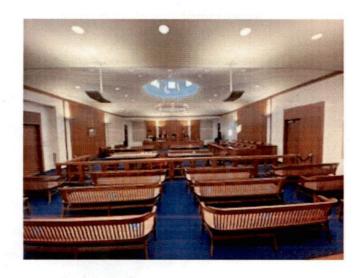
Photos of facilities Courtroom 2A

(40'11" x 60'3" total; 40'11" x 18'2" gallery area only)



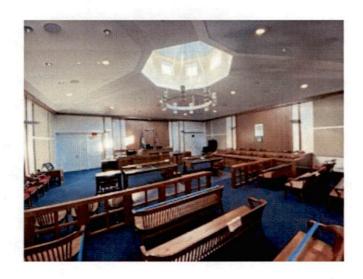




Courtroom 2B

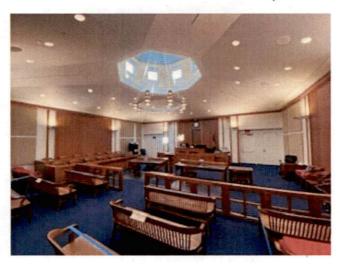
(42' x 42')





Courtroom 2C

(42' x 42')

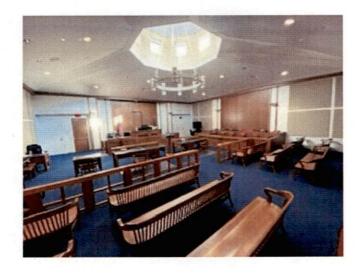




Courtroom 2D

(42' x 42')





Courtroom 2E

(27'5" x 27'5")





Jury Assembly Area

(30'4" x 31'9" at widest point)

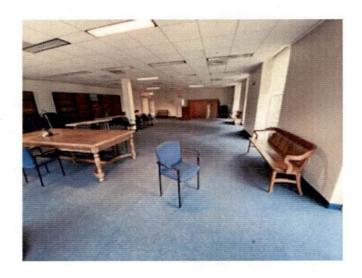






Community Room

(appx. 30' x 45')



Architectural renderings for modifications to courtrooms

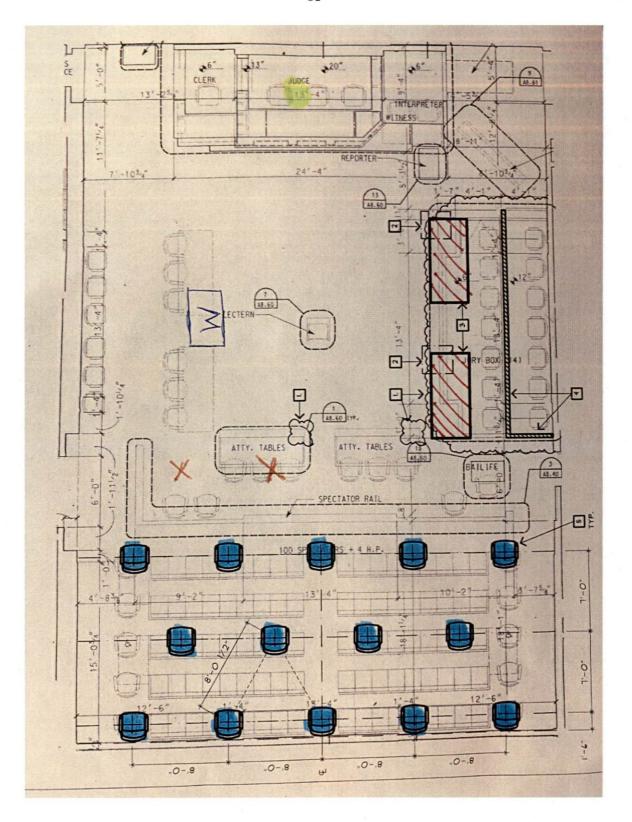
2A

On the following page is an architect's rendering of the layout after proposed modifications to Courtroom 2A. Because the document depicts both existing features and future features of the courtroom and may be difficult to decipher, several key points have been highlighted.

The judge's bench/chair area is highlighted in yellow. The blue highlighted area represents seating in the jury box under this plan, formerly the gallery. Of note, each jury seat has 8 feet distance from any other seat. The orange Xs denote possible location for additional alternate jurors (up to 16 total jurors) while respecting social distance protocols. Those 2 seats would be inside the bar.

The rectangles with red diagonal stripes represent the general location of counsel tables. The lower bank of the existing jury box would be removed so that counsel tables can be placed further to the judge's left, preserving space in the well of the courtroom.

The blue box with the W is the general location of a new placement for the witness stand. Note that per this plan, the podium would not be used while a witness is testifying.



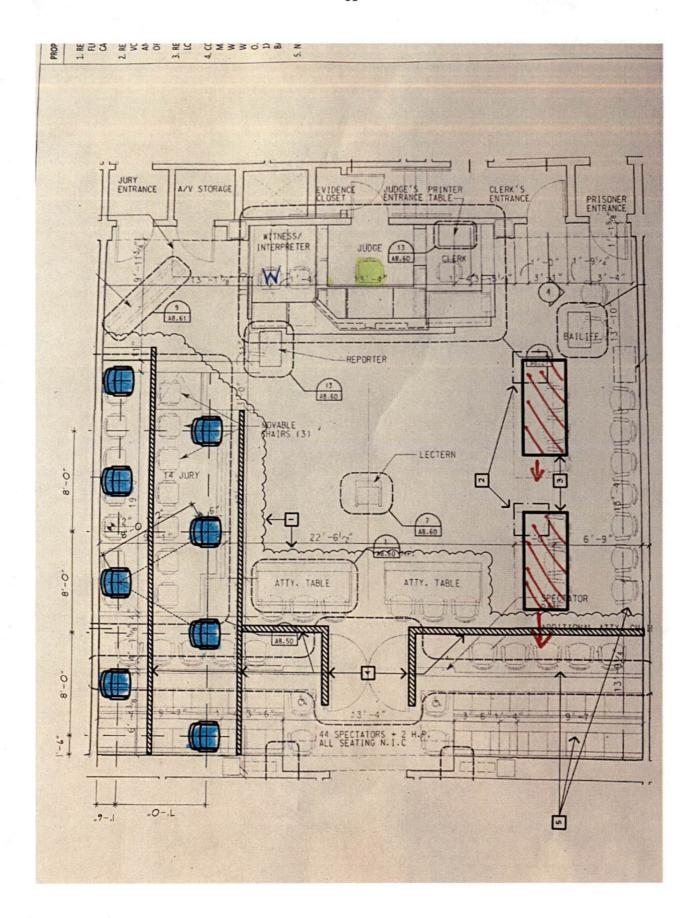
2D

On the following page is an architect's rendering of the layout after proposed modifications to Courtroom 2D. (NB: this schematic is prepared for a courtroom that is the mirror image of 2D because there was not an available blueprint for 2D to use at this time) Because the document depicts both existing features and future features of the courtroom and may be difficult to decipher, several key points have been highlighted.

The judge's bench/chair area is highlighted in yellow. The blue highlighted area represents seating in the jury box under this plan. Of note, each jury seat has 8 feet distance from any other seat. The jury box as depicted here is modified from the current jury box, as it did not provide for proper social distancing.

The blue W is the location of the witness stand.

The rectangles with red diagonal stripes represent the general location of counsel tables. The location of the counsel tables will actually be closer to the back of the courtroom than depicted (see arrows). The bar that is currently in place will be removed. The tables need to be farther to the back so that any individual sitting at the end of the defense table closest to the bench will have sight line to the witness stand.



Summary letter regarding HVAC system in courthouse from Assistant Director of General Services for Loudoun County:



July 29, 2020

Stephen E. Sincavage,

Judge

20th Judicial Circuit

Commonwealth of VA.

18 Market Street

Leesburg, VA 20175

Judge Sincavage,

The Department of General Services (DGS), has reviewed your questions and consulted all of the DGS personnel involved in providing the Court Complex HVAC service. All of your questions are pertinent to the safety and well-being of the Staff and Public entering the Court Complex. General Services already had a number of upgrades to the system as part of our planned replacement equipment program. During 2019, DGS contracted Boland Trane to rebuild the two Chillers. DGS also contracted Boland Trane to rebuild all of the Variable Air Volume, (VAV) boxes in the Complex. During the rebuilding of the VAV's the controls and operating components were also replaced. You may have noticed new thermostats throughout the Court Complex. This work was completed in overnight shifts from January 2020- March 2020.

On the "air side", each air handler were operationally measured to test whether they met the Design Engineer's intent. No AHU was found deficient but 2 of the 11 needed damper work. Those were corrected and re-calibrated, now they are operating optimally. There are many concerns regarding introducing Outside Air whenever possible in the largest quantity available without compromising comfort or operation of machinery like copy machines due to paper jams. DGS has listed some ACTION ITEMS to be completed and inform you of the changes made to the Building Automation System, (BAS).

Most of the concerns regarding the spread of CV-19 through the HVAC are based on the lack of the general Science of HVAC. After the air has been heavily filters as discussed in the questions and answers, the moisture in the air is condensed. This condensing process happens during the process in cooling. As the air moves over the cooling coils the moisture in the air is cooled and condensed. That condensed water is dumped into a drain pan with an active chemical algaecide and fungicide. From the drain pan the water is drained into a closed Sewer drain system.

DGS has the ability to increase outside airflow to the maximum allowable settings to give maximum dilution to the air. It will be increased far beyond the Demand Ventilation setting prior to CV-19. DGS has a very strong maintenance program. It was re-designed to utilize more in-house staff than in previous years. The intent created a lower HVAC service requests from various departments. We have saved money and can use the savings to invest in the new recommendations from the CDC without a substantial impact to the operational budget. DGS will now switch from the MERV-8 to the MERV-13 disposable filter.

The on-site Engineers will be working with the Vendor Boland Trane to ensure that all of the new programmed parameters are correct and compatible with the Building Automation System. If you have additional questions, we are here to provide the answers and services.

Regards, Amidee "Andy" Bollinger Assistant Director, Department of General Services 801 Sycolin Rd. S. #300 S.E. Leesburg VA. 20175

Answers by the Assistant Director of General Services for Loudoun County, to inquiries posed about the HVAC system in the courthouse:

1. The type of HVAC system we have, its condition, quality and its effectiveness

The Courthouse Complex uses Trane manufactured equipment. The equipment is in good condition, serviced by the manufacturers Authorized Factory Service Representative Boland Trane for particular tasks. The system has been updated recently in phases to keep up with the latest ASHRAE guidelines, planned manufacturer's obsolescence and ease of operation for Department of General Services (DGS) on-site Engineers. This reply will discuss the most recent controls work directly related to air flow in the courthouse that was most recently completed in March. The current effectiveness of the equipment, controls and training of the staff is at an optimal level.

2. What measures are taken to ensure that the system operates properly and provides acceptable indoor quality for the occupancy level of the courthouse and, if there is capability to do so, for particular zones/areas/rooms in the building)

Indoor Air Quality at the Court Complex has just been audited for Signal upgrades between the Sensors and Actuators. The Actuators that move the dampers were checked, replaced when necessary and re-calibrated for proper operation. The importance is in the direct relationship between Outside Air (OA) and Return Air (RA) and the system's ability to operate automatically, manually, temporarily or indefinitely. The zones are served by Variable Air Volume (VAV) boxes or terminal units. These VAV's regulate the air necessary for each zone or room as required to maintain a Dry Bulb temperature set point such as 70F. The boxes have minimum and maximum air flow parameters for each area and normally operate between at mid-range. The total VAV's in a building cannot exceed the delivered air from the larger Air Handling Unit (AHU). The air is set to deliver 55F to the VAV/Terminal boxes, the box may or may not add heat for space temperature. This engineering allows for simultaneous heating and

cooling throughout the year based on space temperature requirements such as a server room versus a Jury Waiting Room.

3. Is it possible to increase outdoor ventilation?

Outdoor Air (OA) can be increased and monitored to assure that comfort and conditioning of materials (paper, fabrics) are not compromised. Increasing OA does have limitations by Engineered Design for Construction of the Courts Complex.

4. Is the demand-controlled ventilation disabled? If not, can it be per CDC recommendation?

Demand Ventilation at this writing is in place based on the CO2 levels in the air stream. DGS can disable this feature as recommended for the space, set the OA based on a minimum/ square footage calculation or occupancy calculation.

ACTION ITEM; Disable CO2 demand ventilation in the software.

5. Do we/ can we further open minimum outdoor dampers to reduce or eliminate recirculation? What are the effects of doing so

Outside Air (OA) minimum can be set at a higher percentage of Total Air supplied to all spaces in the Court Complex. The effects are a sliding scale based on Weather conditions. In high humidity conditions, mid-Summer and mid-Spring it is difficult to control humidity. For example in mid-Spring the Dry Bulb temperature can be satisfied quickly by the HVAC system, however the humidity level may suffer due to minimum runtimes of the equipment to adjust the temperature. In mid-Summer the OA temperature can be both very high and filled with humidity. This impact is often referred to Humiditure or Feels like Temperature.

6. What type of filtration do we use and is it the highest compatible with the filter rack? If not, is it possible to upgrade? Are filter edges sealed?

The Court Complex uses a number of air filtration and conditioning products. The main Air Handling Units (AHU) number 1 and number 2 uses a mix of filters. The Pre-Filter is the first filter encountered by the mixture of Outside Air and Return Air into the mixing box at a specific temperature and humidity setting pre-determined by a software set point, typically between 68F – 72F. The air is filtered through a MERV-8 disposable filter and then passes through charcoal filters to remove odors. Leaving the charcoal filters the air enters bag filters for fine particulates such as pollen that may have passed through the first 2 filters. Bag filtration is used in many medical facilities for areas that are not laboratories or operating rooms but for public areas such as waiting rooms and cafeterias. The filter edges are sealed at various points by various materials. The initial disposable and charcoal filters are sealed only by the overlapping metal racking in which they are supported, the ends are tension bar pushed against the filters for a snug fit. The final stage Bag filters are gasket fitted filters, in this stage all bag filters are clipped into place and not slid into place. This assures an optimal and consistent placement of each specific filter. The gasket applied to the perimeter of the bag filters and locking features ensures higher levels of air seal and filtration, eliminating By-Pass Air. The remaining AHU's use the disposable MERV-8 Filters.

<u>ACTION ITEM;</u> DGS will replacing all **MERV-8** disposable filters with **MERV-13** disposable filters.

7. What is the filter replacement protocol?

DGS filter program has evolved over the last year. DGS now does all filter, belt and coil cleaning in-house versus an outside contractor. DGS have found that based on locations such as the Court Complex that the department receives higher quality services from DGS staff than compared to the services and cost of contractors for this service. The filter replacement program is a scheduled program based on institutional knowledge and does adjust from season to season. The calendar replacement calls for the filters to be changed monthly, bi-monthly and quarterly at various locations. Specifically at the Court Complex the filters are changed quarterly by calendar schedule. In addition to the calendar schedule the software Building Automation System also looks at how full (loaded) the filters are by measuring the air pressure on each side of the filter. This will trigger an alarm when the set point has been exceeded. Most often the conditions can exist in the Spring time with high pollen spore counts or in the summer with Construction taking place up to miles away from the Court Complex. The Manometer that constantly reads the air pressure is not calendar driven and gives the Engineers an alert to change the filters prior to a schedule Calendar change of filters.

- 8. Does our system run 24/7? If not, could it and would that improve air quality/ maximize safety against COVID-19?
- 9.
 The DGS policy is to run all buildings with very few exceptions 24/7. This Policy/Practice is based on Historical Data from our Utility Software. We have found a stable building is less expensive and provides better human comfort and paper stability for copy machines and books and documents.
- 10. Is it possible, if decided to be appropriate for relatively high density spaces (jury assembly/ community room with jury overflow) to provide portable air filtration, ventilation, and/or ultraviolet germicidal irradiation devices?

The devices that you're inquiring about is possible, however at this time DGS will have to research the availability of any of these items. The demand for air purification devices that actually work is quite high, while the production due to CV- 19 has slowed down production and shipping.

11. Does our system utilize cross draft airflow – if not, could it?

The use of cross flow utilization became more popular in HVAC design after the Courthouse Complex was designed and constructed. Since that time the practice has been incorporated into many of the new designs from the Department of Transportation and Capital Improvements (DTCI). This cross flow is obtained by exchanging the conditioned exhaust air across an air to air heat exchanger medium to preheat or precool the incoming air. It does not add to the efficiency of air cleaning or distribution, it is an energy saving device philosophy. The current AHU's cannot be retrofitted. The air is introduced through the AHU, distributed by the VAV boxes and either returned or exhausted via the AHU'S Exhaust dampers or the various exhaust fans throughout the building, primarily the bathroom exhaust fans. All of these components must be balanced or drafts occur as well as doors that open themselves or difficult to open. This can run conflict with the ADA requirements for access on the inch/pounds requirements to open a door if a person is handicapped.

If you have other comments that would seem to be important to communicate in our plan to establish the standard and capability of our HVAC system, as well as any improvements we could add if necessary, please provide those as well.

DGS, want to answer your questions directly and chose to respond both to your direct questions and also provide a short summary narrative.

Photographs of Selected COVID-19 Signage in Courthouse

Outside main entrance to courthouse:



WARNING

Security of the former Committee partitions, and in an effort to keep the public rate and limit the up the COVID-33 even, 30 NoT ENTER the COVID-10015 E, within the last 14 days, any one or more of the following source.

- 1. You have traveled intercationally
- 2. You have been directed to quarantics, insists, or self-manage.
- Too have trood positive, been disposed with, or have find contact with anyone who has been displaced with, CDVID 55.
- 4. You have experienced a lever, stugh, or shortness of breath
- 3. You have recided with or bean in time contact with any person in the above exercisonal categories
- Too ore not a party to litigation of a subpressued/vise-stal selection.
- 7. You are able to conduct your business with the Courts critice or by phone

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CLEAR OF THE ORGEST COURT, THE PIT-627

GENERAL DISCRET COURT. NO. 277-0013

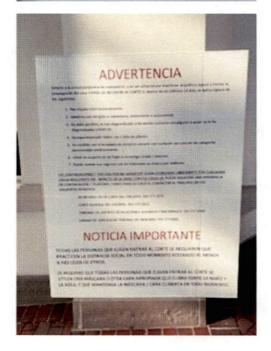
EVENUE AND DOMESTIC BUILDINGS OFFICE COURT AND ASSESSED.

NAMED AND DESCRIPTIONS OF PERSONS ASSESSED.

IMPORTANT NOTICE

ALL PERSONS CHOOSING TO ENTER THE COURTHOUSE ARE REQUIRED TO PRACTICE SOCIAL DISTANCING AT ALL TIMES BY REMAINING AT LEAST 6 FEET AWAY FROM OTHERS.

ALL PERSONS CHOOSING TO ENTER THE COURTHOUSE ARE REQUIRED TO WEAR A MASK OR OTHER APPROPRIATE FACE COVERING OVER THE NOSE AND MOUTH, AND TO KEEP THE MASK/TACE COVERING ON AT ALL TIMES.





Immediately inside main entrance to courthouse:

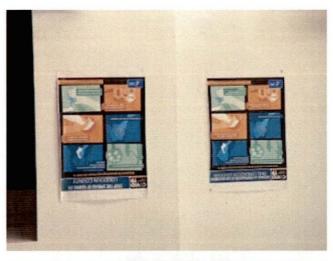




In security screening area:











Near entrance to Clerk's Office across from elevators:



Outside each courtroom:



Inside circuit courtrooms:





Approved for re-submission to th	e Supreme Court of Virginia this 1574
day of <u>OCTOBER</u> , 2020.	
_	Douglas L. Fleming, Jr.
	Chief Judge 20 th Judicial Circuit of Virginia