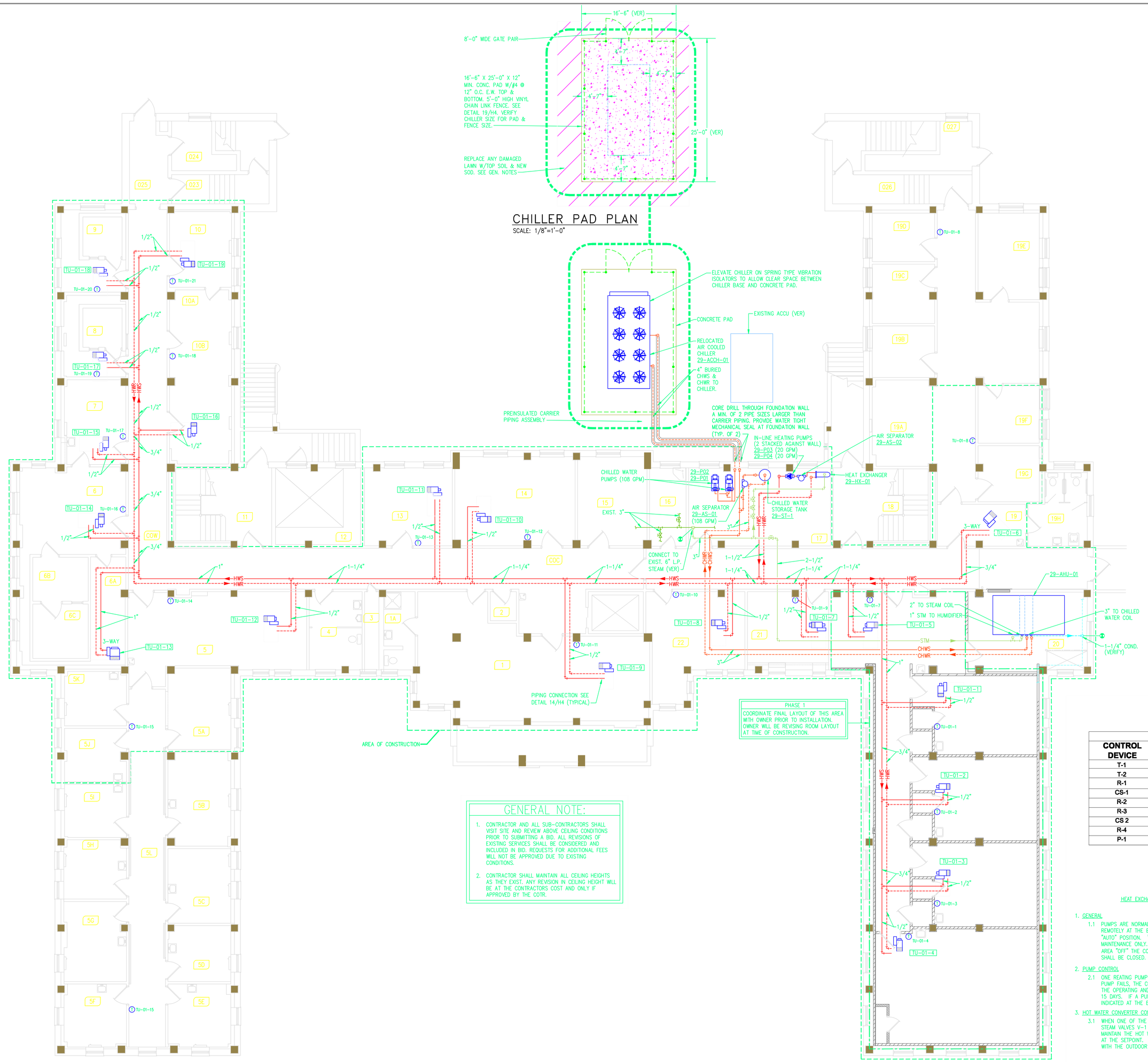



## GENERAL NOTE:

1. CONTRACTOR AND ALL SUB-CONTRACTORS SHALL VISIT SITE AND REVIEW ABOVE CEILING CONDITIONS PRIOR TO SUBMITTING A BID. ALL REVISIONS OF EXISTING SERVICES SHALL BE CONSIDERED AND INCLUDED IN BID. REQUESTS FOR ADDITIONAL FEES WILL NOT BE APPROVED DUE TO EXISTING CONDITIONS.
2. CONTRACTOR SHALL MAINTAIN ALL CEILING HEIGHTS AS THEY EXIST. ANY REVISION IN CEILING HEIGHT WILL BE AT THE CONTRACTORS COST AND ONLY IF APPROVED BY THE COTR.

NORTH

1 / H3 BASEMENT FLOOR HVAV PIPING PLAN

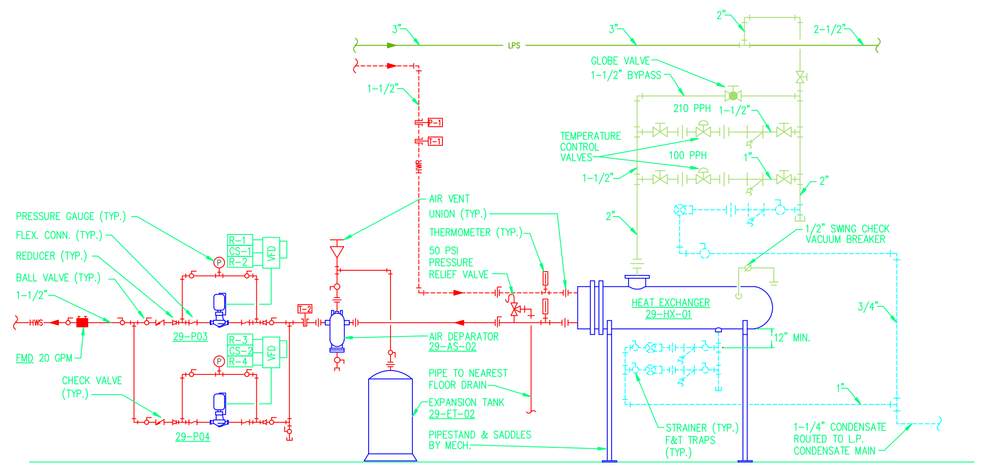
SCALE: 1/8"=1'-0"

## HEAT EXCHANGER POINT SCHEDULE

| CONTROL DEVICE | POINT NAME | POINT DESCRIPTION | POINT TYPE AI | BI | AO | BO | ALARM HI | LOW | BIN | TOTALIZE |
|---|---|---|---|---|---|---|---|---|---|---|
| T-1 | HWR Temp | HOT WATER RETURN TEMPERATURE | X | | | | | | | |
| T-2 | HWS Temp | HOT WATER SUPPLY TEMPERATURE | X | | | | | | X | |
| R-1 | P03 Control | PUMP P03 CONTROL | | | | X | | | | X |
| CS-1 | P03 Status | PUMP P03 STATUS | | X | | | | | | |
| R-2 | P03 Speed | PUMP 03 SPEED | X | | | | | | | |
| R-3 | P04 Control | PUMP P04 CONTROL | | | | X | | | | X |
| CS 2 | P04 Status | PUMP P04 STATUS | | X | | | | | | |
| R-4 | P04 Speed | PUMP 04 SPEED | X | | | | | | | |
| P-1 | Press | HOT WATER SYSTEM PRESSURE | X | | | | | | X | |

HEAT EXCHANGER SEQUENCE OF OPERATION

1. GENERAL
   1.1 PUMPS ARE NORMALLY STARTED AND STOPPED BY THE DCP OR REMOTELY AT THE ECC. H-O-A SWITCHES SHALL BE KEPT IN THE "AUTO" POSITION. "HAND" AND "OFF" SHALL BE USED FOR MAINTENANCE ONLY. WHEN ALL PUMPS FOR HOT WATER SYSTEM AREA "OFF" THE CORRESPONDING CONVERTER STEAM VALVES SHALL BE CLOSED.
2. PUMP CONTROL
   2.1 ONE REATING PUMP SHALL RUN AT ALL TIMES. IF AN OPERATING PUMP FAILS, THE CORRESPONDING STANDBY PUMP SHALL RUN. THE OPERATING AND STANDBY PUMPS SHALL BE ROTATED EVERY 15 DAYS. IF A PUMP FAILS TO RUN AN ALARM SHALL BE INDICATED AT THE ECC.
3. HOT WATER CONVERTER CONTROL
   3.1 WHEN ONE OF THE HOT WATER PUMPS ARE PROVEN RUNNING, STEAM VALVES V-1 AND V-2 SHALL MODULATE IN PARALLEL TO MAINTAIN THE HOT WATER SUPPLY TEMPERATURE SENSED BY T-1 AT THE SETPOINT. THE SETPOINT SHALL BE RESET INVERSELY WITH THE OUTDOOR AIR TEMPERATURE AS INDICATED.




2 / H3 HEATING SCHEMATIC

SCALE: NTS

| No | REVISION | DATE |
|---|---|---|

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I hereby certify that this plan specification, or report was prepared by me or under my direct supervision, and that I am duly Registered Engineer under the laws of the State of Minnesota.

Date_____ Reg. No. 44065

| | | | |
|---|---|---|---|
| APPROVED: SERVICE LINE DIRECTOR | DATE: | APPROVED: INFECTION CONTROL NURSE | DATE: |
| APPROVED: SERVICE LINE DIRECTOR | DATE: | APPROVED: PATIENT SAFETY | DATE: |
| APPROVED: PROJECTS SECTION MANAGER | DATE: | APPROVED: CHIEF OF POLICE | DATE: |
| APPROVED: DIRECTOR FWS | DATE: | APPROVED: SAFETY MANAGER | DATE: |
| APPROVED: CHIEF OF STAFF | DATE: | | |
| APPROVED: MEDICAL CENTER DIRECTOR | DATE: | | |

DRAWING TITLE: BASEMENT LEVEL HVAC PIPING PLAN

PROJECT TITLE: BUILDING 29 BASEMENT HVAC

BUILDING No: 29 | CHECKED BY: JS | DRAWN: JDK

LOCATION: VA MEDICAL CENTER ST.CLOUD, MN 56303

DATE: December 1, 2008
PLOT SCALE: SCALE AS SHOWN
PROJECT NO.: -
CAD FILE
DRAWING NO.: H3 DWG. 7 OF 12

VAMC SAINT CLOUD MN