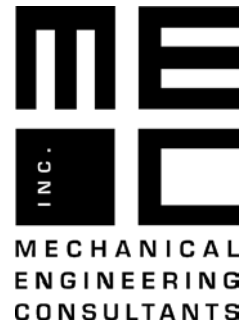


October 28, 2013

**County of Santa Barbara**

105 East Anapamu Street  
Santa Barbara, CA 93101



Attn: Greg Chanis, Assistant Director, General Services, Support Services.

Project: Coroner's Office

Subject: Ventilation Study in response to, Santa Barbara Civil Grand Jury report titled, ***Sheriff-Coroner's Bureau: The Manner of Death – A Final Diagnosis*** (Published June 21, 2013 on Grand Jury Web Site)

Dear Greg,

In response to the Grand Jury report, Mechanical Engineering Consultants, Inc. has performed a study of the ventilation system at the Coroner's Office at 66 South San Antonio Road in Santa Barbara.

Findings 3a & 3b in the report refer to lingering noxious odors, lack of proper ventilation and lack of proper air conditioning. Below are our findings and recommendations. See attached floor plan and key notes for reference. Photos with notes are also attached for visual reference.

**1) Office Area and Restrooms:**

- a. The office area and restrooms are served by a forced air furnace and 3-ton split air conditioner. Ductwork layout is adequate with supply and return air in each major office space.
- b. No fresh air intake causes a negative pressure in relation to the outside and possible back feeding from the lab. Fresh air is required by code.
- c. The restrooms do not have exhaust fans but they do have supply air. When bathroom windows are closed, air will flow from the bathrooms to the office area.

**Recommendations:**

1. Add a fresh air intake to the office system and add exhaust fans to the restrooms.

**2) Walk-in Cooler:**

- a. The Cooler mechanical equipment is adequate.
- b. The Walk-in cooler ceiling is corroded and in need of repair.
- c. The ventilation for the compressor mechanical room is not functioning.
- d. The compressor room exhaust fan is not operational.
- e. The compressor is low on refrigerant.

**Recommendations:**

1. Repair corroded cooler ceiling.

1616 Anacapa Street, Santa Barbara CA 93101-1910

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2. Fix or replace the compressor room exhaust fan and add refrigerant to the compressor.
3. Add a small dedicated exhaust to the cooler to keep it at a negative pressure at all times.

**3) Autopsy Lab:**

- a. Code requires a minimum of 12 air changes per hour and laminar flow with supply air overhead and exhaust low on the wall. Code also requires exhaust to be discharged up and away from the structure and occupied areas.
- b. Exhaust vents are low wall as required, but makeup air is not located to provide laminar flow.
- c. Exhaust air flow was tested and the current air flow is approximately 28 air changes per hour (1,560 CFM). More than adequate to meet the air change requirement (Finding 3a).
- d. The existing exhaust fan does not discharge air up and away from the building (Finding 3b).
- e. The existing exhaust system has a filter rack for a 20"x 24"x 2", 30% efficient filter. This filter was found collapsed in the duct from lack of service (Finding 3b).
- f. It was also discovered that the makeup air system has been disabled and abandoned in place (Finding 3b). This causes a negative pressure in the lab of -0.29" WC when the doors are closed and exhaust is running. Normal negative pressure should be -0.01" WC.
- g. The lab has a 1.4 ton window air conditioning unit that is inadequate when the exhaust fan is operating.
- h. The office area air conditioning system also serves the lab.

**Recommendations:**

1. Replace the makeup air system to provide well filtered and conditioned (heated and cooled) fresh air, properly distributed to provide laminar flow at the autopsy table and full coverage in the lab (Recommendation 5).
2. Replace the rooftop exhaust fan with a vertical discharge fan and high velocity stack (Recommendation 3b).
3. Remove the office A/C supply grille and cap the duct. Office and Lab air systems must be segregated.
4. The size of the window A/C unit is adequate to control the room temperature when the exhaust fan and makeup air systems are off. Conditioned makeup air will control the room temperature when the exhaust system is operating.
5. Add room static pressure gauges to prove negative lab pressure to occupants of the building.

**4) Locker Room:**

- a. The locker room is served by a 3-ton ductless split air conditioner. This is oversized for this room, however it is working.
- b. There is a small general exhaust fan in the center of the room that is not operational.
- c. The shower and water closet are served by a large exhaust fan that may have once served a fume hood. Air flow is much more than required for these rooms and draws makeup air from the rest of the building when operating.
- d. The disabled makeup air system (Finding 3b) also has duct and grilles serving this room.

**Recommendations:**

1. Replace the oversized bathroom and shower exhaust fan with appropriately sized fans.
2. Cap off the makeup air ductwork into this space and patch the ceiling.
3. Repair or replace the existing general exhaust fan and interlock with the office FAU fan for continuous operation during occupied hours.

**5) Office (Lab):**

- a. This back office is served by the front office A/C system. No changes are needed.

Cordially,

Steve Dahl & Paul Tziouvaras  
For: Mechanical Engineering Consultants, Inc.

SCO1306\_Coroners\_Report\_Findings\_3a\_3b(MEC\_10-28-2013).docx



Lab & Locker  
Room Makeup Air  
Unit, Disabled.

Locker Room A/C  
Condensing Unit.

Office A/C  
Condensing Unit.



Office A/C Furnace  
and Evaporator.

No Fresh Air  
Intake.



Walk-In Cooler  
Ceiling Corrosion.



Office A/C Vent  
into Autopsy Lab

Disabled Makeup  
Air Vents.

Low Wall Exhaust  
Vents.



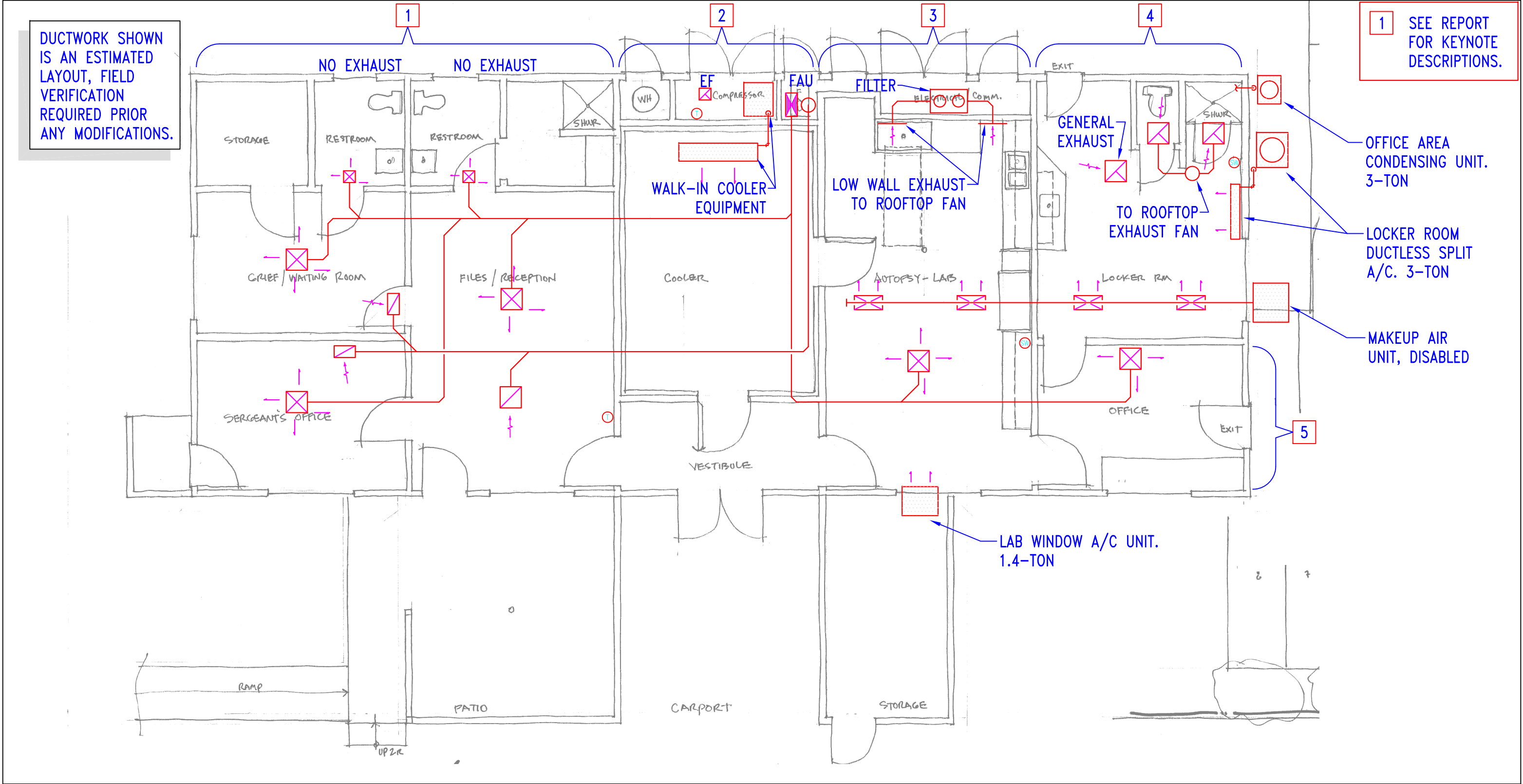
Locker Room  
Shower and Toilet  
Exhaust Fan.

Locker Room  
General Exhaust,  
Not Operational.

Autopsy Lab  
Exhaust Fan. Down  
Shot Discharge.



Autopsy Lab  
Exhaust Duct  
Filter.  
Requires Regular  
Replacement.



PROJECT: VENTILATION STUDY OF COUNTY CORONER'S OFFICE

DESCRIPTION:  
MAIN BUILDING EXISTING  
CONDITIONS.



SCO-1306  
MECHANICAL  
ENGINEERING  
CONSULTANTS  
INC.  
1616 Anacapa Street  
Santa Barbara, Ca 93101  
Tel (805) 957-4632

SITE: COUNTY OF SANTA BARBARA CORONER'S OFFICE  
SHEET TITLE: MAIN BUILDING MECHANICAL FLOOR PLAN  
SCALE: NTS  
DRAWN BY: SD  
CHECKED BY: SD

ADDENDUM #

DATE: 10-11-13

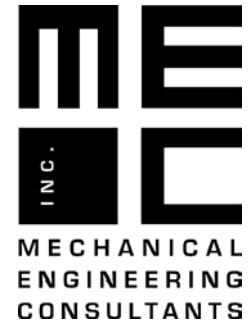
SHEET:

MSK-1

1 OF 2

October 22, 2013

Andrew Tranovich  
County of Santa Barbara Capital Projects  
1105 Santa Barbara Street  
Santa Barbara, CA 93101



Project: SB County Coroner's Office

Subject: Fees for A/E Services in response to, Santa Barbara Civil Grand Jury report titled, ***Sheriff-Coroner's Bureau: The Manner of Death – A Final Diagnosis*** (Published June 21, 2013 on Grand Jury Web Site)

Dear Andrew,

Thank you for the proposal request. Enclosed is my understanding of the scope of services and associated fees based on the recent documents received and our conversations.

**MEC proposes to provide traditional architectural, mechanical, electrical, structural engineering services for the following, based on review of the Grand Jury report and MEC's evaluation and report:**

- A. Findings 3a and 3b.

**MEC proposes to provide bid/construction phase services as follows:**

- A. One scheduled pre-bid meeting.
- B. Review and process addendums.
- C. One scheduled pre-construction meeting.
- D. Review and process RFI's.
- E. Review submittals and shop drawings to include initial review and subsequent correction review.
- F. Up to two site observations of the work in progress with a written report.

**Fees:**

The fee for the above services is:

Findings 3a and 3b .....\$29,000

**Preliminary Construction Costs:**

Findings 3a and 3b .....\$62,000 - \$72,000

**Reimbursable Expenses:**

Reimbursable expenses will be invoiced per attached exhibits.

**Exhibits:**

Attached Exhibit "A" is a part of this agreement.

**Services not included above, that may be provided on a time and material basis at the then current hourly rates, if requested, and mutually agreed to, include but are not limited to:**

- A. Work beyond the scope above.

Cordially,

A handwritten signature in black ink, appearing to read "Paul Tziouvaras", is written over a horizontal line.

Paul Tziouvaras, Principal  
For Mechanical Engineering Consultants, Inc.

Please sign and return one original signature copy if you wish MEC to do the work as described above.

Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Title: \_\_\_\_\_

**Exhibit A**

The following rates apply through year end:

<u>Description</u>	<u>Rate(\$/hr)</u>
Principal .....	160.00
Senior Engineer.....	145.00
Engineer/Senior Designer .....	140.00
Assistant Engineer 1 .....	125.00
Assistant Engineer 2 .....	115.00
Title 24 Energy Analyst .....	100.00
Senior Drafter .....	100.00
Drafter .....	90.00

Overtime: When applicable, will be invoiced at 1.5 times the billing rate for standard overtime, and 2.0 times the billing rate for Holidays.

Reimbursable expenses:

<u>Description</u>	<u>Charge</u>
Plots on bond paper .....	\$4.00/sheet
Plots on vellum .....	\$8.00/sheet
Photocopies .....	\$0.15/sheet
Shipping.....	Cost plus 15%
Reproduction .....	Cost plus 15%
Mileage .....	\$0.555/mile
Authorized Outside Services.....	Cost plus 15%