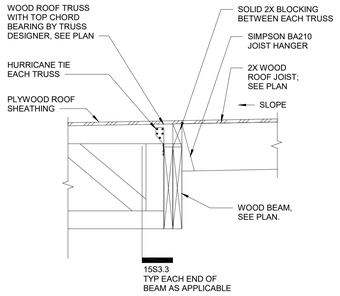
NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

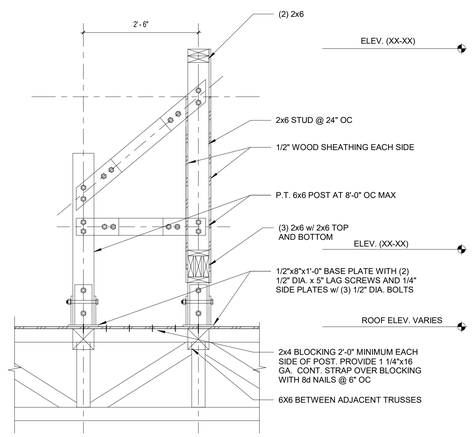
FRAMING SECTIONS AND DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S3.3

2/16/2024 3:39:50 PM
Autodesk Docs://23104.00 - John Knox Village - Lindbergh/23104.00-JKV-Courtyards-Building E-Structural CENTRAL.rvt



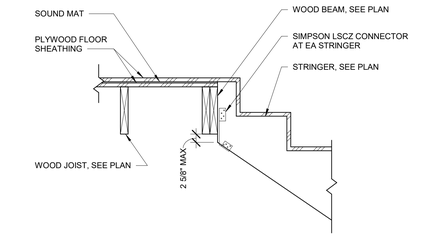
12 S3.4 SECTION
1" = 1'-0"



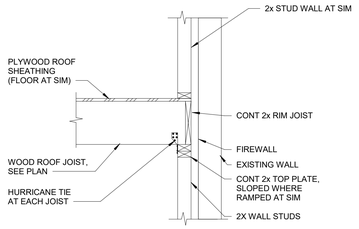
NOTES:

1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
2. TRUSS SUPPLIER SHALL PROVIDE MINIMUM 2x6 VERTICAL WEB MEMBER AT POST SUPPORT CONNECTION. SIZE TRUSS FOR ADDITIONAL SERVICE LOAD OF 1600 LBS AND 1100 LBS NET SERVICE UPLIFT.

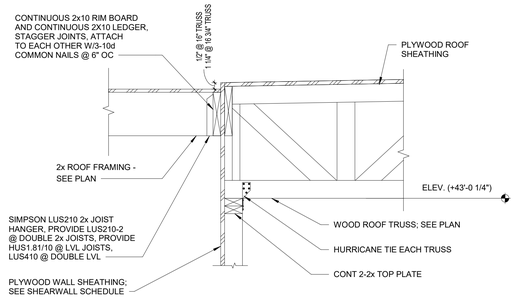
8 S3.4 TYP SCREEN WALL PERPENDICULAR W/ TRUSS
3/4" = 1'-0"



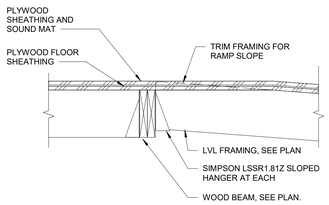
5 S3.4 SECTION AT STAIR
1" = 1'-0"



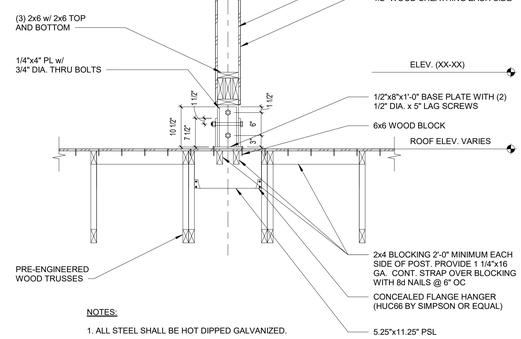
4 S3.4 SECTION
3/4" = 1'-0"



11 S3.4 SECTION
1" = 1'-0"



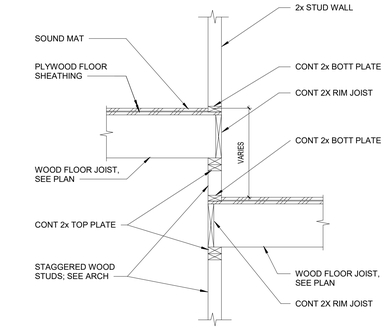
10 S3.4 SECTION
1" = 1'-0"



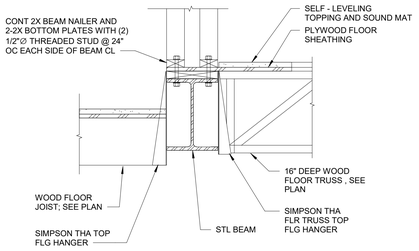
NOTES:

1. ALL STEEL SHALL BE HOT DIPPED GALVANIZED.
2. TRUSS SUPPLIER SHALL PROVIDE MINIMUM 2x6 VERTICAL WEB MEMBER AT POST SUPPORT CONNECTION. SIZE TRUSS FOR ADDITIONAL SERVICE LOAD OF 1600 LBS AND 1100 LBS NET SERVICE UPLIFT.

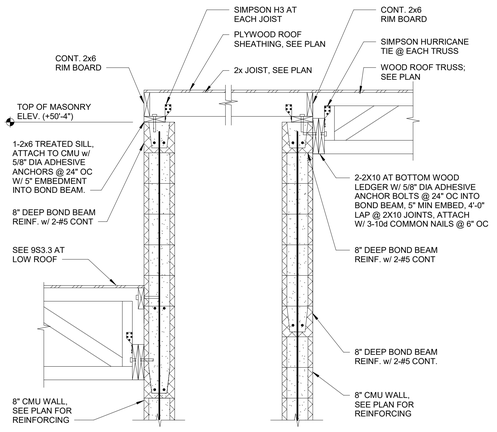
7 S3.4 TYP SCREEN WALL PARALLEL W/ TRUSS
3/4" = 1'-0"



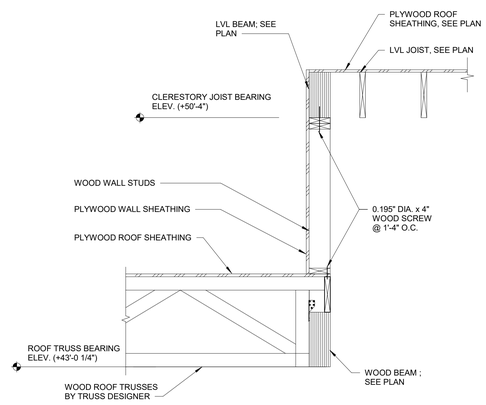
2 S3.4 SECTION
3/4" = 1'-0"



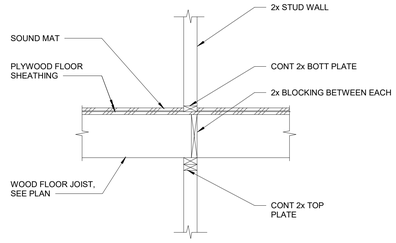
13 S3.4 SECTION
1" = 1'-0"



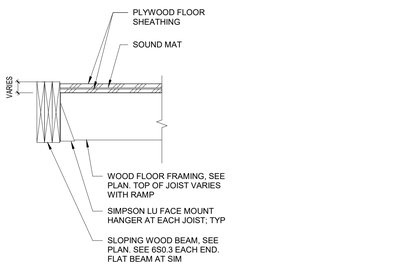
9 S3.4 ELEVATOR #1 CAP SECTION
3/4" = 1'-0"



6 S3.4 SECTION
3/4" = 1'-0"



1 S3.4 SECTION
3/4" = 1'-0"



3 S3.4 SECTION
1" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
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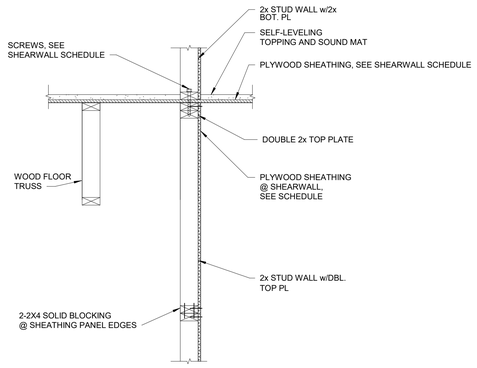
ARCHITECT : DAS		CHECKED : BDT	
ENGINEER : LBF		APPROVED : Approver	

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

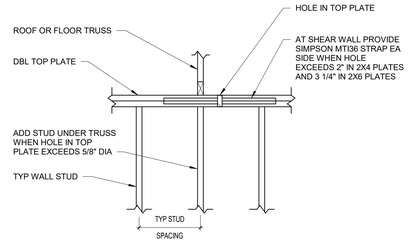
FRAMING SECTIONS AND DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S3.4



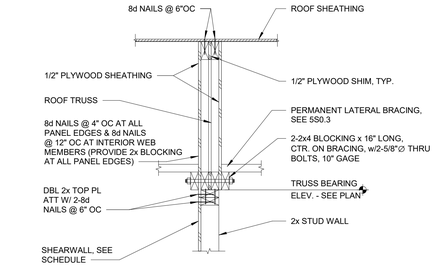
6 S4.1 TYP SHEARWALL PARALLEL TO FLOOR TRUSS

1" = 1'-0"



3 S4.1 TYPICAL TOP & BOTT PLATE PENETRATION IN SHEARWALL

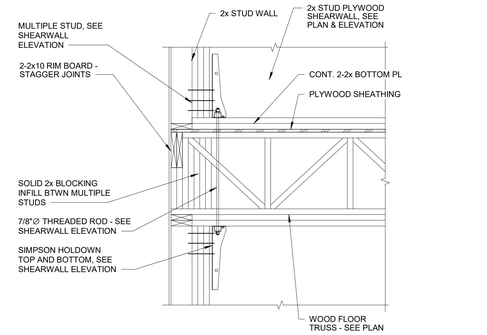
3/4" = 1'-0"



2 NOTE: AT CONTRACTOR'S OPTION, ELIMINATE TRUSS OVER SHEARWALL AND MOVE DOUBLE TOP PLATE TO BOTTOM OF SHEATHING OR A DRAG TRUSS MAY BE PROVIDED IN LIEU OF SHEATHED TRUSS. CONNECTION TO TOP PLATE BY TRUSS DESIGNER. EXTEND DRAG TRUSS FULL LENGTH OF DIAPHRAGM AND DESIGN DRAG TRUSS FOR 300 PLF (ALLOWABLE WIND).

5 S4.1 TYP SHEARWALL PARALLEL TO ROOF TRUSS

1" = 1'-0"



2 S4.1 TYP HOLDOWN BETWEEN FLOORS

3/4" = 1'-0"

SHEARWALL SCHEDULE					
	SW1	SW2	SW3	SW4	SW5
PLYWOOD SHEATHING [0]	3/8" 24/0 SPAN RATING	3/8" 24/0 SPAN RATING	3/8" 24/0 SPAN RATING	15/32" 32/16 SPAN RATING	15/32" 32/16 SPAN RATING
WALL TYPE	UNBLOCKED, TYPE II	TYPE I	TYPE I	TYPE II	TYPE I
NAILING AT PANEL EDGES [1]	8d @ 6" OC	8d @ 4" OC	8d @ 4" OC	10d @ 4" OC	10d @ 4" OC
ASD ALLOWABLE UNIT SHEAR CAPACITY [2]	283 PLF	412 PLF	412 PLF	594 PLF	594 PLF
SILL PLATE CONNECTION @ 2ND & 3RD FLOOR [3]	1/4 DIA X 6" LAG SCREW @ 16" OC	1/4 DIA X 6" LAG SCREW @ 8" OC	1/4 DIA X 6" LAG SCREW @ 8" OC	3/8 DIA X 6" LAG SCREW @ 8" OC	3/8 DIA X 6" LAG SCREW @ 8" OC
SILL PLATE CONNECTION @ 4TH FLOOR [3]	1/4 DIA X 6" LAG SCREW @ 32" OC	1/4 DIA X 6" LAG SCREW @ 16" OC	1/4 DIA X 6" LAG SCREW @ 16" OC	1/4 DIA X 6" LAG SCREW @ 8" OC	1/4 DIA X 6" LAG SCREW @ 16" OC
ANCHOR BOLTS [4]	1/2" DIA @ 32" OC	1/2" DIA @ 16" OC	1/2" DIA @ 16" OC	1/2" DIA @ 16" OC	1/2" DIA @ 16" OC
POST & HDU @ 1ST FLOOR [5]	(3)-2X6	(3)-2X6 W/ HDU8	2-(3)-2X4, 12" APART, W/ HDU8	(3)-2X6 W/ HDU14	2-(3)-2X6 W/ 2-HDU8, 12" APART
POST & HDU @ 2ND FLOOR [5]	(3)-2X6	(3)-2X6 W/ HDU8	2-(3)-2X4, 12" APART, W/ HDU8	(3)-2X6 W/ HDU8	(3)-2X6 W/ HDU8
POST & HDU @ REMAINING FLOORS [5]	(3)-2X6	(3)-2X6 W/ HDU8	(3)-2X4 W/ HDU8	(3)-2X6 W/ HDU8	(3)-2X6 W/ HDU8

2

0 PROVIDE FRT SHEATHING AT FIREWALLS. SEE ARCH FOR FIREWALL LOCATIONS.

1 NAILING PATTERN INDICATES SIZE AND SPACING AT PANEL EDGES, TOP PLATE, SILL PLATE, AND RIM BOARDS. PROVIDE 12" OC SPACING AT INTERMEDIATE FRAMING. USE 8d OR 10d COMMON NAILS BASED ON SCHEDULE WITH 1 3/8" (8d) OR 1 1/2" (10d) PENETRATION IN FRAMING MEMBER OR BLOCKING.

2 ALLOWABLE UNIT SHEAR CAPACITY FOR WIND, DOES NOT INCLUDE ADJUSTMENT FACTORS.

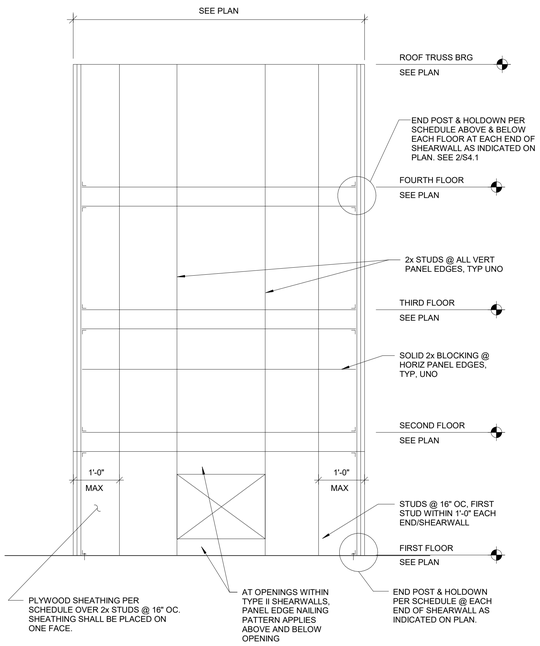
3 MAINTAIN 3/8" MINIMUM EDGE DISTANCES.

4 PROVIDE 7" EMBEDMENT AND PLATE WASHERS NOT LESS THAN 0.229" x 3" x 3". THE PLATE WASHER SHALL EXTEND TO WITHIN 1/2" OF THE EDGE OF THE BOTTOM PLATE ON THE SIDE WITH SHEATHING.

5 BASIS OF DESIGN ARE SIMPSOM HDU. PROVIDE 7/8" DIA ANCHOR ROD WITH 20" EBMEDMENT AT HDU8 AND 1" DIA ANCHOR ROD WITH 22" EMBEDMENT AT HDU14.

4 S4.1 SHEARWALL SCHEDULE

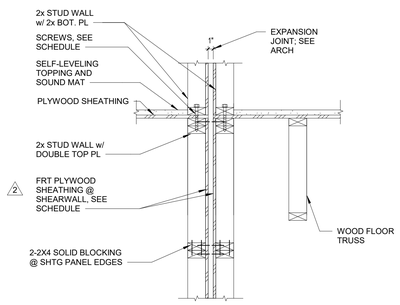
N.T.S.



TYPICAL SHEARWALL ELEVATION

1 S4.1 SHEARWALL ELEVATION

3/16" = 1'-0"



7 S4.1 TYP SHEARWALL PARALLEL TO EJ

1" = 1'-0"

CONSTRUCTION SET

STATE OF MISSOURI
LINDSEY B. FASNACHT
NUMBER PE-2023006433
01/05/24
PROFESSIONAL ENGINEER

PROJECT TITLE

John Knox Village

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DESIGNER	DAS	DRAWN	BSW
ARCHITECT	DAS	CHECKED	BDT
ENGINEER	LBF	APPROVED	Approver

NO.	REVISION DESCRIPTION	DATE
2	REV 1- PERMIT COMMENTS	2/15/24

DRAWING TITLE

SHEARWALL DETAILS

DATE: January 5, 2024
COMM. NO. 23104.00
DRAWING S4.1