

APPENDIX B BUILDING CODE SUMMARY (2018 CODE EDITION) FOR ALL COMMERCIAL PROJECTS

Name of Project : DAVIE COUNTY VEHICLE DODGE BUILDING - GENERATOR INSTALLATION Address : 298 E. DEPOT ST., MOCKSVILLE, NC Zip Code 27028

LEAD DESIGN PROFESSIONAL: DESIGNER FIRM NAME LICENSE # TELEPHONE # EMAIL Building S.E. COLLINS, PA Sam Collins, PE 31024 704-638-6337 scollins@scollinseng.com

2018 EDITION OF NC CODE FOR EXISTING RECONSTRUCTION ALTERATION Uplift Repair Renovation CONSTRUCTED: (date) 2004 ORIGINAL USE(S) (Ch. 3): Assembly RENOVATED: (date) 2021 CURRENT USE(S) (Ch. 3): Assembly PROPOSED USE(S) (Ch. 3): Assembly

BASIC BUILDING DATA : Construction Type : I-A, II-A, III-A, IV, V-A, I-B, II-B, III-B, V-B Sprinklers : No, Partial, Yes NFPA 13B, NFPA 13D Smoke and Heat Venting : No, Yes, Required per Section 910.2.1 Standpipes : No, Yes Class I, II, III, Wet, Dry Fire District : No, Yes (Primary) Flood Hazard Area : No, Yes Building Height : Feet Gross Building Area : FLOOR EXISTING (SQ FT) NEW (SQ FT) SUB-TOTAL 6th Floor 5th Floor 4th Floor 3rd Floor 2nd Floor Mezzanine 1st Floor Basement TOTAL

ALLOWABLE AREA

Primary Occupancy : Assembly A-1, A-2, A-3, A-4, A-5 Business Educational Factory F-1 Moderate, F-2 Low, F-3 Hazardous H-1 Detonate, H-2 Deflagrate, H-3 Combust, H-4 Health, H-5 HPM Institutional I-1, I-2, I-3, I-4, I-5 I-3 Use Condition 1, 2, 3, 4, 5 Mercantile Residential R-1, R-2, R-3, R-4 Storage S-1 Moderate, S-2 Low, High-piled, Parking Garage, Open, Enclosed, Repair Garage Utility and Miscellaneous

Accessory Occupancy : Assembly A-1, A-2, A-3, A-4, A-5 Business Educational Factory F-1 Moderate, F-2 Low Hazardous H-1 Detonate, H-2 Deflagrate, H-3 Combust, H-4 Health, H-5 HPM Institutional I-1, I-2, I-3, I-4, I-5 I-3 Use Condition 1, 2, 3, 4, 5 Mercantile Residential R-1, R-2, R-3, R-4 Storage S-1 Moderate, S-2 Low, High-piled, Parking Garage, Open, Enclosed, Repair Garage Utility and Miscellaneous

Incidental Uses (Table 508.2.5): Furnace room where any piece of equipment is over 400,000 Btu per hour input Rooms with boilers where the largest piece of equipment is over 15 psi and 10 horsepower Refrigerant machine room Hydrogen cutoff rooms, not classified as Group H Incinerator rooms Paint shops, not classified as Group H located in occupancies other than Group F Laboratories and vocational shops not classified as Group H located in a Group E or I-2 occupancy Laundries over 100 square feet Group I-3 bells equipped with padded surfaces Group I-2 waste and linen collection rooms Waste and linen collection rooms over 100 square feet Stationary storage battery systems having a liquid electrolyte capacity of more than 50 gallons, or a lithium-ion capacity of 1,000 pounds used for facility standby powers, emergency power or uninterrupted power supplies. Rooms containing fire pumps Group I-2 storage rooms over 100 square feet Group I-2 commercial kitchens Group I-2 laundries equal to or less than 100 square feet Group I-2 rooms or spaces that contain fuel-fired heating equipment

Special Uses 402, 403, 404, 405, 406, 407, 408, 409, 410, 411, 412, 413, 414, 415, 416, 417, 418, 419, 420, 421, 422, 423, 424, 425, 426, 427 Special Provisions 509.2, 509.3, 509.4, 509.5, 509.6, 509.7, 509.8, 509.9 Mixed Occupancy : No, Yes Separation : Hr. Exception : No, Yes Separation (508.2.5) This separation is not exempt as a Non-Separated Use (see exceptions). Non-Separated Use (508.2.5) For each story, the area of the occupancy shall be determined by applying the ratio of the area of the applicable occupancy to the ratio of the fire-rated type of construction, so determined, shall apply to the entire building. Separated Use (508.4) - See below for area calculations For each story, the area of the occupancy shall be such that the sum of the ratios of the actual floor area of each use divided by the allowable floor area for each use shall not exceed 1. Actual Area of Occupancy A + Actual Area of Occupancy B Allowable Area of Occupancy A Allowable Area of Occupancy B <= 1.00

Table with 6 columns: STORY NO., DESCRIPTION AND USE, (A) BLDG AREA PER STORY (ACTUAL), (B) TABLE 503.5 AREA, (C) AREA FOR OPEN SPACE INCREASED SPRINKLER TYPE, (D) AREA FOR SPRINKLER TYPE, (E) ALLOWABLE AREA OR UNLIMITED, (F) MAXIMUM BLDG AREA

- 1. Frontage area increases from Section 506.2 are computed thus : a. Perimeter which fronts a public way or open space having 20 feet minimum width = (F) b. Total Building Perimeter = (P) c. Ratio (F/P) = (F/P) d. W = Minimum width of public way = (W) e. Percent of frontage increase I_f = 100 [F/P - 0.25] x W/30 = (%) 2. The sprinkler increase per Section 506.3 is as follows : a. Multi-story building I_s = 200 Percent b. Single-story building I_s = 300 Percent 3. Unlimited area applicable under conditions of Sections 507. 4. Maximum Building Area = total number of stories in the building x E (506.4) 5. The maximum area of parking garages must comply with 406.3.5. The maximum area of air traffic control towers must comply with 412.1.2.

ALLOWABLE HEIGHT

Table with 4 columns: Type of construction, Building Height in Feet, Building Height in Stories, CODE REFERENCE

FIRE PROTECTION REQUIREMENTS

Table with 7 columns: BUILDING ELEMENT, FIRE SEPARATION DISTANCE (FEET), REQD, PROVIDED (W/ REDUCTION), DETAIL # AND SHEET #, DESIGN # FOR RATED ASSEMBLY, DESIGN # FOR RATED PENETRATION, DESIGN # FOR RATED JOINTS

LIFE SAFETY SYSTEM REQUIREMENTS

Emergency Lighting : No, Yes Exit Signs : No, Yes Fire Alarm : No, Yes Smoke Detection Systems : No, Yes Sprinkler Activation Only : No, Yes Panic Hardware : No, Yes

LIFE SAFETY PLAN REQUIREMENTS

Life Safety Plan Sheet # : Fire and/or smoke rated wall locations (Chapter 7) Assumed and real property line locations Exterior wall opening area with respect to distance to assumed property lines (705.8) Existing structures within 30' of the proposed building Occupancy types for each area as it relates to occupant load calculation (Table 1004.1.1) Occupancy loads for each area Exit access travel distance (1016) Common path of travel distance (1014.3 & 1028.8) Dead end lengths (1018.4) Clear exit widths for each exit door Maximum calculated occupant load capacity based on occupant load based on egress width (1015) Actual occupant load for each exit door A separate schematic plan indicating where fire rated floor/ceiling and/or roof structure is provided for purposes of occupancy separation Location of doors with panic hardware (1008.1.10) Location of doors with delayed egress locks and the amount of delay (1008.1.9.7) Location of doors with electromagnetic egress locks (1008.1.9.8) Location of doors equipped with hold-open devices Location of emergency escape windows (1029) The square footage of each fire area (902) The square footage of each smoke compartment (407.4) Note any code exceptions or table notes that may have been utilized regarding the items above

ACCESSIBLE DWELLING UNITS

Table with 8 columns: TOTAL UNITS, ACCESSIBLE UNITS REQUIRED, ACCESSIBLE UNITS PROVIDED, TYPE A UNITS, TYPE B UNITS, TYPE C UNITS, TYPE D UNITS, TOTAL ACCESSIBLE UNITS PROVIDED

DRAWING LIST C1.1 - COVER SHEET, APPENDIX B, VICINITY MAP E1.1 - ELECTRICAL POWER PLAN AND RISER

ACCESSIBLE PARKING

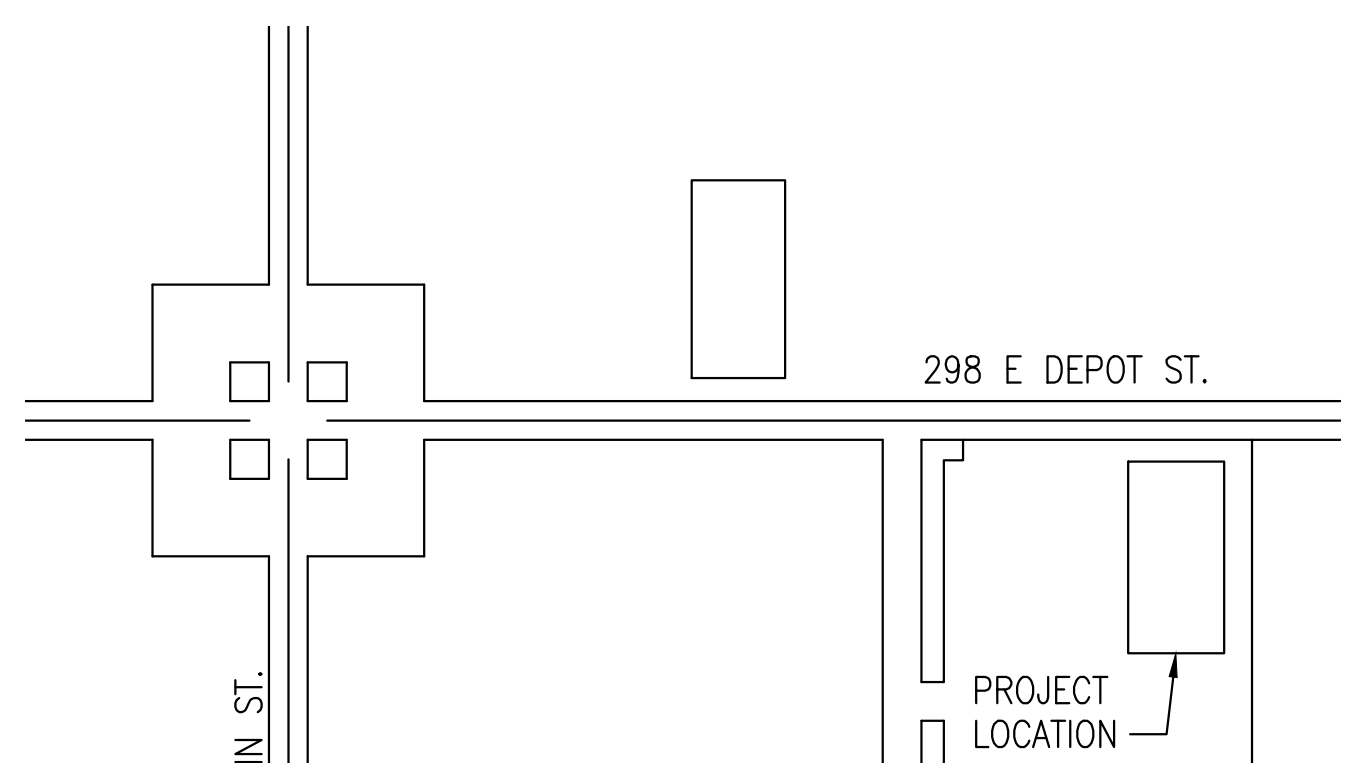
Table with 5 columns: LOT OR PARKING AREA, TOTAL # OF PARKING SPACES, # OF ACCESSIBLE SPACES, VAN SPACES WITH 5' ACCESS AISLE, 132" ACCESS AISLE, TOTAL # ACCESSIBLE PROVIDED

STRUCTURAL DESIGN

DESIGN LOADS : Importance Factors : Wind (I_w), Snow (I_s), Seismic (I_E) Live Loads : Roof, Mezzanine, 1st Floor, 2nd Floor Ground Snow Load : Wind Load : Basic Wind Speed, Exposure Category, Wind Base Shear, Overturning Moment, V_x, V_y SEISMIC DESIGN CATEGORY : A, B, C, D Provide the following Seismic Design Parameters : Occupancy Category (Table 1604.5) I, II, III, IV Spectral Response Acceleration S_s, S_1 Site Classification (Table 1613.5.2) A, B, C, D, E, F Field Test, Presumptive, Historical Data Basic structural system (check one) Bearing Wall, Building Frame, Moment Frame, Dual w/ Special Moment Frame, Dual w/ Intermediate R/C or Special Steel, Inverted Pendulum Seismic base shear V_x, V_y Analysis Procedure Simplified, Equivalent Lateral Force, Dynamic Architectural, Mechanical, Components anchored? Yes, No LATERAL DESIGN CONTROL : Earthquake, Wind SOIL BEARING CAPACITIES : Field Test (provide copy of test report), Presumptive Bearing capacity Pile size, type, and capacity SPECIAL INSPECTIONS REQUIRED : Yes, No

PLUMBING FIXTURE REQUIREMENTS

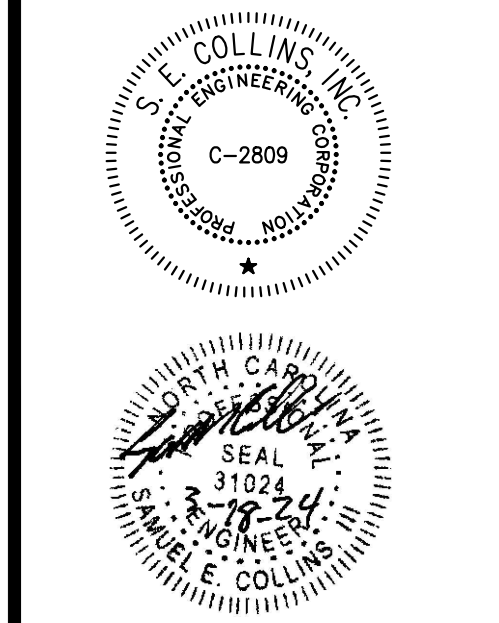
Table with 8 columns: USE, WATERCLOSETS, URINALS, SINKS, SHOWER STALLS, TOILETS, SINKS, DRINKING FOUNTAINS



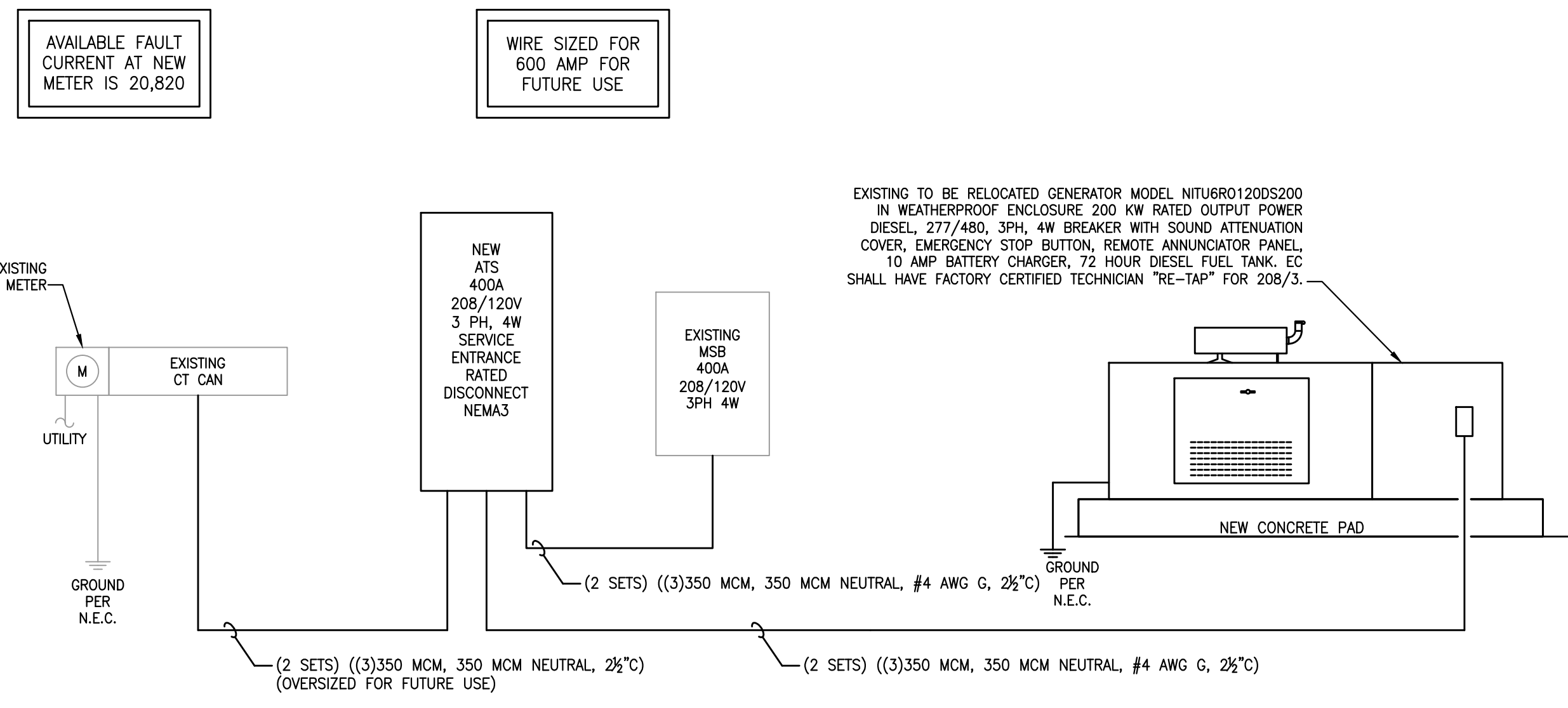
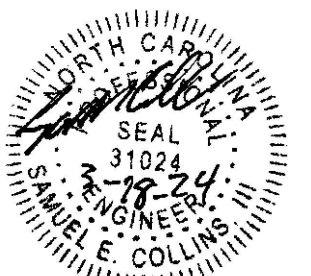
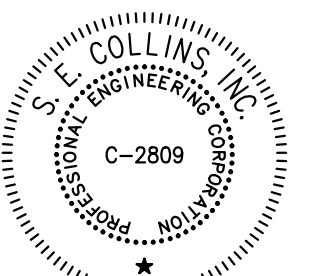
DAVIE COUNTY DODGE BUILDING GENERATOR INSTALLATION 298 E DEPOT STREET MOCKSVILLE, NC 27028

COVER SHEET AND APPENDIX B

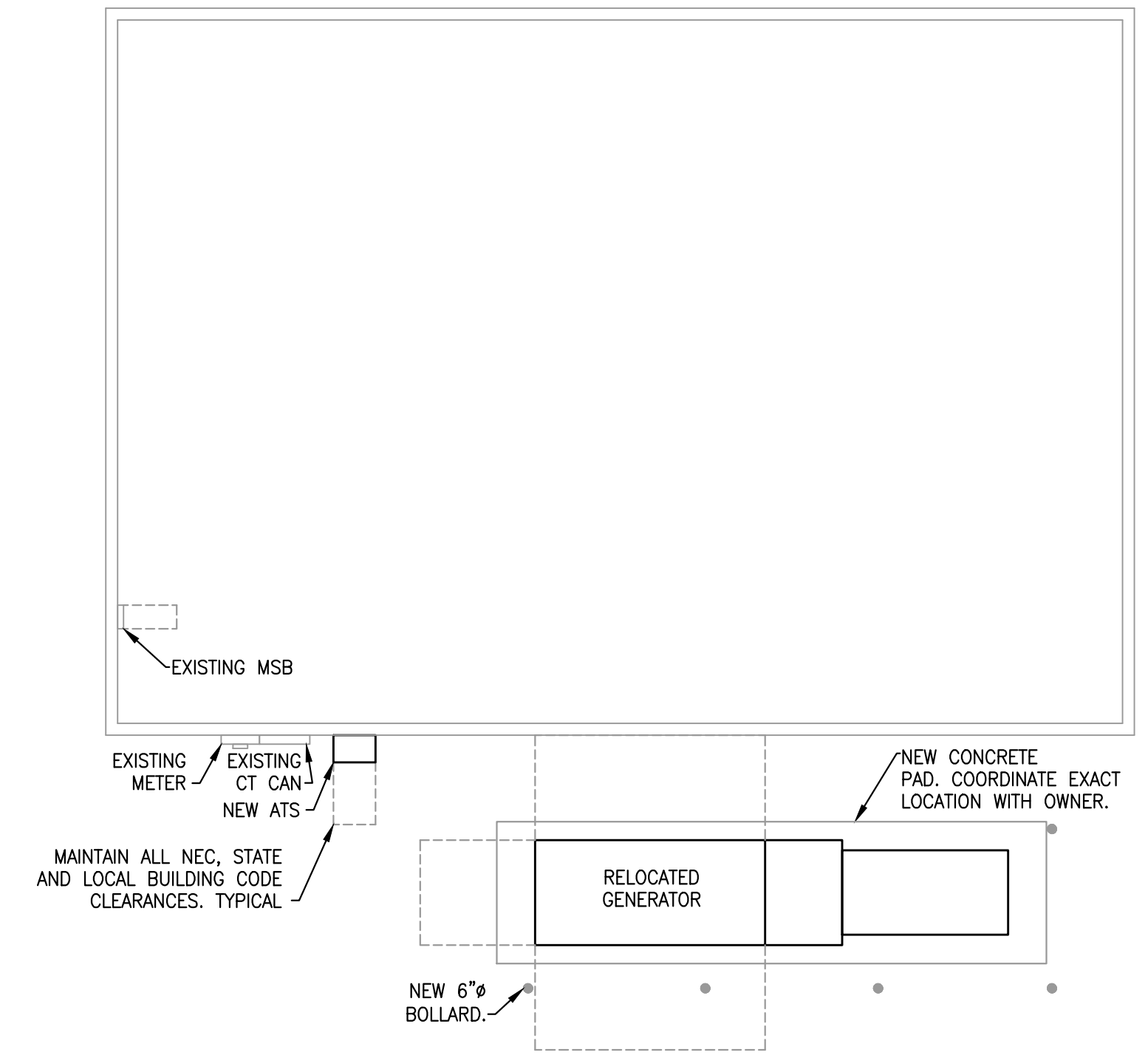
DRAWN BY: BLI CHECKED BY: SEC DATE: MARCH 18, 2024 PROJECT NO: A24-118 FILE:



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1 POWER RISER
SCALE: NO SCALE



2 POWER PLAN
SCALE: 1/8"=1'-0"

E.C. SHALL VERIFY LUG SIZE/QUANTITY ON ALL EXISTING AND NEW EQUIPMENT BEFORE PURCHASING ANY MATERIAL AND NOTIFY ENGINEER OF ANY ISSUES.

ELECTRICAL LOAD SUMMARY (400A SERVICE)							
POWER	ITEM	CURRENT	FUTURE	TOTAL VA	POWERFACTOR	EQUIVALENTVA	MDP/PANEL LOAD
NORMAL	LIGHTING	0.0	0	0.0	1.25	0.0	
	RECEPTACLES	0.0	0	0.0	1.0	0.0	
	HVAC	0.0	0	0.0	1.0	0.0	
	MOTORS	0.0	0	0.0	1.0	0.0	
	FANS	0.0	0	0.0	1.0	0.0	
	WIR. HTS/ FMPS	0.0	0	0.0	1.0	0.0	
	KITCHEN	0.0	0	0.0	1.0	0.0	
	OTHER	121,500.0	0	121,500.0	1.0	121,500.0	
TOTAL		121,500.00	0	121,500.00		121,500.00	/ 1.73x 208 = 337.7 A

PANEL "A"		PANEL SUMMARY																			
MFG. & TYPE		LIGHTS																			
SERV. & TYPE		RECEPTACLES																			
CABINET		HVAC																			
A/C RATING		MOTORS																			
MAINS		FANS																			
BREAKERS		VHS/ PUMPS																			
COPPER BUS & NEUTRAL AND GND KIT		KITCHEN																			
		OTHER																			
		TOTAL																			
DESCRIPTION	WIRE SIZE	CONDUIT SIZE	AMPS-A	AMPS-B	AMPS-C	VOLT-AMPS	TRIP	CIRCUIT #	A	B	C	CIRCUIT #	TRIP	VOLT-AMPS	AMPS-A	AMPS-B	AMPS-C	CONDUIT SIZE	WIRE SIZE	DESCRIPTION	
PNL-A	EXISTING		75.0			9000	150	1				2	175	10600	87.5			EXISTING	Ø	PNL-C	
"	EXISTING			75.0		9000	150	3				4	175	10600	87.5			EXISTING	Ø	"	
"	EXISTING				75.0		150	5				6	175	10600	87.5			EXISTING	Ø	"	
PNL-A-B	EXISTING		112.5			13500	225	7				8	125	7500	62.5			EXISTING	Ø	PNL-D	
"	EXISTING			112.5		13500	225	9				10	125	7500	62.5			EXISTING	Ø	"	
"	EXISTING				112.5		225	11				12	125	7500	62.5			EXISTING	Ø	"	
			0.0			0	0	13				14	0	0	0.0						
			0.0			0	0	15				16	0	0	0.0						
			0.0			0	0	17				18	0	0	0.0						
			0.0			0	0	19				20	0	0	0.0						
			0.0			0	0	21				22	0	0	0.0						
			0.0			0	0	23				24	0	0	0.0						
			0.0			0	0	25				26	0	0	0.0						
			0.0			0	0	27				28	0	0	0.0						
			0.0			0	0	29				30	0	0	0.0						
			0.0			0	0	31				32	0	0	0.0						
			0.0			0	0	33				34	0	0	0.0						
			0.0			0	0	35				36	0	0	0.0						
			0.0			0	0	37				38	0	0	0.0						
			0.0			0	0	39				40	0	0	0.0						
			0.0			0	0	41				42	0	0	0.0						
TOTALS																					
A PHASE AMPS TOTAL						338		A PHASE V-A TOTAL								40500					
B PHASE AMPS TOTAL						338		B PHASE V-A TOTAL								40500					
C PHASE AMPS TOTAL						338		C PHASE V-A TOTAL								40500					

PROVIDE A SEPARATE NEUTRAL FOR ALL MULTI-WIRE LINE TO NEUTRAL LOADS. PROVIDE TRACER ON THE WHITE NEUTRAL WIRE THE SAME COLOR AS PHASE CONDUCTOR.