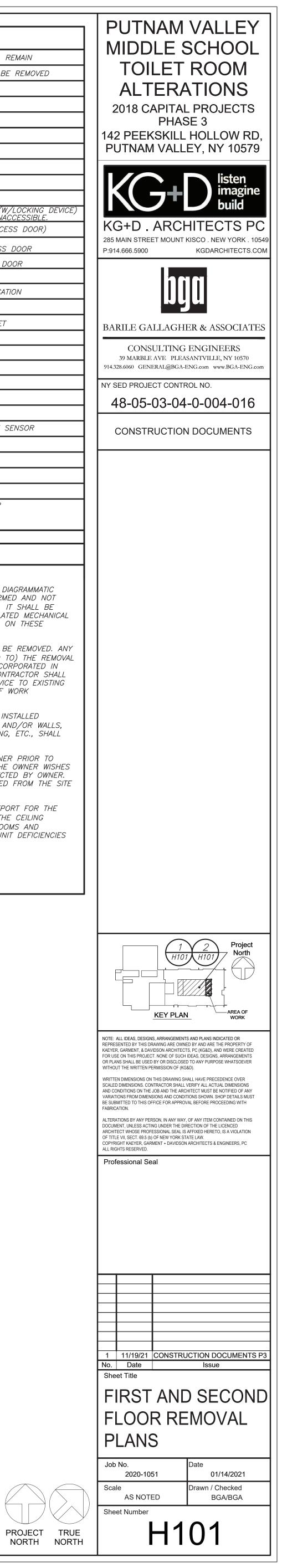
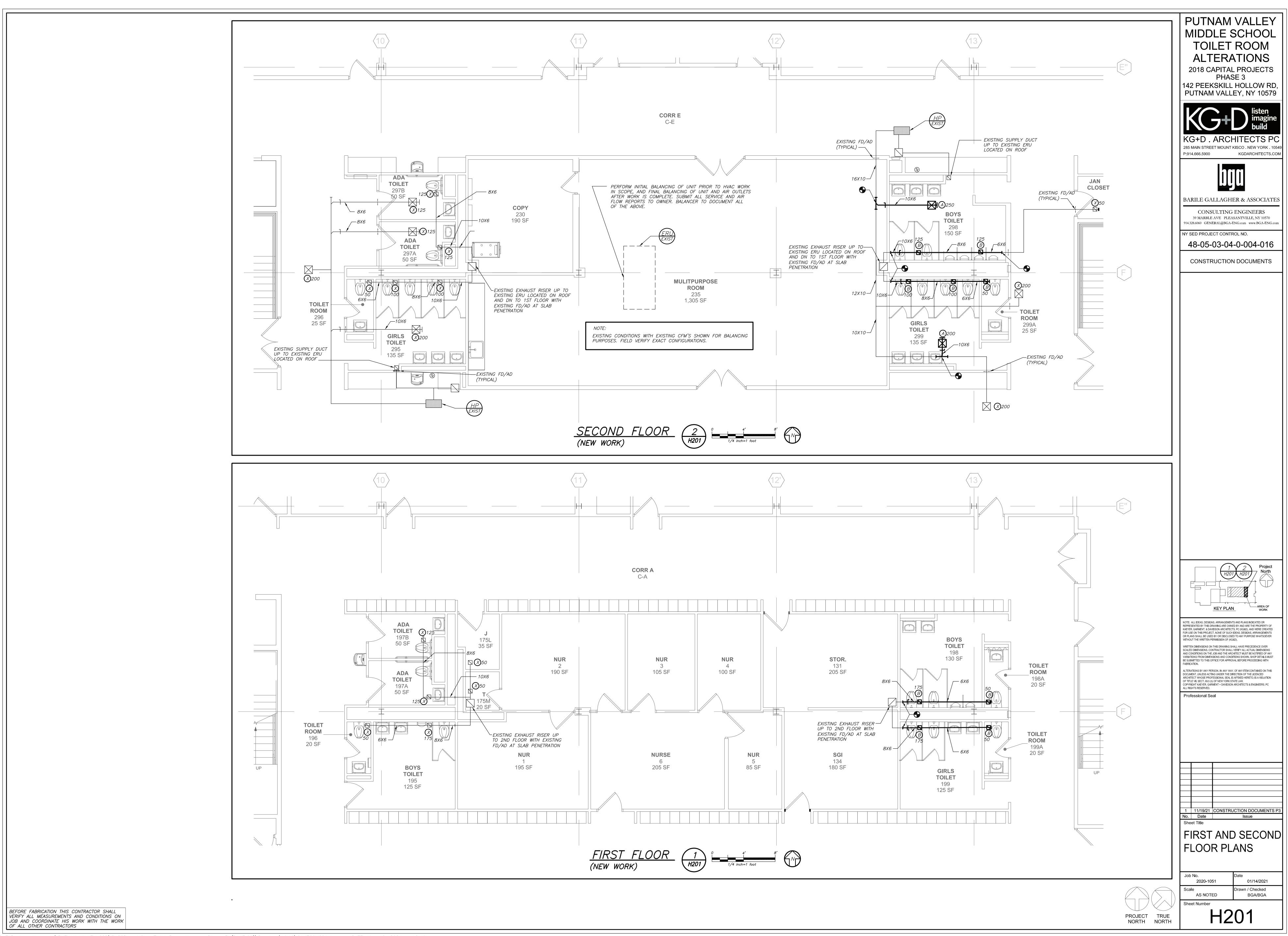


DBE: TAB: Layout1 – Y:\PUTNAM VALLEY CSD\PVCSD – MS – Toilet Renovations – Phase 3 (2147.00)\Drawings\HVAC\214700H101.dwg – DATE: Nov 12, 2021 – 12:09pm

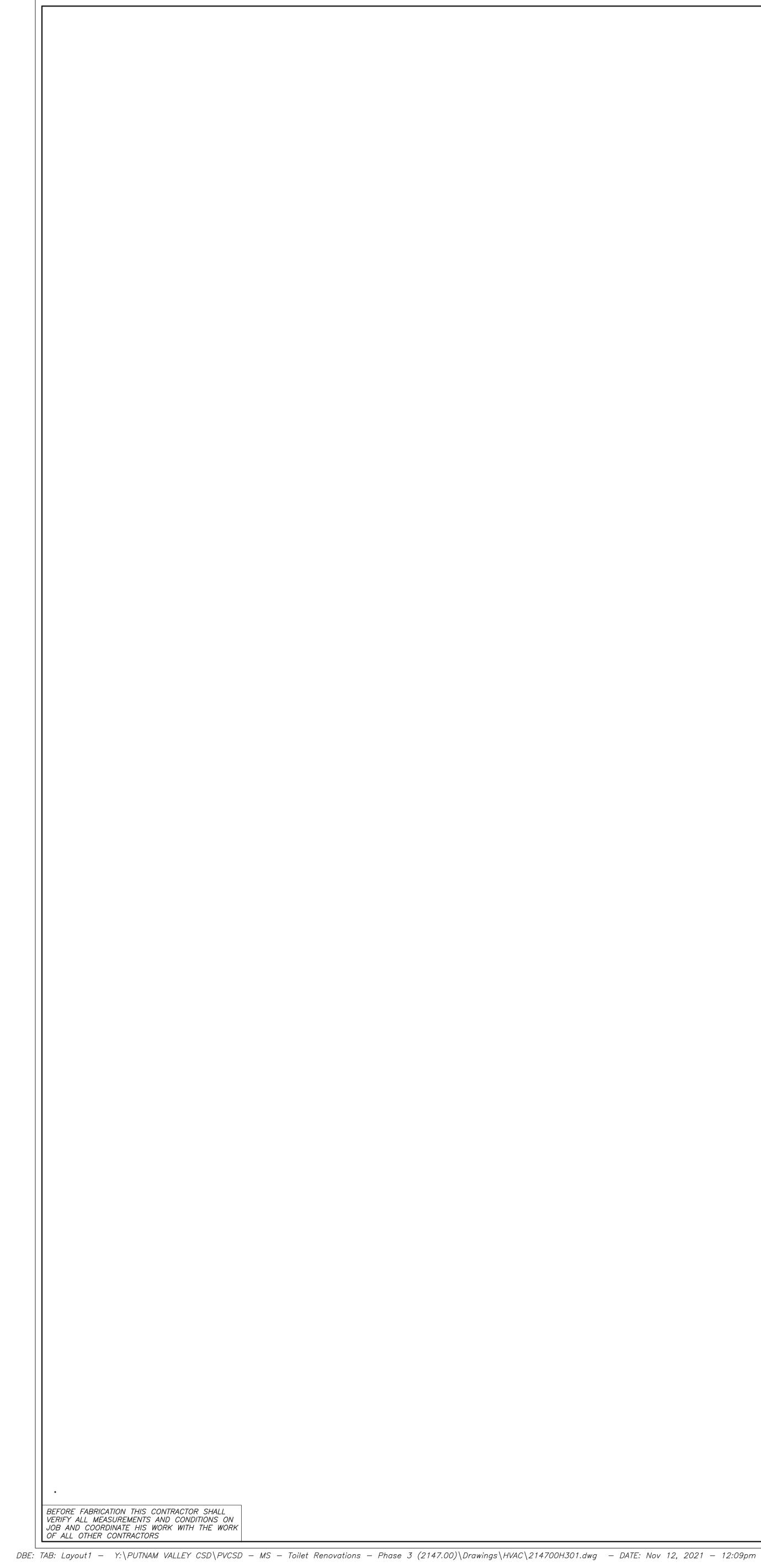
|            | EXISTING DUCTWORK, EQUIPMENT, ETC. TO REMAIN   |
|------------|--|
|            | EXISTING DUCTWORK, EQUIPMENT, ETC. TO BE REMOV   |
|            | —— point of change in duct size<br>NEW DUCTWORK<br>——1" Thermal, acoustic lining (where applicable)          |
|            | T THERMAL ACOUSTIC LINING (WHERE APPLICABLE)  FLEXIBLE CONNECTION NEW DUCTWORK  POINT OF CHANGE IN DUCT SIZE |
| (*)***     |  |
|            | SQUARE DUCT TURN WITH TURNING VANES  |
|            | EXISTING 4-WAY CEILING DIFFUSER  |
|            | EXISTING CEILING REGISTER  |
|            | TYPE -SEE SCHEDULE<br>NEW 4-WAY CEILING DIFFUSER   |
|            | —— СFM<br>ТҮРЕ –SEE SCHEDULE<br>CEILING EXHAUST/RETURN REGISTER  |
|            | —— CFM<br>DUCT MTD. MANUAL AIR VOLUME DAMPER (W/LOCKIN<br>OR CABLE OPERATED WHERE DAMPER IS INACCESSIBL      |
| •          | MOTORIZED AIR VOLUME DAMPER (WITH ACCESS DOOI  |
|            | - SD & AD<br>SMOKE DAMPER (U.L. APPROVED) & ACCESS DOOR  |
|            |  |
| HP         | EXISTING HEAT-PUMP UNIT IDENTIFICATION   |
| ERU        | EXISTING ENERGY RECOVERY UNIT IDENTIFICATION   |
| CFM        | CUBIC FEET PER MINUTE  |
| COD        | CABLE OPERATED DAMPER FROM AIR OUTLET  |
| FSC        | FULL SIZE CONNECTION   |
| OAI        | OUTSIDE AIR INTAKE   |
| FC         | FLEXIBLE CONNECTION  |
| AD         | ACCESS DOOR  |
| FAI        | FRESH AIR INTAKE   |
| FD         | FIRE DAMPER  |
| Ts         | WALL MTD.(5'-2"+/- A.F.F.) TEMPERATURE SENSOR  |
| TE         | EXISTING TEMPERATURE SENSOR  |
| •          | POINT OF DISCONNECTION   |
| <b>∮</b> → | POINT OF CONNECTION, NEW TO EXISTING   |
| CFM        | CUBIC FEET PER MINUTE  |
|            |  |
|            |  |
|            |  |

- <u>REMOVAL NOTES:</u> (1) THE SCOPE OF REMOVAL SHOWN ON "REMOVALS" DRAWINGS IS DIAGRAMMATIC
- ONLY AND INDICATES THE INTENT OF THE WORK TO BE PERFORMED AND NOT THE COMPLETE SCOPE OF DEMOLITION AND/OR REMOVAL WORK. IT SHALL BE THE RESPONSIBILITY OF THIS CONTRACTOR TO REMOVE ANY RELATED MECHANICAL DEVICES EVEN IF NOT SPECIFICALLY INDICATED TO BE REMOVED ON THESE DRAWINGS IN ORDER TO ACCOMMODATE NEW WORK.
- DEVICES SHOWN CROSS HATCHED ON DRAWINGS ARE ITEMS TO BE REMOVED. ANY DEVICES REMOVED SHALL INCLUDE (BUT SHALL NOT BE LIMITED TO) THE REMOVAL OF ALL ASSOCIATED PIPING, CONTRÒLS, ETC. THAT ARE NOT INCORPORATED IN THE NEW LAYOUT, UNTIL SUCH REMOVAL IS COMPLETE. THIS CONTRACTOR SHALL PERFORM ALL WORK REQUIRED TO INSURE CONTINUITY OF SERVICE TO EXISTING REMAINING EQUIPMENT. NO EXTRAS RELATING TO THE SCOPE OF WORK DESCRIBED WILL BE ALLOWED.
- EQUIPMENT, PIPING, ETC., REQUIRED TO RECONNECT SHALL BE INSTALLED CONCEALED WITHIN THE NEW SUSPENDED CEILINGS, PARTITIONS AND/OR WALLS, FLOORS, NO SURFACE MOUNTED OR EXPOSED EQUIPMENT, PIPING, ETC., SHALL BE PERMITTED, UNLESS SPECIFICALLY INDICATED.
- 4 ALL ITEMS TO BE REMOVED SHALL BE REVIEWED WITH THE OWNER PRIOR TO REMOVAL. OWNER SHALL HAVE FIRST SALVAGE RIGHTS. ITEMS THE OWNER WISHES TO KEEP SHALL BE REMOVED WITH CARE AND STORED AS DIRECTED BY OWNER. ITEMS THE OWNER DOES NOT WISH TO KEEP SHALL BE REMOVED FROM THE SITE AND DISPOSED OF PROPERLY.
- S PERFORM INITIAL AIR BALANCING REPORT AND UNIT SERVICE REPORT FOR THE  $\heartsuit$  existing roof mounted energy recovery unit (eru) and the ceiling MOUNTED HEAT PUMP UNITS (HP=1&2) SERVING THE TOILET ROOMS AND ADJACENT CORRIDORS. SUBMIT A DETÁILED REPORT WITH ANY UNIT DEFICIENCIES FOR REVIEW AND COURSE OF ACTION BY OWNER.



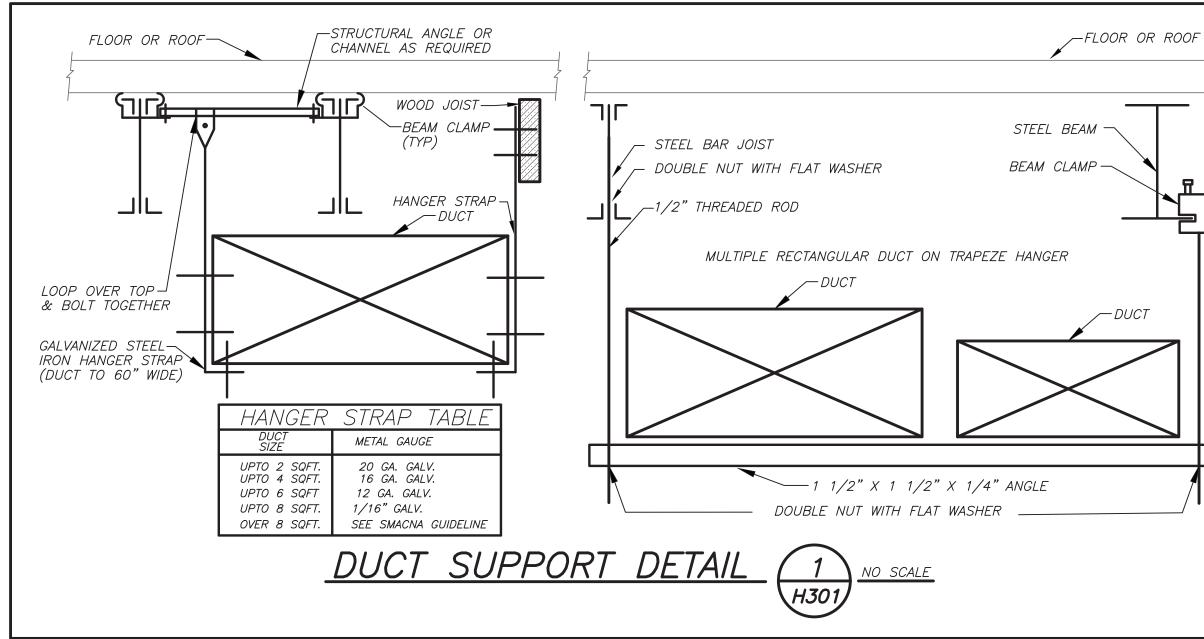


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|                  | S                  | CHEDULE               | , |
|------------------|--------------------|-----------------------|---|
|                  |                    | А                     | ſ |
| ROOM NAME/NUMBER | OCCUPANCY CATEGORY | ROOM AREA<br>(SQ.FT.) |   |
| Boys Toilet/198  | BATHROOM           | 130                   | Γ |
| Toilet/198A      | BATHROOM           | 20                    |   |
| Girls Toilet/199 | BATHROOM           | 125                   |   |
| Toilet/199A      | BATHROOM           | 20                    |   |
| Boys Toilet/298  | BATHROOM           | 150                   |   |
| Girls Toilet/299 | BATHROOM           | 135                   |   |
| Toilet/299A      | BATHROOM           | 20                    |   |

|        |   | SCHL                                    | EDULE  | E OF                                       | EXIS  | STIN        | G V                | VATE                                  | R S                    | SOU   | RCI        | E F  | IEA       | T F                      | -<br>D            | MF                                     | >                  | UN                         | ITS                                    |  |
|--------|---|---|--|--|-------|-------------|--------------------|---------------------------------------|------------------------|---|------------|--|-----------|--------------------------|-------------------|--|--------------------|----------------------------|--|--|
|        | MARK  | MODEL<br>No. ①                          |  | LOCATIO                                    |       | O.A.<br>CFM | EXT. WATE          |                                       | R COOLING              |   | ; Ø        | HEATING  |           |                          |                   | RICAL DATA<br>MOCP ELECTRIC<br>SERVICE |                    | A<br>TRIC                  | REMARI                                 |  |
|        | HP<br>EXIST   | _                                       | HORIZONTA  | L CEILING                                  | G 850 | 350         | 0.4                | 4.5                                   | 2                      | 4.8   | 18.3       | 20.0   | )         | 13.0                     | 20                | ,                                      | 208/1,             | /60                        | 3                                      |  |
|        | N O<br>O<br>T<br>E<br>S<br>AS MANUFACTURED BY "WATER FURNACE";<br>S<br>AS MANUFACTURED BY "WATER FURNACE";<br>S<br>SCHEDULED EER'S AND COP'S ARE AT THE CONDITIONS INDICATED (I.E. 80°F EWT SUMMER AND 30°F EWT WINTER).<br>PERFORMANCE BASED ON 20% ENVIRONOL 200 GLYCOL SOURCE FLUID. |   |  |  |       |             |                    |                                       |                        |   |            |  |           |                          |                   |  |                    |                            |  |  |
|        | SCHEDULE OF EXISTING ENERGY RECOVERY UNITS  |   |  |  |       |             |                    |                                       |                        |   |            |  |           |                          |                   |  |                    |                            |  |  |
|        |   |   |  |  |       | SUPP        |                    |                                       | RETURN-EXHAL           |   |            |  |           |                          | CAL DATA          |  |                    | REMARK                     |  |  |
|        | MARK  | SERVICE                                 | LOCATION   | OUTSIDE M<br>CATION AIR CFM N<br>MIN/MAX N |       | CFM         | EXT. S.P.<br>IN WG | MOTOR<br>HP                           | CFM<br>MIN/MA)         | EXT. S.P.<br>IN WG  | MOTO<br>HP |  | MCA       | E                        | LECTRI<br>SERVICE | ECTRIC<br>TRVICE                       |                    |                            |  |  |
|        | ERU<br>EXIST  | TOILETS/<br>CORRIDORS                   | ROOF   | 2000                                       | -     | 2000        | 0.4                | 1.5                                   | 2000                   | 0.4   | 1.5        |  | 23        |                          | 208/3/6           | 50                                     |                    | 3                          | 4                                      |  |
|        | As MANUFACTURED BY "VENMAR"<br>(4) DESIGN AIR CONDITIONS: SUMMER OA (95'F/75'F)<br>RA (75'F/63'F)<br>RA (75'F/63'F)<br>WINTER OA (6'F)<br>RA (70'F/53'F)<br>BASED ON HOT WATER SUPPLY TEMPERATURE OF 160'F AND<br>RETURN TEMPERATURE OF 140'F.<br>SCHEDULE OF REGISTERS AND DIFFUSERS   |   |  |  |       |             |                    |                                       |                        |   |            |  |           |                          |                   |  |                    |                            |  |  |
|        | MARK TYPE   |   |  | SEF  | RVICE |             | MODEL No.          |                                       | DIRECTION<br>DISCHARGE |   | MPER FIN   |  | VISH      |                          | REMARKS           |  |                    |                            |  |  |
|        |   |   |  | CEILING<br>DIFFUSER                        |       |             | EPL/E-1            |                                       | 4-WAY                  |   |            | POSED<br>ADE   | PER ARCH. |                          | REFER TO 24       |  |                    |                            | 56                                     |  |
|        |   | BCEILING<br>REGISTERRETXEXISTING OUTLET |  |  |       | <i>TURN</i> | 30,                | /S/45                                 | -                      |   |            | ¥  |           |                          | REFER TO 23       |  |                    |                            | )45(                                   |  |
|        | N () AS MANUFACTURED BY "ANEMOSTAT."<br>O (2) INSTALL PER MANUFACTURERS RECOMMENDATIONS.<br>O (NOT TO EXCEED 500 form)<br>O (NOT TO EXCEED 575 form)  |   |  |  |       |             |                    |                                       |                        |   |            |  |           |                          |                   |  |                    |                            |  |  |
|        | E 345 DEGREES DEFLECTION TOWARD<br>S 4 PROVIDE CABLE OPERATED DAMPER<br>WHERE NOT ACCESSIBLE<br>5 PROVIDE BLANK-OFF BAFFLES, VOL<br>EQUALIZING GRID AND MOLDED INS  |   |  |  |       |             | MPER,              | 50 100<br>TO TO<br>100 300<br>6x6 9x9 | ) 300<br>TO<br>500     | 300     500     800       TO     TO     TO       500     800     1200 |            | ) 1200 1500 50<br>TO TO TO   |           | 150 25<br>TO T<br>250 40 | 250 400<br>TO TO  |  | 600<br>TO<br>800 1 | 800<br>TO<br>1100<br>16X16 | 1100 12<br>TO T<br>1200 24<br>18X18 24 |  |
| Ē      | OF M  | INIMUN                                  |  |  |       |             |                    |                                       |                        |   |            |  |           |                          |                   |  |                    |                            |  |  |
|        | ŝ   | В                                       | С  |  | D     |             |                    | E                                     |                        | F   |            | G  |           | Н                        |                   | 1                                      |                    |                            | MINIMU                                 |  |
|        |   | DENSITY<br>0 SQ.FT.)                    | PEOPLE OUTDOOR AIR<br>FLOW RATE<br>(CFM/PERSON)<br>AREA OUTDOOR AIR<br>RATE IN BREATHIN<br>(CFM/SQ.FT. |  |       | NG ZONE     |                    | AIR FLOW RA<br>M/SQ.FT.)              |                        | E NUMBER OF<br>PEOPLE<br>(A×B)÷1000=#P                                |            | OUTDOOR AIR FLOW<br>RATE WITHOUT ZON<br>EFFECTIVENESS<br>FACTOR<br>(F×C)+(A×D)=CFM |           |                          |                   |  |                    | ON AIR<br>ATE              | AIR FLO<br>RATE<br>A×E=CF              |  |
| $\neg$ |   | -                                       | -  |  | -     |             |                    | -                                     |                        | -   |            | -  |           |                          |                   |  |                    |                            | 150<br>50                              |  |
| _      |   | -                                       |  |  |       |             |                    | -                                     |                        | -   |            | -  |           |                          |                   |  | -                  |                            | 50<br>150                              |  |



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