





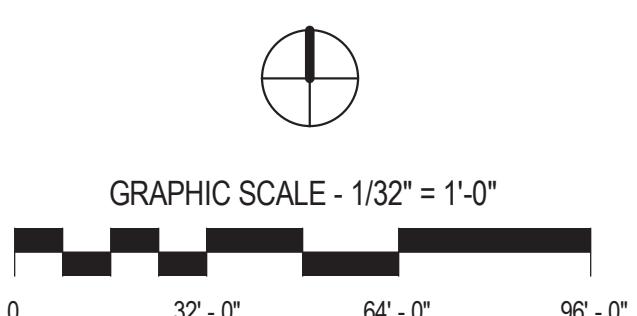
## RENOVATION OF THREE RESIDENCE HALLS DRAPER HALL

RADFORD UNIVERSITY  
RADFORD, VIRGINIA

Project Code 217-17565-002  
VMDO Project Number 1115

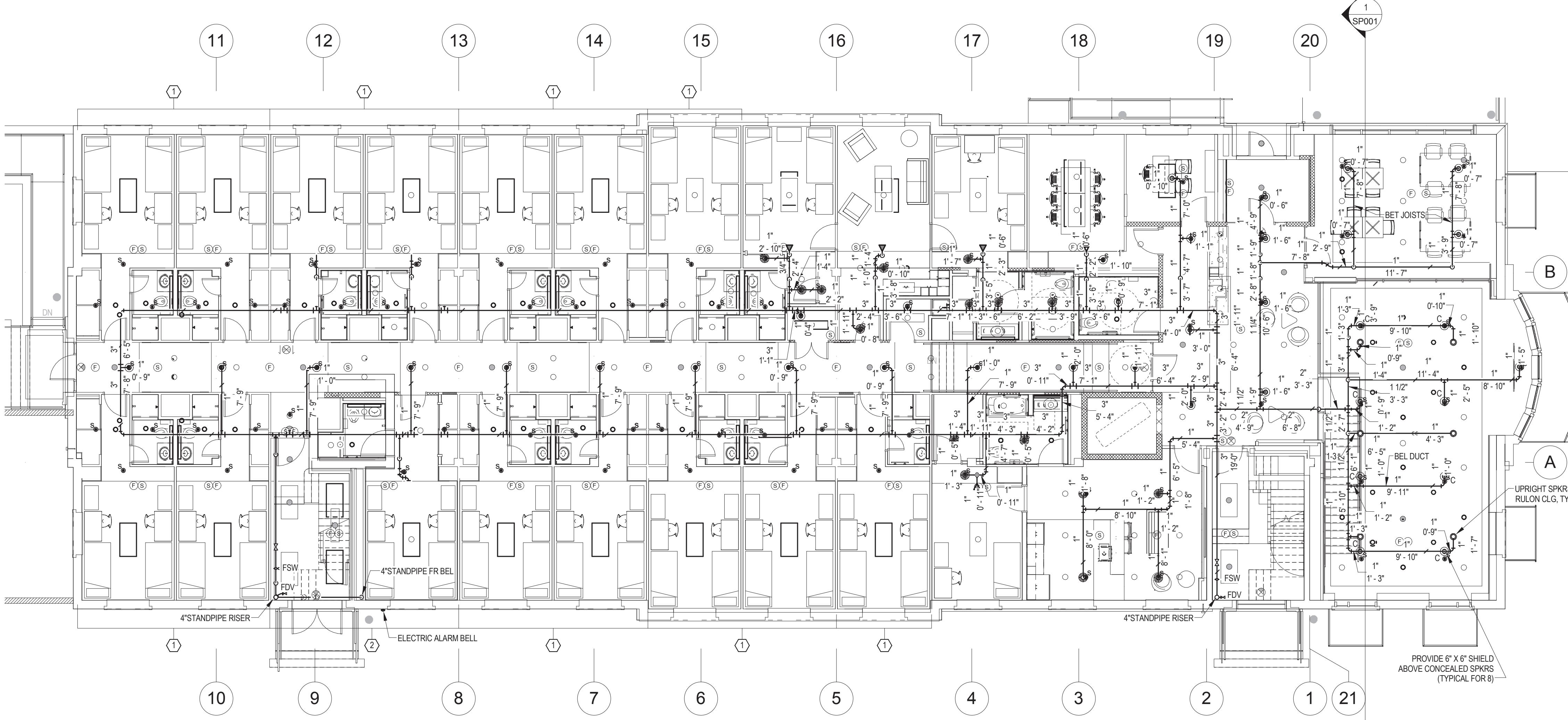
Checked By MGW  
Drawn by MGW

Note: Modifications to the bid documents that were issued by addenda have been incorporated into these drawings for the convenience of the Contractor. In the event of discrepancies between the originally issued addenda and changes depicted on these drawings, the originally issued addenda shall take precedence.



NO.	SUBMITTAL	DATE
1	BID DOCUMENTS	05.19.14
2	Addendum 1	06.19.14
2	Addendum 2	06.24.14
3	Addendum 3	06.25.14
	CONSTRUCTION SET	05.01.15

## BASEMENT AND FIRST FLOOR PLANS - SPRINKLER



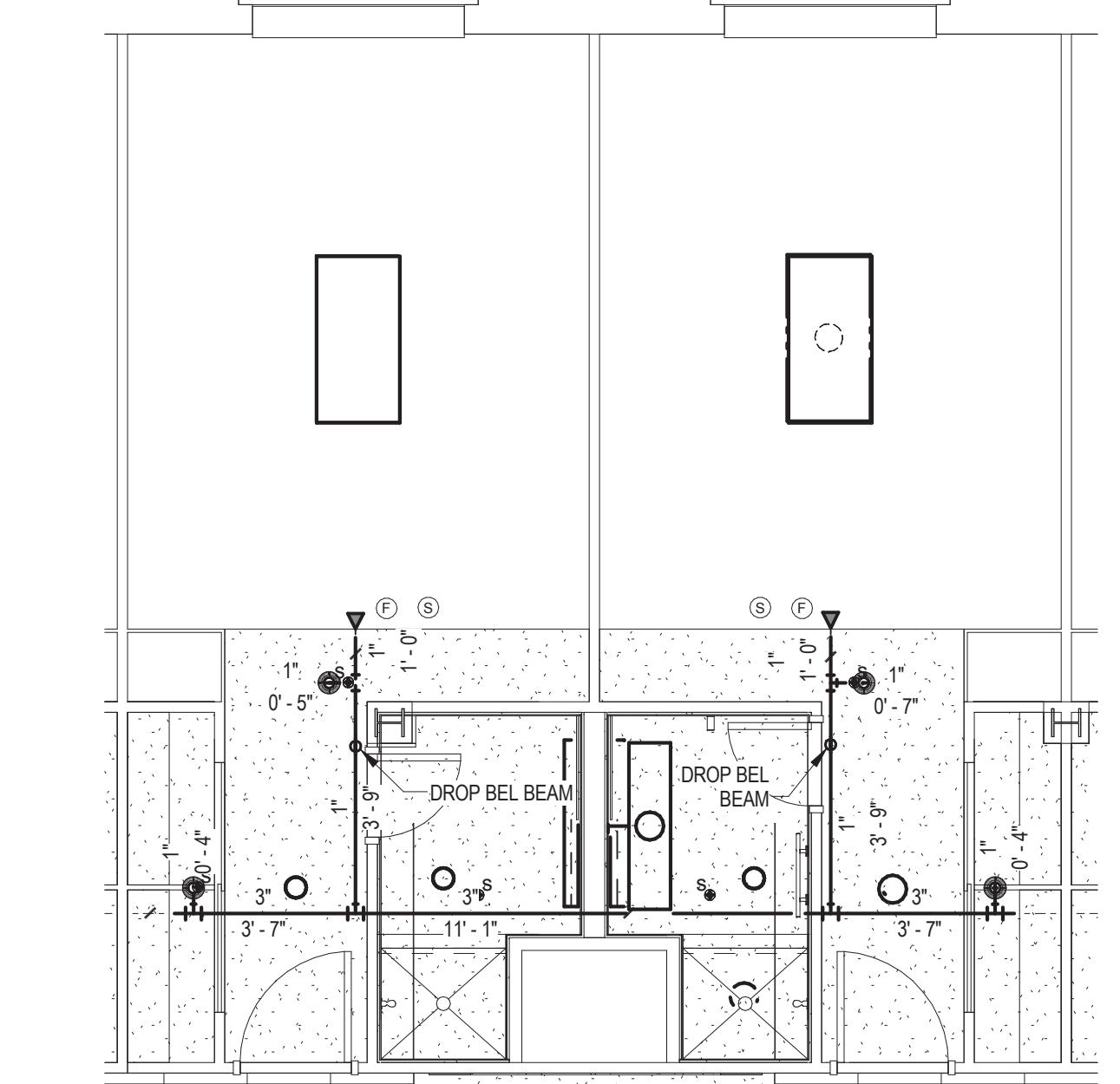
### PLAN NOTES:

- FOR SPRINKLER LAYOUT THIS AREA, SEE TYPICAL TWO BED SUITE - SPRINKLER, SHEET SP101.
- FOR SPRINKLER LAYOUT THIS AREA, SEE TYPICAL ONE BED SUITE WITH STAIR - SPRINKLER, SHEET SP101.
- REFER TO 1/4 SCALE PLANS FOR PIPE SIZES NOT SHOWN ON 1/8 PLANS.

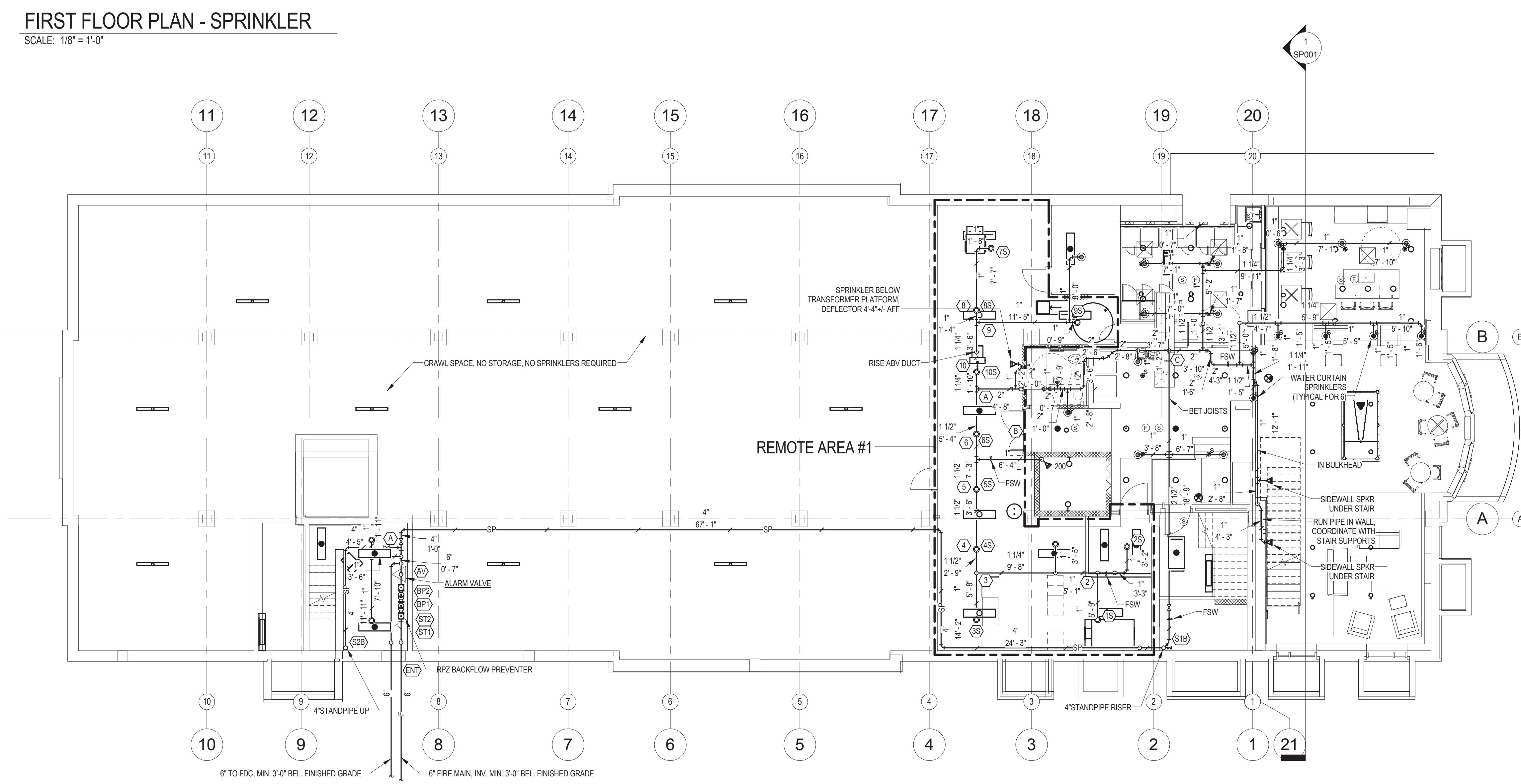
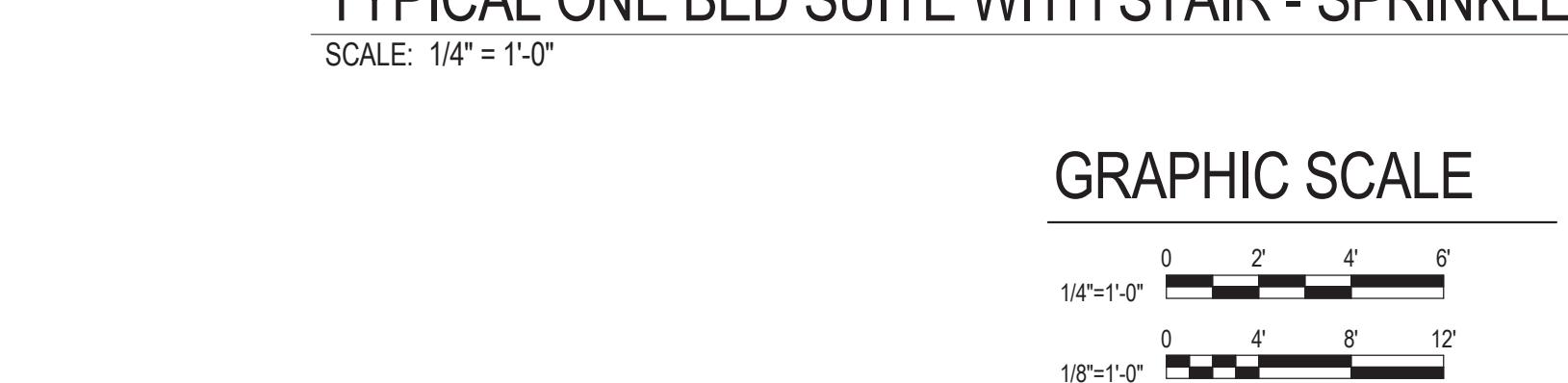
### FIRST FLOOR SPRINKLER HEAD SCHEDULE

QTY.	SYMBOL	DESCRIPTION
29	○	QUICK RESPONSE PENDENT SPRINKLER - 5.6 "K" FACTOR - RECESSED
1	▲	STANDARD SIDEWALL SPRINKLER - 5.6 "K" FACTOR
76	●	RESIDENTIAL PENDENT SPRINKLER - 5.6 "K" FACTOR-RECESSED
19	◀	RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER - 5.6 "K" FACTOR
6	○	QUICK RESPONSE UPRIGHT SPRINKLER - 5.6 "K" FACTOR
8	○	QUICK RESPONSE CONCEALED PENDENT SPRINKLER - 5.6 "K" FACTOR

HYDRAULIC DESIGN DATA - REMOTE AREA #1	
THIS WET PIPE SPRINKLER SYSTEM HAS BEEN HYDRAULICALLY DESIGNED TO MEET THE FOLLOWING CRITERIA:	
STANDARD:	NFPA #13, 2007
HAZARD:	ORDINARY GROUP 1
NO. OF SPRINKLERS:	10
DEMAND PER SPRINKLER:	0.10 GPM/SQ. FT.
AREA OF APPLICATION:	960 SQ. FT.
COMBINED STREAMS:	250 GPM
TOTAL WATER REQUIRED (AT SOURCE):	444.6 GPM (AT SOURCE)
WATER DEMAND @ BASE OF RISER:	194.6 GPM (NODE "ENT")
PRESSURE REQUIRED @ BASE OF RISER:	56.2 PSI (NODE "ENT")

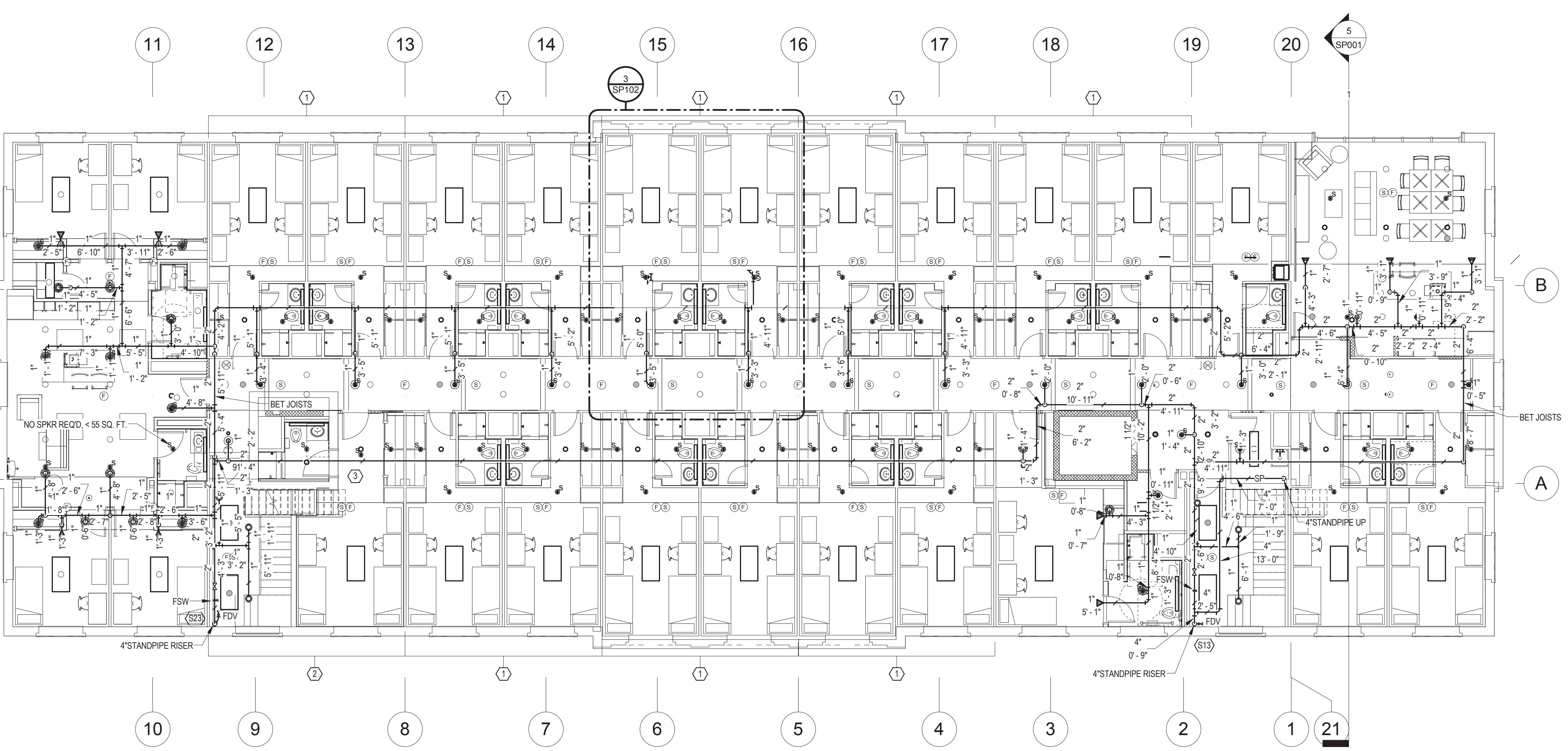


### TYPICAL ONE BED SUITE WITH STAIR - SPRINKLER



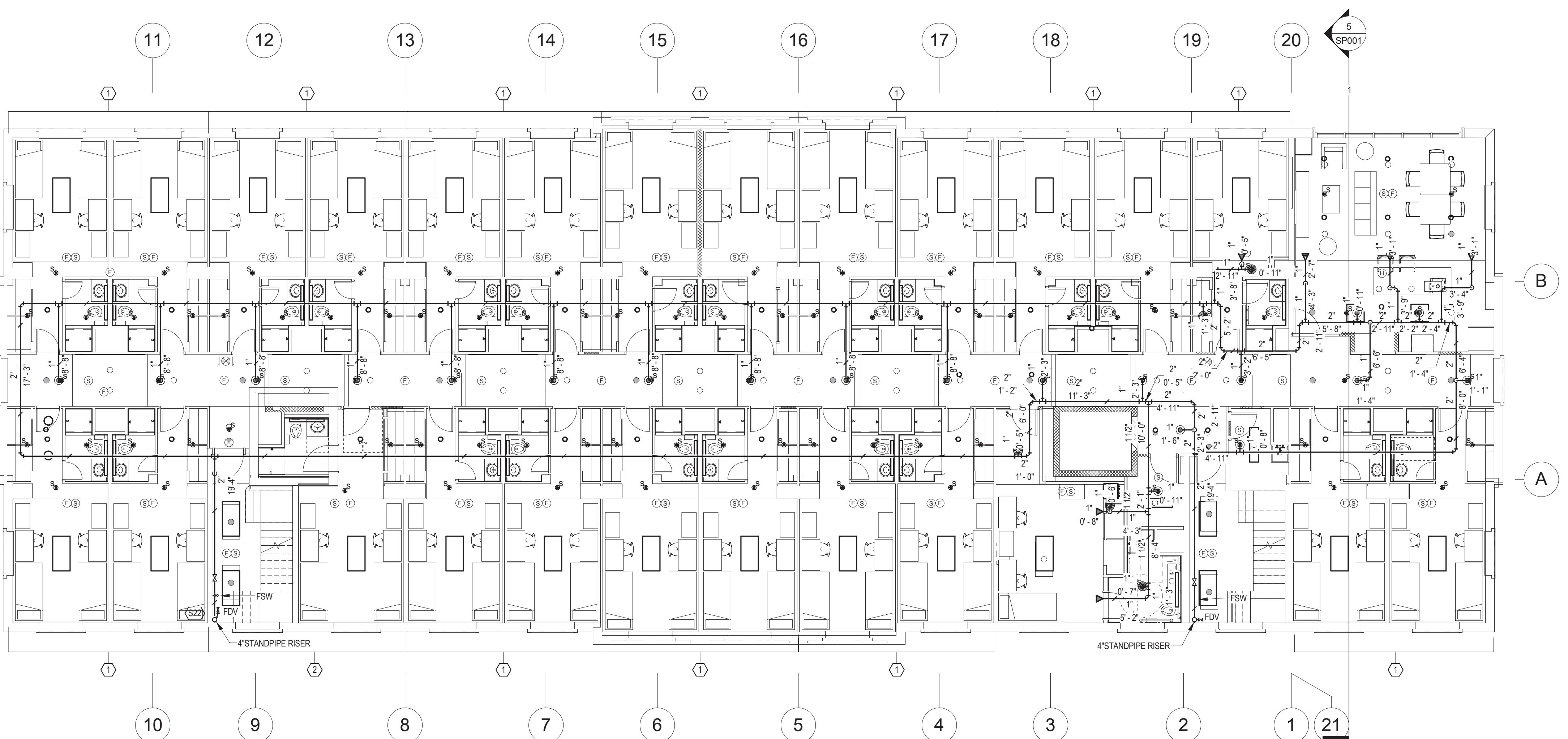
### BASEMENT FLOOR SPRINKLER HEAD SCHEDULE

QTY.	SYMBOL	DESCRIPTION
19	○	QUICK RESPONSE PENDENT SPRINKLER - 5.6 "K" FACTOR - RECESSED
13	○	QUICK RESPONSE UPRIGHT SPRINKLER - 5.6 "K" FACTOR
2	▲ 200	STANDARD SIDEWALL SPRINKLER - 5.6 "K" FACTOR - 200 DEGREE F
2	▲	QUICK RESPONSE SIDEWALL SPRINKLER - 5.6 "K" FACTOR



THIRD FLOOR PLAN - SPRINKLER

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



SECOND FLOOR PLAN - SPRINKLER

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

### PLAN NOTES

- FOR SPRINKLER LAYOUT THIS AREA, SEE TYPICAL TWO BED SUITE - SPRINKLER, SHEET SP101.
- FOR SPRINKLER LAYOUT THIS AREA, SEE TYPICAL ONE BED SUITE WITH STAIR - SPRINKLER, SHEET SP101.
- REFER TO 1/4 SCALE PLANS FOR PIPE SIZES NOT SHOWN ON 1/8 PLANS.

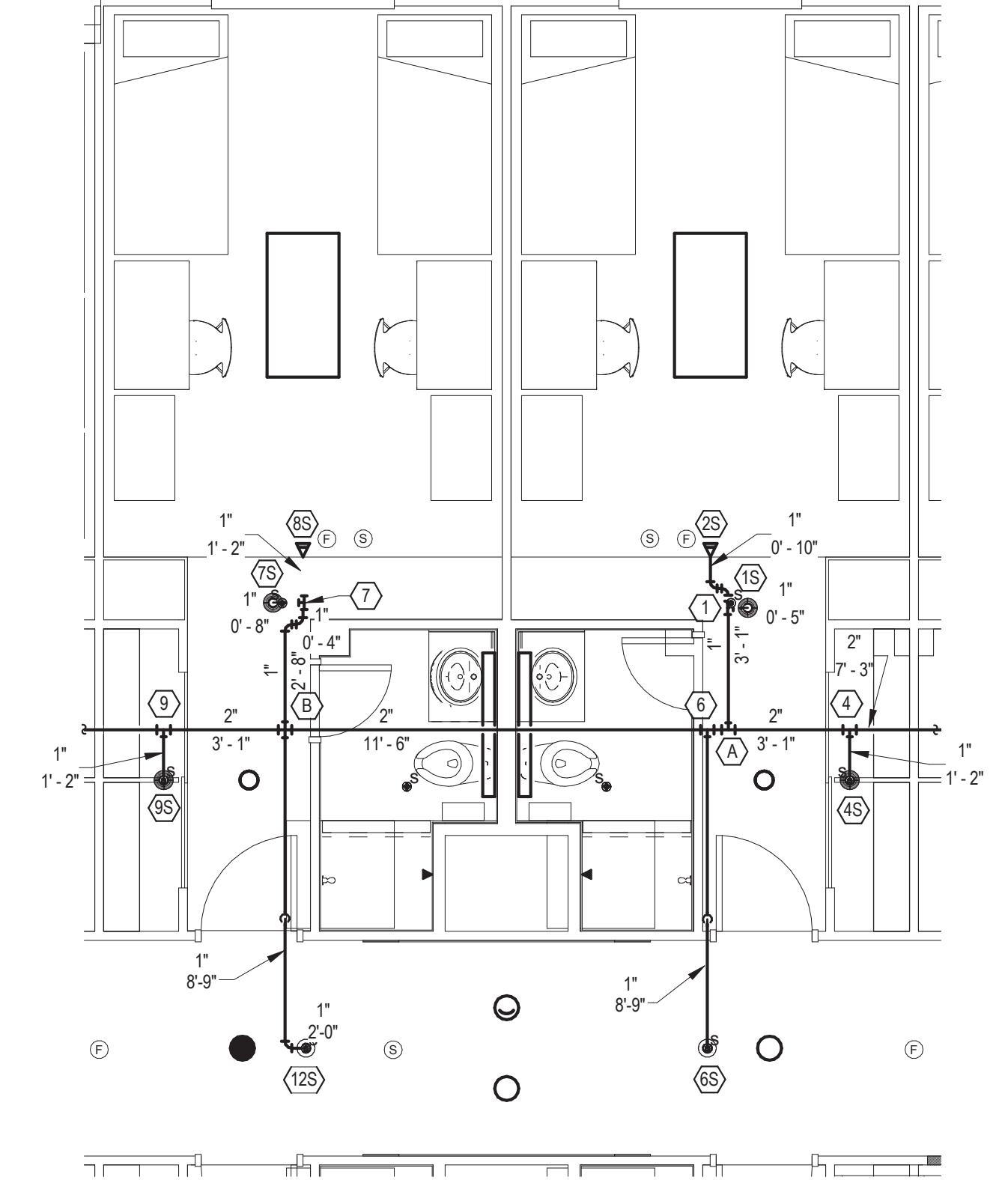
### THIRD FLOOR SPRINKLER HEAD SCHEDULE

QTY.	SYMBOL	DESCRIPTION
17	○	QUICK RESPONSE PENDANT SPRINKLER - 5.6 "K" FACTOR - RECESSED
3	◀	STANDARD SIDEWALL SPRINKLER - 5.6 "K" FACTOR
78	●	RESIDENTIAL PENDANT SPRINKLER - 5.6 "K" FACTOR-RECESSED
26	◀	RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER - 5.6 "K" FACTOR
-	▲	DRY SIDEWALL SPRINKLER - 5.6 "K" FACTOR

HYDRAULIC DESIGN DATA - REMOTE AREA #2	
THIS WET PIPE SPRINKLER SYSTEM HAS BEEN HYDRAULICALLY DESIGNED TO MEET THE FOLLOWING CRITERIA:	
STANDARD:	NFPA #13, 2007
HAZARD:	LIGHT
NO. OF SPRINKLERS:	12
DEMAND PER SPRINKLER:	0.010 GPM/SQ. FT.
DEMAND OF APPLICATION:	715 SQ. FT.
COMBINED HOSE STREAMS:	100 GPM
TOTAL WATER REQUIRED (AT SOURCE):	251.2 GPM (AT SOURCE)
WATER DEMAND @ BASE OF RISER:	151.1 GPM (NODE "ENT")
PRESSURE REQUIRED @ BASE OF RISER:	38.7 PSI (NODE "ENT")

### SECOND FLOOR SPRINKLER HEAD SCHEDULE

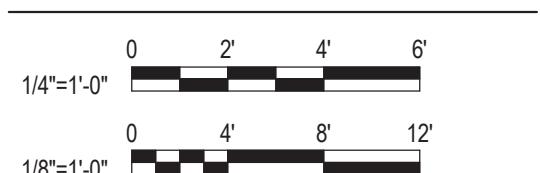
QTY.	SYMBOL	DESCRIPTION
21	○	QUICK RESPONSE PENDANT SPRINKLER - 5.6 "K" FACTOR - RECESSED
3	◀	STANDARD SIDEWALL SPRINKLER - 5.6 "K" FACTOR
76	●	RESIDENTIAL PENDANT SPRINKLER - 5.6 "K" FACTOR-RECESSED
26	◀	RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER - 5.6 "K" FACTOR



SECOND AND THIRD FLOOR PLANS - SPRINKLER

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

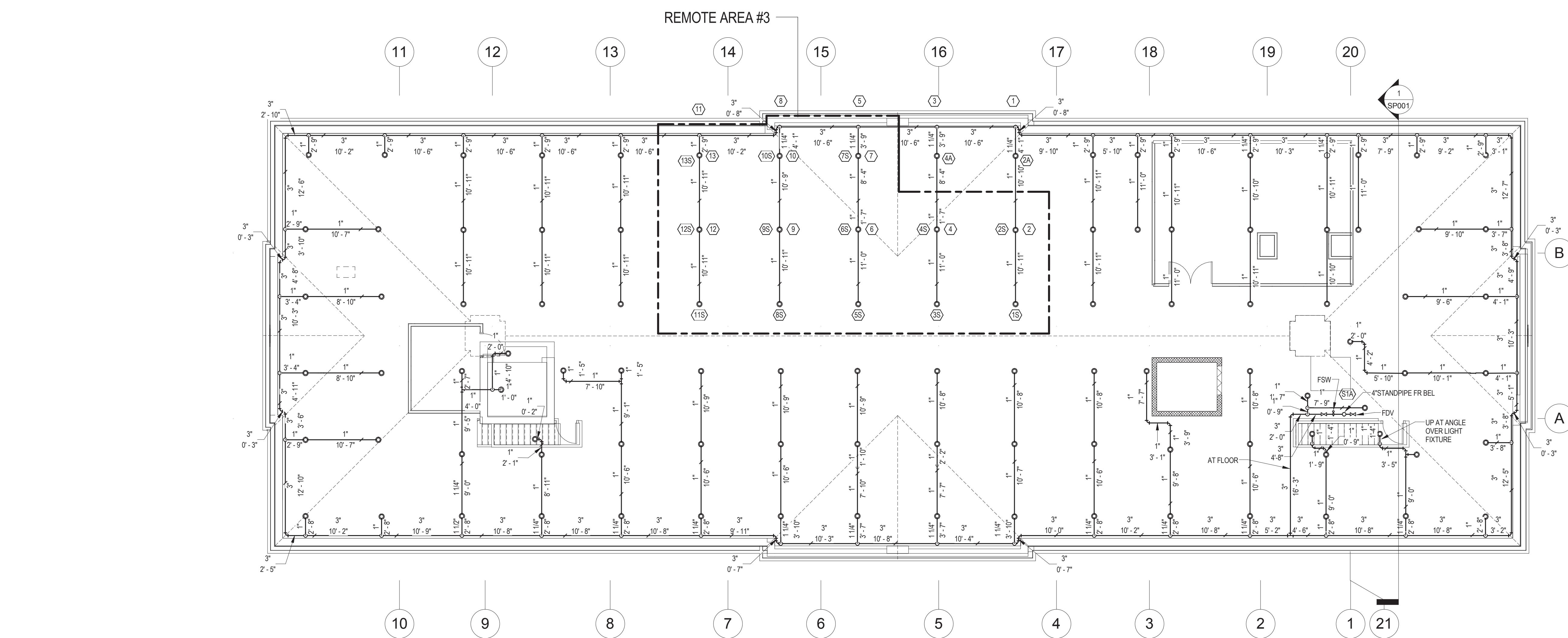
### GRAPHIC SCALE



SP102

**RENOVATION OF THREE RESIDENCE HALLS  
DRAPER HALL**
RADFORD UNIVERSITY  
RADFORD, VIRGINIAProject Code  
VMDO Project Number217-17565-002  
1115Checked By  
Drawn by MGW  
MGW

Note: Modifications to the bid documents that were issued by addenda have been incorporated into these drawings for the convenience of the Contractor. In the event of discrepancies between the originally issued addenda and changes depicted on these drawings, the originally issued addenda shall take precedence.



HYDRAULIC DESIGN DATA - REMOTE AREA #3	
THIS WET PIPE SPRINKLER SYSTEM HAS BEEN HYDRAULICALLY DESIGNED TO MEET THE FOLLOWING CRITERIA:	
STANDARD	NFPA #13, 2007
HAZARD	ORDINARY GROUP 1
NO. OF SPRINKLERS	13
DEMAND PER SPRINKLER	0.15 GPM/SQ. FT.
AREA OF APPLICATION	1380 SQ. FT.
COMBINED HOSE STREAMS	250 GPM
TOTAL WATER REQUIRED AT SOURCE:	485.1 GPM (AT SOURCE)
WATER DEMAND @ BASE OF RISER:	235.0 GPM (NODE "ENT")
PRESSURE REQUIRED @ BASE OF RISER:	54.8 PSI (NODE "ENT")

- NOTES:
1. REMOTE AREA CALCULATED INCLUDES 30 PERCENT AREA INCREASE FOR SLOPED CEILINGS IN ACCORDANCE WITH NFPA 13, 2007 EDITION, SECTION 11.2.3.2.4.
  2. REMOTE AREA CALCULATED INCLUDES 30 PERCENT AREA REDUCTION FOR QUICK RESPONSE SPRINKLERS AND MAXIMUM 15 FOOT HEAD CEILING IN ACCORDANCE WITH NFPA 13, 2007 EDITION, SECTION 11.2.3.2.3.1. REDUCTION WAS APPLIED AFTER ADDING 30 PERCENT AREA INCREASE FOR SLOPED CEILINGS AS STATED IN NOTE 1.

GRAPHIC SCALE - 1/32" = 1'-0"



ISSUES AND REVISIONS	
NO. SUBMITTAL	
BID DOCUMENTS	05.19.14
1 Addendum 1	06.19.14
2 Addendum 2	06.24.14
3 Addendum 3	06.25.14
CONSTRUCTION SET	05.01.15

ATTIC SPRINKLER HEAD SCHEDULE		
QTY.	SYMBOL	DESCRIPTION
105	O	QUICK RESPONSE UPRIGHT SPRINKLER - 5.6 "K" FACTOR

GRAPHIC SCALE  
SP103

