# **DESIGN TEAM INFORMATION:**

**ARCHITECT** 

DAG ARCHITECTS, INC. 40 S. PALAFOX PLACE, STE 201 PENSACOLA, FL 32502

PHONE: 850-429-9004 FAX: 850-429-9005

DAVE LUTRELL, AIA
EMAIL: DLUTTRELL@DAGARCHITECTS.COM

CIVIL ENGINEER
JEHLE-HALSTEAD, INC.
5414 HWY 90
MILTON, FL 32571

PHONE: 850-994-9503 FAX: 850-994-9504

D. PATRICK JEHLE, JR., P.E. EMAIL: PJEHLE@JEHLE-HALSTEAD.COM

STRUCTURAL ENGINEER
SCHMIDT CONSULTING GROUP, INC.
40 S. PALAFOX PLACE, STE 300
PENSACOLA, FL 32502

PHONE: 850-438-0050 FAX: 850-432-8631

STUART SMITH, P.E.
EMAIL: SSMITH@SCHMIDTCONSULTINGGROUP.COM

MECHANICAL/PLUMBING ENGINEER SCHMIDT CONSULTING GROUP, INC. 40 S. PALAFOX PLACE, STE 300 PENSACOLA, FL 32502

PHONE: 850-438-0050 FAX: 850-432-8631

WILLIAM JOSEPH JONES, P.E.
EMAIL: JOE@SCHMIDTCONSULTINGGROUP.COM

ELECTRICAL ENGINEER

SCHMIDT CONSULTING GROUP, INC.

40 S. PALAFOX PLACE, STE 300

PENSACOLA, FL 32502

PHONE: 850-438-0050 FAX: 850-432-8631

TODD NICHOLSON, P.E.
EMAIL: TODDN@SCHMIDTCONSULTINGGROUP.COM



SCHOOL BOARD OF SANTA ROSA COUNTY SCHOOL DISTRICT

OWNER CONTACTS: SANTA ROSA COUNTY SCHOOL BOARD SANTA ROSA COUNTY, FL PHONE: 850-983-5123 FAX: 850-983-5115

JOSEPH B. HARRELL
ASSISTANT SUPERINTENDENT FOR
ADMINISTRATIVE SERVICES
EMAIL: HARRELJ@MAIL.SANTAROSA.K12.FL.US



VICINITY MAP

# HVAC RENOVATION PHASE III

GULF BREEZE HIGH SCHOOL 675 GULF BREEZE PKWY GULF BREEZE (850) 916-4100

# PHASE 2 - DESIGN DEVELOPMENT SUBMITTAL

JUNE 09, 2015

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REVISION DESCRIPTION

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NUMBER

GULF BREEZE HIGH SCHOO HVAC RENOVATION PH. III

DESIGNED AL

> AL CHECKED BY:

WJJ DATE: JUNE 9, 2015

SHEET TITLE:

TITLE SHEET

G001

				DRAWING INDEX
SHEET	OF	SHEET	SHEET#	SHEET NAME
ENERAL				
1	0F	31	G001	TITLE SHEET
2	0F	31	G002	DRAWING INDEX
3	OF	31	G003	HVAC RENOVATION PHASE II AREA SCOPE OF WORK
4	0F	31	G004	GENERAL SITE CONSTRUCTION INFORMATION
MECHANICAL	_			
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6	0F	31	M002	MECHANICAL NOTES
7	0F	31	M003	MECHANICAL SCHEDULES
8	0F	31	M004	MECHANICAL SCHEDULES
9	0F	31	M101	MECHANICAL DEMOLITION ROOF PLAN
10	0F	31	M102	MECHANICAL ROOF PLAN
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14	OF	31	M202	PARTIAL MECHANICAL DEMOLITION PLAN
15	0F	31	M203	PARTIAL MECHANICAL DEMOLITION PLAN
16	0F	31	M301	PARTIAL MECHANICAL NEW WORK PLAN
17	OF	31	M302	PARTIAL MECHANICAL NEW WORK PLAN
18	0F	31	M303	PARTIAL MECHANICAL NEW WORK PLAN
19	OF	31	M401	PARTIAL MECHANICAL PIPING PLAN
20	OF	31	M402	PARTIAL MECHANICAL PIPING PLAN
21	OF	31	M403	PARTIAL MECHANICAL PIPING PLAN
22	OF	31	M701	MECHANICAL SECTIONS AND ELEVATIONS
LECTRICAL				
23	OF	31	E001	ELECTRICAL LEGEND AND NOTES
24	OF	31	E101	ELECTRICAL DEMOLITION ROOF PLAN
25	OF	31	E102	ELECTRICAL NEW WORK ROOF PLAN
26	OF	31	E201	PARTIAL ELECTRICAL DEMOLITION PLAN
27	OF	31	E202	PARTIAL ELECTRICAL DEMOLITION PLAN
28	OF	31	E203	PARTIAL ELECTRICAL DEMOLITION PLAN
29	OF	31	E301	PARTIAL ELECTRICAL NEW WORK PLAN
30	OF	31	E302	PARTIAL ELECTRICAL NEW WORK PLAN
31	OF	31	E303	PARTIAL ELECTRICAL NEW WORK PLAN

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GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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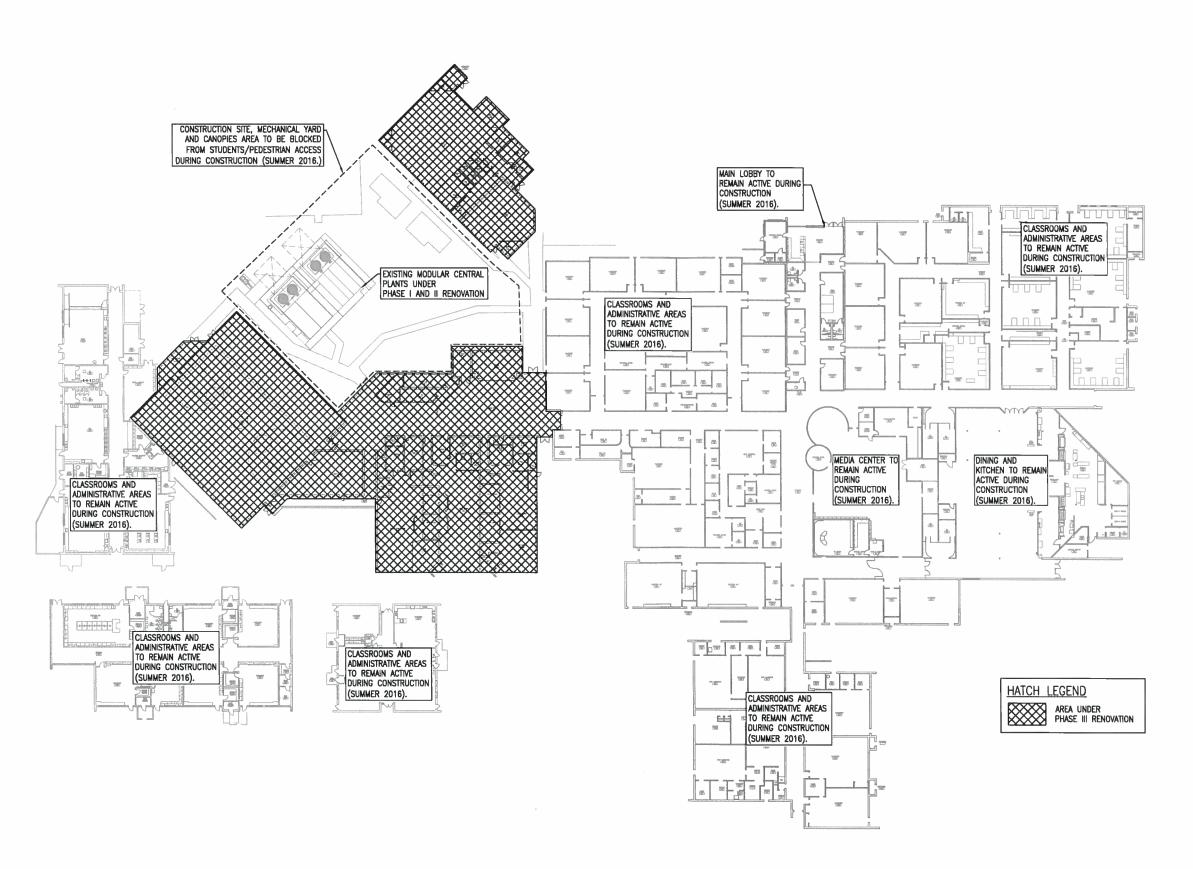
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DRAWING INDEX

G002



HVAC RENOVATION PHASE III AREA SCOPE OF WORK







GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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> HVAC RENOVATION PHASE II AREA SCOPE OF WORK

G003

- 1 PROVIDE LAY DOWN AREAS WITH TEMPORARY SAFETY FENCING.
- (2) REPAIR EXISTING AREA AS REQUIRED TO MATCH ORIGINAL.





MEER DECRIPION

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GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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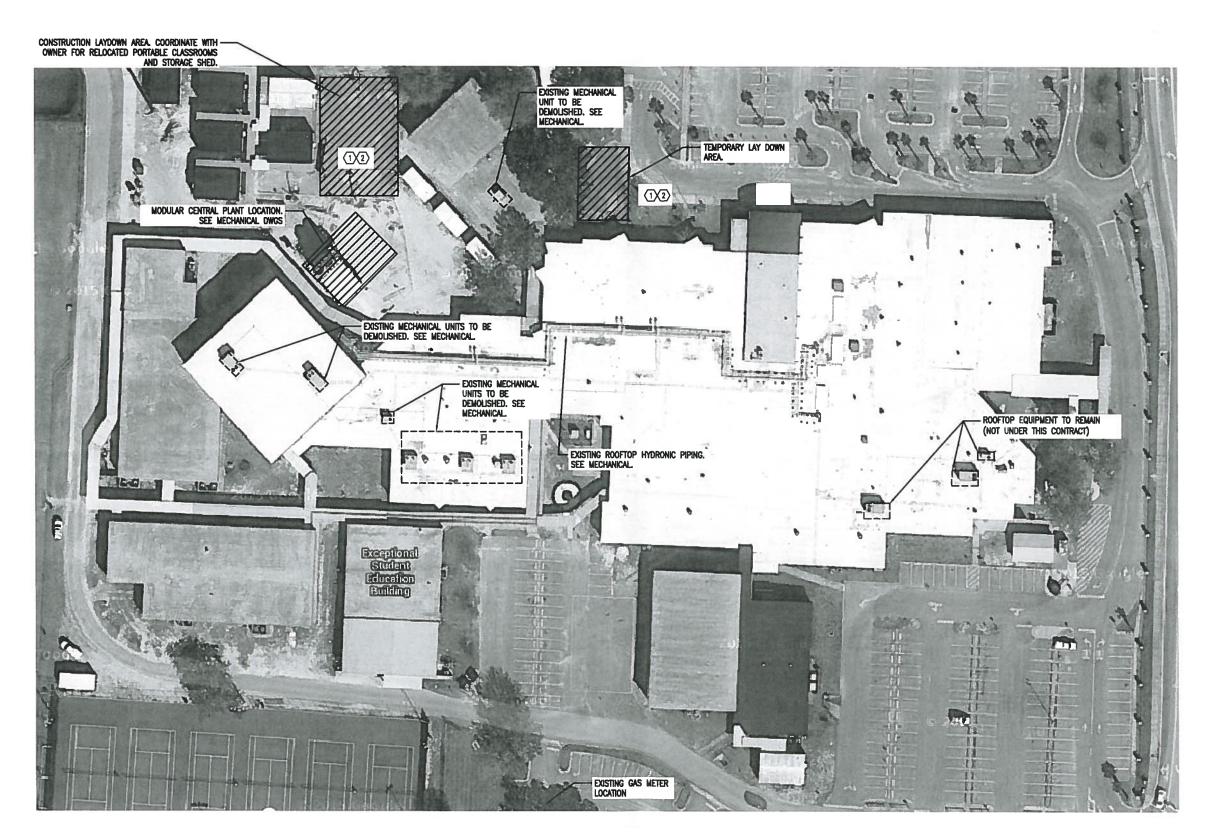
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JUNE 9, 2015

GENERAL SITE CONSTRUCTION INFORMATION

G004



#### **ABBREVIATIONS LEGEND PIPING** POSITIVE PRESSURE SUPPLY DUCT -O ELBOW TURN UP ACD AUTOMATIC CONTROL DAMPER TURNING UP AD ACCESS DOOR -> FLBOW TURN DOWN AFF ABOVE FINISHED FLOOR NEGATIVE PRESSURE RETURN OR EXHAUST AS AIR SEPARATOR DUCT TURNING UP CONNECTION, BOTTOM ASHRAE AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR CONDITIONING ENGINEERS CONNECTION, TOP POSITIVE PRESSURE SUPPLY DUCT BD BELT DRIVE BMS BUILDING MANAGEMENT SYSTEM BP BOILER PUMP -PRIMARY LOOP NEGATIVE PRESSURE RETURN OR EXHAUST CD CEILING DIFFUSER CE CHEMICAL FEEDER ---- HEATING WATER RETURN PIPING CHWS CHILLED WATER PIPING SUPPLY RECTANGULAR DUCT SIZE. FIRST SIZE 24x12 CHWR CHILLED WATER PIPING RETURN LISTED IS SIDE SHOWN IN PLANS. CWS—— CONDENSER WATER SUPPLY PIPING CHWP CHILLED WATER PUMP CFM CUBIC FEET PER MINUTE EXTERNALLY INSULATED DUCTWORK --- CONDENSER WATER RETURN PIPING COAC CLEANOUT ABOVE CEILING CONT. CONTINUOUS EXISTING DUCTWORK TO REMAIN ---- NEW UNDERGROUND PIPING COP COEFFICIENT OF PERFORMANCE \_\_\_\_\_\_ EXISTING DUCTWORK TO BE DEMOLISHED CONDENSATE DRAIN PIPING DAC DUCTLESS SPLIT DX AIR CONDITIONING UNIT DCU DUCTLESS SPLIT DX CONDENSING UNIT WINDSWEDT EXTERNALLY INSULATED ROUND FLEXIBLE —— GATE VALVE DDC OIRECT DIGITAL CONTROL - RALL VALVE DPS DIFFERENTIAL PRESSURE SENSOR DP DEW POINT TEMPERATURE DUCT ELBOW WITH TURNING VANES BUTTERFLY VALVE — SWING CHECK VALVE FA FYHAUST AIR RADIUSED DUCT ELBOW EAL EXHAUST AIR LOUVER SPRING CHECK VALVE EER ENERGY EFFICIENCY RATIO PRV PRESSURE REDUCING VALVE FLEXIBLE DUCT CONNECTION EF EXHAUST FAN EG EXHAUST GRILLE → MANUAL VOLUME BALANCING DAMPER FL FLEVATION PRESSURE RELIEF VALVE. PIPE EMCS ENERGY MANAGEMENT AND CONTROL SYSTEM FULL SIZE DISCHARGE TO FLOOR DRAIN. TRANSITION ENT ENTERING CIRCUIT SETTER ESP EXTERNAL STATIC PRESSURE FLEX DUCT TAKE OFF WITH MVD FT FXPANSION TANK TRIPLE DUTY VALVE FH FLECTRIC HEATER FD FIRE DAMPER OR TAFV AUTOMATIC FLOW CONTROL VALVE FPM FEET PER MINUTE — 2-WAY CONTROL VALVE BRANCH DUCT TAKEOFF WITH MVD GI GRAVITY INTAKE GR GRAVITY RELIEF 3-WAY CONTROL VALVE RETURN OR SUPPLY DEVICE WITH MVD HD HUB DRAIN (SEE SHEET M002) DIRECTLY BELOW MAIN TRUNK DUCT HP HDRSEPOWER COMBINATION VENTURI AND BALL VALVE HWS HOT WATER SUPPLY WITH MEMORY STOP FOR FLOW TEE WITH TURNING VANES BALANCING AND SHUT OFF SERVICE HWP HOT WATER PUMP - MULTI-TURN BALANCING VALVE MAX. MAXIMUM MOTORIZED DAMPER MCP MODULAR CENTRAL PLANT UNION MIN. MINIMUM MMS MODULE MANAGEMENT SYSTEM -- GLOBE VALVE FIRE DAMPER MVD MANUAL VOLUME DAMPER THERMAL EXPANSION VALVE NFPA NATIONAL FIRE PROTECTION ASSOCIATION NO NORMALLY OPEN TRIPLE DUTY VALVE DETAIL NC NORMALLY CLOSED -SHEET REFERENCED X-DDO ANGLE VALVE OA OUTSIDE AIR OAU OUTSIDE AIR UNIT →X→ SOLENOID VALVE EQUIPMENT TAG O.C. ON CENTER BACKPRESSURE RELIEF OR SAFETY VALVE SHEET NOTE PPM PARTS PER MILLION PRV PRESSURE REDUCING VALVE BACKPRESSURE REGULATOR THERMOSTAT MOUNTED AT 56" AFF OR TO P/T PRESSURE/TEMPERATURE (SELF-CONTAINED) MATCH EXISTING ('1' INDICATES AHU CONTROLLED) RA RETURN AIR BACKPRESSURE REGULATOR (EXTERNAL PRESSURE) SA SUPPLY AIR SMOKE DETECTOR SD SMOKE DETECTOR FLEXIBLE PIPE CONNECTOR (PROVIDED BY DIVISION 26, INSTALLED BY SEER SEASONAL ENERGY EFFICIENCY RATIO DIVISION 23 AND WIRED BY DIVISION 26). ∐P/T COMBINATION PRESSURE AND SMACNA SHEET METAL AND AIR CONDITIONING TEMPERATURE TEST PLUG WITH EXTENDED UNDER CUT DOOR 3/4" CONTRACTORS' NATIONAL ASSOCIATION NECK AND CAP STATIC PRESSURE TRANSMITTER CONNECT TO EXISTING SWITCH STRAINER WITH BLOW DOWN GATE VALVE FULL SIZE OF STRAINER AND 3/4" HOSE T'STAT THERMOSTAT END CONNECTION WITH CAP HVAC EQUIPMENT WITH CLEARANCE TT TEMPERATURE TRANSMITTER TSP TOTAL STATIC PRESSURE MANUAL AIR VENT WITH 1/2" BALL TYP. TYPICAL VALVE. ROUTE 1/2" SOFT COPPER TUBING FROM DISCHARGE TO FLOOR DRAIN UNLESS OTHERWISE NOTED. W.G. WATER GAUGE WCC WATER COOLED CHILLER

## GENERAL MECHANICAL NOTES

THE MECHANICAL CONTRACTOR IS TO COORDINATE WITH DTHER TRADES REQUIRED OPENINGS IN WALLS, FOUNDATIONS, FLOORS, AND ROOFS.

OUTSIDE AIR INLETS TO BE LOCATED A MINIMUM OF 10 FT FROM ANY EXHAUST AIR DUTLET OR PLUMBING VENT STACK, FIELD COORDINATE WITH EXISTING CONDITIONS. THE MECHANICAL CONTRACTOR TO VERIFY MECHANICAL EQUIPMENT LOCATIONS AND BE RESPONSIBLE FOR ALL RELATED CLEARANCES IN THE FIELD. PROVIDE ADEQUATE MAINTENANCE CLEARANCE AROUND EACH PIECE OF EQUIPMENT PER THE MANUFACTURER'S RECOMMENDATIONS. PROVIDE CLEARANCE IN FRONT OF ELECTRICAL PANELS AND OTHER ELECTRICAL EQUIPMENT PER THE NATIONAL ELECTRICAL CODE REQUIREMENTS. COORDINATE WITH THE ELECTRICAL AND GENERAL CONTRACTORS IN THE FIELD.

PROVIDE WATER PROOF SEALING OF PIPE AND DUCT PENETRATIONS OF EXTERIOR WALLS, FLODRS, AND/OR ROOF,

THE PIPING SYSTEM IS TO BE FLUSHED UNTIL CLEAN BEFORE EQUIPMENT CONNECTION.

PIPING PENETRATING THROUGH INTERIOR WALLS IS TO BE SLEEVED, SEE DETAIL 2 ON SHEET M502.

PIPING SHOWN ON THESE DRAWINGS IS DIAGRAMMATIC. ARRANGE IN A NEAT AND ORDERLY MANNER.
THE CONTRACTOR IS TO COORDINATE EXISTING FLOOR DRAIN LOCATIONS IN MECHANICAL ROOMS WITH ANY EQUIPMENT LOCATED IN THE MECHANICAL ROOM.
ALL DUCTWORK AND PIPING PENETRATING THROUGH RATED WALLS TO BE FIRE STOPPED. PENETRATIONS THROUGH FIRE RATED FLOORS AND WALLS ARE TO BE FIRE SEALED SO AS TO MAINTAIN FLOOR OR WALL INTEGRITY IN THE EVENT OF A FIRE. PENETRATIONS OF FIREWALLS, CEILINGS, FLOORS, ETC. FOR PIPING TO BE UL LISTED FIRESTOPS AND SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION. CONTRACTOR TO OBTAIN MANUFACTURER SHOP DRAWINGS AT JOBSITE FOR PENETRATIONS.

VERIFY COLLAR SIZES ON ALL EQUIPMENT INLETS AND OUTLETS. TRANSITION DUCTWORK AS NECESSARY. EXTERNALLY INSULATE ALL TRANSITIONS AT EQUIPMENT CONNECTIONS,

11. INSTALL EQUIPMENT AND DUCTWORK TO MANUFACTURERS RECOMMENDED CLEARANCES.

12. PROVIDE FLEXIBLE OUCT, PIPE CONNECTIONS, AND VIBRATION ISOLATORS FOR INTERNALLY ISOLATED UNITS.

13. DO NOT MOUNT DISCONNECT SWITCHES ON HVAC EQUIPMENT EXCEPT AS RECOMMENDED BY MANUFACTURER.

14. ALL NEW ROUND FLEXIBLE DUCT TO BE FACTORY PRE-INSULATED. MAXIMUM LENGTH OF ANY FLEXIBLE DUCT RUNOUT TO BE 6'. WHERE LENGTH REQUIRED EXCEEDS 6', INSTALL EXTERNALLY INSULATED ROUND SNAPLOCK DUCT FOR BALANCE OF DISTANCE TO SPIN-IN TAP AT MAIN DUCT TRUNK,

15. NEW SUPPLY AIR DUCTWORK EXCEPT TAKEOFFS TO SUPPLY AIR DIFFUSERS TO BE SINGLE WALL RECTANGULAR, SMACINA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A. EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS DUCT WRAP. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.

16. NEW RETURN AIR DUCTWORK TO BE SINGLE WALL RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS. PROVIDE 2" THICK EXTERNAL FIBERGLASS WRAP.

17. NEW OUTSIDE AIR INTAKE DUCTWORK TO BE SINGLE WALL RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A, EXTERNALLY INSULATED WITH 2" THICK FIBERGLASS WRAP. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.

18. NEW EXHAUST AIR DUCTWORK TO BE LOW PRESSURE SINGLE WALL RECTANGULAR, SMACNA STATIC PRESSURE CLASS 2" W.G., SEAL CLASS A.

19. AVOID ROUTING DUCTWORK OVER LIGHTS WHEREVER POSSIBLE. MAINTAIN MINIMUM 6" CLEARANCE BETWEEN DUCT INSULATION TO TOP OF LIGHTS.

WORK SHALL COMPLY WITH THE FOLLOWING AGENCIES

-2010 FLORIDA BUILDING CODE.

-2010 FLORIDA MECHANICAL CODE.

-2010 FLORIDA PLUMBING CODE.

-2D1D FLORIDA FUEL GAS CODE.

-NATIONAL FIRE PROTECTION AGENCY (NFPA) -AMERICAN SOCIETY OF HEATING AND REFRIGERATION ENGINEERS (ASHRAE)

TRANSFER DUCTS TO BE INTERNALLY INSULATED WITH 1" THICK ACOUSTICAL DUCT LINER. DUCT SIZES INDICATED ARE INSIDE CLEAR DIMENSIONS.

KEEP MECHANICAL SYSTEMS TIGHT TO STRUCTURE AT ALL TIMES.

23. ALL ROOF PENETRATIONS AND ROOF MOUNTED EQUIPMENT THRU AND /OR LOCATED ON THE SLOPED PORTION OF THE ROOF SHALL BE PAINTED, PAINT TO MATCH EXISTING

24. ALL PIPING LOCATIONS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL PIPING ELEVATIONS IN THE FIELD PRIOR TO FABRICATION. CONTRACTOR TO FIELD ADJUST PIPING RUNS TO COORDINATE WITH EXISTING STRUCTURAL AND BUILDING SYSTEMS AS NECESSARY.

25. REFER TO SPECIFICATIONS FOR UNDERGROUND HYDRONIC PIPING, EXTERIOR HYDRONIC ABOVE GRADE PIPING, AND INTERIOR HYDRONIC PIPING MATERIALS AND

26. PROVIDE ROOFTOP AIR HANDLERS WITH MANUFACTURER PROVIDED CURB IN ORDER TO FORM A COMPLETE AND MATCHED ROOFTOP SYSTEM. CURB SHALL BE

PREFABRICATED, NON-COMBUSTIBLE CONSTRUCTION (MIN. 14 GA. GALVANIZED STEEL) WITH SEALING GASKET AROUND PERIMETER TO INSURE AIR/WATER TIGHT INTEGRITY. FULL PERIMETER SUPPORTED CONDENSING SECTIONS WILL NOT BE ALLOWED. COORDINATE PIPING AND POWER ENTRY LOCATION WITH OTHER TRADES. COORDINATE INSTALLATION DETAILS WITH ARCHITECTURAL

27. FOR PIPE DIAMETERS 4" AND LARGER:

- SOFFIT LOUVER (SFL)

**EXISTING SOFFIT** 

1) WHERE PIPES RUN PERPENDICULAR TO JOISTS, ARRANGE PIPE SUPPORTS IN A MANNER THAT GENERALLY DISTRIBUTES THE PIPE LOAD TO ALL JOISTS DIRECTLY ABOVE THE PIPES. THIS CAN BE ACHIEVED BY SUPPORTING ALL PIPES AT EACH JOIST OR BY STAGGERING THE SUPPORTS FOR INDIVIOUAL PIPES SUCH THAT THE TOTAL LOAD IS EQUALLY DISTRIBUTED TO ALL JOISTS. THE SUSPENSION POINT SHALL OCCUR AT THE BOTTOM CHORD PANEL POINT OF THE JOISTS OR REINFORCED JOIST AS INDICATED IN THE STRUCTURAL DRAWINGS.

2) WHERE JOISTS ARE PARALLEL TO PIPE RUNS, USE L3x3x1/4 (OR APPROPRIATELY RATED UNISTRUT) SPANNING ACROSS THE BOTTOM OF THREE JOISTS AT A MINIMUM TO SUSPEND PIPES. THE SUSPENSION POINT SHALL OCCUR AT THE BOTTOM CHORD PANEL POINT OF THE JOISTS OR REINFORCED JOIST AS INDICATED IN THE STRUCTURAL DRAWINGS.

# DIFFUSER/GRILLE LEGEND

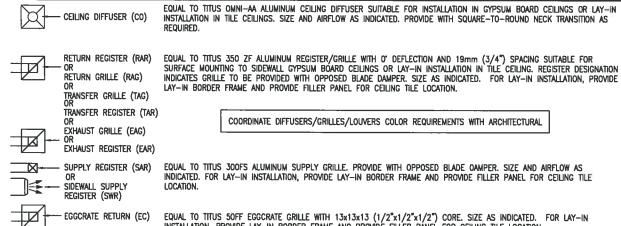
INSTALLATION, PROVIDE LAY—IN BORDER FRAME AND PROVIDE FILLER PANEL FOR CEILING TILE LOCATION.

- OUTSIDE AIR LOUVER (OAL) LOUVER EQUAL TO GREENHECK MODEL ESD-635D FLORIDA PRODUCT APPROVED AND MIAMI-DADE QUALIFIED STATIONARY

SOFFIT LOUVER EQUAL TO TITUS 350 ZF WITH O' DEFLECTION AND  $19_{mm}$  (3/4") SPACING SUITABLE FOR SURFACE MOUNTING TO EXTERIOR SOFFIT. ALUMINUM CONSTRUCTION WITH CLEAR ANODIZED FINISH. PROVIDE WITH INSECT SCREEN. LOUVER SIZE

AS INDICATED (FACE AREA). COORDINATE OPENING WITH OTHER TRADES. COORDINATE COLOR WITH ARCHITECTURAL TO MATCH

DRAINABLE BLADE EXTRUDED ALUMINUM LOUVER, PROVIDE WITH CLEAR ANODIZED FINISH AND BIRD SCREEN, LOUVER SIZE AS INDICATED (FACE AREA) WITH A MINIMUM OF 50% FREE AREA, COORDINATE EXACT WALL OPENING WITH STRUCTURAL



SCHMID ONSULTING GROUP II

SCG project: 2015-124



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DESIGNED BY: DRAWN BY:

CHECKED BY: W.LL

JUNE 9, 2015

MECHANICAL LEGEND, NOTES, &

ABBREVIATIONS

M00

## GENERAL PIPING NOTES

- ALL PIPING LOCATIONS ARE PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL FIELD VERIFY ALL PIPING ELEVATIONS IN THE FIELD PRIOR TO SUBMITTING A BID.
- 2. INSULATE ALL CHILLED WATER AND HOT WATER PIPING, FITTINGS, VALVES AND ACCESSORIES (NEW & EXISTING UNCOVERED BY WORK UNDER THIS PROJECT) WITH 2" THICK CELLULAR GLASS INSULATION WITH ALL SERVICE JACKET AND VAPOR BARRIER. VAPOR BARRIER SHALL OVERLAP EXISTING JACKET WHERE NEW INSULATION ABUTS EXISTING INSULATION.
- PROVIDE ADHESIVE PIPE MARKER EVERY 50' IN EXPOSED LOCATIONS AND EVERY 25' IN CONCEALED LOCATIONS INDICATING PIPE SERVICE. PIPE MARKER COLOR SHALL BE GREEN AND INDICATE DIRECTION OF FLOW.
- 4. BUTTERFLY VALVES SHALL BE RATED AT A MINIMUM OF 150 PSIG WOG AND SHALL PROVIDE BUBBLETIGHT SHUTOFF. VALVES SHALL HAVE LUG STYLE CAST IRON BODY, ALUMINUM BRONZE DISC, 416 STAINLESS STEEL STEM, EPDM SLEEVES, SEATS AND O-RINGS, AND GEAR OPERATOR WITH DUCTILE IRON HANDWHEEL VALVES SHALL BE SUITABLE FOR DEAD END SERVICE AND SHALL BE MILWAUKEE 'M' SERIES. -NO EQUAL. GEAR OPERATORS SHALL HAVE MEMORY POSITIONING DEVICE (TRAVEL ADJUSTMENT SCREW) FOR PERMANENT REGISTERING OF FINAL TAB SETTING. BUTTERFLY CONTROL VALVES SHALL BE SAME EXCEPT WITH PNEUMATIC OPERATOR.
- ALL BALL VALVES SHALL BE BRONZE BODY, THREADED ENDS, ALL STAINLESS STEEL TRIM, MILWAUKEE 20BSOR-02.
- 6. PRESSURE/TEMPERATURE TEST PORTS SHALL BE BRASS BODY 1/4" MPT WITH DUAL NORDEL SEALS AND BRASS CAP W/RETAINER STRAP, FLOW DESIGN INC. SUPERSEAL. PROVIDE 2-3/4" LENGTH FOR INSULATED PIPING AND 1-1/4" LENGTH FOR NON-INSULATED PIPING. INSTALL P/T PORTS IN GALVANIZED MALLEABLE IRON SCREWED REDUCING TEE IN STEEL PIPING SIZE 2" AND SMALLER. INSTALL P/T PORTS IN FORGED STEEL THREDOLETS OR WELDED REDUCING TEE IN PIPING SIZE 2 1/2" AND LARGER. HALF COUPLINGS ARE NOT ALLOWABLE. MOUNT P/T PORTS IN VERTICAL POSITION.
- THE USE OF BUSHINGS AND CLOSE NIPPLES FOR THREADED CONNECTIONS OF ANY KIND IS NOT ALLOWABLE.
- NEW CHILLED WATER, HOT WATER AND INDOOR CONDENSER WATER PIPING TO BE DOMESTIC MADE SCHEDULE 40 STEEL. PROVIDE FLANGED, WELDED, OR GROOVED END CONNECTIONS.
- OUTDOOR CONDENSER WATER PIPING SHALL BE SCHEDULE 40 PVC. PAINT NEW PIPE WITH UV RESISTANT COATING AND PROVIDE WITH STEEL JACKET TO MATCH EXISTING. PROVIDE FLANGED, WELDED, OR GROOVED END CONNECTIONS.
- 10. PROVIDE PIPE CONNECTIONS AND VIBRATION ISOLATORS FOR INTERNALLY ISOLATED MECHANICAL EQUIPMENTS.
- 11. COMPLY WITH MSS SP-58 (PIPE HANGERS AND SUPPORTS-MATERIALS, DESIGN, AND MANUFACTURE), MSS SP-69 (PIPE HANGERS AND SUPPORTS-SELECTION AND APPLICATION), MSS SP-89 (PIPE HANGERS AND SUPPORTS-FABRICATION AND INSTALLATION) FOR PIPE HANGER SELECTIONS AND APPLICATIONS.
- 12. PROVIDE WALL SLEEVE AND ESCUTCHEON PLATES FOR ALL WALL PIPING PENETRATIONS. GALVANIZED STEEL SHEET SLEEVES. PROVIDE A MINIMUM 1" ANNULAR SPACE. PROVIDE CONTINUOUS INSULATION THROUGH SLEEVE.
- 13. ALL PIPING PENETRATIONS (FIRE WALLS, CEILINGS, FLOORS) SHALL BE UL LISTED FIRESTOPS AND SHALL BE INSTALLED AS PER MANUFACTURER'S RECOMMENDATION. CONTRACTOR SHALL OBTAIN MANUFACTURER SHOP DRAWINGS AT JOBSITE FOR ALL PENETRATIONS.
- 14. SLOPE ABOVE CEILING WASTE LINE MIN. 1/8" PER FOOT. SEE FLOOR PLAN FOR SIZE AND ROUTING. INSULATE ABOVE CEILING WASTE PIPING PER SPECIFICATIONS. PROVIDE ABOVE CEILING CAST IRON BODY HUB DRAIN (HD) WITH BOTTOM OUTLET AND WATERLESS TRAP GUARD. SIZE AS INDICATED. BASIS OF DESIGN IS ZURN.
- 15. PROVIDE HEAT TRACE AND POWER FOR ALL NEW WEATHER EXPOSED INSULATED CHILLED WATER PIPING. REFER TO SHEET M103.

## GENERAL PHASING NOTES

- WORK UNDER THIS PROJECT CONSISTS OF PHASE III OF THE GULF BREEZE HIGH SCHOOL HVAC RENOVATION AND WILL BE THE FINAL PHASE OF THIS CONSTRUCTION PROJECT. PHASE I AND II ARE NOT INCLUDED IN THIS CONTRACT.
- ALL WORK WHICH REQUIRES POWER OUTAGE SHUTDOWN SHALL BE COMPLETED IN A CONSECUTIVE 24 HOUR PERIOD. THE WORK SHALL BE COMMENCED AT 7:00 AM ON THE SHUTDOWN DAY AND SHALL BE COMPLETED AT OR BEFORE 7:00 AM ON THE FOLLOWING DAY. COORDINATE WITH OWNER.
- 3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND DELIVERING TO THE SITE ALL EQUIPMENT, PIPING, VALVES, ACCESSORIES AND OTHER MATERIALS REQUIRED FOR COMPLETION OF THE SHUTDOWN WORK IN THE SPECIFIED TIME PERIOD. THE CONTRACTOR IS ENCOURAGED TO UTILIZE PREFABRICATED PIPING ASSEMBLIES TO THE MAXIMUM EXTENT PRACTICABLE.
- 4. THE OWNER WITH THE ASSISTANCE OF THE PLANT MANUFACTURER REPRESENTATIVE WILL SHUT DOWN THE CENTRAL PLANT AND THE CONTRACTOR SHALL DRAIN THE HOT WATER SYSTEM PRIOR TO THE COMMENCEMENT OF WORK ON THE SHUTDOWN DAY.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REFILLING THE SYSTEM AND LEAK TESTING THE PIPING PRIOR TO COMPLETION OF SHUTDOWN WORK.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VENTING AIR FROM THE SYSTEM AND ASSISTING THE OWNER IN RESTARTING THE SYSTEM FOLLOWING COMPLETION OF SHUTDOWN WORK AT 7:00 AM ON THE DAY FOLLOWING THE SHUTDOWN DAY.
- 7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AND DELIVERING TO THE SITE ALL EQUIPMENT, PIPING, VALVES, ACCESSORIES AND OTHER MATERIALS REQUIRED FOR COMPLETION OF THE SHUTDOWN WORK IN THE SPECIFIED TIME PERIOD. THE CONTRACTOR IS ENCOURAGED TO UTILIZE PREFABRICATED PIPING ASSEMBLIES TO THE MAXIMUM EXTENT PRACTICABLE.
- RE-INSULATION WORK, CLEAN-UP, AND OTHER TASKS NOT REQUIRING SYSTEM SHUTDOWN SHALL BE ACCOMPLISHED WITHIN 3
  WORKING DAYS OF SUCCESSFUL SYSTEM START-UP.
- 9. REFER TO SPECIFICATIONS FOR SPECIFIC PROJECT SCHEDULE MILESTONES.

## ULTRAVIOLET DISINFECTION SYSTEM (FOR RTU-4)

UV-C FIXTURING - FIXTURING SHALL CONSIST OF A POWER SUPPLY, POWER SUPPLY HOUSING, "PLENUM RATED" WIRING LOOM, LAMP PLUG, LAMP-PLUG PROTECTOR AND ENCAPSULATED LAMP WITH ADJUSTABLE LAMP RETAINING DEVICE.

POWER SUPPLY — POWER SUPPLY SHALL BE CSA AND UL LISTED AS A VARIABLE INPUT TYPE (120-277 VAC +/- 10%), 50-60 HZ WITH A PROGRAMMED RAPID START. SUPPLY SHALL BE DESIGNED AS HIGH POWER FACTOR, CLASS P, SOUND RATED "A", TYPE 1 OUTDOOR AND WITH INHERENT THERMAL PROTECTION AND NO PCB'S. SUPPLY SHALL BE CAPABLE OF PRODUCING THE SPECIFIED OUTPUT AND ORGANISM DESTRUCTION AT NOT MORE THAN 15 WATTS OF POWER CONSUMPTION FOR EACH SQUARE FOOT OF TREATED, CROSS SECTIONAL AREA. THE POWER SUPPLY SHALL BE CAPABLE OF PROPERLY POWERING 1-145W UV-C LAMP OR 1- OR 2- 75W UV-C LAMPS WHILE ENSURING AT LEAST 9000 HOURS OF LAMP LIFE, AND WITH GREATER THAN 85% OF ITS INITIAL OUTPUT, AT THE LAMPS "END OF LAMP LIFE" PHASE. POWER SUPPLY SHALL BE PROTECTED AGAINST "END OF LAMP LIFE" CONDITIONS, WARRANTED FOR 5 YEARS, AND BE LABELED FOR FIELD WIRING.

POWER SUPPLY HOUSING — SHALL BE CONSTRUCTED OF 20GA GALVANIZED, POWDER COATED STEEL AND DESIGNED TO FACILITATE NEC REGULATED POWER SUPPLY INSTALLATION OUTSIDE PLENUMS. EACH HOUSING SHALL BE CAPABLE OF PROPERLY HOLDING, GROUNDING AND WIRING EITHER FOUR OR EIGHT BALLASTS WITHIN TO PROTECT AGAINST ELECTRICAL SHOCK AND MOISTURE, AS WELL AS RF AND EMI LEAKS.

PLENUM RATED WIRING LOOM - SHALL BE OF SUFFICIENT LENGTH TO FACILITATE LAMP CONNECTION TO A REMOTELY LOCATED POWER SUPPLY. THE LAMP AND LOOM SHALL BE CAPABLE OF BEING MOUNTED ANYWHERE IN THE SYSTEM AND/OR AS SHOWN ON THE DRAWINGS. THE LOOM SHALL MEET UL SUBJECT 13 AND UL 1581, AND ARTICLE 725 OF THE NEC. THE LOOM JACKET SHALL BE CONSTRUCTION OF UV-C RESISTANT MATERIALS AND SHALL HAVE AN INTERNAL ALUMINUM/MYLAR SHIELD.

LAMP PLUG - SHALL BE OF THE 4-PIN TYPE CAPABLE OF ACCOMMODATING A SINGLE-ENDED HO LAMP.

LAMP-PLUG PROTECTOR — SHALL BE OF UV RESISTANT MATERIALS AND DESIGNED TO SHRINK 3-1 OVER THE LAMP PLUG AND WIRING LOOM FOR PROTECTION AGAINST ELECTRICAL SHOCK, MOISTURE AND SEPARATION.

EACH LAMP PLUG AND PLENUM RATED WIRING LOOM CONNECTION SHALL HAVE A UVC RESISTANT, ELASTIC PLUGLUV TO ENSURE A WATER TIGHT CONNECTION AND SEAL BETWEEN ANY SINGLE—ENDED LAMP AND WIRING LOOM LAMP PLUG TO PREVENT ELECTRICAL SHOCK, CONNECTION SHORTS AND/OR LAMP OR BALLAST FAILURE FROM LAMP PIN OXIDATION OR PIN ARCING.

LAMP RETAINING DEVICE - MAY BE SINGLE OR DUAL TYPES, MAGNETICALLY OR PERMANENTLY AFFIXED WITHIN THE IRRADIATED CAVITY AND CONSTRUCTED OF UVC RESISTANT MATERIALS AND PROVIDE FOR MAXIMUM FLEXIBILITY IN QUICK LAMP POSITIONING, REMOVAL AND HOLDING POWER.

LAMPS — EACH LAMP SHALL CONTAIN LESS THAN 8 MILLIGRAMS OF MERCURY AND SHALL BE HERMETICALLY LAMINATED WITH A THIN LAYER OF UY—C TRANSMISSIBLE MATERIAL TO PROVIDE PROTECTION AGAINST LAMP BREAKAGE AND TO ENSURE LAMP CONTENTS FROM A BROKEN LAMP ARE CONTAINED. LAMP LIFE SHALL BE 9000 HOURS WITH NO MORE THAN A 15% OUTPUT LOSS AT THE END OF THE LAMPS LIFE. LAMPS SHALL BE CONSTRUCTED WITH UY—C PROOF MATERIAL BASES AND SHALL NOT PRODUCE OZONE.

IRRADIATION — FIXTURELESS LAMPS ARE TO BE INSTALLED IN SUFFICIENT QUANTITY AND IN SUCH A MANNER SO AS TO PROVIDE AN EQUAL DISTRIBUTION OF THE AVAILABLE UV—C ENERGY. WHEN INSTALLED, THE UV—C ENERGY PROVED SHALL BE OF THE LOWEST POSSIBLE REFLECTED AND SHADOWED LOSSES AND SHALL BE DISTRIBUTED IN A 360 DEGREE PATTERN WITHIN THE CAVITY TO PROVIDE THE HIGHEST UV—C ENERGY ABSORPTION BY MICROBIAL PRODUCTS IN THE AIR.

INTENSITY — THE MINIMAL UV—C ENERGY STRIKING A SURFACE SHALL BE SUFFICIENT TO CONTINUOUSLY DESTROY A MONO—LAYER OF MOLD AND/OR BACTERIA IN LESS THAN ONE HOUR WHILE OPERATING IN AIR TEMPERATURES OF 1—70°C.

INSTALLATION — THE BALLAST HOUSING SHALL BE CAPABLE OF INSTALLATION WITHIN THE AIR STREAM AND/OR WITHIN A POWER SUPPLY HOUSING. LAMPS SHALL BE MOUNTED TO IRRADIATE THE INTENDED SURFACE(S) AS WELL AS ALL OF THE AVAILABLE LINE OF SIGHT AIR STREAM THROUGH PROPER LAMP PLACEMENT AND INCIDENT ANGLE REFLECTION.

SAFETY - TO PROTECT PERSONNEL, ALL ACCESS PANELS AND DOORS TO ANY UV-C ASSEMBLY AND/OR WITHIN VIEW OF ANY UV-C ASSEMBLY SHALL INCLUDE MECHANICAL INTERLOCK SWITCH TO INSURE THAT ALL UV-C ASSEMBLES WILL BE DE-ENERGIZED WHEN ANY OF THESE ACCESSES ARE OPENED. THIS SHALL BE IN ADDITION TO THE MANUAL DISCONNECT SWITCH MOUNTED OUTSIDE THE AIR HANDLING UNIT CASING.

## **DEMOLITION NOTES**

- . ALL DEMOLISHED ITEMS NOT SPECIFICALLY INDICATED TO BE REUSED SHALL BE REMOVED FROM THE OWNER'S PROPERTY AND LEGALLY DISPOSED OF BY THE CONTRACTOR AS PART OF WORK UNDER THIS CONTRACT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR TEMPORARILY AND PERMANENT WEATHERPROOFING OF THE INSTALLATION. THE
  CONTRACTOR SHALL BE FULLY LIABLE FOR ANY WATER DAMAGE OR OTHER DAMAGE FROM THE ELEMENTS CAUSED TO THE OWNER'S
  PROPERTY AS A RESULT OF THE CONTRACTOR'S FAILURE TO PROVIDE THE NECESSARY WEATHERPROOFING DURING THE COURSE OF
  WORK UNDER THIS CONTRACT.
- 3. DRAWINGS SHOWING EXISTING ROOF CURBS, DUCTWORK CONNECTIONS, ELECTRICAL CONNECTIONS, AND FUEL GAS PIPING CONNECTIONS ARE DIAGRAMMATIC AND ARE INTENDED ONLY TO DEPICT THE GENERAL ARRANGEMENT, APPROXIMATE SIZE, AND OVERALL PROXIMITY OF THE EXISTING SYSTEM ELEMENTS. EACH CONTRACTOR AND SUBCONTRACTOR SHALL BE RESPONSIBLE FOR VISITING THE SITE OF WORK TO VERIFY EXISTING CONDITIONS PRIOR TO COMMENCING THE CONSTRUCTION.
- 4. THE CONTRACTOR SHALL ADDITIONALLY BE RESPONSIBLE FOR MAKING ACCURATE FIELD MEASUREMENTS OF ALL EXISTING CONDITIONS RELATING TO THE DESIGN AND INSTALLATION OF NEW MECHANICAL EQUIPMENT, PIPING, DUCTWORK, ETC PRIOR TO COMMENCING WORK. PROPER SIZING OF THE PHYSICAL ASPECTS OF NEW EQUIPMENT TO MATCH EXISTING SITE CONDITIONS SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 5. UNLESS NOTED OTHERWISE, ANY AND ALL DAMAGE TO THE EXISTING BUILDING SITE, EXTERIOR BUILDING FINISHES, BUILDING STRUCTURE, BUILDING SYSTEMS (MECHANICAL, ELECTRICAL, ETC.), INTERIOR BUILDING FINISHES, OR BUILDING FURNISHINGS CAUSED BY THE CONTRACTOR DURING THE COURSE OF WORK UNDER THIS CONTRACT SHALL BE REPLACED AND/OR REPAIRED BY THE CONTRACTOR AT NO ADDITIONAL COST TO THE OWNER. REPLACEMENT AND/OR REPAIR OF DAMAGED ITEMS SHALL BE MADE TO THE COMPLETE SATISFACTION OF THE OWNER, AND AS A MINIMUM SHALL RETURN THE DAMAGED ITEMS TO THE CONDITION IN WHICH THEY WERE FOUND PRIOR TO THE COMMENCEMENT OF THIS WORK.
- 6. PLACEMENT OF EQUIPMENT AND MATERIALS REQUIRED FOR THIS WORK SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.
- 7. ACCORDINGLY, THE CONTRACTOR SHALL INCLUDE IN HIS BID THE COST OF PROPER PLACEMENT MACHINERY AND EQUIPMENT. THE CONTRACTOR SHALL BE FULLY LIABLE FOR ANY DAMAGE CAUSED TO THE BUILDING OR BUILDING SITE (AS NOTED ABOVE) DURING EQUIPMENT PLACEMENT OPERATIONS. THIS INCLUDES BUT IS NOT LIMITED TO DAMAGE TO SITE ITEMS SUCH AS LANDSCAPING, GRASSING, SIDEWALKS, AND EXTERIOR LIGHTING.
- 8. THE CONTRACTOR SHALL SUBMIT A WRITTEN REQUEST FOR OUTAGES OF ELECTRICAL POWER, AIR CONDITIONING/HEATING, ETC. TO THE OWNER NOT LESS THAN 10 WORKING DAYS PRIOR TO THE DATE PLANNED FOR SUCH OUTAGES. ALL OUTAGES SHALL REQUIRE THE PRIOR WRITTEN APPROVAL OF THE OWNER'S AUTHORIZED REPRESENTATIVE.
- 9. REMOVE INDICATED UNITS AND IMMEDIATELY COMPLETE THE FOLLOWING WORK:
- RÉMOVE NATURAL GAS PIPING BACK TO ELBOW AT ROOF LEVEL AND CAP GAS-TIGHT.
- REMOVE CONDENSATE DRAIN PIPING.
- CAP EXISTING ROOF CURBS AS INDICATED. SEE STRUCTURAL AND ARCHITECTURAL FOR COORDINATION.
- COORDINATE WITH ELECTRICAL CONTRACTOR FOR TERMINATING POWER PROCEDURES.
- 10. EXISTING UNUSED SUPPLY OR RETURN AIR REGISTER TO BE REMOVED, REMOVE ITS ASSOCIATED FLEX DUCT AND CAP ALL DUCT OPENINGS TIGHT. PROVIDE CEILING OPENING WITH CEILING TILES TO MATCH EXISTING.
- 11. ABANDON, CAP AND/OR REMOVE EXISTING UNUSED SUPPLY DUCTWORK FROM DEMOLISHED PACKAGED DX ROOFTOP UNIT. REMOVE AS NECESSARY TO EASE NEW WORK CONSTRUCTION.
- 12. CLEAN ALL RE-USED EXISTING DIFFUSER/REGISTER.
- 13. REMOVE CEILING TILES AS NECESSARY TO INSTALL NEW DUCTWORK. CEILING TILES TO BE STORED AND REUSED. SEE NEW WORK FOR EXTENT OF NEW DUCTWORK. CARE SHALL BE TAKEN NOT TO DAMAGE ANY FURNITURE AND EQUIPMENT IN THIS SPACE. COORDINATE WITH ARCHITECTURAL FOR CEILING TILES SCOPE OF WORK.
- 14. INFORMATION INDICATING LOCATION OF EXISTING DUCTWORK, CEILING DIFFUSERS AND RETURN REGISTERS WAS OBTAINED FROM EXISTING AS BUILT DRAWINGS AND SITE VISITS AND ARE REPRESENTATIVE OF THE BEST AVAILABLE SOURCE TO DATE.
- 15. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL VERIFY DUCTWORK AND PIPING LOCATION AND SIZE.
- 16. CONTRACTOR SHALL CUT ANY AREAS NECESSARY TO PERFORM WORK AND PATCH TO MATCH EXISTING. COORDINATE WALL OR FLOOR FINISH WITH ARCHITECTURAL.
- 17. PRIOR TO SUBSTANTIAL, CONTRACTOR SHALL PATCH OR REPLACE ALL DAMAGED WALL, CEILING, AND FLOOR DURING CONSTRUCTION TO MATCH EXISTING, IF ANY, OR NEW WORK. COORDINATE WITH ARCHITECTURAL
- 18. ALL REMOVED MECHANICAL ASSOCIATED ITEMS REMOVED SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE TRANSFERRED FROM JOB SITE, <u>EXCEPT</u> ITEMS SELECTED BY OWNER AND THESE ITEMS SHALL BE RELOCATED TO STORAGE AREA DESIGNATED BY THE SCHOOL DISTRICT.
- 19. CONTRACTOR SHALL NOT DISRUPT EXISTING UTILITY SERVICES WITHOUT ASCERTAINING WRITTEN PERMISSION FROM OWNER. REQUIRED OUTAGES OR SHUTDOWNS SHALL BE KEPT TO A MINIMUM AND SHALL BE PERFORMED WITHIN A PREDETERMINED TIME FOR DURATION OF SHUT-DOWN.
- 20. UNLESS NOTED OR SHOWN OTHERWISE, ALL EXISTING UTILITY SERVICES SHALL REMAIN INTACT AND ACTIVE TO FACILITATE REVISED CONDITIONS.
- 21. CONTRACTOR TO REUSE EXISTING CEILING TILES AT LOCKER ROOMS. EXISTING REMOVED DUCTED CEILING SUPPLY GRILLES AND REGISTER TO BE REPLACED WITH EXISTING CEILING TILES FROM LIBRARY. COORDINATE WITH OWNER.



REVISION

ABER MBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:

DRAWN BY:
AL
CHECKED BY:

WJJ DATE: JUNE 9, 2015

SHEET TITLE

MECHANICAL NOTES

<sub>неет:</sub> МЛОО 2

			DESIGN CONDIT	IONS		
	OUT	SIDE	inside (	OCCUPIED)	inside (un	IOCCUPIED)
	DB (DEG. F)	WB (DEG. F)	DB (DEG. F)	RH	OB (DEG. F)	RH
SUMMER	93	81	75	50%	78	50%
WINTER	31	-	68	-	65	-

#### NOTES:

- 1. INSIDE SUMMER DESIGN TEMPERATURE IS +0/-2 DEG. F.
- 2. INSIDE SUMMER DESIGN RELATIVE HUMIDITY IS + 10%.
- 3. INSIDE WINTER DESIGN TEMPERATURE IS +2/-0 DEG. F.

													HYDRONIC	ROOFTO	P AIR HAI	NDLING UN	IIT_SCHED	ULE												
						FA	N DATA										CHILLED WAT	R COIL DATA								HOT WATER	COIL DATA			
										ELECTR	ICAL DATA						AIR	SIDE		WATE	R SIDE				AIR	SIDE		WATER	SIDE	
MARK	LOCATION	AIR VOLUME CONTROL	MAX. AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	MAX. HEATING AIRFLOW (CFM)	MIN. OA Airflow (CFM)	MAX. OA AIRFLOW (CFM)	E.S.P. (IN. W.G.)	FAN HP	fan qty	TOTAL FAN HP	VOLTS/PH/H	MAX. FACE VEL. (FPM)	MIN. TOTAL CAP. (MBH)	MIN. SENS. CAP. (MBH)	MIN. LATENT CAP. (MBH)	ENT. AIR TEMP. (DEG. F) DB/WB	LVG. AIR TEMP. (DEG. F) DB/WB	ent. Water Temp. (deg. F)	LVG. WATER TEMP. (DEG. F)	GPM		MAX. FACE VEL. (FPM)		ENT. AIR TEMP. DB (DEG. F)		ENT. WATER TEMP. (DEG. F)	LVG. WATER TEMP. (DEG. F)	GРM	MAX. WATER PRESS. DROP (FT. W.C.)
RTU-4	GYM	SZ-VAV	26,000	7,800	26,000	1,000	4,400	1.5	7.5	4	30	460/3/60	500	1,063.4	622.3	441.1	76.0	66.7	44	56	177.2	15	500	780.0	63.1	90.0	130	100	52.0	10

#### NOTES

- 1. MANUFACTURER SHALL ALLOW A MINIMUM OF 0.5" EXTRA STATIC FOR DIRTY INITIAL FILTERS.
- 2. EXTERNAL STATIC DOES NOT INCLUDE PRESSURE DROP THROUGH CASING COILS, INITIAL FILTERS, FILTER HOUSINGS, AND HYDRONIC COILS.
- 3. INSTALL UNIT IN STRICT ACCORDANCE WITH THE MFR'S PRINTED INSTRUCTIONS AND APPLICABLE CODES AND STANDARDS.
- 4. PROVIDE EXTENDED LUBE LINES TO OUTSIDE OF UNIT CASING ON THE SIDE WHICH IS ACCESSIBLE FOR SERVICING ON ALL UNITS.
- 5. PROVIDE FACTORY MOUNTED FIRE STATS TO SHUT UNIT DOWN UPON DETECTION OF EXCESSIVE HEAT IN THE SUPPLY SIDE DISCHARGE OF UNIT.
- 6. INTERLOCK AHU'S TO ENABLE FAN SHUTDOWN UPON AN INDICATION OF ALARM CONDITION BY THE BLDG, FIRE ALARM SYSTEM.
- 7. PROVIDE 5-YEAR MANUFACTURER'S WARRANTY
- 8. PROVIDE SINGLE POWER POINT CONNECTION FOR EACH RTU. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL
- 9. SUPPLY FAN SHALL HAVE CAPACILITY TO REDUCE FAN CAPACITY TO 2/3 OF MAXIMUM AIRFLOW.
- 10. SVAV SINGLE ZONE VARIABLE AIR VOLUME.
- 11. PROVIDE UNIT WITH VFD VARIABLE SPEED DRIVE. SEE MECHANICAL SPECIFICATIONS FOR VFD REQUIREMENTS.
- 12. PROVIDE 2" PLEATED MERY 8 FILTER. MAXIMUM FILTER VELOCITY EQUAL TO 350 FPM.
- 13. AIR HANDLER FILTERS SHALL BE AS PER ASHRAE 62-2007. PROVIDE FILTER DIFFERENTIAL PRESSURE GAUGE.

- 14. PROVIDE WITH UVC (ULTRA VIOLET C-BAND) DISINFECTION SYSTEM ON DISCHARGE SIDE OF CHILLED WATER COIL. SEE SHEET MOD2 FOR UV SPECIFICATIONS.
- 15. PROVIDE WITH MANUFACTURER SMOKE DETECTOR ON THE SUPPLY AND RETURN SECTION.
- 16. PROVIDE MANUFACTURER ROOF CURB AND WIND STRAPPING FOR 150 MPH. REFER TO STRUCTURAL FOR CURB DETAILS.
- 17. PROVIDE UNIT MOUNTED WEATHERPROOF DISCONNECT.
- 18. CHILLED WATER CONTROL VALVE SHALL BE TWO WAY TYPE. HOT WATER CONTROL VALVE SHALL BE TWO-WAY TYPE.
- 19. CONTROL VALVE CV TO BE CALCULATED AT THE SCHEDULED WATER FLOW WITH A VALVE AUTHORITY OF 0.5 BY CONTROLS SUB-CONTRACTOR.
- 20. CHILLED WATER COIL SHALL BE MINIMUM OF 6 ROW COILS. HOT WATER COIL SHALL BE MINIMUM OF 2 ROW COILS.
- 21. PROVIDE RTU-4 WITH WALL MOUNTED CO2 SENSOR. SEE CONTROLS DWGS.
- 22. COORDINATE SEQUENCE OF DEMAND CONTROL VENTILATION WITH CONTROLS CONTRACTOR. SEE SEQUENCE OF OPERATIONS.
- 23. REFER TO DETAILS ON SHEET M505.
- 24. TRAP CONDENSATE PIPING AT UNIT AND ROUTE TO EXISTING ROOF DRAIN LEADER.
- 25. BASIS OF DESIGN FOR IS DAIKIN APPLIED.

											_		A	IR HANDL	ING UNIT	SCHEDUL														
						FAN DATA								·		CHILLED WAT	ER COIL DATA									HOT WATER	COIL DATA			
									ELECTRIC	CAL DATA						AIR	SIDE			WATER	SIDE				AIR	SIDE		WATER	R SIDE	
MARK	LOCATION	AIR VOLUME CONTROL	MAX. AIRFLOW (CFM)	MIN. AIRFLOW (CFM)	MAX. HEATING AIRFLOW (CFM)	MIN. OA AIRFLOW (CFM)	MAX. OA AIRFLOW (CFM)	E.S.P. (IN. W.G.)	FAN HP		MAX. FACE VEL. (FPM)			MIN. LATENT CAP. (MBH)		ENT. AIR TEMP. WB (DEG. F)	LVG. AIR TEMP. DB (DEG. F)		ENT. WATER TEMP. (DEG. F)		GPMi		MAX. FACE		ENT. AIR TEMP. DB (DEG. F)		ENT. WATER TEMP. (DEG. F)	LVG. WATER TEMP. (DEG. F)	GPM	MAX. WATER PRESS. DROP (FT. W.C.)
AHU-2	GYM LOBBY	SZ-VAV	5,500	1,650	5,500	N/A	1,500	1.0		460/3/60	500	206.6	146.8	59.8	78.6	65.6	54.5	53.2	44	56	34.4	15	500	191.5	58.5	90.0	130	100	12.8	10
AHU-3	BAND BLDG	SZ-VAV	3,300	800	3,300	200	800	1.0		460/3/60	500	124.3	84.5	39.8	77.9	65.9	54.5	53.3	44	56	20.7	15	500	108.3	60.0	90.0	130	100	7.2	10
AHU-4	BAND BLDG	SZ-VAV	1,600	800	1,600	N/A	200	1.0		460/3/60	500	44.1	36.0	8.1	75.3	62.3	54.5	52.5	44	56	7.4	15	500	42.9	65.2	90.0	130	100	2.9	10
						L																								

### NOTE

- 1. MANUFACTURER SHALL ALLOW A MINIMUM OF 0.5" EXTRA STATIC FOR DIRTY INITIAL FILTERS. EXTERNAL STATIC DOES NOT INCLUDE PRESSURE DROP THROUGH CASING COILS, INITIAL FILTERS, AND FILTER HOUSINGS.
- 2. PROMDE EXTENDED LUBE LINES TO OUTSIDE OF UNIT CASING ON THE SIDE WHICH IS ACCESSIBLE FOR SERVICING ON ALL UNITS.
- 3. INSTALL UNIT IN STRICT ACCORDANCE WITH THE MFR'S PRINTED INSTRUCTIONS AND APPLICABLE CODES AND STANDARDS.
- 4. PIPE ALL CONDENSATE FROM UNITS TO DRAIN WITH TRAP, PROVIDE PADS AND BASE RAILS OF SUFFICIENT HEIGHT TO ENABLE CORRECT TRAP DEPTH.
- 5. PROVIDE FACTORY MOUNTED FIRE STATS TO SHUT UNIT DOWN UPON DETECTION OF EXCESSIVE HEAT IN THE SUPPLY SIDE DISCHARGE OF UNIT.
- 6. INTERLOCK AHU'S TO ENABLE FAN SHUTDOWN UPON AN INDICATION OF ALARM CONDITION BY THE BLDG. FIRE ALARM SYSTEM
- TRAP CONDENSATE PIPING AT UNIT AND ROUTE TO POINT INDICATED. SEE DETAIL 1 ON SHEET M502 FOR TYPICAL CONDENSATE DRAIN TRAP.
   CHILLED WATER CONTROL VALVE SHALL BE TWO WAY TYPE. HOT WATER CONTROL VALVE SHALL BE TWO—WAY TYPE.
- 9. CONTROL VALVE CV TO BE CALCULATED AT THE SCHEDULED WATER FLOW WITH A VALVE AUTHORITY OF 0.5 BY CONTROLS SUB-CONTRACTOR.
- 10. CHILLED WATER COIL SHALL BE MINIMUM OF 6 ROW COILS. HOT WATER COIL SHALL BE MINIMUM OF 2 ROW COILS.
- 11. AIR HANDLER FILTERS SHALL BE AS PER ASHRAE 62-2007. PROVIDE FILTER DIFFERENTIAL PRESSURE GAUGE.
- 12. ADJUST LOCATION OF UNITS IN MECHANICAL ROOMS AS REQUIRED FOR SERVICE AS RECOMMENDED BY MANUFACTURER. COORDINATE ACCESS DOOR LOCATION FOR UNIT ACCESS.
- 13. NEW UNITS MAY REQUIRE DISASSEMBLY AND REASSEMBLY IN THE MECHANICAL ROOM.
- 14. INTERLOCK AHU'S TO ENABLE FAN SHUTDOWN UPON AN INDICATION OF ALARM CONDITION BY THE BLDG. FIRE ALARM SYSTEM.
- 15. VDT VERTICAL DRAW THRU; SZ-VAV SINGLE ZONE VARIABLE AIR VOLUME.
- 16. PROVIDE UNIT WITH VFD VARIABLE SPEED DRIVE. SEE MECHANICAL SPECIFICATIONS FOR VFD REQUIREMENTS.
- 17. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
- 18. COORDINATE SEQUENCE OF DEMAND CONTROL VENTILATION WITH CONTROLS CONTRACTOR. SEE SEQUENCE OF OPERATIONS.
- 19. PROVIDE 2" PLEATED MERV 8 FILTER. MAXIMUM FILTER VELOCITY EQUAL TO 350 FPM.
- 20. PROVIDE WITH RA DUCT MOUNT CO2 SENSOR, SEE CONTROLS DWGS.
- 21. PROVIDE WITH LVC (ULTRA VIOLET C-BAND) DISINFECTION SYSTEM ON DISCHARGE SIDE OF CHILLED WATER COIL. SEE SHEET MOD2 FOR LV SPECIFICATIONS.
- 22. BASIS OF DESIGN IS DAIKIN APPLIED.



SEAL ACOUNTRICOON AND A

REVISION DESCRIPTION

UMBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:

DRAWN BY: AL CHECKED BY:

WJJ DATE:

JUNE 9, 2015

MECHANICAL

SCHEDULES

M003

							F	AN COIL	UNIT	SCHE	DULE										
						0	A COOLING CO	IL DATA (PREC	CONDITIO	NED)						OA.	HEATING	COIL DATA	A (PREHE	AT)	
	(see note 9		MIN. QA	MIN. TOTAL	MIN. SENS.	MIN. LAT.	ENT. AIR TEMP. (DEG F)	LVG. AIR TEMP. (DEG F)	WATER (DE			CONTROL	MAX. PRESS. DROP (FT.	MIN. TOTAL	AIR 1		WATER (DE	TEMP. G F)		CONTROL	MAX. PRESS. DROP (FT.
MARK	TO 12) TYPE	FAN CFM	CFM	CAP. (MBH)	CAP. (MBH)	CAP. (MBH)	DB/WB	DB/WB	EWT	LWT	GPM	VALVE TYPE	W.C.)	CAP. (MBH)	EAT	LAT	EWT	LWT	GPM	VALVE TYPE	
FCU 4-1	VDT	1300	440	34.9	17.9	17.0	93/81	55/54	44	56	5.8	2-WAY	5	12.4	29	55	130	100	0.8	2-WAY	5

								FA	N COIL U	NIT SCHE	DULE (CON	ITINUE	D)				_				
				CO	OLING COIL DA	TA (PRIM	NRY)						HE	ATING C	DIL DATA	(REHEA	T)		E	LECTRICAL DAT	Ά
	MIN. TOTAL CAP.	MIN. SENS. CAP.	MIN. LAT. CAP.	ENT. AIR TEMP. (DEG F)	LVG. AIR TEMP. (DEG F)	WATER (DEC			CONTROL	MAX. PRESS. DROP (FT.	MIN. TOTAL	AIR 1		WATER (DEC			CONTROL	MAX. PRESS. DROP (FT.	SA FAN	OA FAN	
MARK	(MBH)	(MBH)	(MBH)	OB/WB	DB/WB	EWT	LWT	GPM	VALVE TYPE	2	CAP. (MBH)	EAT	LAT	EWT	LWT	GPM	VALVE TYPE		POWER (HP)	POWER	V/PH/HZ
FCU 4-1	23.8	18.0	5.8	66/60	55/53	44	56	4.0	2-WAY	5	34.5	65	90	130	100	2.3	2-WAY	5	3/4	1/8	208/1/60

#### NOTES

1. MANUFACTURER SHALL ALLOW A MINIMUM OF 0.5" EXTRA STATIC FOR DIRTY INITIAL FILTERS.

EXTERNAL STATIC DOES NOT INCLUDE PRESSURE DROP THROUGH COILS AND FILTERS LOCATED INSIDE FAN COIL UNIT.

- 2. PROVIDE WITH FACTORY CONTROL VALVE PACKAGE, AUTOFLOW, MANUAL AIR VENT, AND INTERNAL COIL DRAIN. SEE SPECS.
- 3. PROVIDE SINGLE POWER POINT CONNECTION. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
- 4. PROVIDE WITH FACTORY SIZED AND MOUNTED INTERNAL CONDENSATE PUMP.
- 5. PROVIDE INSULATED WAQ STAINLESS STEEL DRAIN PANS, FURNISH AND FIELD INSTALL CONDENSATE DRAIN PAN FLOAT VALVE.
- 6. WIRE VALVE INTO LOW VOLTAGE POWER SUPPLY TO SHUT UNIT DOWN IF THE CONDENSATE PUMP FAILS.
- PROVIDE ALARM TO DDC PANEL
- 7. PROVIDE FACTORY MOUNTED AND WIRED SPEED CONTROLLER FOR BOTH OA FAN AND SA FAN.
- 8. PROVIDE WITH FACTORY MOUNTED DISCONNECT.
- 9. VBT VERTICAL BLOW THROUGH (NON-DUCTED UNIT) WITH HINGED FRONT-ACCESS PANEL.
- 10. V8T TYPE FCU PROVIDE TOP-MOUNTED ACOUSTICAL DISCHARGE PLENUM WITH SUPPLY AIR REGISTERS,
- TITUS 272FL WITH 08D OR EQUAL. 11.  $\mbox{VDT}$  —  $\mbox{VERTICAL DRAW THROUGH (DUCTED UNIT) WITH HINGED FRONT ACCESS PANEL.$
- VDT TYPE FCU PROVIDE TOP DUCTWORK CONNECTION AND 12" BASE RAIL COORDINATE WITH EXISTING CLASSROOM CEILING HEIGHT.
   AND SUPPLY DUCT CONNECTION.
- 13. PROVIDE UNIT WITH FACTORY MOUNTED FREEZESTAT FOR FREEZE PROTECTION.
- 14. PROVIDE 2 INCH MERV 8 RATED PLEATED FILTERS.
- 15. PROVIDE FACTORY FURNISHED OUTDOOR AIR PLENUM AND MOTORIZED DAMPER, SEE SPECIFICATIONS.
- 16. CABINET SHALL BE POWDER COATED 14 GA. STEEL WITH 1" THICK. COATED 3.0 P.C.F. DENSITY INSULATION.
- 17. SEE DETAILS ON SHEET M502.
- 18. BASIS OF DESIGN IS TEMPSPEC.

				FAN SC	HEDULE							
						PER	FORMANCE D	ATA		EL	ECTRICAL DA	TA
MARK	LOCATION	Control Interlocks	TYPE	DRIVE	CFM	E.S.P. (IN. W.C.)	MAX. RPM	MAX. SONES	FAN POWER (W)	VOLTS	PHASE	Hz
EF-2	VARSITY BOYS LOCKER	RTU-4 (GYM)	CRF	DD	1,200	0.5	1,725	12.0	1/2 HP	115	1	- 60
EF-3	BOYS LOCKER	RTU-4 (GYM)	CRF	DD	1,200	0.5	1,725	12.0	1/2 HP	115	1	60
EF-4	GIRLS LOCKER	RTU-4 (GYM)	CRF	DD	1,000	0.5	1,725	10.0	1/2 HP	115	1	60
EF-5	JANITOR	AHU-2 (GYM LOBBY)	CRF	DD	250	0.5	1,725	8.0	1/6 HP	115	1	60
EF-6	CONCESSION RR	AHU-2 (GYM LOBBY)	CRF	DD	750	0.5	1,725	10.0	1/4 HP	115	1	60

#### FAN NOTES

- 1. CRF CENTRIFUGAL ROOF MOUNTED FAN; DD DIRECT DRIVE
- 2. PROVIDE FANS WITH SPEED CONTROLLER FOR AIR FLOW BALANCING.
- 3. PROVIDE FAN WITH AN INTEGRAL DISCONNECT.
- 4. PROVIDE WITH PRE-FABRICATED CURB, BACKDRAFT DAMPER, S.S. BIRDSCREEN AND S.S. FASTENERS
- 5. PROVIDE ROOF MOUNTED MIAMI DADE/FLORIDA PRODUCT APPROVED HIGH WIND RATED EXHAUST FAN AND CURB.
- 6. REFER TO FIRE ALARM DRAWINGS FOR FIRE ALARM SHUTDOWN RELAYS.
- 7. ALL FAN TO RUN CONTINUOUSLY DURING OCCUPIED HOURS. CONNECT TO DDC SYSTEM OCCUPANCY SCHEDULE.
- 8. SEE ELECTRICAL FOR COMBINATION MOTOR STARTER/DISCONNECT.
- 9. BASIS OF DESIGN IS GREENHECK

								BL	OWER COL	L UNIT	SCHE	DULE										
								COOL	ING COIL DATA	١						HEAT	ING CO	L DATA			ELECTRIC	AL DATA
			EXT. STATIC PRESS. (IN.	MIN. OA	MIN. TOTAL CAP.	MIN. SENS. CAP.	MIN. LAT.	ENT. AIR TEMP. (DEG F)	F)	WATER (DEC			MAX. PRESS. DROP (FT.	MIN. TOTAL	AIR T		WATER (DE	TEMP. G F)		MAX. PRESS. DROP (FT.	sa fan	
MARK	TYPE	FAN CFM	W.C.)	CFM	(MBH)	(MBH)	(MBH)	DB/WB	DB/WB	EWT	LWT	GPM	W.C.)	CAP. (MBH)	DB	OB	EWT	LWT	GPM	W.C.)	POWER (HP)	V/PH/HZ
BCU 5-1	HDT	2200	0.5	215	62.7	49.2	13.5	75/62.5	54/52	44	56	10.5	10	59.7	65	90	130	100	4.0	5	3/4	115/1/60
BCU 5-2	HDT	550	0.5	60	15.3	12.3	3.0	75.3/62.4	54/52	44	56	2.6	10	14.9	65	90	130	100	1.0	5	3/4	115/1/60
BCU 5-3	HDT	1800	0.5	235	59.0	48.1	10.9	78.2/63.6	54/52	44	56	9.8	10	52.7	63	90	130	100	3.5	5	3/4	115/1/60
BCU 5-4	HDT	2150	0.5	325	71.8	57.2	14.6	78.3/63.9	54/52	44	56	12.0	10	65.3	62	90	130	100	4.4	5	3/4	115/1/60
BCU 5-5	HDT	2000	0.5	265	63.6	51.4	12.2	77.9/63.5	54/52	44	56	10.6	10	58.6	63	90	130	100	3.9	5	3/4	115/1/60
BCU 5-6	HDT	1400	0.5	165	43.4	35.0	8.4	77.7/63.5	54/52	44	56	7.2	10	41.0	63	90	130	100	2.7	5	3/4	115/1/60

## NOTES:

- MANUFACTURER SHALL ALLOW A MINIMUM OF 0.5" EXTRA STATIC FOR DIRTY INITIAL FILTERS. EXTERNAL STATIC DOES NOT INCLUDE PRESSURE DROP THROUGH
  CASING COILS, INITIAL FILTERS, AND FILTER HOUSINGS.
- 2. PIPE ALL CONDENSATE FROM UNITS TO DRAIN WITH TRAP. TRAP CONDENSATE PIPING AT UNIT AND ROUTE TO NEAREST FLOOR DRAIN OR HUB DRAIN.
- 3. CHILLED WATER CONTROL VALVES SHALL BE TWO WAY TYPE. HOT WATER CONTROL VALVES SHALL BE OF TWO-WAY TYPE.
- 4. PROVIDE WITH FACTORY MOUNTED DISCONNECT. COORDINATE POWER REQUIREMENTS WITH ELECTRICAL.
- 5. VDT VERTICAL DRAW THRU; HDT HORIZONTAL DRAW THRU
- 6. BASIS OF DESIGN IS YORK/JOHNSON CONTROLS.
- ADDITIONAL NOTES FOR HORIZONTAL UNITS:
- 7. PROVIDE WITH CONCEALED CONDENSATE PUMP. COORDINATE POWER WITH ELECTRICAL.
- 8. FURNISH AND FIELD INSTALL SECONDARY DRAIN PAN FLOAT VALVE. PROVIDE ALARM POINT TO DDC PANEL.
- 9. WIRE VALVE INTO LOW VOLTAGE POWER SUPPLY TO SHUT UNIT DOWN IF THE CONDENSATE PUMP FAILS.

		GRAVITY VE	ntilator	SCHEDULE		
					DIMENSI	ONS (IN.)
MARK	TYPE	SERVING	AIRFLOW (CFM)	SP (IN W.G.)	CURB CAP (WxL)	THROAT (Wx
GI-1	INTAKE	BCU 5-1	215	0.05	24x24	18x18
GI-2	INTAKE	BCU 5-2 AND 5-3	295	0.05	24x24	18x18
GI-3	INTAKE	BCU 5-4	325	0.05	24x24	18x18
GI-4	INTAKE	BCU 5-5 AND 5-6	430	0.05	24x24	18x18
						1

### NOT

- 1. GI GRAVITY INTAKE; GR GRAVITY RELIEF
- 2. PROVIDE WITH 5" PRE-FABRICATED CURB, BIRD SCREEN, AND BACKDRAFT DAMPER.
- 3. PROVIDE LOW SILHOUETTE, ROOF MOUNTED MIAMI DADE/FLORIDA PRODUCT APPROVED
- HIGH WIND RATED GRAVITY VENTILATOR AND CURB.

  4. BASIS OF DESIGN IN GREENHECK FG SERIES.
- 5. REFER TO DETAIL 1 ON SHEET M504.

	S C H M I D T
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	FLORIDA LICENSE NUMBER 0537 I 40 S Polofox PL Ste 300 - Persoccio, R. 325 P-850-438-0050 - F-850-432-8431
	WILLIAM JOSEPH JONES P.E. PLORIDA LICENSE NUMBER 58080
-	SCG project   20   5-124

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REVISION DESCRIPTION

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:
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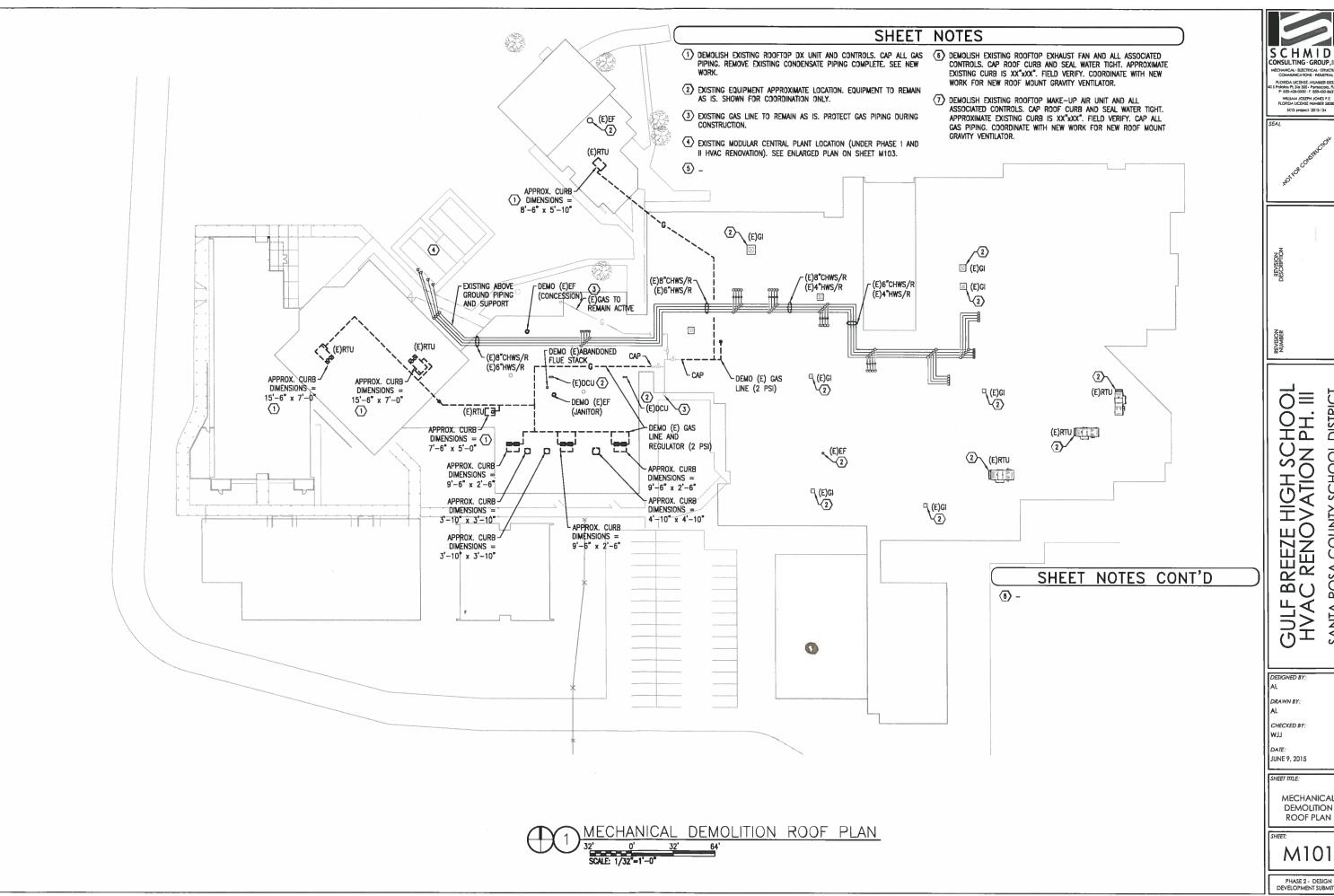
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AL

CHECKED BY: WJJ DATE: JUNE 9, 2015

SHEET TITLE:

MECHANICAL SCHEDULES

sheet: M004



DISTRICT GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA

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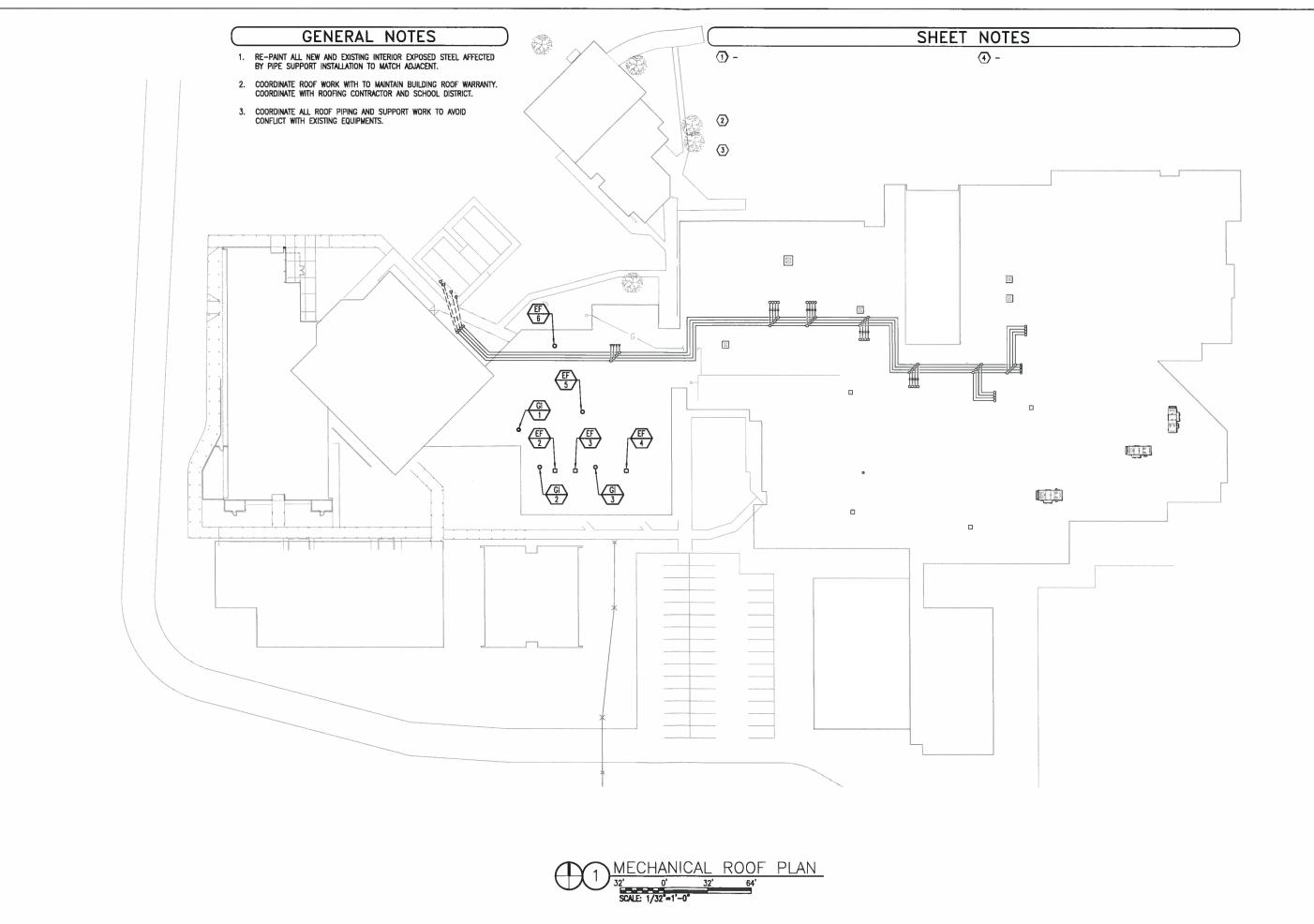
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JUNE 9, 2015

SHEET TITLE:

MECHANICAL DEMOLITION **ROOF PLAN** 

M101



S C H M I D T
CONSULTING GROUP, INC.
MICHAEL BELTENCH FINISHING
COMMINICATIONS REQUITED,
ROPEL ICEDIAE NUMBER 03571
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WILLIAM JOSEPH JONES P.E.
RORDA UCEDISE NUMBER 2000
JCG project: 2015-124

SEAL , MOTOR CONSTRUCTION

REVISION

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GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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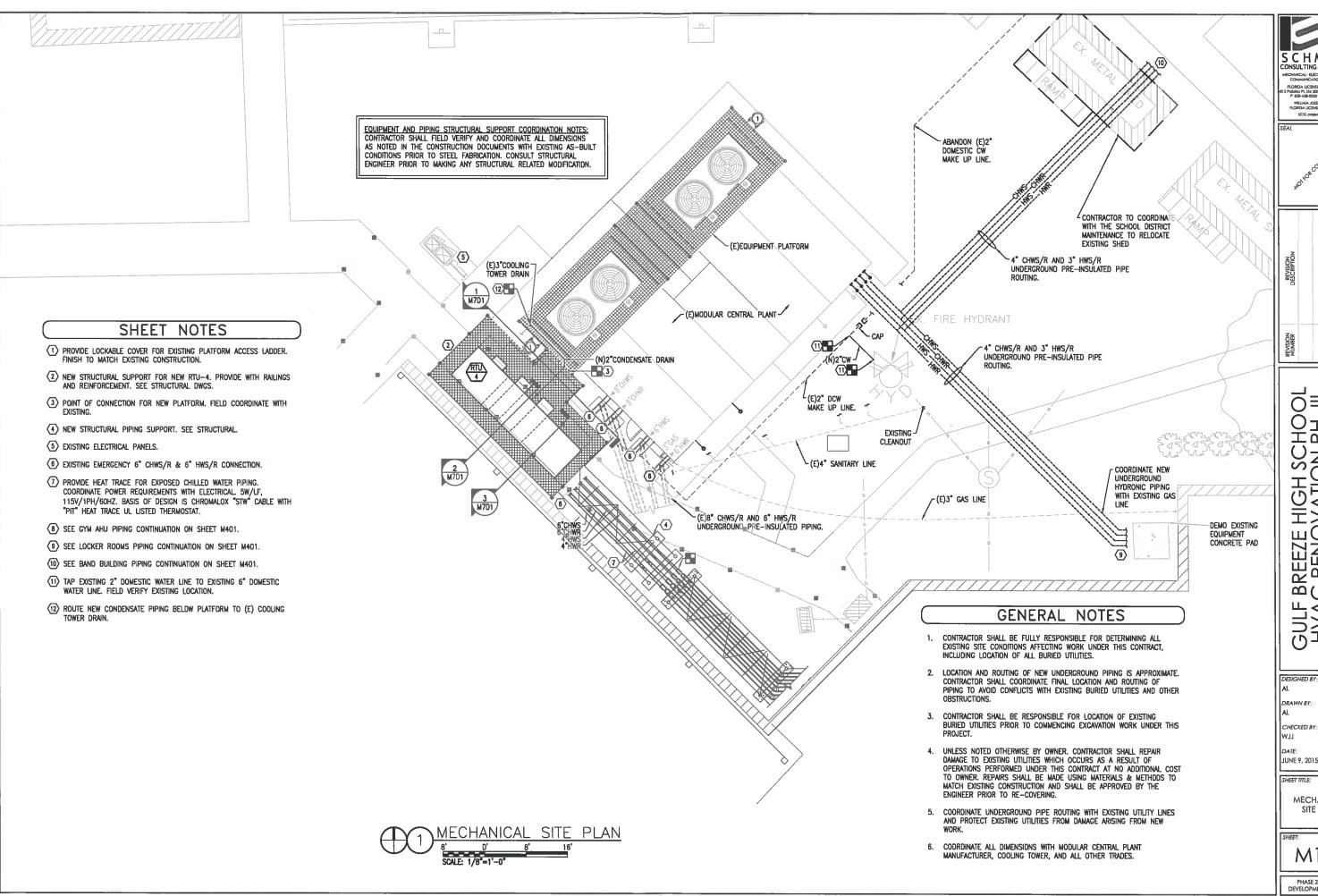
WJJ DATE:

DATE: JUNE 9, 2015

SHEET TITLE:

MECHANICAL NEW WORK ROOF PLAN

M102



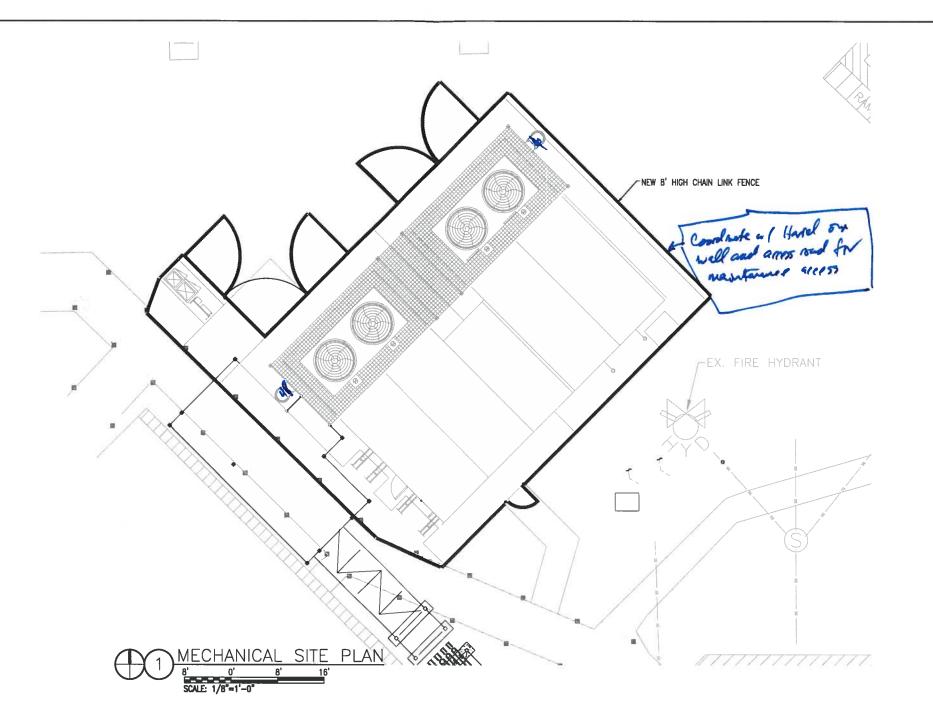
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JUNE 9, 2015

MECHANICAL SITE PLAN

M103





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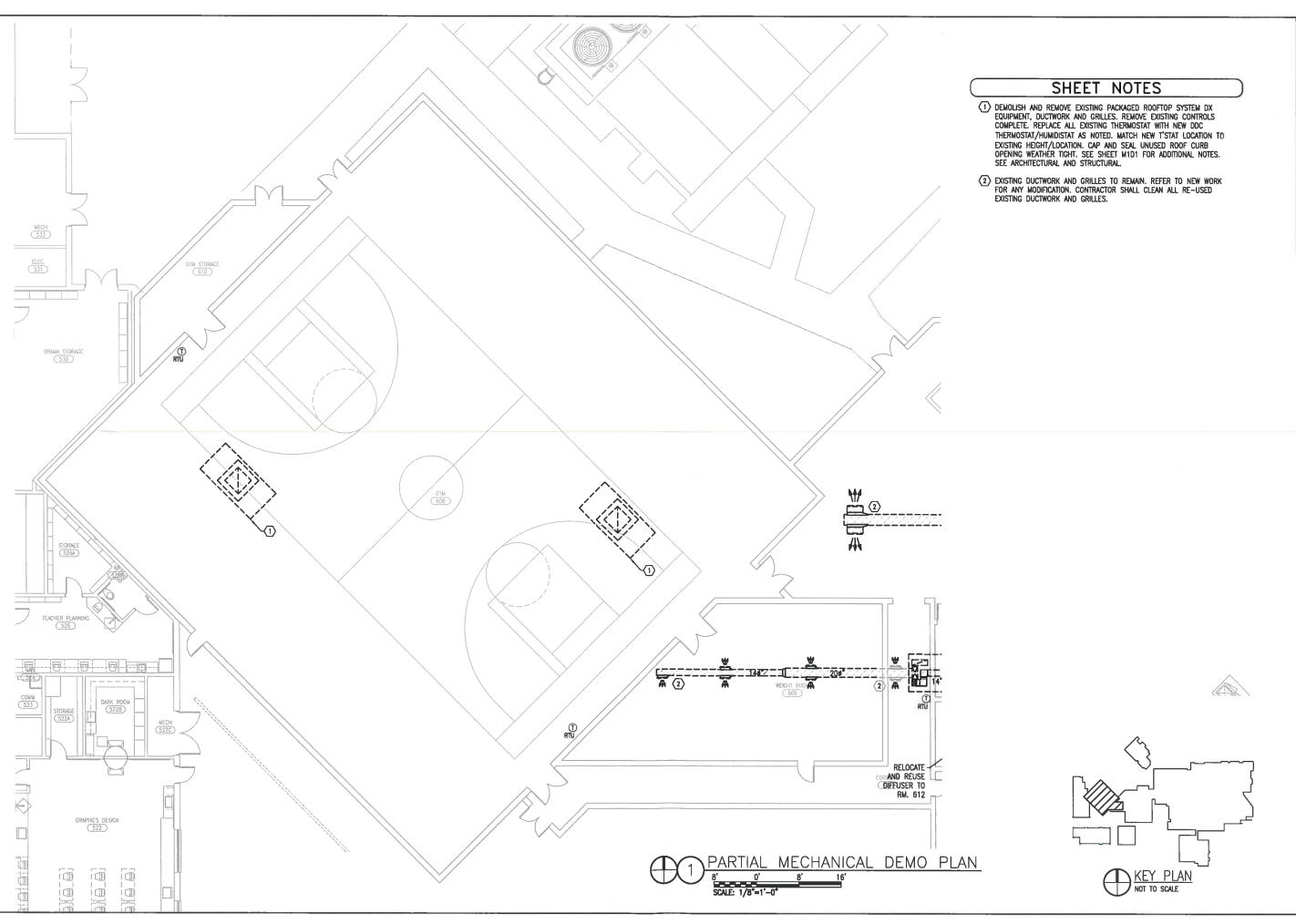
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*DATE:* JUNE 9, 2015

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MECHANICAL SITE PLAN

M104



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CONSULTING - GROUP, INC.
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COMMENCATION - FORSTRUL
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GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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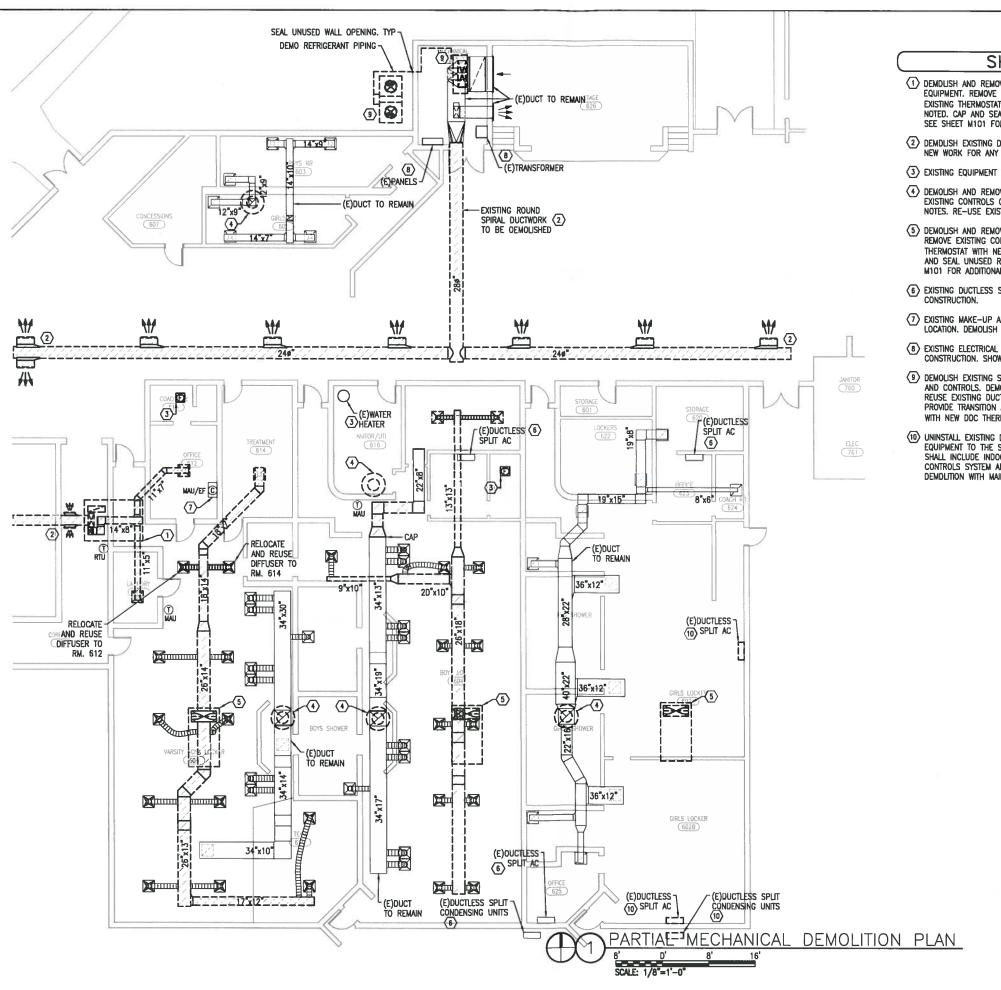
CHECKED BY:

*DATE:*JUNE 9, 2015

SHEET TITLE:

PARTIAL MECHANICAL DEMOLITION PLAN

SHEET: M201





- 1 DEMDLISH AND REMOVE EXISTING PACKAGED ROOFTOP SYSTEM DX EQUIPMENT, REMOVE EXISTING CONTROLS COMPLETE, REPLACE ALL EXISTING THERMOSTAT WITH NEW DDC THERMOSTAT/HUMIDISTAT AS NOTED. CAP AND SEAL UNUSED ROOF CURB OPENING WEATHER TIGHT. SEE SHEET M101 FOR ADDITIONAL NOTES.
- 2 demolish existing ductwork and grilles to remain. Refer to New Work for any modification.
- 3 EXISTING EQUIPMENT TO REMAIN
- 4 DEMOLISH AND REMOVE EXISTING ROOFTOP EXHAUST FAN. REMOVE EXISTING CONTROLS COMPLETE. SEE SHEET M101 FOR ADDITIONAL NOTES. RE-USE EXISTING EXHAUST DUCTWORK. SEE NEW WORK.
- 5 DEMOLISH AND REMOVE EXISTING ROOFTOP MAKE-UP AIR UNIT. REMOVE EXISTING CONTROLS COMPLETE. REPLACE ALL EXISTING THERMOSTAT WITH NEW DDC THERMOSTAT/HUMIDISTAT AS NOTED. CAP AND SEAL UNUSED ROOF CURB OPENING WEATHER TIGHT. SEE SHEET M101 FOR ADDITIONAL NOTES. SEE ARCHITECTURAL AND STRUCTURAL.
- (6) EXISTING DUCTLESS SPLIT SYSTEM TO REMAIN. PROTECT DURING
- 7 EXISTING MAKE-UP AIR UNITS AND EXHAUST FAN CONTROL PANEL LOCATION. DEMOLISH PANEL SYSTEM COMPLETE.
- (B) EXISTING ELECTRICAL EQUIPMENT TO REMAIN. PROTECT DURING CONSTRUCTION. SHOWN FOR COORDINATION ONLY.
- 9 DEMOLISH EXISTING SPLIT SYSTEM DX EQUIPMENT, REFRIGERANT PIPING AND CONTROLS. DEMO EXISTING REFRIGERANT PIPING. CONTRACTOR TO REUSE EXISTING DUCTWORK SYSTEM. PROVIDE NEW OA INTAKE AND PROVIDE TRANSITION AS NECESSARY. REPLACE EXISTING THERMOSTAT WITH NEW DDC THERMOSTAT/HUMIDISTAT. SEE NEW WORK.
- (10) UNINSTALL EXISTING DUCTLESS SPLIT SYSTEM AND RETURN EXISTING EQUIPMENT TO THE SCHOOL DISTRICT MAINTENANCE DEPARTMENT, THIS SHALL INCLUDE INDOOR EVAPORATOR, OUTDDDR CONDENSER, CONTROLS SYSTEM AND ALL RELATED ACCESSORIES. COORDINATE DEMOLITION WITH MAINTENANCE PERSONNEL.

KEY PLAN NOT TO SCALE





SCG project; 20 IS-124



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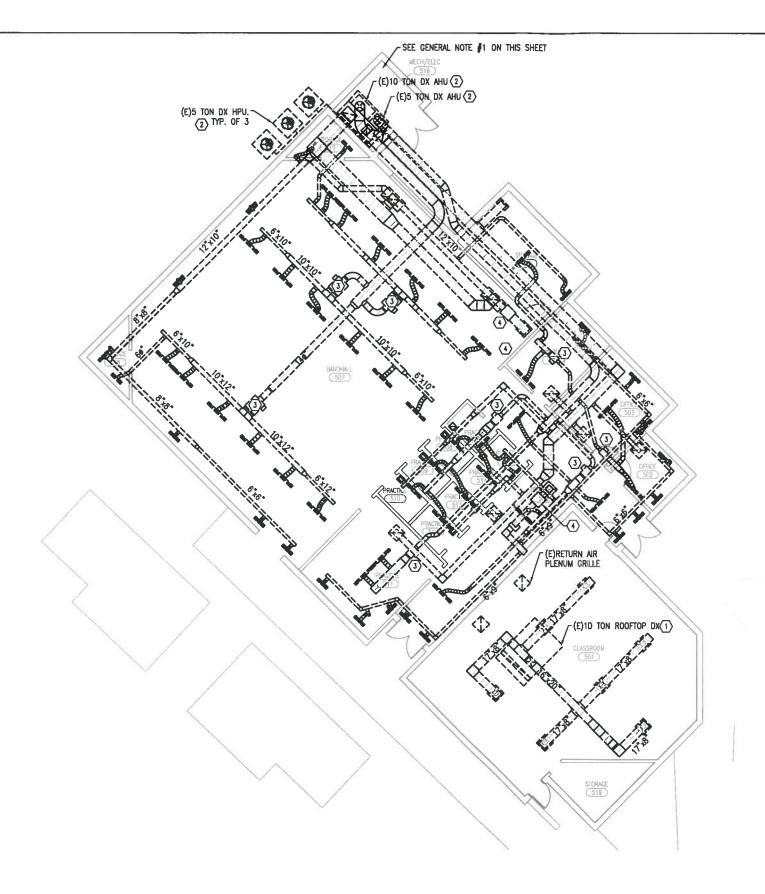
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CHECKED BY WJJ

JUNE 9, 2015

PARTIAL MECHANICAL DEMOLITION PLAN

M202



- (1) DEMDLISH AND REMOVE EXISTING PACKAGED ROOFTOP SYSTEM DX EQUIPMENT. REMOVE EXISTING CONTROLS COMPLETE. CONTRACTOR TO DEMDLISH EXISTING DUCTWORK SYSTEM AS INDICATED. REPLACE ALL EXISTING THERMOSTAT WITH NEW DDC THERMOSTAT/HUMIDISTAT AS NOTED. CAP AND SEAL UNUSED ROOF CURB OPENING WEATHER TIGHT. SEE ARCHITECTURAL AND STRUCTURAL.
- (2) DEMOLISH EXISTING SPLIT SYSTEM DX EQUIPMENT, REFRIGERANT PIPING AND CONTROLS. DEMO EXISTING UNDERGROUND REFRIGERANT PIPING. CONTRACTOR TO REUSE EXISTING DUCTWORK SYSTEM AND DA INTAKE. PROVIDE TRANSITION AS NECESSARY. REPLACE EXISTING THERMOSTAT WITH NEW DDC THERMOSTAT/HUMIDISTAT. SEE NEW WORK
- 3 DEMOLISH EXISTING VAV BOX, ELECTRIC HEATING ELEMENTS, AND CONTROLS.
- (4) DEMOLISH EXISTING INLINE FAN, ELECTRIC HEATING ELEMENTS, AND CONTROLS, AND DUCTWORK.

# GENERAL NOTES

 EXISTING MECHANICAL ROOM SHALL BE CLEANED FROM ANY EXISTING DEBRIS. SEAL ALL EXISTING OPENING WEATHER TIGHT PER SCHODL DISTRICT REQUIREMENTS. CONTRACTOR MAY REUSE EXISTING WALL OPENING FOR NEW LOUVER. SEAL ALL UNUSED OPENING WEATHER TIGHT.



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CONSULTING GROUP, INC.
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PECRIPTION DESCRIPTION

NUMBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:
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DRAWN BY:
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CHECKED BY:
WJJ

JUNE 9, 2015

PARTIAL MECHANICAL DEMOLITION PLAN

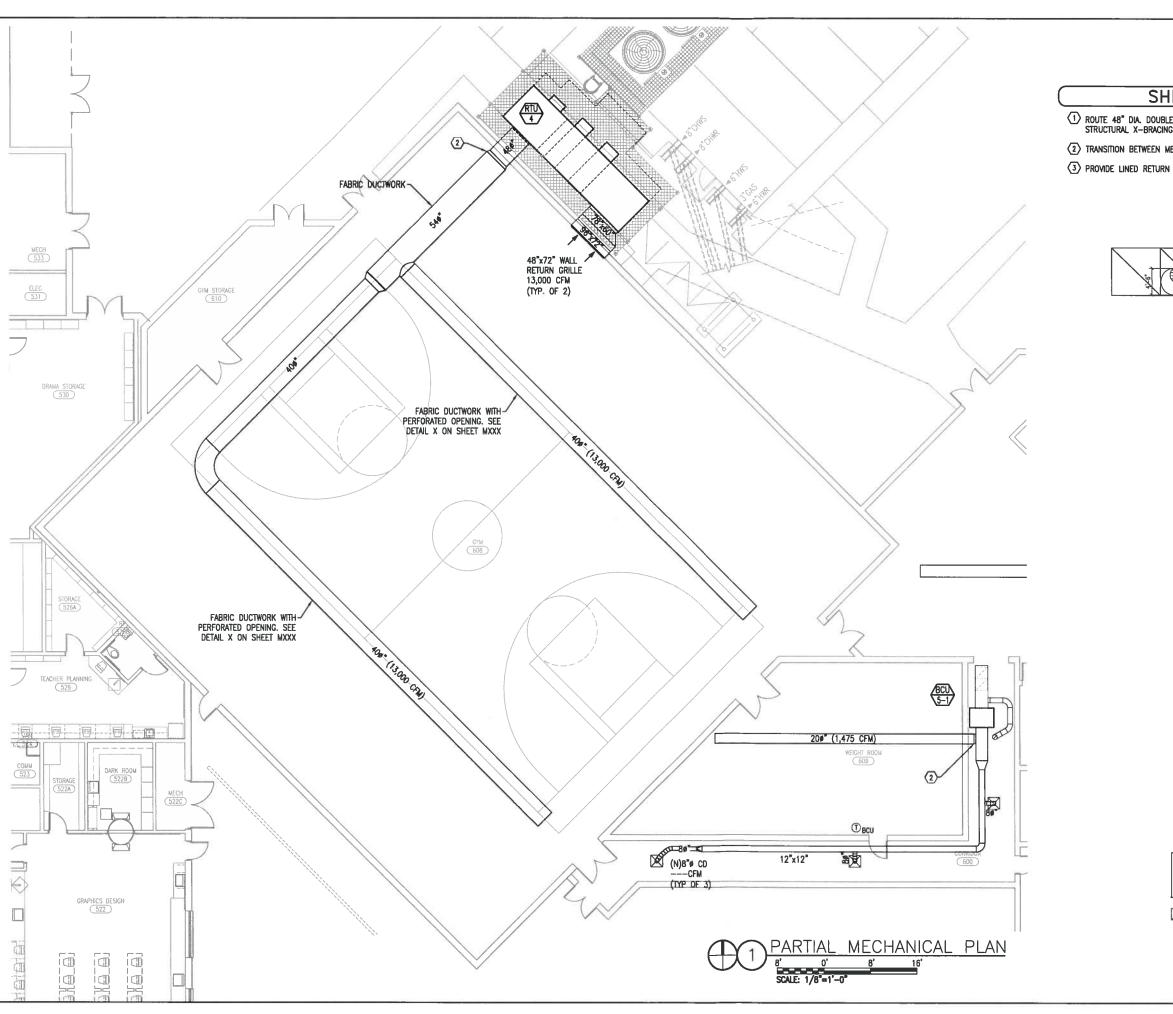
M203

PHASE 2 - DESIGN DEVELOPMENT SUBMITTAL

PARTIAL MECHANICAL DEMOLITION PLAN

8' 0' 8' 16'

SCAR: 1/8'=1'-0'





- (1) ROUTE 48" DIA. DOUBLE WALL METAL DUCTWORK BETWEEN STRUCTURAL X-BRACING. FIELD COORDINATE EXACT LOCATION.
- 2 TRANSITION BETWEEN METAL AND FABRIC DUCTWORK.
- 3 PROVIDE LINED RETURN DUCTWORK.



WILLIAM JOSEPH JONES P.E. RORDA LICENSE HUMBER STORD SCG projecti 2015-124





GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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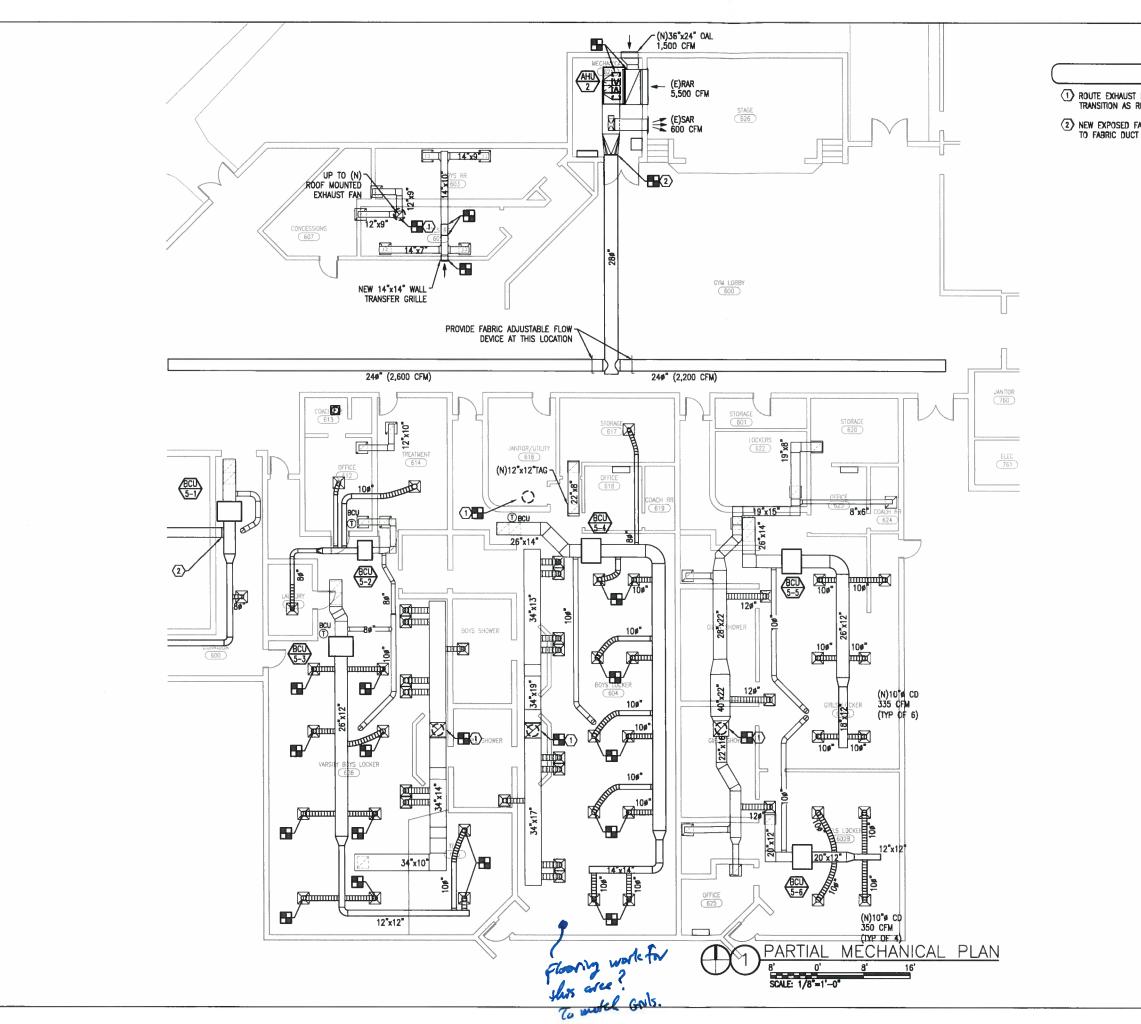
MJJ DATE:

JUNE 9, 2015 SHEET TITLE:

PARTIAL MECHANICAL **NEW WORK** PLAN

M301

KEY PLAN NOT TO SCALE



- 1) ROUTE EXHAUST DUCT TO NEW EXHAUST FAN. PROVIDE DUCT TRANSITION AS REQUIRED.
- $\ensuremath{\bigcirc}$  New exposed fabric ductwork. Provide transition from metal to fabric duct at this location.



CONSULTING - GROUP, INC MECHANICAL - BECCTRICAL - ETRUCTUMA COMMUNICATION of HOUSTRAI RIC REDA LICENSE. HILMARER 63371 40 5 Patrian R. 13 000 - Penerocal VI 9 5 Patrian R. 13 000 - Penerocal VI 9 1 Patrian R. 13 000 - Penerocal VI WILLIAM JOSEPH (DNES P. E. ROEBA LICENSE NUMBER 50000 SCG project: 2015-124



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NUMBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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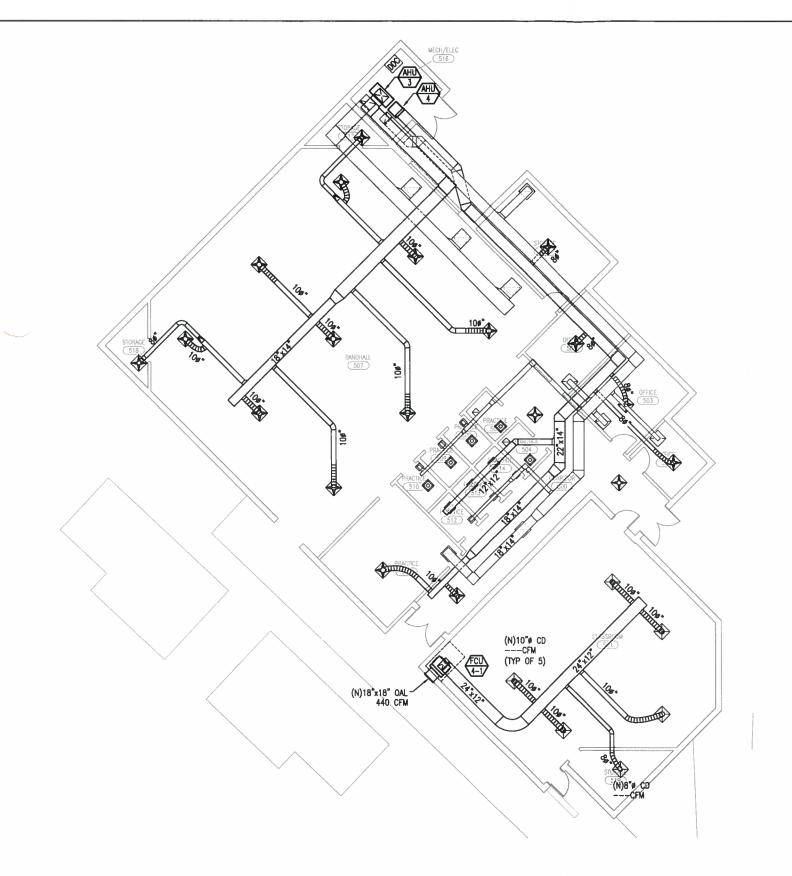
WJJ DATE:

JUNE 9, 2015

KEY PLAN NOT TO SCALE

PARTIAL
MECHANICAL
NEW WORK
PLAN

M302



1) NEW DUCTWORK FOR BAND BUILDING



EAL ROLEGE REPUBLICON

DESCRIPTION

NUMBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY: AL DRAWN BY:

CHECKED BY:

DATE: JUNE 9, 2015

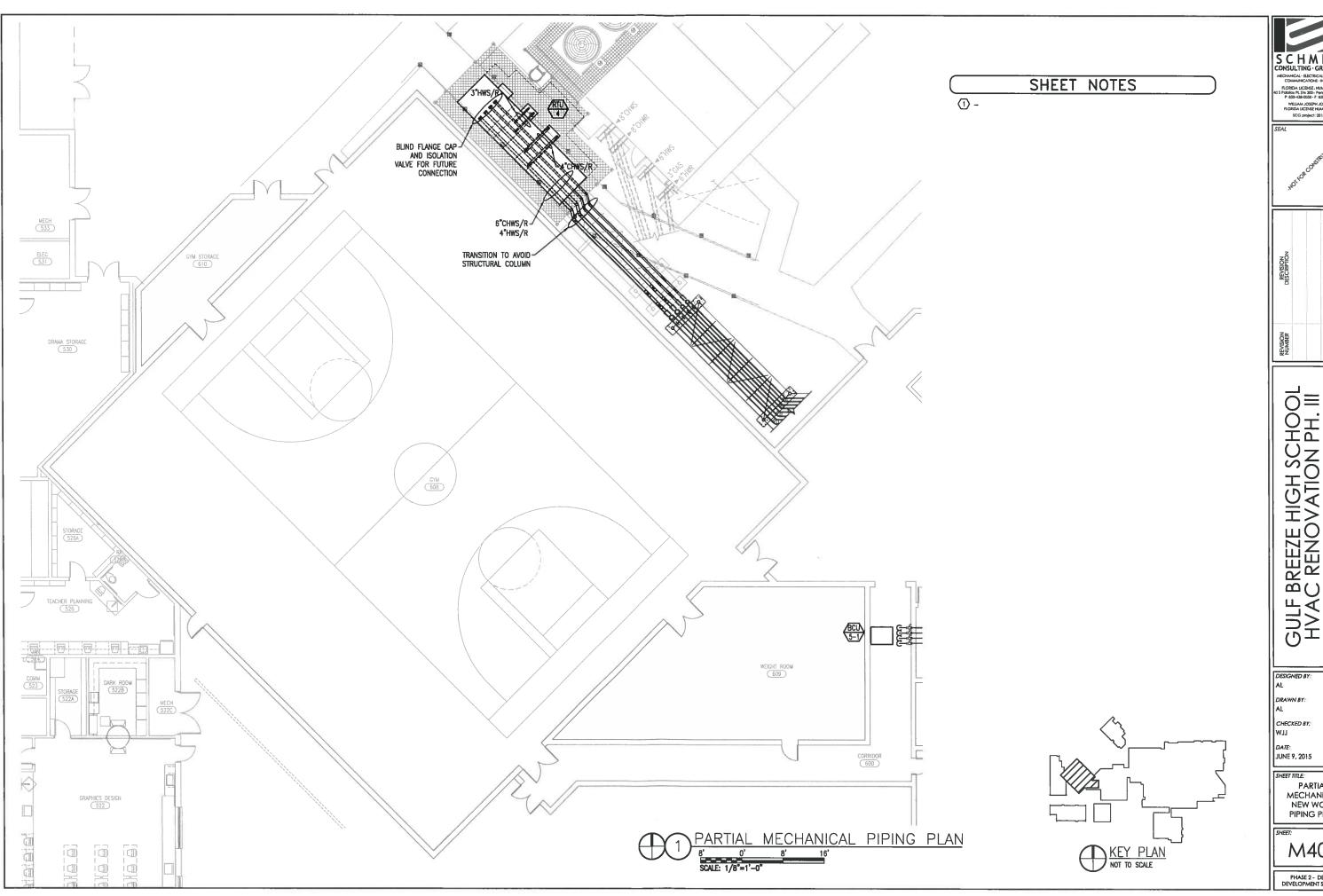
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KEY PLAN NOT TO SCALE





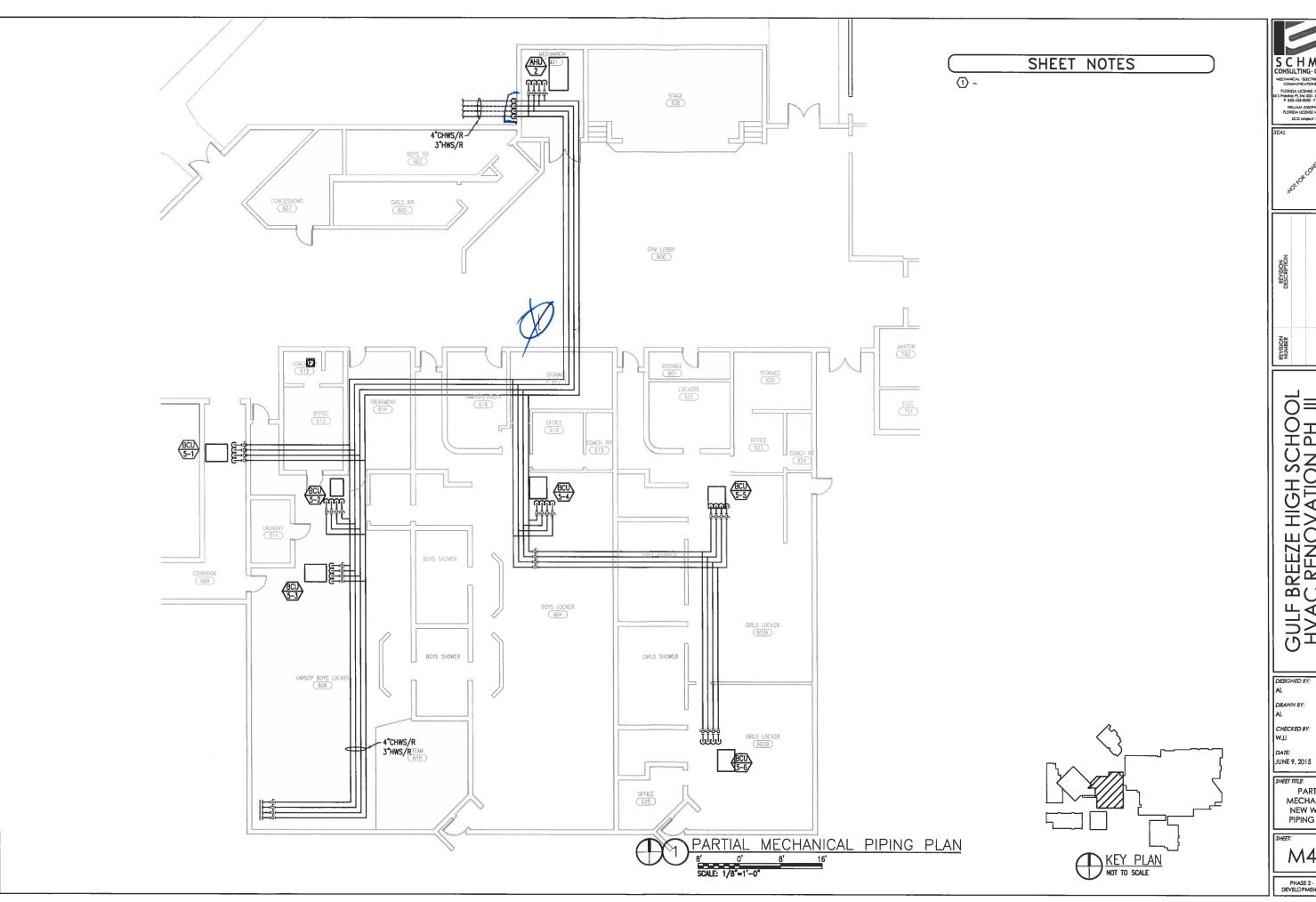
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GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

PARTIAL MECHANICAL NEW WORK PIPING PLAN

M401



COMMINICATIONS - INDUSTRIAL FLORIDA LICENSE : NUMBER DSS7! 13 Policitias PL SNe 300 - Persocolia, PL 31 P. 1853-438-0000 - PL 1854-423-4631 WILLIAM JOSEPH JONES P.E. PLORIDA LICENSE NUMBER 80000 SCG project: 2015-124



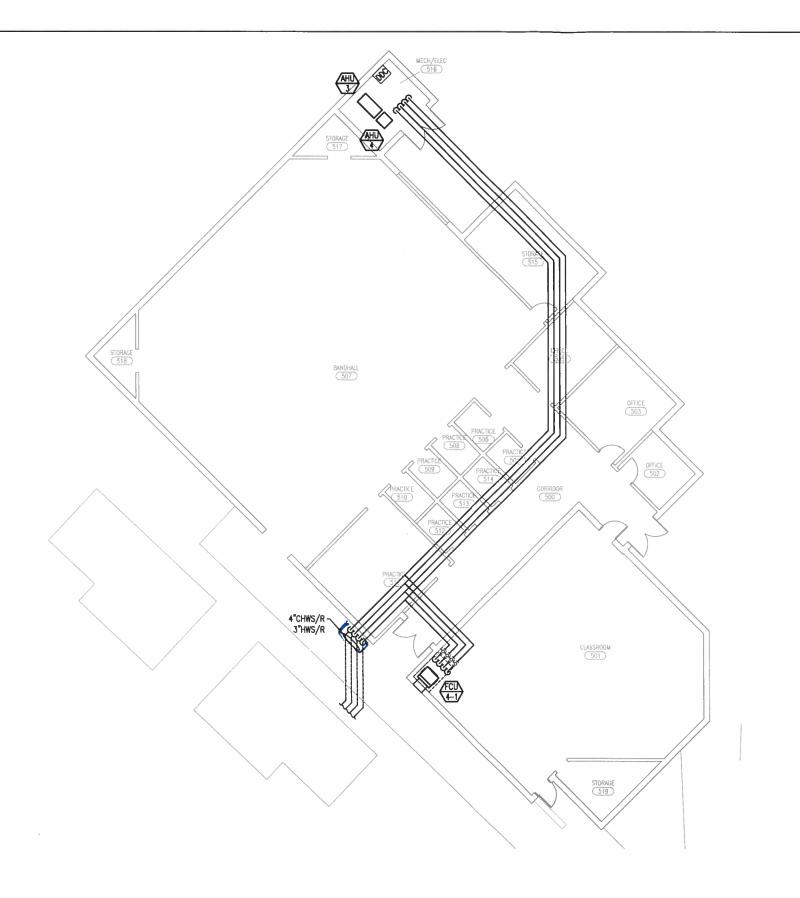


GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY: DRAWN BY: CHECKED BY:

PARTIAL MECHANICAL NEW WORK PIPING PLAN

M402



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CONSULTING - GROUP, INC.
MECHANICA: RESTRICTION.
COMMINICATION - PONTRINA
ROBRA UCEDES, NUMBER 0527 |
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P 550-438-0035 F 550-622-643 |
WILLIAM JOSEPH J (1908) P E.
ROBRA UCEDES (MAMER 55000
SCO project 2016 1/64

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REVISION DESCRIPTION

NUMBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:

AL CHECKED BY: WJJ

DATE: JUNE 9, 2015

SHEET TITLE

KEY PLAN NOT TO SCALE

PARTIAL

MECHANICAL

NEW WORK

PIPING PLAN

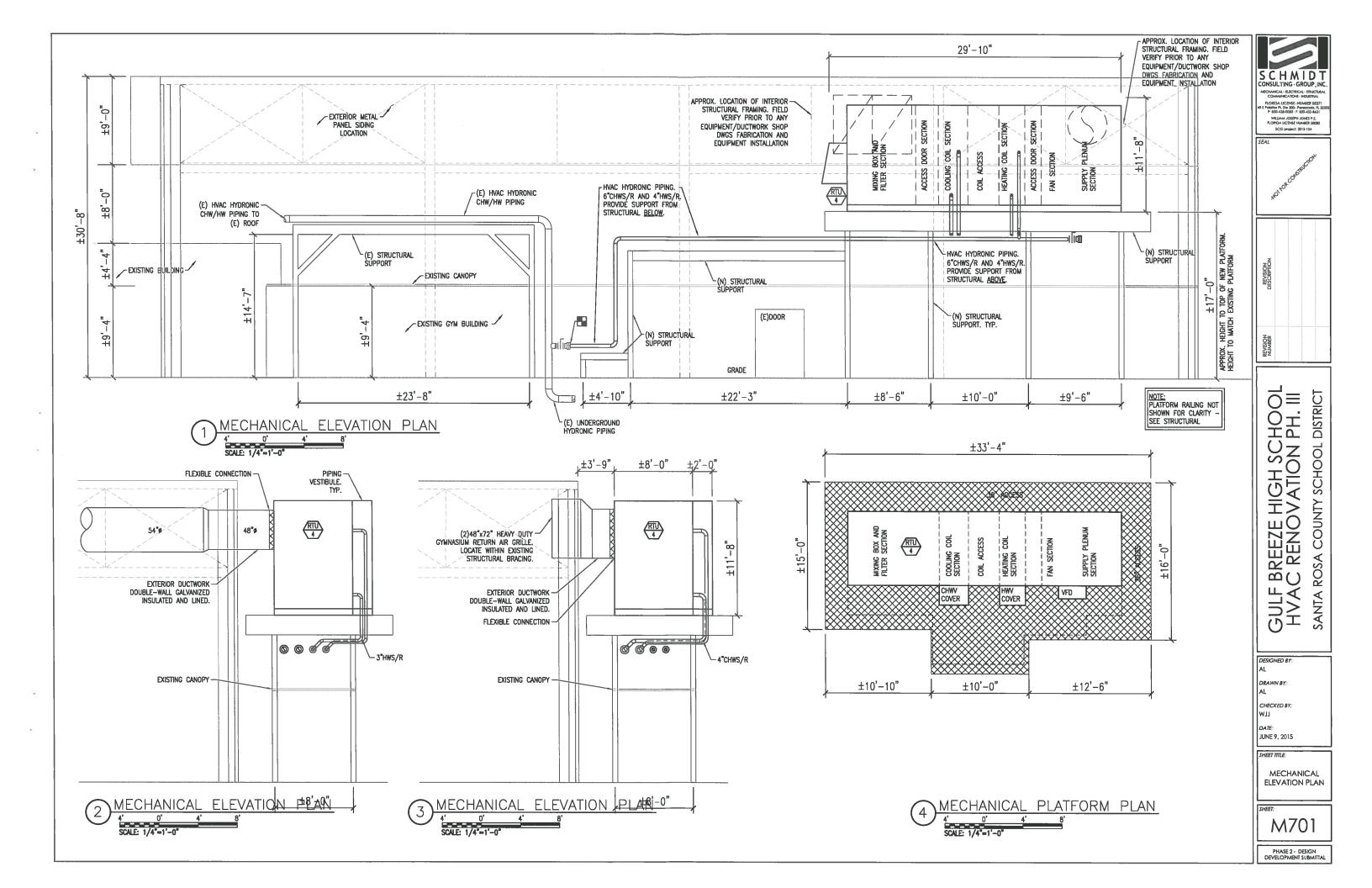
M403

PHASE 2 - DESIGN DEVELOPMENT SUBMITTAL

PARTIAL MECHANICAL PIPING PLAN

8' 0' 8' 16'

SCALE 1/8'=1'-0'



## ELECTRICAL LEGEND

(F2A)	0	LED	LIGHTING	FIXTURE.
(120)				

- (EX) 🕱 EXIT LIGHT (DARKENED AREA INDICATES LIGHTED FACE). SEE LIGHTING FIXTURE SCHEDULE.
  - DATA JUNCTION BOX MOUNTED AT 18" AFF. PROVIDE WITH BLANK COVER PLATE. PROVIDE 1"C WITH PULL WIRE FROM BOX TO ABOVE CEILING.
  - CABLE TV OUTLET, PROVIDE WITH BLANK COVER PLATE. PROVIDE 3/4"C WITH PULL WIRE FROM BOX TO ABOVE CEILING.
  - SINGLE POLE LIGHTING SWITCH. MOUNT 48" AFF UNLESS NOTED OTHERWISE. SUBSCRIPT INDICATES AS FOLLOWS:
    - 3 THREE-WAY LIGHTING SWITCH
    - P PASSIVE INFARED MOTION SENSOR WALL SWITCH (SENSORSWITCH WSD PDT OR APPROVED EQUAL).
    - M MANUAL MOTOR STARTER. MOUNT 80" AFF. PROVIDE PHENOLIC LABEL.
    - a,b LETTER INDICATES ZONE OF CONTROL.
    - 3K LOCKING THREE WAY SWITCH (HUBBELL HBL1223L WITH HBL1209 KEY)
  - DUPLEX RECEPTACLE NEMA 5-15R. PROVIDE NEMA 5-20R FOR SINGLE DEDICATED RECEPTACLES. MOUNT 18" AFF UNLESS NOTED OTHERWISE. VERIFY DUPLEX MOUNTING REQUIREMENTS WITH ARCHITECTUAL DRAWINGS PRIOR TO ROUGH-IN. SUBSCRIPT INDICATES AS FOLLOWS:
    - G GROUND FAULT CIRCUIT INTERRUPTER TYPE WP - WEATHERPROOF COVERPLATE. MOUNT 30" AFF
    - D MOUNT RECEPTACLE ADJACENT TO DATA OUTLET.
  - **(** JUNCTION BOX.
  - П NON-FUSED DISCONNECT SWITCH. SIZE FOR LOAD BEING SERVED. PROVIDE PHENOLIC LABEL, SEE SPECIFICATIONS.
  - PANELBOARD, MOUNTED AS INDICATED. SEE PANELBOARD SCHEDULES. COORDINATE COIL VOLTAGE WITH EQUIPMENT BEING SERVED. SQ. D CO-xx SERIES, OR APPROVED EQUAL. MOUNT IN SERVING ELECTRICAL ROOM. PROVIDE PHENOLIC LABEL, SEE SPECIFICATIONS.
  - MOTOR FURNISHED BY OTHERS.
  - CIRCUIT RUN CONCEALED ABOVE CEILING OR IN WALL.
    - CIRCUIT RUN CONCEALED IN OR BELOW FLOOR SLAB OR UNDERGROUND.
    - → HOMERUN TO PANELBOARD ANY CIRCUIT WITHOUT FURTHER DESIGNATION 2#12, 1#12 GRD, 1/2"C. J#12, 1#12 GRD, 1/2"C, ETC., PER NEC. MINIMUM SIZE ON HOMERUNS GREATER THAN 100 FEET SHALL BE #10 AWG.
  - LIGHTING FIXTURE MARK. SEE LIGHTING FIXTURE SCHEDULE FOR REQUIREMENTS.
  - MECHANICAL EQUIPMENT MARK. SEE MECHANICAL EQUIPMENT ELECTRICAL SCHEDULE. SHEET NOTE MARK. SEE SHEET NOTES FOR SPECIFIC INSTRUCTIONS.

## **ABBREVIATIONS**

AFF	ABOVE	FINISHED	FLOOR.

CENTERLINE

MNT

CONDUIT. С

JUNCTION BOX.

FACP FIRE ALARM CONTROL PANEL

MOUNTING HEIGHT AFF

WEATHERPROOF.

# **GENERAL NOTES**

- 1. ENTIRE ELECTRICAL INSTALLATION SHALL BE IN ACCORDANCE WITH THE 2011 EDITION OF THE NATIONAL ELECTRICAL
- 2. CONDUIT ROUTINGS AND DEVICE/EQUIPMENT LOCATIONS SHOWN ARE DIAGRAMMATIC ONLY, CONTRACTOR SHALL FIELD ROUTE AND LOCATE AS REQUIRED. CONDUIT ROUTINGS SHALL BE NORTH/SOUTH OR EAST/WEST.
- 3. ALL ELECTRICAL EQUIPMENT AND DEVICES SHALL BE PROVIDED WITH SUITABLE PHENOLIC NAMEPLATES.
- 4. ALL CATALOG NUMBERS AND MANUFACTURERS SHOWN ARE TO INDICATE DEVICE, QUALITY, AND TYPE OF ITEM DESIRED ONLY.
- 5. THE CONDUIT MATERIAL SHALL BE AS FOLLOWS:
  - A) BELOW GRADE RIGID NON-METALLIC. (POWER ONLY) 3/4" MINIMUM.
  - B) RISER FROM 36" BELOW GRADE RIGID GALVANIZED STEEL.
  - C) CONCEALED RISER FROM 36" BELOW GRADE RIGID NON-METALLIC. (POWER ONLY)
  - D) ABOVE GRADE SUBJECT TO PHYSICAL ABUSE RIGID GALVANIZED STEEL OR INTERMEDIATE.
  - E) ABOVE GRADE NOT SUBJECT TO PHYSICAL ABUSE OR WEATHER ELECTRICAL METALLIC TUBING.
  - F) INDOORS NOT SUBJECT TO PHYSICAL ABUSE ELECTRICAL METALLIC TUBING.
- 6. THE LOADS SHOWN FOR APPLIANCES AND EQUIPMENT ARE BASED ON DESIGN INFORMATION. THE CONTRACTOR SHALL VERIFY ALL APPLIANCE LOADS PRIOR TO RUNNING THE CIRCUIT. THE MINIMUM CIRCUIT REQUIREMENTS SHALL BE BASED ON THE APPLIANCE NAMEPLATE VALUE OR CODE REQUIREMENTS, WHICHEVER IS MORE STRINGENT. ADDITIONAL COMPENSATION SHALL NOT BE ALLOWED FOR APPLIANCE MODIFICATIONS BY THE CONTRACTOR.
- 7. COORDINATE LOCATIONS OF ELECTRICAL EQUIPMENT, DEVICES, OUTLETS, FIXTURES, ETC., WITH ARCHITECTURAL PLANS, ELEVATIONS AND REFLECTED CEILING PLANS PRIOR TO ROUGH-IN WORK.
- 8. WALL OUTLETS SHALL NOT BE INSTALLED BACK TO BACK.
- 9. CONTRACTOR SHALL SUPPLY ALL NECESSARY ELECTRICAL DEVICES IN THE CABINETS, INCLUDING BUT NOT LIMITED TO: RECEPTACLES, CONDUIT, JUNCTION BOXES, CONDUCTORS, DEVICE PLATES.
- 10. PROVIDE A 6'-0" MAXIMUM FLEXIBLE CONNECTION FROM EACH RECESSED LIGHTING FIXTURE TO JUNCTION BOX ABOVE CEILING.
- 11.ALL FIRE ALARM CIRCUITS SHALL BE TERMINATED ON TERMINAL STRIPS, WIRE NUTS ARE PROHIBITED, ALL ANNUNCIATING AND INITIATING CIRCUITS ENTERING THE BUILDING AND AT THE FIRE ALARM PANEL SHALL BE PROVIDED WITH SUITABLE SURGE SUPPRESSORS (SEE SPECIFICATIONS).
- 12. VERIFY ALL POWER/DATA/PHONE RECEPTACLE ELEVATIONS LOCATED 7" CENTER LINE OVER COUNTERTOP WITH ARCHITECTURAL DETAILS PRIOR TO ROUGH-IN. LOCATE LONG AXIS HORIZONTALLY.
- 13. ALL CONDUITS NOT LOCATED UNDER SLAB SHALL HAVE A MINIMUM BURIAL DEPTH OF 36" UNLESS NOTED OTHERWISE.
- 14.ALL SAFETY SWITCH DISCONNECTS LOCATIONS IN MECHANICAL ROOMS SHALL HAVE 3'-0" MIN. OF WORKING SPACE IN FRONT OF DISCONNECT: COORDINATE WITH MECHANICAL CONTRACTOR AND FOLIPMENT LOCATIONS
- 15. FINAL CONDUIT CONNECTIONS TO HEAT PUMPS, AIR HANDLERS, EXHAUST FANS, AND WATER HEATERS SHALL BE FLEXIBLE METAL (LIQUID TIGHT IN FLAMMABLE, OUTSIDE AND OTHER DAMP AND WET LOCATIONS).
- 16. CONTRACTOR SHALL COORDINATE ALL WORK WITH OTHER TRADES PRIOR TO INSTALLATION, REFER TO MECHANICAL AND PLUMBING DRAWINGS FOR EXACT LOCATION AND SIZE OF EQUIPMENT WHICH ARE PROVIDED BY OTHERS AND
- 17.RECEPTACLES, SWITCHES AND COVER PLATES COLOR SHALL BE SELECTED BY THE ARCHITECT FROM STANDARD COLORS.
- 18. VERIFY ALL DOOR SWINGS WITH ARCHITECTURAL DRAWINGS PRIOR TO ROUGHING IN FOR SWITCHES.
- 19. CONDUITS LEAVING OR ENTERING BUILDING SHALL BE SEALED PER N.E.C. TO PREVENT ENTRANCE OF MOISTURE.
- 20.ALL EXHAUST FAN DISCONNECTS AND OVERLOADS ARE SCHEDULED TO BE PROVIDED UNDER DIVISION 23.
- 21.ALL DIMENSIONS TO DEVICES AFF SHALL BE TO CENTERLINE UNLESS NOTED OTHERWISE.
- 22. WORKING SPACE OF 36" FOR 120/208 SYSTEMS AND 42" FOR 277/480 SYSTEMS SHALL BE MAINTAINED IN FRONT OF ALL ELECTRICAL PANELS AND DEVICES.
- 23.ALL SIDEWALKS AND PARKING LOT ASPHALT AREAS THAT ARE CUT DUE TO NEW ELECTRICAL SERVICES SHALL BE
- 24.FINAL CONNECTION TO ALL EQUIPMENT IS SHOWN DIAGRAMMATIC. PROVIDE FINAL CONNECTION AS REQUIRED PER







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DESIGNED BY

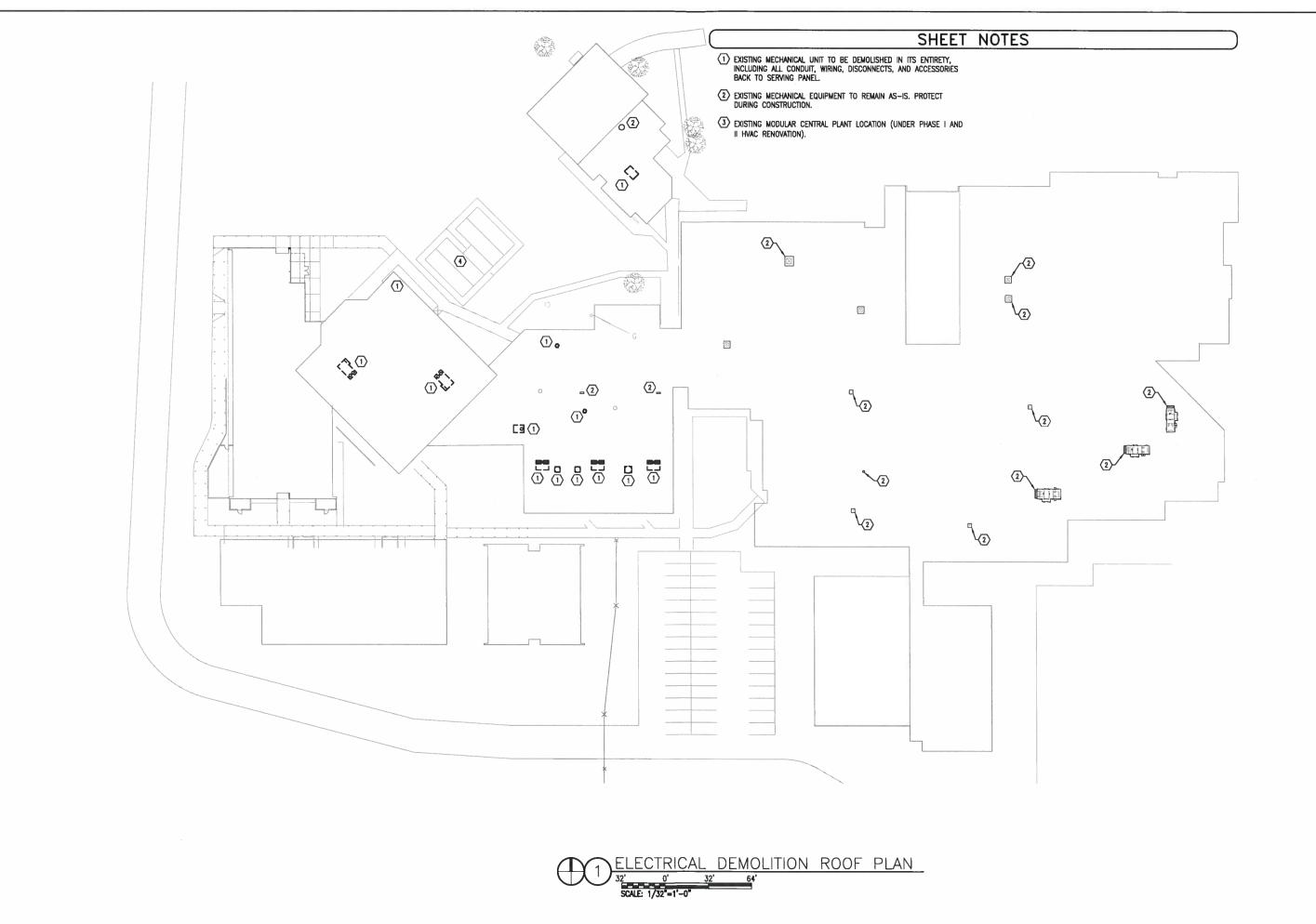
DRAWN BY

CHECKED BY

DATE JUNE 9, 2015

SHEET TITLE ELECTRICAL LEGEND, NOTES. & **ABBREVIATIONS** 

E001









NUMBER

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY

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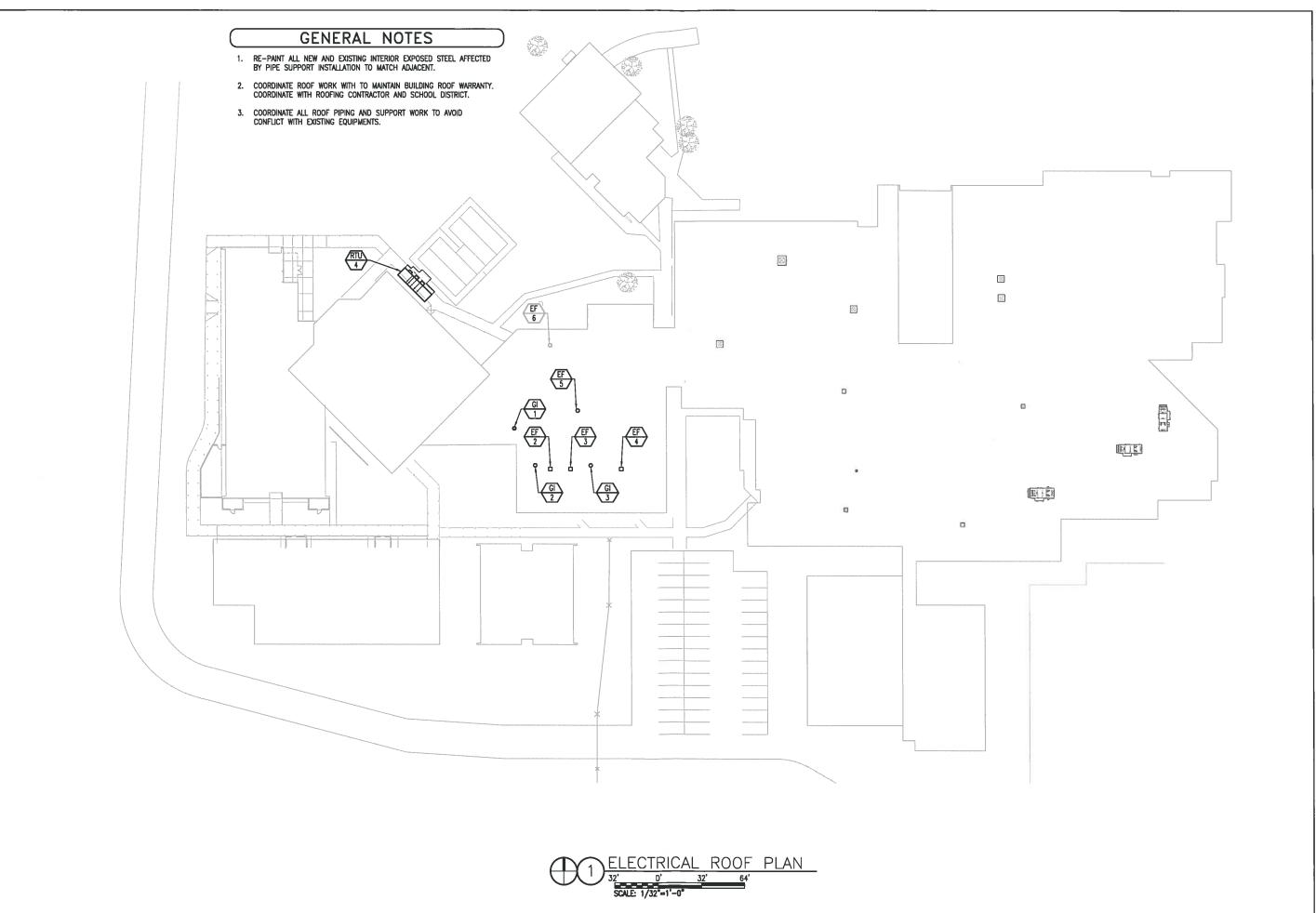
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JUNE 9, 2015

SHEET TITLE

ELECTRICAL DEMOLITION ROOF PLAN

E101



GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

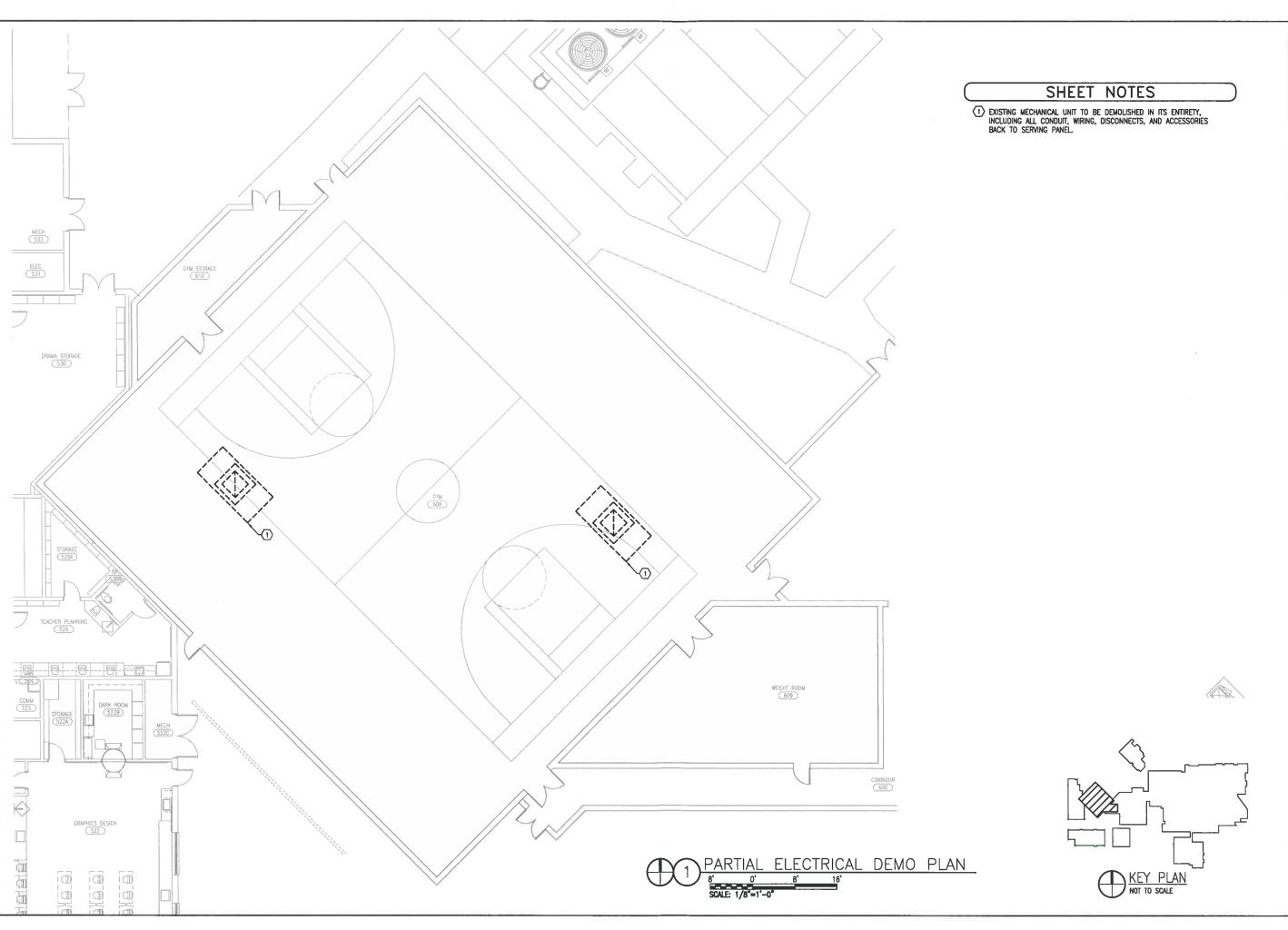
DESIGNED BY:

CHECKED BY:

*DATE:* JUNE 9, 2015

ELECTRICAL NEW WORK ROOF PLAN

E102



S C H M I D T
CONSULTING - GROUP, INC.

MEDIANCAI - BLETIEVAI - TRUCTIERAL
COMMINICATION - FRUITEMAI
ROBBOL (LEDBE - HUMBER 0537)
40 3 relation P. 18-300 - Personate, 17, 3300
P. 81-83-800 - P. 83-9-800
TOOL HOUSEON P. 8



MBER REVISION DESCRIPTION

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:
JTH

DRAWN BY:
JTH

JTH

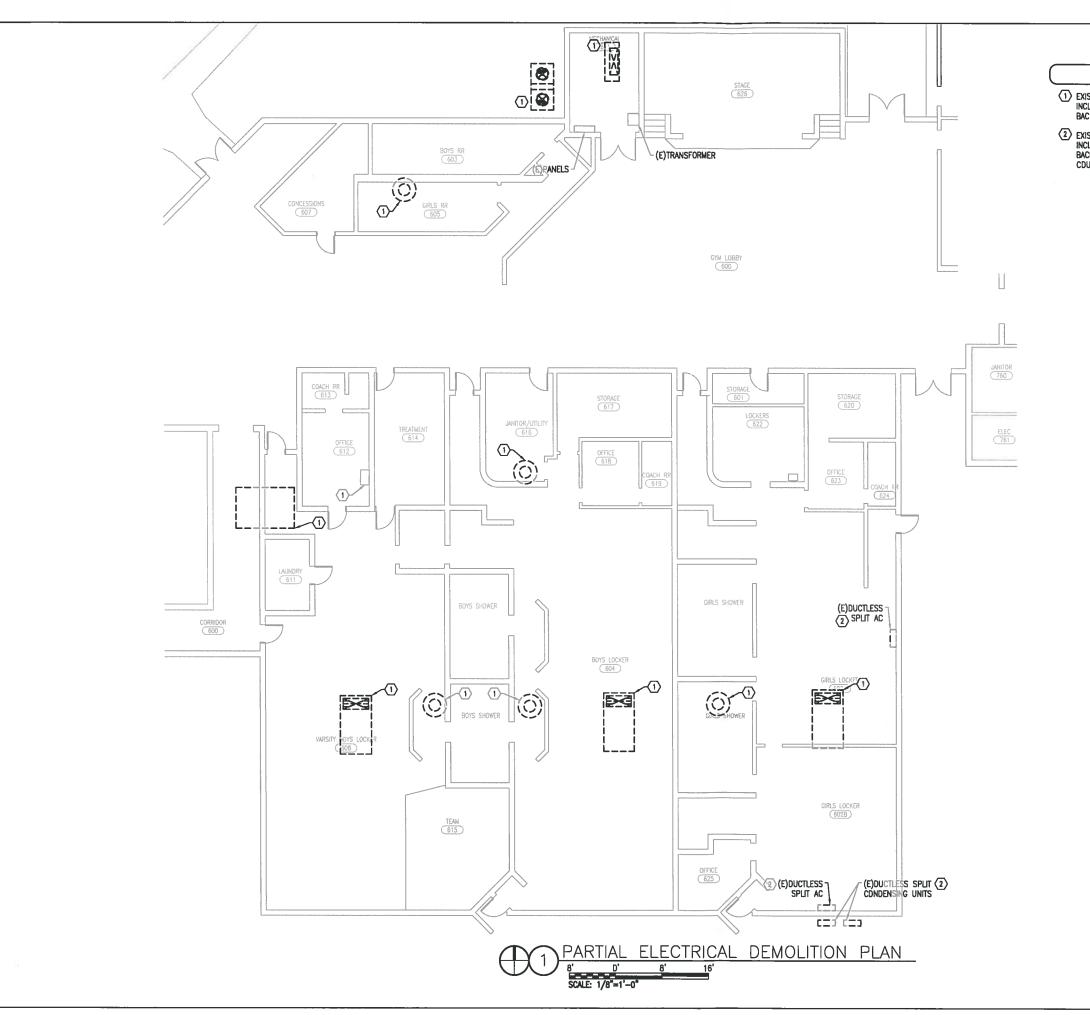
CHECKED BY:
TAN

*DATE:*JUNE 9, 2015

HEET TITLE:

PARTIAL ELECTRICAL DEMOLITION PLAN

E201



- (1) EXISTING MECHANICAL UNIT TO BE DEMOLISHED IN ITS ENTIRETY, INCLUDING ALL CONDUIT, WIRING, DISCONNECTS, AND ACCESSORIES BACK TO SERVING PANEL.
- (2) EXISTING MECHANICAL UNIT TO BE DEMOLISHED IN ITS ENTIRETY, INCLUDING ALL CONDUIT, WIRING, DISCONNECTS, AND ACCESSORIES BACK TO SERVING PANEL. RETURN EQUIPMENT BACK TO SANTA ROSA CDUNTY SCHOOL DISTRICT MAINTENANCE DEPARTMENT.



CONSULTING - GROUP, INC
MECHANICA - BECTICA - STRUCTURA
COMMUNICATION - ROUSTRAL
COMMUNICATION - ROUSTRAL
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7 P 850-489 500 - Persocole, R 2
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TODO NICHOLSCH P.E
R.ORDA UCESSE NIMASE 54862
5CG project: 2015-124

EAL NO FOR CONSTRUCTION

R DESCRITION

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:

DRAWN BY:

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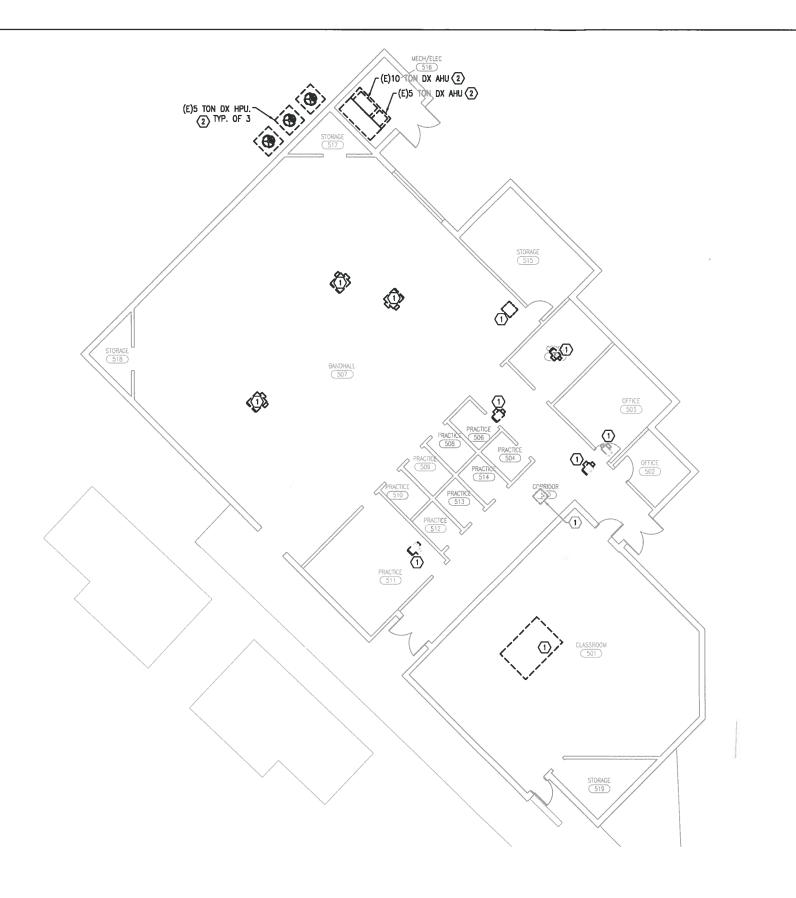
DATE: JUNE 9, 2015

SHEET TITLE:

PARTIAL ELECTRICAL DEMOLITION PLAN

E202

KEY PLAN NOT TO SCALE



EXISTING MECHANICAL UNIT TO BE DEMOLISHED IN ITS ENTIRETY, INCLUDING ALL CONDUIT, WIRING, DISCONNECTS, AND ACCESSORIES BACK TO SERVING PANEL.



SEAL MONTH CONTROL CON

REGERTION

REVISION

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

DESIGNED BY:
JTH

DRAWN BY:
JTH

ЛН CHECKED BY: TAN

DATE: JUNE 9, 2015

SHEET TITLE

PARTIAL ELECTRICAL DEMOLITION PLAN

E203

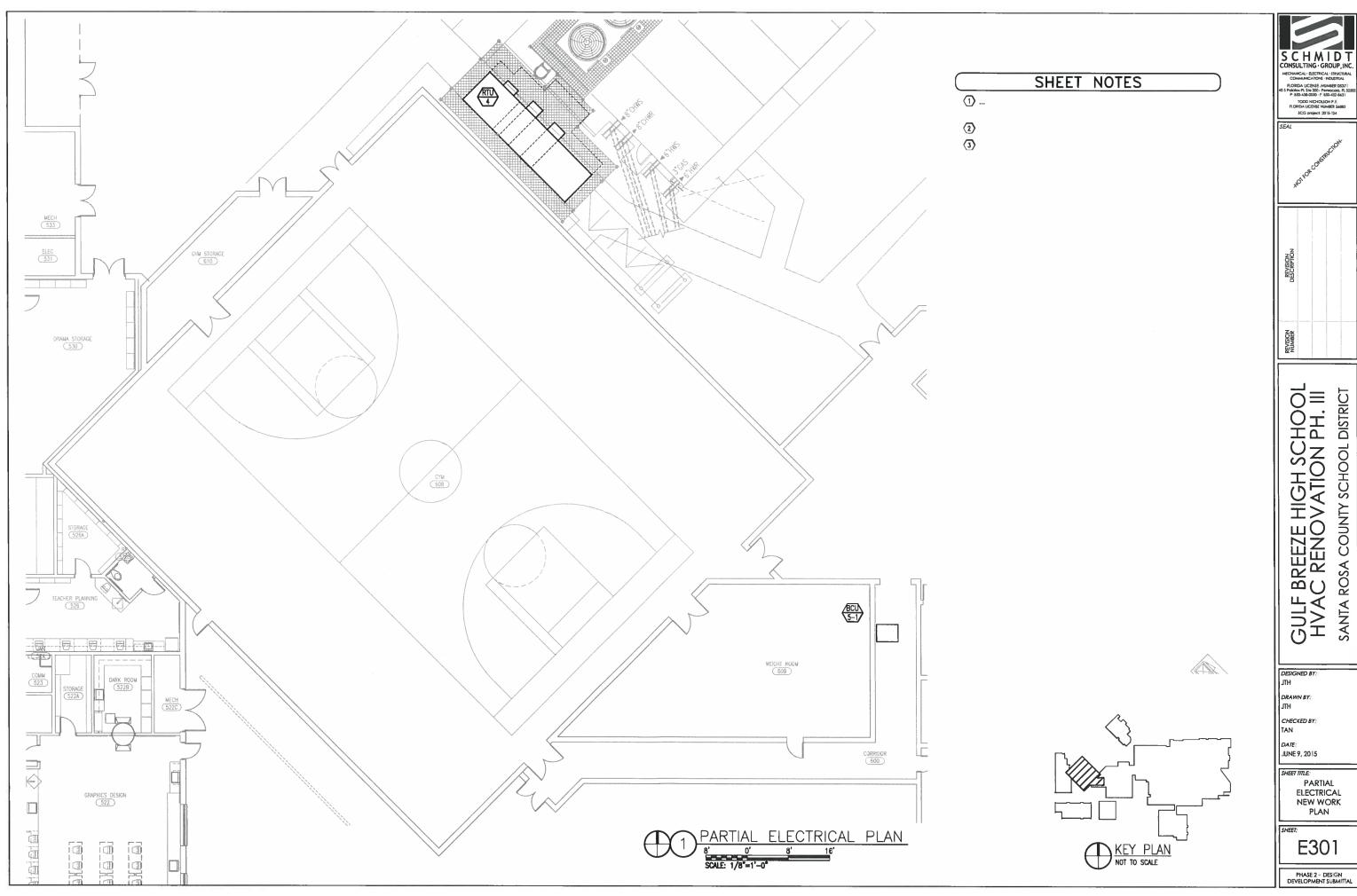
KEY PLAN NOT TO SCALE

PHASE 2 - DESIGN

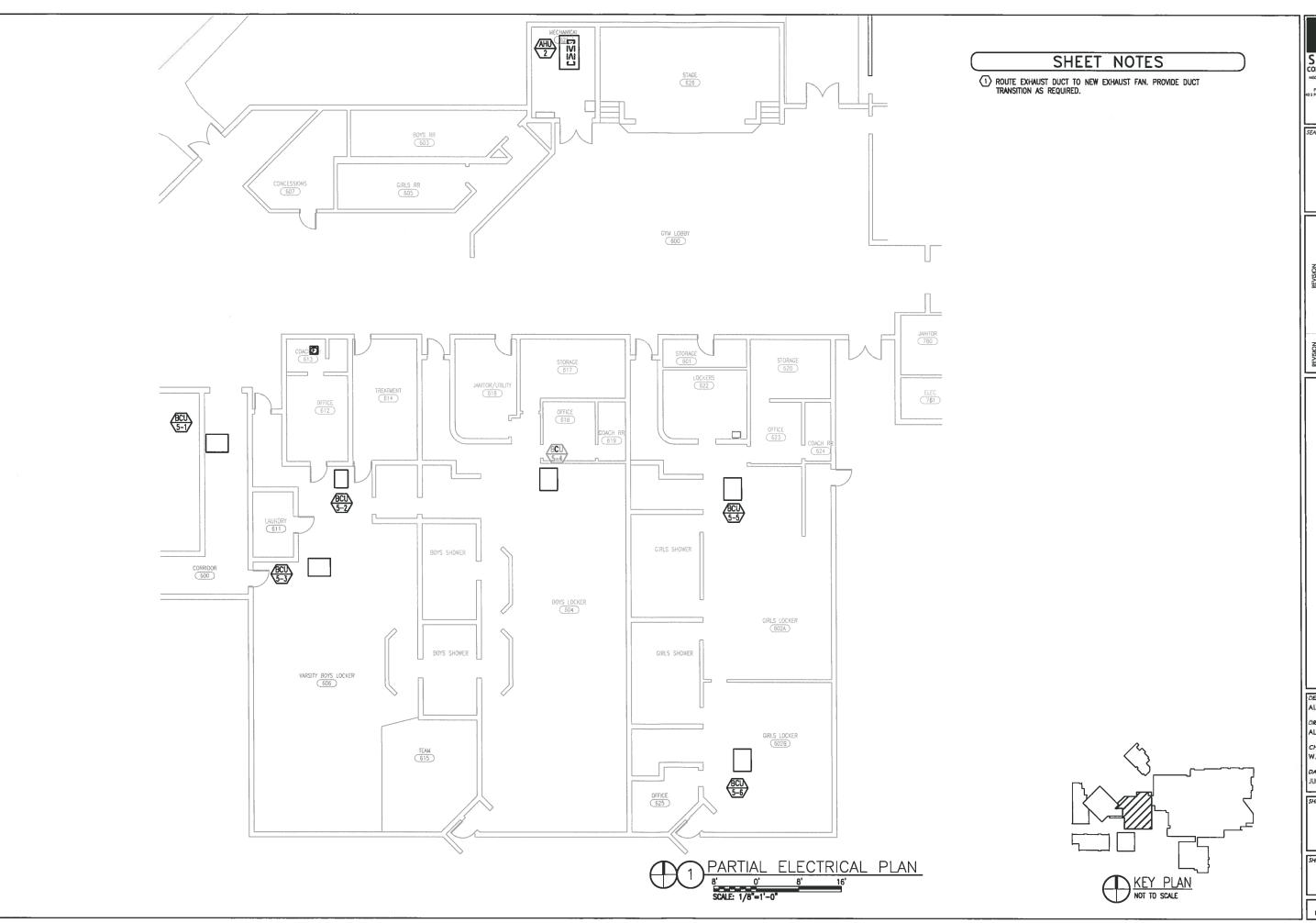
PARTIAL ELECTRICAL DEMOLITION PLAN

8' 0' 8' 16'

SCALE 1/8=1'-0'







S C H M I D T
CONSULTING-GROUP, INC
MECHANICA: -BECTRICA: -TRUICTUMA
COMMUNICATION: -FOURTHAIL
FRONDA LOEVES: NUMBER 03371
43 1 Petition Pt. 10+ 200: -Perimonole, Pt. 232
7- 630-45000; -F. 630-4500;
TODO NECHOSEN MUMBER 56802
SCC project: 2015-124

GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

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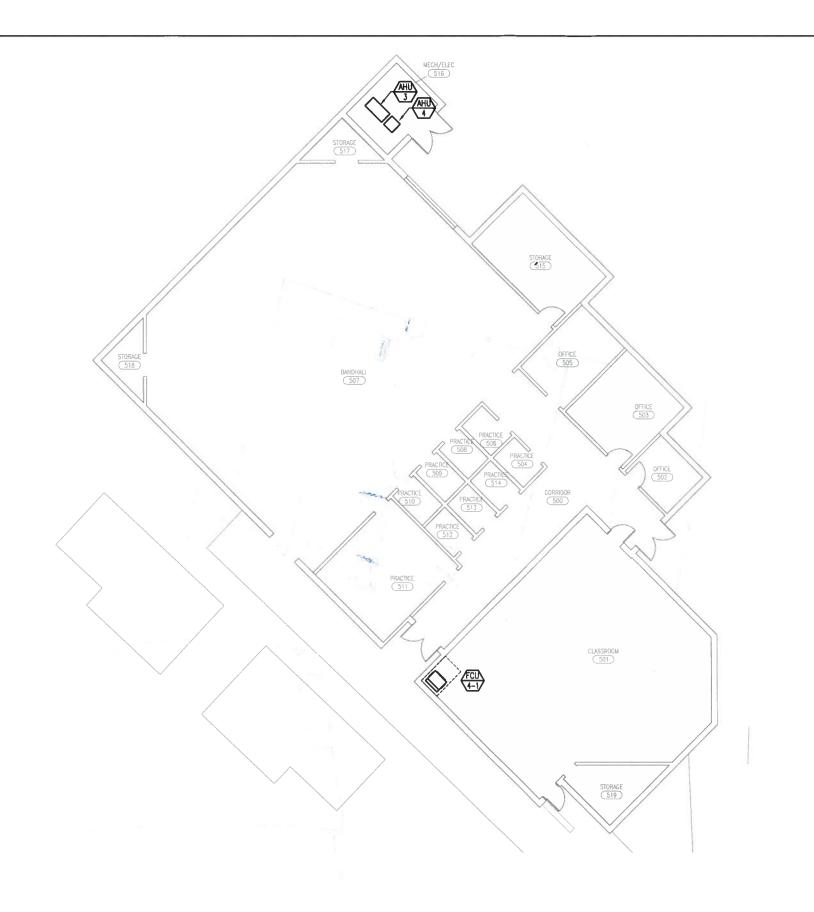
CHECKED BY:

DATE: JUNE 9, 2015

SHEET TITLE: PARTIAL ELECTRICAL NEW WORK

PLAN

E302







GULF BREEZE HIGH SCHOOL HVAC RENOVATION PH. III SANTA ROSA COUNTY SCHOOL DISTRICT

CHECKED BY: *DATE:*JUNE 9, 2015

PARTIAL ELECTRICAL NEW WORK PLAN

E303 PHASE 2 - DESIGN DEVELOPMENT SUBMITTAL

KEY PLAN NOT TO SCALE

ELECTRICAL PLAN