



Project: VA White City	Consultant: Zachary Colon
Location:	Date: 12/10/25 4:12 PM
PRICE SUMMARY	

Tag	Model	Location	Qty	Net
CHILLER ACDS-1	ACDS040ANBS		1	
Project Total				

Chiller - ACDS040ANBS

Description	List	Net
Tag - CHILLER ACDS-1 ▪ Manufacturer DBUSA ▪ Base Price (R-454b Unit, Voltage: 208-230V/3/60) ▪ MCHX_TCP:Microchannel Coil (TCP-Coating) ▪ CWPC - Chilled water pump control ▪ SEN - Water sensor: Entering water temp sensor ▪ LA1:Min Ambient 30F ▪ HGBP:Hot gas bypass for low load operation Auto Lead Lag ▪ GAG:Pressure gauge ▪ TDFS:Thermal Dispersion Flow Switch ▪ DBD:DB Director ▪ DSIV:Compressor Discharge Isolation Valve ▪ LAL:Low ambient lockout ▪ UVR:Over/under/phase (standard) ▪ RFTR:Chilled water reset ▪ Capacity (Tons): 45.28, Input power (kW): 50.27, RLA (A): 168, Ampacity: 168, Unit max. fuse/HACR CB size: 175, Refrigerant: R-454b ▪ Fluid flow (USgpm): 108.3, EFT (°F): 54.0, LFT (°F): 44.0, Pressure drop (psi): 7.7, Fouling factor (h·ft²·°F/Btu): 0.00010, Fluid: Water ▪ Design ambient (°F): 95.00, Min. ambient (°F): 30.00, Altitude (ft): 0.00		
Unit List / Net Adds		

Shipped loose items

Description	List	Net
RIS:Rubber in shear isolator		
Shipped Loose List / Net Adds		
Total List/Net Adds		
Net Total (1 count at 1.0 mult)		

Grand Total	
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Scroll Compressor Air Cooled Package Chiller

Model #	ACDS040ANBS
Quantity	1 Rating version
Manufacturer	ACDG14 DBUSA

Physical Specifications

Compressor Qty	4	Shipping weight (lb)	2,996
Length (in)	116.00	Operating weight (lb)	3,021
Width (in)	89.00	Refrigerant	R-454b
Height (in)	88.00	Approx. refrigerant charge (lb)	101

Conditions of service

Percent of full load	100%	Compressor power (kW)	40.67
Capacity (Tons)	45.28	Total Fan Power (kW)	9.600
Unit power (kW)	50.27	Cooling Efficiency (EER, Btu /W.hr)	10.81
		IPLV.IP (EER, Btu /W.hr)	16.18

Evaporator

Fluid	Water	Leaving fluid temp. (°F)	44.00
Fluid flow rate (USgpm)	108.3	Fouling factor (h·ft ² ·°F/Btu)	0.000100
Entering fluid temp. (°F)	54.00	Pressure drop (psi/ft.H ₂ O)	7.70/17.8
		Fluid freezing point (°F)	32.00

Condenser

Design ambient (°F)	95.0	Altitude (ft)	0.000
Low ambient control to (°F)	30.0	Fan Motor Power (kW) (Qty)	2.400 (4)

Electrical characteristics

Unit power supply	208-230V/3ph/60Hz	Unit rated load amps	160.0
Control power	115V/1ph/60Hz	Unit min. circuit ampacity (A)	168.0
Unit max. fuse/HACR CB size (A)	175.0	Comp. rated load amps (A)	33.0(4)
		Comp. locked rotor amps (A)	304.0(4)

Notes

- Certified in accordance with the AHRI Air-Cooled Water-Chilling Packages Certification Program, which is based on AHRI Standard-550/590(I-P) and AHRI Standard 551/591(SI). Certified units may be found in the AHRI Directory at www.ahridirectory.org.
- Meets ASHRAE 90.1-2019 Path A and Path B chiller minimum efficiency guidelines

- Please consult factory for lead time.
- Refrigerant charge may vary. Unit nameplate will show final factory charge.
- The electrical data is being projected base on 95F ambient temperature, Please consult factory for all other ambient temperature

IPLV.IP Points at Standard AHRI Rating Conditions

% Full load	Tons	Unit kW	Comp. kW	Fan kW	Evap. EFT	Evap. LFT	EER	Ambient(°F)
100%	45.28	50.27	40.67	9.600	54.00	44.00	10.81	95.0
75%	33.96	29.84	23.23	6.610	51.50	44.00	13.66	80.0
50%	22.64	15.47	11.39	4.080	49.00	44.00	17.56	65.0
25%	11.32	6.710	4.710	2.000	46.50	44.00	20.24	55.0

Sound Data

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000	Total dB(A)
Sound Pressure Level (free field) at 32.80 ft	32	42	49	56	59	58	58	52	64

*Sound Pressure Level (free field) ± 2 dB(A) Tolerance

Standard Equipment

Unit Construction	Hermetic Scroll Compressors
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- Unit shall be constructed of heavy gauge G90 galvanized steel
- All sheet metal parts are painted with oven baked epoxy / polyester powder paint, sustaining 1000 hour salt spray test in accordance with ASTM B-117
- Control panel IP54
- Strap on belt type crankcase heater or sump heater
- Compressor staging on all units
- One (1) year warranty. (Factory provides standard warranty of 12 months from start up or 18 months from shipment date whichever occurs first. Limited to parts replacement only and excludes freight, taxes/duties, labours, consumable items, etc. Machine must be well maintained by DB authorized service representative.)

Air Cooled Condenser

- Microchannel Coil (TCP-Coating)
- Subcooling circuit(s)
- Direct drive fans with internal motor protection
- Standard operation to 45°F ambient using fan cycling

Evaporator

- Braze Plate Heat Exchanger(Optional Shell & Tube Heat Exchanger)
- Single and True Dual Evaporator
- Plate material AISI 316
- Fully insulated

Refrigeration Specialties

- Thermal expansion valve(Standard for ACDS010-090)
- Liquid line solenoid valve (Standard with thermal expansion valve)
- Sight glass
- Two compressors per refrigerant circuit
- Refrigerant charge of R-454b
- Electronic expansion valve (optional for ACDS010-090, standard for ACDS100-180)

Code Compliance

- Units conform to NEC, NEMA, ANSI/ASHRAE 15
- Units conform and certified to ANSI/UL Std. 1995 & CAN/CSA Std. C22.2 No.236 (ETL Listed)

Controls

- DB Director microcomputer controller on all models
- Two line 16 character alpha numeric display control functions
- Compressor loading/staging based on leaving fluid temperature
- Evaporator fluid freeze protection
- High and low pressure protection
- Staggered starting of compressors
- Anti-recycle timing in controller
- Fan cycling
- Accepts remote start & stop signal
- Keyboard accessed LCD readouts, continuously updated
- Discharge and suction pressure for all circuits

Optional Equipment/Service Included

Factory Mounted Options Included

- Gauges (GAG). Includes suction and discharge pressure gauges for all unit models. The microcomputer where fitted also displays discharge and suction pressure
- Hot Gas By-Pass
- Chilled water pump control (CWPC) - provides a contact closure for pump starting prior to starting of the chiller.
- Display units: English - provides English units display on DB Director (standard).

Accessories (Shipped Loose)

- Rubber-in-shear isolators (RIS) - designed for ease of installation, these rubber, one piece, molded isolators have skid resistant baseplates. Applicable for most installations.



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- NOTES:
1. ALL DIMENSIONS ARE IN INCHES (MILLIMETERS).
 2. ALLOW 60 [1524] CLEARANCE FOR CONTROL PANEL.
 3. EXTERNAL WATER PIPING MUST BE SUPPORTED TO MINIMIZE EXTERNAL WEIGHT ONTO EVAPORATOR OR UNIT.
 4. IF VIBRATION ISOLATORS ARE INSTALLED, FLEXIBLE CONNECTIONS SHALL BE INSTALLED AS CLOSE AS POSSIBLE TO THE EVAPORATOR WATER CONNECTIONS TO ISOLATE THE VIBRATION IN THE WATER PIPING.
 5. PLEASE CONSULT FACTORY FOR CERTIFIED DRAWING IF OTHER OPTION IS SELECTED.

OPTION ITEMS (TICK WHERE APPLICABLE)

OPTION 1: VIBRATION ISOLATORS

- ☐ NIL
- ☒ RUBBER ISOLATOR
- ☐ SPRING ISOLATOR

OPTION 2: PROTECTIVE PANELS

- ☒ NIL
- ☐ WIRE MESH (CONDENSER COIL SECTION ONLY)
- ☐ HAL GUARD (COMPLETE UNIT)

OPTION 3: WATER CONNECTOR TYPE

- ☒ STANDARD (VICTAULTIC)
- ☐ FLANGE
- ☐ MNPT

DIMENSION CHANGES C/W STANDARD OPTION

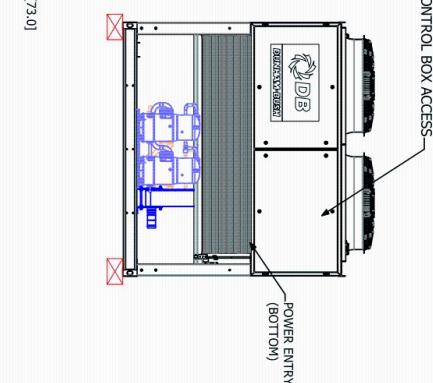
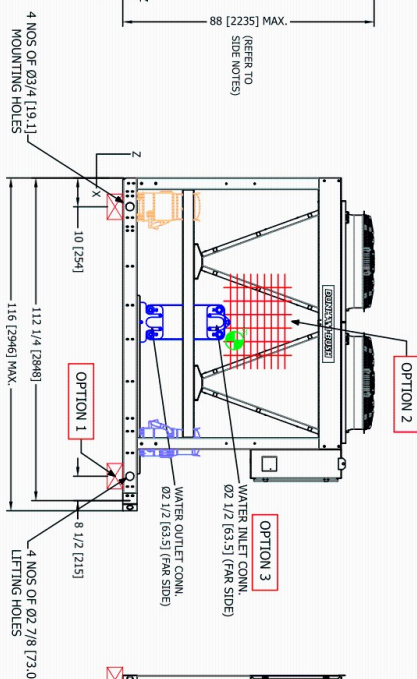
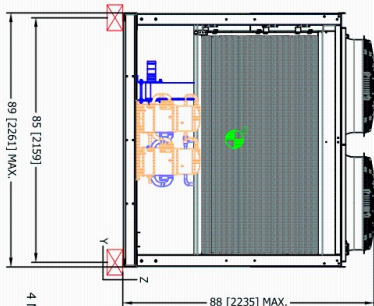
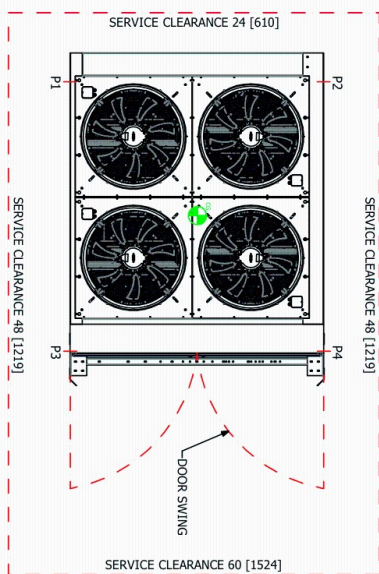
> IF SOFTSTARTER IS SELECTED, CONTROL BOX HEIGHT MIGHT BE HIGHER THAN AS SHOWN, BUT UNIT MAX HEIGHT IS NOT AFFECTED.

> LOW AMBIENT KIT (LAK) / LAK2 ONLY:

ADDITIONAL CONTROL BOX MIGHT BE ADDED, AND THE UNIT COMPONENT LAYOUT MIGHT BE CHANGED. (PLEASE TAKE NOTE ON THE UNIT CONTROL BOX HEIGHT INCREASE, PRECAUTIONS TO BE TAKEN DURING SHIPPING AND MOVING THE UNIT)

POINT	P1	P2	P3	P4
POINT LOAD LBS [KG]	749 [340]	765 [347]	749 [340]	759 [344]

CHILLED WATER CONNECTION INLET/OUTLET



CONTROL BOX ACCESS

POWER ENTRY (BOTTOM)

CERTIFIED DRAWING

DBUS/ENG/CD/02 REV00 10/01

OPTION 2: PROTECTIVE PANELS

☒ NIL

SHIP. WEIGHT LBS [KG]	OPERAT. WEIGHT LBS [KG]	CENTRE OF GRAVITY (X,Y,Z) INCHES
040	2996 [1359]	3021 [1371]

CG: CENTRE OF GRAVITY

SHIP. WEIGHT LBS [KG]	OPERAT. WEIGHT LBS [KG]	CENTRE OF GRAVITY (X,Y,Z) INCHES
040	3090 [1401]	3115 [1413]

CG: CENTRE OF GRAVITY

HAL GUARD (COMPLETE UNIT)

SHIP. WEIGHT LBS [KG]	OPERAT. WEIGHT LBS [KG]	CENTRE OF GRAVITY (X,Y,Z) INCHES
040	3387 [1536]	3412 [1371]

CG: CENTRE OF GRAVITY

ALL DIMENSIONS ARE IN INCHES [MM]

This is computer generated drawing.
No signature required

REV	DESCRIPTION	DATE	BY



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LOCATION

QTY.

MODEL ACDS040 60Hz R454B

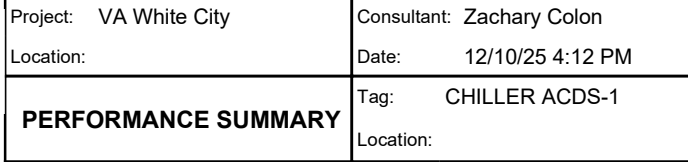
PROJECT STANDARD

TITLE

AIR COOLED CHILLER

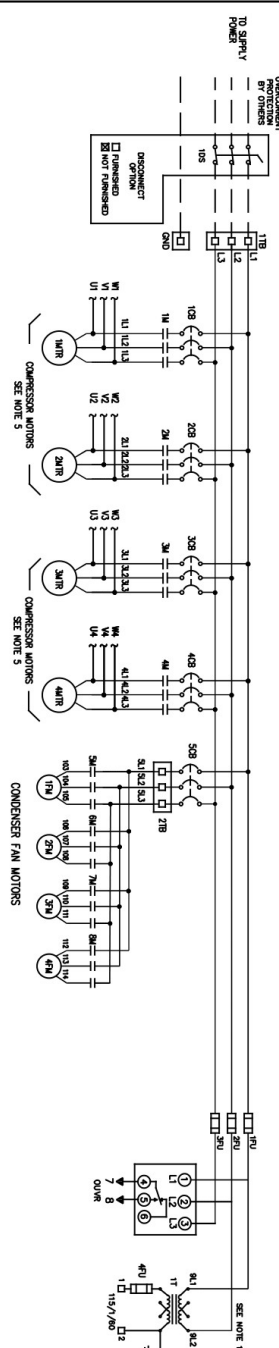
DRAWING NO 93299G-338

SCALE: N.T.S. SHEET 1 OF 1



MODEL	AD3150A/RCS
POWER SUPPLY	400V/3PH/60Hz
COMPRESSOR	44A
MOTORS 1A TO 1C	260A
COMPRESSOR	44A
MOTORS 2A TO 2C	260A
CONDENSERS FAN MOTORS 1 TO 10	2.4
UNIT RLA	304A
UNIT MCA	315A
UNIT MFS	350A

TGI/ENG/ELD/05 REV.8 11/15

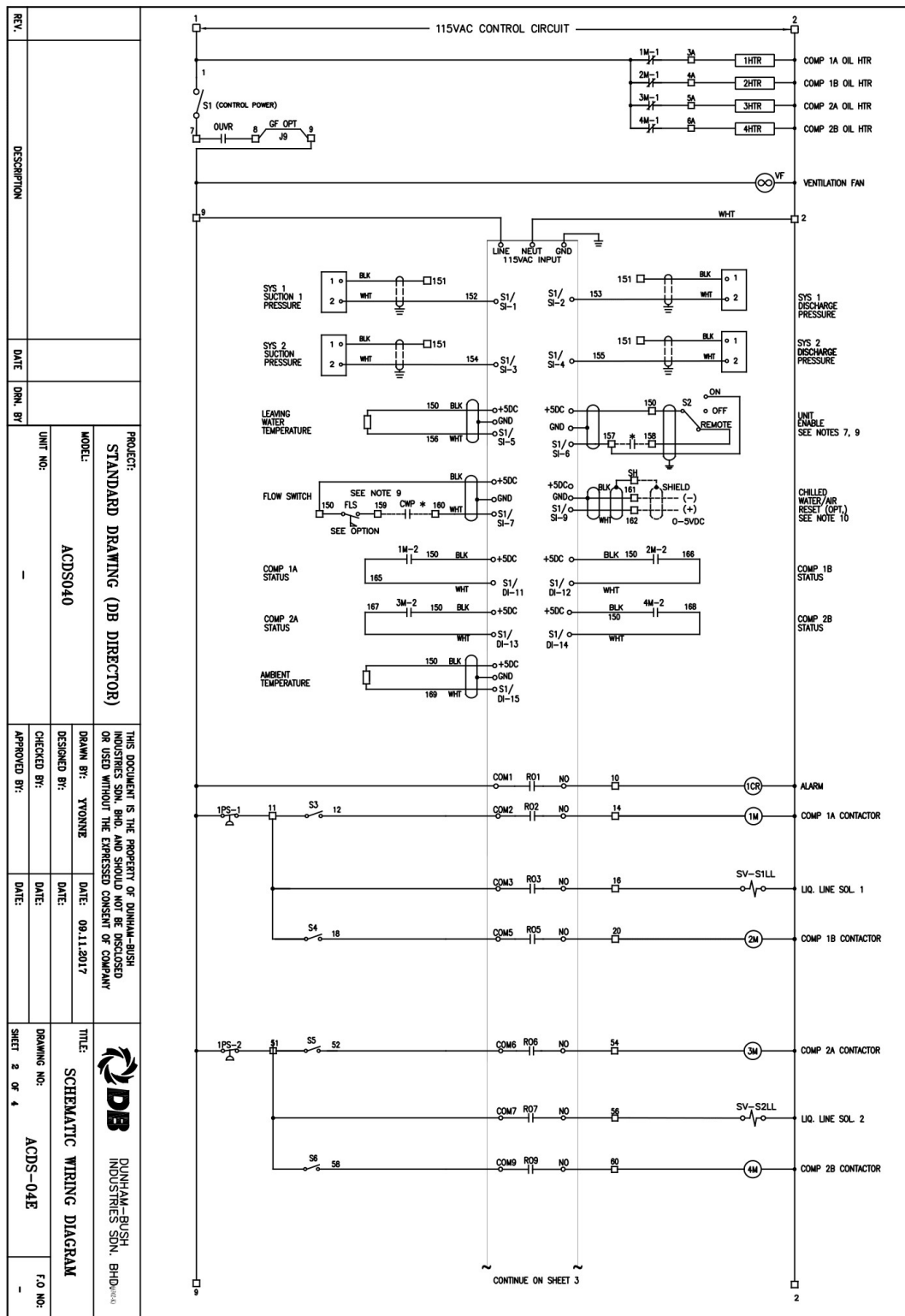
[illegible]

1. RESETS TO BE TIME DELAY TYPE.
2. FIELD INSTALLED CONTROL, WIRING LOCAL, STATE & NATIONAL CODES.
3. COPPER CONDUCTORS ONLY.
4. DISCONNECT MEANS A BRANCH CIRCUIT PROTECTION SHALL BE 5. IF POWER SUPPLY HAS BEEN ENERGIZED FOR 24 HOURS, MINIMUM OIL, SOOT HEATERS MUST BE ENERGIZED FOR 15 MINUTES, MINIMUM BEFORE STARTING COMPRESSOR.
6. FIELD INSTALLED CONTROL, WIRING LOCAL, STATE & NATIONAL CODES.
7. DISCONNECT PROTECTION, USE DISMANT, 102 FOR AIR/VEHICLE CONNECTION.
8. OUTLETTER CONTROL, CONTACTS MAY BE WIRED BETWEEN 154, 157 & 158 TO RESET; MAY OPEN 35 TO 50 SECONDS, TO RESET; MAY OPEN 54 FOR 5 SECONDS, ETC.
9. SHELLED CONTROL, IS REMOVED FOR FIELD INSTALLED CUSTOMER CONTROL.
10. SHELLED CONTROL, SHELLED WATER WASH, NOT WASH.
11. CONNECT SHIELD TO SURROUND, GROUND.
12. IF 8-5VDC CAN BE USED SET SETPOINT 99.
13. FIELD INSTALLED CONTROL, WIRING LOCAL, STATE & NATIONAL CODES.
14. CUSTOMER MAY NOT RESET, USE SHELLED CONTROL.
15. TO RESET; POINT, USE SHELLED CONTROL.

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PROJECT: STANDARD DRAWING (DB DIRECTOR)			
MODEL: ACD5040		UNIT NO.: -	
DRAWN BY: YUONGNE		DATE: 08.11.2017	
DESIGNED BY:		DATE:	
CHECKED BY:		DATE:	
APPROVED BY:		DATE:	
TITLE: SCHEMATIC WIRING DIAGRAM		DRAWING NO.: ACD5-04E	
SHEET 1 OF 4		F.O NO.: -	
REV.		DESCRIPTION	
DATE		CHK. BY	



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TS/ENG/ELD/05 REV.8 11/15



Project: VA White City	Consultant: Zachary Colon
Location:	Date: 12/10/25 4:12 PM
PERFORMANCE SUMMARY	Tag: CHILLER ACDS-1
	Location:



REV.	DESCRIPTION	DATE	DRAWN BY	UNIT NO.	MODEL:	PROJECT:
					ACDS040	STANDARD DRAWING (DB DIRECTOR)
						THIS DOCUMENT IS THE PROPERTY OF DUNHAM-BUSH INDUSTRIES SPN. BHD. AND SHOULD NOT BE DISCLOSED OR USED WITHOUT THE EXPRESSED CONSENT OF COMPANY
						DESIGNED BY: TYOUNG DATE: 09.11.2017
						CHECKED BY: DATE:
						APPROVED BY: DATE:
						TITLE: SCHEMATIC WIRING DIAGRAM
						DRAWING NO: ACDS-04E
						SHEET 4 OF 4
						F.O. NO:

F4

F2

F3

F1

CONTROL BOX

RECOMMENDED FAN STAGING

	SYSTEM 1	SYSTEM 2
BASE FANS	4	2
STAGE 2	3	1

• COIL HEADER

ALARM CONTACT

350

1CR-1

351

HOT GAS BYPASS OPTION

☐ 1 SYSTEM

☐ 2 SYSTEM

☒ NOT FURNISHED

11

COM4

R04

NO

17

SV-S1HB

2

51

COM6

R08

NO

57

SV-S2HB

LOW AMBIENT OPTION

☐ FURNISHED

☒ NOT FURNISHED

4CR-1

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