H:\WCU\GeoConvPh1\Civil\Draw\Exhibits\Overall Campus Geothermal Piping Map.dwg
Plot Driver: DWG TO PDF.PC3 7/21/2017 9:19 AM

Generated by: Nguyen Ngo

| | QUANTITY | BOREFIELD | COMMENTS |
|---|---|---|---|
| | 170 | 1A | COMPLETED |
| | 180 | 1B | COMPLETED |
| | 88 | 2A | COMPLETED |
| | TBD | 2B | FUTURE |
| | 90 | 2C | UNDER DESIGN |
| | 188 | 3A & 3B | COMPLETED |
| | 90 | 3C | FUTURE |
| | 210 | 4A | COMPLETED |
| | 50 | 4B | FUTURE |
| | 120 | 4C | FUTURE |
| | TBD | 5A | FUTURE |
| | 41 | 6A | COMPLETED |

**GEO THERMAL SYSTEM VALVE INVENTORY**

| location | Valve No. | Valve Variable (s) Supply (S) | Size | ID |
|---|---|---|---|---|
| **PUMP HOUSE EXTERNAL VALVES** | | | | |
| P-1 | A | S | 12 | System Isolation (BYPASS LINE) |
| | B | R | 12 | System Isolation (BYPASS LINE) |
| | C | S | 12 | System Isolation ( BORE FIELD (A & B)) |
| | D | R | 12 | System Isolation ( BORE FIELD (A & B)) |
| P-2 | A | S | 12 | System Isolation (BYPASS LINE) |
| | B | R | 12 | System Isolation (BYPASS LINE) |
| | C | S | 30 | System Isolation (PUMP HOUSE) |
| | D | R | 30 | System Isolation (PUMP HOUSE) |
| **DISTRIBUTION SYSTEM VALVES** | | | | |
| 1-1 (Valves located in vault) | A | S | 30 | System Isolation (MAIN TRUNK) |
| | B | R | 30 | System Isolation (MAIN TRUNK) |
| | C | S | 20 | System Isolation ( SERIES 1 BRANCH) |
| | D | R | 20 | System Isolation ( SERIES 1 BRANCH) |
| | E | S | 16 | System Isolation (FUTURE) |
| | F | R | 16 | System Isolation (FUTURE) |
| 1-2 | A | S | 12 | System Isolation ( SERIES 1 NORTHERN BRANCH) |
| | B | R | 12 | System Isolation ( SERIES 1 NORTHERN BRANCH) |
| | C | S | 12 | System Isolation ( SERIES 1 EASTERN BRANCH) |
| | D | R | 12 | System Isolation ( SERIES 1 EASTERN BRANCH) |
| 1-3 | A | S | 8 | System Isolation (ANDERSON HALL/ RUBY JONES HALL) |
| | B | R | 8 | System Isolation (ANDERSON HALL/ RUBY JONES HALL) |
| | C | S | 6 | Service Isolation (REDITATION HALL) |
| | D | R | 6 | Service Isolation (REDITATION HALL) |
| | E | S | 4 | Service Isolation ( RUBY JONES HALL from ANDERSON HALL) |
| | F | R | 4 | Service Isolation ( RUBY JONES HALL from ANDERSON HALL) |
| 1-4 | A | S | 10 | Service Isolation (F.H.G. LIBRARY ) |
| | B | R | 10 | Service Isolation (F.H.G. LIBRARY ) |
| | C | S | 12 | System Isolation (FUTURE) |
| | D | R | 12 | System Isolation (FUTURE) |
| 2-1 | A | S | 10 | System Isolation ( SERIES 2 BRANCH) |
| | B | R | 10 | System Isolation ( SERIES 2 BRANCH) |
| | C | S | 10 | System Isolation (FUTURE) |
| | D | R | 10 | System Isolation (FUTURE) |
| | E | S | 10 | System Isolation ( SERIES 2 BRANCH) |
| | F | R | 10 | System Isolation ( SERIES 2 BRANCH) |
| 2-2 | A | S | 10 | System Isolation ( SERIES 2 BRANCH) |
| | B | R | 10 | System Isolation ( SERIES 2 BRANCH) |
| | C | S | 8 | System Isolation (WAYNE HALL) |
| | D | R | 8 | System Isolation (WAYNE HALL) |
| 3-1 | A | S | 10 | Service Isolation ( BRANDYWINE HALL) |
| | B | R | 10 | Service Isolation ( BRANDYWINE HALL) |
| | C | S | 12 | System Isolation ( SERIES 3 BRANCH) |
| | D | R | 12 | System Isolation ( SERIES 3 BRANCH) |
| 3-2 | A | S | 8 | Service Isolation ( LAWRENCE HALL FUTURE) |
| | B | R | 8 | Service Isolation ( LAWRENCE HALL FUTURE) |
| 3-3 | A | S | 12 | Service Isolation (COMMONWEALTH HALL) |
| | B | R | 12 | Service Isolation (COMMONWEALTH HALL) |
| 4-1 | A | S | 16 | System Isolation ( SERIES 4 BRANCH ) |
| | B | R | 16 | System Isolation ( SERIES 4 BRANCH ) |
| 4-2 | A | S | 8 | Service Isolation ( UNIVERSITY HALL) |
| | B | R | 8 | Service Isolation ( UNIVERSITY HALL) |
| 4-3 | A | S | 10 | Service Isolation ( ALLEGHENY HALL) |
| | B | R | 10 | Service Isolation ( ALLEGHENY HALL) |
| 4-4 | A | S | 16 | Service Isolation ( 4-4 SERIES VALVES) |
| | B | R | 16 | Service Isolation ( 4-4 SERIES VALVES) |
| | C | S | 8 | System Isolation (HOLLINGER FIELDHOUSE) |
| | D | R | 8 | System Isolation (HOLLINGER FIELDHOUSE) |
| | E | S | 6 | (BYPASS VALVE |
| 5-1 | A | S | 24 | System Isolation |
| | B | R | 24 | System Isolation |
| 6-1 | A | S | 20 | System Isolation (SERIES 6 BRANCH FUTURE) |
| | B | R | 20 | System Isolation ( SERIES 6 BRANCH FUTURE) |
| | C | S | 20 | System Isolation |
| | D | R | 20 | System Isolation |
| 7-1 | A | S | 12 | Service Isolation ( STUDENT RECREATION CENTER) |
| | B | R | 12 | Service Isolation ( STUDENT RECREATION CENTER) |
| | C | S | 20 | System Isolation ( SERIES 7 BRANCH) |
| | D | R | 20 | System Isolation ( SERIES 7 BRANCH) |
| 7-2 | A | S | 8 | Service Isolation ( FUTURE) |
| | B | R | 8 | Service Isolation ( FUTURE) |
| 7-3 | A | S | 8 | Service Isolation (FUTURE) |
| | B | R | 8 | Service Isolation (FUTURE) |
| 7-4 | A | S | 8 | Service Isolation (FUTURE) |
| | B | R | 8 | Service Isolation (FUTURE) |
| 7-5 | A | S | 8 | Service Isolation (FUTURE) |
| | B | R | 8 | Service Isolation (FUTURE) |
| 7-6 | A | S | 8 | Service Isolation (FUTURE) |
| | B | R | 8 | Service Isolation (FUTURE) |
| 7-7 | A | S | 8 | Service Isolation (FUTURE) |
| | B | R | 8 | Service Isolation (FUTURE) |
| | C | S | 20 | System Isolation (CHURCH ST CROSSING) |
| | D | R | 20 | System Isolation (CHURCH ST CROSSING) |
| 7-8 | A | S | 20 | System Isolation (CHURCH ST CROSSING) |
| | B | R | 20 | System Isolation (CHURCH ST CROSSING) |
| | C | S | 8 | System Isolation (UOS) |
| | D | R | 8 | System Isolation (UOS) |
| 7-9 | A | S | 8 | Service Isolation ( MITCHELL HALL FUTURE) |
| | B | R | 8 | Service Isolation ( MITCHELL HALL FUTURE) |
| 7-10 | A | S | 8 | Service Isolation (BP&C) |
| | B | R | 8 | Service Isolation (BP&C) |
| | C | S | 16 | System Isolation (FUTURE ) |
| | D | R | 16 | System Isolation (FUTURE ) |
| **BORE FIELDS VALVES** | | | | |
| 1A-1B | A | S | 12 | System Isolation (BORE FIELD 1A & 1B) |
| | B | R | 12 | System Isolation (BORE FIELD 1A & 1B) |
| 2A | A | S | 12 | System Isolation (BORE FIELD 2A) |
| | B | R | 12 | System Isolation (BORE FIELD 2A) |
| 2B | A | S | 12 | System Isolation (FUTURE BORE FIELD 2B) |
| | B | R | 12 | System Isolation (FUTURE BORE FIELD 2B) |
| 2C | A | S | 10 | System Isolation (FUTURE) |
| | B | R | 10 | System Isolation (FUTURE) |
| 3A & 3B | A | S | 12 | System Isolation (BORE FIELD 3A & 3B) |
| | B | R | 12 | System Isolation (BORE FIELD 3A & 3B) |
| 3C | A | S | 10 | System Isolation (FUTURE) |
| | B | R | 10 | System Isolation (FUTURE) |
| | C | S | 10 | System Isolation (FUTURE FIELD 3C) |
| | D | R | 10 | System Isolation (FUTURE FIELD 3C) |
| 4A | A | S | 12 | System Isolation (BORE FIELD 4-A, 4B & 4-C) |
| | B | R | 12 | System Isolation (BORE FIELD 4-A, 4B & 4-C) |
| 4B | A | S | 10 | System Isolation (FUTURE BORE FIELD 4B) |
| | B | R | 10 | System Isolation (FUTURE BORE FIELD 4B) |
| | C | S | 12 | System Isolation (BORE FIELD 4A& 4-C) |
| | D | R | 12 | System Isolation (BORE FIELD 4A& 4-C) |
| 4C | A | S | 10 | System Isolation (FUTURE BORE FIELD 4C) |
| | B | R | 10 | System Isolation (FUTURE BORE FIELD 4C) |

| BUILDING | PUMP (GPM) | # PUMPS |
|---|---|---|
| F.H.G. LIBRARY | 480 | 3 |
| RUBY JONES HALL | 180 | 2 |
| RECITATION HALL | 150 | 2 |
| ANDERSON HALL | 750 | 2 |
| ALLEGHENY HALL | 850 | 2 |
| BRANDYWINE HALL | 850 | 2 |
| COMMONWEALTH HALL | 950 | 2 |
| HOLLINGER HALL | 755 | 2 |
| STUDENT RECREATION CENTER | 600 | 2 |
| MITCHELL HALL | 325 | 2 |
| BUSINESS & PUBLIC MANAGEMENT CENTER | 950 | 2 |
| WAYNE HALL (TO BEGIN RENOVATION) | 900 | 2 |
| 25 UNIVERSITY AVE. | 220 | 3 |
| UNIVERSITY HALL (NOT CONNECTED) | --- | --- |

| LEGEND | |
|---|---|
| | EXISTING SUPPLY & RETURN LINES FOR DISTRIBUTION SYSTEM |
| | FUTURE SUPPLY & RETURN LINE FOR DISTRIBUTION SYSTEM |
| | EXISTING SUPPLY & RETURN BYPASS LINES |
| 1-2 | EXISTING SUPPLY & RETURN LINES FOR BORE FIELD COLLECTION SYSTEM |
| | FUTURE SUPPLY & RETURN LINES FOR BORE FIELD COLLECTION SYSTEM |
| | REFERENCE POINT FOR VALVE LOCATION |

80' 0 80'
SCALE IN FEET

West Chester University

| No. | DESCRIPTION | DATE | BY |
|---|---|---|---|
| | REVISIONS | | |


CENTURY ENGINEERING
200 Airport Road, Capital City Airport
New Cumberland, PA 17070
717-901-7055 Fax 717-901-7059


**NORTH CAMPUS DISTRICT GEOTHERMAL PIPING**
FOR
**WEST CHESTER UNIVERSITY**
WEST CHESTER, PA 19383

**OVERALL CAMPUS DISTRICT GEOTHERMAL SYSTEM MAP**

DATE 06-27-17
SCALE 1"=80'
PROJECT NO.
CHECKED BY GLM
DRAWN BY NHN
SHEET NO. EX-1