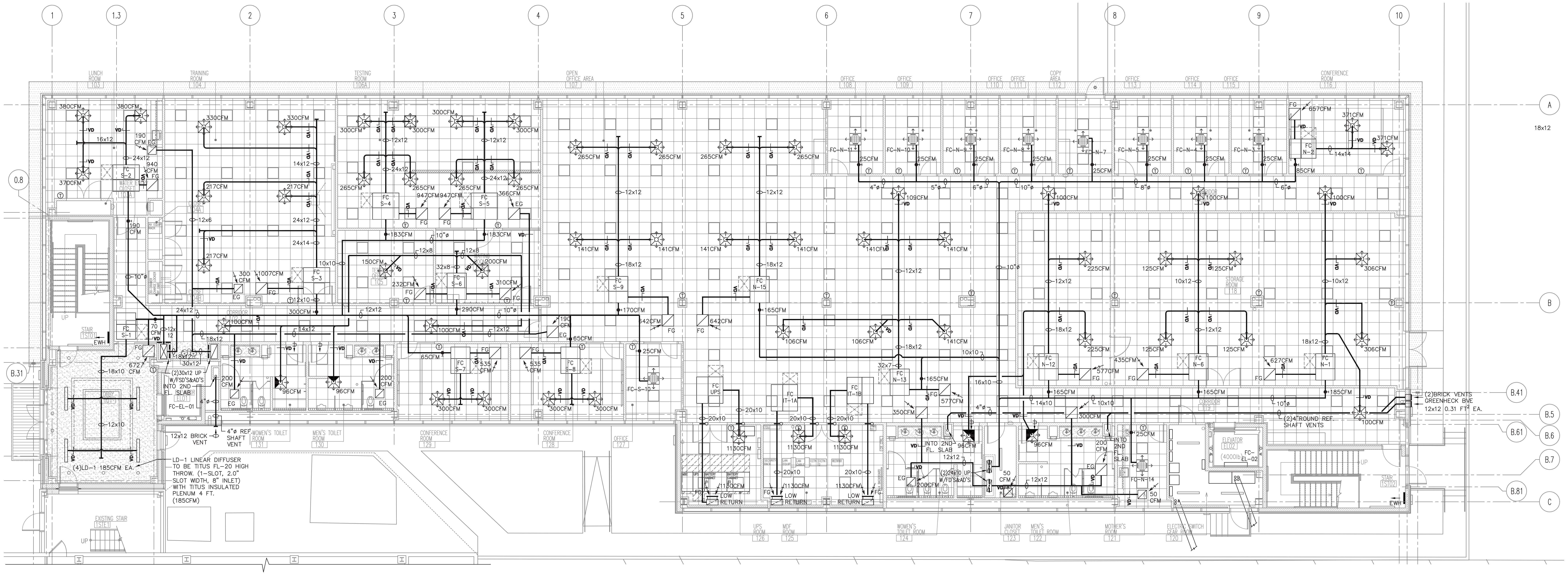
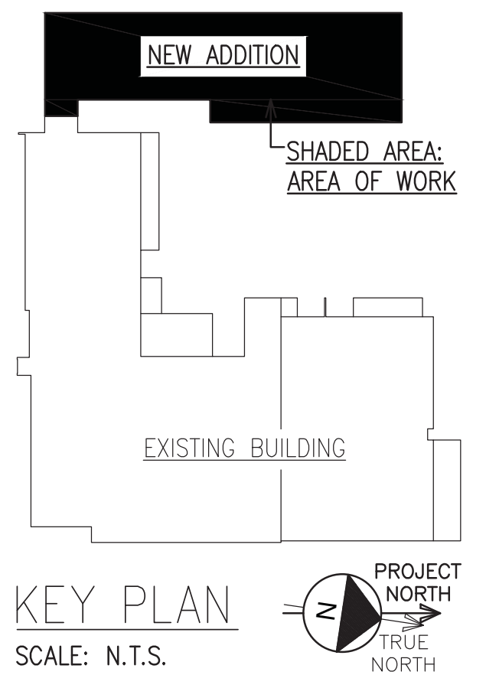


1 1st FLOOR DUCTWORK PLAN

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



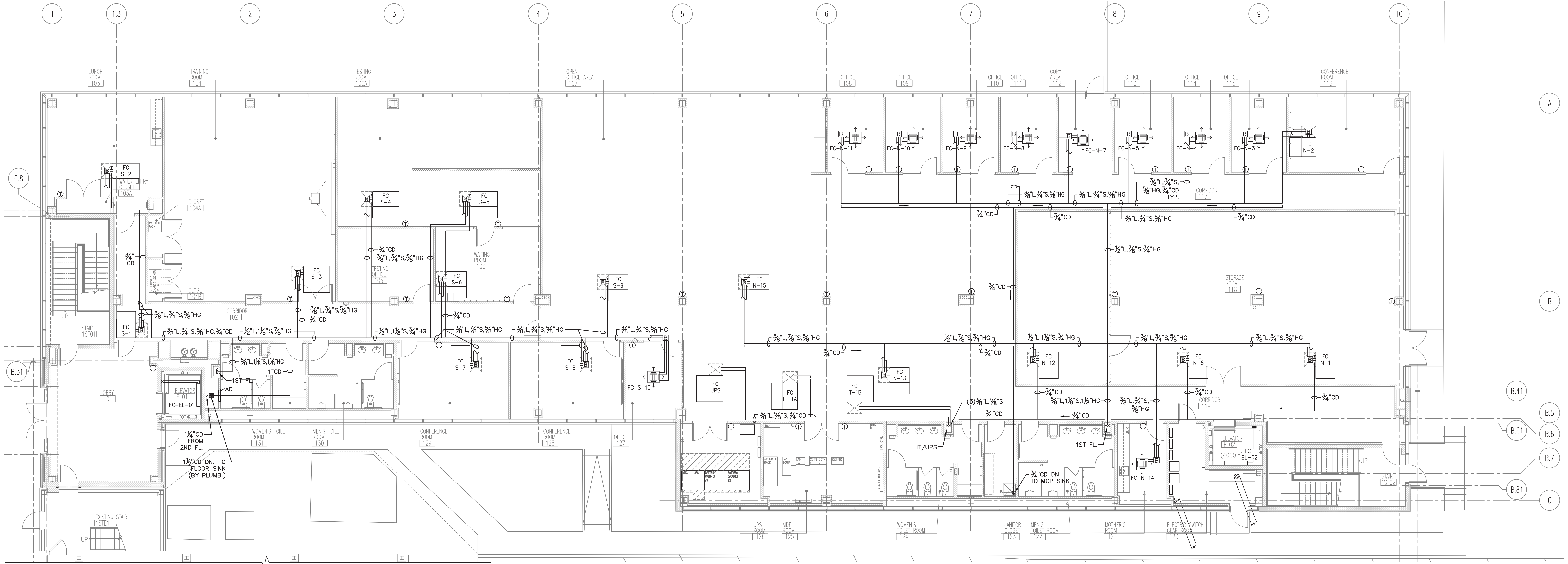
KEY PLAN

SCALE: N.T.S.

NOTES:

ALL VOLUME DAMPERS AT FAN COIL OUTSIDE AIR INTAKES WITH THIS SYMBOL SHALL BE CONTINENTAL FAN IRIS BALANCING DAMPER SIZE INDICATED BELOW AND CFM AS INDICATED ON THE DRAWING.

1–30 CFM 4"; 31–60 CFM 5"; 61–90 CFM 6"; 91–160 CFM 8"; 161–300 CFM 10"



2 1st FLOOR PIPING PLAN

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

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated Consulting Engineers
31 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

STATE OF NEW YORK · BRIAN W. PASECHNICK · NO. 91385 · PROFESSIONAL ENGINEER

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com

DRAFTED: MJR
CHECKED: –
PROJ. NO: 5593
DATE: 08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW		
DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD
DESIGN REVIEW		DATE

APPROVED

DATE

☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ____________

NEW BUILDING – MECHANICAL FIRST FLOOR PLAN

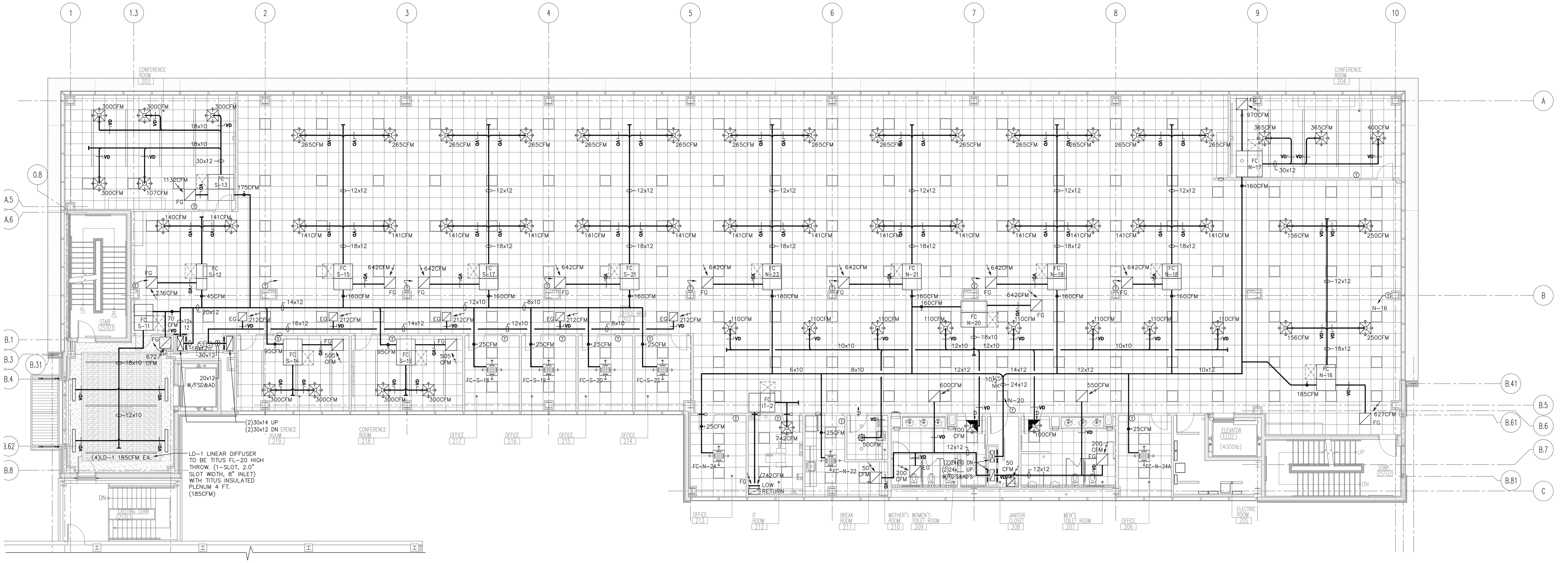
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-101	54 OF 95	

VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

- ▫ John Lignos, AIA
- ▪ Lorin J. Sonenshine, AIA
- ▫ Steven Napolitano, PE, PP
- ▫ Robert Nocella, AIA



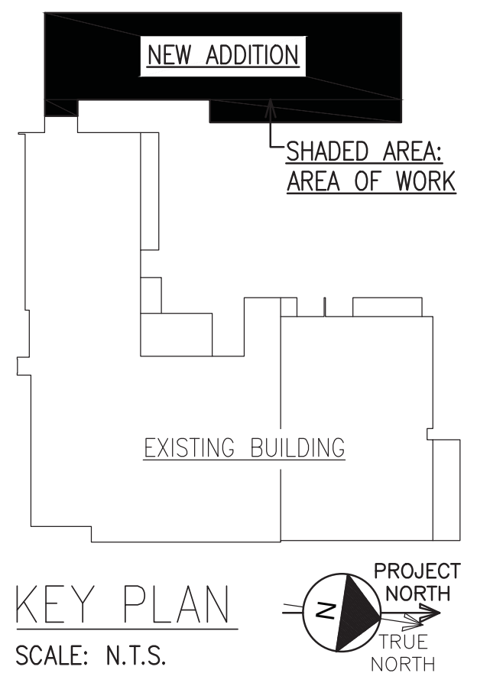
(2)30x14 UP
(2)30x12 DN

(4)LD-1 185CFM EA.

LD-1 LINEAR DIFFUSER TO BE TITUS FL-20 HIGH THROW. (1-SLOT, 2.0" SLOT WIDTH, 8" INLET) WITH TITUS INSULATED PLENUM 4 FT. (185CFM)

1 2nd FLOOR DUCTWORK PLAN

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



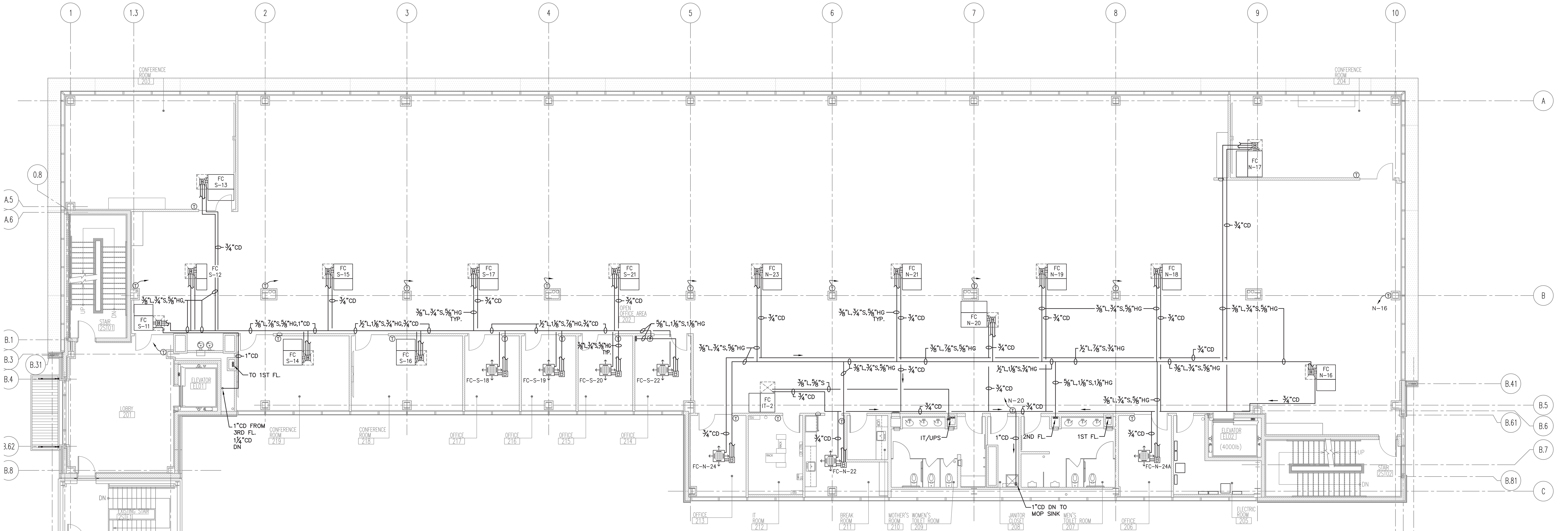
KEY PLAN

SCALE: N.T.S.

NOTES:

ALL VOLUME DAMPERS AT FAN COIL OUTSIDE AIR INTAKES WITH THIS SYMBOL SHALL BE CONTINENTAL FAN IRIS BALANCING DAMPER SIZE INDICATED BELOW AND CFM AS INDICATED ON THE DRAWING.

1–30 CFM 4"; 31–60 CFM 5"; 61–90 CFM 6"; 91–160 CFM 8"; 161–300 CFM 10"



1"CD FROM 3RD FL. 1¼"CD DN

1"CD DN TO MOP SINK

2 2nd FLOOR PIPING PLAN

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

Omdex Incorporated Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

STATE OF NEW YORK
BRIAN W. PASECHNICK
NO. 91385
LICENSED PROFESSIONAL ENGINEER

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com

DRAFTED:	MJR
CHECKED:	–
PROJ. NO:	5593
DATE:	08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD
DESIGN REVIEW		DATE

APPROVED

DATE

☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ____________

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

NEW BUILDING - MECHANICAL SECOND FLOOR PLAN

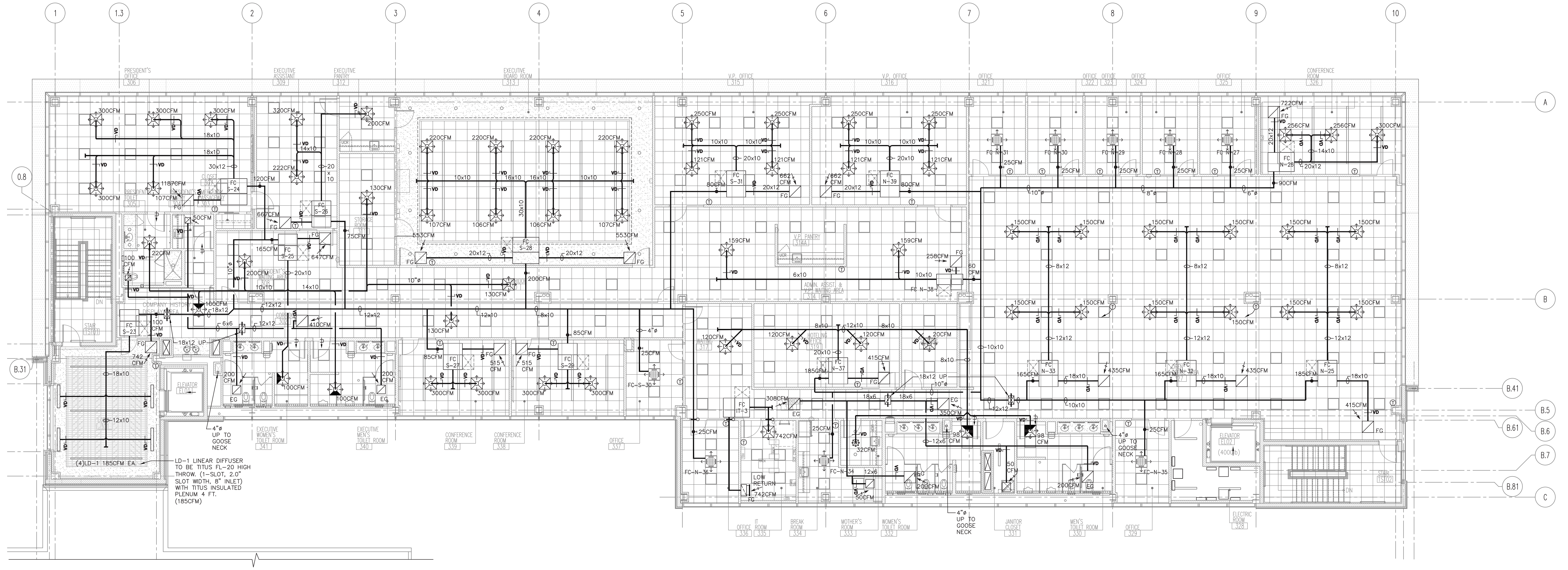
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-102	55 OF 95	

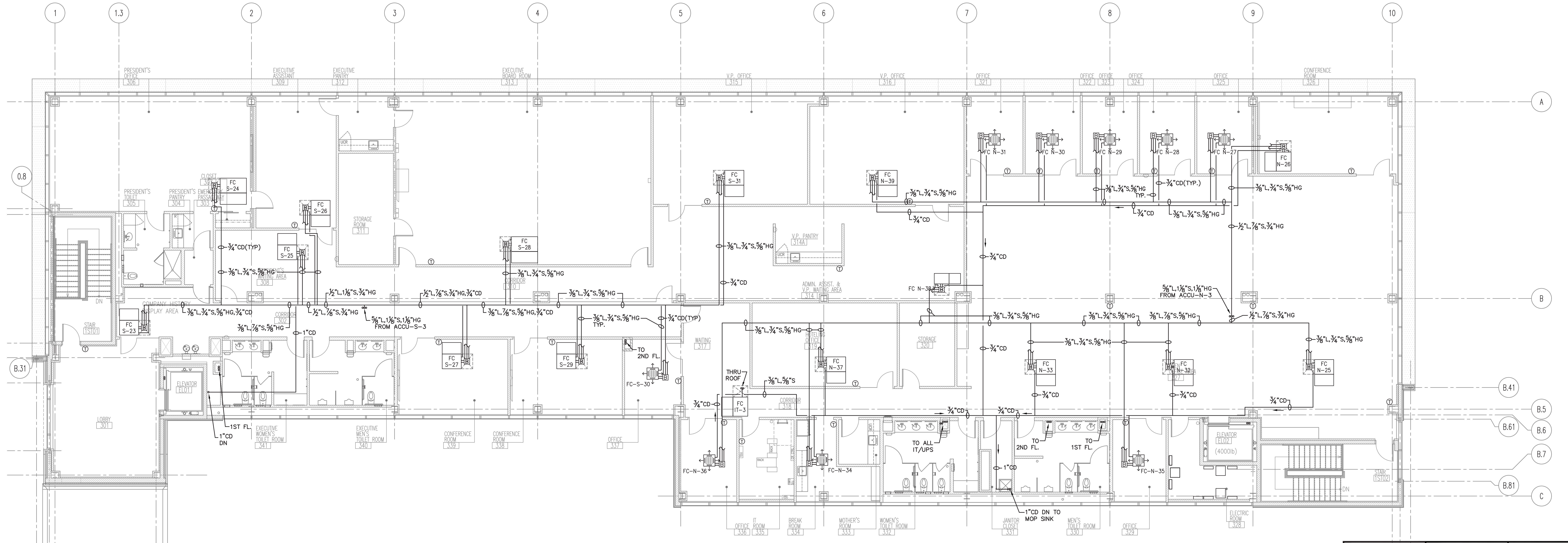
VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

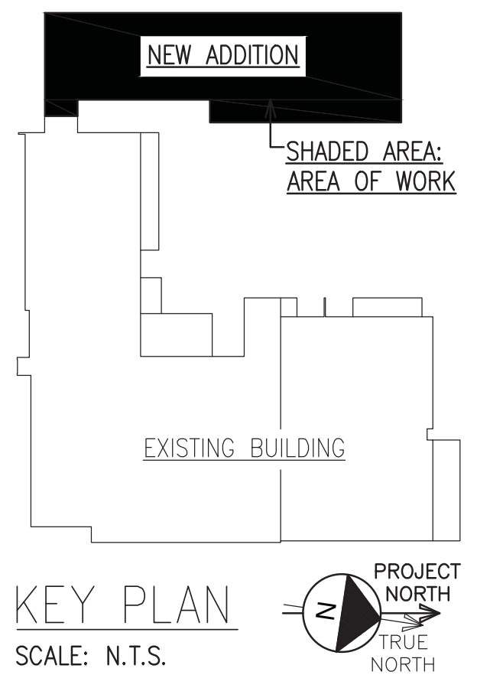
- ▫ John Lignos, AIA
- ▪ Lorin J. Sonenshine, AIA
- ▫ Steven Napolitano, PE, PP
- ▫ Robert Nocella, AIA



1 3rd FLOOR DUCTWORK PLAN
SCALE: 1/8" = 1'-0"



2 3rd FLOOR PIPING PLAN
SCALE: 1/8" = 1'-0"



KEY PLAN
SCALE: N.T.S.

NOTES:

ALL VOLUME DAMPERS AT FAN COIL OUTSIDE AIR INTAKES WITH THIS SYMBOL SHALL BE CONTINENTAL FAN IRIS BALANCING DAMPER SIZE INDICATED BELOW AND CFM AS INDICATED ON THE DRAWING.

1–30 CFM 4"; 31–60 CFM 5"; 61–90 CFM 6"; 91–160 CFM 8"; 161–300 CFM 10"

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated
Consulting Engineers
31 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com

DRAFTED: MJR
CHECKED: –
PROJ. NO: 5593
DATE: 08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN
DES
CHKD
DESIGN REVIEW
DATE

APPROVED
DATE
☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

NEW BUILDING – MECHANICAL THIRD FLOOR PLAN

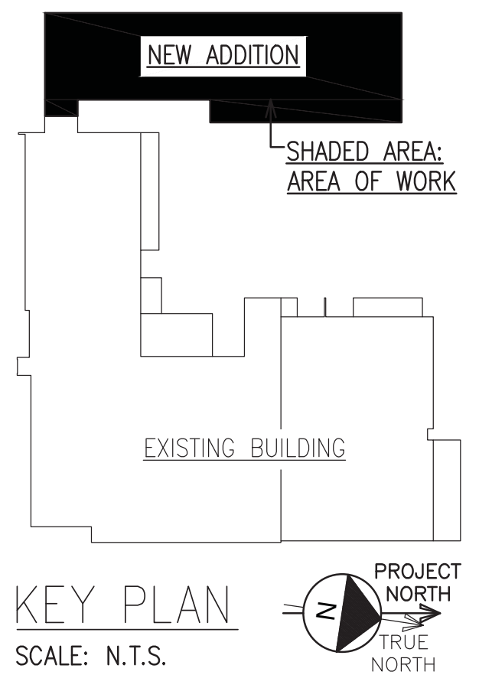
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-103	56 OF 95	

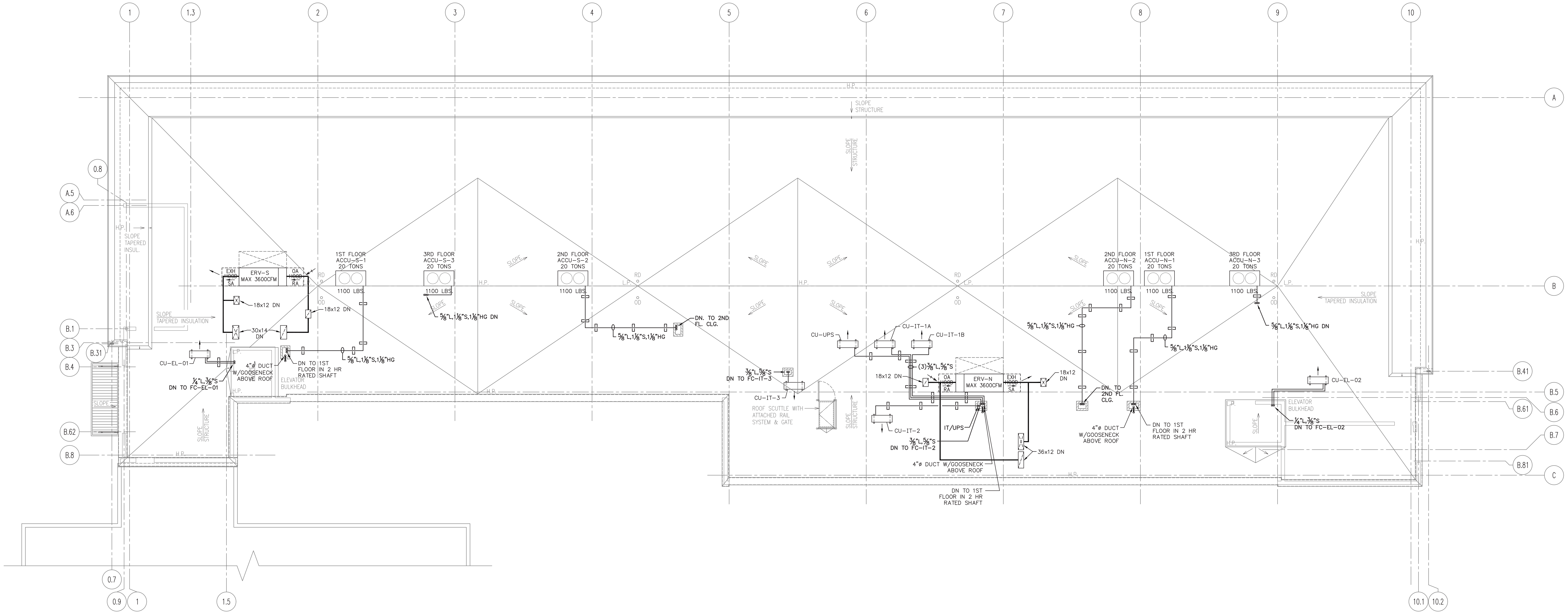
VILLAGE OF SPRING VALLEY
ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

- John Lignos, AIA
- Lorin J. Sonenshine, AIA
- Steven Napolitano, PE, PP
- Robert Nocella, AIA



KEY PLAN
SCALE: N.T.S.



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

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated
Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

NO. 91385
Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com

DRAFTED:	MJR
CHECKED:	–
PROJ. NO:	5593
DATE:	08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD
DESIGN REVIEW		DATE

APPROVED
DATE
☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

NEW BUILDING - MECHANICAL ROOF PLAN

SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-104	57 OF 95	

VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

- ☐ John Lignos, AIA
- ■ Lorin J. Sonenshine, AIA
- ☐ Steven Napolitano, PE, PP
- ☐ Robert Nocella, AIA

VRV FAN COIL UNIT SCHEDULE

BASED ON
DAIKIN (CALL D&B 973-429-2828)

UNIT I.D. FC–	MAXIMUM AIR CAPACITY CFM	OUTSIDE AIR CFM	DAIKIN MODEL NUMBER FX–	COOLING E.A.T. °F. DB/WB	HEAT E.A.T. °F.	TOTAL COOLING CAPACITY BTU/HR	SENSIBLE COOLING CAPACITY BTU/HR	HEATING CAPACITY BTU/HR	MAXIMUM SOUND Dba	MCA AMPS @ 208V, 1ø 60 HZ	DIMENSIONS H X W X D INCHES	CU #	DISCHARGE DUCT SIZE INCHES WxH
S–1	742	70	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	S–1	32x7
S–2	1130	190	SA36AAVJU	80/67	70	36,000	25,700	40,000	39	2.5	9 11/16 x 55 1/8 x 31 1/2	S–1	47x7
S–3	1307	550	SA48AAVJU	80/67	70	48,000	34,300	54,000	42	2.8	9 11/16 x 55 1/8 x 31 1/2	S–1	47x7
S–4	1130	183	SA36AAVJU	80/67	70	36,000	25,700	40,000	39	2.5	9 11/16 x 55 1/8 x 31 1/2	S–1	47x7
S–5	1130	183	SA36AAVJU	80/67	70	36,000	25,700	40,000	39	2.5	9 11/16 x 55 1/8 x 31 1/2	S–1	47x7
S–6	742	200	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	S–1	32x7
S–7	600	85	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	S–1	32x7
S–8	600	85	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	S–1	32x7
S–9	812	170	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	S–1	32x7
S–10	300	25	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–1	–
S–11	742	70	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	S–2	32x7
S–12	281	45	SA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–2	–
S–13	1307	175	SA48AAVJU	80/67	70	48,000	34,300	54,000	42	2.8	9 11/16 x 55 1/8 x 31 1/2	S–2	47x7
S–14	600	95	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	S–2	32x7
S–15	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	S–2	32x7
S–16	600	95	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	S–2	32x7
S–17	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	S–2	32x7
S–18	300	25	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–2	–
S–19	300	25	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–2	–
S–20	300	25	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–2	–
S–21	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	S–2	32x7
S–22	300	25	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–2	–
S–23	742	100	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	S–3	32x7
S–24	1307	120	SA48AAVJU	80/67	70	48,000	34,300	54,000	42	2.8	9 11/16 x 55 1/8 x 31 1/2	S–3	47x7
S–25	812	165	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	S–3	32x7
S–26	742	75	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	S–3	32x7
S–27	600	85	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	S–3	32x7
S–28	1307	200	SA48AAVJU	80/67	70	48,000	34,300	54,000	42	2.8	9 11/16 x 55 1/8 x 31 1/2	S–3	47x7
S–29	600	85	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	S–3	32x7
S–30	300	23	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	S–3	–
S–31	742	80	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	S–3	32x7

- ALL UNITS TO HAVE BUILT IN CONDENSATE PUMPS
- IN ADDITION TO PRIMARY CONDENSATE DRAIN, A WATER DETECTION SYSTEM CONFORMING WITH UL 508 SHALL BE INCLUDED AS PART OF EACH OF THE FAN COILS.
- PROVIDE BSQ36TVJ BRANCH SELECTOR BOX FOR EACH FC

VRV FAN COIL UNIT SCHEDULE

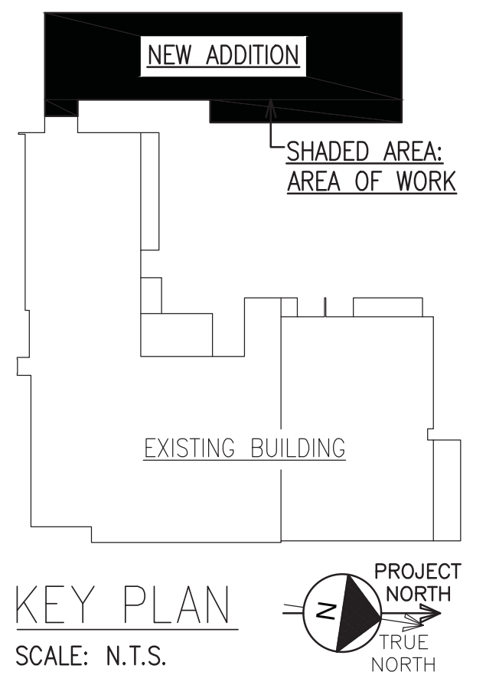
BASED ON
DAIKIN (CALL D&B 973-429-2828)

UNIT I.D. FC–	MAXIMUM AIR CAPACITY CFM	OUTSIDE AIR CFM	DAIKIN MODEL NUMBER FX–	COOLING E.A.T. °F. DB/WB	HEAT E.A.T. °F.	TOTAL COOLING CAPACITY BTU/HR	SENSIBLE COOLING CAPACITY BTU/HR	HEATING CAPACITY BTU/HR	MAXIMUM SOUND Dba	MCA AMPS @ 208V, 1ø 60 HZ	DIMENSIONS H X W X D INCHES	CU #	DISCHARGE DUCT SIZE INCHES WxH
N–1	812	185	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–1	32x7
N–2	742	85	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	N–1	32x7
N–3	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–4	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–5	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–6	600	165	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	N–1	32x7
N–7	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–8	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–9	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–10	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–11	317	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–12	742	165	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	N–1	32x7
N–13	742	165	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	N–1	32x7
N–14	300	25	ZA05AAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	N–1	–
N–15	742	115	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	N–1	32x7
N–16	812	185	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–2	32x7
N–17	1130	160	SA36AAVJU	80/67	70	36,000	25,700	40,000	39	2.5	9 11/16 x 55 1/8 x 31 1/2	N–2	47x7
N–18	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–2	32x7
N–19	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–2	47x7
N–20	1130	160	SA36AAVJU	80/67	70	36,000	25,700	40,000	39	2.5	9 11/16 x 55 1/8 x 31 1/2	N–2	32x7
N–21	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–2	32x7
N–22	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–2	–
N–23	812	160	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–2	32x7
N–24	300	25	ZA07AAVJU	80/67	70	7,500	5,800	8,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–2	–
N–24A	300	25	ZA07AAVJU	80/67	70	7,500	5,800	8,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–2	–
N–25	812	185	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–3	32x7
N–26	812	90	SA30AAVJU	80/67	70	30,000	22,600	34,000	37.5	1.8	9 11/16 x 39 3/8 x 31 1/2	N–3	32x7
N–27	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–28	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–29	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–30	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–31	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–32	600	165	SQ18TAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	N–3	32x7
N–33	600	165	SQ18TAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	N–3	32x7
N–34	318	25	ZA09AAVJU	80/67	70	9,500	6,600	10,500	33	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–35	300	25	ZQ05TAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–36	300	25	ZQ05TAVJU	80/67	70	5,800	4,700	6,500	32	0.3	10 1/4 x 22 5/8 x 22 5/8	N–3	–
N–37	600	185	SA18AAVJU	80/67	70	18,000	13,600	20,000	34	1.6	9 11/16 x 39 3/8 x 31 1/2	N–3	32x7
N–38	318	60	SA09AAVJU	80/67	70	9,500	7,000	10,500	33	0.8	9 11/16 x 21 11/16 x 31 1/2	N–3	14x7
N–39	732	80	SA24AAVJU	80/67	70	24,000	17,100	27,000	36	1.8	9 11/16 x 39 3/8 x 31 1/2	N–3	32x7

- ALL UNITS TO HAVE BUILT IN CONDENSATE PUMPS
- IN ADDITION TO PRIMARY CONDENSATE DRAIN, A WATER DETECTION SYSTEM CONFORMING WITH UL 508 SHALL BE INCLUDED AS PART OF EACH OF THE FAN COILS.
- PROVIDE BSQ36TVJ BRANCH SELECTOR BOX FOR EACH FC

SYMBOL LIST AND ABBREVIATIONS

ABBREVIATION	SYMBOL	DESCRIPTION	ABBREVIATION	SYMBOL	DESCRIPTION
	～	FLEXIBLE DUCTWORK	TR		TOP REGISTER
		NEW DUCTWORK	FC		FAN COIL
		DUCTWORK WITH INTERNAL ACOUSTIC LINING	EF		EXHAUST FAN
	→	SUPPLY AIR DUCTWORK	CU		CONDENSING UNIT
	←	RETURN AIR DUCTWORK	SP		STATIC PRESSURE
	SD	SPLITTER DAMPER	UH		UNIT HEATER
		90 DEGREES DUCT ELBOW WITH DOUBLE TURNING VANES	ESP		EXTERNAL STATIC PRESSURE
	⊠	SUPPLY DUCT RISER UP	OA		OUTSIDE AIR
	⊠	SUPPLY DUCT RISER DOWN	FF		FINISH FLOOR
	⧄	RETURN/EXHAUST DUCT RISER UP	AFF		ABOVE FINISH FLOOR
	⧄	RETURN/EXHAUST DUCT RISER DOWN	HC		HUNG CEILING
CD	⊠	FOUR WAY BLOW CEILING DIFFUSER	NIC		NOT IN CONTRACT
CD	⊠	THREE WAY BLOW CEILING DIFFUSER	FPM		FEET PER MINUTE
CD	⧗	TWO WAY BLOW CEILING DIFFUSER	NTS		NOT TO SCALE
CD	◩	TWO WAY BLOW CEILING DIFFUSER	CFM		CUBIC FEET PER MINUTE
CR	⧄	CEILING REGISTER		Ⓢ	TEMPERATURE SENSOR
VD		VOLUME DAMPER	AD	□	ACCESS DOOR
FC	▩FC	FLEXIBLE CONNECTION	FD	— — —	FIRE DAMPER
BG		BOTTOM GRILLE		Ⓣ	THERMOSTAT
	L	DOOR LOUVER		Ⓗ	HUMIDITY SENSOR
	U	3/4" DOOR UNDERCUT	CFM		CUBIC FEET PER MINUTE
TD		TRANSFER DUCT			
TO		TRANSFER OPENING	MD	—□	MOTORIZED DAMPER
—— CD ——		CONDENSATE DRAIN	EAT		ENTERING AIR TEMPERATURE
—— SUC ——		REFRIGERANT SUCTION	LAT		LEAVING AIR TEMPERATURE
—— LIQ ——		REFRIGERANT LIQUID			
—— HG ——		REFRIGERANT HOT GAS			



KEY PLAN
SCALE: N.T.S.

SCHEDULE FOR CEILING MOUNTED SUPPLY AIR DIFFUSERS

CFM RANGE	NECK SIZE INCHES	MAXIMUM NECK VELOCITY FPM	OVERALL SIZE INCHES	MANUFACTURER	MODEL No.
0–60	6"ø	600	24"X24"	TITUS	OMNI
61–200	8"ø	↓	↓	↓	↓
201–320	10"ø	↓	↓	↓	↓
321–500	12"ø	↓	↓	↓	↓
501–600	14"ø	↓	↓	↓	↓

NOTES:
ALL DIFFUSERS TO HAVE EQUALIZING GRID AND DAMPER
TWO WAY DIFFUSER TO BE SIZED FOR 200% CFM
THREE WAY DIFFUSER TO BE SIZED FOR 133% CFM

SCHEDULE FOR SIDEWALL SUPPLY AIR GRILLES

CFM	NECK SIZE W X H INCHES	MAXIMUM NECK VELOCITY FPM	OVERALL SIZE W X H INCHES	MANUFACTURER	MODEL No.
742	18x12	600	19-3/4" X 13-3/4"	TITUS	300RS
1130	24x12	600	25-3/4" X 13-3/4"	TITUS	300RS

SCHEDULE FOR FAN COIL UNIT FILTERED RETURN GRILLES (FG)

CFM RANGE	NECK SIZE W X H INCHES	MAXIMUM NECK VELOCITY FPM	OVERALL SIZE W X H INCHES	MANUFACTURER	MODEL No.
0–550	16 x 16	350	19-3/4" X 19-3/4"	TITUS	350RLF
551–972	20 X 20	350	23-3/4" X 23-3/4"	TITUS	350RLF
973–1130	24 X 24	350	27-3/4" X 27-3/4"	TITUS	50FF

CONTRACTOR SHALL PROVIDE 1" MERV 7 FILTER PLUS ONE SPARE FOR EACH GRILLE

SCHEDULE FOR DUCT SYSTEM EXHAUST AIR REGISTERS (EG)

CFM RANGE	NECK SIZE W X H INCHES	MAXIMUM NECK VELOCITY FPM	OVERALL SIZE W X H INCHES	MANUFACTURER	MODEL No.
0–185	8"X8"	500	9-3/4" X 9-3/4"	TITUS	355RL
186–440	12"X12"	500	13-3/4" X 13-3/4"	TITUS	355RL
441–625	16"X16"	500	17-3/4" X 17-3/4"	TITUS	355RL
626–1250	22"X22"	500	23-3/4" X 23-3/4"	TITUS	355RL

ENERGY RECOVERY UNIT SCHEDULE

BASED ON OXYGEN8 (D&B)
(973) 429-2828

UNIT NO.	SERVICE	LOCATION	SUPPLY RETURN AIR CAPACITY CFM	OUTSIDE AIR DB/WB		RETURN AIR DB/WB		LEAVING AIR TEMP DB/WB		TOTAL CAPACITY MBH		ELECTRICAL DATA			SUPPLY FAN		EXHAUST FAN		UNIT MODEL No.	MAX. WT. LBS	SEE NOTES
				COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	COOLING	HEATING	VOLTS/PH/HZ	MCA	MOCP	KW	RPM	KW	RPM			
ERV–S	O.A. SOUTH	ROOF	3800	95/75	5	75/63	70	81.7 / 68.6	48.5	91.5	199.8	460/3/60	31A	35A	2.5	2709	2.5	2897	C400U	1600	1–5
ERV–N	O.A. NORTH	ROOF	3800	95/75	5	75/63	70	81.7 / 68.6	48.5	91.5	199.8	460/3/60	31A	35A	2.5	2709	2.5	2897	C400U	1600	1–5

NOTES:
1. PROVIDE ECM DIRECT DRIVE MOTORS, NON-FUSED DISCONNECT, 24v TRANSFORMER/RELAY PACKAGE.
2. MERV 8 2"TA FILTERS.
3. MOTORIZED O.A. AND E.A. DAMPERS.
4. PROVIDE 17KW PREHEAT COIL W/ SCR CONTROLS.
5. ROOF CURB BY CONTRACTOR.
* 1.5" W.C. TOTAL STATIC PRESSURE MAX.

VRV ACCU OUTDOOR HEAT RECOVERY UNIT SCHEDULE

DAIKIN AS STANDARD 973-429-2828 D&B

UNIT NO.	DAIKIN MODEL NUMBER	COMB %	O.A. TEMP COOLING DEG.	COOLING CAPACITY BTU/HR	O.A. TEMP HEATING DEG.	HEATING CAPACITY BTU/HR	LONGEST PIPE LENGTH FT.	R-32 REFRIG. LBS. TOTAL	460 3ø 60HZ RLA AMPS	MCA AMPS	MOP AMPS	W X D X H INCH	WT. LBS. MAX	FCU's SERVED	REMARKS
S–1	REYA240AATJA		95	240,000	10	270,000	540	TBD	30.5	38.1	40	68 7/8 x 30 1/4 x 65 3/8	1100	S–1 THRU S–10	
S–2	REYA240AATJA		95	240,000	10	270,000	540	TBD	30.5	38.1	40	68 7/8 x 30 1/4 x 65 3/8	1100	S–11 THRU S–22	
S–3	REYA240AATJA		95	240,000	10	270,000	540	TBD	30.5	38.1	40	68 7/8 x 30 1/4 x 65 3/8	1100	S–23 THRU S–31	
N–1	REYA240AATJA		95	240,000	10	270,000	540	TBD	30.5	38.1	40	68 7/8 x 30 1/4 x 65 3/8	1100	N–1 THRU N–15	
N–2	REYA240AATJA		95	240,000	10	270,000	540	TBD	30.5	38.1	40	68 7/8 x 30 1/4 x 65 3/8	1100	N–16 THRU N–24	
N–3	REYA240AATJA		95	240,000	10	270,000	540	TBD	30.5	38.1	40	68 7/8 x 30 1/4 x 65 3/8	1100	N–25 THRU N–39	

ALL UNITS TO BE MOUNTED ON 24" HIGH VMC R 7200 SEISMIC/WINDRATED VIBRATION ISOLATION EQUIPMENT SUPPORTS.
PROVIDE I-TOUCH MANAGER PANEL WITH BACNET INTERFACE IN MECH. RM.

IT ROOMS SPLIT SYSTEMS

AREAS SERVED:
IT ROOMS

(R-32) BASED ON DAIKIN

INDOOR UNIT
UNITS FC-IT-2, FC-IT-3
DAIKIN MODEL FBA24AAVJU

SENSIBLE BTUH 18,000
SEER 2 .... 17.0
VOLTS 208/1/60
MCA 1.9A
MOP 15A
CFM 742
DIMENSIONS HxWxD .... 9 11/16"H x 39 3/8"W x 31 1/2"D
WEIGHT .... 82 LBS.
LIQ/SUC .... 3/8"/5/8"

OUTDOOR UNIT
UNIT CU-IT-2, CU-IT-3
DAIKIN MODEL RZA24AAVJU

TOTAL BTU/HR 24,000
VOLTS 208/1/60
MOP 20A
MCA 19.8A
COPP. 1.8
DIMENSIONS .... 34"H x 44"W x 18 1/8"D
WEIGHT .... 216 LBS.

PROVIDE:
- * WIRED CONTROLLER
- * ALL CONTROL WIRING BY HVAC CONTRACTOR
- * PROVIDE INTEGRAL CONDENSATE PUMP
- * LOW AMBIENT COOLING
- * MOUNT ON VMC R 7000 EQUIPMENT SUPPORTS
- * DAIKIN PLUS ADAPTOR FOR BMS INTEGRATION

MDF AND UPS ROOMS SPLIT SYSTEMS

AREAS SERVED:
UPS ROOM
MDF ROOM

(R-32) BASED ON DAIKIN

INDOOR UNIT
UNITS FC-UPS, FC-IT-1A, FC-IT-1B
DAIKIN MODEL FBA36AAVJU

SENSIBLE BTUH 27,000
SEER 2 .... 17.0
VOLTS 208/1/60
MCA 3.1A
MOP 15A
CFM 1130
DIMENSIONS HxWxD .... 9 11/16"H x 55 1/8"W x 31 1/2"D
WEIGHT .... 101 LBS.
LIQ/SUC .... 3/8"/5/8"

OUTDOOR UNIT
UNIT CU-UPS, CU-IT-1A, CU-IT-1B
DAIKIN MODEL RZA36AAVJU

TOTAL BTU/HR 35,000
VOLTS 208/1/60
MOP 35A
MCA 34.6
COP. 1.8
DIMENSIONS .... 34"H x 44"W x 18 1/8"D
WEIGHT .... 216 LBS.

PROVIDE:
- * WIRED CONTROLLER
- * ALL CONTROL WIRING BY HVAC CONTRACTOR
- * PROVIDE INTEGRAL CONDENSATE PUMP
- * LOW AMBIENT COOLING
- * MOUNT ON VMC R 7000 EQUIPMENT SUPPORTS
- * DAIKIN PLUS ADAPTOR FOR BMS INTEGRATION

ELEVATOR MACHINE SPACE SPLIT SYSTEMS

AREAS SERVED:
ELEVATOR MACHINE
SPACES EL01 & EL02

(R-32)

INDOOR UNITS
UNITS FC-EL-01 & EL-02
DAIKIN MODEL FTKF12AXVJU

SENSIBLE BTUH 9,540
SEER2 21
CFM 473
DIMENSIONS WxDxH .... 30 5/16"x9 3/16"x11 1/3"
WEIGHT .... 21 LBS.
LIQ/SUC .... 1/4"x3/8"

* WIRED REMOTE CONTROL WALL MTD.

OUTDOOR UNITS
UNITS CU-EL-01 & EL-02
DAIKIN MODEL RKF12AXVJU

TOTAL BTU/HR 12,000
VOLTS 208/1/60
MAX FUSE 15A
MCA 9.15A
UNIT FLA 9A
DIMENSIONS WxDxH .... 36 1/2"x11 3/16"x21 11/16"
WEIGHT .... 60 LBS.

PROVIDE:
- * LOW AMBIENT CONTROLS (FIELD INSTALLED WIND BAFFLE)
- * CONDENSATE PUMP
- * INDOOR UNIT WIRED FROM OUTDOOR UNIT
- * DAIKIN PLUS ADAPTOR FOR BMS INTEGRATION

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com

DRAFTED:	MJR
CHECKED:	–
PROJ. NO:	5593
DATE:	08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD
DESIGN REVIEW		DATE

APPROVED
DATE
☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

MECHANICAL SCHEDULES

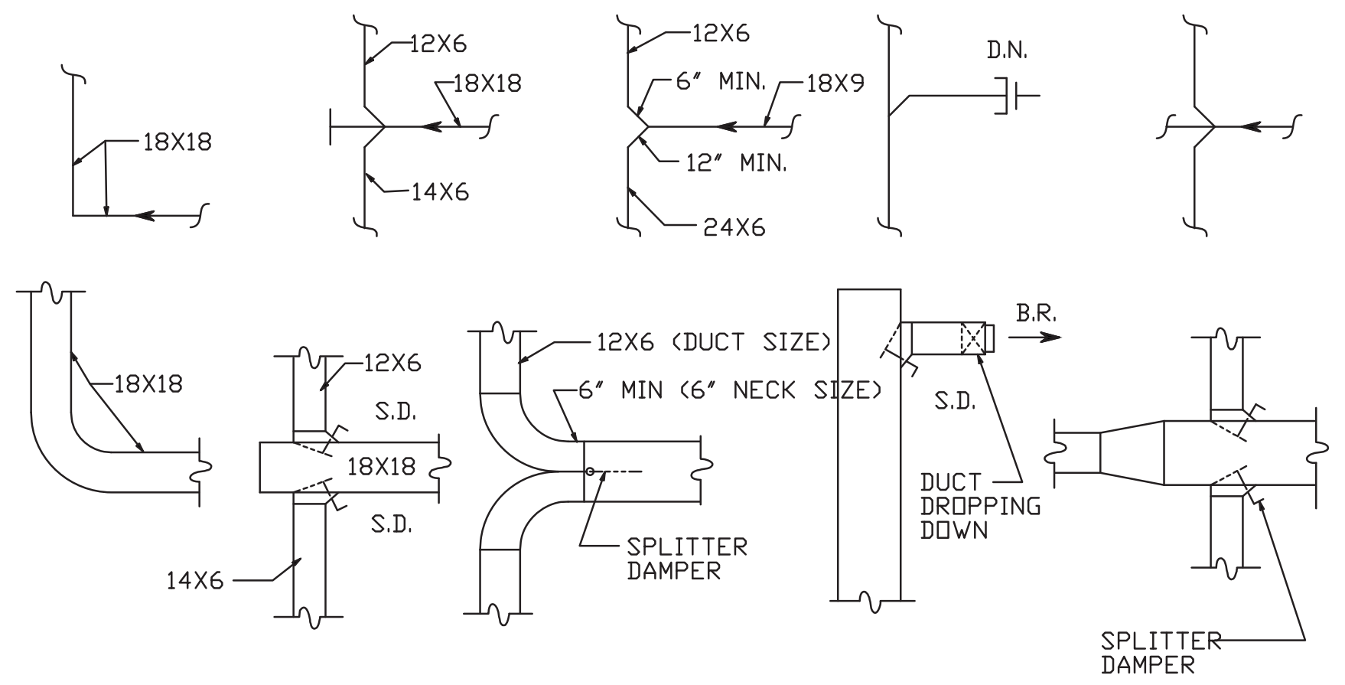
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-201	58 OF 95	

VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

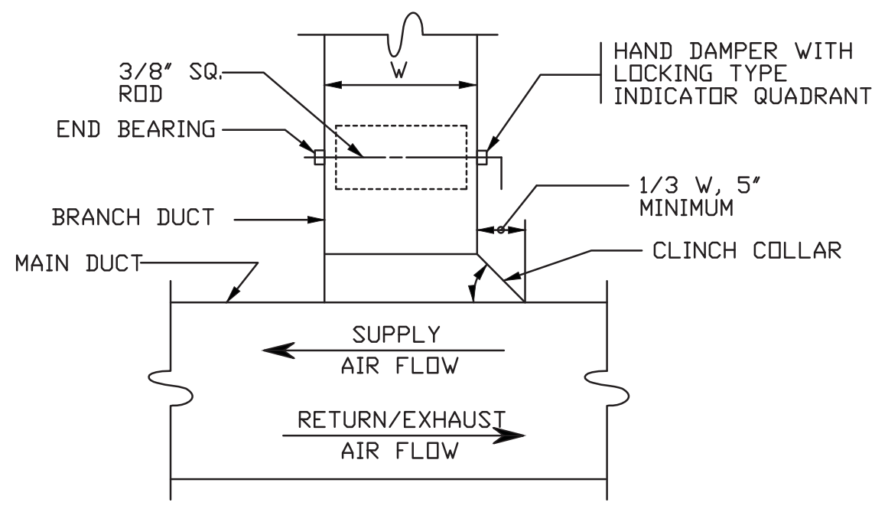
SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

▫ John Lignos, AIA
▪ Lorin J. Sonenshine, AIA
▫ Steven Napolitano, PE, PP
▫ Robert Nocella, AIA



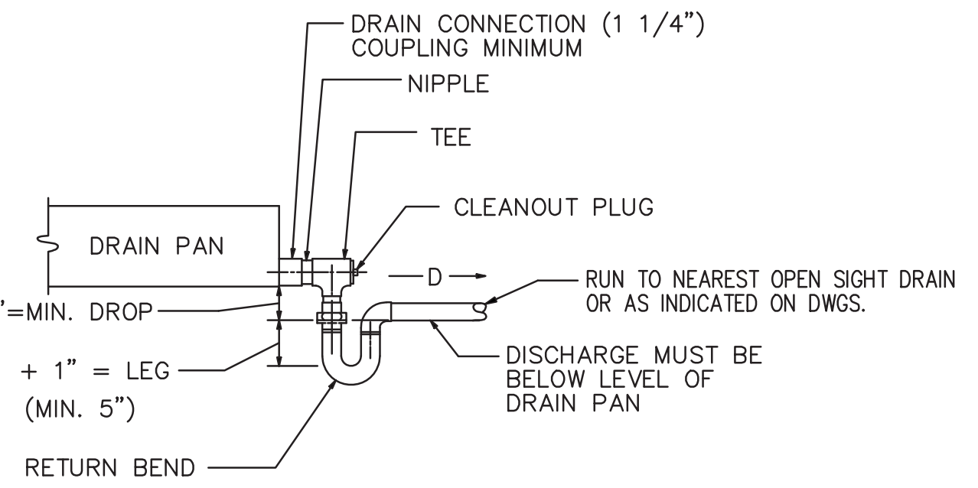
TYPICAL SINGLE LINE DUCT DETAILS

NOT TO SCALE



RECTANGULAR DUCT TAP WITH VOLUME DAMPER

NOT TO SCALE:

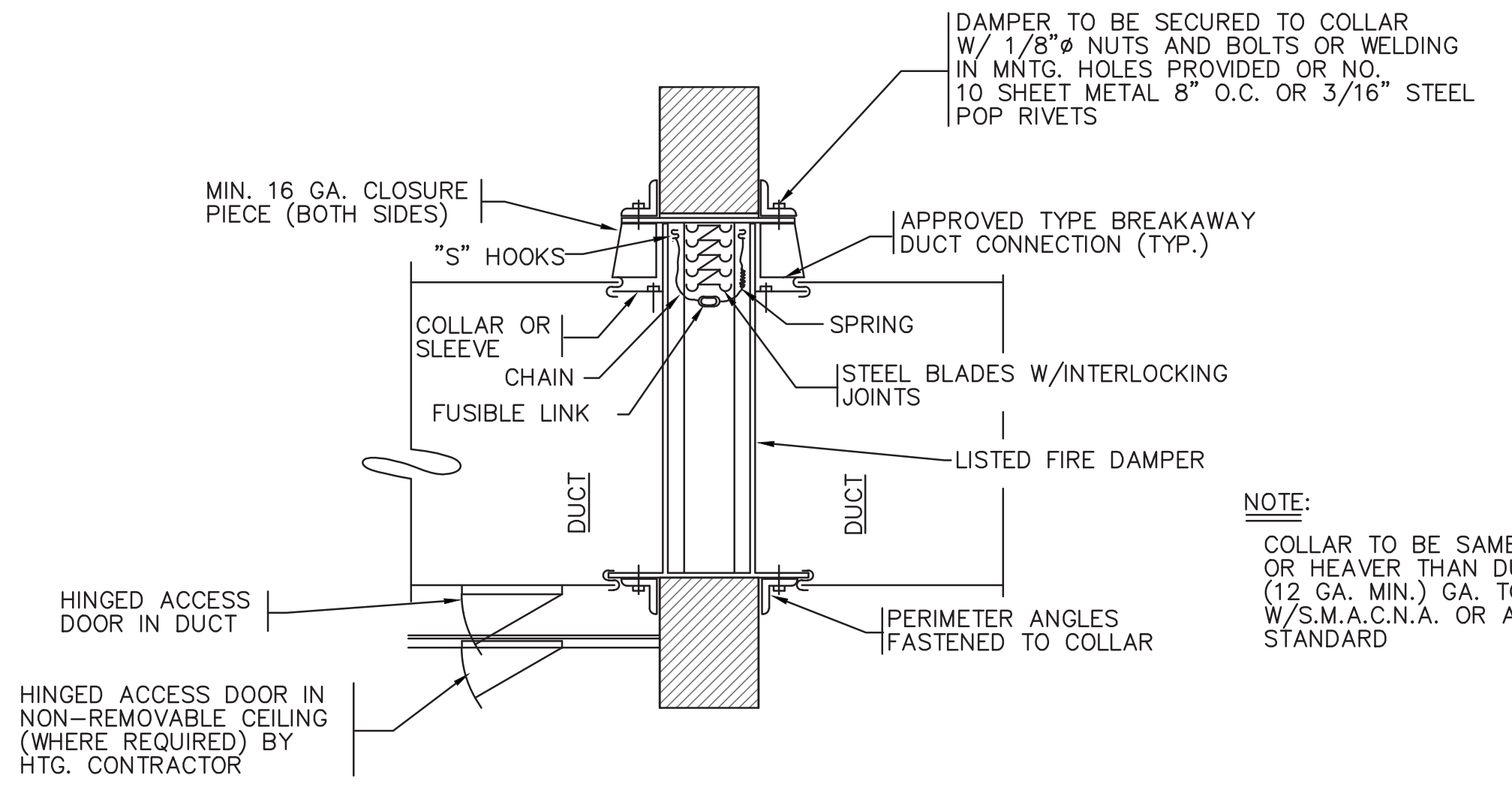


X = NEGATIVE INTERNAL STATIC PRESSURE AT FAN INLET.

NOTES:
1. ALLOW SUFFICIENT SPACE BELOW DRAIN PAN FOR TRAP
2. PITCH DRAIN FOR PROPER RUN – OFF.
3. MANUALLY, PRIME FILL TRAP BEFORE START–UP TO FORM INITIAL DRAIN SEAL.
4. SUPPORT LENGHTY DRAIN LINES TO PREVENT SAG AND CONDENSATE OVERFLOW.

DRAIN PAN WATER SEAL PIPING DRAW THRU UNIT

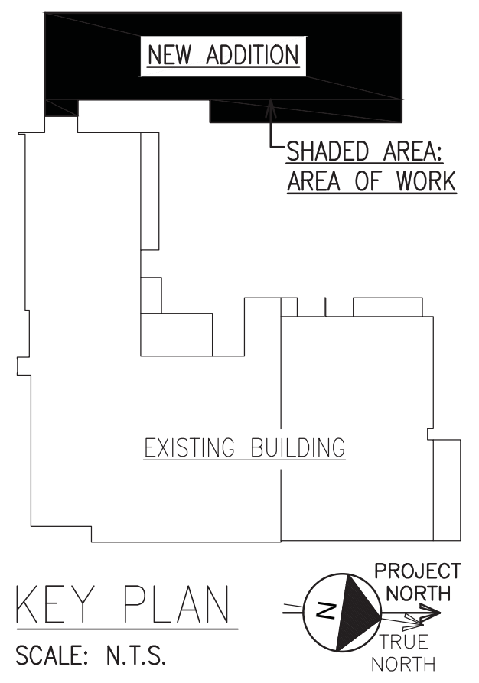
NOT TO SCALE



NOTE:
COLLAR TO BE SAME GA. OR HEAVER THAN DUCT (12 GA. MIN.) GA. TO CONFORM W/S.M.A.C.N.A. OR ASHRAE STANDARD

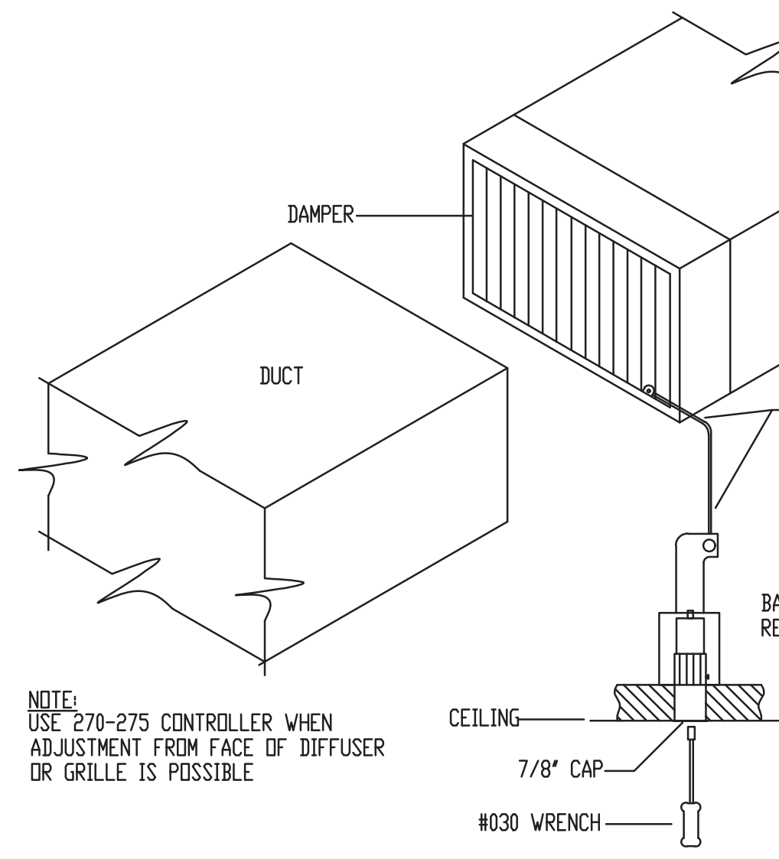
FIRE DAMPER VERTICAL PENETRATION DETAIL

NOT TO SCALE:



KEY PLAN

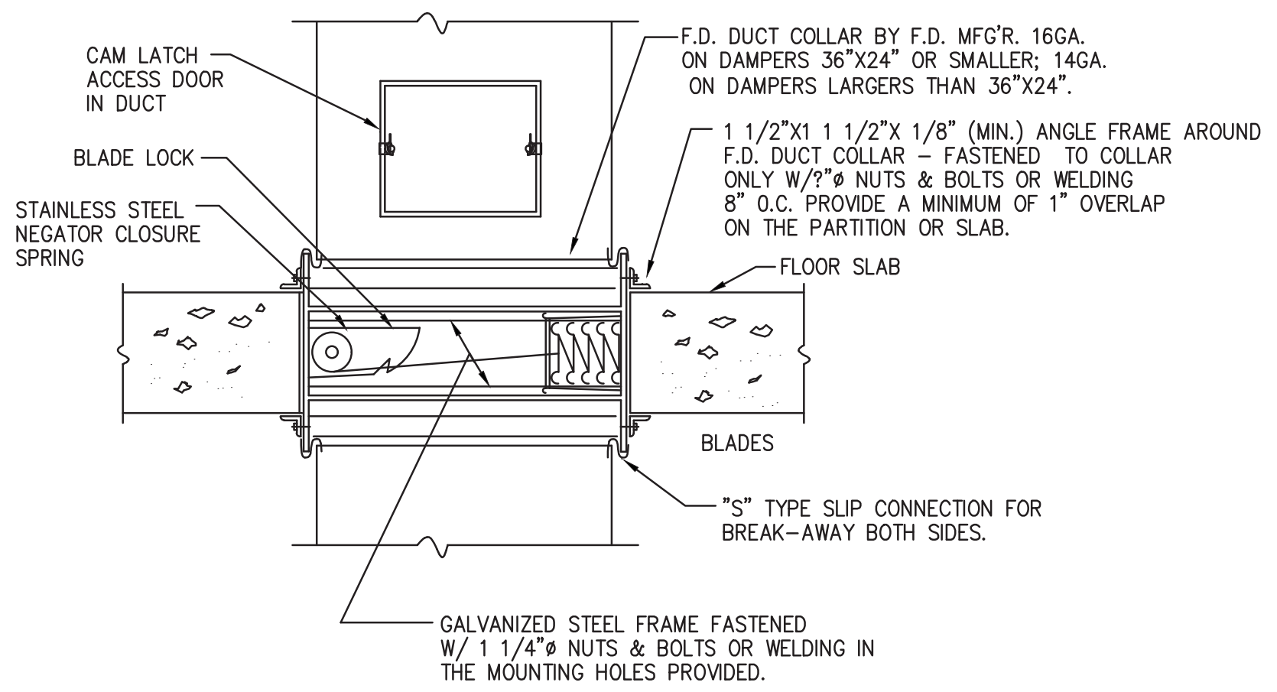
SCALE: N.T.S.



NOTE:
USE 270-275 CONTROLLER WHEN ADJUSTMENT FROM FACE OF DIFFUSER OR GRILLE IS POSSIBLE

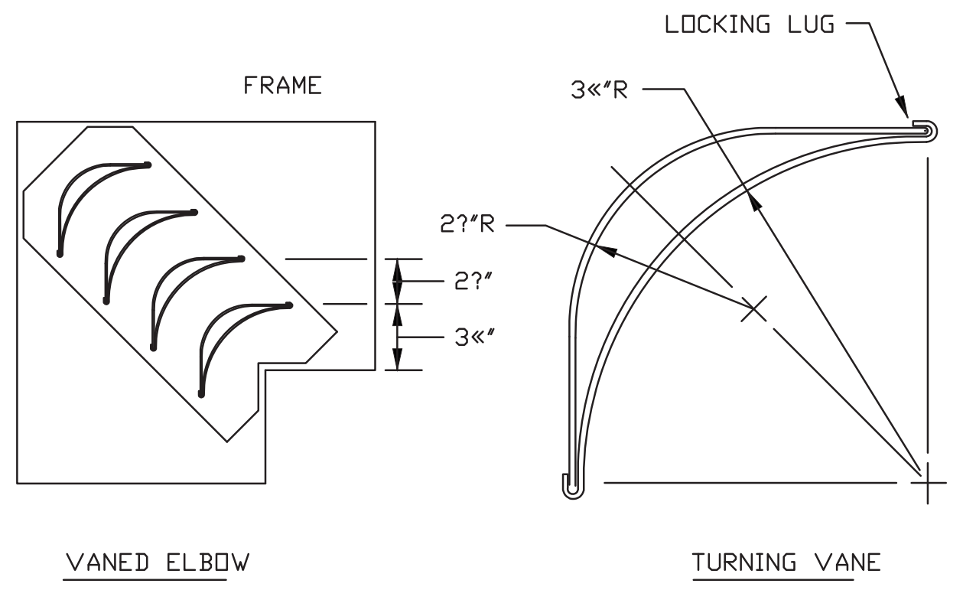
VOLUME DAMPER CONTROL ABOVE SHEETROCK CEILINGS

NOT TO SCALE



FIRE DAMPER DETAIL (HORIZONTAL MOUNT)

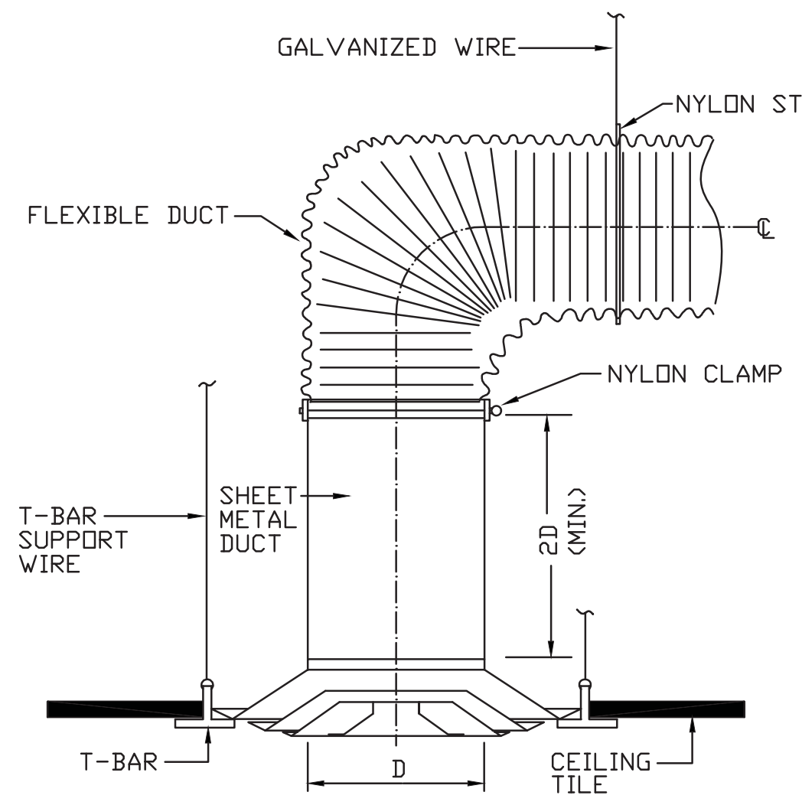
NOT TO SCALE:



NOTES:
1. LOCKING LUGS INTEGRAL WITH VANE.
2. MAXIMUM UNSUPPORTED VANE LENGTH 48".
3. FRAMES – BOLTED OR RIVETED TO ELBOW.
4. VANES AND FRAMES – SAME GAUGE AS ELBOW.

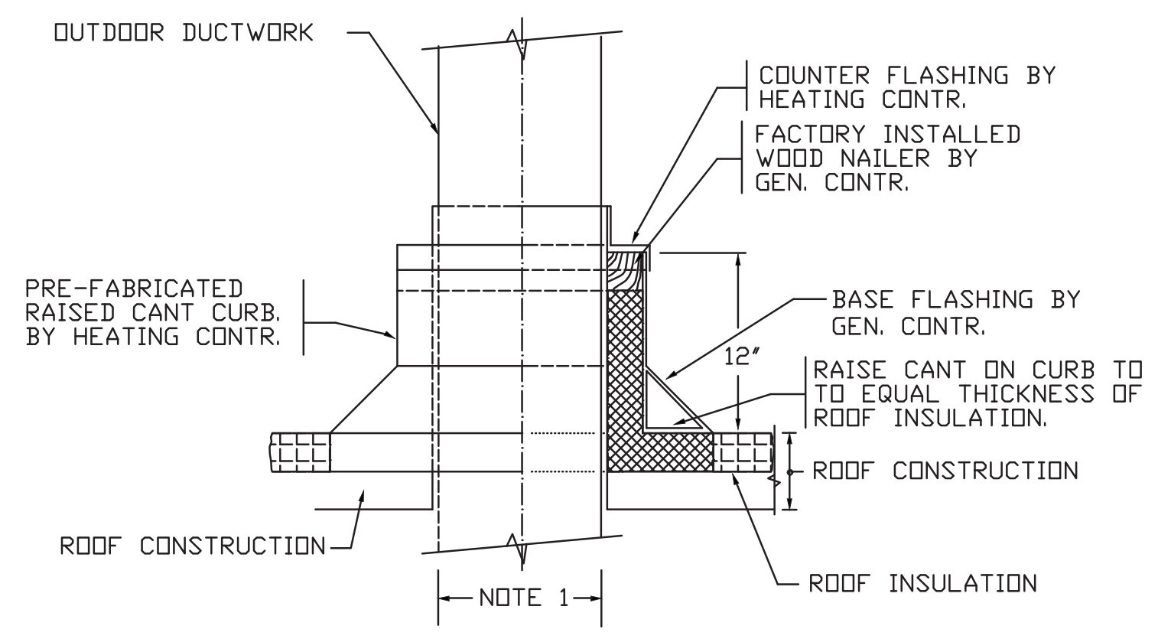
DOUBLE THICKNESS TURNING VANES FOR SQUARE ELBOW

NOT TO SCALE:



FLEXIBLE DUCT CONNECTION TO DIFFUSER

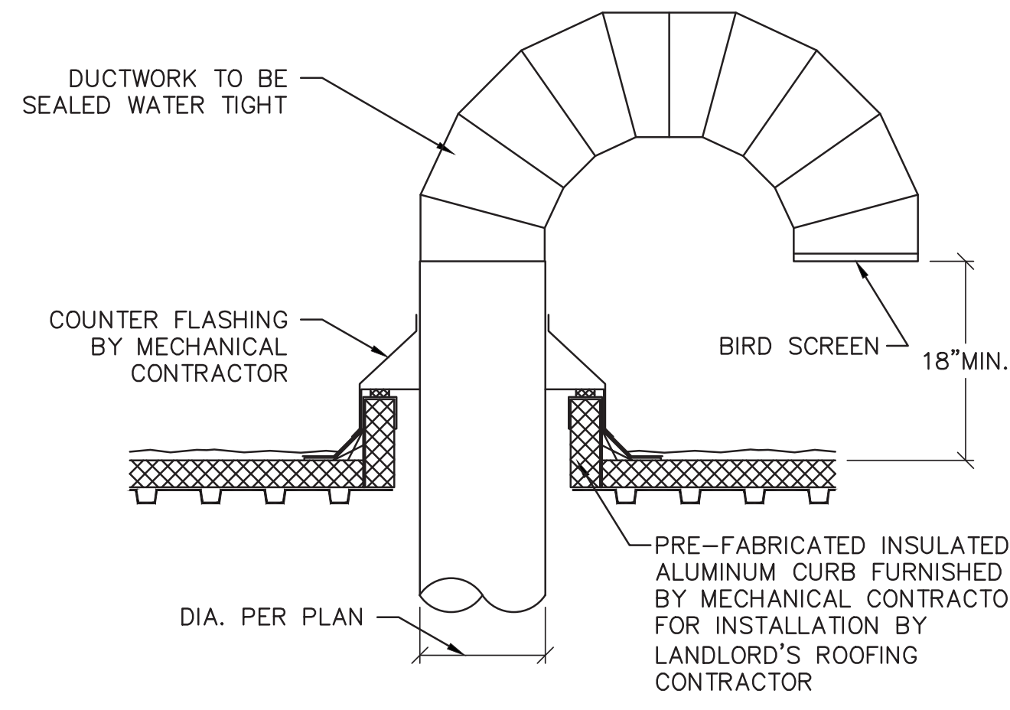
NOT TO SCALE:



NOTE:
ROOF OPENING TO BE 2" LARGER THAN DUCT DIMENSIONS INDICATED ON PLANS.

ROOF CURB DETAIL FOR DUCT PENETRATION

NOT TO SCALE:

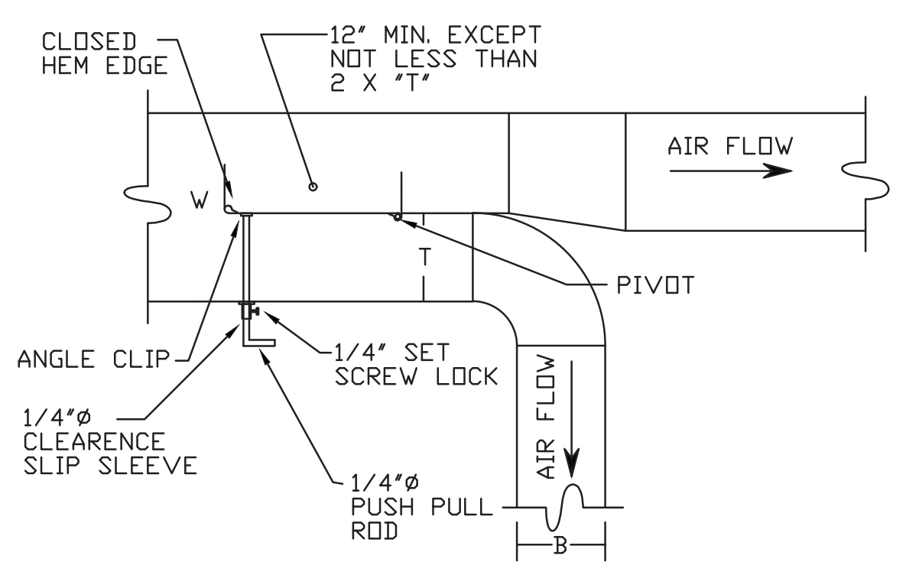


NOTE: ANY ROOF PENETRATION DETAILS OR NOTES PROVIDED TO THE GENERAL CONTRACTOR BY THE LANDLORD AT THE PRE–CONSTRUCTION MEETING TAKE PRECEDENCE OVER THIS DETAIL. ALL ROOF WORK SHALL BE COORDINATED WITH LANDLORD AND SHALL HAVE WRITTEN LANDLORD APPROVAL PRIOR TO WORK BEING PERFORMED.

PROVIDE ADDITIONAL SUPPORTS AS REQUIRED.

GOOSENECK VENT THRU ROOF

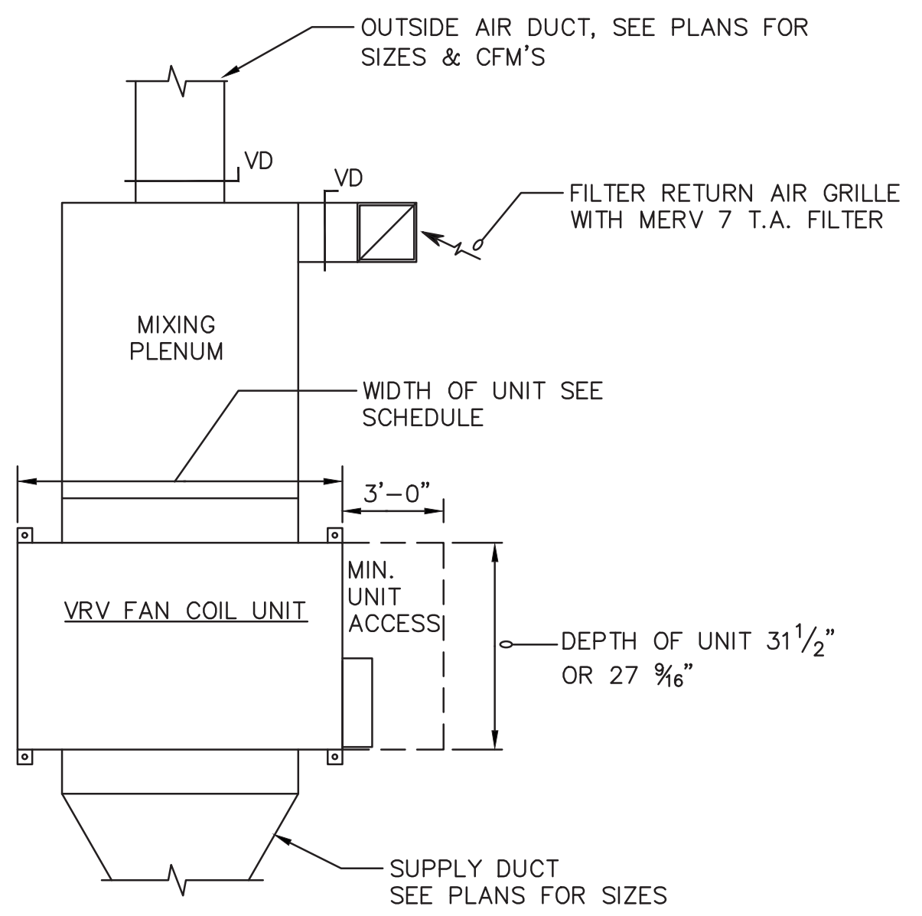
N.T.S.



NOTES:
1. FURNISH THIS TYPE CONNECTION WHERE NOTED & WHEN SINGLE LINE DUCTWORK IS INDICATED AS THIS_⅃_ FOR LOW PRESSURE BRANCHES WITH MORE THAN 700 CFM AND MEDIUM PRESSURE BRANCHES WITH MORE THAN 1000 CFM.
2. ONE ROD UP TO 24" DEPTH.
3. TWO RODS 25" UP TO 36".
4. OVER 36" USE DUCT BRANCH WITH THROAT AND VOLUME DAMPER.
5. $T = \frac{CFM\,B}{CFM\,W} \times W$, MINIMUM 4 INCHES.

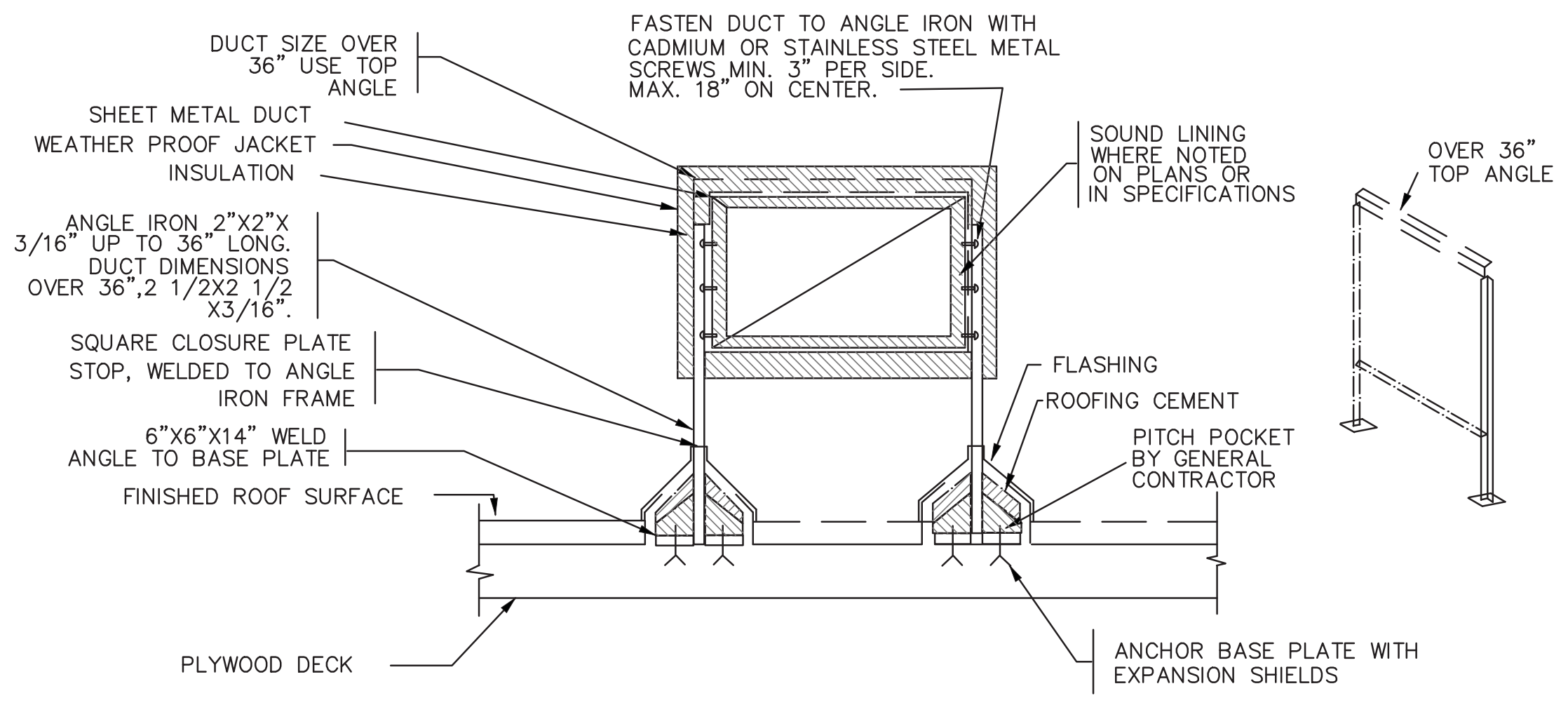
RECTANGULAR DUCT BRANCH WITH THROAT & SPLITTER DAMPER

NOT TO SCALE:



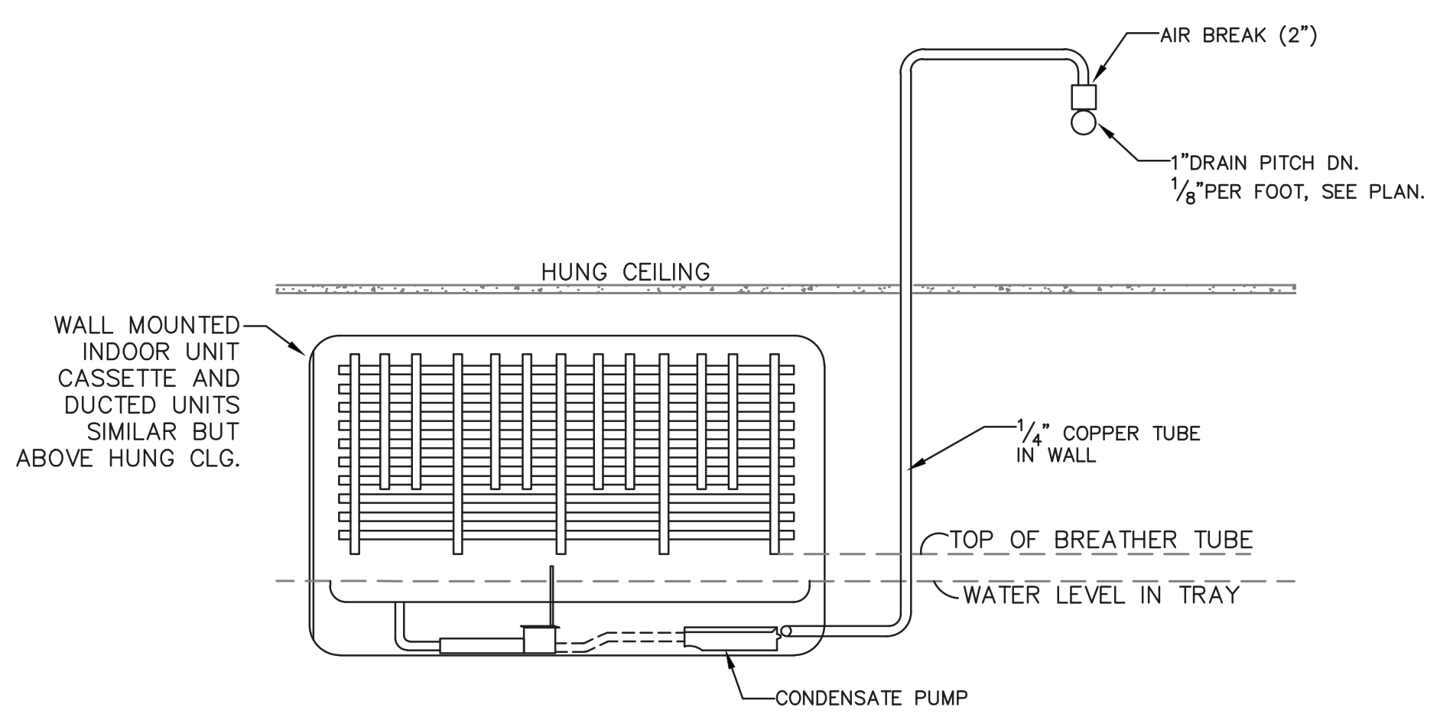
TYPICAL VRV FAN COIL INSTALLATION & ACCESS DETAIL

NOT TO SCALE:



DETAIL OF SUPPORT FOR ROOF MOUNTED DUCTWORK

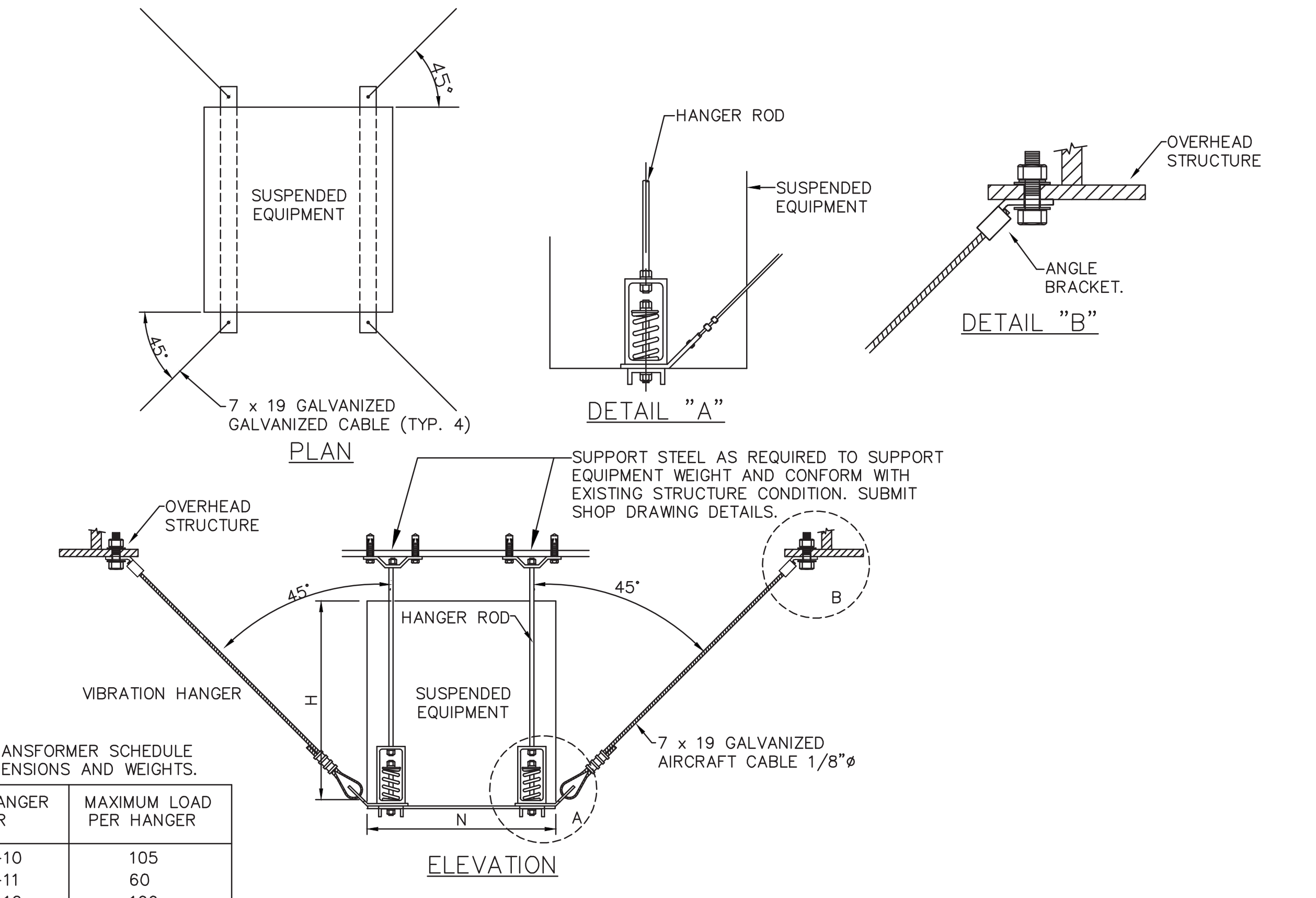
N.T.S



ENSURE THAT END OF DISCHARGE TUBE IS HIGHER THAN WATER LEVEL IN EVAPORATOR DRAIN PAN. END OF TUBE MUST EMPTY INTO LARGER DIAMETER DRAIN PIPE AND MUST HAVE AIR BREAK TO PREVENT SIPHONING.

INDOOR UNIT CONDENSATE REMOVAL DETAIL

NOT TO SCALE:



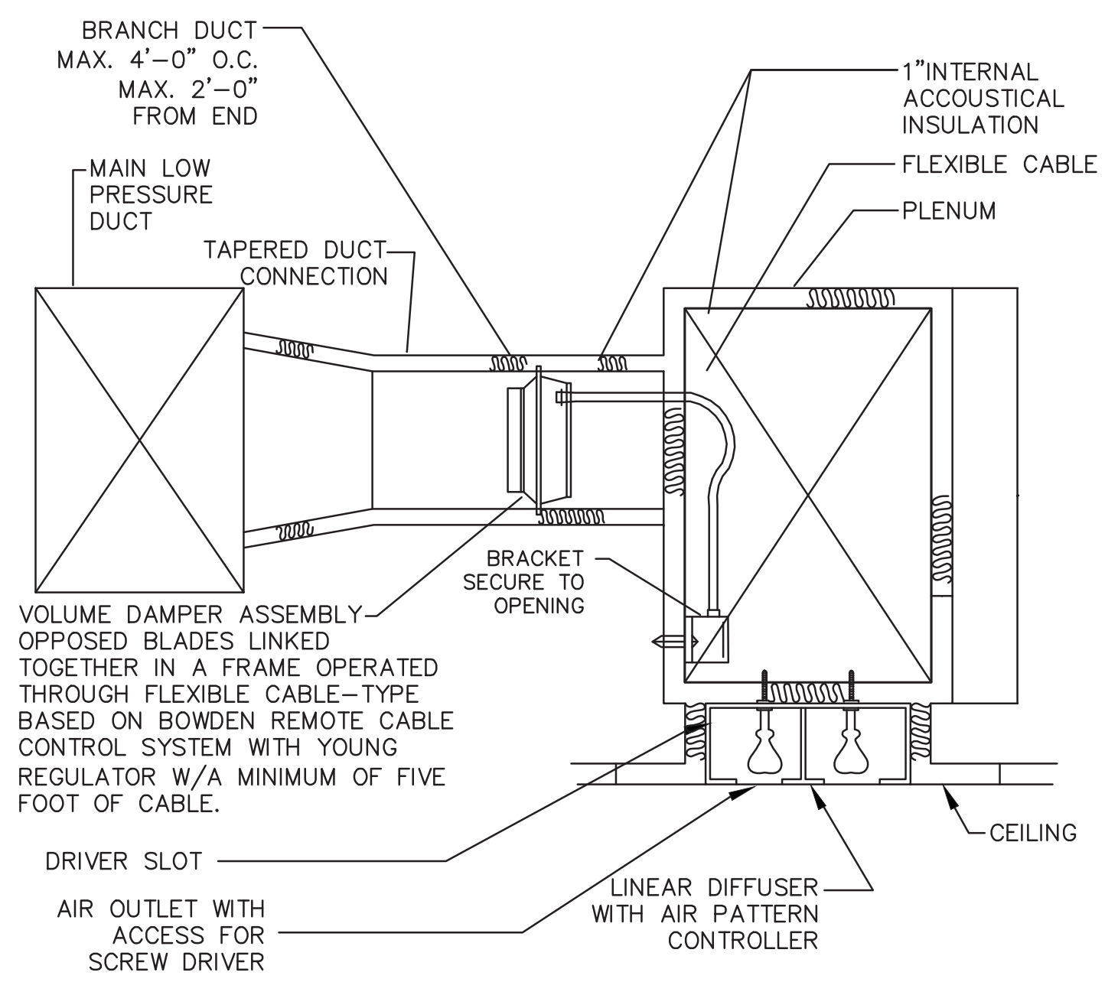
*SEE TRANSFORMER SCHEDULE FOR DIMENSIONS AND WEIGHTS.

VMC HANGER NUMBER	MAXIMUM LOAD PER HANGER
SHS–10	105
SHS–11	60
SHS–12	100
SHS–13	165
SHS–14	260

NOTE: TENSION CABLE ONLY ENOUGH TO REMOVE SAG.

VIBRATION HANGERS FOR EQUIPMENT

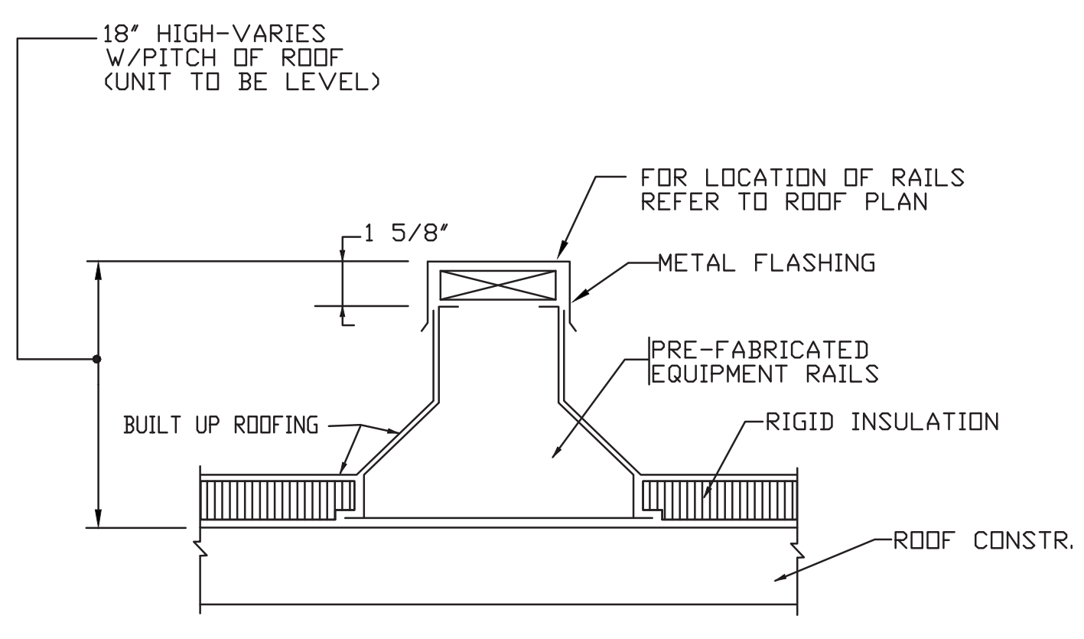
NTS



NOTES:
1. TYPICAL BRANCH DUCT TO BE MIN. 6"x6" (CLEAR DIMENSION) UNLESS NOTED.
2. COORDINATE DIFFUSER BORDER TYPES AND COLORS AND CEILING SUPPORTS WITH ARCHITECTURAL DRAWINGS.

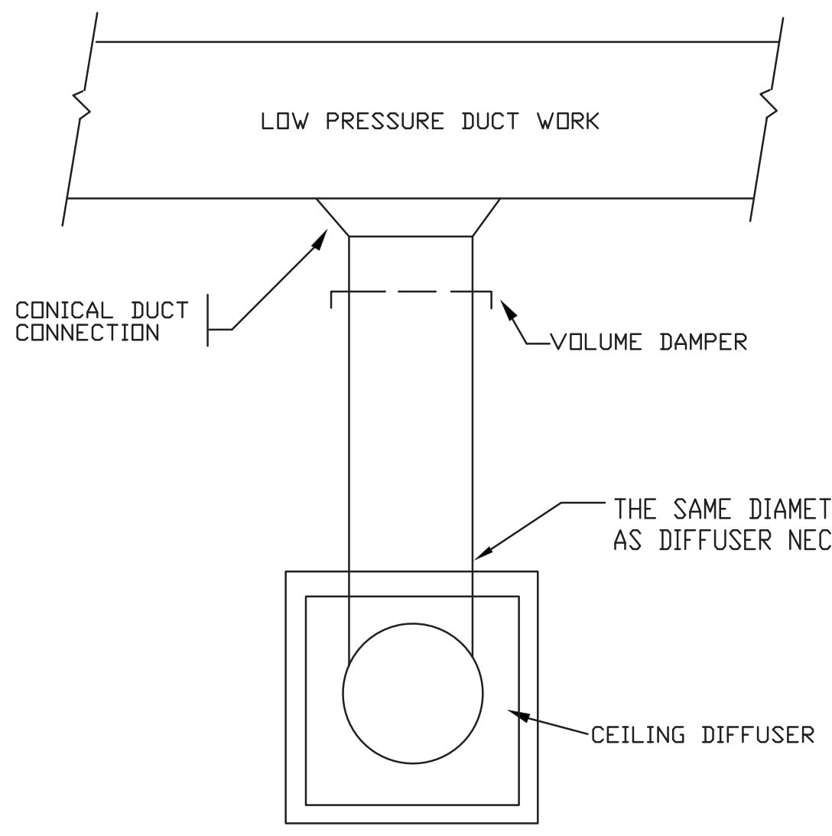
LINEAR DIFFUSER DETAIL

NOT TO SCALE



ROOF TOP EQUIPMENT RAILS DETAIL

NOT TO SCALE:



TYPICAL CEILING DIFFUSER TAKE–OFF DETAIL

NOT TO SCALE

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04–28–2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432–1811
(201) 444–0753 FAX (201) 444–0839

NO. 91385
Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns–arch–eng.com

DRAFTED:	MJR
CHECKED:	–
PROJ. NO:	5593
DATE:	08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD

DESIGN REVIEW
DATE

APPROVED
DATE
☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

MECHANICAL DETAILS

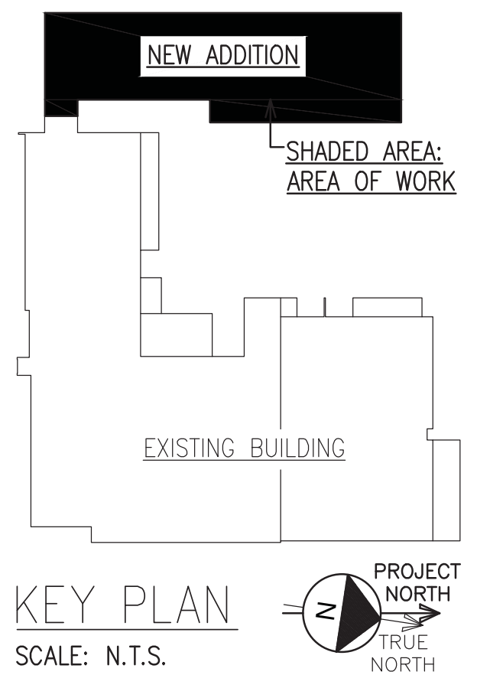
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52–1–2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M–202	59 OF 95	

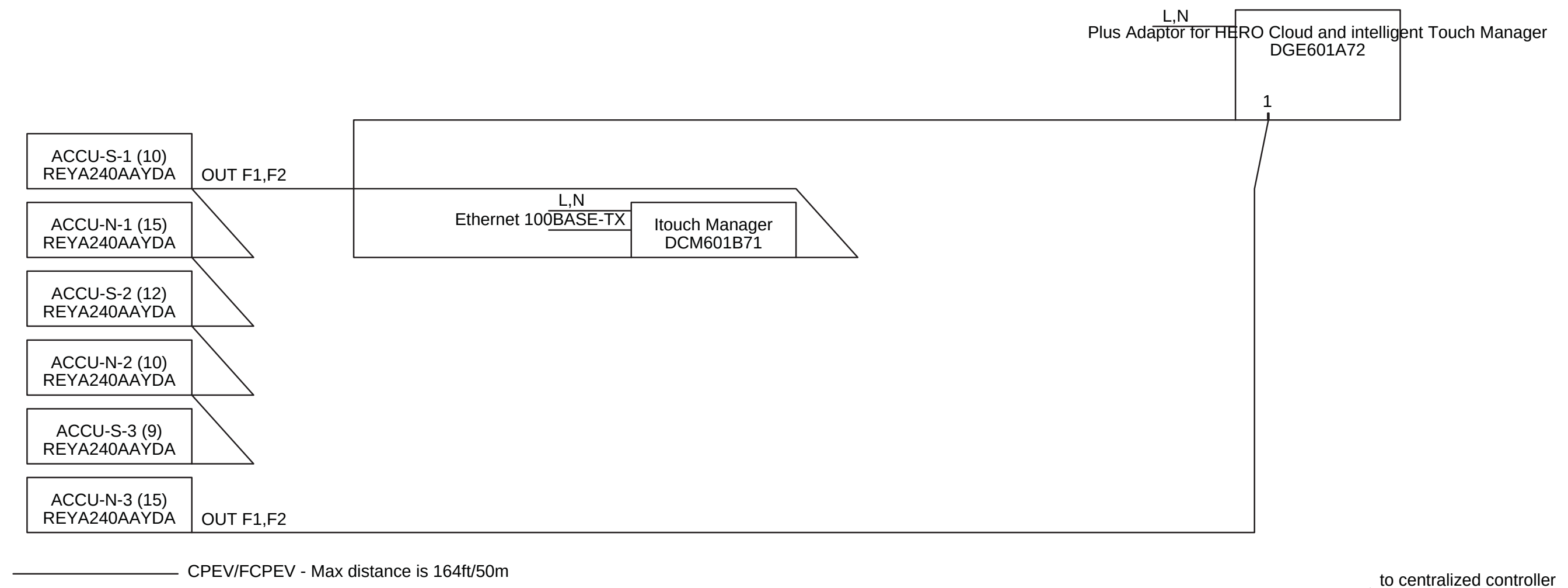
VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

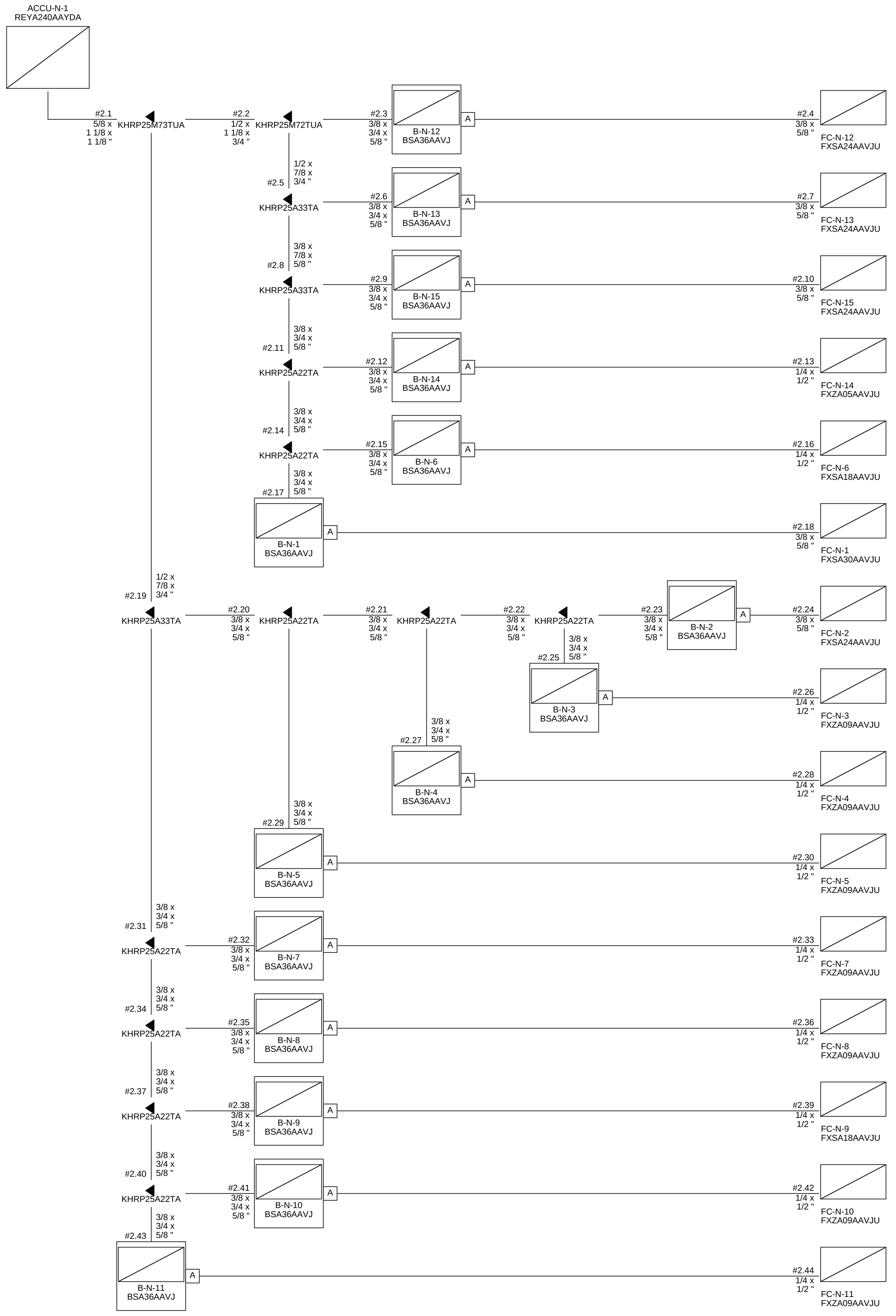
- ▫ John Lignos, AIA
- ▪ Lorin J. Sonenshine, AIA
- ▫ Steven Napolitano, PE, PP
- ▫ Robert Nocella, AIA



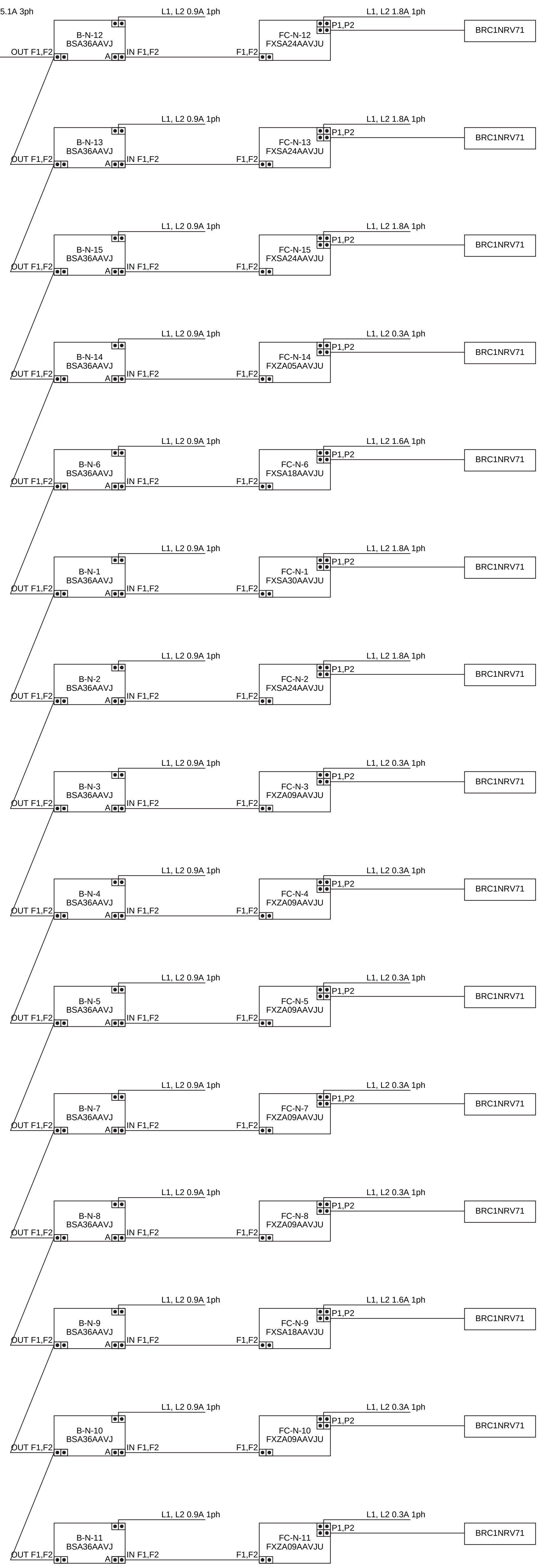
KEY PLAN
SCALE: N.T.S.



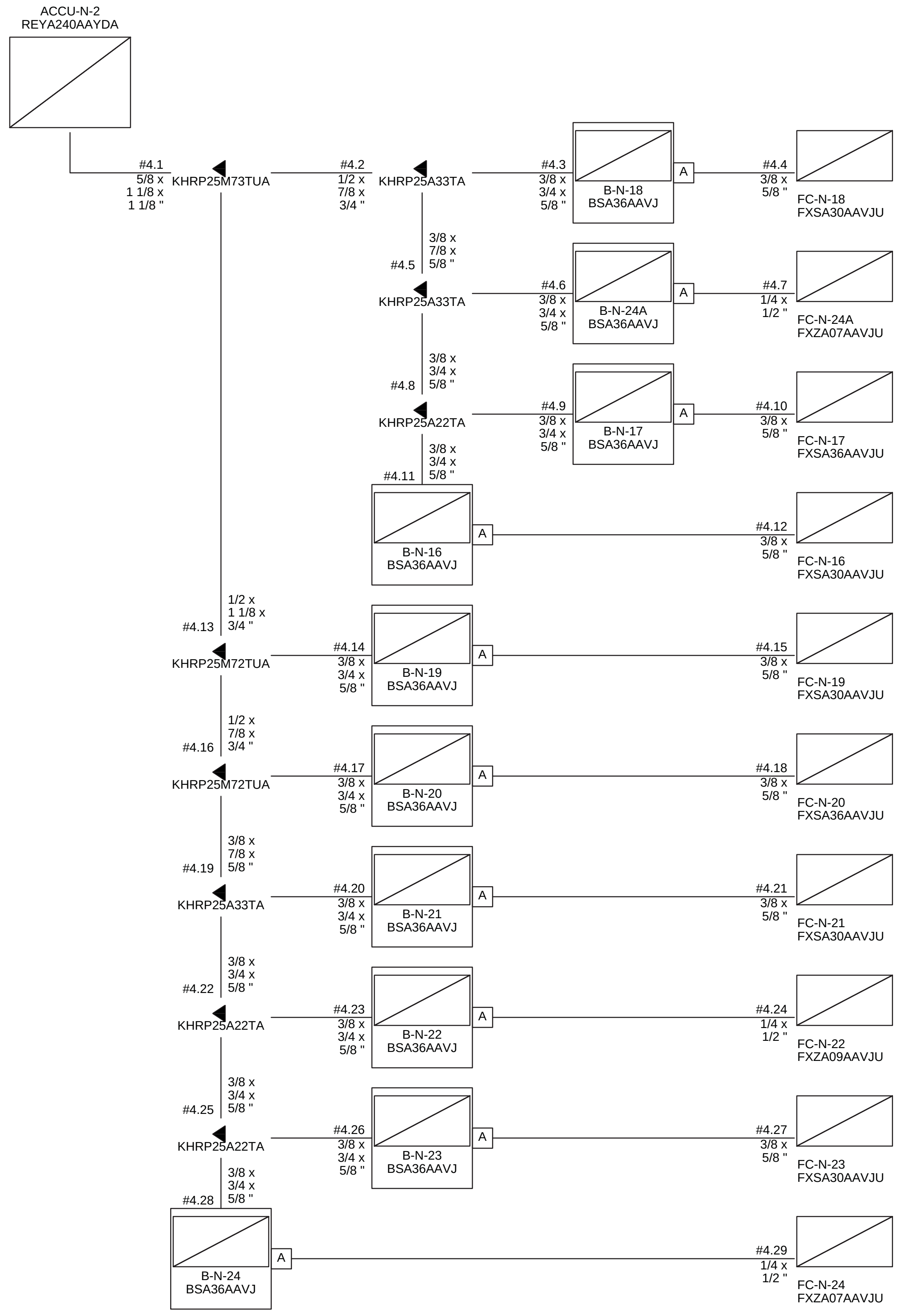
CONTROL WIRING SCHEMATIC
NTS



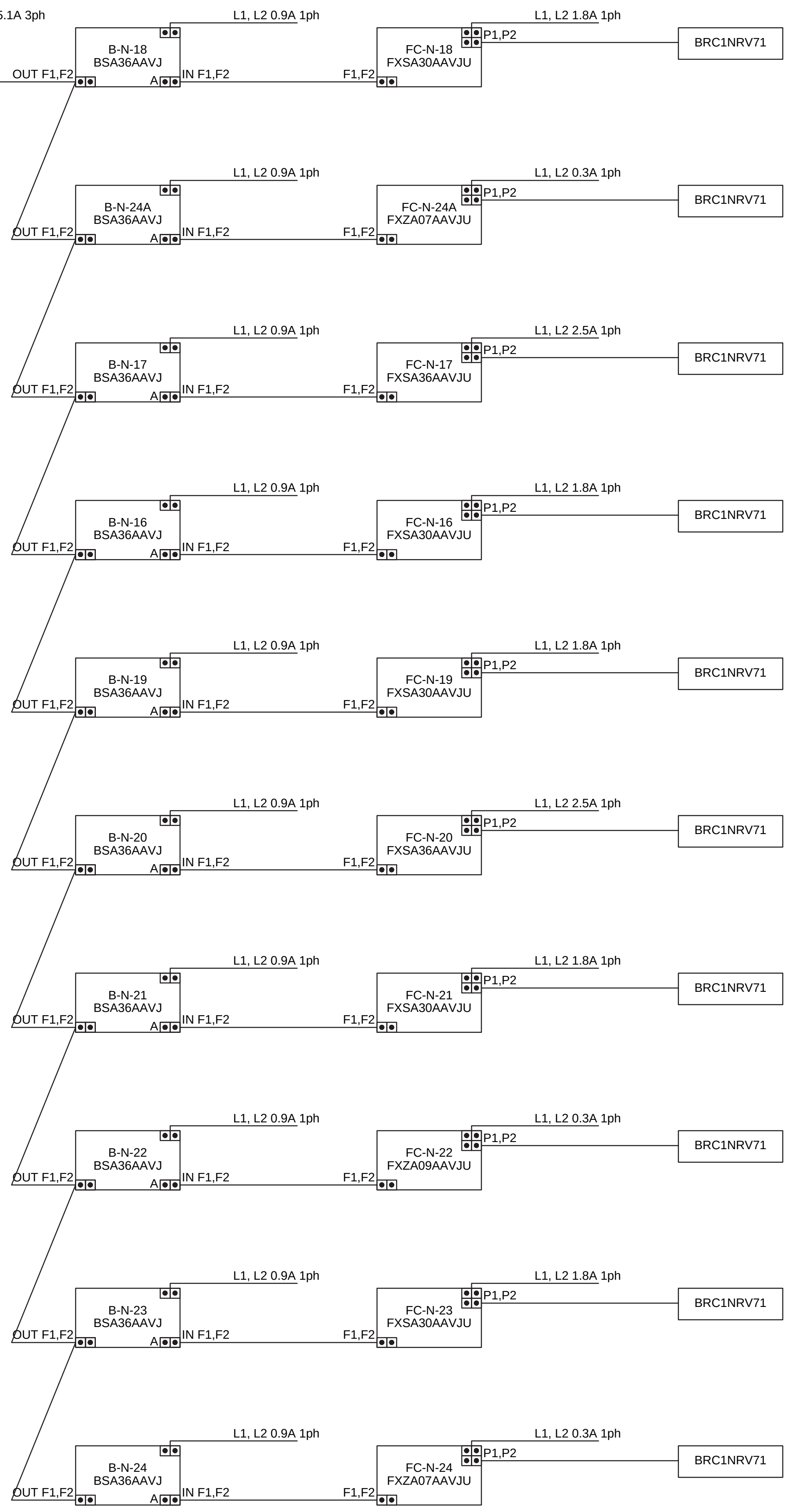
ACCU-N-1 PIPING SCHEMATIC
NTS



ACCU-N-1 WIRING SCHEMATIC
NTS



ACCU-N-2 PIPING SCHEMATIC
NTS



ACCU-N-2 WIRING SCHEMATIC
NTS

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

STATE OF NEW YORK
BRIAN W. PASECHNICK
NO. 91385
LICENSED PROFESSIONAL ENGINEER

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com
DRAFTED: MJR
CHECKED: —
PROJ. NO: 5593
DATE: 08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD
DESIGN REVIEW		DATE

APPROVED
DATE
☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

MECHANICAL PIPING & WIRING SCHEMATICS

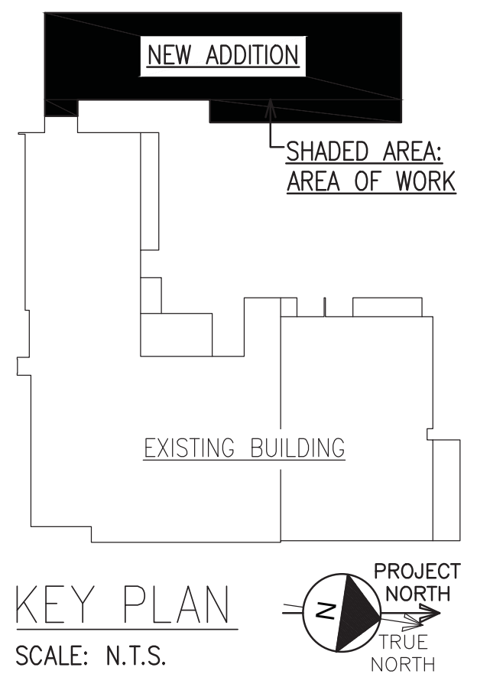
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-301	60 OF 95	

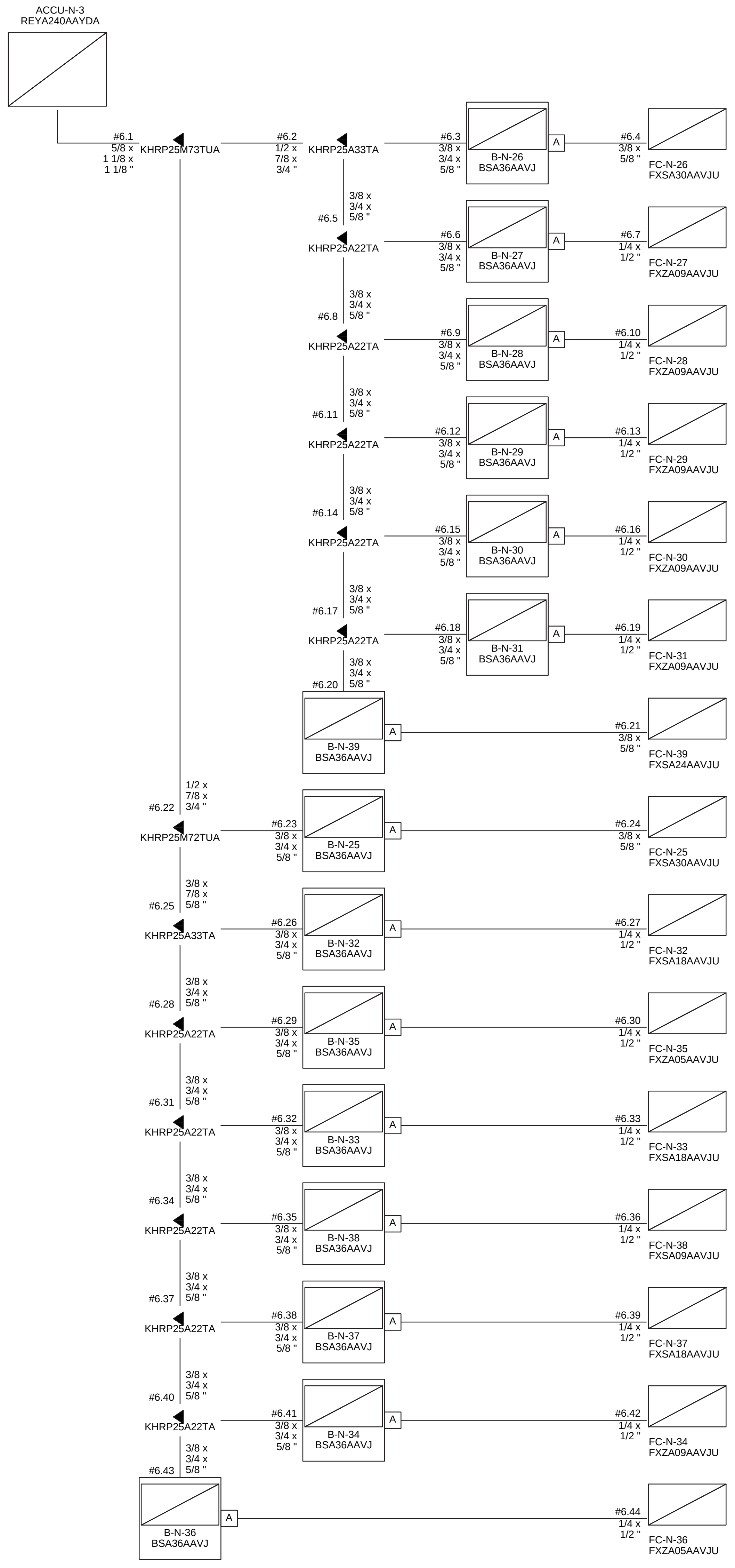
VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

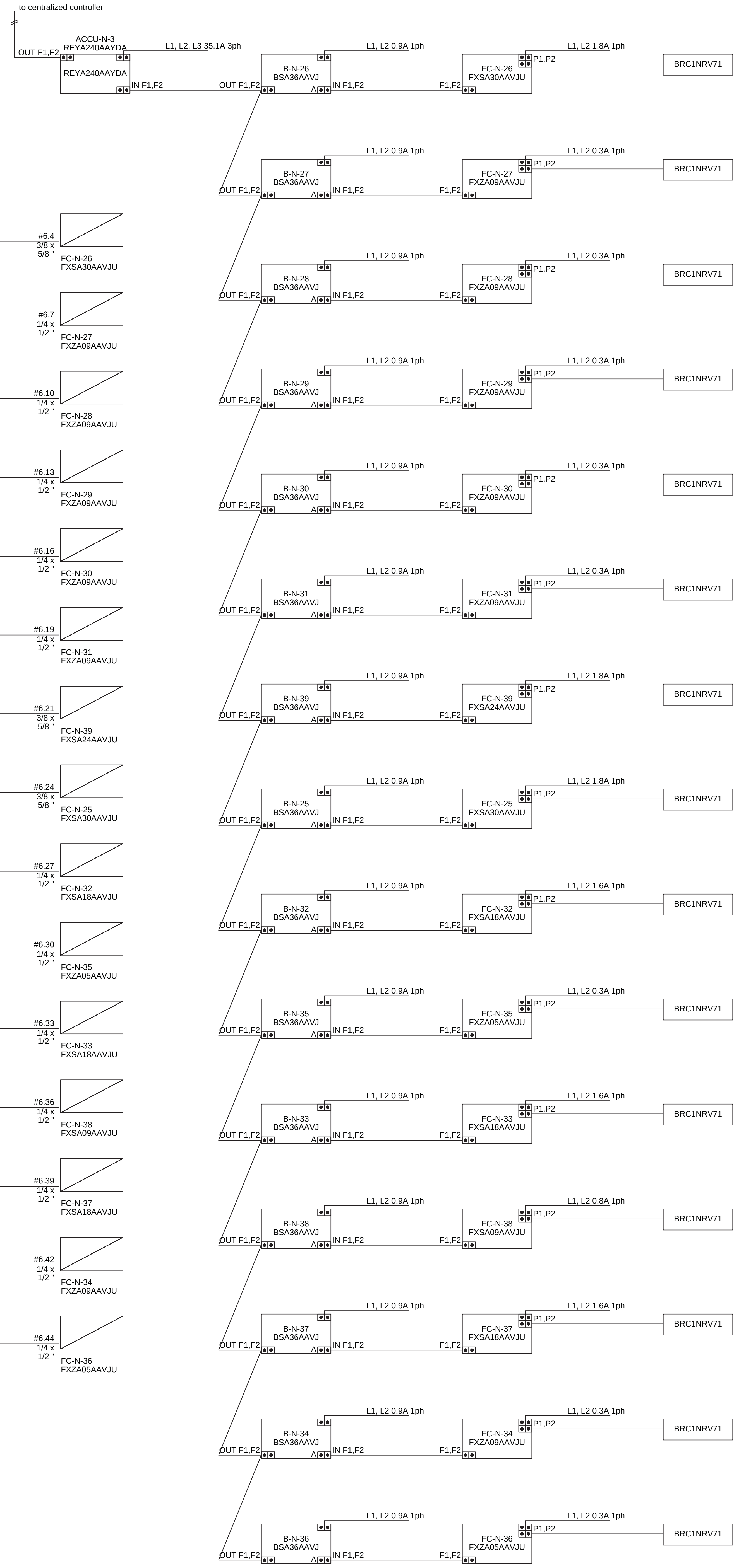
- ▫ John Lignos, AIA
- ▪ Lorin J. Sonenshine, AIA
- ▫ Steven Napolitano, PE, PP
- ▫ Robert Nocella, AIA



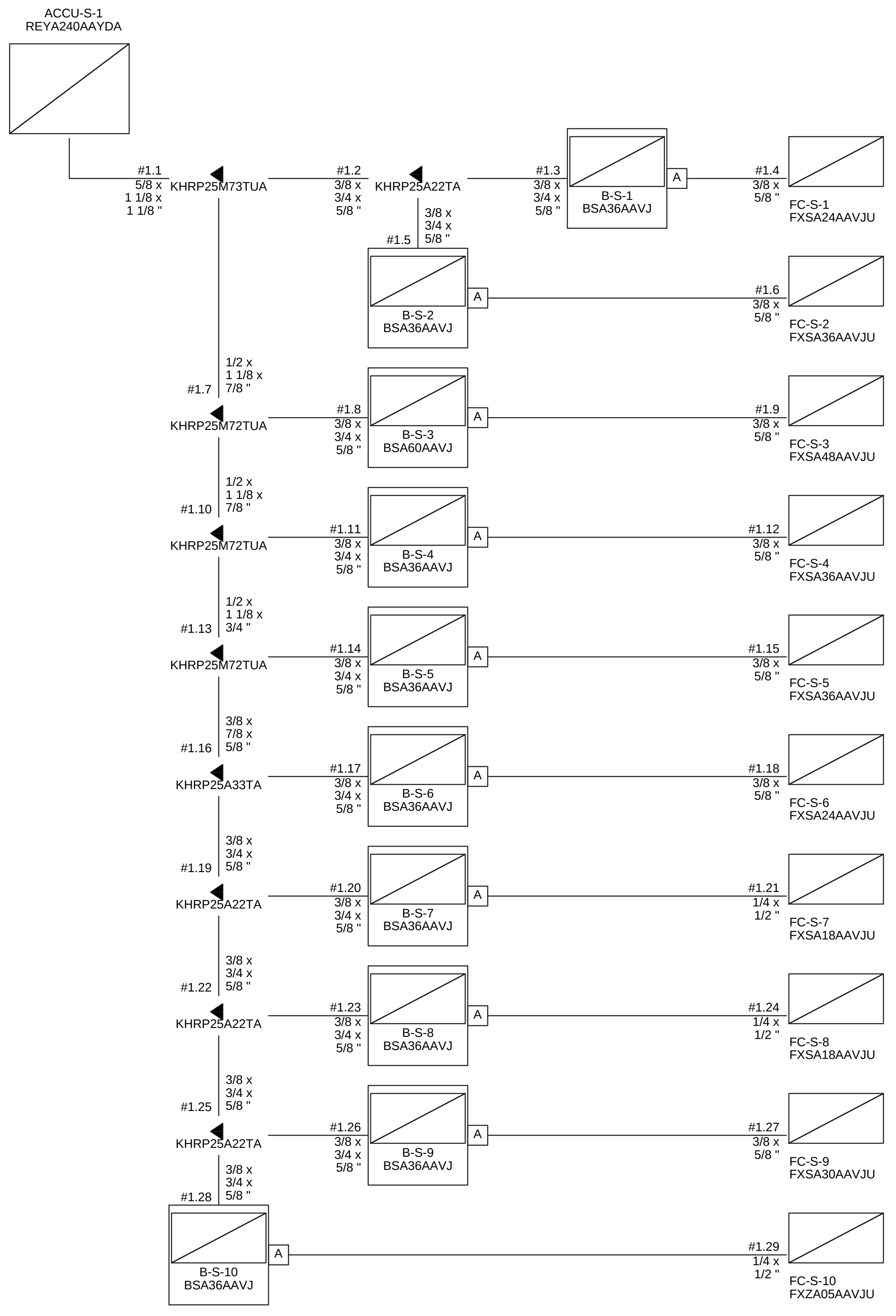
KEY PLAN
SCALE: N.T.S.



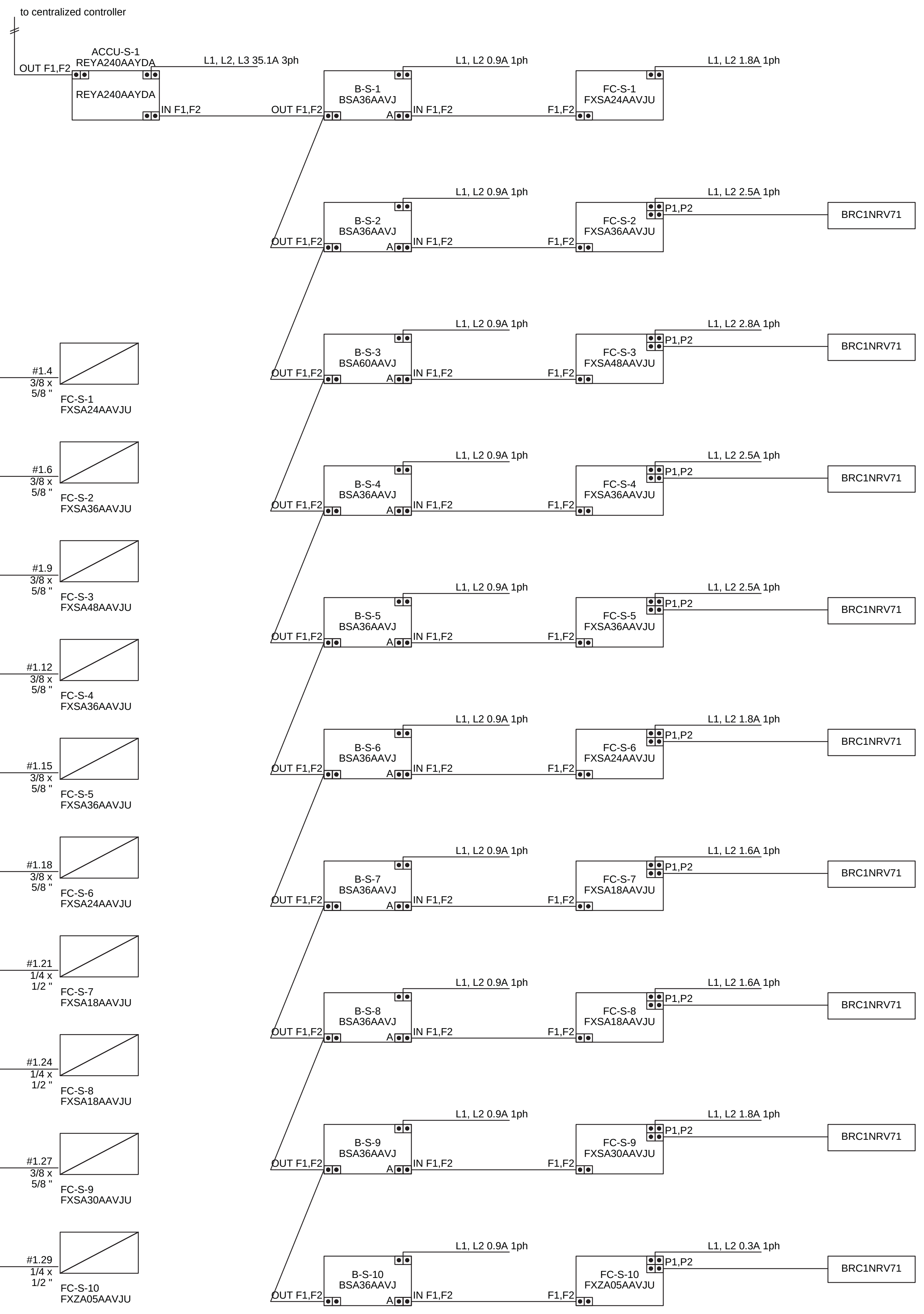
ACCU-N-3 PIPING SCHEMATIC
NTS



ACCU-N-3 WIRING SCHEMATIC
NTS



ACCU-S-1 PIPING SCHEMATIC
NTS



ACCU-S-1 WIRING SCHEMATIC
NTS

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04-28-2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432-1811
(201) 444-0753 FAX (201) 444-0839

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns-arch-eng.com
DRAFTED: MJR
CHECKED: –
PROJ. NO: 5593
DATE: 08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN DES CHKD
DESIGN REVIEW DATE

APPROVED
DATE
☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

MECHANICAL PIPING & WIRING SCHEMATICS

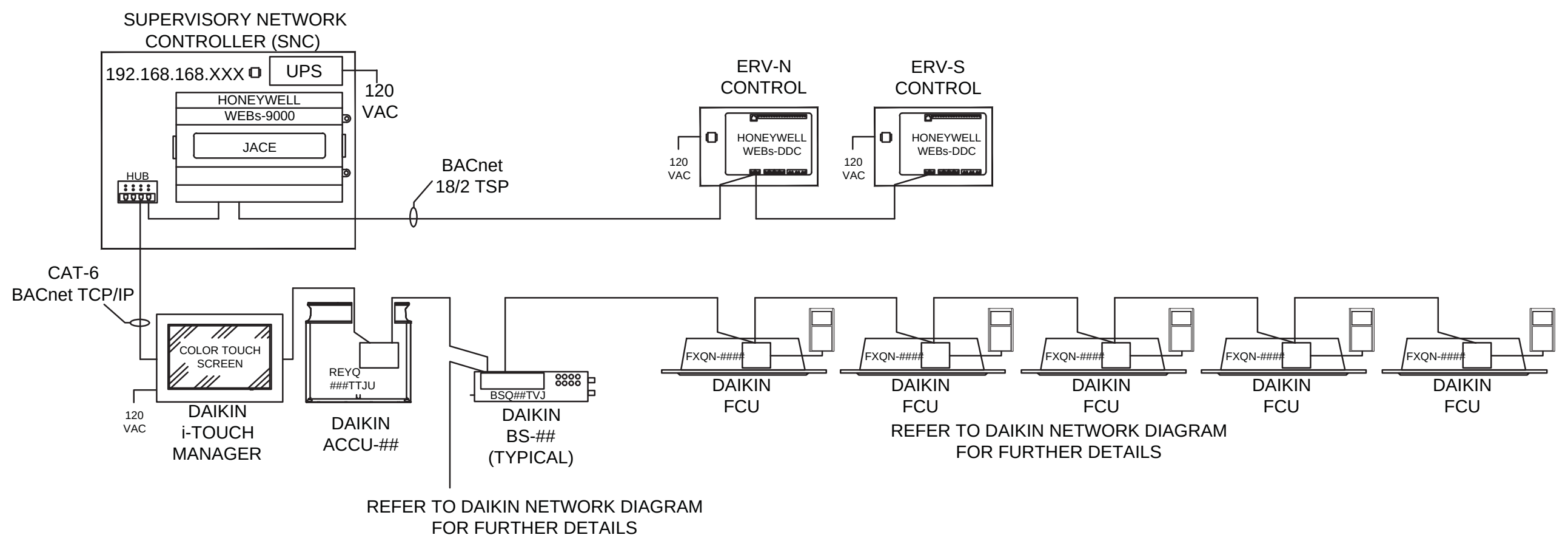
SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52-1-2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M-302	61 OF 95	

VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

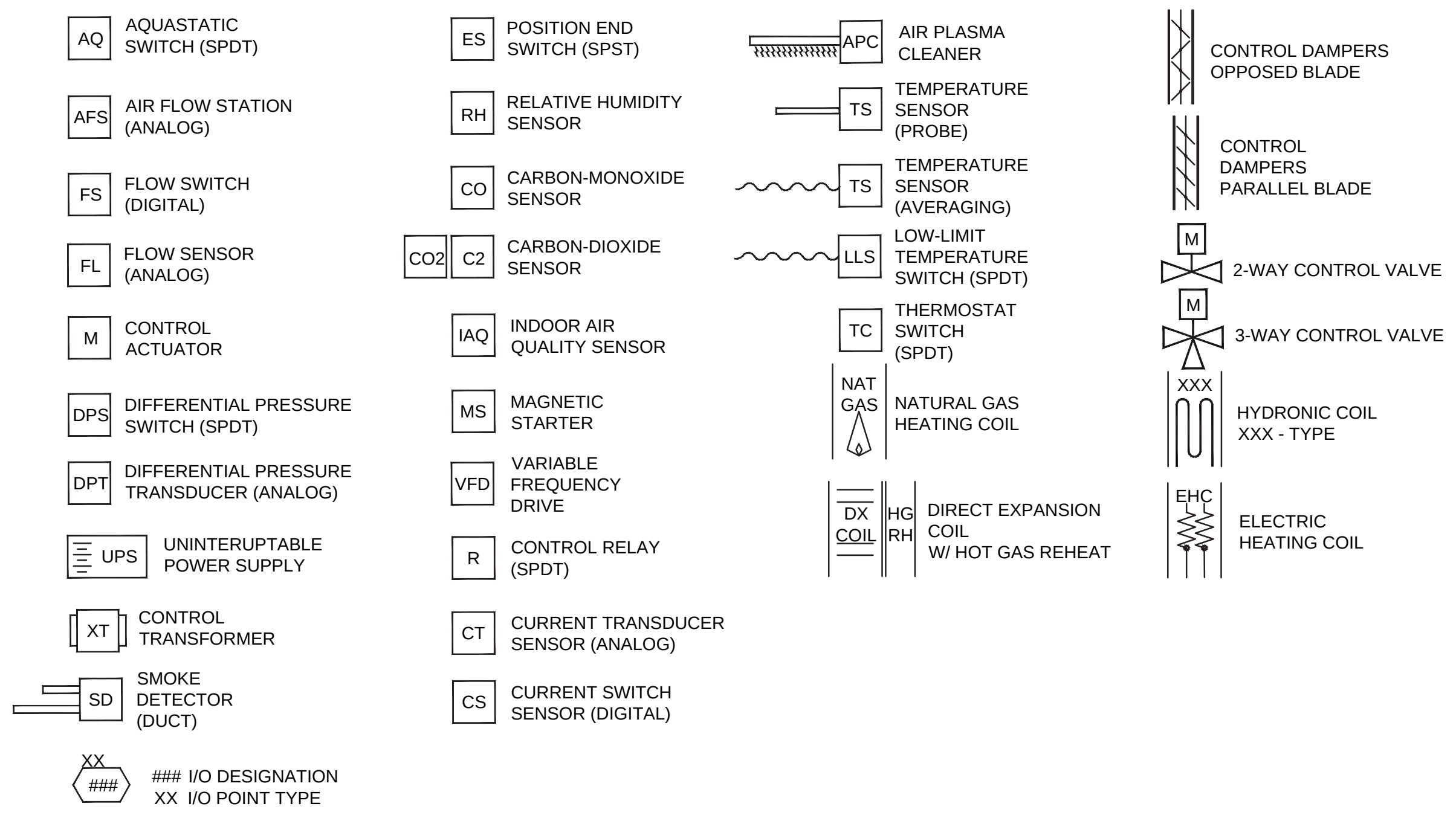
- John Lignos, AIA
- Lorin J. Sonenshine, AIA
- Steven Napolitano, PE, PP
- Robert Nocella, AIA



1. PROVIDE HONEYWELL WEBS9000 SUPERVISORY NETWORK CONTROLLERS.
2. ALL INTEGRATION OF CONTROLS WILL BE VIA BACnet OPEN PROTOCOL. THE DIRECT DIGITAL SYSTEM SHALL BE ACCESSIBLE VIA THE LOCAL CONNECTION.
3. THE NEW HONEYWELL WEBs-9000 DDC SYSTEM WILL SCHEDULE THE HVAC EQUIPMENT AS ADJUSTED BY THE FACILITIES STAFF. THE FACILITIES STAFF AND IT STAFF WILL RECEIVE FULL TRAINING ON THE OPERATION OF THE SYSTEM.
4. THE HONEYWELL DDC SYSTEM SHALL INTEGRATE ALL OF DAIKIN (VRF SYSTEM) BACnet DDC CONTROLLERS INTO ONE SEAMLESS AND COMPLETELY FUNCTIONAL SYSTEM.
5. THE ATC CONTRACTOR SHALL PROVIDE NEW BACnet & DAIKIN NETWORK COMMUNICATIONS WIRING. THE NETWORK ROUTING SHOWN IS DIAGRAMMATIC ONLY; ACTUAL BUS ROUTING TO BE DETERMINED BY ATC ELECTRICIAN AND SHOWN ON AS-BUILT DRAWINGS.

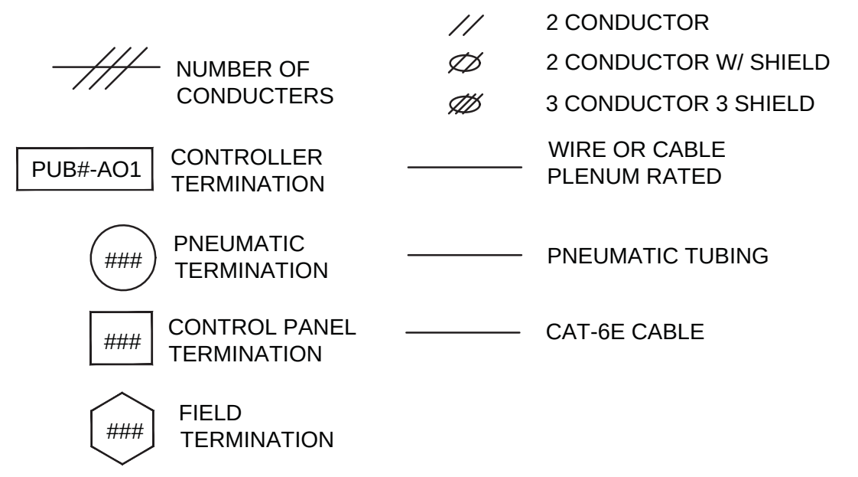
BMS NETWORK ARCHITECTURE

NOT TO SCALE
W/ INTEGRATION TO VRF SYSTEM



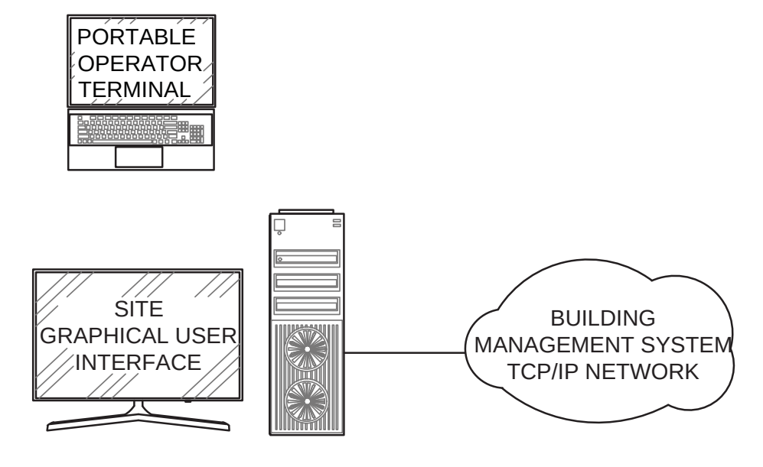
BMS DEVICE LEGEND

NOT TO SCALE
CONTROL DEVICE SYMBOLS



WIRING SYMBOLS

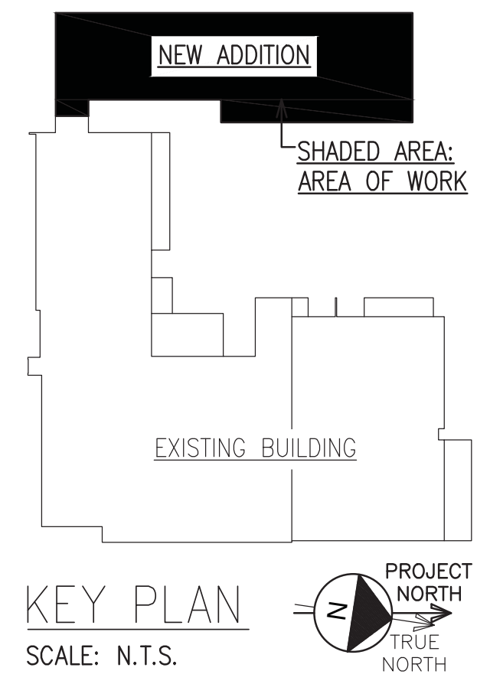
NOT TO SCALE
WIRING SYMBOLS



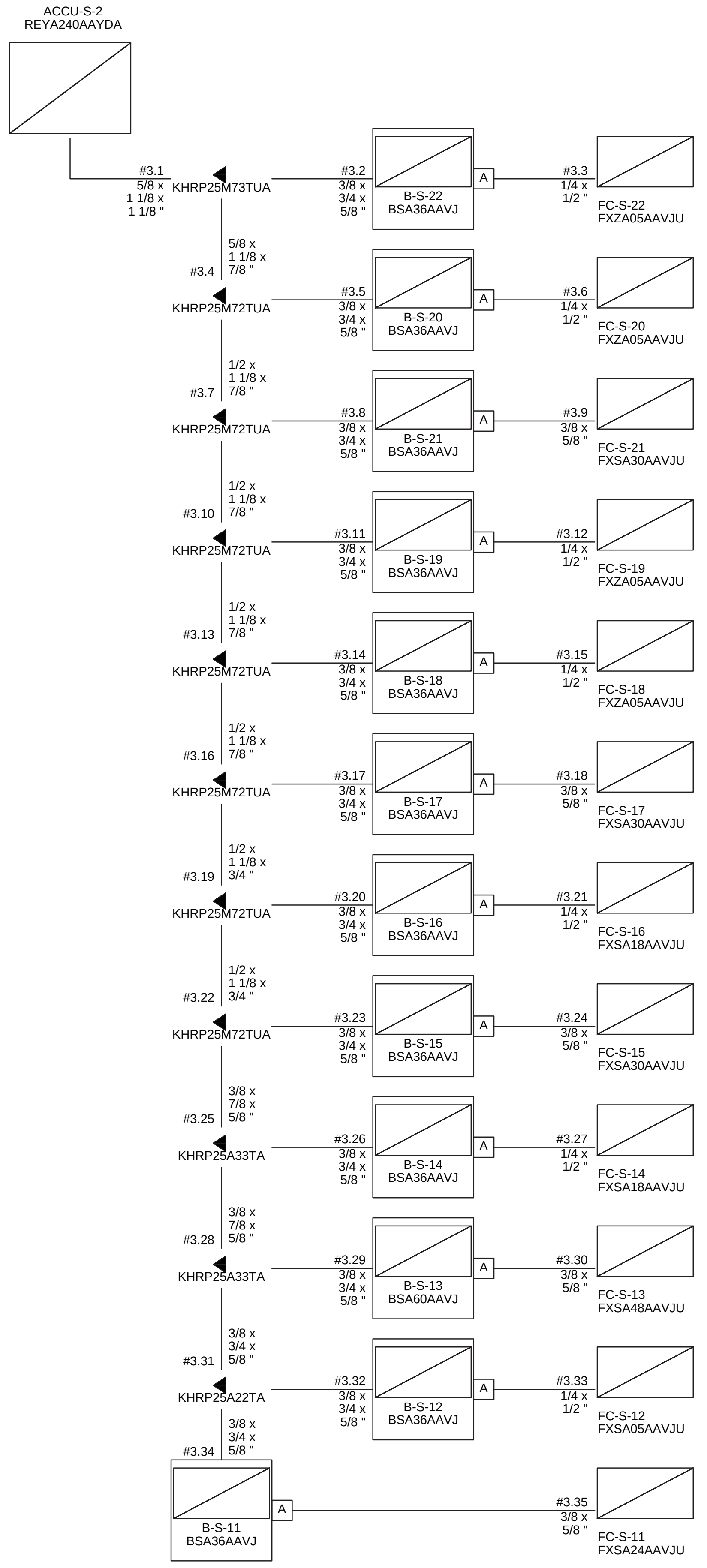
- PROVIDE CUSTOMIZED 3-D WEB-BASED GRAPHICS FOR NEW BMS HVAC SYSTEMS. INCORPORATE ALL OF THE NEW HONEYWELL AND UNIT MANUFACTURER DDC CONTROLLERS INTO ONE SEAMLESS AND COMPLETELY FUNCTIONAL SYSTEM.

BMS WEB-BASED GRAPHIC USER INTERFACE

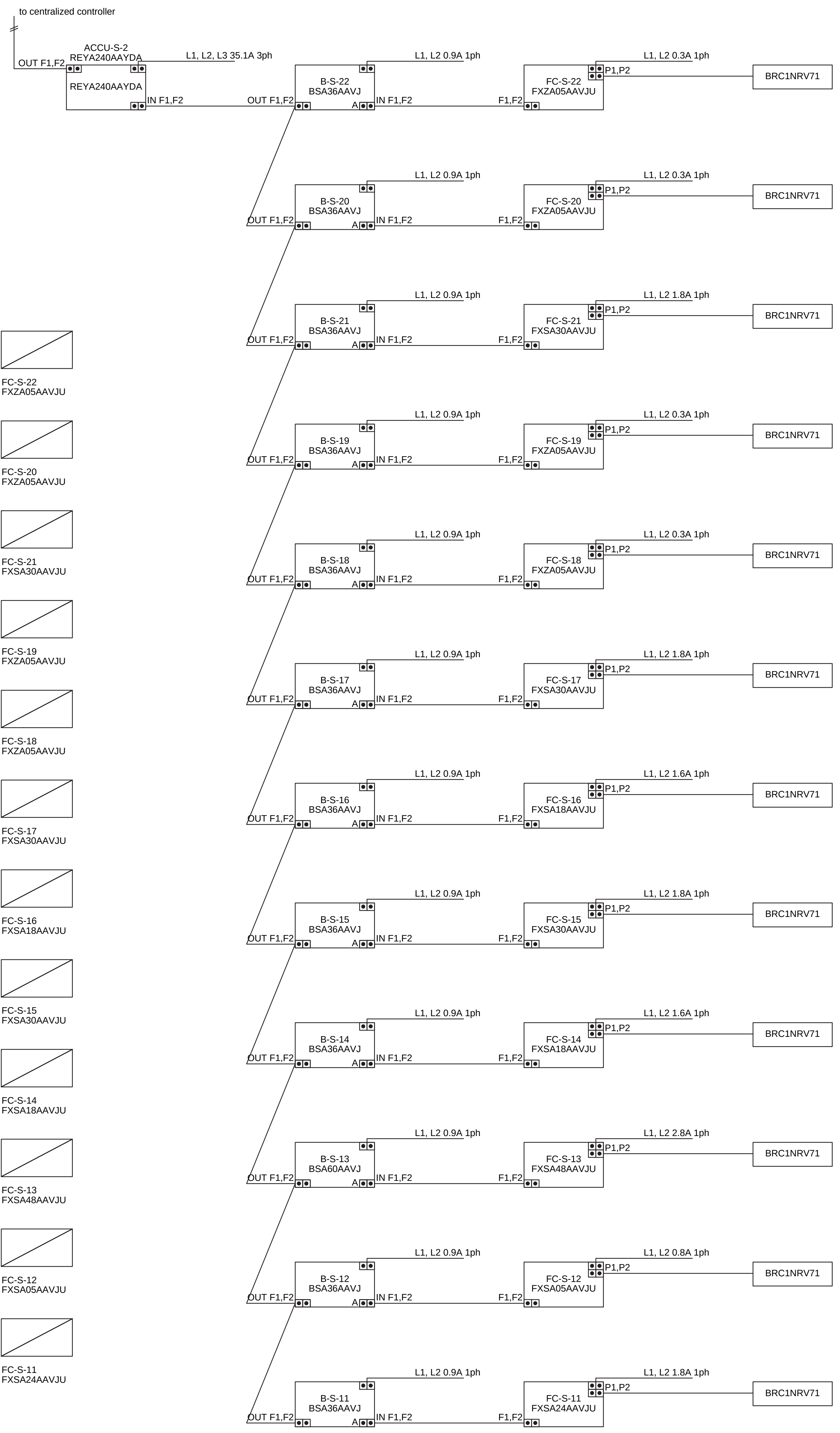
NOT TO SCALE



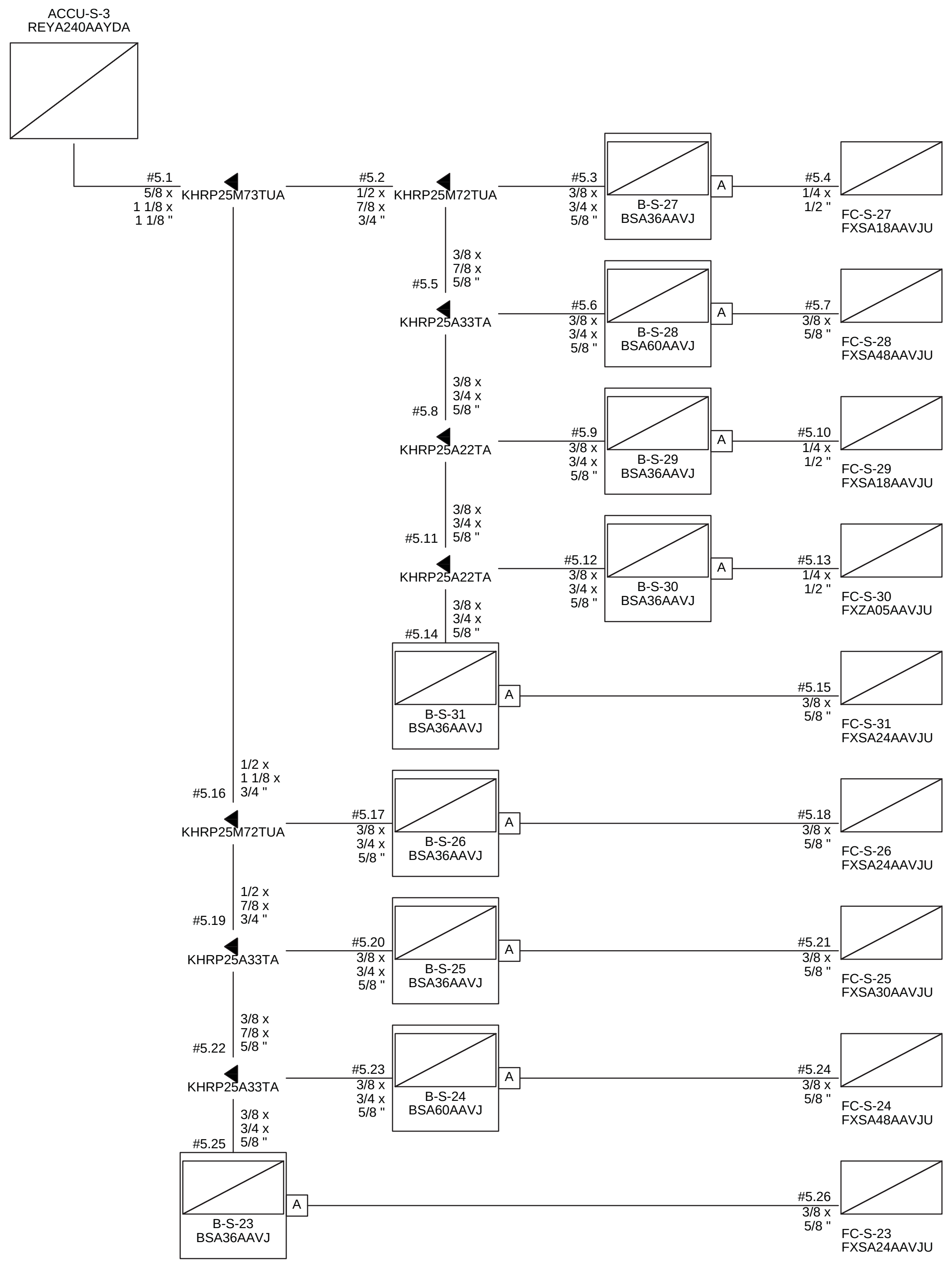
KEY PLAN
SCALE: N.T.S.



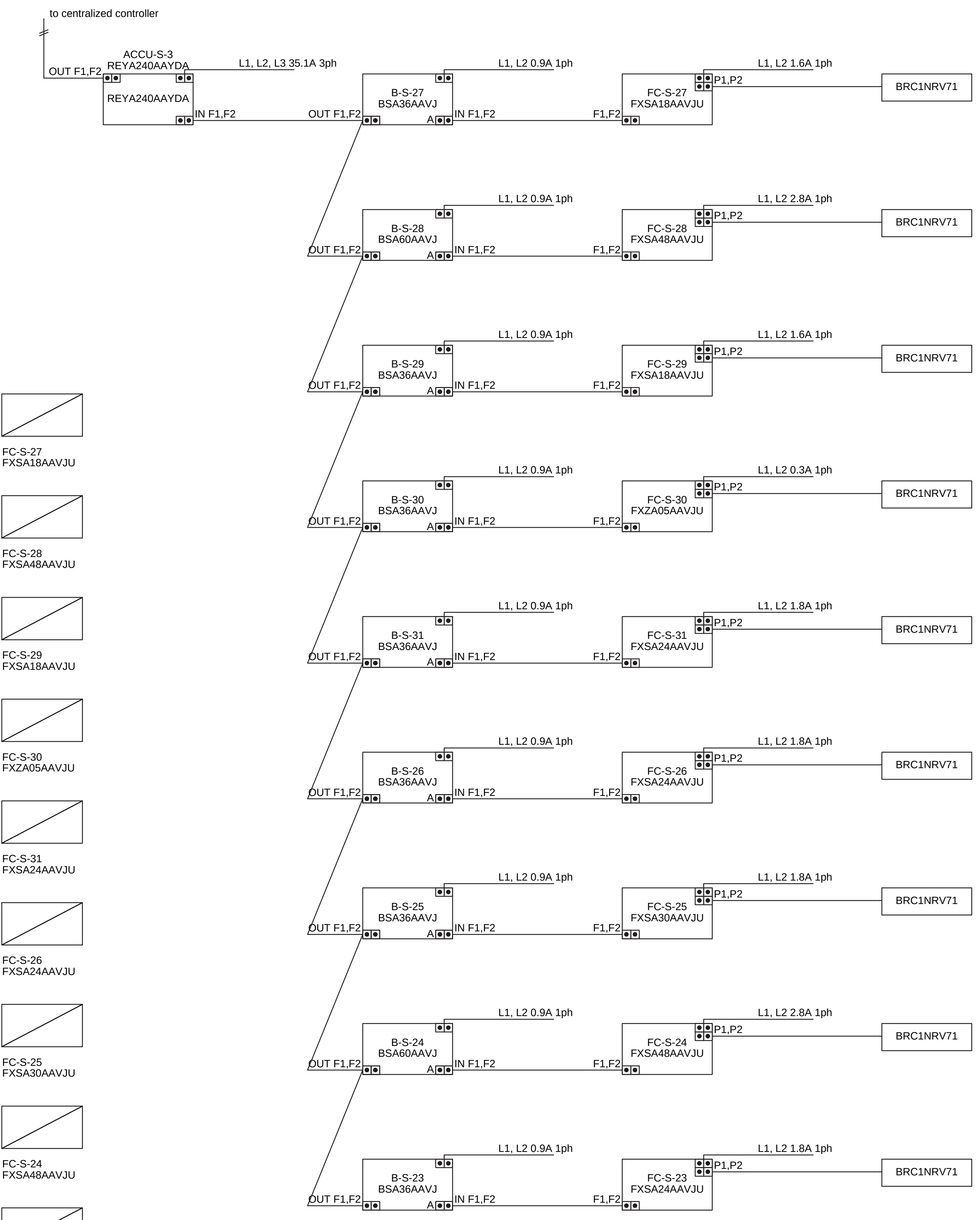
ACCU–S–2 PIPING SCHEMATIC
NTS



ACCU–S–2 WIRING SCHEMATIC
NTS



ACCU–S–3 PIPING SCHEMATIC
NTS



ACCU–S–3 WIRING SCHEMATIC
NTS

1	ISSUED FOR BUILDING DEPARTMENT FILING & BIDDING	04–28–2025

ORANGE AND ROCKLAND UTILITIES, INC.
SPRING VALLEY NEW YORK

Omdex Incorporated Consulting Engineers
21 Cross Avenue
Midland Park, NJ 07432–1811
(201) 444–0753 FAX (201) 444–0839

STATE OF NEW YORK
BRIAN W. PASECHNICK
NO. 91385
LICENSED PROFESSIONAL ENGINEER

Brian W. Pasechnick, PE
NY #91385

SNS ARCHITECTS & ENGINEERS
tel: 201.573.1767
fax:201.573.0808
www.sns–arch–eng.com

DRAFTED:	MJR
CHECKED:	–
PROJ. NO:	5593
DATE:	08.11.2024

Lorin J. Sonenshine, AIA
Cert./Lic. No. NY 018401

ENGINEERING REVIEW

DEPT.	SIGNATURE	DATE
CIVIL		
METERING		
RELAY		
TRANS. & SUB.		

DWN	DES	CHKD

DESIGN REVIEW
DATE

APPROVED
DATE

☐ INFORMATION
☐ COMMENTS
☐ BID
☐ CONSTRUCTION
☐ ________

MECHANICAL PIPING & WIRING SCHEMATICS

SVOC NEW OFFICE ADDITION
TAX MAP ID 56.52–1–2
390 WEST ROUTE 59
VILLAGE OF SPRING VALLEY
TOWN OF RAMAPO
ROCKLAND COUNTY, NEW YORK

SCALE	FILE NO.	DRAWING NUMBER	SHEET	REV.
AS NOTED		M–303	62 OF 95	

VILLAGE OF SPRING VALLEY ROCKLAND COUNTY, NEW YORK

SNS Architects & Engineers, PC
ONE PARAGON DRIVE . MONTVALE . NEW JERSEY . 07645

- John Lignos, AIA
- Lorin J. Sonenshine, AIA
- Steven Napolitano, PE, PP
- Robert Nocella, AIA