

KEYED NOTES

- PROVIDE TYPE-II "HEAT ONLY" HOOD OVER TOASTER AND TURBOCHIEF OVENS. RUN 10" SHEETMETAL DUCT FROM CONNECTION ON HOOD TO EXHAUST FAN ON ROOF. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED. VERIFY DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION. REFER TO DETAIL ON SHEET M-3. USE FACTORY-MANUFACTURED PIPE AND FITTINGS ONLY. CONFIRM LOCATION ON SITE WITH MOST RECENT KITCHEN PLANS.
- PROVIDE TEMPERATURE SENSOR 66" A.F.F. IN A WALL NEAR LOCATION SHOWN. SEAL WALL OPENINGS WITH CAULK. AUDIO-VISUAL ANNUNCIATOR TIED INTO SMOKE DETECTOR. PROVIDE THERMOSTAT IN MANAGERS OFFICE. COORDINATE LOCATIONS ON SITE WITH G.C. AND EQUIPMENT. AVOID SOURCES OF HEAT. INSULATE BACKS OF SENSORS.
- TYPE "B" FLUE THROUGH ROOF WITH CONE FLASHING, RAIN SHIELD, AND WEATHER-PROOF CAP PROVIDED BY PLUMBING CONTRACTOR. DISCHARGE SHALL BE MINIMUM 10 FEET FROM AIR INTAKES. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED. USE FACTORY-MANUFACTURED PIPE AND FITTINGS ONLY. COMBUSTION AIR IS PROVIDED VIA NATURAL DRAFT USING OUTSIDE AIR FROM THE ROOF-TOP UNITS.
- RUN 10X10 EXHAUST DUCT TO EXHAUST FAN ON ROOF AS SHOWN. OFFSET AND TRANSITION AS NEEDED.
- PROVIDE TYPE-II "HEAT ONLY" HOOD OVER JUST-BAKED OVENS. RUN 10" SHEETMETAL DUCT FROM CONNECTION ON HOOD TO EXHAUST FAN ON ROOF. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED. VERIFY DIMENSIONS PRIOR TO FABRICATION OR INSTALLATION. REFER TO DETAIL ON SHEET M-3. USE FACTORY-MANUFACTURED PIPE AND FITTINGS ONLY. CONFIRM LOCATION ON SITE WITH MOST RECENT KITCHEN PLANS.
- EXISTING FAN TO BE REMOVED BY GENERAL CONTRACTOR. HVAC CONTRACTOR IS TO VISIT THE JOBSITE, MEASURE THE E.T.R. CURBS, AND PROVIDE CURB ADAPTORS. SEE "FAN SCHEDULE," THIS SHEET.
- SHEETMETAL TRUNKLINE FABRICATED, INSTALLED, SEALED, AND EXTERNALLY INSULATED PER SMACNA AND LOCAL CODES. VERIFY ROUTING ON SITE PRIOR TO FABRICATION. OFFSET AND TRANSITION AT CONNECTIONS AS NEEDED.

AIR BALANCE SCHEDULE

TAG	SUPPLY AIR	OUTSIDE AIR	RETURN AIR	EXHAUST AIR	BLDG. PRESSURE	% OUTSIDE AIR
RTU-1*	2000 CFM	400 CFM	1600 CFM	---	+ 400 CFM	20
RTU-2*	2000 CFM	400 CFM	1600 CFM	---	+ 400 CFM	20
RTU-3*	2000 CFM	400 CFM	1600 CFM	---	+ 400 CFM	20
EF-1	---	---	---	470 CFM	- 470 CFM	---
EF-2	---	---	---	450 CFM	- 450 CFM	---
EF-3	---	---	---	150 CFM	- 150 CFM	---
TOTAL	6000 CFM	1200 CFM	4800 CFM	1070 CFM	+ 130 CFM	20

* EXISTING, TO REMAIN. SET CAPACITIES AS SHOWN

AIR DEVICE SCHEDULE

SYM.	SIZE	TYPE	DUCT SIZE	MODEL#	FINISH	BOOT SIZE	OPENING SIZE	QTY.
A*	24X24	SUPPLY 4 WAY	12"	NCA12	WHITE	12"	T-BAR	9
B**	24X24	SUPPLY PERF.	12"	APDF3-1424	WHITE	12"	T-BAR	3
C***	12X12	SUPPLY 1 WAY	6"	630	WHITE	12X12	SIZE + 1/4"	1
D***	12X12	SUPPLY 1 WAY	6"	630	WHITE	12X12	SIZE + 1/4"	3
E	24X24	RETURN	18"	630TB	WHITE	22X22	T-BAR	3
F	12X12	EXHAUST	6"	630	WHITE	12X12	SIZE + 1/4"	3

ALL DIFFUSERS SHALL BE MANUFACTURED BY METALARE OR EQUIVALENT AND 100% ALUMINUM CONSTRUCTION
 * PROVIDE WITH PVCRB SLIDING-BLADE DAMPER
 ** PROVIDE WITH THREE 14"X10"-12" REDUCERS FOR TOPS OF DIFFUSERS
 *** PROVIDE WITH OPPOSED-BLADE DAMPER

PACKAGE ROOFTOP UNIT SCHEDULE (RTU-1,2,3)

TAG	MANUFACTURER	MODEL	LOCATION, CURB DIMENSIONS	TYPE OF HEAT	TOTAL COOLING CAPACITY, MBTU/HR	SENSIBLE COOLING CAPACITY, MBTU/HR	ENTERING AIR CONDITIONS, DBT/WBFT	AMBIENT AIR DB TEMPERATURE, °F	SUPPLY AIR, CFM	OUTSIDE AIR, CFM	EXTERNAL STATIC PRESSURE, "WG	BHP - MEDIUM STATIC MOTOR	E.E.R.	GAS INPUT MBTU/HR	GAS OUTPUT MBTU/HR	UNIT WEIGHT, LBS.	ELECTRICAL REQUIREMENT, V/PHASE/Hz	MINIMUM CIRCUIT AMPERAGE	MAXIMUM OVER CURRENT PROTECTION
RTU-1, RTU-2, AND RTU-3	TRANE (EXISTING, TO REMAIN)	YS060 AND YC060 (5 TONS EACH)	RTUS ARE EXISTING AND TO REMAIN. HVAC CONTRACTOR IS TO SET AIR CAPACITIES PER THE AIR BALANCE SCHEDULE, THIS SHEET. VERIFY PROPER WORKING OPERATION OF UNIT, AND IMMEDIATELY REPORT ANY PROBLEMS TO THE GENERAL CONTRACTOR AND NCA CONSULTANTS.	RTUS ARE EXISTING AND TO REMAIN. HVAC CONTRACTOR IS TO SET AIR CAPACITIES PER THE AIR BALANCE SCHEDULE, THIS SHEET. VERIFY PROPER WORKING OPERATION OF UNIT, AND IMMEDIATELY REPORT ANY PROBLEMS TO THE GENERAL CONTRACTOR AND NCA CONSULTANTS.	150	100	55/65	70	2000	400	0.25	1.5	10.0	100	100	150	208/1/60	15	15

FAN SCHEDULE

UNIT NUMBER	AREA SERVED	MANUFACTURER	MODEL	CFM	STATIC PRESSURE, "WG	FAN HORSEPOWER	DRIVE	RPM	ELECTRICAL V/PHASE/Hz	NCA CURB LxWxH @ FLANGE	ACCESSORIES	NOTES/ACCESSORIES
EF-1	TOASTER/OVENS	CAPTIVE AIRE	DU33HFA	470	0.75	0.33	DIRECT	917	120/1/60	120/1/80	A,B,D,E,H,J,K,L,M	G. INTERLOCK WITH SALES FLOOR LIGHTS H. CURB ADAPTOR FOR INSTALLATION. E.T.R. FAN CURB I. CONTROLLED BY TEMP. PROBES IN HOODS. SEE SHEET M-3 J. REFER TO KITCHEN BALANCE SCHEDULE K. ENSURE 10" - 0" MINIMUM CLEARANCE FROM AIR INTAKE L. ENSURE 10" - 0" MINIMUM CLEARANCE FROM AIR INTAKE M. COORDINATE WITH MANUFACTURER FOR UNIT SELECTION
EF-2	JUST-BAKED OVEN	CAPTIVE AIRE	DU12HFA	450	0.75	0.25	DIRECT	1082	120/1/60	120/1/80	A,B,D,E,H,J,K,L,M	G. INTERLOCK WITH SALES FLOOR LIGHTS H. CURB ADAPTOR FOR INSTALLATION. E.T.R. FAN CURB I. CONTROLLED BY TEMP. PROBES IN HOODS. SEE SHEET M-3 J. REFER TO KITCHEN BALANCE SCHEDULE K. ENSURE 10" - 0" MINIMUM CLEARANCE FROM AIR INTAKE L. ENSURE 10" - 0" MINIMUM CLEARANCE FROM AIR INTAKE M. COORDINATE WITH MANUFACTURER FOR UNIT SELECTION
EF-3	RESTROOMS	CAPTIVE AIRE	DR10HFA	150	0.375	0.06	DIRECT	1250	120/1/60	120/1/80	A,B,D,E,H,J,K,L,M	G. INTERLOCK WITH SALES FLOOR LIGHTS H. CURB ADAPTOR FOR INSTALLATION. E.T.R. FAN CURB I. CONTROLLED BY TEMP. PROBES IN HOODS. SEE SHEET M-3 J. REFER TO KITCHEN BALANCE SCHEDULE K. ENSURE 10" - 0" MINIMUM CLEARANCE FROM AIR INTAKE L. ENSURE 10" - 0" MINIMUM CLEARANCE FROM AIR INTAKE M. COORDINATE WITH MANUFACTURER FOR UNIT SELECTION

DRAWING INFORMATION

DATE	DESCRIPTION	BY
01-09-19	FOR CONSTRUCTION	KM

NCA CONSULTANTS/GROUP
 4585 140TH AVE. NORTH, SUITE #1001
 CLEARWATER, FLORIDA
 PHONE: (877) 530-0078
 CALL NCA MARKETING FOR PRICING
 NCA JOB# 19-114

ARCHITECT OF RECORD
 JAMES D. SMITH, AIA
 522 BAY LN.
 CENTERVILLE, MA 02632

ATTENTION GENERAL CONTRACTOR: "E-ENGINEERING" DEVIATIONS FROM THE "LOW VOLTAGE" AND REQUIRED HVAC EQUIPMENT MUST BE APPROVED IN ADVANCE BY THE ARCHITECT AND PROFESSIONAL ENGINEER. UNAUTHORIZED SUBSTITUTIONS OR ALTERATIONS WILL VOID THE SIGNATURE AND SEAL OF THE PROFESSIONAL ENGINEER AND LEAVE VIOLATORS RESPONSIBLE FOR RESUBMISSION OF SCHEDULES AND DRAWINGS.

EXISTING CONDITIONS:
 EXCLUDING ITEMS THAT ARE EXPLICITLY NOT TO BE REMOVED, THE GENERAL CONTRACTOR IS TO REMOVE EXISTING ROOFTOP UNITS, DUCTWORK, CURBS, CONTROLS, SUPPORTS, AND OTHER ACCESSORIES ASSOCIATED WITH THE ROOFTOP EQUIPMENT; REMOVE, ALTER, AND REPLACE STRUCTURAL FRAMING AS NEEDED; RE-DECK AND RE-ROOF EXISTING ROOFING TO MATCH EXISTING ROOF; AND REMOVE ALL EXISTING GRIDDERS, DIFFUSERS, DUCTWORK, HANGERS, AND ASSOCIATED MATERIALS.

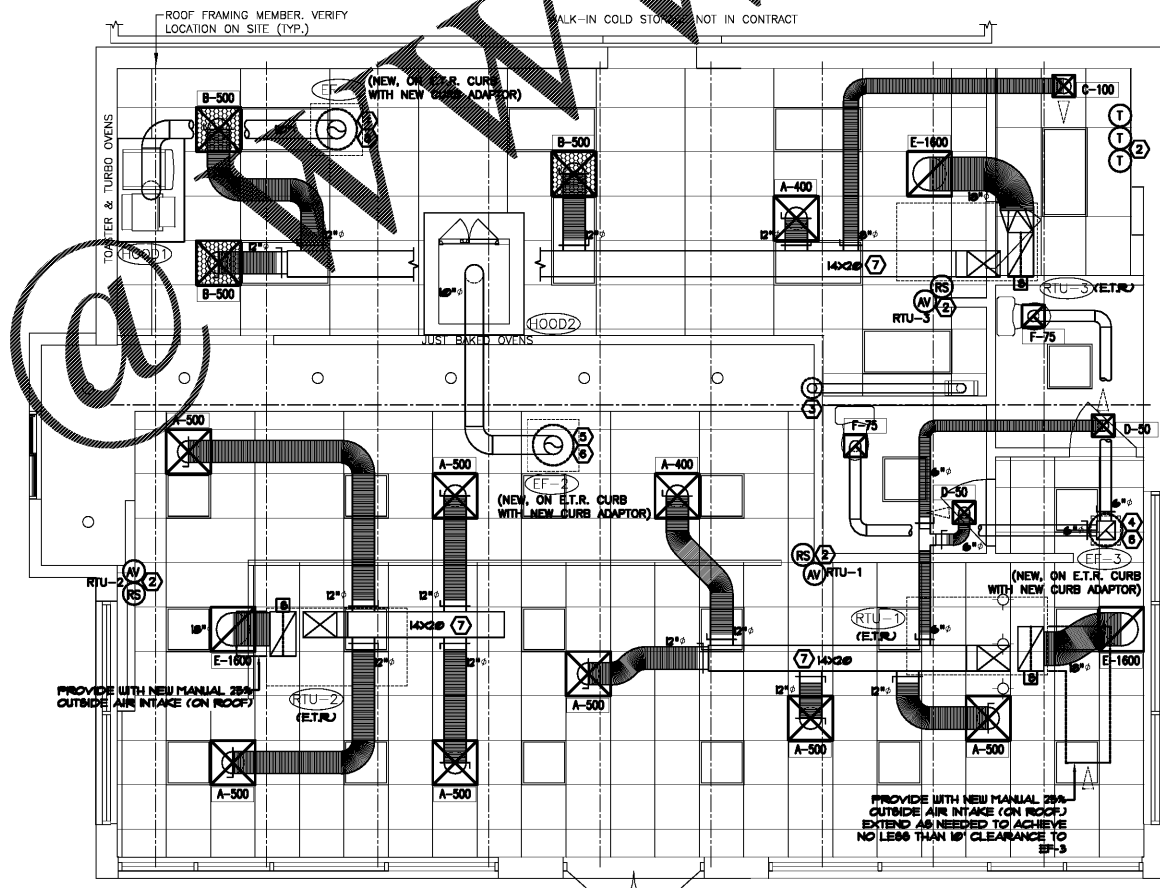
- CONTRACTOR NOTES**
- THE HVAC CONTRACTOR IS TO FURNISH AND INSTALL THE HOODS, EXHAUST FANS, NEW DUCTWORK, INSULATION, NEW DIFFUSERS, SMOKE DETECTORS, AND TEMPERATURE CONTROLS. RISERS AND A.I.C. SEE E.T.R.
 - THE HVAC CONTRACTOR IS TO VERIFY LOCATIONS FOR EF-1, EF-2, AND THE HOODS ON SITE FROM MOST-RECENT KITCHEN EQUIPMENT PLANS. ALL NEW FANS ARE TO BE U.L. LISTED.
 - ALL FLEX DUCT IS TO BE U.L. LISTED, R-6, FOIL-BACKED, CLASSIFIED AS A CLASS 1 AIR DUCT. MAXIMUM LENGTH PER LOCAL CODE.
 - ALL METAL DUCT AND AIR DISTRIBUTION DEVICES ARE TO BE INSULATED WITH R-6, 2" X .75 DENSITY FOIL-BACKED INSULATION, WITH FIRE AND SMOKE RATING [25]-[50].
 - ALL DUCTWORK IS TO BE INDEPENDENTLY HUNG FROM STRUCTURAL MEMBERS.
 - ALL DUCTWORK IS TO BE FABRICATED, INSTALLED, SEALED, AND EXTERNALLY INSULATED PER ENR LOW-VELOCITY DUCT MANUAL (LATEST ISSUE). INTERNALLY LINED DUCTWORK IS NOT ALLOWED.
 - UNLESS OTHERWISE NOTED, ALL SUPPLY TAKEOFFS ARE TO HAVE A MANUAL VOLUME CONTROL DAMPER.
 - THE HVAC CONTRACTOR IS TO COORDINATE DIFFUSER LOCATIONS ON SITE WITH THE MOST RECENT REFLECTED CEILING PLAN.
 - THE HVAC CONTRACTOR IS TO FURNISH A WRITTEN GUARANTEE COVERING A ONE-YEAR PERIOD FOR ALL HVAC EQUIPMENT. ALL NEW FANS TO BE U.L. LISTED.
 - UPON COMPLETION OF PROJECT THE HVAC CONTRACTOR IS TO HIRE AN A.A.B.C. OR N.E.E.B. CERTIFIED, INDEPENDENT TEST AND BALANCE COMPANY TO CONDUCT A COMPLETE, CERTIFIED TEST AND BALANCE OF ALL HVAC EQUIPMENT. PROVIDE A WRITTEN REPORT TO NCA CONSULTANTS. ALL CAPACITIES MUST BE SET TO AMOUNTS INDICATED ON THE FLOOR PLANS AND SCHEDULES.
 - THE HVAC CONTRACTOR IS TO MAKE ALL LOW-VOLTAGE WIRING FINAL CONNECTIONS FOR ALL HVAC EQUIPMENT INCLUDING TEMPERATURE CONTROLS, RTUS, AND SMOKE DETECTORS.

GENERAL CONTRACTOR
 1. IT IS THE RESPONSIBILITY OF THE GENERAL CONTRACTOR TO RECEIVE, OFFLOAD, AND STORE ALL HVAC MATERIALS WHICH ARRIVE AT THE JOB SITE. ALL MATERIAL MUST BE STORED INSIDE THE BUILDING. HOODS MUST BE STORED IN THE KITCHEN.
 2. IT IS VERY IMPORTANT THAT ACCURATE MEASUREMENTS ARE USED WHEN LOCATING EXHAUST FAN ROOF OPENING. COORDINATE ROOF OPENINGS WITH THE KITCHEN EQUIPMENT PLAN AND EXHAUST HOOD PLANS. OBTAIN THE CORRECT PLANS FROM THE KITCHEN EQUIPMENT SUPPLIER.
 3. RTU ROOF OPENING SIZES AND ROOF CURBS ARE BASED ON EQUIPMENT SHOWN. IF OTHER EQUIPMENT IS USED, VERIFY ROOF OPENING REQUIREMENTS. MAKE PENETRATIONS AS NEEDED FOR INSTALLATION OF NEW CURB AND RTU. COORDINATE ON SITE WITH HVAC CONTRACTOR. ENSURE THAT ROOFING MATERIAL DOES NOT COVER THE TOP OF ANY HVAC EQUIPMENT CURB.
 4. ALL ROOF, CEILING, WALL, AND STRUCTURAL FRAMING REQUIRED FOR UNIT, FAN, DUCT, DIFFUSER, AND ALL OTHER HVAC WORK IS TO BE BY THE G.C. COORDINATE ON SITE WITH HVAC CONTRACTOR. GENERAL CONTRACTOR IS TO PROVIDE ANY SCREENING, GUARD RAILS, ETC. FOR ROOF-MOUNTED HVAC EQUIPMENT PER IBC AND LOCAL CODES.
 5. IF NECESSARY THE GENERAL CONTRACTOR IS TO REMOVE, REPLACE, AND/OR REPAIR CEILING GRID AND TILES IN ORDER FOR THE HVAC WORK TO BE PERFORMED.

ELECTRICAL CONTRACTOR
 1. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL PITCH POCKETS FOR POWER AND CONTROL WIRING, AND IS TO MAINTAIN 12" MINIMUM CLEARANCE FROM BACK PANEL OF AIR CONDITIONING UNITS.
 2. THE ELECTRICAL CONTRACTOR IS TO INSTALL LOW-VOLTAGE CONTROL WIRING FOR ALL AIR CONDITIONING CONTROLS.
 3. THE ELECTRICAL CONTRACTOR IS TO FURNISH AND INSTALL DISCONNECTS FOR RTUS. WIRE THE RESTROOM EXHAUST FAN TO RUN CONTINUOUSLY WHILE THE DINING ROOM LIGHTS ARE ON, AND WIRE KITCHEN / HOOD EXHAUST FANS THROUGH THE OCCUPIED / UNOCCUPIED PANEL. NOTE: IF THE HOOD FANS ARE NOT CONTROLLED BY TEMPERATURE PROBES IN THE HOOD DISCHARGE COLLARS (SEE HOOD DETAILS, THIS SET) THEN THE ELECTRICAL CONTRACTOR IS TO WIRE THE KITCHEN / HOOD FANS TO BE ENERGIZED DURING STORE OPERATIONAL HOURS.
 4. THE ELECTRICAL CONTRACTOR IS TO USE A MINIMUM OF 4"-6" SEALTITE FLEXIBLE CONDUIT WHEN WIRING KITCHEN HOOD EXHAUST FANS ON ROOF SO THAT FANS MAY BE REMOVED FROM CURBS AND PLACED ON ROOF FOR CLEANING EXHAUST DUCTWORK.
 5. FOR EACH UNIT, THE ELECTRICAL CONTRACTOR IS TO PROVIDE ONE SINGLE-GANG RECEPTACLE TEST STATION FOR THERMISTORS AND ONE DOUBLE-GANG RECEPTACLE TEST STATION FOR THE ANNUNCIATOR, WITH GREEN AND RED LIGHT INDICATORS. THE FIRE AND MECHANICAL INSPECTORS WILL DETERMINE SUITABLE LOCATION FOR TEST STATIONS. ANNUNCIATORS AND TEST STATION WILL BE LOOPED IN THE CIRCUITRY OF THE SMOKE DETECTOR DEVICES. WIRING WILL BE INSTALLED BY ELECTRICAL CONTRACTOR. PROVIDE ADDITIONAL RECEPTACLES FOR THE THERMOSTATS IN THE MANAGERS OFFICE.

PLUMBING CONTRACTOR
 1. THE PLUMBING CONTRACTOR IS TO PROVIDE AND INSTALL CONDENSATE DRAINS/GAS PIPING FOR ALL HVAC EQUIPMENT, AND PITCH POCKETS FOR RTU CONNECTIONS.
 2. THE PLUMBING CONTRACTOR IS TO COORDINATE PLUMBING VENT STACKS AND WATER HEATER FLUES WITH OUTSIDE AIR INTAKES OF A/C UNITS. 10"-0" MINIMUM CLEARANCE REQUIRED OR PER LOCAL CODE.
 3. THE PLUMBING CONTRACTOR IS TO PROVIDE AND INSTALL FLUE GAS EXHAUST VENT FOR WATER HEATER. MAINTAIN 10"-0" MINIMUM CLEARANCE TO AIR INTAKES, OR PER LOCAL CODE. COORDINATE ON SITE WITH G.C. AND HVAC CONTRACTOR.

UPON COMMENCEMENT OF ROUGH-IN AS SCHEDULED BY NCA CONSULTANTS, THE AIR CONDITIONING CONTRACTOR IS TO REMAIN ON THE JOB SITE FULL TIME UNTIL THE ROUGH-IN IS 100% COMPLETE. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT WILL VERIFY.
 UPON COMMENCEMENT OF TRIM-OUT AS SCHEDULED BY NCA CONSULTANTS, THE AIR CONDITIONING CONTRACTOR IS TO REMAIN ON THE JOB SITE FULL TIME UNTIL THE TRIM-OUT IS 100% COMPLETE. THE GENERAL CONTRACTOR'S SITE SUPERINTENDENT WILL VERIFY.



FLOOR PLAN - HVAC
 SCALE 1/4" = 1' - 0" WHEN PLOTTED 36" X 24" 19-114

Order Plans

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 1291 HWY 11-W
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REVISION

No.	DATE	DESCRIPTION

DWG DATE: 2-1-19
 DRAWN BY: CHC
 PROJECT No.: 17182
 DWG TITLE:

HVAC FLOOR PLAN, NOTES, AND SCHEDULES

SHEET No.

M-1

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