Appendix I-1
Field Noise Measurement Data

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT ALEXAN ARCADIA — PROJECT # 11663
SITE ID
SITE ADDRESS — OBSERVER(S) PETE VIZAR
START DATE 9/1/21 — END DATE 9/1/21
START TIME — END TIME

METEOROLOGICAL CONDITIONS

TEMP 69 F — HUMIDITY 72 % R.H. — WIND CALM (LIGHT) MODERATE
WINDSPD 4 MPH — DIR. N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY SUNNY CLEAR (OVRCAST) PRTLY CLDY FOG — RAIN

ACOUSTIC MEASUREMENTS

MEAS. INSTRUMENT PICCOLO SLM-3 — TYPE 1 2 — SERIAL # —
CALIBRATOR BSWA CA 114 — SERIAL # —
CALIBRATION CHECK — PRE-TEST ____ dBA SPL — POST-TEST ____ dBA SPL — WINDSCRN YES

SETTINGS (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST1) 130-145	10:54	11:09							

COMMENTS
READING TAKEN AT NORTHWEST CORNER OF [redacted] W. SANTA CLARA ST & ROLLIN PL (EXCELSIOR SCHOOL BLDG)
PRIMARY NOISE SOURCE IS TRAFFIC ON W. SANTA CLARA ST; CONSISTANT NOISE (AIR COMPRESSORS/ POWER WASH EQUIPMENT) FROM MERCEDES BENZ DEALERSHIP ACROSS W. SANTA CLARA ST;

SOURCE INFO AND TRAFFIC COUNTS

PRIMARY NOISE SOURCE (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: APX. 50' TO C/L ON W. SANTA CLARA ST
TRAFFIC COUNT DURATION: 15 MIN

COUNT 1 (OR RDWY 1)

DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	109			
MED TRKS	2			
HVY TRKS	0			
BUSES	0			
MOTRCLS	0			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ☐

COUNT 2 (OR RDWY 2)

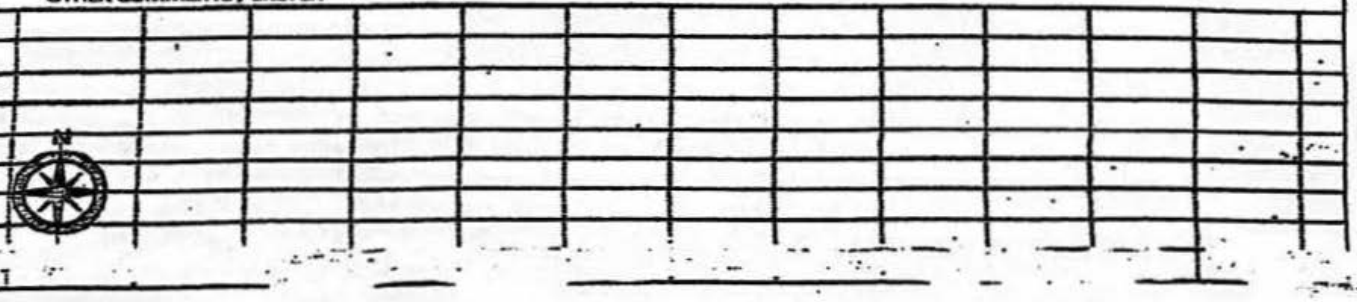
NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING (DIST. TRAFFIC (1ST RDWYS BELOW)) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: SOME DISTANT TRAFFIC NOISE FROM N. SANTA ANITA AVE;

DESCRIPTION / SKETCH

TERRAIN HARD SOFT (MIXED) FLAT OTHER:
PHOTOS 1877; 1878; 1879; 1880; 1881; 1882
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT ALEXAN ARCADIA — PROJECT # 11663
SITE ID
SITE ADDRESS — OBSERVER(S) PETE VITAR
START DATE 9/1/21 — END DATE 9/1/21
START TIME — END TIME

METEOROLOGICAL CONDITIONS
TEMP 70 F — HUMIDITY 72 % R.H. — WIND CALM (LIGHT) MODERATE
WINDSPD 2 MPH — DIR N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY SUNNY CLEAR (OVRCAST) PRTLY CLDY FOG — RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT PICOLO SLM-3 — TYPE 1 2 — SERIAL # ____
CALIBRATOR BSWA CA 114 — SERIAL # ____
CALIBRATION CHECK — PRE-TEST ____ dBA SPL — POST-TEST ____ dBA SPL — WINDSCRN YES

SETTINGS (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER: ____

	REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST2)	146-161	11:22	11:37							

COMMENTS
READING TAKEN IN PARKING AREA (BEHIND RESIDENCES) ALONG W. SANTA CLARA ST; PRIMARY NOISE SOURCE IS TRAFFIC ON W. SANTA CLARA ST; CONSISTENT NOISE (AIR COMPRESSORS/ POWER WASH EQUIPMENT) FROM MERCEDES BENZ DEALERSHIP ACROSS W. SANTA CLARA ST.

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER: ____
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: APX 65' TO C/L OF W. SANTA CLARA ST.

TRAFFIC COUNT DURATION: 15 MIN — SPEED ____ MIN

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	113			
MED TRKS	6			
HVY TRKS	1			
BUSES	0			
MOTRCLS	0			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING (DIST. TRAFFIC (1ST RDWY BELOW)) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: SOME DISTANT TRAFFIC NOISE FROM N. SANTA ANITA AVE.

DESCRIPTION / SKETCH
TERRAIN (HARD) SOFT MIXED FLAT OTHER: ____
PHOTOS 1884; 1885; 1886; 1887; 1888; 1889; 1890
OTHER COMMENTS / SKETCH

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT ALEXAN ARCADIA — PROJECT # 11663
SITE ID
SITE ADDRESS — OBSERVER(S) PETE VITAR
START DATE 9/1/21 — END DATE 9/1/21
START TIME — END TIME

METEOROLOGICAL CONDITIONS
TEMP 70 F — HUMIDITY 72 % R.H. — WIND CALM (LIGHT) MODERATE
WINDSPD 2 MPH — DIR N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY SUNNY CLEAR (OVRCAST) PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT PICCOLO SLM-3 — TYPE 1 2 — SERIAL # —
CALIBRATOR ISSWA CA 114 — SERIAL # —
CALIBRATION CHECK — PRE-TEST ___ dBA SPL — POST-TEST ___ dBA SPL — WINDSCRN YES

SETTINGS (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST3) 182-187	11:54	12:10							

COMMENTS
READING TAKEN IN NORTHEAST PORTION OF ARCADIA COMMUNITY PARK, JUST NORTH OF ALTA ST; PRIMARY NOISE SOURCE IS TRAFFIC ON S SANTA ANITA AVE.

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP: APX 85' TO ~~WROUGHT IRON~~ FENCE SE ON S SANTA ANITA AVE

TRAFFIC COUNT DURATION: 15 MIN — SPEED ___ MIN

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	381			
MED TRKS	7			
HVY TRKS	4			
BUSES	1			
MOTRCLS	2			

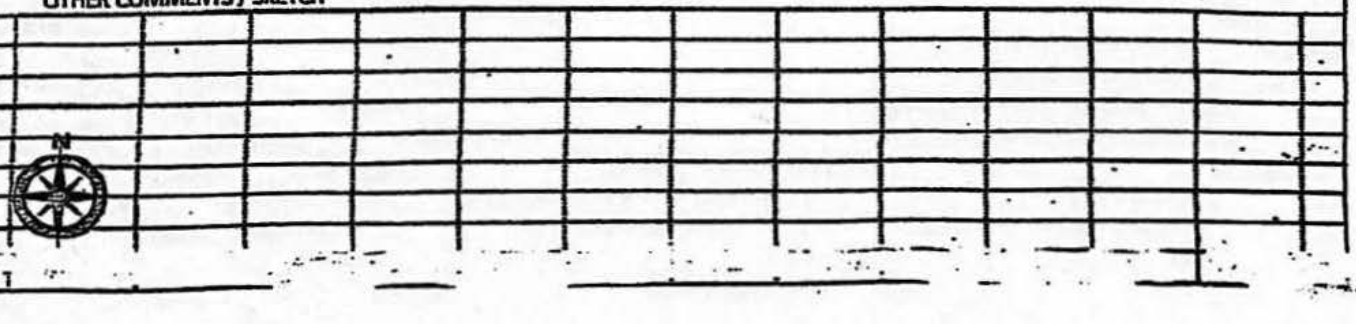
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING DIST. CONVRSTNS / YELLING DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH
TERRAIN HARD SOFT (MIXED) FLAT OTHER:
PHOTOS 1892; 1893; 1894; 1895;
OTHER COMMENTS / SKETCH



DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT ALEXAN ARCADIA — PROJECT # 11663
SITE ID
SITE ADDRESS — OBSERVER(S) PETE VITAR
START DATE 9/1/21 — END DATE 9/1/21
START TIME — END TIME

METEOROLOGICAL CONDITIONS
TEMP 70 F — HUMIDITY 72 % R.H. — WIND CALM (LIGHT) MODERATE
WINDSPD 2 MPH — DIR N NE S SE S SW W NW — VARIABLE STEADY GUSTY
SKY SUNNY CLEAR (OVRCAST) PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT PICCOLO SLM-3 — TYPE 1 2 — SERIAL # —
CALIBRATOR BSWA CA 114 — SERIAL # —
CALIBRATION CHECK — PRE-TEST — dBA SPL — POST-TEST — dBA SPL — WINDSCRN YES

SETTINGS (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER:

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(SJ4) 178-182	12:30	12:44							

COMMENTS READING TAKEN BEHIND (IN ALLEY) OF 16 ALTA ST (RESIDENTIAL); PRIMARY NOISE SOURCE IS TRAFFIC ON SANTA ANITA AVE TO THE WEST; OCCASIONAL CARS IN ALLEY

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT — DIST. TO RDWY C/L OR EOP:
TRAFFIC COUNT DURATION: 15 MIN — SPEED MIN

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED
AUTOS	8			
MED TRKS	0			
HVY TRKS	0			
BUSES	0			
MOTRCLS	0			

IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ✓

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB SPEED	SB/WB SPEED

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS (BIRDS) DIST. INDUSTRIAL
DIST. KIDS PLAYING (DIST. CONVRSTNS / YELLING) DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER:

DESCRIPTION / SKETCH
TERRAIN HARD SOFT (MIXED) FLAT OTHER:
PHOTOS 1902; 1903; 1904; 1905
OTHER COMMENTS / SKETCH

ADX 300' TO C/L ON SANTA ANITA AVE TO THE WEST

DUDEK

FIELD NOISE MEASUREMENT DATA

PROJECT ALEXAN ARCADIA PROJECT # 11663
SITE ID
SITE ADDRESS OBSERVER(S) PETE VITAR
START DATE 9/1/21 END DATE 9/1/21
START TIME END TIME

METEOROLOGICAL CONDITIONS
TEMP 71 F HUMIDITY 69 % R.H. WIND CALM (LIGHT) MODERATE
WINDSPD 5 MPH DIR. N NE S SE S SW W NW VARIABLE STEADY GUSTY
SKY SUNNY CLEAR (OVRCAST) PRTLY CLDY FOG RAIN

ACOUSTIC MEASUREMENTS
MEAS. INSTRUMENT PICCOLO SLM-3 TYPE 1 2 SERIAL # ____
CALIBRATOR BSWA CA 114 SERIAL # ____
CALIBRATION CHECK PRE-TEST ____ dBA SPL POST-TEST ____ dBA SPL WINDSCRN YES

SETTINGS (A-WTD) (SLOW) FAST FRONTAL RANDOM ANSI OTHER: ____

REC. #	BEGIN	END	Leq	Lmax	Lmin	L90	L50	L10	OTHER (SPECIFY METRIC
(ST5) 197-212	13:04	13:19							

COMMENTS
READING TAKEN IN PARKING LOT AREA BEHIND COMMERCIAL BUILDING AT 150 N. SANTA ANITA AVE; NOISE SOURCES ARE TRAFFIC ON N. SANTA ANITA AVE TO THE WEST; CONSTRUCTION NOISE FROM BUILDING ON SW CORNER OF N. SANTA ANITA AVE & E. SANTA CLARA ST; SOME TRAFFIC IN PARKING LOT

SOURCE INFO AND TRAFFIC COUNTS
PRIMARY NOISE SOURCE (TRAFFIC) AIRCRAFT RAIL INDUSTRIAL OTHER:
ROADWAY TYPE: ASPHALT DIST. TO RDWY C/L OR EOP: APX 200-70 C/L ON S. SANTA ANITA AVE
TRAFFIC COUNT DURATION: 15 MIN SPEED ____ MIN SPEED

COUNT 1 (OR RDWY 1) DIRECTION	NB/EB	SB/WB	NB/EB	SB/WB
AUTOS				
MED TRKS				
HVY TRKS				
BUSES				
MOTRCLS				

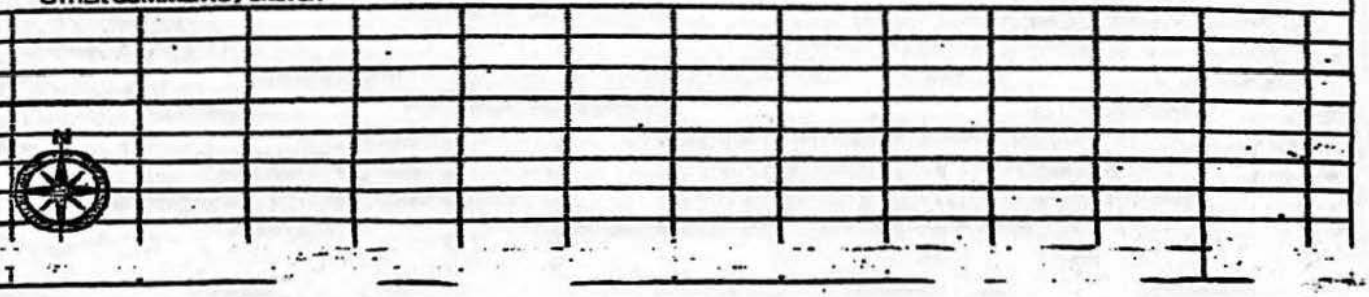
IF COUNTING BOTH DIRECTIONS AS ONE, CHECK HERE ☑

COUNT 2 (OR RDWY 2)	NB/EB	SB/WB	NB/EB	SB/WB

SPEEDS ESTIMATED BY: RADAR / DRIVING THE PACE
POSTED SPEED LIMIT SIGNS SAY:

OTHER NOISE SOURCES (BACKGROUND): DIST. AIRCRAFT RUSTLING LEAVES DIST. BARKING DOGS BIRDS DIST. INDUSTRIAL
DIST. KIDS PLAYING (DIST. CONVRSTNS / YELLING) DIST. TRAFFIC (LIST RDWYS BELOW) DISTD GARDENERS/LANDSCAPING NOISE
OTHER: ____

DESCRIPTION / SKETCH
TERRAIN (HARD) SOFT MIXED FLAT OTHER: ____
PHOTOS 1907; 1908; 1909; 1910; 1911; 1912; 1913
OTHER COMMENTS / SKETCH



ST1

Rec 130 to 145	Slow Response		dBA weighting			2.0 dB resolution stats												
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin	L1%	L5%	L10%	L50%	L90%	L95%	L99%	Lmedian	Lmean	StdDev	L2%	L8%	L25%
9/1/2021 10:54	1.0 min	64.7	82.5	69.6	55.9	69	67	67	63	57	57	55	63	62.6	3.4	68.1	67	65
9/1/2021 10:55	1.0 min	64.8	82.6	75.5	55	75	71	67	57	55	55	55	57	59.6	4.95	73.8	69	61
9/1/2021 10:56	1.0 min	64.4	82.2	73.2	53.3	73	69	69	61	53	53	53	61	60.5	5.1	71	69	63
9/1/2021 10:57	1.0 min	63.1	80.9	70.3	51.3	69	69	67	57	53	51	51	57	58.6	5.48	69	67	63
9/1/2021 10:58	1.0 min	67.1	84.9	71.3	56.2	71	69	69	65	60.8	57	55	65	65	3.51	71	69	67
9/1/2021 10:59	1.0 min	67.8	85.6	74.3	54.7	73	71	71	65	55	55	54.6	65	63.9	5.58	73	71	69
9/1/2021 11:00	1.0 min	67.1	84.9	73.5	57.5	73	71	69	65	59	57	57	65	64.3	4.29	71	71	67
9/1/2021 11:01	1.0 min	66.1	83.9	81.3	56.1	77.4	69	67	61	57	57	55	61	61	4.55	75	67	63
9/1/2021 11:02	1.0 min	65	82.8	73.3	54.6	71	69	67	63	55	55	53	63	61.9	4.55	71	67	65
9/1/2021 11:03	1.0 min	65.6	83.4	72.8	55.2	71	71	67	63	55	55	55	63	62.2	4.59	71	69	65
9/1/2021 11:04	1.0 min	60.2	78	67.1	56.4	65.4	65	63	57	55	55	55	57	58.3	2.68	65	63	59
9/1/2021 11:05	1.0 min	63.7	81.5	69.5	53.5	69	67	67	59	53	53	53	59	59.8	5.38	69	67	65
9/1/2021 11:06	1.0 min	64.6	82.4	68.7	55.1	67	67	67	63	56.8	55	55	63	62.1	3.88	67	67	65
9/1/2021 11:07	1.0 min	64	81.8	71.5	57.5	71	67	67	61	57	57	57	61	61.7	3.5	69	67	65
9/1/2021 11:08	1.0 min	64.4	82.2	70.5	56.4	69	69	67	61	57	57	55	61	61.8	4.1	69	67	65
9/1/2021 11:09	8 sec	58.6	67.6	62	56.3	61	61	61	57	55	55	55	57	57.8	2	61	61	59

ST2

Rec 146 to 161	Slow Response		dBA weighting			2.0 dB resolution stats												
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin	L1%	L5%	L10%	L50%	L90%	L95%	L99%	Lmedian	Lmean	StdDev	L2%	L8%	L25%
9/1/2021 11:22	1.0 min	61.6	79.4	67.7	53.9	67	65	65	57	53	53	53	57	58.2	4.53	67	65	63
9/1/2021 11:23	1.0 min	67.7	85.5	74.3	60.8	73	71	71	65	61	61	61	65	65.5	3.22	73	71	67
9/1/2021 11:24	1.0 min	66.6	84.4	71.4	59.8	71	69	67	65	61	59	59	65	64.9	2.61	69	69	67
9/1/2021 11:25	1.0 min	64.5	82.3	70.4	55	69	69	67	61	55	55	55	61	61.1	5.03	69	67	65
9/1/2021 11:26	1.0 min	65.5	83.3	70.5	56	69	69	69	63	55	55	55	63	62.4	4.84	69	69	67
9/1/2021 11:27	1.0 min	64.8	82.6	70	54.7	69	67	67	63	55	55	53	63	61.7	4.49	69	67	65
9/1/2021 11:28	1.0 min	64.3	82.1	70.3	55.6	69	67	67	61	55	55	55	61	61.7	4.15	69	67	65
9/1/2021 11:29	1.0 min	66.4	84.2	76	55.2	75	73	67	61	55	55	55	61	61.2	5.64	75	71	65
9/1/2021 11:30	1.0 min	65.2	83	71.2	57.2	69	69	67	63	57	57	57	63	62.9	3.38	69	67	65
9/1/2021 11:31	1.0 min	65.1	82.9	71.3	54.3	71	69	69	63	55	53	53	63	62.8	4.36	71	69	65
9/1/2021 11:32	1.0 min	63.4	81.2	71	54.2	69	67.1	65.2	59	55	55	53	59	60	4.13	69	67	63
9/1/2021 11:33	1.0 min	65.9	83.7	70.7	54.6	69	69	69	63	55	54.9	53	63	62.3	5.36	69	69	67
9/1/2021 11:34	1.0 min	63.4	81.2	70.1	54.3	69	67.1	67	57	53	53	53	57	59.3	5.34	69	67	63.5
9/1/2021 11:35	1.0 min	67.3	85.1	72.7	59	71	71	69	65	61	59	59	65	65.1	3.26	71	71	67
9/1/2021 11:36	1.0 min	79.6	97.4	94	61.1	91	87	81	67	63	61	61	67	69.3	7.01	91	82.4	71
9/1/2021 11:37	12 sec	64.8	75.6	69.2	60	67	67	67	63	59	59	59	63	63.2	2.8	67	67	66.5

ST3

Rec 162 to 177	Slow Response		dBA weighting			2.0 dB resolution stats												
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin	L1%	L5%	L10%	L50%	L90%	L95%	L99%	Lmedian	Lmean	StdDev	L2%	L8%	L25%
9/1/2021 11:54	1.0 min	62.1	79.9	67.4	54.1	66	64	64	60	54	54	54	60	59.7	3.45	66	64	62
9/1/2021 11:55	1.0 min	64.4	82.2	69.6	53.4	68	68	68	62	54	53.9	52	62	61.2	4.91	68	68	66
9/1/2021 11:56	1.0 min	66.1	83.9	70.3	54.3	70	68	68	66	56	54	54	66	63.3	4.89	68	68	68
9/1/2021 11:57	1.0 min	58.1	75.9	66.2	51.3	64.4	64	62	53	50	50	50	53	54.4	4.4	64	62	56
9/1/2021 11:58	1.0 min	65.6	83.4	71.8	55.1	70	70	68	64	56	56	54	64	62.9	4.27	70	70	66
9/1/2021 11:59	1.0 min	61.4	79.2	66.1	53	66	64	64	60	54	52	52	60	58.6	4.28	64	64	62
9/1/2021 12:00	1.0 min	68.2	86	76.9	60.8	76	72	70	66	62	60	60	66	65.7	3.49	74	70	68
9/1/2021 12:01	1.0 min	64.9	82.7	71.2	53.5	70	70	68	60	54	52	52	60	60.9	5.55	70	68	66
9/1/2021 12:02	1.0 min	69	86.8	76.1	55.5	74	74	72	66	58	56	54	66	65	5.68	74	74	70
9/1/2021 12:03	1.0 min	65.6	83.4	69.7	55.9	68	68	68	64	56	56	56	64	63.2	3.89	68	68	66
9/1/2021 12:04	1.0 min	61.6	79.4	69	55.2	68	68	66	58	54	54	54	58	58.8	3.88	68	66	60
9/1/2021 12:05	1.0 min	67.5	85.3	76.9	59.8	76	72	68	64	62	62	60	64	65	3.11	74.8	70	66
9/1/2021 12:06	1.0 min	63.1	80.9	68.9	56.5	68	68	66	60	56	56	56	60	60.6	3.62	68	66	64
9/1/2021 12:07	1.0 min	67.4	85.2	74.2	55.8	72	72	70	65	56	56	54	65	63.6	5.48	72	70	68
9/1/2021 12:08	1.0 min	65.6	83.4	70.3	57.1	68	68	68	64	58	56	56	64	63.3	3.57	68	68	66
9/1/2021 12:09	17 sec	68.8	81.1	71.2	62.3	70	70	70	68	64	62	62	68	67.6	2.62	70	70	70

ST4

Rec 178 to 192	Slow Response		dBA weighting			2.0 dB resolution stats												
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin	L1%	L5%	L10%	L50%	L90%	L95%	L99%	Lmedian	Lmean	StdDev	L2%	L8%	L25%
9/1/2021 12:30	1.0 min	58	75.8	65.1	52.9	65	63	61	55	53	53	53	55	55.8	3.06	63	61	57
9/1/2021 12:31	1.0 min	56.3	74.1	69.3	51.5	65.4	59	55	53	51	51	51	53	53.7	2.86	63	57	55
9/1/2021 12:32	1.0 min	54.4	72.2	57.2	52.3	57	55	55	53	51	51	51	53	53.1	1.64	57	55	55
9/1/2021 12:33	1.0 min	58.1	75.9	68	52.5	67	63	59	55	53	53	52.6	55	55.2	3.22	65.8	61	55
9/1/2021 12:34	1.0 min	60.5	78.3	67.4	53.1	65	65	63	59	53	53	53	59	57.9	3.66	65	63	61
9/1/2021 12:35	1.0 min	59.2	77	66.1	54	65	63	61	57	53	53	53	57	57	3.18	65	63	59
9/1/2021 12:36	1.0 min	63.7	81.5	72.2	55.1	71	69	67	59	55	55	55	59	59.9	4.6	71	67	63
9/1/2021 12:37	1.0 min	61	78.8	72.7	54.1	71	63.1	59	55	53	53	53	55	56.5	3.54	71	59	57
9/1/2021 12:38	1.0 min	56.5	74.3	70.1	52.7	67	61	59	55	53	53	51	55	54.9	3.06	65.8	59	55
9/1/2021 12:39	1.0 min	57.4	75.2	63.6	53.8	63	61	59	55	53	53	53	55	55.8	2.43	63	61	57
9/1/2021 12:40	1.0 min	55.1	72.9	57.5	53.5	57	55	55	55	53	53	53	55	54.1	1.17	57	55	55
9/1/2021 12:41	1.0 min	56.6	74.4	62.4	54.1	61	59	57	55	53	53	53	55	55.4	1.68	61	57	55
9/1/2021 12:42	1.0 min	59.1	76.9	69.1	55.3	67	63.1	59	55	55	55	55	55	56.5	2.86	67	61	57
9/1/2021 12:43	1.0 min	55.9	73.7	57.7	54.3	57	57	57	55	53	53	53	55	54.8	1.07	57	57	55
9/1/2021 12:44	1.0 min	61.3	79.1	72.8	53.8	71	67	63	55	53	53	53	55	56.6	4.34	71	65	57

ST5

Rec 197 to 212	Slow Response		dBA weighting			2.0 dB resolution stats												
Date hh:mm:ss	LeqPeriod	Leq	SEL	Lmax	Lmin	L1%	L5%	L10%	L50%	L90%	L95%	L99%	Lmedian	Lmean	StdDev	L2%	L8%	L25%
9/1/2021 13:04	1.0 min	60.8	78.6	70.2	56.8	69	65.4	61	59	57	57	55	59	58.7	2.68	67	63	59
9/1/2021 13:05	1.0 min	59.7	77.5	69	56.5	65	61	59	57	55	55	55	57	57.6	1.88	63	60.4	59
9/1/2021 13:06	1.0 min	60.1	77.9	69.3	57.4	67.4	65	61	57	57	57	57	57	58.7	2.53	67	63	59
9/1/2021 13:07	1.0 min	58.3	76.1	61.3	55.8	61	59	59	57	55	55	55	57	57	1.32	59	59	57
9/1/2021 13:08	1.0 min	61.4	79.2	68	58.4	67	63	63	59	59	57	57	59	60.1	1.84	65	63	61
9/1/2021 13:09	1.0 min	60.7	78.5	66.5	57.5	65	63	61	59	57	57	57	59	59.1	2.03	65	63	59
9/1/2021 13:10	1.0 min	59.6	77.4	71	56.9	67.4	63	61	57	57	57	57	57	58	2.19	65	61	59
9/1/2021 13:11	1.0 min	61.1	78.9	66.1	57.4	65	63	63	59	57	57	57	59	59.5	2.17	65	63	61
9/1/2021 13:12	1.0 min	59.5	77.3	63.7	56.8	61.4	61	61	59	57	57	55	59	58.5	1.38	61	61	59
9/1/2021 13:13	1.0 min	58.4	76.2	61	56.8	59	59	59	57	57	57	55	57	57.5	0.94	59	59	57
9/1/2021 13:14	1.0 min	61	78.8	68.6	57.8	67	65	61	59	57	57	57	59	59.2	2.3	67	63	59
9/1/2021 13:15	1.0 min	60.5	78.3	68.6	56.3	65	63	61	57	55	55	55	57	58.4	2.42	65	61	59
9/1/2021 13:16	1.0 min	66.3	84.1	78.4	55.6	77	73	69	59	55	55	55	59	60	5.34	77	71	61
9/1/2021 13:17	1.0 min	60.6	78.4	64.6	56.9	63	63	61	59	57	57	55	59	59.5	1.77	63	61	61
9/1/2021 13:18	1.0 min	61.8	79.6	67	57.4	65	63	63	59	57	57	57	59	60.2	2.2	65	63	61
9/1/2021 13:19	8 sec	62.4	71.4	65.3	60.7	65	63	63	61	61	61	59	61	61.8	1.32	65	63	63

Appendix I-2
Construction Noise Modeling Data

Report date: 8/24/2021
Case Description: Alexan Arcadia - Demolition - Nearest

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	30	0
Backhoe	No	40		77.6	50	0
Concrete Saw	No	20		89.6	70	0
Front End Loader	No	40		79.1	50	0
Tractor	No	40	84		80	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		86.1	82.1	N/A	N/A	N/A	N/A
Backhoe		77.6	73.6	N/A	N/A	N/A	N/A
Concrete Saw		86.7	79.7	N/A	N/A	N/A	N/A
Front End Loader		79.1	75.1	N/A	N/A	N/A	N/A
Tractor		79.9	75.9	N/A	N/A	N/A	N/A
	Total	86.7	85.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	650	0
Backhoe	No	40		77.6	670	0
Concrete Saw	No	20		89.6	700	0
Front End Loader	No	40		79.1	680	0
Tractor	No	40	84		700	0

Results

Equipment		Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Dozer		59.4	55.4	N/A	N/A	N/A	N/A
Backhoe		55	51	N/A	N/A	N/A	N/A
Concrete Saw		66.7	59.7	N/A	N/A	N/A	N/A
Front End Loader		56.4	52.5	N/A	N/A	N/A	N/A
Tractor		61.1	57.1	N/A	N/A	N/A	N/A
	Total	66.7	63.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	650	0
Backhoe	No	40		77.6	670	0
Concrete Saw	No	20		89.6	700	0
Front End Loader	No	40		79.1	680	0
Tractor	No	40	84		700	0

Results

Equipment		Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Dozer		59.4	55.4	N/A	N/A	N/A	N/A
Backhoe		55	51	N/A	N/A	N/A	N/A
Concrete Saw		66.7	59.7	N/A	N/A	N/A	N/A
Front End Loader		56.4	52.5	N/A	N/A	N/A	N/A
Tractor		61.1	57.1	N/A	N/A	N/A	N/A
	Total	66.7	63.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
School to the NW	Residential	65	60	55

Equipment

			Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Dozer	No	40		81.7	630	0
Backhoe	No	40		77.6	650	0
Concrete Saw	No	20		89.6	670	0
Front End Loader	No	40		79.1	640	0
Tractor	No	40	84		660	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		59.7	55.7	N/A	N/A	N/A	N/A
Backhoe		55.3	51.3	N/A	N/A	N/A	N/A
Concrete Saw		67	60	N/A	N/A	N/A	N/A
Front End Loader		57	53	N/A	N/A	N/A	N/A
Tractor		61.6	57.6	N/A	N/A	N/A	N/A
	Total	67	63.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	860	0
Backhoe	No	40		77.6	880	0
Concrete Saw	No	20		89.6	890	0
Front End Loader	No	40		79.1	880	0
Tractor	No	40	84		900	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		57	53	N/A	N/A	N/A	N/A
Backhoe		52.6	48.7	N/A	N/A	N/A	N/A
Concrete Saw		64.6	57.6	N/A	N/A	N/A	N/A
Front End Loader		54.2	50.2	N/A	N/A	N/A	N/A
Tractor		58.9	54.9	N/A	N/A	N/A	N/A
	Total	64.6	61	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 8/24/2021
Case Description: Alexan Arcadia - Demolition - Typical

---- Receptor #1 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	165	0
Backhoe	No	40		77.6	165	0
Concrete Saw	No	20		89.6	165	0
Front End Loader	No	40		79.1	165	0
Tractor	No	40	84		165	0

Equipment		Calculated (dBA) *Lmax	Leq	Results Day Lmax	Noise Limits (dBA) Day Leq	Evening Lmax	Evening Leq
Dozer		71.3	67.3	N/A	N/A	N/A	N/A
Backhoe		67.2	63.2	N/A	N/A	N/A	N/A
Concrete Saw		79.2	72.2	N/A	N/A	N/A	N/A
Front End Loader		68.7	64.8	N/A	N/A	N/A	N/A
Tractor		73.6	69.7	N/A	N/A	N/A	N/A
	Total	79.2	75.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Park	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	825	0
Backhoe	No	40		77.6	825	0
Concrete Saw	No	20		89.6	825	0
Front End Loader	No	40		79.1	825	0

Tractor		No	40	84		825	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		57.3	53.3	N/A	N/A	N/A	N/A
Backhoe		53.2	49.2	N/A	N/A	N/A	N/A
Concrete Saw		65.2	58.2	N/A	N/A	N/A	N/A
Front End Loader		54.8	50.8	N/A	N/A	N/A	N/A
Tractor		59.7	55.7	N/A	N/A	N/A	N/A
	Total	65.2	61.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	825	0
Backhoe	No	40		77.6	825	0
Concrete Saw	No	20		89.6	825	0
Front End Loader	No	40		79.1	825	0
Tractor	No	40	84		825	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer		57.3	53.3	N/A	N/A	N/A	N/A
Backhoe		53.2	49.2	N/A	N/A	N/A	N/A
Concrete Saw		65.2	58.2	N/A	N/A	N/A	N/A
Front End Loader		54.8	50.8	N/A	N/A	N/A	N/A
Tractor		59.7	55.7	N/A	N/A	N/A	N/A
	Total	65.2	61.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	765	0
Backhoe	No	40		77.6	765	0
Concrete Saw	No	20		89.6	765	0
Front End Loader	No	40		79.1	765	0
Tractor	No	40	84		765	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	58	54	N/A	N/A	N/A	N/A
Backhoe	53.9	49.9	N/A	N/A	N/A	N/A
Concrete Saw	65.9	58.9	N/A	N/A	N/A	N/A
Front End Loader	55.4	51.4	N/A	N/A	N/A	N/A
Tractor	60.3	56.3	N/A	N/A	N/A	N/A
Total	65.9	62.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Dozer	No	40		81.7	980	0
Backhoe	No	40		77.6	980	0
Concrete Saw	No	20		89.6	980	0
Front End Loader	No	40		79.1	980	0
Tractor	No	40	84		980	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Dozer	55.8	51.8	N/A	N/A	N/A	N/A
Backhoe	51.7	47.7	N/A	N/A	N/A	N/A
Concrete Saw	63.7	56.7	N/A	N/A	N/A	N/A
Front End Loader	53.3	49.3	N/A	N/A	N/A	N/A
Tractor	58.2	54.2	N/A	N/A	N/A	N/A
Total	63.7	60.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/24/2021
Case Description: Alexan Arcadia - Site Prep - Nearest

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		30	0
Scraper	No	40		83.6	50	0
Concrete Saw	No	20		89.6	70	0
Front End Loader	No	40		79.1	50	0

		Calculated (dBA)		Results Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		89.4	85.5	N/A	N/A	N/A	N/A
Scraper		83.6	79.6	N/A	N/A	N/A	N/A
Concrete Saw		86.7	79.7	N/A	N/A	N/A	N/A
Front End Loader		79.1	75.1	N/A	N/A	N/A	N/A
	Total	89.4	87.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		650	0
Scraper	No	40		83.6	670	0
Concrete Saw	No	20		89.6	700	0
Front End Loader	No	40		79.1	680	0

Results

Equipment		Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Grader		59.4	55.4	N/A	N/A	N/A	N/A
Scraper		55	51	N/A	N/A	N/A	N/A
Concrete Saw		66.7	59.7	N/A	N/A	N/A	N/A
Front End Loader		56.4	52.5	N/A	N/A	N/A	N/A
	Total	66.7	63.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		650	0
Scraper	No	40		83.6	670	0
Concrete Saw	No	20		89.6	700	0
Front End Loader	No	40		79.1	680	0

Results

Equipment		Calculated (dBA) *Lmax	Leq	Noise Limits (dBA) Day Lmax	Day Leq	Evening Lmax	Evening Leq
Grader		59.4	55.4	N/A	N/A	N/A	N/A
Scraper		55	51	N/A	N/A	N/A	N/A
Concrete Saw		66.7	59.7	N/A	N/A	N/A	N/A
Front End Loader		56.4	52.5	N/A	N/A	N/A	N/A
	Total	66.7	63.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
School to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		630	0

Scraper	No	40	83.6	650	0	
Concrete Saw	No	20	89.6	670	0	
Front End Loader	No	40	79.1	640	0	

				Results			
	Calculated (dBA)			Noise Limits (dBA)			
				Day		Evening	
Equipment	*Lmax	Leq		Lmax	Leq	Lmax	Leq
Grader	59.7	55.7		N/A	N/A	N/A	N/A
Scraper	55.3	51.3		N/A	N/A	N/A	N/A
Concrete Saw	67	60		N/A	N/A	N/A	N/A
Front End Loader	57	53		N/A	N/A	N/A	N/A
Total	67	63.6		N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

				---- Receptor #5 ----	
	Baselines (dBA)				
Description	Land Use	Daytime	Evening	Night	
Residences to the NW	Residential	65	60	55	

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Grader	No	40	85		860	0
Scraper	No	40		83.6	880	0
Concrete Saw	No	20		89.6	890	0
Front End Loader	No	40		79.1	880	0

				Results			
	Calculated (dBA)			Noise Limits (dBA)			
				Day		Evening	
Equipment	*Lmax	Leq		Lmax	Leq	Lmax	Leq
Grader	57	53		N/A	N/A	N/A	N/A
Scraper	52.6	48.7		N/A	N/A	N/A	N/A
Concrete Saw	64.6	57.6		N/A	N/A	N/A	N/A
Front End Loader	54.2	50.2		N/A	N/A	N/A	N/A
Total	64.6	61		N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 8/24/2021
Case Description: Alexan Arcadia - Site Prep - Typical

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		165	0
Scraper	No	40		83.6	165	0
Concrete Saw	No	20		89.6	165	0
Front End Loader	No	40		79.1	165	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		74.6	70.7	N/A	N/A	N/A	N/A
Scraper		73.2	69.2	N/A	N/A	N/A	N/A
Concrete Saw		79.2	72.2	N/A	N/A	N/A	N/A
Front End Loader		68.7	64.8	N/A	N/A	N/A	N/A
	Total	79.2	76	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		825	0
Scraper	No	40		83.6	825	0
Concrete Saw	No	20		89.6	825	0
Front End Loader	No	40		79.1	825	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	60.7	56.7	N/A	N/A	N/A	N/A
Scraper	59.2	55.3	N/A	N/A	N/A	N/A
Concrete Saw	65.2	58.2	N/A	N/A	N/A	N/A

Front End Loader		54.8	50.8	N/A	N/A	N/A	N/A
	Total	65.2	62	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Grader	No	40	85		825	0
Scraper	No	40		83.6	825	0
Concrete Saw	No	20		89.6	825	0
Front End Loader	No	40		79.1	825	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader	60.7	56.7	N/A	N/A	N/A	N/A
Scraper	59.2	55.3	N/A	N/A	N/A	N/A
Concrete Saw	65.2	58.2	N/A	N/A	N/A	N/A
Front End Loader	54.8	50.8	N/A	N/A	N/A	N/A
Total	65.2	62	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Grader	No	40	85		765	0
Scraper	No	40		83.6	765	0
Concrete Saw	No	20		89.6	765	0
Front End Loader	No	40		79.1	765	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq

Grader		61.3	57.3	N/A	N/A	N/A	N/A
Scraper		59.9	55.9	N/A	N/A	N/A	N/A
Concrete Saw		65.9	58.9	N/A	N/A	N/A	N/A
Front End Loader		55.4	51.4	N/A	N/A	N/A	N/A
	Total	65.9	62.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Grader	No	40	85		980	0
Scraper	No	40		83.6	980	0
Concrete Saw	No	20		89.6	980	0
Front End Loader	No	40		79.1	980	0

		Calculated (dBA)		Results Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Grader		59.2	55.2	N/A	N/A	N/A	N/A
Scraper		57.7	53.8	N/A	N/A	N/A	N/A
Concrete Saw		63.7	56.7	N/A	N/A	N/A	N/A
Front End Loader		53.3	49.3	N/A	N/A	N/A	N/A
	Total	63.7	60.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 8/25/2021
Case Description: Alexan Arcadia - Grading - Nearest

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Description	Equipment Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Excavator	No	40		80.7	30	0
Grader	No	40	85		50	0
Dozer	No	40		81.7	70	0
Front End Loader	No	40		79.1	50	0
Backhoe	No	40		77.6	80	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	85.1	81.2	N/A	N/A	N/A	N/A
Grader	85	81	N/A	N/A	N/A	N/A
Dozer	78.7	74.8	N/A	N/A	N/A	N/A
Front End Loader	79.1	75.1	N/A	N/A	N/A	N/A
Backhoe	73.5	69.5	N/A	N/A	N/A	N/A
Total	85.1	85.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	650	0
Grader	No	40	85		670	0
Dozer	No	40		81.7	700	0
Front End Loader	No	40		79.1	680	0
Backhoe	No	40		77.6	710	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	58.4	54.5	N/A	N/A	N/A	N/A
Grader	62.5	58.5	N/A	N/A	N/A	N/A
Dozer	58.7	54.8	N/A	N/A	N/A	N/A
Front End Loader	56.4	52.5	N/A	N/A	N/A	N/A
Backhoe	54.5	50.5	N/A	N/A	N/A	N/A
Total	62.5	62	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	650	0
Grader	No	40	85		670	0
Dozer	No	40		81.7	700	0
Front End Loader	No	40		79.1	680	0
Backhoe	No	40		77.6	710	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		58.4	54.5	N/A	N/A	N/A	N/A
Grader		62.5	58.5	N/A	N/A	N/A	N/A
Dozer		58.7	54.8	N/A	N/A	N/A	N/A
Front End Loader		56.4	52.5	N/A	N/A	N/A	N/A
Backhoe		54.5	50.5	N/A	N/A	N/A	N/A
	Total	62.5	62	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	630	0
Grader	No	40	85		650	0
Dozer	No	40		81.7	670	0
Front End Loader	No	40		79.1	640	0
Backhoe	No	40		77.6	660	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		58.7	54.7	N/A	N/A	N/A	N/A

Grader		62.7	58.7	N/A	N/A	N/A	N/A
Dozer		59.1	55.1	N/A	N/A	N/A	N/A
Front End Loader		57	53	N/A	N/A	N/A	N/A
Backhoe		55.1	51.2	N/A	N/A	N/A	N/A
	Total	62.7	62.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	860	0
Grader	No	40	85		880	0
Dozer	No	40		81.7	890	0
Front End Loader	No	40		79.1	880	0
Backhoe	No	40		77.6	900	0

			Results			
	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	56	52	N/A	N/A	N/A	N/A
Grader	60.1	56.1	N/A	N/A	N/A	N/A
Dozer	56.7	52.7	N/A	N/A	N/A	N/A
Front End Loader	54.2	50.2	N/A	N/A	N/A	N/A
Backhoe	52.5	48.5	N/A	N/A	N/A	N/A
Total	60.1	59.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 8/25/2021
Case Description: Alexan Arcadia - Grading - Typical

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	165	0
Grader	No	40	85		165	0
Dozer	No	40		81.7	165	0
Front End Loader	No	40		79.1	165	0
Backhoe	No	40		77.6	165	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	70.3	66.4	N/A	N/A	N/A	N/A
Grader	74.6	70.7	N/A	N/A	N/A	N/A
Dozer	71.3	67.3	N/A	N/A	N/A	N/A
Front End Loader	68.7	64.8	N/A	N/A	N/A	N/A
Backhoe	67.2	63.2	N/A	N/A	N/A	N/A
Total	74.6	74.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	825	0
Grader	No	40	85		825	0
Dozer	No	40		81.7	825	0
Front End Loader	No	40		79.1	825	0
Backhoe	No	40		77.6	825	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	56.4	52.4	N/A	N/A	N/A	N/A
Grader	60.7	56.7	N/A	N/A	N/A	N/A
Dozer	57.3	53.3	N/A	N/A	N/A	N/A
Front End Loader	54.8	50.8	N/A	N/A	N/A	N/A
Backhoe	53.2	49.2	N/A	N/A	N/A	N/A

	Total	60.7	60.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	825	0
Grader	No	40	85		825	0
Dozer	No	40		81.7	825	0
Front End Loader	No	40		79.1	825	0
Backhoe	No	40		77.6	825	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	56.4	52.4	N/A	N/A	N/A	N/A
Grader	60.7	56.7	N/A	N/A	N/A	N/A
Dozer	57.3	53.3	N/A	N/A	N/A	N/A
Front End Loader	54.8	50.8	N/A	N/A	N/A	N/A
Backhoe	53.2	49.2	N/A	N/A	N/A	N/A
Total	60.7	60.2	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Excavator	No	40		80.7	765	0
Grader	No	40	85		765	0
Dozer	No	40		81.7	765	0
Front End Loader	No	40		79.1	765	0
Backhoe	No	40		77.6	765	0

Results

	Calculated (dBA)		Noise Limits (dBA)			

				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator		57	53	N/A	N/A	N/A	N/A
Grader		61.3	57.3	N/A	N/A	N/A	N/A
Dozer		58	54	N/A	N/A	N/A	N/A
Front End Loader		55.4	51.4	N/A	N/A	N/A	N/A
Backhoe		53.9	49.9	N/A	N/A	N/A	N/A
	Total	61.3	60.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

			Equipment			
	Impact		Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Excavator	No	40		80.7	980	0
Grader	No	40	85		980	0
Dozer	No	40		81.7	980	0
Front End Loader	No	40		79.1	980	0
Backhoe	No	40		77.6	980	0

			Results			
	Calculated (dBA)			Noise Limits (dBA)		
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Excavator	54.9	50.9	N/A	N/A	N/A	N/A
Grader	59.2	55.2	N/A	N/A	N/A	N/A
Dozer	55.8	51.8	N/A	N/A	N/A	N/A
Front End Loader	53.3	49.3	N/A	N/A	N/A	N/A
Backhoe	51.7	47.7	N/A	N/A	N/A	N/A
Total	59.2	58.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 8/25/2021
Case Description: Alexan Arcadia - Bldg Const - Nearest

---- Receptor #1 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	30	0
Man Lift	No	20		74.7	50	0
Crane	No	16		80.6	70	0
Generator	No	50		80.6	50	0
Front End Loader	No	40		79.1	80	0
Welder / Torch	No	40		74	40	0
Welder / Torch	No	40		74	70	0
Welder / Torch	No	40		74	80	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	79.1	72.1	N/A	N/A	N/A	N/A
Man Lift	74.7	67.7	N/A	N/A	N/A	N/A
Crane	77.6	69.7	N/A	N/A	N/A	N/A
Generator	80.6	77.6	N/A	N/A	N/A	N/A
Front End Loader	75	71	N/A	N/A	N/A	N/A
Welder / Torch	75.9	72	N/A	N/A	N/A	N/A
Welder / Torch	71.1	67.1	N/A	N/A	N/A	N/A
Welder / Torch	69.9	65.9	N/A	N/A	N/A	N/A
Total	80.6	81	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Baselines (dBA)

Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	650	0
Man Lift	No	20		74.7	670	0
Crane	No	16		80.6	700	0
Generator	No	50		80.6	680	0
Front End Loader	No	40		79.1	710	0
Welder / Torch	No	40		74	670	0
Welder / Torch	No	40		74	700	0

Welder / Torch	No	40	74	710	0	

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	52.4	45.4	N/A	N/A	N/A	N/A
Man Lift	52.2	45.2	N/A	N/A	N/A	N/A
Crane	57.6	49.7	N/A	N/A	N/A	N/A
Generator	58	54.9	N/A	N/A	N/A	N/A
Front End Loader	56.1	52.1	N/A	N/A	N/A	N/A
Welder / Torch	51.5	47.5	N/A	N/A	N/A	N/A
Welder / Torch	51.1	47.1	N/A	N/A	N/A	N/A
Welder / Torch	51	47	N/A	N/A	N/A	N/A
Total	58	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	650	0
Man Lift	No	20		74.7	670	0
Crane	No	16		80.6	700	0
Generator	No	50		80.6	680	0
Front End Loader	No	40		79.1	710	0
Welder / Torch	No	40		74	670	0
Welder / Torch	No	40		74	700	0
Welder / Torch	No	40		74	710	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	52.4	45.4	N/A	N/A	N/A	N/A
Man Lift	52.2	45.2	N/A	N/A	N/A	N/A
Crane	57.6	49.7	N/A	N/A	N/A	N/A
Generator	58	54.9	N/A	N/A	N/A	N/A
Front End Loader	56.1	52.1	N/A	N/A	N/A	N/A
Welder / Torch	51.5	47.5	N/A	N/A	N/A	N/A
Welder / Torch	51.1	47.1	N/A	N/A	N/A	N/A
Welder / Torch	51	47	N/A	N/A	N/A	N/A

	Total	58	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	630	0
Man Lift	No	20		74.7	650	0
Crane	No	16		80.6	670	0
Generator	No	50		80.6	640	0
Front End Loader	No	40		79.1	660	0
Welder / Torch	No	40		74	650	0
Welder / Torch	No	40		74	680	0
Welder / Torch	No	40		74	670	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift		52.7	45.7	N/A	N/A	N/A	N/A
Man Lift		52.4	45.4	N/A	N/A	N/A	N/A
Crane		58	50	N/A	N/A	N/A	N/A
Generator		58.5	55.5	N/A	N/A	N/A	N/A
Front End Loader		56.7	52.7	N/A	N/A	N/A	N/A
Welder / Torch		51.7	47.7	N/A	N/A	N/A	N/A
Welder / Torch		51.3	47.3	N/A	N/A	N/A	N/A
Welder / Torch		51.5	47.5	N/A	N/A	N/A	N/A
	Total	58.5	59.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	860	0
Man Lift	No	20		74.7	880	0

Crane	No	16	80.6	890	0
Generator	No	50	80.6	880	0
Front End Loader	No	40	79.1	900	0
Welder / Torch	No	40	74	870	0
Welder / Torch	No	40	74	880	0
Welder / Torch	No	40	74	900	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	50	43	N/A	N/A	N/A	N/A
Man Lift	49.8	42.8	N/A	N/A	N/A	N/A
Crane	55.5	47.6	N/A	N/A	N/A	N/A
Generator	55.7	52.7	N/A	N/A	N/A	N/A
Front End Loader	54	50	N/A	N/A	N/A	N/A
Welder / Torch	49.2	45.2	N/A	N/A	N/A	N/A
Welder / Torch	49.1	45.1	N/A	N/A	N/A	N/A
Welder / Torch	48.9	44.9	N/A	N/A	N/A	N/A
Total	55.7	56.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/25/2021
Case Description: Alexan Arcadia - Bldg Const - Typical

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	165	0
Man Lift	No	20		74.7	165	0
Crane	No	16		80.6	165	0
Generator	No	50		80.6	165	0
Front End Loader	No	40		79.1	165	0
Welder / Torch	No	40		74	165	0
Welder / Torch	No	40		74	165	0
Welder / Torch	No	40		74	165	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift		64.3	57.3	N/A	N/A	N/A	N/A
Man Lift		64.3	57.3	N/A	N/A	N/A	N/A
Crane		70.2	62.2	N/A	N/A	N/A	N/A
Generator		70.3	67.2	N/A	N/A	N/A	N/A
Front End Loader		68.7	64.8	N/A	N/A	N/A	N/A
Welder / Torch		63.6	59.7	N/A	N/A	N/A	N/A
Welder / Torch		63.6	59.7	N/A	N/A	N/A	N/A
Welder / Torch		63.6	59.7	N/A	N/A	N/A	N/A
	Total	70.3	71.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	825	0
Man Lift	No	20		74.7	825	0
Crane	No	16		80.6	825	0
Generator	No	50		80.6	825	0
Front End Loader	No	40		79.1	825	0
Welder / Torch	No	40		74	825	0
Welder / Torch	No	40		74	825	0
Welder / Torch	No	40		74	825	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift		50.4	43.4	N/A	N/A	N/A	N/A
Man Lift		50.4	43.4	N/A	N/A	N/A	N/A
Crane		56.2	48.2	N/A	N/A	N/A	N/A
Generator		56.3	53.3	N/A	N/A	N/A	N/A
Front End Loader		54.8	50.8	N/A	N/A	N/A	N/A
Welder / Torch		49.7	45.7	N/A	N/A	N/A	N/A
Welder / Torch		49.7	45.7	N/A	N/A	N/A	N/A
Welder / Torch		49.7	45.7	N/A	N/A	N/A	N/A
	Total	56.3	57.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	825	0
Man Lift	No	20		74.7	825	0
Crane	No	16		80.6	825	0
Generator	No	50		80.6	825	0
Front End Loader	No	40		79.1	825	0
Welder / Torch	No	40		74	825	0
Welder / Torch	No	40		74	825	0
Welder / Torch	No	40		74	825	0

		Calculated (dBA)		Results	Noise Limits (dBA)		
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift		50.4	43.4	N/A	N/A	N/A	N/A
Man Lift		50.4	43.4	N/A	N/A	N/A	N/A
Crane		56.2	48.2	N/A	N/A	N/A	N/A
Generator		56.3	53.3	N/A	N/A	N/A	N/A
Front End Loader		54.8	50.8	N/A	N/A	N/A	N/A
Welder / Torch		49.7	45.7	N/A	N/A	N/A	N/A
Welder / Torch		49.7	45.7	N/A	N/A	N/A	N/A
Welder / Torch		49.7	45.7	N/A	N/A	N/A	N/A
	Total	56.3	57.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	765	0
Man Lift	No	20		74.7	765	0
Crane	No	16		80.6	765	0

Generator	No	50	80.6	765	0
Front End Loader	No	40	79.1	765	0
Welder / Torch	No	40	74	765	0
Welder / Torch	No	40	74	765	0
Welder / Torch	No	40	74	765	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	51	44	N/A	N/A	N/A	N/A
Man Lift	51	44	N/A	N/A	N/A	N/A
Crane	56.9	48.9	N/A	N/A	N/A	N/A
Generator	56.9	53.9	N/A	N/A	N/A	N/A
Front End Loader	55.4	51.4	N/A	N/A	N/A	N/A
Welder / Torch	50.3	46.3	N/A	N/A	N/A	N/A
Welder / Torch	50.3	46.3	N/A	N/A	N/A	N/A
Welder / Torch	50.3	46.3	N/A	N/A	N/A	N/A
Total	56.9	58.1	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Man Lift	No	20		74.7	980	0
Man Lift	No	20		74.7	980	0
Crane	No	16		80.6	980	0
Generator	No	50		80.6	980	0
Front End Loader	No	40		79.1	980	0
Welder / Torch	No	40		74	980	0
Welder / Torch	No	40		74	980	0
Welder / Torch	No	40		74	980	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Man Lift	48.9	41.9	N/A	N/A	N/A	N/A
Man Lift	48.9	41.9	N/A	N/A	N/A	N/A
Crane	54.7	46.7	N/A	N/A	N/A	N/A
Generator	54.8	51.8	N/A	N/A	N/A	N/A

Front End Loader		53.3	49.3	N/A	N/A	N/A	N/A
Welder / Torch		48.2	44.2	N/A	N/A	N/A	N/A
Welder / Torch		48.2	44.2	N/A	N/A	N/A	N/A
Welder / Torch		48.2	44.2	N/A	N/A	N/A	N/A
	Total	54.8	55.9	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/25/2021
Case Description: Alexan Arcadia - Paving - Nearest

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	30	0
Paver	No	50		77.2	50	0
Concrete Pump Truck	No	20		81.4	70	0
Roller	No	20		80	50	0
Roller	No	20		80	80	0
Backhoe	No	40		77.6	40	0

		Calculated (dBA)		Results	Noise Limits (dBA)		
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		83.2	79.3	N/A	N/A	N/A	N/A
Paver		77.2	74.2	N/A	N/A	N/A	N/A
Concrete Pump Truck		78.5	71.5	N/A	N/A	N/A	N/A
Roller		80	73	N/A	N/A	N/A	N/A
Roller		75.9	68.9	N/A	N/A	N/A	N/A
Backhoe		79.5	75.5	N/A	N/A	N/A	N/A
	Total	83.2	82.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night

Park	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	650	0
Paver	No	50		77.2	670	0
Concrete Pump Truck	No	20		81.4	700	0
Roller	No	20		80	680	0
Roller	No	20		80	710	0
Backhoe	No	40		77.6	670	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		52.4	45.4	N/A	N/A	N/A	N/A
Paver		52.2	45.2	N/A	N/A	N/A	N/A
Concrete Pump Truck		57.6	49.7	N/A	N/A	N/A	N/A
Roller		58	54.9	N/A	N/A	N/A	N/A
Roller		56.1	52.1	N/A	N/A	N/A	N/A
Backhoe		51.5	47.5	N/A	N/A	N/A	N/A
	Total	58	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	650	0
Paver	No	50		77.2	670	0
Concrete Pump Truck	No	20		81.4	700	0
Roller	No	20		80	680	0
Roller	No	20		80	710	0
Backhoe	No	40		77.6	670	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	52.4	45.4	N/A	N/A	N/A	N/A

Paver		52.2	45.2	N/A	N/A	N/A	N/A
Concrete Pump Truck		57.6	49.7	N/A	N/A	N/A	N/A
Roller		58	54.9	N/A	N/A	N/A	N/A
Roller		56.1	52.1	N/A	N/A	N/A	N/A
Backhoe		51.5	47.5	N/A	N/A	N/A	N/A
	Total	58	59	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Mixer Truck	No	40		78.8	630	0
Paver	No	50		77.2	650	0
Concrete Pump Truck	No	20		81.4	670	0
Roller	No	20		80	640	0
Roller	No	20		80	660	0
Backhoe	No	40		77.6	650	0

Results

		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		52.7	45.7	N/A	N/A	N/A	N/A
Paver		52.4	45.4	N/A	N/A	N/A	N/A
Concrete Pump Truck		58	50	N/A	N/A	N/A	N/A
Roller		58.5	55.5	N/A	N/A	N/A	N/A
Roller		56.7	52.7	N/A	N/A	N/A	N/A
Backhoe		51.7	47.7	N/A	N/A	N/A	N/A
	Total	58.5	59.5	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Mixer Truck	No	40		78.8	860	0

Paver	No	50	77.2	880	0
Concrete Pump Truck	No	20	81.4	890	0
Roller	No	20	80	880	0
Roller	No	20	80	900	0
Backhoe	No	40	77.6	870	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	50	43	N/A	N/A	N/A	N/A
Paver	49.8	42.8	N/A	N/A	N/A	N/A
Concrete Pump Truck	55.5	47.6	N/A	N/A	N/A	N/A
Roller	55.7	52.7	N/A	N/A	N/A	N/A
Roller	54	50	N/A	N/A	N/A	N/A
Backhoe	49.2	45.2	N/A	N/A	N/A	N/A
Total	55.7	56.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/25/2021
Case Description: Alexan Arcadia - Paving - Typical

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	165	0
Paver	No	50		77.2	165	0
Concrete Pump Truck	No	20		81.4	165	0
Roller	No	20		80	165	0
Roller	No	20		80	165	0
Backhoe	No	40		77.6	165	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq

Concrete Mixer Truck		68.4	64.5	N/A	N/A	N/A	N/A
Paver		66.8	63.8	N/A	N/A	N/A	N/A
Concrete Pump Truck		71	64	N/A	N/A	N/A	N/A
Roller		69.6	62.6	N/A	N/A	N/A	N/A
Roller		69.6	62.6	N/A	N/A	N/A	N/A
Backhoe		67.2	63.2	N/A	N/A	N/A	N/A
	Total	71	71.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

			Equipment Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Impact Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Concrete Mixer Truck	No	40		78.8	825	0
Paver	No	50		77.2	825	0
Concrete Pump Truck	No	20		81.4	825	0
Roller	No	20		80	825	0
Roller	No	20		80	825	0
Backhoe	No	40		77.6	825	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		54.5	50.5	N/A	N/A	N/A	N/A
Paver		52.9	49.9	N/A	N/A	N/A	N/A
Concrete Pump Truck		57.1	50.1	N/A	N/A	N/A	N/A
Roller		55.7	48.7	N/A	N/A	N/A	N/A
Roller		55.7	48.7	N/A	N/A	N/A	N/A
Backhoe		53.2	49.2	N/A	N/A	N/A	N/A
	Total	57.1	57.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

			Equipment Spec Lmax	Actual Lmax	Receptor Distance	Estimated Shielding
Description	Impact Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)

Concrete Mixer Truck	No	40	78.8	825	0
Paver	No	50	77.2	825	0
Concrete Pump Truck	No	20	81.4	825	0
Roller	No	20	80	825	0
Roller	No	20	80	825	0
Backhoe	No	40	77.6	825	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	54.5	50.5	N/A	N/A	N/A	N/A
Paver	52.9	49.9	N/A	N/A	N/A	N/A
Concrete Pump Truck	57.1	50.1	N/A	N/A	N/A	N/A
Roller	55.7	48.7	N/A	N/A	N/A	N/A
Roller	55.7	48.7	N/A	N/A	N/A	N/A
Backhoe	53.2	49.2	N/A	N/A	N/A	N/A
Total	57.1	57.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	765	0
Paver	No	50		77.2	765	0
Concrete Pump Truck	No	20		81.4	765	0
Roller	No	20		80	765	0
Roller	No	20		80	765	0
Backhoe	No	40		77.6	765	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck	55.1	51.1	N/A	N/A	N/A	N/A
Paver	53.5	50.5	N/A	N/A	N/A	N/A
Concrete Pump Truck	57.7	50.7	N/A	N/A	N/A	N/A
Roller	56.3	49.3	N/A	N/A	N/A	N/A
Roller	56.3	49.3	N/A	N/A	N/A	N/A
Backhoe	53.9	49.9	N/A	N/A	N/A	N/A
Total	57.7	58	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Concrete Mixer Truck	No	40		78.8	980	0
Paver	No	50		77.2	980	0
Concrete Pump Truck	No	20		81.4	980	0
Roller	No	20		80	980	0
Roller	No	20		80	980	0
Backhoe	No	40		77.6	980	0

		Calculated (dBA)		Results			
				Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Concrete Mixer Truck		53	49	N/A	N/A	N/A	N/A
Paver		51.4	48.4	N/A	N/A	N/A	N/A
Concrete Pump Truck		55.6	48.6	N/A	N/A	N/A	N/A
Roller		54.2	47.2	N/A	N/A	N/A	N/A
Roller		54.2	47.2	N/A	N/A	N/A	N/A
Backhoe		51.7	47.7	N/A	N/A	N/A	N/A
	Total	55.6	55.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Roadway Construction Noise Model (RCNM),Version 1.1

Report date: 8/25/2021
Case Description: Alexan Arcadia - Architectural Coating - Nearest

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

			Equipment Spec	Actual	Receptor	Estimated

Description	Impact Device	Usage(%)	Lmax (dBA)	Lmax (dBA)	Distance (feet)	Shielding (dBA)
Compressor (air)	No	40		77.7	40	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	79.6	75.6	N/A	N/A	N/A	N/A
Total	79.6	75.6	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Park	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	650	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	55.4	51.4	N/A	N/A	N/A	N/A
Total	55.4	51.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

Description	Land Use	Baselines (dBA) Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	650	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	55.4	51.4	N/A	N/A	N/A	N/A

	Total	55.4	51.4	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	630	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		55.7	51.7	N/A	N/A	N/A	N/A
	Total	55.7	51.7	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Description	Impact Device	Usage(%)	Equipment Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	860	0

		Results					
		Calculated (dBA)		Noise Limits (dBA)			
				Day		Evening	
Equipment		*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)		53	49	N/A	N/A	N/A	N/A
	Total	53	49	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Report date: 8/25/2021
Case Description: Alexan Arcadia - Architectural Coating - Typical

---- Receptor #1 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Offices/Med. Office	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	165	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	67.3	63.3	N/A	N/A	N/A	N/A
Total	67.3	63.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #2 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Park	Residential	65	60	55

			Equipment			
			Spec	Actual	Receptor	Estimated
	Impact		Lmax	Lmax	Distance	Shielding
Description	Device	Usage(%)	(dBA)	(dBA)	(feet)	(dBA)
Compressor (air)	No	40		77.7	825	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	53.3	49.3	N/A	N/A	N/A	N/A
Total	53.3	49.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #3 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the S	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	825	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	53.3	49.3	N/A	N/A	N/A	N/A
Total	53.3	49.3	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #4 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
School to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	765	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq
Compressor (air)	54	50	N/A	N/A	N/A	N/A
Total	54	50	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

---- Receptor #5 ----

		Baselines (dBA)		
Description	Land Use	Daytime	Evening	Night
Residences to the NW	Residential	65	60	55

Equipment

Description	Impact Device	Usage(%)	Spec Lmax (dBA)	Actual Lmax (dBA)	Receptor Distance (feet)	Estimated Shielding (dBA)
Compressor (air)	No	40		77.7	980	0

Results

	Calculated (dBA)		Noise Limits (dBA)			
			Day		Evening	
Equipment	*Lmax	Leq	Lmax	Leq	Lmax	Leq

Compressor (air)		51.8	47.8	N/A	N/A	N/A	N/A
	Total	51.8	47.8	N/A	N/A	N/A	N/A

*Calculated Lmax is the Loudest value.

Appendix I-3

Stationary Operations Noise Modeling Data

24VNA9 Infinity® 19VS Variable Speed Air Conditioner with Puron® Refrigerant 1 – 5 Tons

Carrier
turn to the experts

Product Data

INFINITY® 19VS

The Infinity® 19VS air conditioner offers high-efficiency variable speed performance in a remarkably small cabinet and provides up to 19 SEER cooling efficiency. The variable speed inverter capacity control delivers up to 5 stages of operation for exceptional load matching, dehumidification and zoning performance.

This product has been designed and manufactured to provide flexible system matching and work with a wide variety of indoor units and controls.

NOTE: Ratings contained in this document are subject to change at any time. Always refer to the AHRI directory (www.ahridirectory.org) for the most up-to-date ratings information.

INDUSTRY LEADING FEATURES / BENEFITS

Energy Efficiency

- Up to 19 SEER / 13 EER
- Microtube Technology™ refrigeration system

Sound

- Sound level as low as 55 dBA in low speed (Silencer System II).
- Soft start and smooth ramp to operating speeds

Comfort

- Variable speed compressor operates at 5 stages with capacity range from as wide as 25-100%
- Air cooled Inverter variable speed drive
  - — System requires Infinity® Touch Control with version 11 software or newer for 5 stage operation on sizes 24 - 60 and version 12 or higher on size 13.
  - — Ratings provided with 2-stage thermostats and suitable non-communicating indoor products for 2-stage operation.

Reliability

- Puron® refrigerant - environmentally sound, won't deplete the ozone layer and low lifetime service cost.
- Front-seating service valves
- Inverter control drives compressor and fan motor
- No control module attached to fan motor
- Infinity intelligence monitors critical system parameters
- Pressure equalizer valve for easy compressor starting
- High pressure switch
- Suction pressure transducer
- Compressor discharge temperature sensor
- Suction temperature sensor
- Filter drier (field installed)
- Internal crankcase heater standard

Flexibility and installation:

- 2 control wires to outdoor unit in complete Infinity system and Touch Control
- Energy Tracking capability with the Infinity® Touch Control (Energy Tracking has the ability to monitor and estimate the energy consumption of your Infinity® system.)
- Smaller and lighter than 2-stage units
- Minimum and Maximum adjustments with Infinity® Touch Control
- Compatible with non-communicating thermostats

Durability

WeatherArmor Ultra™ protection package:

- Solid, Durable sheet metal construction
- Steel louver coil guard
- Baked-on, complete outer coverage, powder paint

Applications

- Line sets up to 100 ft (30.5 m) equivalent length
- No long-line accessories required.

MODEL NUMBER NOMENCLATURE

1	2	3	4	5	6	7	8	9	10	11	12	13
N	N	A	A	A/N	N	N	N	A/N	A/N	A/N	N	N
2	4	V	N	A	9	3	6	A	0	0	3	0
Product Series		Product Family	Tier	Major Series	SEER	Cooling Capacity		Variations	Open	Open	Voltage	Minor Series
24 = AC		V = VS HP	N= Infinity Series	A = Puron	9 = 19 SEER	1,000 Btuh (nominal)		A = Standard B = Design Variation	0=Not Defined	0=Not Defined	3=208/230–1	0, 1, 2...

Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program For verification of certification for individual products, go to www.ahridirectory.org.

Qualifying Models Only

STANDARD FEATURES

FEATURES	Unit Size – Voltage, Series							
	13	24B	25	36	37	48	49	60
Puron Refrigerant	X	X	X	X	X	X	X	X
Variable Speed Rotary Compressor	X	X	X	X	X	X	X	X
Air–Cooled Integrated Inverter Drive	X	X	X	X	X	X	X	X
Louvered Coil Guard	X	X	X	X	X	X	X	X
Field Installed Filter Drier	X	X	X	X	X	X	X	X
Front Seating Service Valves	X	X	X	X	X	X	X	X
Internal Pressure and Temperature Protection	X	X	X	X	X	X	X	X
Suction Pressure Transducer	X	X	X	X	X	X	X	X
High Pressure Switch	X	X	X	X	X	X	X	X
Internal Crankcase Heater	X	X	X	X	X	X	X	X
Enhanced Diagnostics with Infinity® Touch Control (version 11 software or newer for 5 stage operation on sizes 24 – 60 and version 12 or higher on size 13.)	X	X	X	X	X	X	X	X
Deluxe Sound Blanket	X	X	X	X	X	X	X	X
Outdoor Air Temperature Sensor	X	X	X	X	X	X	X	X

X = Standard

PHYSICAL DATA

UNIT SIZE SERIES	13–30	24B–30	25–31	36–31	37–30	48–30	49–30	60–30
Compressor Type	Variable Speed Rotary							
REFRIGERANT	Puron® (R–410A)							
Control	TXV (Puron® Hard Shutoff)							
Charge lb (kg)	4.6 (2.09)	4.80 (2.18)	5.5 (2.50)	6.0 (2.72)	7.5 (3.40)	7.5 (3.40)	9.6 (4.35)	8.30 (3.76)
COND FAN	Forward Swept Propeller Type, Direct Drive							
Air Discharge	Vertical							
Air Qty (CFM)	1600	2500	2500	2500	4500	4500	4800	4500
Motor HP	1/5	1/5	1/3	1/3	1/3	1/3	1/3	1/3
Motor RPM	650	825	1050	1050	850	850	850	900
COND COIL								
Face Area (Sq ft)	11.12	11.12	13.90	13.90	21.50	21.50	27.53	23.65
Fins per In.	20	20	20	20	20	20	25	20
Rows	1	1	1	1	1	1	1	1
Circuits	6	5	6	6	8	8	8	8
VALVE CONNECT. (In. ID)								
Vapor	5/8	5/8	3/4	3/4	7/8	7/8	7/8	7/8
Liquid	3/8							
REFRIGERANT TUBES (In. OD)								
Rated Vapor*	3/4	3/4	7/8	7/8	1–1/8	1–1/8	1–1/8	1–1/8
Max Liquid Line	3/8							

* Units are rated with 25 ft (7.6 m) of lineset length. See Vapor Line Sizing and Cooling Capacity Loss table when using other sizes and lengths of lineset.

Note: See unit Installation Instruction for proper installation.

REFRIGERANT PIPING LENGTH LIMITATIONS

Maximum Line Lengths:

The maximum allowable total equivalent length for air conditioners can vary depending on the vertical separation. See the tables below for allowable lengths depending on whether the outdoor unit is on the same level, above or below the outdoor unit.

Maximum Line Lengths for Air Conditioner Applications

	MAXIMUM ACTUAL LENGTH ft (m)	MAXIMUM EQUIVALENT LENGTH† ft (m)	MAXIMUM VERTICAL SEPARATION ft (m)
Units on equal level	100 (30.5)	100 (30.5)	N/A
Outdoor unit ABOVE indoor unit	100 (30.5)	100 (30.5)	100 (30.5)
Outdoor unit BELOW indoor unit	See Table *'Maximum Total Equivalent Length: Outdoor Unit BELOW Indoor Unit'*		

† Total equivalent length accounts for losses due to elbows or fitting. See the Long Line Guideline for details.

Maximum Total Equivalent Length† - Outdoor Unit BELOW Indoor Unit

Size	Liquid Line Diameter w/ TXV	AC with Puron® Refrigerant – Maximum Total Equivalent Length† Vertical Separation ft (m) Outdoor unit BELOW indoor unit;						
		0 – 20 (0 – 6.1)	21 – 30 (6.4 – 9.1)	31 – 40 (9.4 – 12.2)	41 – 50 (12.5 – 15.2)	51 – 60 (15.5 – 18.3)	61 – 70 (18.6 – 21.3)	71 – 80 (21.6 – 24.4)
1 – Ton	3/8	100*	100*	100*	100*	100*	100*	100*
2 – Ton	3/8	100*	100*	100*	100*	100*	100*	100*
3 – Ton	3/8	100*	100*	100*	100*	100*	100*	100*
4 – Ton	3/8	100*	100*	100*	100*	100	100	– –
5 – Ton	3/8	100*	100*	100*	100*	100	100	– –

*** Maximum actual length not to exceed 100 ft (30.5 m)**

† Total equivalent length accounts for losses due to elbows or fitting.

– – = outside acceptable range

LONG LINE APPLICATIONS

Unit is approved for up to 100 ft (30.5 m) equivalent length and vertical separations shown above with no additional accessories. Longer line set applications are not permitted.

COOLING CAPACITY LOSS TABLE

Nominal Size (Btuh)	Line OD (in.)	24VNA9 Cooling Capacity Loss (%) Total Equivalent Line Length (ft)				
		25	50	75	80	100
13	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	**0.1**	**0.4**	**0.6**	**0.7**	**0.8**
24B	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	**0.1**	**0.4**	**0.6**	**0.7**	**0.8**
25	5/8	0.5	1.2	1.8	1.9	2.4
	3/4	0.1	0.4	0.6	0.7	0.8
	7/8	0.0	0.1	0.3	0.3	0.4
36	5/8	1.1	2.4	3.7	4.0	5.0
	3/4	0.3	0.8	1.3	1.4	1.8
	7/8	0.0	0.3	0.5	0.6	0.8
37 48 49	3/4	0.7	1.6	2.4	2.6	3.2
	7/8	0.3	0.7	1.1	1.2	1.6
	1 1/8	0.0	0.1	0.2	0.3	0.4
60	3/4	1.0	2.3	3.5	3.8	4.8
	7/8	0.4	1.0	1.7	1.8	2.3
	1 1/8	0.0	0.1	0.3	0.4	0.5

Rating Line Size in **BOLD**

MIN/MAX AIRFLOW TABLES

The indoor airflow delivered by this system varies significantly based on outdoor temperature, indoor unit combination, and system demand. The airflows on these tables are for duct design considerations. Duct systems capable of these ranges will ensure the system will deliver full capacity at all outdoor temperatures. Minimum and maximum airflows can be adjusted from these numbers in the Infinity Control Setup screen.

Cooling – Comfort Mode			Minimum Cooling (Dehum or Zoning)
Size	Max Stage 5 Airflow	Max Stage 1 Airflow	
1–Ton	420	300	300
2–Ton	739	300	300
3–Ton	990	300	300
4–Ton	1389	542	457
5–Ton	1600	700	600

Cooling – Efficiency Mode		
Size	Max Stage 5 Airflow	Max Stage 1 Airflow
1–Ton	420	300
2–Ton	825	585
3–Ton	1050	600
4–Ton	1400	875
5–Ton	1800	975

Cooling Max Mode		
Size	Max Stage 5 Airflow	Max Stage 1 Airflow
1–Ton (550 cfm/ delivered ton)	780	434
2–Ton (24)	850	585
2–Ton (25) (550 cfm/ delivered ton)*	1350	510
3–Ton	1200	600
4–Ton	1600	875
4–Ton–49	1450	875
5–Ton	2000	975

* Serial number beginning with 0115E and newer

LEGEND::

Max Capacity Airflow – Stage 5 airflow varies depending on conditions. This is the highest airflow the system will attempt to deliver in this particular mode. Ductwork for non–zoned systems should be sized for this airflow to ensure the system can deliver full capacity when needed. Improper duct design may result in excessive airflow noise and/or cutback occurrences at max airflow conditions.

Highest Min. Capacity Airflow – Stage 1 airflow also varies depending on conditions. In zoned systems, each zone must be capable of delivering this airflow for the system to deliver full capacity into the zone. Otherwise, airflow may be diverted to other zones or cutback may occur.

Min Cooling (Dehum or Zoning) – Lowest airflow the system will deliver. May operate down to this airflow in dehumidification mode or in zoning applications where ductwork restrictions have caused the blower to cut–back.

ELECTRICAL DATA

UNIT SIZE– VOLTAGE, SERIES	V/PH	OPER VOLTS*		COMPR		FAN	MCA	MAX FUSE ** or CKT BRK AMPS
		MAX	MIN	LRA	RLA	FLA		
13–30	208–230–1	253	197	N/A	10.3	0.58	13.5	20
24B–30				N/A	10.3	0.58	13.5	20
25–31				N/A	17.7	1.20	23.6	40
36–31				N/A	18.4	1.20	24.2	40
37–30				N/A	19.6	1.20	26.0	40
48–30				N/A	20.9	1.20	27.3	40
49–30				N/A	19.6	1.40	26.0	40
60–30				N/A	30.9	1.40	40.0	60

* Permissible limits of the voltage range at which the unit will operate satisfactorily

** Time–Delay fuse.

FLA – Full Load Amps

LRA – Locked Rotor Amps

MCA – Minimum Circuit Amps

RLA – Rated Load Amps

NOTE: Control circuit is 24–V on all units and requires external power source. Copper wire must be used from service disconnect to unit.

All motors/compressors contain internal overload protection.

Complies with 2010 requirements of ASHRAE Standards 90.1

CHARGING SUBCOOLING (TXV-TYPE EXPANSION DEVICE)

UNIT SIZE–VOLTAGE, SERIES	
13–30	**If a Touch Control is installed, subcooling recommendation displayed in Charging Mode must be followed. If not, subcooling chart shown on the charging label must be followed**
24B–30	
25–31	
36–31	
37–30	
48–30	
49–30	
60–30	

RPM-CAPACITY-SOUND (dBA)*

STAGE #	COMP RPM	CAPACITY %	SOUND (dBA)
24VNA913			
1	1500	58%	58
2	1867	72%	59
3	2100	81%	59
4	2350	90%	59
5	2600	100%	60
24VNA924B			
1	1500	35%	55
2	2566	56%	60
3	3150	69%	65
4	3950	87%	66
5	4700	100%	68
24VNA925			
1	1200	36%	56
2	1900	58%	61
3	2400	73%	63
4	2600	79%	67
5	3300	100%	69
24VNA936			
1	1200	25%	56
2	2400	50%	61
3	3300	69%	65
4	4200	88%	69
5	4800	100%	71
24VNA937			
1	1200	40%	56
2	1800	60%	63
3	2200	73%	67
4	2600	87%	67
5	3000	100%	68
24VNA948			
1	1500	35%	62
2	2460	57%	65
3	2800	65%	67
4	3650	84%	70
5	4320	100%	72
24VNA949			
1	1200	38%	57
2	1840	59%	62
3	2300	74%	66
4	2700	87%	68
5	3120	100%	73
24VNA960			
1	1200	32%	57
2	2180	55%	61
3	2850	70%	64
4	3700	90%	70
5	4140	100%	72

*Estimated sound for stages 2, 3, and 4
For 2−stage operation: Low = Stage 2, High = Stage 5

SOUND POWER LEVEL (dBA)

Unit Size – Voltage, Series	Typical Octave Band Spectrum (without tone adjustment)	Min Speed Cooling	Max Speed Cooling
013 – 30	Freq (Hz)	1500 RPM	2600 RPM
	125	62.0	64.0
	250	61.0	59.5
	500	54.0	55.0
	1000	53.0	57.0
	2000	49.0	50.0
	4000	42.0	49.5
	8000	47.5	49.5
	Sound Rating (dBA)	59	63
024B – 30	Freq (Hz)	1500 RPM	4700 RPM
	125	63.0	67.5
	250	57.0	66.5
	500	51.5	61.5
	1000	47.5	58.0
	2000	41.5	54.5
	4000	38.0	57.5
	8000	45.5	53.5
	Sound Rating (dBA)	55	67
025 – 31	Freq (Hz)	1200 RPM	3300 RPM
	125	59.5	70.0
	250	56.0	67.5
	500	54.0	67.5
	1000	50.0	63.5
	2000	41.5	59.0
	4000	35.0	58.0
	8000	48.0	51.5
	Sound Rating (dBA)	55	69
036 – 31	Freq (Hz)	1200 RPM	4800 RPM
	125	59.5	70.0
	250	56.0	68.0
	500	54.0	66.0
	1000	50.0	64.0
	2000	41.5	61.5
	4000	35.0	62.0
	8000	48.0	55.5
	Sound Rating (dBA)	55	72
037 – 30	Freq (Hz)	1200 RPM	3000 RPM
	125	64.0	74.0
	250	61.0	68.0
	500	57.5	66.5
	1000	53.5	61.5
	2000	49.0	59.5
	4000	42.0	57.5
	8000	44.0	51.0
	Sound Rating (dBA)	60	69
048 – 30	Freq (Hz)	1500 RPM	4320 RPM
	125	67.0	73.5
	250	63.0	71.5
	500	57.0	69.5
	1000	54.5	64.5
	2000	51.0	62.5
	4000	54.0	62.5
	8000	47.5	54.5
	Sound Rating (dBA)	64	72
49 – 30	Freq (Hz)	1200	3120
	125	44.5	52.0
	250	48.5	63.0
	500	50.5	63.5
	1000	51.5	67.5
	2000	47.5	61.5
	4000	43.5	58.5
	8000	47.5	54.5
	Sound Rating (dBA)	57	73.0
060 – 30	Freq (Hz)	1200 RPM	4140 RPM
	125	61.5	71.5
	250	59.5	73.0
	500	54.5	70.0
	1000	50.5	65.0
	2000	44.0	62.0
	4000	41.5	60.5
	8000	49.0	58.0
	Sound Rating (dBA)	57	72

NOTE: Tested in compliance with AHRI 270−1995 but not listed with AHRI.

ACCESSORIES

KIT NUMBER	KIT NAME	13–30	24B–30	25–31	36–31	37–30	48–30	49–30	60
KSASF0101AAA	SPRT FEET KIT						X	X	X
KSASF0201AAA	SPRT FEET KIT	X	X	X	X	X			
KSATX0201PUR	TXV KIT	X	X	X					
KSATX0301PUR	TXV KIT				X	X			
KSATX0401PUR	TXV KIT						X	X	
KSATX0501PUR	TXV KIT								X
KSBTX0201PUR	TXV KIT	X	X	X					
KSBTX0301PUR	TXV KIT				X	X			
KSBTX0401PUR	TXV KIT						X	X	
LM10KK003	VAPOR LINE MUFFLER	X	X	X	X	X	X	X	X

x = Accessory

Accessory Description and Usage

Support Feet

Raises unit above base pad. 2 and 3 ton kit contains 5 feet for stable installation with small base. 4 and 5 ton kit contains 4 feet.

Usage Guideline:

Recommended for rooftop applications

Thermostatic Expansion Valve (TXV)

A modulating flow-control valve which meters refrigerant liquid flow rate into the evaporator in response to the superheat of the refrigerant gas leaving the evaporator.

Usage Guideline:

Required if indoor unit does not already contain Puron® refrigerant TXV

Vapor Line Muffler

An external muffler installed in the vapor line to minimize vibration transmitted through refrigerant lines

Usage Guideline:

Recommended if vapor line is not installed per recommendations in the installation instructions and vibration may be transmitted into the structure.

CONTROLS

SYSTXCCITN01–A	Infinity® Touch Control (non–Wi–Fi) (version 11 software or newer for 5 stage operation on sizes 24 – 60 and version 12 or higher on size 13.)
SYSTXCCITC01–A	Infinity® Touch Control (Wi–Fi) (version 11 software or newer for 5 stage operation on sizes 24 – 60 and version 12 or higher on size 13.)
SYSTXCCITW01–A	Infinity® Touch Control with Wi–Fi & Wireless Access Point
SYSTXCC4ZC01	Infinity® 4–Zone Damper Control Module
SYSTXCCSMS01	Infinity® Smart Sensor (Optional wall control used to monitor temperature and/or fan control in an individual zone.)
SYSTXCCNIM01	Infinity® Network Interface Module (Connects Heat Recovery and Energy Recovery Ventilators on non–zoning applications.)
SYSTXCCSMS01	Infinity® Smart Sensor

THERMOSTATS

PART NUMBER	PROGRAM	GAS	ELECTRIC	HEAT	COOL
TP–PAC01	7–Day	√	√	1	1
TP–NRH01–A	NP	√	√	3	2
TP–NAC01	NP	√	√	1	1

DIMENSIONS

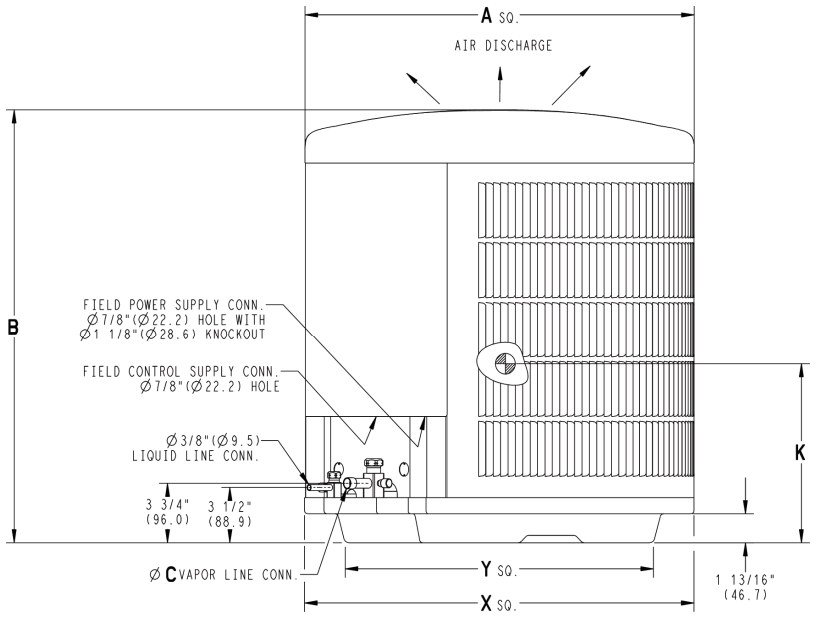
UNIT	SERIES	ELECTRICAL CHARACTERISTICS				A		B		C		D		E		F		G		H		I		J		K		OPERATING WEIGHT		SHIPPING WEIGHT		SHIPPING LENGTH / WIDTH (Sq.)		SHIPPING HEIGHT	
						INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	INCH	MM	Lbs	Kgs	Lbs	Kgs	INCH	MM	INCH	MM
24VNA913A0030050	0	Y	N	N	N	23 1/8	587.3	32 1/8	815.6	3/4	19.1	4 7/16	113.0	18 1/16	459.0	7 13/16	197.9	5/16	7.9	3	76.2	11 1/4	285.8	11 1/4	285.8	14 1/2	368.3	135	61.2	158	71.7	25 1/4	641.5	36 9/16	929.5
24VNA924B0030050	0	Y	N	N	N	23 1/8	587.3	32 1/8	815.6	3/4	19.1	4 7/16	113.0	18 1/16	459.0	7 13/16	197.9	5/16	7.9	3	76.2	11 1/4	285.8	11 1/4	285.8	14 1/2	368.3	135	61.2	158	71.7	25 1/4	641.5	36 9/16	929.5
24VNA925A0031050	1	Y	N	N	N	23 1/8	587.3	38 15/16	988.4	3/4	19.1	4 7/16	113.0	18 1/16	459.0	7 13/16	197.9	5/16	7.9	3	76.2	10 3/4	273.1	10 3/4	273.1	18 1/4	463.6	160	72.6	186	84.4	25 1/4	641.5	43 3/8	1102.2
24VNA936A0031050	1	Y	N	N	N	23 1/8	587.3	38 15/16	988.4	3/4	19.1	4 7/16	113.0	18 1/16	459.0	7 13/16	197.9	5/16	7.9	3	76.2	10 3/4	273.1	10 3/4	273.1	18 1/4	463.6	160	72.6	186	84.4	25 1/4	641.5	43 3/8	1102.2
24VNA937A0030050	0	Y	N	N	N	31 3/16	792.5	39 3/8	1000.5	7/8	22.2	6 9/16	166.1	24 11/16	626.3	9 1/8	231.3	5/16	7.9	3	76.2	14 1/2	368.3	14 5/8	371.5	18 3/4	476.3	216	98.0	255	115.7	33 5/16	846.6	45 1/4	1149.1
24VNA948A0030050	0	Y	N	N	N	31 3/16	792.5	39 3/8	1000.5	7/8	22.2	6 9/16	166.1	24 11/16	626.3	9 1/8	231.3	5/16	7.9	3	76.2	14 1/2	368.3	14 5/8	371.5	18 3/4	476.3	216	98.0	255	115.7	33 5/16	846.6	45 1/4	1149.1
24VNA949A0030050	0	Y	N	N	N	35	889.0	43 13/16	1112.6	7/8	22.2	6 9/16	166.1	28 7/16	722.8	9 1/8	231.3	5/16	7.9	3	76.2	16 1/4	412.8	16 1/4	412.8	20 1/2	520.7	262	118.8	300	136.1	37 1/8	943.1	50 3/16	1274.9
24VNA960A0030050	0	Y	N	N	N	31 3/16	792.5	42 13/16	1086.9	7/8	22.2	6 9/16	166.1	24 11/16	626.3	9 1/8	231.3	5/16	7.9	3	76.2	16 1/2	419.1	15	381.0	20	508.0	241	109.3	282	127.9	33 5/16	846.6	48 1/4	1224.8

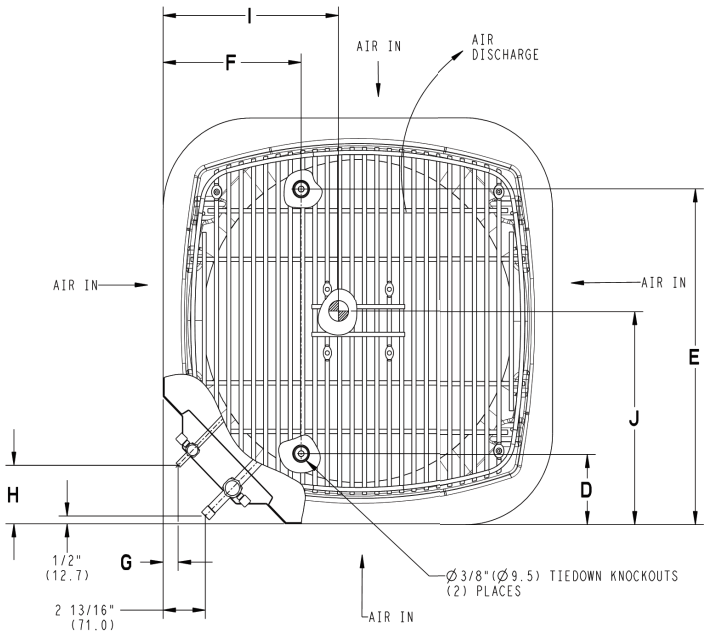
208-230-1-60	208/230-3-60	460-3-60	575-3-60

Y=YES
N=NO

NOTES:

1. CENTER OF GRAVITY ◔ .





UNIT SIZE	"X" MINIMUM GROUND MOUNTING PAD APPLICATION DIMENSIONS		"Y" MINIMUM ROOF-TOP MOUNTING PAD APPLICATION DIMENSIONS	
13,24,25,36	23 1/8	587.3	17 7/8	454.6
-	25 3/4	654.0	20 7/16	518.5
37,48,60	31 3/16	792.5	22 15/16	583.2
49	35	889.0	26 3/4	679.7

NOTE: ALL DIMENSIONS IN INCH (MM)

U.S. ECCN: Not Subject to Regulation (N.S.R.)

SD5238-4 REV. F

TESTED AHRI COMBINATION RATINGS*

NOTE: Ratings contained in this document are subject to change at any time.

For AHRI ratings certificates, please refer to the AHRI directory www.ahridirectory.org

Additional ratings and system combinations can be accessed via the Carrier database at: www.MyCarrierRatings.com

Outdoor Model Number	Indoor Model Number	Furnace Model Number	Cooling Capacity High	EER	SEER	ID CFM
24VNA913A*030*	FE4ANF002L+UI		12800	13.0	17.0	420
24VNA924B*030*	FE4ANF002L+UI		24000	11.0	17.5	825
24VNA925A*031*	FE4AN(B,F)005L+UI		24000	12.5	19.0	825
24VNA936A*031*	FE4AN(B,F)005L+UI		35000	10.5	18.0	1050
24VNA937A*030*	FE4ANB006L+UI		33600	13.0	18.5	1050
24VNA948A*030*	FE4ANB006L+UI		46500	11.0	18.0	1400
24VNA949A*030*	CNPV*6024AL*+UI	58CV(A,X)155–22	44500	12.5	19.0	1200
24VNA960A*030*	FE4ANB006L+UI		57000	10.0	16.5	1600

* Ratings are net values reflecting the effects of circulating fan heat. Supplemental electric heat is not included. Ratings are based on:
Cooling Standard: 80°F (27°C) db 67°F (19°C) wb indoor entering air temperature and 95°F (35°C) db air entering outdoor unit.
EER — Energy Efficiency Ratio
SEER — Seasonal Energy Efficiency Ratio
UI — User Interface

NOTE: Ratings contained in this document are subject to change at any time.

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE

EDB °F (°C)	EVAP. AIR	24VNA913 / FE4ANF002L Efficiency Mode Condenser Entering Air Temperature °F (°C)																					
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**420**	12.59	5.26	1.36	**420**	13.48	5.59	1.17	**420**	14.21	5.86	0.98	**420**	15.07	6.18	0.81	**420**	15.92	6.51	0.65	**420**	16.76	6.83	0.50
	67 (19.4)		11.37	7.16	1.35		12.17	7.50	1.17		12.84	7.79	0.98		13.61	8.13	0.82		14.37	8.46	0.67		15.11	8.79	0.53
	63 (17.2)		10.47	8.64	1.34		11.21	8.99	1.17		11.83	9.30	0.99		12.53	9.64	0.83		13.22	9.98	0.69		13.89	10.32	0.56
	57 (13.9)		9.83	9.83	1.34		10.40	10.40	1.17		10.89	10.89	0.99		11.42	11.42	0.84		11.93	11.93	0.71		12.42	12.42	0.59
80 (26.7)	72 (22.2)	**420**	12.55	7.18	1.36	**420**	13.44	7.52	1.17	**420**	14.16	7.81	0.98	**420**	15.02	8.15	0.81	**420**	15.87	8.49	0.65	**420**	16.71	8.83	0.50
	67 (19.4)		11.34	9.04	1.35		12.13	9.40	1.17		12.80	9.71	0.98		13.57	10.07	0.82		14.33	10.42	0.67		15.07	10.76	0.53
	63 (17.2)		10.52	10.47	1.35		11.23	10.87	1.17		11.84	11.20	0.99		12.54	11.57	0.83		13.22	11.93	0.69		13.88	12.28	0.56
	57 (13.9)		10.48	10.48	1.34		11.08	11.08	1.17		11.59	11.59	0.99		12.16	12.16	0.83		12.70	12.70	0.70		13.22	13.22	0.57
STAGE 3																									
75 (23.9)	72 (22.2)	**300**	10.14	4.18	1.01	**300**	10.85	4.45	0.90	**420**	12.12	5.12	0.77	**420**	12.91	5.41	0.66	**420**	13.68	5.70	0.54	**420**	14.43	5.98	0.42
	67 (19.4)		9.12	5.54	1.01		9.75	5.82	0.91		10.91	7.08	0.79		11.61	7.38	0.68		12.29	7.68	0.57		12.95	7.97	0.47
	63 (17.2)		8.38	6.62	1.01		8.96	6.90	0.91		10.04	8.60	0.79		10.67	8.92	0.69		11.28	9.23	0.60		11.88	9.53	0.50
	57 (13.9)		7.73	7.73	1.00		8.17	8.17	0.92		9.57	9.57	0.80		10.07	10.07	0.70		10.54	10.54	0.61		11.01	11.01	0.52
80 (26.7)	72 (22.2)	**300**	10.10	5.57	1.01	**300**	10.82	5.86	0.90	**420**	12.07	7.11	0.77	**420**	12.86	7.42	0.66	**420**	13.63	7.73	0.54	**420**	14.38	8.03	0.42
	67 (19.4)		9.09	6.92	1.01		9.73	7.22	0.91		10.89	9.03	0.79		11.58	9.36	0.68		12.25	9.68	0.57		12.91	9.99	0.47
	63 (17.2)		8.39	7.99	1.01		8.97	8.29	0.91		10.24	10.24	0.79		10.78	10.78	0.69		11.34	11.19	0.59		11.92	11.53	0.50
	57 (13.9)		8.23	8.23	1.01		8.70	8.70	0.91		10.23	10.23	0.79		10.75	10.75	0.69		11.26	11.26	0.60		11.76	11.76	0.50
STAGE 1																									
75 (23.9)	72 (22.2)	**200**	8.50	3.45	0.83	**200**	9.09	3.68	0.77	**300**	8.44	3.60	0.51	**300**	9.06	3.83	0.44	**300**	9.67	4.05	0.36	**300**	10.28	4.28	0.28
	67 (19.4)		7.65	4.36	0.83		8.17	4.60	0.77		7.61	5.05	0.51		8.16	5.29	0.45		8.70	5.53	0.39		9.23	5.77	0.31
	63 (17.2)		7.04	5.08	0.82		7.51	5.32	0.77		7.02	6.18	0.51		7.51	6.44	0.46		8.00	6.69	0.40		8.46	6.93	0.34
	57 (13.9)		6.23	6.15	0.81		6.63	6.39	0.77		6.75	6.75	0.52		7.16	7.16	0.47		7.54	7.54	0.41		7.90	7.90	0.36
80 (26.7)	72 (22.2)	**200**	8.48	4.39	0.83	**200**	9.06	4.63	0.77	**300**	8.40	5.06	0.51	**300**	9.02	5.30	0.44	**300**	9.64	5.55	0.36	**300**	10.24	5.80	0.28
	67 (19.4)		7.63	5.29	0.83		8.15	5.54	0.77		7.59	6.49	0.51		8.14	6.76	0.45		8.68	7.02	0.39		9.21	7.28	0.31
	63 (17.2)		7.03	6.01	0.82		7.49	6.26	0.77		7.23	7.23	0.51		7.66	7.66	0.46		8.08	8.08	0.40		8.50	8.42	0.33
	57 (13.9)		6.58	6.58	0.82		6.94	6.94	0.77		7.22	7.22	0.51		7.65	7.65	0.46		8.06	8.06	0.40		8.46	8.46	0.34

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA924B / FE4ANF002L Efficiency Mode Condenser Entering Air Temperature °F (°C)																					
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**825**	23.43	9.90	2.85	**825**	25.03	10.49	2.52	**825**	26.46	11.02	2.20	**825**	28.00	11.60	1.91	**825**	29.51	12.16	1.63	**825**	31.01	12.73	1.37
	67 (19.4)		21.30	13.70	2.81		22.76	14.32	2.49		24.07	14.89	2.18		25.46	15.50	1.90		26.82	16.10	1.63		28.19	16.70	1.38
	63 (17.2)		19.74	16.69	2.78		21.07	17.34	2.47		22.29	17.94	2.17		23.58	18.57	1.89		24.85	19.20	1.63		26.11	19.82	1.39
	57 (13.9)		18.74	18.74	2.76		19.81	19.81	2.45		20.78	20.78	2.15		21.79	21.79	1.88		22.78	22.78	1.63		23.74	23.74	1.39
80 (26.7)	72 (22.2)	**825**	23.36	13.70	2.85	**825**	24.96	14.32	2.52	**825**	26.39	14.88	2.20	**825**	27.93	15.49	1.91	**825**	29.44	16.09	1.63	**825**	30.94	16.69	1.37
	67 (19.4)		21.24	17.45	2.81		22.69	18.11	2.49		24.00	18.72	2.18		25.39	19.36	1.90		26.76	19.99	1.63		28.12	20.63	1.38
	63 (17.2)		19.96	19.96	2.78		21.18	20.93	2.47		22.35	21.63	2.17		23.61	22.34	1.89		24.86	23.02	1.63		26.10	23.70	1.38
	57 (13.9)		19.93	19.93	2.78		21.05	21.05	2.47		22.07	22.07	2.16		23.12	23.12	1.89		24.16	24.16	1.63		25.17	25.17	1.39
STAGE 3																									
75 (23.9)	72 (22.2)	**650**	16.60	7.18	1.72	**650**	17.75	7.59	1.53	**650**	18.75	7.96	1.31	**650**	19.88	8.37	1.12	**650**	20.99	8.78	0.94	**650**	22.08	9.18	0.77
	67 (19.4)		15.01	10.22	1.72		16.06	10.66	1.53		16.99	11.06	1.32		18.00	11.49	1.14		18.99	11.92	0.97		19.97	12.34	0.81
	63 (17.2)		13.88	12.59	1.71		14.82	13.06	1.54		15.70	13.48	1.32		16.62	13.94	1.15		17.52	14.38	0.99		18.40	14.82	0.84
	57 (13.9)		13.48	13.48	1.71		14.25	14.25	1.54		14.97	14.97	1.32		15.70	15.70	1.16		16.40	16.40	1.01		17.10	17.10	0.86
80 (26.7)	72 (22.2)	**650**	16.54	10.24	1.72	**650**	17.69	10.68	1.53	**650**	18.68	11.07	1.31	**650**	19.81	11.51	1.12	**650**	20.92	11.94	0.94	**650**	22.01	12.37	0.77
	67 (19.4)		14.98	13.23	1.72		16.01	13.70	1.53		16.94	14.13	1.32		17.95	14.59	1.14		18.93	15.05	0.97		19.91	15.50	0.81
	63 (17.2)		14.42	14.42	1.72		15.24	15.24	1.53		15.99	15.99	1.32		16.77	16.77	1.15		17.61	17.39	0.99		18.46	17.89	0.83
	57 (13.9)		14.40	14.40	1.72		15.22	15.22	1.53		15.96	15.96	1.32		16.74	16.74	1.15		17.50	17.50	0.99		18.23	18.23	0.84
STAGE 1																									
75 (23.9)	72 (22.2)	**650**	14.01	6.30	1.38	**650**	15.00	6.65	1.24	**585**	9.25	4.60	0.54	**585**	9.85	4.81	0.46	**585**	10.45	5.01	0.37	**585**	11.04	5.22	0.29
	67 (19.4)		12.64	9.35	1.39		13.52	9.73	1.25		8.32	7.38	0.55		8.85	7.61	0.48		9.37	7.84	0.40		9.89	8.07	0.33
	63 (17.2)		11.71	11.62	1.39		12.49	12.06	1.26		8.11	8.11	0.55		8.56	8.56	0.48		9.00	9.00	0.41		9.43	9.43	0.34
	57 (13.9)		11.67	11.67	1.39		12.35	12.35	1.26		8.11	8.11	0.55		8.55	8.55	0.48		8.98	8.98	0.41		9.42	9.42	0.34
80 (26.7)	72 (22.2)	**650**	13.95	9.39	1.38	**650**	14.94	9.76	1.24	**585**	9.20	7.43	0.54	**585**	9.80	7.66	0.45	**585**	10.39	7.90	0.37	**585**	10.98	8.13	0.29
	67 (19.4)		12.66	12.32	1.39		13.52	12.75	1.25		8.77	8.77	0.54		9.26	9.26	0.47		9.73	9.73	0.39		10.19	10.19	0.31
	63 (17.2)		12.55	12.55	1.39		13.28	13.28	1.26		8.77	8.77	0.54		9.25	9.25	0.47		9.72	9.72	0.39		10.18	10.18	0.31
	57 (13.9)		12.53	12.53	1.39		13.26	13.26	1.26		8.76	8.76	0.54		9.24	9.24	0.47		9.71	9.71	0.39		10.17	10.17	0.31

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR EWB °F (°C)	24VNA925/FE4ANF005 Efficiency Mode Condenser Entering Air Temperature °F (°C)																					
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
		ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**825**	23.68	9.99	2.51	**825**	25.12	10.51	2.21	**825**	26.43	11.00	1.90	**825**	27.77	11.50	1.62	**825**	29.08	11.99	1.34	**825**	30.34	12.47	1.07
	67 (19.4)		21.55	13.82	2.50		22.88	14.39	2.21		24.10	14.93	1.92		25.35	15.48	1.65		26.55	16.01	1.39		27.72	16.54	1.13
	63 (17.2)		19.97	16.81	2.49		21.22	17.43	2.22		22.38	18.00	1.93		23.54	18.59	1.67		24.67	19.16	1.42		25.77	19.72	1.17
	57 (13.9)		18.96	18.96	2.48		19.97	19.97	2.21		20.91	20.91	1.94		21.84	21.84	1.69		22.75	22.75	1.45		23.62	23.62	1.21
80 (26.7)	72 (22.2)	**825**	23.52	13.77	2.50	**825**	24.94	14.33	2.20	**825**	26.25	14.85	1.90	**825**	27.59	15.38	1.61	**825**	28.89	15.91	1.34	**825**	30.15	16.42	1.07
	67 (19.4)		21.46	17.56	2.50		22.78	18.18	2.21		24.00	18.75	1.92		25.24	19.33	1.65		26.45	19.90	1.39		27.61	20.46	1.13
	63 (17.2)		20.19	20.19	2.49		21.30	21.10	2.22		22.43	21.76	1.93		23.57	22.40	1.67		24.68	23.02	1.42		25.77	23.62	1.17
	57 (13.9)		20.15	20.15	2.49		21.20	21.20	2.22		22.18	22.18	1.93		23.15	23.15	1.67		24.09	24.09	1.43		25.00	25.00	1.19
STAGE 3																									
75 (23.9)	72 (22.2)	**650**	15.55	6.67	1.25	**650**	16.54	7.02	1.17	**650**	17.29	7.30	1.03	**650**	18.23	7.64	0.91	**650**	19.14	7.98	0.77	**650**	20.05	8.32	0.61
	67 (19.4)		14.11	9.43	1.25		15.02	9.82	1.18		15.76	10.15	1.05		16.63	10.52	0.95		17.47	10.89	0.82		18.29	11.25	0.67
	63 (17.2)		13.09	11.60	1.25		13.94	12.02	1.19		14.67	12.38	1.06		15.47	12.78	0.97		16.26	13.17	0.85		17.02	13.56	0.71
	57 (13.9)		12.65	12.65	1.25		13.36	13.36	1.20		13.97	13.97	1.07		14.62	14.62	0.98		15.26	15.26	0.87		15.89	15.89	0.75
80 (26.7)	72 (22.2)	**650**	15.43	9.41	1.24	**650**	16.40	9.79	1.17	**650**	17.14	10.08	1.03	**650**	18.08	10.45	0.91	**650**	18.99	10.81	0.77	**650**	19.94	11.19	0.61
	67 (19.4)		14.07	12.14	1.25		14.97	12.56	1.18		15.70	12.91	1.05		16.56	13.31	0.94		17.39	13.70	0.82		18.21	14.09	0.67
	63 (17.2)		13.49	13.49	1.25		14.23	14.23	1.19		14.84	14.84	1.06		15.54	15.49	0.96		16.30	15.95	0.84		17.05	16.38	0.71
	57 (13.9)		13.47	13.47	1.25		14.20	14.20	1.19		14.81	14.81	1.06		15.50	15.50	0.96		16.17	16.17	0.85		16.81	16.81	0.72
STAGE 1																									
75 (23.9)	72 (22.2)	**650**	12.12	5.39	0.73	**650**	12.92	5.68	0.75	**585**	10.55	4.66	0.46	**585**	11.18	4.89	0.44	**585**	11.84	5.13	0.39	**585**	12.52	5.37	0.28
	67 (19.4)		10.98	7.95	0.74		11.73	8.27	0.77		9.58	6.85	0.47		10.16	7.10	0.47		10.74	7.35	0.43		11.36	7.61	0.34
	63 (17.2)		10.22	9.94	0.74		10.91	10.29	0.77		8.93	8.56	0.49		9.46	8.83	0.49		10.00	9.10	0.46		10.55	9.37	0.38
	57 (13.9)		10.14	10.14	0.74		10.74	10.74	0.78		8.82	8.82	0.49		9.29	9.29	0.50		9.75	9.75	0.47		10.21	10.21	0.40
80 (26.7)	72 (22.2)	**650**	11.99	7.94	0.73	**650**	12.79	8.25	0.75	**585**	10.41	6.81	0.46	**585**	11.06	7.06	0.44	**585**	11.73	7.32	0.38	**585**	12.41	7.59	0.28
	67 (19.4)		10.97	10.45	0.74		11.70	10.80	0.76		9.55	8.98	0.47		10.13	9.25	0.47		10.71	9.53	0.43		11.32	9.81	0.34
	63 (17.2)		10.83	10.83	0.74		11.46	11.46	0.77		9.40	9.40	0.48		9.89	9.89	0.48		10.37	10.37	0.44		10.87	10.87	0.36
	57 (13.9)		10.82	10.82	0.74		11.44	11.44	0.77		9.39	9.39	0.48		9.87	9.87	0.48		10.35	10.35	0.44		10.85	10.85	0.36

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA936 / FE4ANF005 Efficiency Mode Condenser Entering Air Temperature °F (°C)																							
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**1050**	34.24	14.18	4.44	**1050**	36.41	14.99	3.89	**1050**	38.29	15.70	3.36	**1050**	40.30	16.47	2.87	**1050**	42.28	17.24	2.41	**1050**	44.18	17.98	1.98
	67 (19.4)		31.38	19.07	4.38		33.35	19.95	3.85		35.13	20.75	3.34		36.99	21.60	2.87		38.79	22.42	2.43		40.52	23.22	2.02
	63 (17.2)		29.21	22.90	4.33		31.07	23.84	3.81		32.74	24.70	3.31		34.48	25.59	2.86		36.17	26.47	2.44		37.79	27.32	2.04
	57 (13.9)		27.05	27.05	4.27		28.50	28.50	3.77		29.85	29.85	3.28		31.20	31.20	2.84		32.65	32.25	2.44		34.08	33.21	2.06
80 (26.7)	72 (22.2)	**1050**	34.04	18.92	4.44	**1050**	36.21	19.79	3.88	**1050**	38.09	20.56	3.35	**1050**	40.10	21.39	2.86	**1050**	42.08	22.22	2.41	**1050**	43.98	23.01	1.98
	67 (19.4)		31.25	23.78	4.38		33.23	24.72	3.84		35.00	25.57	3.33		36.86	26.47	2.86		38.66	27.35	2.42		40.39	28.21	2.02
	63 (17.2)		29.21	27.55	4.33		31.05	28.56	3.81		32.70	29.48	3.31		34.43	30.44	2.86		36.11	31.38	2.43		37.72	32.28	2.04
	57 (13.9)		28.61	28.61	4.32		30.14	30.14	3.80		31.53	31.53	3.30		32.95	32.95	2.85		34.31	34.31	2.44		35.64	35.64	2.05
STAGE 3																									
75 (23.9)	72 (22.2)	**900**	21.81	9.32	1.96	**900**	23.25	9.85	1.83	**900**	24.29	10.24	1.67	**900**	25.66	10.75	1.50	**900**	27.01	11.26	1.31	**900**	28.33	11.75	1.10
	67 (19.4)		19.85	13.12	1.96		21.18	13.71	1.84		22.21	14.19	1.68		23.48	14.77	1.52		24.72	15.33	1.35		25.94	15.89	1.15
	63 (17.2)		18.41	16.08	1.95		19.66	16.73	1.85		20.68	17.29	1.68		21.87	17.91	1.54		23.02	18.53	1.37		24.16	19.14	1.19
	57 (13.9)		17.71	17.71	1.95		18.75	18.75	1.85		19.63	19.63	1.68		20.61	20.61	1.54		21.57	21.57	1.39		22.50	22.50	1.22
80 (26.7)	72 (22.2)	**900**	21.64	13.06	1.95	**900**	23.07	13.65	1.83	**900**	24.08	14.08	1.66	**900**	25.46	14.65	1.49	**900**	26.81	15.21	1.31	**900**	28.13	15.76	1.10
	67 (19.4)		19.77	16.83	1.95		21.09	17.48	1.84		22.11	18.01	1.67		23.37	18.64	1.52		24.60	19.26	1.35		25.82	19.87	1.15
	63 (17.2)		18.86	18.86	1.95		19.95	19.95	1.84		20.82	20.82	1.68		21.94	21.67	1.53		23.07	22.38	1.37		24.19	23.06	1.19
	57 (13.9)		18.83	18.83	1.95		19.91	19.91	1.84		20.79	20.79	1.68		21.82	21.82	1.53		22.82	22.82	1.37		23.80	23.80	1.20
STAGE 1																									
75 (23.9)	72 (22.2)	**800**	14.74	6.58	0.98	**800**	15.80	6.96	1.00	**600**	10.82	4.81	0.48	**600**	11.57	5.09	0.46	**600**	12.38	5.38	0.39	**600**	13.21	5.69	0.27
	67 (19.4)		13.36	9.71	0.98		14.34	10.16	1.02		9.83	7.10	0.49		10.52	7.42	0.49		11.24	7.76	0.44		11.99	8.11	0.34
	63 (17.2)		12.47	12.13	0.98		13.37	12.65	1.03		9.17	8.88	0.51		9.81	9.25	0.51		10.45	9.62	0.47		11.13	10.00	0.38
	57 (13.9)		12.37	12.37	0.98		13.18	13.18	1.03		9.09	9.09	0.51		9.66	9.66	0.52		10.22	10.22	0.48		10.81	10.81	0.40
80 (26.7)	72 (22.2)	**800**	14.58	9.69	0.97	**800**	15.63	10.12	1.00	**600**	10.67	7.06	0.47	**600**	11.46	7.39	0.46	**600**	12.27	7.73	0.39	**600**	13.08	8.07	0.27
	67 (19.4)		13.36	12.75	0.98		14.32	13.27	1.02		9.80	9.32	0.49		10.49	9.70	0.49		11.21	10.08	0.44		11.95	10.47	0.34
	63 (17.2)		13.20	13.20	0.98		14.04	14.04	1.02		9.68	9.68	0.49		10.28	10.28	0.49		10.89	10.89	0.45		11.52	11.52	0.36
	57 (13.9)		13.18	13.18	0.98		14.02	14.02	1.02		9.67	9.67	0.49		10.26	10.26	0.49		10.87	10.87	0.45		11.50	11.50	0.36

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA937 / FE4ANB006L Efficiency Mode Condenser Entering Air Temperature °F (°C)																							
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**1050**	32.70	13.63	3.49	**1050**	34.98	14.48	3.05	**1050**	37.03	15.26	2.59	**1050**	39.26	16.11	2.21	**1050**	41.44	16.95	1.86	**1050**	43.61	17.78	1.54
	67 (19.4)		31.53	19.22	3.08		31.81	19.44	3.03		33.70	20.30	2.58		35.71	21.22	2.21		37.69	22.14	1.87		39.65	23.05	1.56
	63 (17.2)		27.56	22.33	3.44		29.48	23.32	3.02		31.25	24.26	2.58		33.12	25.24	2.21		34.94	26.21	1.88		36.75	27.17	1.58
	57 (13.9)		25.78	25.78	3.41		27.31	27.31	3.00		28.73	28.73	2.56		30.19	30.19	2.21		31.62	31.62	1.89		33.01	33.01	1.61
80 (26.7)	72 (22.2)	**1050**	32.58	18.47	3.49	**1050**	34.86	19.41	3.05	**1050**	36.91	20.26	2.59	**1050**	39.14	21.19	2.21	**1050**	41.32	22.11	1.86	**1050**	43.48	23.02	1.54
	67 (19.4)		31.43	24.01	3.08		31.71	24.30	3.03		33.60	25.24	2.58		35.61	26.24	2.21		37.59	27.23	1.87		39.55	28.22	1.56
	63 (17.2)		27.61	27.02	3.44		29.49	28.13	3.02		31.23	29.15	2.58		33.10	30.22	2.21		34.91	31.27	1.88		36.70	32.31	1.58
	57 (13.9)		27.36	27.36	3.44		28.98	28.98	3.01		30.45	30.45	2.57		32.00	32.00	2.21		33.49	33.49	1.89		34.96	34.96	1.59
STAGE 3																									
75 (23.9)	72 (22.2)	**900**	22.96	9.72	2.41	**900**	24.70	10.37	2.11	**900**	26.36	10.99	1.76	**900**	28.08	11.65	1.50	**900**	29.77	12.29	1.25	**900**	31.45	12.93	1.03
	67 (19.4)		20.81	13.49	2.42		22.39	14.22	2.13		23.90	14.93	1.79		25.43	15.65	1.54		26.95	16.37	1.30		28.46	17.09	1.08
	63 (17.2)		19.24	16.44	2.42		20.68	17.23	2.14		22.09	18.01	1.80		23.50	18.79	1.56		24.89	19.57	1.34		26.28	20.35	1.13
	57 (13.9)		18.34	18.34	2.42		19.54	19.54	2.15		20.70	20.70	1.82		21.85	21.85	1.58		22.98	22.98	1.37		24.10	24.10	1.17
80 (26.7)	72 (22.2)	**900**	22.86	13.49	2.41	**900**	24.60	14.23	2.11	**900**	26.26	14.93	1.76	**900**	27.98	15.67	1.50	**900**	29.67	16.39	1.25	**900**	31.35	17.12	1.03
	67 (19.4)		20.74	17.22	2.42		22.31	18.03	2.13		23.83	18.82	1.79		25.36	19.62	1.54		26.87	20.42	1.30		28.38	21.22	1.08
	63 (17.2)		19.57	19.57	2.42		20.83	20.83	2.14		22.16	21.83	1.80		23.54	22.72	1.56		24.92	23.58	1.33		26.29	24.45	1.12
	57 (13.9)		19.53	19.53	2.42		20.79	20.79	2.14		22.01	22.01	1.80		23.22	23.22	1.56		24.42	24.42	1.34		25.59	25.59	1.14
STAGE 1																									
75 (23.9)	72 (22.2)	**800**	18.16	7.73	1.96	**800**	19.62	8.28	1.73	**600**	15.04	6.28	0.87	**600**	16.16	6.71	0.72	**600**	17.28	7.14	0.57	**600**	18.39	7.57	0.43
	67 (19.4)		16.42	10.82	1.98		17.74	11.45	1.76		13.64	8.56	0.91		14.65	9.05	0.76		15.65	9.54	0.62		16.65	10.04	0.49
	63 (17.2)		15.19	13.25	1.99		16.40	13.94	1.77		12.63	10.35	0.93		13.55	10.90	0.80		14.47	11.44	0.66		15.39	11.99	0.53
	57 (13.9)		14.59	14.59	1.99		15.61	15.61	1.78		11.87	11.87	0.95		12.64	12.64	0.82		13.40	13.40	0.70		14.16	14.16	0.58
80 (26.7)	72 (22.2)	**800**	18.08	10.84	1.96	**800**	19.54	11.47	1.73	**600**	14.98	8.55	0.87	**600**	16.10	9.05	0.72	**600**	17.22	9.55	0.57	**600**	18.33	10.05	0.43
	67 (19.4)		16.38	13.89	1.98		17.69	14.60	1.75		13.60	10.81	0.91		14.60	11.37	0.76		15.60	11.94	0.62		16.60	12.50	0.49
	63 (17.2)		15.57	15.57	1.99		16.66	16.66	1.77		12.67	12.58	0.93		13.57	13.20	0.79		14.48	13.82	0.66		15.39	14.44	0.53
	57 (13.9)		15.54	15.54	1.99		16.63	16.63	1.77		12.62	12.62	0.93		13.43	13.43	0.80		14.23	14.23	0.67		15.04	15.04	0.54

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA948 / FE4BNB006 Efficiency Mode Condenser Entering Air Temperature °F (°C)																					
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**1400**	44.82	18.57	5.52	**1400**	47.96	19.76	4.88	**1400**	50.99	20.91	4.29	**1400**	53.98	22.06	3.74	**1400**	56.89	23.19	3.23	**1400**	59.70	24.29	2.75
	67 (19.4)		40.99	24.95	5.42		43.86	26.26	4.80		46.65	27.54	4.23		49.36	28.80	3.70		52.01	30.04	3.21		54.60	31.27	2.75
	63 (17.2)		38.13	29.97	5.34		40.79	31.36	4.74		43.37	32.72	4.18		45.91	34.07	3.67		48.37	35.40	3.19		50.78	36.72	2.74
	57 (13.9)		35.29	35.29	5.26		37.41	37.41	4.66		39.46	39.46	4.12		41.45	41.45	3.62		43.58	43.09	3.16		45.70	44.59	2.73
80 (26.7)	72 (22.2)	**1400**	44.60	24.79	5.51	**1400**	47.74	26.09	4.88	**1400**	50.77	27.36	4.28	**1400**	53.76	28.62	3.73	**1400**	56.66	29.86	3.22	**1400**	59.48	31.07	2.75
	67 (19.4)		40.84	31.14	5.42		43.71	32.55	4.80		46.50	33.94	4.23		49.21	35.31	3.70		51.86	36.65	3.20		54.45	37.98	2.75
	63 (17.2)		38.13	36.06	5.34		40.76	37.59	4.74		43.33	39.07	4.18		45.84	40.54	3.67		48.30	41.98	3.18		50.70	43.40	2.74
	57 (13.9)		37.36	37.36	5.32		39.59	39.59	4.72		41.72	41.72	4.16		43.81	43.81	3.64		45.84	45.84	3.17		47.82	47.82	2.73
STAGE 3																									
75 (23.9)	72 (22.2)	**1200**	29.42	12.62	2.82	**1200**	31.60	13.43	2.56	**1200**	33.63	14.20	2.26	**1200**	35.75	15.00	2.00	**1200**	37.82	15.78	1.74	**1200**	39.85	16.55	1.49
	67 (19.4)		26.82	17.86	2.80		28.83	18.79	2.56		30.73	19.68	2.27		32.66	20.60	2.02		34.57	21.50	1.77		36.44	22.40	1.52
	63 (17.2)		24.93	21.96	2.79		26.79	22.99	2.55		28.58	23.99	2.26		30.39	25.00	2.02		32.16	26.00	1.78		33.91	26.99	1.55
	57 (13.9)		24.03	24.03	2.78		25.61	25.61	2.55		27.12	27.12	2.26		28.62	28.62	2.03		30.11	30.11	1.80		31.55	31.55	1.57
80 (26.7)	72 (22.2)	**1200**	29.22	17.78	2.81	**1200**	31.39	18.70	2.55	**1200**	33.41	19.57	2.25	**1200**	35.52	20.47	2.00	**1200**	37.60	21.37	1.74	**1200**	39.62	22.25	1.48
	67 (19.4)		26.71	22.96	2.80		28.71	24.01	2.56		30.60	25.01	2.26		32.52	26.03	2.01		34.42	27.05	1.77		36.30	28.05	1.52
	63 (17.2)		25.56	25.56	2.80		27.23	27.23	2.55		28.80	28.80	2.26		30.48	30.24	2.02		32.21	31.42	1.78		33.93	32.55	1.55
	57 (13.9)		25.52	25.52	2.80		27.19	27.19	2.55		28.76	28.76	2.26		30.35	30.35	2.02		31.90	31.90	1.78		33.43	33.43	1.55
STAGE 1																									
75 (23.9)	72 (22.2)	**1100**	25.50	10.99	2.21	**1100**	27.46	11.73	2.07	**875**	19.62	8.56	0.95	**875**	20.96	9.06	0.84	**875**	22.29	9.57	0.72	**875**	23.61	10.07	0.57
	67 (19.4)		23.22	15.65	2.21		25.04	16.51	2.08		17.88	12.38	0.98		19.11	12.99	0.88		20.32	13.60	0.76		21.53	14.21	0.62
	63 (17.2)		21.57	19.30	2.21		23.24	20.26	2.08		16.68	15.37	1.00		17.82	16.07	0.90		18.95	16.77	0.79		20.07	17.46	0.66
	57 (13.9)		20.89	20.89	2.20		22.32	22.32	2.08		16.33	16.33	1.00		17.34	17.34	0.91		18.34	18.34	0.81		19.33	19.33	0.68
80 (26.7)	72 (22.2)	**1100**	25.31	15.59	2.21	**1100**	27.26	16.44	2.06	**875**	19.42	12.31	0.95	**875**	20.76	12.92	0.84	**875**	22.09	13.52	0.71	**875**	23.43	14.14	0.57
	67 (19.4)		23.13	20.20	2.21		24.93	21.18	2.07		17.82	16.09	0.98		19.04	16.80	0.88		20.25	17.51	0.76		21.44	18.21	0.62
	63 (17.2)		22.25	22.25	2.21		23.77	23.77	2.08		17.35	17.35	0.98		18.41	18.41	0.89		19.46	19.46	0.78		20.50	20.50	0.65
	57 (13.9)		22.21	22.21	2.21		23.73	23.73	2.08		17.32	17.32	0.98		18.39	18.39	0.89		19.43	19.43	0.78		20.47	20.47	0.65

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA949 / *CNPV*6024AL* Efficiency Mode Condenser Entering Air Temperature °F (°C)																							
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**1200**	45.15	18.59	4.64	**1200**	47.22	19.34	4.10	**1200**	49.13	20.04	3.62	**1200**	50.85	20.69	3.20	**1200**	52.44	21.29	2.83	**1200**	53.90	21.86	2.50
	67 (19.4)		40.99	24.58	4.57		42.88	25.28	4.03		44.59	25.92	3.56		46.15	26.50	3.14		47.59	27.05	2.77		48.89	27.54	2.45
	63 (17.2)		37.94	29.29	4.53		39.67	29.93	3.99		41.26	30.52	3.52		42.70	31.05	3.10		44.02	31.54	2.74		45.22	31.98	2.42
	57 (13.9)		34.94	34.94	4.48		36.17	36.17	3.94		37.25	37.25	3.47		38.39	37.79	3.05		39.47	38.20	2.69		40.46	38.55	2.38
80 (26.7)	72 (22.2)	**1200**	45.05	24.59	4.65	**1200**	47.12	25.29	4.10	**1200**	49.03	25.93	3.62	**1200**	50.75	26.52	3.20	**1200**	52.34	27.07	2.83	**1200**	53.80	27.58	2.50
	67 (19.4)		40.90	30.52	4.57		42.79	31.16	4.03		44.50	31.73	3.56		46.06	32.26	3.14		47.51	32.74	2.77		48.81	33.18	2.45
	63 (17.2)		38.05	35.23	4.53		39.74	35.81	3.99		41.31	36.35	3.52		42.73	36.82	3.10		44.03	37.24	2.74		45.22	37.62	2.42
	57 (13.9)		37.10	37.10	4.51		38.37	38.37	3.97		39.51	39.51	3.50		40.51	40.51	3.08		41.42	41.42	2.71		42.21	42.21	2.39
STAGE 3																									
75 (23.9)	72 (22.2)	**1100**	31.12	13.04	2.69	**1100**	33.04	13.72	2.42	**1100**	34.76	14.34	2.13	**1100**	36.52	14.98	1.89	**1100**	38.19	15.60	1.67	**1100**	39.82	16.21	1.47
	67 (19.4)		27.98	17.71	2.68		29.74	18.37	2.42		31.35	18.98	2.12		32.93	19.60	1.88		34.47	20.20	1.67		35.92	20.78	1.46
	63 (17.2)		25.70	21.37	2.67		27.30	22.01	2.41		28.81	22.61	2.11		30.27	23.20	1.88		31.66	23.76	1.67		33.00	24.31	1.47
	57 (13.9)		24.22	24.22	2.66		25.43	25.43	2.41		26.54	26.54	2.11		27.60	27.60	1.88		28.59	28.59	1.67		29.51	29.51	1.47
80 (26.7)	72 (22.2)	**1100**	31.03	17.82	2.69	**1100**	32.96	18.48	2.42	**1100**	34.67	19.07	2.13	**1100**	36.43	19.69	1.89	**1100**	38.11	20.29	1.67	**1100**	39.73	20.88	1.47
	67 (19.4)		27.94	22.44	2.68		29.69	23.08	2.42		31.28	23.67	2.12		32.86	24.25	1.88		34.39	24.83	1.67		35.84	25.38	1.46
	63 (17.2)		25.99	25.99	2.67		27.49	26.68	2.41		28.94	27.28	2.11		30.37	27.85	1.88		31.74	28.40	1.67		33.06	28.93	1.47
	57 (13.9)		25.95	25.95	2.67		27.20	27.20	2.41		28.35	28.35	2.11		29.45	29.45	1.88		30.47	30.47	1.67		31.45	31.45	1.47
STAGE 1																									
75 (23.9)	72 (22.2)	**1100**	24.22	10.36	1.81	**1100**	26.07	11.01	1.70	**875**	22.44	9.23	0.80	**875**	22.15	9.12	0.98	**875**	23.77	9.73	0.84	**875**	25.39	10.35	0.64
	67 (19.4)		21.60	14.43	1.81		23.29	15.08	1.71		18.32	11.38	1.06		19.80	12.00	0.98		21.26	12.62	0.84		22.74	13.26	0.66
	63 (17.2)		19.74	17.61	1.80		21.27	18.26	1.71		16.73	13.62	1.05		18.09	14.24	0.98		19.44	14.88	0.85		20.79	15.51	0.67
	57 (13.9)		19.08	19.08	1.80		20.28	20.28	1.71		15.60	15.60	1.05		16.63	16.63	0.98		17.64	17.64	0.86		18.62	18.62	0.70
80 (26.7)	72 (22.2)	**1100**	24.14	14.58	1.81	**1100**	25.99	15.23	1.70	**875**	20.47	11.51	1.08	**875**	22.08	12.12	0.98	**875**	23.71	12.75	0.84	**875**	25.33	13.38	0.64
	67 (19.4)		21.61	18.61	1.81		23.27	19.26	1.71		18.30	14.33	1.06		19.76	14.96	0.98		21.22	15.60	0.84		22.70	16.25	0.66
	63 (17.2)		20.60	20.60	1.80		21.86	21.86	1.71		16.89	16.55	1.06		18.19	17.21	0.98		19.52	17.86	0.85		20.85	18.52	0.67
	57 (13.9)		20.56	20.56	1.80		21.82	21.82	1.71		16.76	16.76	1.05		17.83	17.83	0.98		18.88	18.88	0.85		19.90	19.90	0.68

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - EFFICIENCY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA960 / FE4BNB006L Efficiency Mode Condenser Entering Air Temperature °F (°C)																					
		115 (46.1)				105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**	ID SCFM	Capacity MBtuh		Total Sys. KW**
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																									
75 (23.9)	72 (22.2)	**1600**	55.38	22.79	7.70	**1600**	59.00	24.17	6.73	**1600**	62.54	25.53	5.88	**1600**	65.96	26.86	5.13	**1600**	69.30	28.16	4.47	**1600**	72.59	29.46	3.89
	67 (19.4)		50.63	30.18	7.50		53.95	31.68	6.54		57.12	33.14	5.70		60.22	34.57	4.96		63.25	35.99	4.32		66.21	37.38	3.75
	63 (17.2)		47.11	36.00	7.35		50.18	37.58	6.40		53.13	39.12	5.57		55.99	40.62	4.84		58.78	42.11	4.21		61.52	43.58	3.65
	57 (13.9)		43.16	43.16	7.19		45.55	45.55	6.23		47.97	47.63	5.40		50.44	49.37	4.69		52.86	51.01	4.06		55.26	52.62	3.52
80 (26.7)	72 (22.2)	**1600**	55.24	30.04	7.70	**1600**	58.86	31.53	6.73	**1600**	62.40	33.00	5.88	**1600**	65.82	34.44	5.13	**1600**	69.15	35.85	4.47	**1600**	72.44	37.26	3.89
	67 (19.4)		50.50	37.37	7.50		53.83	38.98	6.54		57.00	40.53	5.70		60.10	42.07	4.96		63.13	43.59	4.32		66.10	45.08	3.75
	63 (17.2)		47.09	43.10	7.35		50.13	44.81	6.40		53.07	46.46	5.57		55.91	48.08	4.84		58.70	49.67	4.21		61.44	51.25	3.65
	57 (13.9)		45.62	45.62	7.29		48.12	48.12	6.33		50.51	50.51	5.49		52.83	52.83	4.76		55.06	55.06	4.12		57.24	57.24	3.56
STAGE 3																									
75 (23.9)	72 (22.2)	**1350**	35.94	15.07	3.39	**1350**	38.40	15.98	3.08	**1350**	40.44	16.73	2.76	**1350**	42.79	17.61	2.51	**1350**	45.10	18.48	2.29	**1350**	47.36	19.34	2.08
	67 (19.4)		32.49	20.54	3.35		34.72	21.48	3.05		36.67	22.32	2.72		38.80	23.24	2.47		40.88	24.15	2.24		42.94	25.05	2.04
	63 (17.2)		29.95	24.83	3.33		32.01	25.81	3.03		33.87	26.70	2.69		35.85	27.65	2.44		37.78	28.59	2.22		39.68	29.52	2.01
	57 (13.9)		28.14	28.14	3.32		29.76	29.76	3.02		31.24	31.24	2.67		32.75	32.75	2.42		34.21	34.21	2.19		35.65	35.65	1.99
80 (26.7)	72 (22.2)	**1350**	35.82	20.59	3.39	**1350**	38.29	21.54	3.08	**1350**	40.32	22.34	2.76	**1350**	42.67	23.26	2.51	**1350**	44.98	24.17	2.29	**1350**	47.24	25.07	2.08
	67 (19.4)		32.39	26.01	3.35		34.62	26.99	3.05		36.56	27.87	2.72		38.70	28.83	2.47		40.78	29.77	2.24		42.84	30.72	2.04
	63 (17.2)		30.07	30.04	3.29		32.09	31.18	3.03		33.90	32.16	2.69		35.85	33.17	2.44		37.76	34.16	2.22		39.65	35.14	2.01
	57 (13.9)		30.02	30.02	3.33		31.70	31.70	3.03		33.22	33.22	2.68		34.80	34.80	2.43		36.33	36.33	2.21		37.82	37.82	2.00
STAGE 1																									
75 (23.9)	72 (22.2)	**1200**	26.64	11.34	1.89	**1200**	28.56	12.02	1.84	**975**	20.89	8.78	1.03	**975**	22.26	9.26	1.00	**975**	23.59	9.73	0.91	**975**	24.89	10.21	0.75
	67 (19.4)		23.86	15.71	1.89		25.60	16.40	1.84		18.63	11.93	1.02		19.89	12.40	1.00		21.11	12.85	0.92		22.30	13.31	0.77
	63 (17.2)		21.85	19.14	1.89		23.45	19.83	1.84		16.95	14.38	1.01		18.11	14.83	1.00		19.24	15.26	0.92		20.34	15.69	0.79
	57 (13.9)		20.91	20.91	1.88		22.14	22.14	1.84		15.97	15.97	1.01		16.81	16.81	1.00		17.62	17.62	0.94		18.38	18.38	0.81
80 (26.7)	72 (22.2)	**1200**	26.55	15.84	1.89	**1200**	28.46	16.52	1.84	**975**	20.81	12.06	1.03	**975**	22.18	12.52	1.00	**975**	23.51	12.97	0.91	**975**	24.81	13.42	0.75
	67 (19.4)		23.79	20.16	1.89		25.52	20.85	1.84		18.58	15.17	1.02		19.83	15.62	1.00		21.05	16.05	0.92		22.24	16.48	0.77
	63 (17.2)		22.48	22.48	1.89		23.77	23.77	1.84		17.25	17.25	1.01		18.20	17.98	1.00		19.28	18.43	0.92		20.35	18.85	0.79
	57 (13.9)		22.44	22.44	1.89		23.72	23.72	1.84		17.21	17.21	1.01		18.08	18.08	1.00		18.91	18.91	0.93		19.70	19.70	0.80

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 and 115 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE

EDB °F (°C)	EVAP. AIR	24VNA913 / FE4ANF002L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																		
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**360**	13.14	5.38	1.16	**420**	14.21	5.86	0.98	**420**	15.07	6.18	0.81	**420**	15.92	6.51	0.65	**420**	16.76	6.83	0.50
	67 (19.4)		11.86	7.01	1.16		12.84	7.79	0.98		13.61	8.13	0.82		14.37	8.46	0.67		15.11	8.79	0.53
	63 (17.2)		10.91	8.29	1.16		11.83	9.30	0.99		12.53	9.64	0.83		13.22	9.98	0.69		13.89	10.32	0.56
	57 (13.9)		9.88	9.88	1.16		10.89	10.89	0.99		11.42	11.42	0.84		11.93	11.93	0.71		12.42	12.42	0.59
80 (26.7)	72 (22.2)	**360**	13.10	7.04	1.16	**420**	14.16	7.81	0.98	**420**	15.02	8.15	0.81	**420**	15.87	8.49	0.65	**420**	16.71	8.83	0.50
	67 (19.4)		11.82	8.65	1.16		12.80	9.71	0.98		13.57	10.07	0.82		14.33	10.42	0.67		15.07	10.76	0.53
	63 (17.2)		10.90	9.92	1.16		11.84	11.20	0.99		12.54	11.57	0.83		13.22	11.93	0.69		13.88	12.28	0.56
	57 (13.9)		10.51	10.51	1.16		11.59	11.59	0.99		12.16	12.16	0.83		12.70	12.70	0.70		13.22	13.22	0.57
STAGE 3																					
75 (23.9)	72 (22.2)	**300**	10.85	4.45	0.90	**360**	11.86	4.92	0.77	**360**	12.61	5.20	0.65	**360**	13.33	5.47	0.54	**360**	14.04	5.74	0.43
	67 (19.4)		9.75	5.82	0.91		10.67	6.59	0.78		11.33	6.88	0.68		11.97	7.17	0.57		12.60	7.45	0.47
	63 (17.2)		8.96	6.90	0.91		9.81	7.90	0.79		10.40	8.20	0.69		10.98	8.49	0.60		11.55	8.78	0.50
	57 (13.9)		8.17	8.17	0.92		9.13	9.13	0.79		9.58	9.58	0.71		10.02	10.02	0.62		10.45	10.45	0.53
80 (26.7)	72 (22.2)	**300**	10.82	5.86	0.90	**360**	11.82	6.62	0.77	**360**	12.56	6.92	0.65	**360**	13.29	7.21	0.54	**360**	14.00	7.50	0.43
	67 (19.4)		9.73	7.22	0.91		10.64	8.28	0.78		11.30	8.59	0.68		11.94	8.89	0.57		12.57	9.19	0.47
	63 (17.2)		8.97	8.29	0.91		9.84	9.57	0.79		10.42	9.89	0.69		10.99	10.21	0.60		11.56	10.52	0.50
	57 (13.9)		8.70	8.70	0.91		9.73	9.73	0.79		10.22	10.22	0.69		10.68	10.68	0.60		11.14	11.14	0.51
STAGE 1																					
75 (23.9)	72 (22.2)	**300**	9.87	4.09	0.77	**300**	8.43	3.60	0.51	**300**	9.04	3.82	0.45	**300**	9.66	4.05	0.37	**300**	10.27	4.28	0.28
	67 (19.4)		8.87	5.49	0.78		7.60	5.04	0.52		8.15	5.28	0.46		8.69	5.52	0.39		9.22	5.76	0.32
	63 (17.2)		8.15	6.59	0.78		7.00	6.18	0.52		7.50	6.43	0.47		7.98	6.68	0.41		8.45	6.93	0.34
	57 (13.9)		7.59	7.59	0.78		6.74	6.74	0.52		7.15	7.15	0.47		7.53	7.53	0.42		7.89	7.89	0.36
80 (26.7)	72 (22.2)	**300**	9.83	5.52	0.77	**300**	8.39	5.05	0.51	**300**	9.00	5.30	0.45	**300**	9.62	5.55	0.37	**300**	10.23	5.80	0.28
	67 (19.4)		8.84	6.90	0.78		7.58	6.49	0.52		8.13	6.75	0.46		8.67	7.01	0.39		9.19	7.27	0.32
	63 (17.2)		8.17	7.99	0.78		7.22	7.22	0.52		7.65	7.65	0.47		8.07	8.07	0.41		8.49	8.42	0.34
	57 (13.9)		8.09	8.09	0.78		7.21	7.21	0.52		7.64	7.64	0.47		8.05	8.05	0.41		8.45	8.45	0.34

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA924B / FE4ANF002L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																	
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**642**	24.23	9.92	2.44	**608**	25.33	10.31	2.12	**634**	26.93	10.95	1.84	**663**	28.54	11.60	1.58	**708**	30.28	12.32	1.33
	67 (19.4)		22.01	12.96	2.42		23.01	13.22	2.10		24.45	14.00	1.83		25.91	14.82	1.58		27.51	15.77	1.34
	63 (17.2)		20.38	15.34	2.39		21.31	15.50	2.08		22.64	16.40	1.82		24.00	17.33	1.57		25.48	18.47	1.35
	57 (13.9)		18.45	18.45	2.36		19.08	18.80	2.05		20.28	19.87	1.80		21.49	20.99	1.57		22.82	22.37	1.36
80 (26.7)	72 (22.2)	**642**	24.17	12.95	2.44	**608**	25.27	13.22	2.12	**634**	26.87	14.00	1.84	**663**	28.48	14.82	1.58	**708**	30.22	15.77	1.33
	67 (19.4)		21.96	15.96	2.42		22.96	16.09	2.10		24.40	17.02	1.83		25.86	17.99	1.58		27.45	19.17	1.34
	63 (17.2)		20.36	18.31	2.39		21.28	18.35	2.08		22.61	19.39	1.82		23.97	20.49	1.57		25.45	21.85	1.35
	57 (13.9)		19.56	19.56	2.38		20.08	20.08	2.07		21.29	21.29	1.81		22.54	22.54	1.57		23.97	23.97	1.35
STAGE 3																					
75 (23.9)	72 (22.2)	**437**	16.80	6.88	1.49	**415**	17.53	7.13	1.28	**437**	18.69	7.60	1.10	**456**	19.82	8.06	0.92	**484**	21.04	8.55	0.76
	67 (19.4)		15.18	8.96	1.50		15.85	9.13	1.28		16.89	9.72	1.11		17.91	10.28	0.95		18.99	10.93	0.79
	63 (17.2)		13.98	10.59	1.50		14.60	10.69	1.28		15.56	11.37	1.13		16.49	12.01	0.97		17.48	12.77	0.82
	57 (13.9)		12.63	12.63	1.49		12.99	12.94	1.29		13.83	13.75	1.14		14.64	14.51	1.00		15.53	15.43	0.86
80 (26.7)	72 (22.2)	**437**	16.75	8.99	1.49	**415**	17.48	9.16	1.28	**437**	18.64	9.75	1.10	**456**	19.77	10.32	0.92	**484**	20.98	10.97	0.76
	67 (19.4)		15.14	11.05	1.50		15.81	11.13	1.28		16.85	11.84	1.11		17.87	12.51	0.95		18.95	13.31	0.79
	63 (17.2)		13.97	12.66	1.50		14.59	12.68	1.28		15.54	13.48	1.13		16.47	14.23	0.97		17.46	15.14	0.82
	57 (13.9)		13.43	13.43	1.50		13.78	13.78	1.29		14.66	14.66	1.13		15.51	15.51	0.99		16.47	16.47	0.84
STAGE 1																					
75 (23.9)	72 (22.2)	**362**	13.91	5.70	1.21	**222**	8.34	3.43	0.52	**234**	8.89	3.65	0.44	**229**	9.31	3.80	0.37	**245**	9.90	4.05	0.29
	67 (19.4)		12.50	7.42	1.22		7.48	4.49	0.53		7.97	4.78	0.46		8.34	4.91	0.40		8.86	5.24	0.33
	63 (17.2)		11.48	8.77	1.22		6.85	5.34	0.53		7.30	5.67	0.47		7.63	5.79	0.41		8.11	6.18	0.35
	57 (13.9)		10.41	10.41	1.22		6.25	6.25	0.54		6.65	6.65	0.48		6.87	6.87	0.43		7.32	7.32	0.37
80 (26.7)	72 (22.2)	**362**	13.87	7.46	1.21	**222**	8.31	4.53	0.52	**234**	8.86	4.82	0.44	**229**	9.28	4.96	0.37	**245**	9.87	5.29	0.29
	67 (19.4)		12.47	9.17	1.22		7.45	5.59	0.53		7.94	5.94	0.46		8.31	6.06	0.40		8.83	6.48	0.33
	63 (17.2)		11.48	10.51	1.22		6.85	6.43	0.53		7.30	6.83	0.47		7.62	6.93	0.41		8.10	7.41	0.35
	57 (13.9)		11.08	11.08	1.22		6.68	6.68	0.54		7.10	7.10	0.48		7.33	7.33	0.42		7.81	7.81	0.36

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA925 / FE4ANF005 Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																		
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)		
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**608**	19.25	8.01	1.62	**608**	25.24	10.26	1.88	**634**	26.68	10.84	1.61	**663**	28.11	11.43	1.34	**708**	29.64	12.06	1.07
	67 (19.4)		17.48	10.88	1.63		22.98	13.18	1.89		24.31	13.92	1.63		25.64	14.68	1.38		27.06	15.57	1.13
	63 (17.2)		16.21	13.13	1.64		21.29	15.45	1.90		22.54	16.31	1.65		23.79	17.21	1.41		25.13	18.30	1.17
	57 (13.9)		15.18	15.18	1.65		19.10	18.78	1.90		20.23	19.83	1.66		21.37	20.92	1.44		22.62	22.29	1.21
80 (26.7)	72 (22.2)	**608**	19.12	10.84	1.61	**608**	25.12	13.12	1.88	**634**	26.55	13.85	1.60	**663**	27.98	14.60	1.33	**708**	29.49	15.47	1.07
	67 (19.4)		17.42	13.69	1.63		22.91	16.02	1.89		24.24	16.91	1.63		25.56	17.83	1.38		26.97	18.96	1.13
	63 (17.2)		16.26	15.91	1.64		21.26	18.28	1.90		22.51	19.29	1.65		23.76	20.35	1.41		25.10	21.68	1.17
	57 (13.9)		16.12	16.12	1.64		20.08	20.08	1.90		21.23	21.23	1.66		22.41	22.41	1.42		23.77	23.77	1.19
STAGE 3																					
75 (23.9)	72 (22.2)	**437**	15.62	6.37	1.16	**437**	16.33	6.64	1.03	**452**	17.27	7.02	0.91	**475**	18.26	7.42	0.78	**510**	19.32	7.87	0.62
	67 (19.4)		14.19	8.25	1.17		14.88	8.57	1.04		15.74	9.03	0.94		16.66	9.56	0.82		17.64	10.18	0.68
	63 (17.2)		13.12	9.74	1.18		13.79	10.07	1.05		14.60	10.61	0.96		15.46	11.23	0.85		16.38	12.00	0.71
	57 (13.9)		11.80	11.80	1.18		12.35	12.27	1.06		13.08	12.91	0.97		13.87	13.68	0.88		14.74	14.65	0.76
80 (26.7)	72 (22.2)	**437**	15.55	8.23	1.16	**437**	16.25	8.52	1.02	**452**	17.19	8.98	0.91	**475**	18.17	9.50	0.78	**510**	19.23	10.12	0.62
	67 (19.4)		14.14	10.11	1.17		14.83	10.44	1.04		15.69	10.99	0.94		16.60	11.63	0.82		17.57	12.43	0.67
	63 (17.2)		13.11	11.59	1.18		13.77	11.94	1.05		14.58	12.56	0.96		15.44	13.30	0.85		16.36	14.24	0.71
	57 (13.9)		12.51	12.51	1.18		13.05	13.05	1.05		13.78	13.78	0.97		14.60	14.60	0.86		15.55	15.55	0.74
STAGE 1 – FE4ANF005 ONLY																					
75 (23.9)	72 (22.2)	**342**	6.36	2.59	0.47	**250**	9.26	3.75	0.47	**250**	9.75	3.95	0.47	**250**	10.23	4.15	0.43	**250**	10.72	4.35	0.36
	67 (19.4)		10.72	6.18	0.76		8.39	4.68	0.48		8.84	4.89	0.49		9.27	5.09	0.47		9.70	5.30	0.40
	63 (17.2)		9.90	7.24	0.76		7.74	5.40	0.49		8.15	5.61	0.51		8.56	5.83	0.49		8.96	6.04	0.44
	57 (13.9)		8.82	8.81	0.77		6.85	6.46	0.49		7.22	6.68	0.52		7.59	6.90	0.52		7.95	7.12	0.48
80 (26.7)	72 (22.2)	**342**	11.79	6.17	0.75	**250**	9.23	4.68	0.47	**250**	9.72	4.88	0.47	**250**	10.20	5.09	0.43	**250**	10.68	5.30	0.36
	67 (19.4)		10.69	7.53	0.76		8.37	5.60	0.48		8.81	5.82	0.49		9.25	6.03	0.47		9.68	6.24	0.40
	63 (17.2)		9.88	8.60	0.76		7.72	6.32	0.49		8.14	6.54	0.51		8.54	6.76	0.49		8.95	6.98	0.44
	57 (13.9)		9.35	9.35	0.77		7.09	7.09	0.49		7.40	7.40	0.52		7.70	7.70	0.51		8.00	8.00	0.48
STAGE 1 – ALL OTHER INDOOR COMBINATIONS																					
75 (23.9)	72 (22.2)	**342**	3.18	1.29	0.24	**222**	8.99	3.64	0.47	**234**	9.59	3.89	0.48	**229**	9.99	4.06	0.44	**245**	10.66	4.33	0.36
	67 (19.4)		10.72	6.18	0.76		8.13	4.46	0.48		8.68	4.76	0.50		9.04	4.92	0.48		9.65	5.25	0.41
	63 (17.2)		9.90	7.24	0.76		7.49	5.09	0.49		8.00	5.44	0.51		8.34	5.58	0.50		8.91	5.98	0.44
	57 (13.9)		8.82	8.81	0.77		6.63	6.02	0.49		7.09	6.43	0.52		7.39	6.56	0.52		7.90	7.04	0.48
80 (26.7)	72 (22.2)	**342**	11.79	6.17	0.75	**222**	8.96	4.47	0.47	**234**	9.55	4.76	0.47	**229**	9.96	4.92	0.44	**245**	10.62	5.26	0.36
	67 (19.4)		10.69	7.53	0.76		8.11	5.28	0.48		8.66	5.63	0.50		9.02	5.78	0.48		9.63	6.18	0.41
	63 (17.2)		9.88	8.60	0.76		7.48	5.91	0.49		7.99	6.31	0.51		8.33	6.44	0.50		8.89	6.91	0.44
	57 (13.9)		9.35	9.35	0.77		6.73	6.73	0.49		7.19	7.19	0.52		7.40	7.40	0.52		7.93	7.93	0.48

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA936 / FE4ANF005 Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																		
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)		
	EWB °F (°C)	ID SCFM	Capacity MBtuh Total	Capacity MBtuh Sens‡	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Capacity MBtuh Sens‡	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Capacity MBtuh Sens‡	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Capacity MBtuh Sens‡	Total Sys. KW	ID SCFM	Capacity MBtuh Total	Capacity MBtuh Sens‡	Total Sys. KW
STAGE 5																					
75 (23.9)	72 (22.2)	**812**	35.03	14.21	3.80	**812**	36.79	14.91	3.28	**848**	38.97	15.79	2.81	**887**	41.14	16.67	2.38	**948**	43.43	17.61	1.97
	67 (19.4)		32.03	18.10	3.76		33.69	18.87	3.26		35.70	19.98	2.81		37.69	21.10	2.39		39.83	22.39	2.00
	63 (17.2)		29.78	21.12	3.72		31.34	21.94	3.23		33.23	23.22	2.80		35.10	24.53	2.40		37.11	26.09	2.02
	57 (13.9)		26.68	25.51	3.66		28.08	26.39	3.19		29.78	27.92	2.78		31.49	29.50	2.40		33.35	31.47	2.04
80 (26.7)	72 (22.2)	**812**	34.90	17.98	3.79	**812**	36.65	18.72	3.28	**848**	38.82	19.81	2.81	**887**	40.98	20.92	2.37	**948**	43.26	22.19	1.97
	67 (19.4)		31.95	21.83	3.75		33.60	22.64	3.25		35.61	23.95	2.81		37.60	25.30	2.39		39.72	26.91	2.00
	63 (17.2)		29.73	24.84	3.72		31.29	25.70	3.23		33.16	27.18	2.80		35.04	28.72	2.39		37.04	30.61	2.02
	57 (13.9)		27.71	27.71	3.68		28.95	28.95	3.20		30.66	30.66	2.78		32.41	32.41	2.40		34.42	34.42	2.04
STAGE 3																					
75 (23.9)	72 (22.2)	**566**	21.74	8.83	1.80	**566**	22.72	9.22	1.63	**600**	24.20	9.82	1.47	**626**	25.61	10.39	1.30	**664**	27.10	11.00	1.09
	67 (19.4)		19.76	11.28	1.80		20.72	11.74	1.64		22.09	12.54	1.49		23.39	13.27	1.33		24.77	14.10	1.14
	63 (17.2)		18.28	13.20	1.80		19.22	13.70	1.63		20.51	14.65	1.50		21.73	15.51	1.35		23.02	16.51	1.18
	57 (13.9)		16.37	16.02	1.79		17.25	16.59	1.63		18.42	17.76	1.51		19.53	18.80	1.37		20.72	20.04	1.21
80 (26.7)	72 (22.2)	**566**	21.65	11.25	1.80	**566**	22.62	11.67	1.63	**600**	24.08	12.45	1.47	**626**	25.49	13.17	1.29	**664**	26.96	13.99	1.09
	67 (19.4)		19.70	13.69	1.80		20.66	14.18	1.63		22.03	15.15	1.49		23.32	16.03	1.33		24.69	17.07	1.14
	63 (17.2)		18.26	15.60	1.80		19.20	16.13	1.63		20.48	17.26	1.50		21.70	18.27	1.35		22.99	19.47	1.17
	57 (13.9)		17.18	17.18	1.80		17.96	17.96	1.63		19.20	19.20	1.50		20.34	20.34	1.36		21.61	21.61	1.20
STAGE 1 – FE4ANF005 ONLY																					
75 (23.9)	72 (22.2)	**417**	14.50	5.90	0.99	**250**	9.48	3.84	0.49	**250**	10.07	4.08	0.49	**250**	10.66	4.32	0.45	**267**	11.47	4.65	0.35
	67 (19.4)		13.17	7.58	1.00		8.59	4.79	0.50		9.13	5.04	0.52		9.66	5.30	0.49		10.39	5.71	0.41
	63 (17.2)		12.18	8.91	1.00		7.92	5.53	0.51		8.42	5.80	0.53		8.92	6.07	0.51		9.60	6.55	0.45
	57 (13.9)		10.89	10.84	1.01		7.02	6.61	0.52		7.46	6.90	0.55		7.91	7.19	0.54		8.52	7.77	0.49
80 (26.7)	72 (22.2)	**417**	14.44	7.57	0.99	**250**	9.44	4.79	0.49	**250**	10.03	5.04	0.49	**250**	10.62	5.30	0.45	**267**	11.43	5.71	0.35
	67 (19.4)		13.13	9.25	1.00		8.56	5.73	0.50		9.10	6.01	0.52		9.64	6.28	0.49		10.36	6.78	0.41
	63 (17.2)		12.16	10.56	1.00		7.91	6.47	0.51		8.41	6.76	0.53		8.91	7.05	0.51		9.58	7.61	0.45
	57 (13.9)		11.52	11.52	1.01		7.26	7.26	0.52		7.64	7.64	0.54		8.03	8.03	0.54		8.66	8.66	0.48
STAGE 1 – ALL OTHER INDOOR COMBINATIONS																					
75 (23.9)	72 (22.2)	**417**	14.50	5.90	0.99	**236**	9.35	3.79	0.49	**232**	9.88	4.01	0.50	**246**	10.62	4.30	0.45	**267**	11.47	4.65	0.35
	67 (19.4)		13.17	7.58	1.00		8.46	4.68	0.50		8.94	4.90	0.52		9.62	5.27	0.49		10.39	5.71	0.41
	63 (17.2)		12.18	8.91	1.00		7.80	5.37	0.51		8.25	5.59	0.53		8.88	6.02	0.51		9.60	6.55	0.45
	57 (13.9)		10.89	10.84	1.01		6.91	6.39	0.52		7.30	6.60	0.55		7.87	7.12	0.54		8.52	7.77	0.49
80 (26.7)	72 (22.2)	**417**	14.44	7.57	0.99	**236**	9.31	4.68	0.49	**232**	9.84	4.90	0.50	**246**	10.58	5.27	0.45	**267**	11.43	5.71	0.35
	67 (19.4)		13.13	9.25	1.00		8.44	5.57	0.50		8.92	5.79	0.52		9.60	6.23	0.49		10.36	6.78	0.41
	63 (17.2)		12.16	10.56	1.00		7.79	6.26	0.51		8.23	6.48	0.53		8.87	6.98	0.51		9.58	7.61	0.45
	57 (13.9)		11.52	11.52	1.01		7.08	7.08	0.52		7.39	7.39	0.55		7.97	7.97	0.54		8.66	8.66	0.48

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA937 / FE4ANB006L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																		
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**812**	33.61	13.66	2.96	**812**	35.51	14.41	2.51	**848**	37.87	15.36	2.15	**888**	40.27	16.34	1.81	**948**	42.86	17.40	1.51
	67 (19.4)		30.54	17.52	2.94		32.28	18.33	2.50		34.42	19.52	2.15		36.60	20.75	1.83		38.94	22.16	1.53
	63 (17.2)		28.29	20.54	2.93		29.92	21.40	2.49		31.90	22.77	2.15		33.91	24.19	1.84		36.07	25.89	1.55
	57 (13.9)		25.29	24.94	2.90		26.74	25.90	2.47		28.50	27.52	2.15		30.29	29.23	1.85		32.24	31.32	1.58
80 (26.7)	72 (22.2)	**812**	33.51	17.49	2.96	**812**	35.42	18.30	2.51	**848**	37.77	19.49	2.15	**888**	40.17	20.72	1.81	**948**	42.74	22.14	1.51
	67 (19.4)		30.47	21.31	2.94		32.21	22.18	2.50		34.35	23.59	2.15		36.52	25.07	1.83		38.86	26.84	1.53
	63 (17.2)		28.24	24.31	2.93		29.87	25.23	2.49		31.85	26.83	2.15		33.86	28.50	1.84		36.02	30.55	1.55
	57 (13.9)		26.63	26.63	2.91		27.94	27.94	2.48		29.75	29.75	2.15		31.61	31.61	1.84		33.74	33.74	1.57
STAGE 3																					
75 (23.9)	72 (22.2)	**566**	22.84	9.26	2.06	**566**	24.29	9.84	1.72	**600**	26.09	10.57	1.47	**625**	27.82	11.27	1.23	**665**	29.72	12.04	1.01
	67 (19.4)		20.67	11.68	2.07		21.98	12.30	1.74		23.60	13.23	1.50		25.16	14.10	1.28		26.87	15.10	1.07
	63 (17.2)		19.09	13.58	2.08		20.29	14.24	1.75		21.79	15.33	1.52		23.23	16.32	1.31		24.80	17.51	1.11
	57 (13.9)		17.03	16.40	2.08		18.10	17.12	1.77		19.44	18.43	1.55		20.71	19.61	1.34		22.12	21.08	1.15
80 (26.7)	72 (22.2)	**566**	22.78	11.70	2.06	**566**	24.23	12.32	1.72	**600**	26.03	13.26	1.47	**625**	27.76	14.13	1.23	**665**	29.64	15.14	1.01
	67 (19.4)		20.62	14.10	2.07		21.93	14.77	1.74		23.55	15.90	1.50		25.10	16.93	1.28		26.81	18.18	1.07
	63 (17.2)		19.06	15.99	2.08		20.27	16.70	1.75		21.76	17.98	1.52		23.20	19.14	1.31		24.77	20.57	1.11
	57 (13.9)		17.76	17.76	2.08		18.73	18.73	1.76		20.14	20.14	1.54		21.44	21.44	1.33		22.97	22.97	1.14
STAGE 1 – FE4ANB006L ONLY																					
75 (23.9)	72 (22.2)	**500**	18.14	7.36	1.70	**500**	14.63	6.00	0.87	**500**	15.69	6.41	0.72	**500**	16.75	6.83	0.57	**500**	17.81	7.24	0.44
	67 (19.4)		16.41	9.34	1.72		13.27	7.90	0.91		14.22	8.36	0.76		15.17	8.83	0.63		16.11	9.29	0.50
	63 (17.2)		15.16	10.91	1.74		12.27	9.39	0.93		13.14	9.90	0.80		14.01	10.41	0.66		14.88	10.91	0.54
	57 (13.9)		13.54	13.23	1.75		11.20	11.20	0.96		11.91	11.91	0.83		12.61	12.61	0.71		13.31	13.30	0.59
80 (26.7)	72 (22.2)	**500**	18.09	9.36	1.70	**500**	14.58	7.89	0.87	**500**	15.64	8.36	0.72	**500**	16.70	8.83	0.57	**500**	17.75	9.31	0.44
	67 (19.4)		16.37	11.32	1.72		13.23	9.78	0.91		14.18	10.30	0.76		15.12	10.82	0.63		16.07	11.34	0.50
	63 (17.2)		15.14	12.88	1.74		12.26	11.27	0.93		13.13	11.83	0.80		14.00	12.39	0.66		14.87	12.96	0.54
	57 (13.9)		14.21	14.21	1.74		11.88	11.88	0.94		12.62	12.62	0.81		13.36	13.36	0.68		14.09	14.09	0.57
STAGE 1 – ALL OTHER INDOOR COMBINATIONS																					
75 (23.9)	72 (22.2)	**417**	17.38	7.04	1.70	**236**	12.07	4.96	0.92	**232**	12.74	5.27	0.79	**246**	13.77	5.69	0.66	**267**	14.98	6.17	0.52
	67 (19.4)		15.72	8.68	1.72		10.91	5.83	0.95		11.51	6.14	0.83		12.45	6.65	0.70		13.53	7.24	0.57
	63 (17.2)		14.53	9.98	1.73		10.07	6.52	0.97		10.63	6.83	0.85		11.49	7.40	0.73		12.49	8.08	0.61
	57 (13.9)		12.94	11.91	1.74		8.96	7.52	0.98		9.45	7.84	0.87		10.21	8.50	0.76		11.10	9.31	0.65
80 (26.7)	72 (22.2)	**417**	17.34	8.70	1.70	**236**	12.04	5.86	0.92	**232**	12.71	6.17	0.79	**246**	13.75	6.68	0.66	**267**	14.95	7.27	0.52
	67 (19.4)		15.69	10.34	1.72		10.89	6.72	0.95		11.49	7.05	0.83		12.43	7.63	0.70		13.51	8.33	0.57
	63 (17.2)		14.50	11.63	1.73		10.05	7.40	0.97		10.61	7.73	0.85		11.47	8.38	0.73		12.47	9.17	0.61
	57 (13.9)		13.22	13.22	1.74		8.95	8.40	0.98		9.44	8.73	0.87		10.21	9.47	0.76		11.09	10.40	0.65

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage

Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA948 / FE4BNB006 Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																		
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**1110**	46.42	18.85	4.71	**1184**	49.80	20.23	4.17	**1247**	53.09	21.57	3.65	**1330**	56.46	22.96	3.19	**1226**	58.44	23.68	2.67
	67 (19.4)		42.40	24.08	4.63		45.50	25.89	4.11		48.51	27.62	3.61		51.61	29.50	3.17		53.38	29.85	2.67
	63 (17.2)		39.38	28.15	4.57		42.27	30.30	4.06		45.08	32.33	3.58		47.99	34.60	3.15		49.62	34.64	2.66
	57 (13.9)		35.31	34.09	4.47		37.94	36.72	3.98		40.49	39.19	3.53		43.14	41.99	3.12		44.52	41.65	2.64
80 (26.7)	72 (22.2)	**1110**	46.26	23.95	4.71	**1184**	49.62	25.75	4.16	**1247**	52.90	27.46	3.65	**1330**	56.25	29.32	3.19	**1226**	58.25	29.68	2.67
	67 (19.4)		42.29	29.13	4.63		45.38	31.35	4.10		48.38	33.45	3.61		51.47	35.79	3.17		53.26	35.77	2.67
	63 (17.2)		39.31	33.18	4.57		42.20	35.74	4.06		45.01	38.14	3.58		47.91	40.87	3.15		49.54	40.54	2.66
	57 (13.9)		36.80	36.80	4.51		39.58	39.58	4.01		42.24	42.24	3.55		45.10	45.10	3.13		45.76	45.76	2.65
STAGE 3																					
75 (23.9)	72 (22.2)	**744**	29.62	12.03	2.44	**801**	31.87	12.96	2.16	**842**	34.08	13.86	1.91	**887**	36.31	14.77	1.66	**1001**	38.96	15.92	1.43
	67 (19.4)		26.97	15.41	2.44		29.06	16.68	2.16		31.09	17.85	1.92		33.14	19.06	1.68		35.59	20.85	1.46
	63 (17.2)		24.98	18.04	2.43		26.95	19.58	2.15		28.84	20.96	1.92		30.75	22.40	1.70		33.06	24.69	1.49
	57 (13.9)		22.33	21.88	2.41		24.13	23.80	2.14		25.84	25.48	1.92		27.58	27.24	1.71		29.92	29.92	1.51
80 (26.7)	72 (22.2)	**744**	29.51	15.35	2.44	**801**	31.74	16.60	2.15	**842**	33.93	17.76	1.91	**887**	36.15	18.96	1.66	**1001**	38.77	20.72	1.43
	67 (19.4)		26.90	18.70	2.44		28.98	20.29	2.15		31.00	21.72	1.92		33.04	23.21	1.68		35.47	25.60	1.46
	63 (17.2)		34.45	25.97	4.20		26.90	23.17	2.15		28.79	24.81	1.92		30.70	26.53	1.70		33.02	29.42	1.49
	57 (13.9)		30.79	29.76	4.10		33.37	32.41	3.78		35.77	34.73	3.46		38.24	37.17	3.15		41.59	41.26	2.86
STAGE 1 — FE4ANB006 ONLY																					
75 (23.9)	72 (22.2)	**662**	25.60	10.40	1.99	**500**	18.27	7.44	0.93	**500**	19.44	7.91	0.83	**508**	20.67	8.39	0.71	**534**	22.04	8.96	0.56
	67 (19.4)		23.27	13.31	1.99		16.64	9.65	0.95		17.72	10.17	0.86		18.84	10.76	0.75		20.11	11.51	0.61
	63 (17.2)		21.53	15.58	1.99		15.45	11.39	0.97		16.45	11.96	0.88		17.49	12.62	0.77		18.68	13.53	0.65
	57 (13.9)		19.26	18.92	1.98		13.90	13.90	0.98		14.76	14.58	0.90		15.69	15.35	0.81		16.77	16.48	0.70
80 (26.7)	72 (22.2)	**662**	25.60	10.40	1.99	**500**	18.26	7.44	0.93	**500**	19.44	7.91	0.83	**508**	20.67	8.39	0.71	**534**	22.04	8.96	0.56
	67 (19.4)		23.27	13.31	1.99		16.64	9.65	0.95		17.72	10.17	0.86		18.84	10.76	0.75		20.11	11.51	0.61
	63 (17.2)		21.53	15.58	1.99		15.45	11.39	0.97		16.45	11.96	0.88		17.49	12.62	0.77		18.68	13.53	0.65
	57 (13.9)		19.26	18.92	1.98		13.90	13.90	0.98		14.76	14.58	0.90		15.69	15.35	0.81		16.77	16.48	0.70
STAGE 1 — ALL OTHER COILS																					
75 (23.9)	72 (22.2)	**662**	25.60	10.40	1.99	**457**	17.95	7.29	0.93	**482**	19.30	7.84	0.83	**508**	20.67	8.39	0.71	**534**	22.04	8.96	0.56
	67 (19.4)		23.27	13.31	1.99		16.36	9.31	0.95		17.59	10.02	0.86		18.84	10.76	0.75		20.11	11.51	0.61
	63 (17.2)		21.53	15.58	1.99		15.18	10.89	0.97		16.33	11.74	0.88		17.49	12.62	0.77		18.68	13.53	0.65
	57 (13.9)		19.26	18.92	1.98		13.59	13.23	0.98		14.63	14.27	0.90		15.69	15.35	0.81		16.77	16.48	0.70
80 (26.7)	72 (22.2)	**662**	25.60	10.40	1.99	**457**	17.95	7.29	0.93	**482**	19.30	7.84	0.83	**508**	20.67	8.39	0.71	**534**	22.04	8.96	0.56
	67 (19.4)		23.27	13.31	1.99		16.36	9.31	0.95		17.59	10.02	0.86		18.84	10.76	0.75		20.11	11.51	0.61
	63 (17.2)		21.53	15.58	1.99		15.18	10.89	0.97		16.33	11.74	0.88		17.49	12.62	0.77		18.68	13.53	0.65
	57 (13.9)		19.26	18.92	1.98		13.59	13.23	0.98		14.63	14.27	0.90		15.69	15.35	0.81		16.77	16.48	0.70

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor. **Stage 1 –** Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA949 / *CNPV*6024AL*+58CV(A, X)155–22 Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																	
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)			
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**1110**	46.69	19.03	4.05	**1184**	49.03	19.99	3.61	**1196**	50.82	20.67	3.20	**1200**	52.44	21.29	2.83	**1236**	54.18	21.99	2.52
	67 (19.4)		42.37	24.54	3.98		44.50	25.79	3.55		46.13	26.47	3.14		47.59	27.05	2.77		49.16	27.84	2.47
	63 (17.2)		39.20	28.86	3.94		41.17	30.33	3.51		42.67	31.00	3.10		44.02	31.54	2.74		45.47	32.41	2.44
	57 (13.9)		35.30	35.19	3.89		37.12	36.99	3.46		38.37	37.72	3.05		39.47	38.20	2.69		40.73	39.17	2.39
80 (26.7)	72 (22.2)	**1110**	46.59	24.56	4.05	**1184**	48.93	25.81	3.61	**1196**	50.72	26.49	3.20	**1200**	52.34	27.07	2.83	**1236**	54.08	27.87	2.52
	67 (19.4)		42.29	30.00	3.98		44.41	31.53	3.55		46.04	32.21	3.14		47.51	32.74	2.77		49.07	33.63	2.47
	63 (17.2)		39.24	34.32	3.94		41.22	36.08	3.51		42.71	36.75	3.10		44.03	37.24	2.74		45.49	38.20	2.44
	57 (13.9)		37.41	37.41	3.92		39.33	39.33	3.49		40.47	40.47	3.07		41.42	41.42	2.71		42.65	42.65	2.41
STAGE 3																					
75 (23.9)	72 (22.2)	**744**	30.83	12.50	2.33	**801**	32.85	13.32	2.05	**842**	34.76	14.09	1.82	**887**	36.68	14.86	1.61	**1001**	39.12	15.87	1.43
	67 (19.4)		27.67	15.62	2.33		29.56	16.69	2.04		31.29	17.62	1.81		33.04	18.56	1.60		35.28	20.03	1.43
	63 (17.2)		25.33	18.03	2.32		27.09	19.29	2.03		28.71	20.34	1.81		30.31	21.41	1.61		32.39	23.23	1.44
	57 (13.9)		22.37	21.65	2.32		23.97	23.17	2.03		25.40	24.38	1.81		26.83	25.65	1.61		28.78	28.01	1.44
80 (26.7)	72 (22.2)	**744**	30.77	15.75	2.33	**801**	32.78	16.79	2.05	**842**	34.69	17.72	1.82	**887**	36.60	18.67	1.61	**1001**	39.04	20.14	1.43
	67 (19.4)		27.61	18.83	2.33		29.50	20.12	2.04		31.23	21.20	1.81		32.98	22.32	1.60		35.21	24.23	1.43
	63 (17.2)		25.33	21.25	2.32		27.10	22.73	2.03		28.71	23.93	1.81		30.32	25.17	1.61		32.41	27.44	1.43
	57 (13.9)		23.54	23.54	2.32		25.21	25.21	2.03		26.63	26.63	1.81		28.08	28.08	1.61		30.35	30.35	1.44
STAGE 1																					
75 (23.9)	72 (22.2)	**662**	23.83	9.66	1.63	**457**	17.67	7.17	1.02	**482**	19.19	7.80	0.93	**508**	20.76	8.45	0.80	**535**	22.37	9.11	0.61
	67 (19.4)		21.23	12.07	1.64		15.73	8.59	1.01		17.11	9.31	0.93		18.52	10.05	0.81		19.97	10.81	0.63
	63 (17.2)		19.35	13.95	1.64		14.34	9.71	1.00		15.61	10.49	0.93		16.90	11.30	0.82		18.23	12.13	0.66
	57 (13.9)		17.03	16.78	1.63		12.49	11.34	0.99		13.61	12.23	0.94		14.76	13.14	0.84		15.94	14.09	0.69
80 (26.7)	72 (22.2)	**662**	23.77	12.23	1.63	**457**	17.63	8.73	1.02	**482**	19.16	9.45	0.93	**508**	20.73	10.20	0.80	**535**	22.33	10.97	0.61
	67 (19.4)		21.18	14.61	1.64		15.71	10.14	1.01		17.08	10.95	0.93		18.49	11.79	0.81		19.94	12.65	0.63
	63 (17.2)		19.36	16.50	1.64		14.33	11.25	1.00		15.59	12.13	0.93		16.89	13.04	0.82		18.22	13.97	0.66
	57 (13.9)		18.08	18.08	1.63		12.74	12.74	0.99		13.79	13.79	0.94		14.88	14.88	0.83		16.03	15.95	0.69

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 1 – Compressor speed limited to stage two at 105 outdoor.

See additional notes on page 25

DETAILED COOLING CAPACITIES# - COMFORT + DEHUMIDIFY MODE CONTINUED

EDB °F (°C)	EVAP. AIR	24VNA960 / FE4BNB006L Comfort + Dehumidify Mode Condenser Entering Air Temperature °F (°C)																		
		105 (40.5)				95 (35)				85 (29.4)				75 (23.9)				65 (18.3)		
	EWB °F (°C)	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW	ID SCFM	Capacity MBtuh		Total Sys. KW
			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡			Total	Sens‡	
STAGE 5																					
75 (23.9)	72 (22.2)	**1367**	57.74	23.45	6.51	**1440**	61.60	25.02	5.73	**1514**	65.43	26.57	5.06	**1566**	69.11	28.06	4.43	**1488**	71.73	29.06	3.80
	67 (19.4)		52.75	29.96	6.32		56.26	31.94	5.56		59.74	33.92	4.89		63.08	35.74	4.28		65.39	36.48	3.66
	63 (17.2)		49.06	35.05	6.19		52.31	37.35	5.43		55.53	39.67	4.77		58.62	41.74	4.17		60.75	42.26	3.56
	57 (13.9)		44.14	42.48	6.02		47.05	45.25	5.27		49.93	48.04	4.62		52.69	50.49	4.02		54.52	50.74	3.43
80 (26.7)	72 (22.2)	**1367**	57.61	29.82	6.52	**1440**	61.47	31.80	5.74	**1514**	65.28	33.78	5.06	**1566**	68.97	35.61	4.43	**1488**	71.59	36.37	3.80
	67 (19.4)		52.65	36.25	6.32		56.15	38.64	5.56		59.62	41.04	4.89		62.96	43.19	4.28		65.29	43.67	3.66
	63 (17.2)		48.99	41.31	6.19		52.23	44.02	5.43		55.45	46.75	4.77		58.54	49.15	4.17		60.67	49.42	3.56
	57 (13.9)		45.90	45.90	6.08		48.92	48.92	5.33		51.93	51.93	4.67		54.72	54.72	4.07		55.91	55.91	3.46
STAGE 3																					
75 (23.9)	72 (22.2)	**959**	36.98	15.01	3.25	**1013**	39.25	15.94	2.79	**1066**	41.77	16.95	2.44	**1120**	44.28	17.97	2.13	**1210**	47.05	19.11	1.87
	67 (19.4)		33.40	19.03	3.22		35.55	20.23	2.75		37.83	21.50	2.39		40.10	22.76	2.09		42.62	24.30	1.84
	63 (17.2)		30.77	22.16	3.21		32.82	23.59	2.72		34.94	25.04	2.37		37.04	26.50	2.06		39.38	28.36	1.81
	57 (13.9)		27.31	26.75	3.18		29.19	28.48	2.69		31.09	30.22	2.34		32.99	31.96	2.04		35.10	34.26	1.79
80 (26.7)	72 (22.2)	**959**	36.89	19.10	3.25	**1013**	39.15	20.27	2.79	**1066**	41.66	21.53	2.44	**1120**	44.17	22.80	2.13	**1210**	46.93	24.34	1.87
	67 (19.4)		33.32	23.06	3.22		35.47	24.51	2.75		37.74	26.01	2.39		40.02	27.53	2.09		42.53	29.47	1.84
	63 (17.2)		30.72	26.18	3.21		32.77	27.85	2.72		34.89	29.54	2.37		36.99	31.25	2.06		39.33	33.50	1.81
	57 (13.9)		28.74	28.74	3.19		30.65	30.65	2.70		32.58	32.58	2.35		34.53	34.53	2.05		36.85	36.85	1.80
STAGE 1																					
75 (23.9)	72 (22.2)	**748**	27.11	11.00	2.21	**600**	19.91	8.07	1.22	**600**	20.99	8.50	1.01	**647**	22.49	9.11	0.80	**700**	24.02	9.73	0.59
	67 (19.4)		24.28	13.80	2.21		17.69	10.04	1.21		18.67	10.45	1.01		20.04	11.19	0.81		21.43	11.97	0.61
	63 (17.2)		22.21	15.99	2.20		16.05	11.57	1.21		16.97	11.96	1.01		18.23	12.81	0.82		19.53	13.71	0.62
	57 (13.9)		19.51	19.20	2.20		13.98	13.85	1.20		14.76	14.19	1.02		15.88	15.20	0.84		17.03	16.27	0.65
80 (26.7)	72 (22.2)	**748**	27.04	13.93	2.21	**600**	19.86	10.20	1.22	**600**	20.94	10.61	1.01	**647**	22.43	11.35	0.80	**700**	23.96	12.13	0.59
	67 (19.4)		24.22	16.71	2.21		17.65	12.16	1.21		18.63	12.54	1.01		19.99	13.42	0.81		21.39	14.35	0.61
	63 (17.2)		22.18	18.88	2.20		16.04	13.68	1.21		16.95	14.04	1.01		18.21	15.03	0.82		19.50	16.08	0.62
	57 (13.9)		20.65	20.65	2.20		14.90	14.90	1.20		15.50	15.50	1.02		16.63	16.63	0.83		17.82	17.82	0.64

Operation in this area is restricted to maintain reliable system operation and customer comfort. The system will default to the next available stage
Stage 5 – Compressor speed limited to stage four at 65 outdoor. **Stage 1 –** Compressor speed limited to stage two at 105 outdoor.

NOTES:

* Tested combination.

† Total and sensible capacities are net capacities. Blower motor heat has been subtracted.

‡ Sensible capacities are shown for both 80°F (27°C) and 75°F (23.4°C) entering air at the indoor coil.
For sensible capacities at other than these, deduct 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree below reference temperature, or add 835 Btuh (245 kW) per 1000 CFM (480 L/S) of indoor coil air for each degree above reference temperature.

Detailed cooling capacities are based on indoor and outdoor unit at the same elevation per AHRI standard 210/240–2008. If additional tubing length and/or indoor unit is located above outdoor unit, a slight variation in capacity may occur.

** System kw is total of indoor and outdoor unit kilowatts.

NOTE: When the required data falls between the published data, interpolation may be performed. Extrapolation is not an acceptable practice.

EWB — Entering Wet Bulb

GUIDE SPECIFICATIONS
GENERAL

System Description

Outdoor-mounted, air-cooled, split-system air conditioning unit suitable for ground or rooftop installation. Unit consists of a hermetic compressor, an air-cooled coil, forward-swept blade propeller-type condenser fan, and a control box. Unit will discharge supply air upward as shown on contract drawings. Unit will be used in a refrigeration circuit to match up to a packaged fan coil or coil unit.

Quality Assurance

- Unit will be rated in accordance with the latest edition of AHRI Standard 240.
- Unit will be certified for capacity and efficiency, and listed in the latest AHRI directory.
- Unit construction will comply with latest edition of ASHRAE and with NEC.
- Unit will be constructed in accordance with UL standards and will carry the UL label of approval. Unit will have C-UL approval.
- Unit cabinet will be capable of withstanding Federal Test Method Standard No. 141 (Method 6061) 500-hr salt spray test.
- Air-cooled condenser coils are pressure tested and the outdoor units are leak tested.
- Unit constructed in ISO9001 approved facility.

Delivery, Storage, and Handling

- Unit will be shipped as single package only and is stored and handled per unit manufacturer's recommendations.

Warranty (for inclusion by specifying engineer)

- U.S. and Canada only.

PRODUCTS

Equipment

- Factory-assembled, single-piece, air-cooled air conditioning unit. Contained within the unit enclosure is all factory wiring, piping, controls, compressor, refrigerant charge Puron® (R-410A) refrigerant, and special features required prior to field start-up.

Unit Cabinet

- Unit cabinet will be constructed of galvanized steel, bonderized, and coated with a powder coat paint.

Fans

- Condenser fan will be direct-drive propeller type, forward swept blade, discharging air upward.
- Condenser fan motors will be totally enclosed, 1-phase type with class B insulation and permanently lubricated.
- Shafts will be corrosion resistant.
- Fan blades will be statically and dynamically balanced.
- Condenser fan openings will be equipped with coated steel wire safety guards.

Compressor

- Compressor will be hermetically sealed.
- Compressor will be mounted on rubber vibration isolators.
- Compressor will be covered with a sound absorbing blanket.

Condenser Coil

- Condenser coil will be air cooled.
- Coil will be constructed of aluminum fins mechanically bonded to copper tubes which are then cleaned, dehydrated, and sealed.

Refrigeration Components

- Refrigeration circuit components will include liquid-line front-seating shutoff valve with sweat connections, vapor-line front-seating shutoff valve with sweat connections, system charge of Puron® (R-410A) refrigerant, POE compressor oil, accumulator, charge compensator, electronic expansion valve, and reversing valve.
- Unit will be equipped with high-pressure switch, suction pressure transducer, and filter drier for Puron® refrigerant.

Operating Characteristics

- The capacity of the unit will meet or exceed _____ Btuh at a suction temperature of _____ °F (°C). The power consumption at full load will not exceed _____ kW.
- Combination of the unit and the evaporator or fan coil unit will have a total net cooling capacity of _____ Btuh or greater at conditions of _____ CFM entering air temperature at the evaporator at _____ °F (°C) wet bulb and _____ °F (°C) dry bulb, and air entering the unit at _____ °F (°C).
- The system will have a SEER of _____ Btuh/watt or greater at DOE conditions.

Electrical Requirements

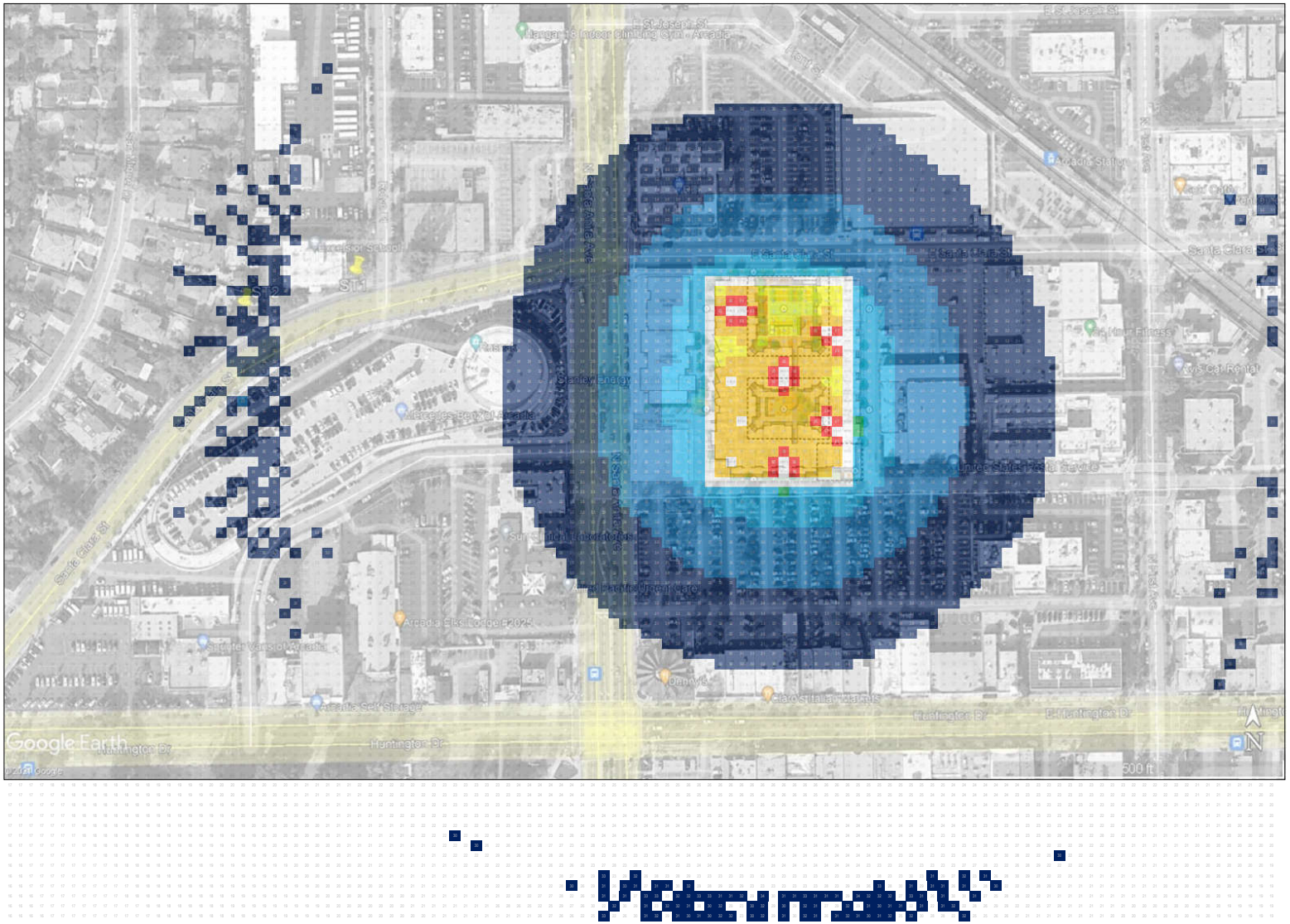
- Nominal unit electrical characteristics will be _____ v, single phase, 60 hz. The unit will be capable of satisfactory operation within voltage limits of _____ v to _____ v.
- Unit electrical power will be single point connection.
- Control circuit will be 24v.
- Compliant with IEC 61000-4-5 Transient Surge Requirement.

Special Features

- Refer to section of this literature identifying accessories and descriptions for specific features and available enhancements.
- Infinity control with appropriate software version is required for full featured operation.

SYSTEM DESIGN SUMMARY

1. Intended for outdoor installation with free air inlet and outlet. Outdoor fan external static pressure available is less than 0.01-in. wc.
2. This product is not qualified for low ambient cooling operation.
   Minimum cooling outdoor operating temperatures:
   - Communicating systems: 40°F (4.44°C)
   - Non-communicating systems: 55°F (12.8°C)
3. For reliable operation, unit should be level in all horizontal planes.
4. This unit is qualified for up to 100 ft (30.5 m) equivalent length of line set without additional accessories.
5. If any refrigerant tubing is buried, provide a 6 in. (152.4 mm) vertical rise to the valve connections at the unit. Refrigerant tubing lengths up to 36 in. (914.4 mm) may be buried without further consideration. Do not bury refrigerant lines longer than 36 in. (914.4 mm).
6. Use only copper wire for electric connection at unit. Aluminum and clad aluminum are not acceptable for the type of connector provided.
7. Do not apply capillary tube indoor coils to these units.
8. Puron refrigerant TXV required on indoor coil.


Predicted Aggregate Sound Pressure Level (SPL)
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Low
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75 70
70 65
65 60
60 55
55 50
50 45
45 40
40 35
35 30
Selected Receptors
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RCW
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RU02 32.3 31
RU03 24.3 75
RU04 24.9 80
RU05 39.7 44
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Google Earth
500 ft
N

Appendix I-4
Traffic Noise Modeling Data

Dudek					**6 October 2021**							
MG					**TNM 2.5**							
INPUT: ROADWAYS								**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**11663**							**a State highway agency substantiates the use**				
RUN:	**Alexan Arcadia - Existing**							**of a different type with the approval of FHWA**				
Roadway		**Points**										
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**				**Flow Control**			**Segment**	
				X	**Y**	**Z**		**Control Device**	**Speed Constraint**	**Percent Vehicles Affected**	**Pvmt Type**	**On Struct?**
	ft			ft	ft	ft			mph	%		
Santa Anita Ave south of Huntington Dr	90.0	point1	1	1,891.0	718.0	100.00					Average	
		point3	3	1,873.0	1,697.5	100.00						
Santa Clara St - west of Santa Anita Av	55.0	point18	18	732.5	1,716.1	100.00					Average	
		point8	8	1,130.0	2,216.0	100.00					Average	
		point9	9	1,235.9	2,306.2	100.00					Average	
		point10	10	1,343.5	2,372.2	100.00					Average	
		point11	11	1,496.2	2,426.0	100.00					Average	
		point12	12	1,847.5	2,495.8	100.00						
Huntington Dr west of Santa Anita Ave	75.0	point20	20	704.7	1,687.3	100.00					Average	
		point16	16	1,869.9	1,697.7	100.00						
Huntington Dr east of Santa Anita Ave	75.0	point21	21	1,874.9	1,697.9	100.00					Average	
		point2	2	2,838.0	1,708.1	100.00						
Santa Anita Ave south of Santa Clara St	90.0	point22	22	1,873.0	1,697.5	100.00					Average	
		point4	4	1,855.5	2,492.0	100.00						
Santa Anita Ave north of Santa Clara St	90.0	point24	24	1,855.3	2,499.9	100.00					Average	
		point6	6	1,853.0	3,030.3	100.00						
Santa Clara St - east of Santa Anita Av	55.0	point25	25	1,855.7	2,495.8	100.00					Average	
		point13	13	2,093.3	2,493.7	100.00					Average	
		point14	14	2,813.7	2,504.1	100.00						

Dudek **6 October 2021**
MG **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **11663**
RUN: **Alexan Arcadia - Existing**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Santa Anita Ave south of Huntington Dr	point1	1	2334	40	48	40	24	35	0	0	0	0
	point3	3										
Santa Clara St - west of Santa Anita Av	point18	18	877	35	18	35	9	30	0	0	0	0
	point8	8	877	35	18	35	9	30	0	0	0	0
	point9	9	877	35	18	35	9	30	0	0	0	0
	point10	10	877	35	18	35	9	30	0	0	0	0
	point11	11	877	35	18	35	9	30	0	0	0	0
	point12	12										
Huntington Dr west of Santa Anita Ave	point20	20	2751	30	57	30	28	25	0	0	0	0
	point16	16										
Huntington Dr east of Santa Anita Ave	point21	21	2227	30	46	30	23	25	0	0	0	0
	point2	2										
Santa Anita Ave south of Santa Clara St	point22	22	1615	40	33	40	17	35	0	0	0	0
	point4	4										
Santa Anita Ave north of Santa Clara St	point24	24	2173	40	45	40	22	35	0	0	0	0
	point6	6										
Santa Clara St - east of Santa Anita Av	point25	25	567	35	12	35	6	30	0	0	0	0
	point13	13	567	35	12	35	6	30	0	0	0	0
	point14	14										

Dudek
MG

6 October 2021
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Existing

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,446.5	2,442.1	100.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,254.3	2,350.2	100.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,743.4	1,590.7	100.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,079.8	1,483.5	100.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,921.7	2,213.1	100.00	5.00	0.00	66	10.0	8.0	Y

Dudek 6 October 2021
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Existing

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,975.7	1,568.9	100.00	15.00	0.00	0	0		
									point3	3	2,427.9	1,568.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point42	42	1,789.6	2,887.1	100.00	15.00	0.00	0	0		
									point25	25	1,789.6	2,694.4	100.00	15.00	0.00	0	0		
									point26	26	1,643.8	2,687.4	100.00	15.00					
Barrier1-2-2-2-2	W	0.00	99.99	0.00				0.00	point44	44	1,662.9	2,590.2	100.00	15.00	0.00	0	0		
									point28	28	1,664.6	2,508.6	100.00	15.00	0.00	0	0		
									point29	29	1,522.3	2,503.5	100.00	15.00					
Barrier1-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point46	46	1,420.0	2,519.1	100.00	15.00	0.00	0	0		
									point31	31	1,422.6	2,445.3	100.00	15.00	0.00	0	0		
									point32	32	1,314.1	2,446.2	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point48	48	1,091.8	2,037.6	100.00	20.00	0.00	0	0		
									point22	22	1,572.7	2,317.3	100.00	20.00	0.00	0	0		
									point23	23	1,768.3	2,313.2	100.00	20.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,921.9	2,457.3	100.00	15.00	0.00	0	0		
									point18	18	1,923.6	2,248.7	100.00	15.00	0.00	0	0		
									point19	19	2,017.3	2,248.7	100.00	15.00	0.00	0	0		
									point20	20	2,016.4	2,458.1	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,287.7	2,458.0	100.00	15.00	0.00	0	0		
									point14	14	2,286.9	2,133.8	100.00	15.00	0.00	0	0		
									point15	15	2,768.6	2,139.0	100.00	15.00	0.00	0	0		
									point16	16	2,760.7	2,465.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,689.8	2,134.5	100.00	15.00	0.00	0	0		
									point10	10	1,801.7	2,134.5	100.00	15.00	0.00	0	0		
									point11	11	1,813.9	1,868.0	100.00	15.00	0.00	0	0		
									point12	12	1,684.6	1,867.1	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point56	56	1,987.1	1,452.9	100.00	15.00	0.00	0	0		
									point6	6	2,834.5	1,464.9	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point57	57	1,928.4	1,793.4	100.00	15.00	0.00	0	0		
									point8	8	2,661.0	1,793.4	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point58	58	2,427.9	1,568.0	100.00	15.00	0.00	0	0		
									point4	4	2,844.4	1,575.0	100.00	15.00					

Dudek
MG
6 October 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Existing
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	66.2	66	66.2	10	Snd Lvl	66.2	0.0	8	-8.0
ST2	2	1	0.0	66.7	66	66.7	10	Snd Lvl	66.7	0.0	8	-8.0
ST3	3	1	0.0	66.9	66	66.9	10	Snd Lvl	66.9	0.0	8	-8.0
ST4	4	1	0.0	59.6	66	59.6	10	----	59.6	0.0	8	-8.0
ST5	5	1	0.0	67.5	66	67.5	10	Snd Lvl	67.5	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	5	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek					**6 October 2021**							
MG					**TNM 2.5**							
INPUT: ROADWAYS								**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**11663**							**a State highway agency substantiates the use**				
RUN:	**Alexan Arcadia - Existing with Project**							**of a different type with the approval of FHWA**				
Roadway		**Points**										
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**				**Flow Control**			**Segment**	
				X	**Y**	**Z**		**Control Device**	**Speed Constraint**	**Percent Vehicles Affected**	**Pvmt Type**	**On Struct?**
	ft			ft	ft	ft			mph	%		
Santa Anita Ave south of Huntington Dr	90.0	point1	1	1,891.0	718.0	100.00					Average	
		point3	3	1,873.0	1,697.5	100.00						
Santa Clara St - west of Santa Anita Av	55.0	point18	18	732.5	1,716.1	100.00					Average	
		point8	8	1,130.0	2,216.0	100.00					Average	
		point9	9	1,235.9	2,306.2	100.00					Average	
		point10	10	1,343.5	2,372.2	100.00					Average	
		point11	11	1,496.2	2,426.0	100.00					Average	
		point12	12	1,847.5	2,495.8	100.00						
Huntington Dr west of Santa Anita Ave	75.0	point20	20	704.7	1,687.3	100.00					Average	
		point16	16	1,869.9	1,697.7	100.00						
Huntington Dr east of Santa Anita Ave	75.0	point21	21	1,874.9	1,697.9	100.00					Average	
		point2	2	2,838.0	1,708.1	100.00						
Santa Anita Ave south of Santa Clara St	90.0	point22	22	1,873.0	1,697.5	100.00					Average	
		point4	4	1,855.5	2,492.0	100.00						
Santa Anita Ave north of Santa Clara St	90.0	point24	24	1,855.3	2,499.9	100.00					Average	
		point6	6	1,853.0	3,030.3	100.00						
Santa Clara St - east of Santa Anita Av	55.0	point25	25	1,855.7	2,495.8	100.00					Average	
		point13	13	2,093.3	2,493.7	100.00					Average	
		point14	14	2,813.7	2,504.1	100.00						

Dudek **6 October 2021**
MG **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **11663**
RUN: **Alexan Arcadia - Existing with Project**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Santa Anita Ave south of Huntington Dr	point1	1	2362	40	49	40	24	35	0	0	0	0
	point3	3										
Santa Clara St - west of Santa Anita Av	point18	18	895	35	18	35	9	30	0	0	0	0
	point8	8	895	35	18	35	9	30	0	0	0	0
	point9	9	895	35	18	35	9	30	0	0	0	0
	point10	10	895	35	18	35	9	30	0	0	0	0
	point11	11	895	35	18	35	9	30	0	0	0	0
	point12	12										
Huntington Dr west of Santa Anita Ave	point20	20	2769	30	57	30	29	25	0	0	0	0
	point16	16										
Huntington Dr east of Santa Anita Ave	point21	21	2227	30	46	30	23	25	0	0	0	0
	point2	2										
Santa Anita Ave south of Santa Clara St	point22	22	1659	40	34	40	17	35	0	0	0	0
	point4	4										
Santa Anita Ave north of Santa Clara St	point24	24	2215	40	46	40	23	35	0	0	0	0
	point6	6										
Santa Clara St - east of Santa Anita Av	point25	25	616	35	13	35	6	30	0	0	0	0
	point13	13	616	35	13	35	6	30	0	0	0	0
	point14	14										

Dudek
MG

6 October 2021
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Existing with Project

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,446.5	2,442.1	100.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,254.3	2,350.2	100.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,743.4	1,590.7	100.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,079.8	1,483.5	100.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,921.7	2,213.1	100.00	5.00	0.00	66	10.0	8.0	Y

Dudek 6 October 2021
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Existing with Project

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,975.7	1,568.9	100.00	15.00	0.00	0	0		
									point3	3	2,427.9	1,568.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point42	42	1,789.6	2,887.1	100.00	15.00	0.00	0	0		
									point25	25	1,789.6	2,694.4	100.00	15.00	0.00	0	0		
									point26	26	1,643.8	2,687.4	100.00	15.00					
Barrier1-2-2-2-2	W	0.00	99.99	0.00				0.00	point44	44	1,662.9	2,590.2	100.00	15.00	0.00	0	0		
									point28	28	1,664.6	2,508.6	100.00	15.00	0.00	0	0		
									point29	29	1,522.3	2,503.5	100.00	15.00					
Barrier1-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point46	46	1,420.0	2,519.1	100.00	15.00	0.00	0	0		
									point31	31	1,422.6	2,445.3	100.00	15.00	0.00	0	0		
									point32	32	1,314.1	2,446.2	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point48	48	1,091.8	2,037.6	100.00	20.00	0.00	0	0		
									point22	22	1,572.7	2,317.3	100.00	20.00	0.00	0	0		
									point23	23	1,768.3	2,313.2	100.00	20.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,921.9	2,457.3	100.00	15.00	0.00	0	0		
									point18	18	1,923.6	2,248.7	100.00	15.00	0.00	0	0		
									point19	19	2,017.3	2,248.7	100.00	15.00	0.00	0	0		
									point20	20	2,016.4	2,458.1	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,287.7	2,458.0	100.00	15.00	0.00	0	0		
									point14	14	2,286.9	2,133.8	100.00	15.00	0.00	0	0		
									point15	15	2,768.6	2,139.0	100.00	15.00	0.00	0	0		
									point16	16	2,760.7	2,465.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,689.8	2,134.5	100.00	15.00	0.00	0	0		
									point10	10	1,801.7	2,134.5	100.00	15.00	0.00	0	0		
									point11	11	1,813.9	1,868.0	100.00	15.00	0.00	0	0		
									point12	12	1,684.6	1,867.1	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point56	56	1,987.1	1,452.9	100.00	15.00	0.00	0	0		
									point6	6	2,834.5	1,464.9	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point57	57	1,928.4	1,793.4	100.00	15.00	0.00	0	0		
									point8	8	2,661.0	1,793.4	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point58	58	2,427.9	1,568.0	100.00	15.00	0.00	0	0		
									point4	4	2,844.4	1,575.0	100.00	15.00					
Barrier24	W	0.00	99.99	0.00				0.00	point60	60	2,050.8	2,455.3	100.00	84.00	0.00	0	0		
									point61	61	2,050.2	2,147.5	100.00	84.00	0.00	0	0		
									point62	62	2,253.0	2,146.4	100.00	84.00	0.00	0	0		

									point63	63	2,255.8	2,454.2	100.00	84.00							

Dudek
MG
6 October 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Existing with Project
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	66.3	66	66.3	10	Snd Lvl	66.3	0.0	8	-8.0
ST2	2	1	0.0	66.8	66	66.8	10	Snd Lvl	66.8	0.0	8	-8.0
ST3	3	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
ST4	4	1	0.0	59.7	66	59.7	10	----	59.7	0.0	8	-8.0
ST5	5	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	5	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek					**6 October 2021**							
MG					**TNM 2.5**							
INPUT: ROADWAYS								**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**11663**							**a State highway agency substantiates the use**				
RUN:	**Alexan Arcadia - Opening Year (2024)**							**of a different type with the approval of FHWA**				
Roadway		**Points**										
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**				**Flow Control**			**Segment**	
				X	**Y**	**Z**		**Control Device**	**Speed Constraint**	**Percent Vehicles Affected**	**Pvmt Type**	**On Struct?**
	ft			ft	ft	ft			mph	%		
Santa Anita Ave south of Huntington Dr	90.0	point1	1	1,891.0	718.0	100.00					Average	
		point3	3	1,873.0	1,697.5	100.00						
Santa Clara St - west of Santa Anita Av	55.0	point18	18	732.5	1,716.1	100.00					Average	
		point8	8	1,130.0	2,216.0	100.00					Average	
		point9	9	1,235.9	2,306.2	100.00					Average	
		point10	10	1,343.5	2,372.2	100.00					Average	
		point11	11	1,496.2	2,426.0	100.00					Average	
		point12	12	1,847.5	2,495.8	100.00						
Huntington Dr west of Santa Anita Ave	75.0	point20	20	704.7	1,687.3	100.00					Average	
		point16	16	1,869.9	1,697.7	100.00						
Huntington Dr east of Santa Anita Ave	75.0	point21	21	1,874.9	1,697.9	100.00					Average	
		point2	2	2,838.0	1,708.1	100.00						
Santa Anita Ave south of Santa Clara St	90.0	point22	22	1,873.0	1,697.5	100.00					Average	
		point4	4	1,855.5	2,492.0	100.00						
Santa Anita Ave north of Santa Clara St	90.0	point24	24	1,855.3	2,499.9	100.00					Average	
		point6	6	1,853.0	3,030.3	100.00						
Santa Clara St - east of Santa Anita Av	55.0	point25	25	1,855.7	2,495.8	100.00					Average	
		point13	13	2,093.3	2,493.7	100.00					Average	
		point14	14	2,813.7	2,504.1	100.00						

Dudek
MG

6 October 2021
TNM 2.5

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opening Year (2024)

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Santa Anita Ave south of Huntington Dr	point1	1	2491	40	51	40	26	35	0	0	0	0
	point3	3										
Santa Clara St - west of Santa Anita Av	point18	18	1052	35	22	35	11	30	0	0	0	0
	point8	8	1052	35	22	35	11	30	0	0	0	0
	point9	9	1052	35	22	35	11	30	0	0	0	0
	point10	10	1052	35	22	35	11	30	0	0	0	0
	point11	11	1052	35	22	35	11	30	0	0	0	0
	point12	12										
Huntington Dr west of Santa Anita Ave	point20	20	2991	30	62	30	31	25	0	0	0	0
	point16	16										
Huntington Dr east of Santa Anita Ave	point21	21	2366	30	49	30	24	25	0	0	0	0
	point2	2										
Santa Anita Ave south of Santa Clara St	point22	22	1724	40	36	40	18	35	0	0	0	0
	point4	4										
Santa Anita Ave north of Santa Clara St	point24	24	2432	40	50	40	25	35	0	0	0	0
	point6	6										
Santa Clara St - east of Santa Anita Av	point25	25	701	35	14	35	7	30	0	0	0	0
	point13	13	701	35	14	35	7	30	0	0	0	0
	point14	14										

Dudek
MG

6 October 2021
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opening Year (2024)

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,446.5	2,442.1	100.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,254.3	2,350.2	100.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,743.4	1,590.7	100.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,079.8	1,483.5	100.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,921.7	2,213.1	100.00	5.00	0.00	66	10.0	8.0	Y

Dudek 6 October 2021
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opening Year (2024)

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,975.7	1,568.9	100.00	15.00	0.00	0	0		
									point3	3	2,427.9	1,568.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point42	42	1,789.6	2,887.1	100.00	15.00	0.00	0	0		
									point25	25	1,789.6	2,694.4	100.00	15.00	0.00	0	0		
									point26	26	1,643.8	2,687.4	100.00	15.00					
Barrier1-2-2-2-2	W	0.00	99.99	0.00				0.00	point44	44	1,662.9	2,590.2	100.00	15.00	0.00	0	0		
									point28	28	1,664.6	2,508.6	100.00	15.00	0.00	0	0		
									point29	29	1,522.3	2,503.5	100.00	15.00					
Barrier1-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point46	46	1,420.0	2,519.1	100.00	15.00	0.00	0	0		
									point31	31	1,422.6	2,445.3	100.00	15.00	0.00	0	0		
									point32	32	1,314.1	2,446.2	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point48	48	1,091.8	2,037.6	100.00	20.00	0.00	0	0		
									point22	22	1,572.7	2,317.3	100.00	20.00	0.00	0	0		
									point23	23	1,768.3	2,313.2	100.00	20.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,921.9	2,457.3	100.00	15.00	0.00	0	0		
									point18	18	1,923.6	2,248.7	100.00	15.00	0.00	0	0		
									point19	19	2,017.3	2,248.7	100.00	15.00	0.00	0	0		
									point20	20	2,016.4	2,458.1	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,287.7	2,458.0	100.00	15.00	0.00	0	0		
									point14	14	2,286.9	2,133.8	100.00	15.00	0.00	0	0		
									point15	15	2,768.6	2,139.0	100.00	15.00	0.00	0	0		
									point16	16	2,760.7	2,465.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,689.8	2,134.5	100.00	15.00	0.00	0	0		
									point10	10	1,801.7	2,134.5	100.00	15.00	0.00	0	0		
									point11	11	1,813.9	1,868.0	100.00	15.00	0.00	0	0		
									point12	12	1,684.6	1,867.1	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point56	56	1,987.1	1,452.9	100.00	15.00	0.00	0	0		
									point6	6	2,834.5	1,464.9	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point57	57	1,928.4	1,793.4	100.00	15.00	0.00	0	0		
									point8	8	2,661.0	1,793.4	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point58	58	2,427.9	1,568.0	100.00	15.00	0.00	0	0		
									point4	4	2,844.4	1,575.0	100.00	15.00					

Dudek
MG
6 October 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opening Year (2024)
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	67.0	66	67.0	10	Snd Lvl	67.0	0.0	8	-8.0
ST2	2	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
ST3	3	1	0.0	67.2	66	67.2	10	Snd Lvl	67.2	0.0	8	-8.0
ST4	4	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
ST5	5	1	0.0	67.8	66	67.8	10	Snd Lvl	67.8	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	5	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0

Dudek					**6 October 2021**							
MG					**TNM 2.5**							
INPUT: ROADWAYS								**Average pavement type shall be used unless**				
PROJECT/CONTRACT:	**11663**							**a State highway agency substantiates the use**				
RUN:	**Alexan Arcadia - Opnng Year w Proj**							**of a different type with the approval of FHWA**				
Roadway		**Points**										
Name	**Width**	**Name**	**No.**	**Coordinates (pavement)**				**Flow Control**			**Segment**	
				X	**Y**	**Z**		**Control Device**	**Speed Constraint**	**Percent Vehicles Affected**	**Pvmt Type**	**On Struct?**
	ft			ft	ft	ft			mph	%		
Santa Anita Ave south of Huntington Dr	90.0	point1	1	1,891.0	718.0	100.00					Average	
		point3	3	1,873.0	1,697.5	100.00						
Santa Clara St - west of Santa Anita Av	55.0	point18	18	732.5	1,716.1	100.00					Average	
		point8	8	1,130.0	2,216.0	100.00					Average	
		point9	9	1,235.9	2,306.2	100.00					Average	
		point10	10	1,343.5	2,372.2	100.00					Average	
		point11	11	1,496.2	2,426.0	100.00					Average	
		point12	12	1,847.5	2,495.8	100.00						
Huntington Dr west of Santa Anita Ave	75.0	point20	20	704.7	1,687.3	100.00					Average	
		point16	16	1,869.9	1,697.7	100.00						
Huntington Dr east of Santa Anita Ave	75.0	point21	21	1,874.9	1,697.9	100.00					Average	
		point2	2	2,838.0	1,708.1	100.00						
Santa Anita Ave south of Santa Clara St	90.0	point22	22	1,873.0	1,697.5	100.00					Average	
		point4	4	1,855.5	2,492.0	100.00						
Santa Anita Ave north of Santa Clara St	90.0	point24	24	1,855.3	2,499.9	100.00					Average	
		point6	6	1,853.0	3,030.3	100.00						
Santa Clara St - east of Santa Anita Av	55.0	point25	25	1,855.7	2,495.8	100.00					Average	
		point13	13	2,093.3	2,493.7	100.00					Average	
		point14	14	2,813.7	2,504.1	100.00						

Dudek **6 October 2021**
MG **TNM 2.5**

INPUT: TRAFFIC FOR LAeq1h Volumes
PROJECT/CONTRACT: **11663**
RUN: **Alexan Arcadia - Opnng Year w Proj**

Roadway	Points		Segment									
Name	Name	No.	Autos		MTrucks		HTrucks		Buses		Motorcycles	
			V	S	V	S	V	S	V	S	V	S
			veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph	veh/hr	mph
Santa Anita Ave south of Huntington Dr	point1	1	2519	40	52	40	26	35	0	0	0	0
	point3	3										
Santa Clara St - west of Santa Anita Av	point18	18	1071	35	22	35	11	30	0	0	0	0
	point8	8	1071	35	22	35	11	30	0	0	0	0
	point9	9	1071	35	22	35	11	30	0	0	0	0
	point10	10	1071	35	22	35	11	30	0	0	0	0
	point11	11	1071	35	22	35	11	30	0	0	0	0
	point12	12										
Huntington Dr west of Santa Anita Ave	point20	20	3009	30	62	30	31	25	0	0	0	0
	point16	16										
Huntington Dr east of Santa Anita Ave	point21	21	2366	30	49	30	24	25	0	0	0	0
	point2	2										
Santa Anita Ave south of Santa Clara St	point22	22	1767	40	36	40	18	35	0	0	0	0
	point4	4										
Santa Anita Ave north of Santa Clara St	point24	24	2474	40	51	40	26	35	0	0	0	0
	point6	6										
Santa Clara St - east of Santa Anita Av	point25	25	750	35	15	35	8	30	0	0	0	0
	point13	13	750	35	15	35	8	30	0	0	0	0
	point14	14										

Dudek
MG

6 October 2021
TNM 2.5

INPUT: RECEIVERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opnng Year w Proj

Receiver Name	No.	#DUs	Coordinates (ground) X	Y	Z	Height above Ground	Input Sound Levels and Criteria: Existing LAeq1h	Impact Criteria LAeq1h	Impact Criteria Sub'l	NR Goal	Active in Calc.
			ft	ft	ft	ft	dBA	dBA	dB	dB	
ST1	1	1	1,446.5	2,442.1	100.00	5.00	0.00	66	10.0	8.0	Y
ST2	2	1	1,254.3	2,350.2	100.00	5.00	0.00	66	10.0	8.0	Y
ST3	3	1	1,743.4	1,590.7	100.00	5.00	0.00	66	10.0	8.0	Y
ST4	4	1	2,079.8	1,483.5	100.00	5.00	0.00	66	10.0	8.0	Y
ST5	5	1	1,921.7	2,213.1	100.00	5.00	0.00	66	10.0	8.0	Y

Dudek 6 October 2021
MG TNM 2.5

INPUT: BARRIERS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opnng Year w Proj

Barrier									Points										
Name	Type	Height		If Wall	If Berm			Add'tnl	Name	No.	Coordinates (bottom)			Height	Segment				
		Min	Max	$ per	$ per	Top	Run:Rise	$ per			X	Y	Z	at	Seg Ht	Perturbs		On	Important
				Unit	Unit	Width		Unit						Point	Incre-	#Up	#Dn	Struct?	Reflec-
				Area	Vol.			Length							ment				tions?
		ft	ft	$/sq ft	$/cu yd	ft	ft:ft	$/ft			ft	ft	ft	ft	ft				
Barrier1	W	0.00	99.99	0.00				0.00	point1	1	1,975.7	1,568.9	100.00	15.00	0.00	0	0		
									point3	3	2,427.9	1,568.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point42	42	1,789.6	2,887.1	100.00	15.00	0.00	0	0		
									point25	25	1,789.6	2,694.4	100.00	15.00	0.00	0	0		
									point26	26	1,643.8	2,687.4	100.00	15.00					
Barrier1-2-2-2-2	W	0.00	99.99	0.00				0.00	point44	44	1,662.9	2,590.2	100.00	15.00	0.00	0	0		
									point28	28	1,664.6	2,508.6	100.00	15.00	0.00	0	0		
									point29	29	1,522.3	2,503.5	100.00	15.00					
Barrier1-2-2-2-2-2-2	W	0.00	99.99	0.00				0.00	point46	46	1,420.0	2,519.1	100.00	15.00	0.00	0	0		
									point31	31	1,422.6	2,445.3	100.00	15.00	0.00	0	0		
									point32	32	1,314.1	2,446.2	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point48	48	1,091.8	2,037.6	100.00	20.00	0.00	0	0		
									point22	22	1,572.7	2,317.3	100.00	20.00	0.00	0	0		
									point23	23	1,768.3	2,313.2	100.00	20.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point50	50	1,921.9	2,457.3	100.00	15.00	0.00	0	0		
									point18	18	1,923.6	2,248.7	100.00	15.00	0.00	0	0		
									point19	19	2,017.3	2,248.7	100.00	15.00	0.00	0	0		
									point20	20	2,016.4	2,458.1	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point52	52	2,287.7	2,458.0	100.00	15.00	0.00	0	0		
									point14	14	2,286.9	2,133.8	100.00	15.00	0.00	0	0		
									point15	15	2,768.6	2,139.0	100.00	15.00	0.00	0	0		
									point16	16	2,760.7	2,465.0	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point54	54	1,689.8	2,134.5	100.00	15.00	0.00	0	0		
									point10	10	1,801.7	2,134.5	100.00	15.00	0.00	0	0		
									point11	11	1,813.9	1,868.0	100.00	15.00	0.00	0	0		
									point12	12	1,684.6	1,867.1	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point56	56	1,987.1	1,452.9	100.00	15.00	0.00	0	0		
									point6	6	2,834.5	1,464.9	100.00	15.00					
Barrier1-2-2	W	0.00	99.99	0.00				0.00	point57	57	1,928.4	1,793.4	100.00	15.00	0.00	0	0		
									point8	8	2,661.0	1,793.4	100.00	15.00					
Barrier1-2	W	0.00	99.99	0.00				0.00	point58	58	2,427.9	1,568.0	100.00	15.00	0.00	0	0		
									point4	4	2,844.4	1,575.0	100.00	15.00					
Barrier24	W	0.00	99.99	0.00				0.00	point60	60	2,050.8	2,455.3	100.00	84.00	0.00	0	0		
									point61	61	2,050.2	2,147.5	100.00	84.00	0.00	0	0		
									point62	62	2,253.0	2,146.4	100.00	84.00	0.00	0	0		

									point63	63	2,255.8	2,454.2	100.00	84.00							

Dudek
MG
6 October 2021
TNM 2.5
Calculated with TNM 2.5

RESULTS: SOUND LEVELS
PROJECT/CONTRACT: 11663
RUN: Alexan Arcadia - Opnng Year w Proj
BARRIER DESIGN: INPUT HEIGHTS
ATMOSPHERICS: 68 deg F, 50% RH

Average pavement type shall be used unless a State highway agency substantiates the use of a different type with approval of FHWA.

Receiver Name	No.	#DUs	Existing LAeq1h	No Barrier LAeq1h Calculated	Crit'n	Increase over existing Calculated	Increase over existing Crit'n Sub'l Inc	Type Impact	With Barrier Calculated LAeq1h	Noise Reduction Calculated	Noise Reduction Goal	Calculated minus Goal
			dBA	dBA	dBA	dB	dB		dBA	dB	dB	dB
ST1	1	1	0.0	67.1	66	67.1	10	Snd Lvl	67.1	0.0	8	-8.0
ST2	2	1	0.0	67.6	66	67.6	10	Snd Lvl	67.6	0.0	8	-8.0
ST3	3	1	0.0	67.3	66	67.3	10	Snd Lvl	67.3	0.0	8	-8.0
ST4	4	1	0.0	60.0	66	60.0	10	----	60.0	0.0	8	-8.0
ST5	5	1	0.0	67.9	66	67.9	10	Snd Lvl	67.9	0.0	8	-8.0

Dwelling Units	# DUs	Noise Reduction Min dB	Noise Reduction Avg dB	Noise Reduction Max dB
All Selected	5	0.0	0.0	0.0
All Impacted	4	0.0	0.0	0.0
All that meet NR Goal	0	0.0	0.0	0.0