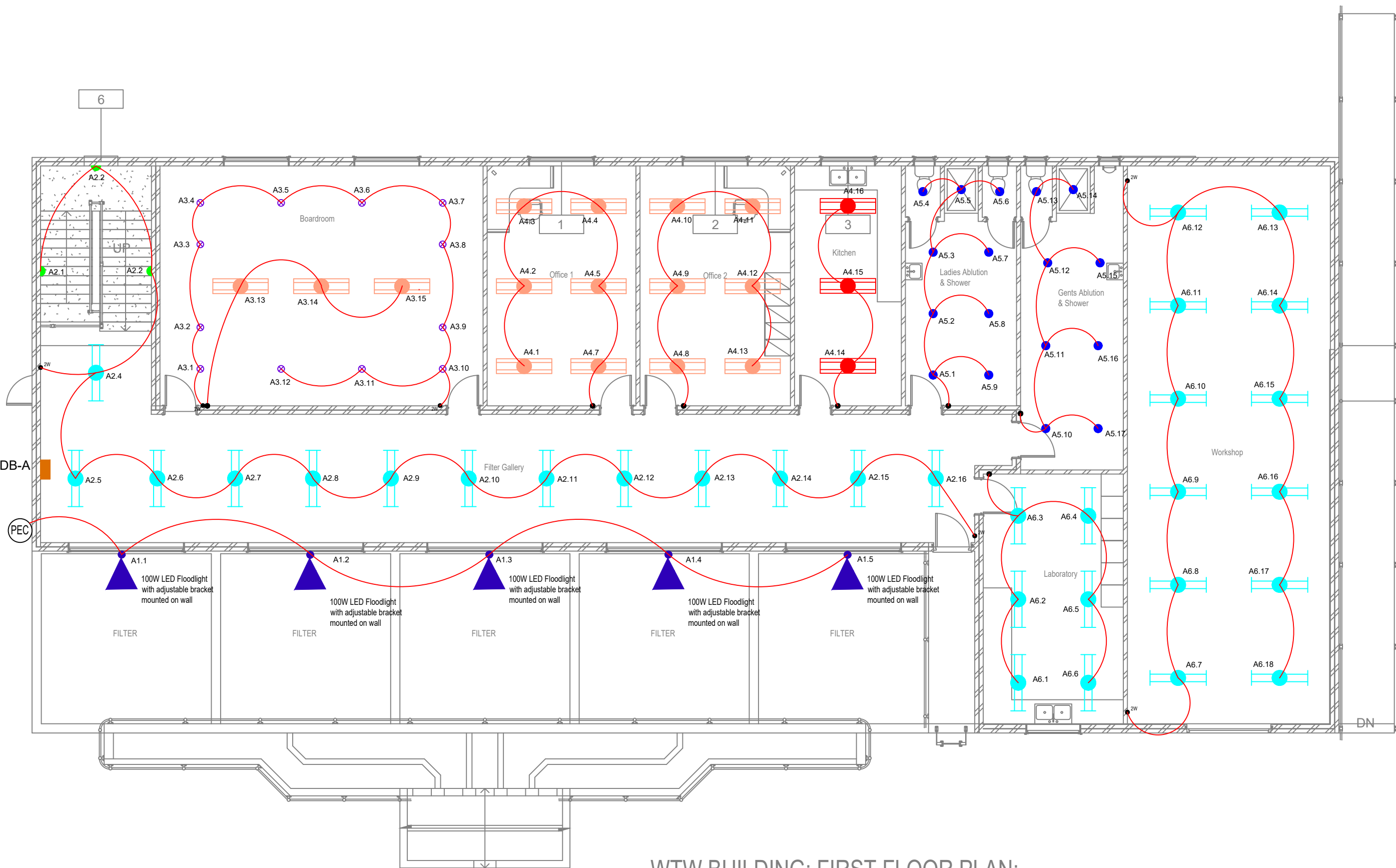


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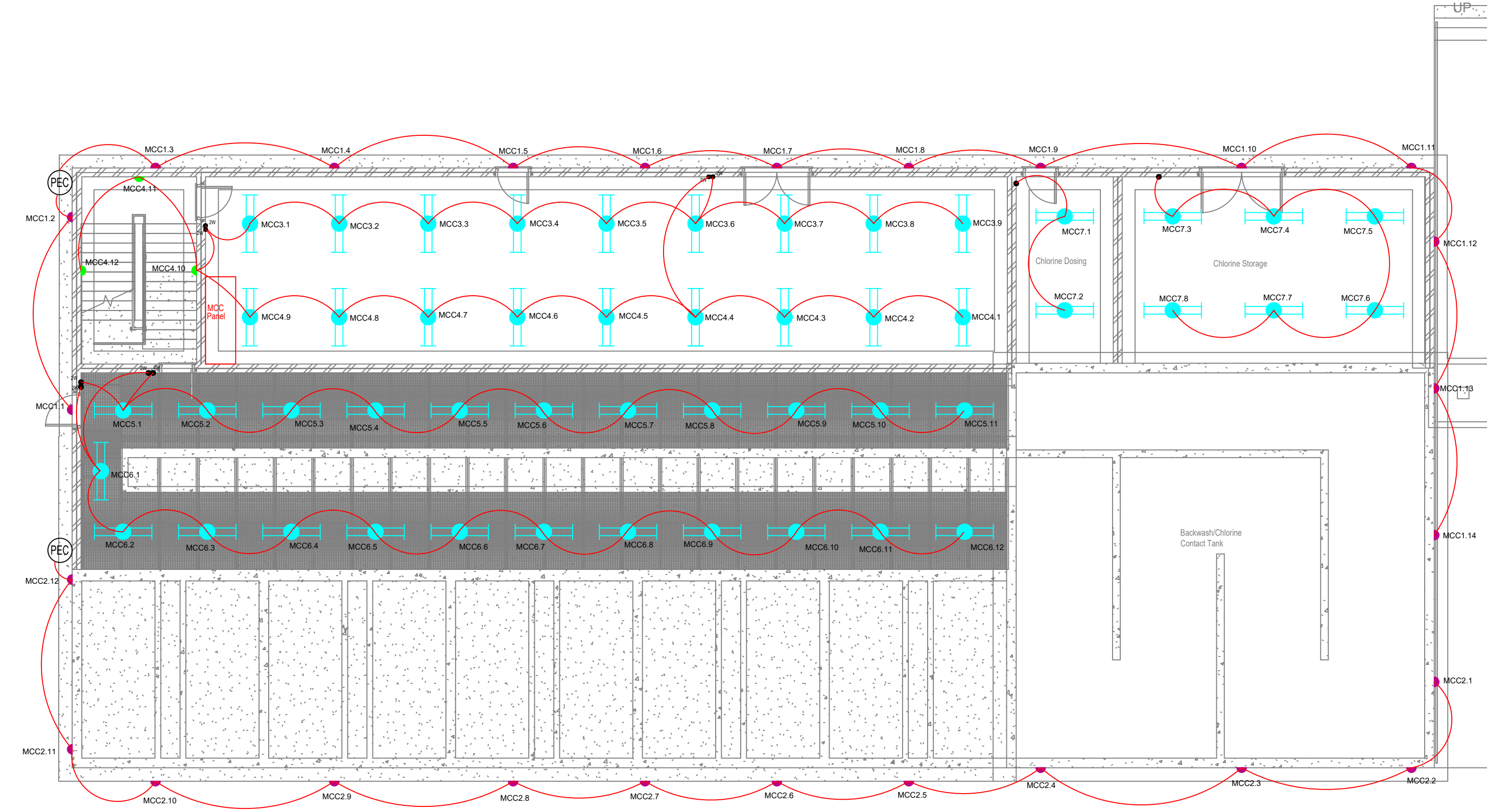
THIS DRAWING HAS BEEN PREPARED UNDER THE CONTROLS ESTABLISHED BY THE HN CONSULTING ENGINEERS QUALITY MANAGEMENT SYSTEM AND MEETS THE REQUIREMENTS OF THE SABS QUALITY GRADING SYSTEM THAT IS ISO 9001:2008 COMPLIANT

#### GENERAL NOTES

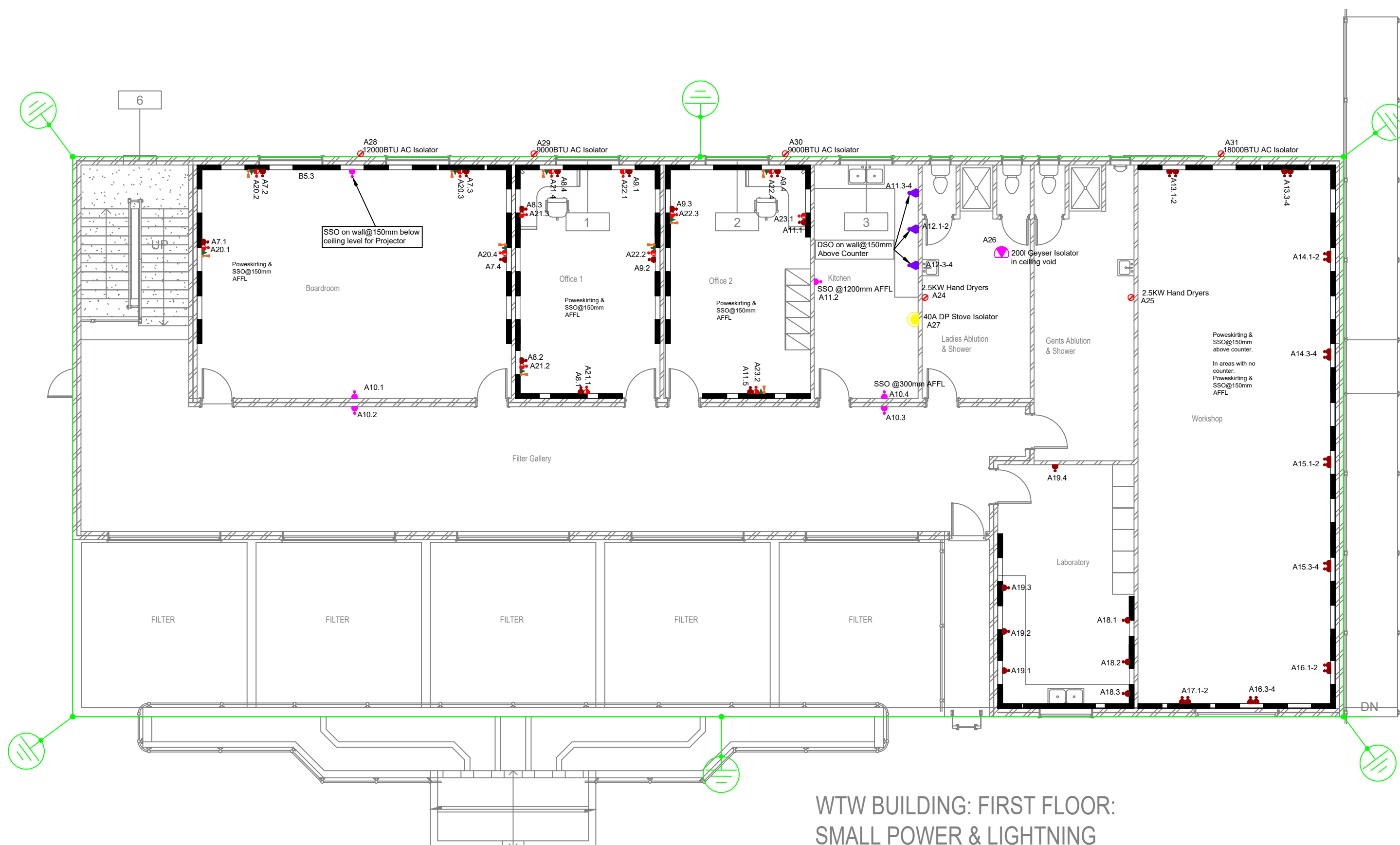
- THIS DRAWING PROVIDES INFORMATION RELATED TO THE FORM OF THE WORK WHEN COMPLETED TOGETHER WITH GUIDANCE, WHERE FUNDAMENTAL TO THE DESIGN, FOR THE SEQUENCE OF CONSTRUCTION. THIS DRAWING DOES NOT PURPORT TO INCLUDE ANY NECESSARY PRECAUTIONS, ITEMS OR COMPONENTS REQUIRED FOR CONSTRUCTION SAFETY. ALL SUCH PRECAUTIONS MUST BE TAKEN AND ITEMS OR COMPONENTS SUPPLIED BY THE CONTRACTOR.
- ANY DISCREPANCIES ARE TO BE CONFIRMED WITH THE ENGINEER ON SITE PRIOR TO WORK PROCEEDING.
- ONLY WRITTEN DIMENSIONS SHALL BE USED.
- ALL DIMENSIONS ARE IN mm.



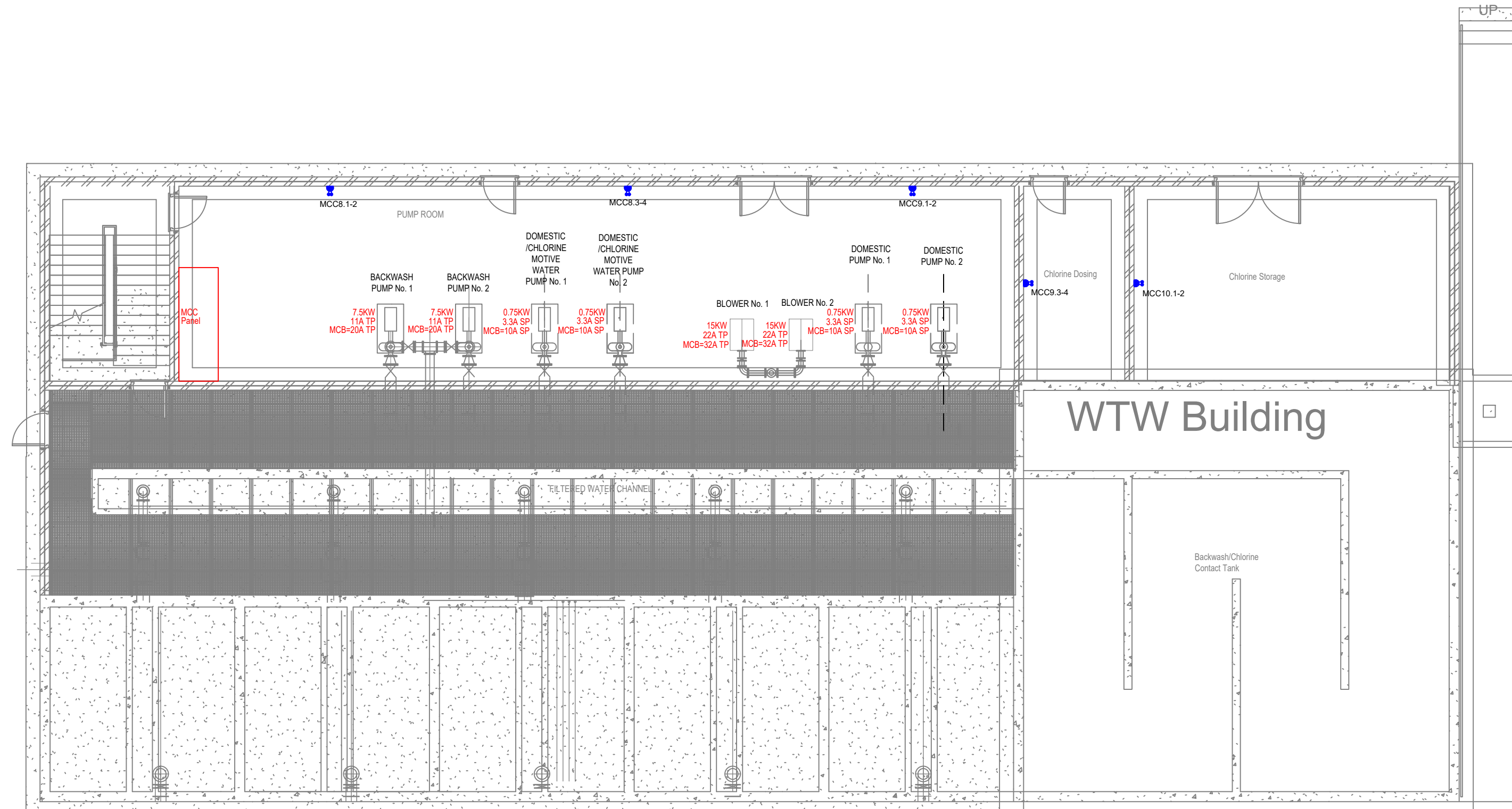
WTW BUILDING: FIRST FLOOR PLAN:  
Lighting Layout  
1:100



WTW BUILDING: GROUND FLOOR PLAN:  
Lighting Layout



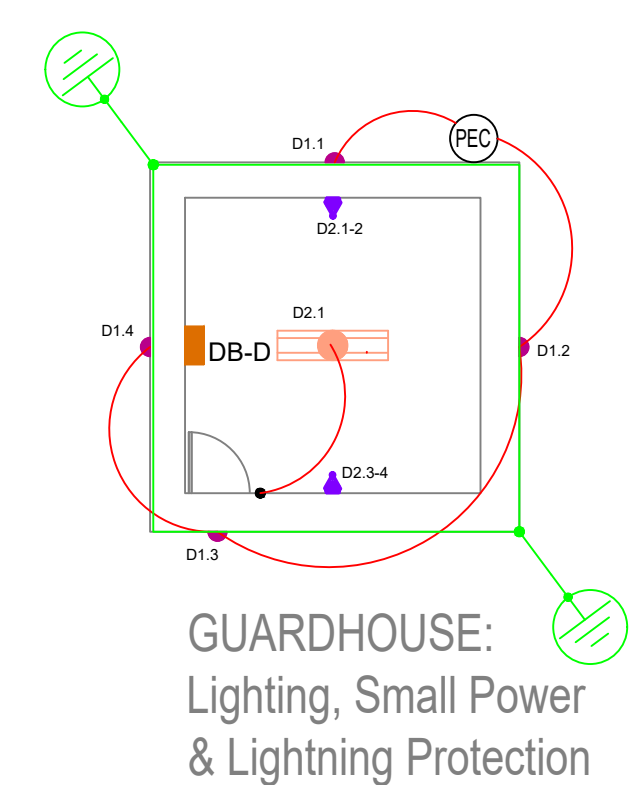
WTW BUILDING: FIRST FLOOR:  
SMALL POWER & LIGHTNING  
PROTECTION  
1:100



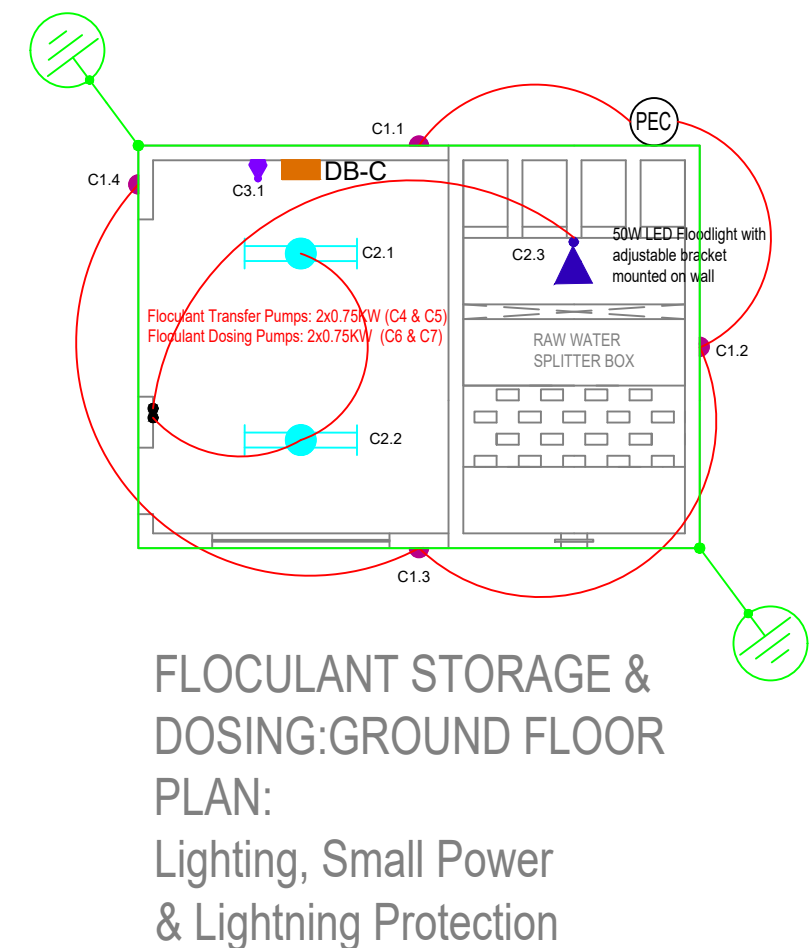
WTW BUILDING: GROUND FLOOR PLAN:  
Small Power & Motors

|  |                                                                                                                            |
|--|----------------------------------------------------------------------------------------------------------------------------|
|  | 2x22W LED Open Channel Floodlight, 4000K, Colour: White, SABS Approved, Regent Lighting or similar.                        |
|  | 2x22W LED Decorative Floodlight with an Acrylic Diffuser, 4000K, Colour: White, SABS Approved, Regent Lighting or similar. |
|  | 18W LED Downlight, 100mm Dia, 4000K, Colour: White, SABS Approved, Regent Lighting or similar.                             |
|  | P65, 24W LED Square Die-Cast Aluminum Bulbhead with Back Trim, 4000K, SABS Approved, Brand Beka or similar.                |
|  | 12W Polycarbonate Round Bulbhead with White Trim, 4000K, SABS Approved, Regent Lighting or similar.                        |
|  | 2x22W LED Vapourproof Floodlight, 4000K, Colour: Grey, SABS Approved, Regent Lighting or similar.                          |

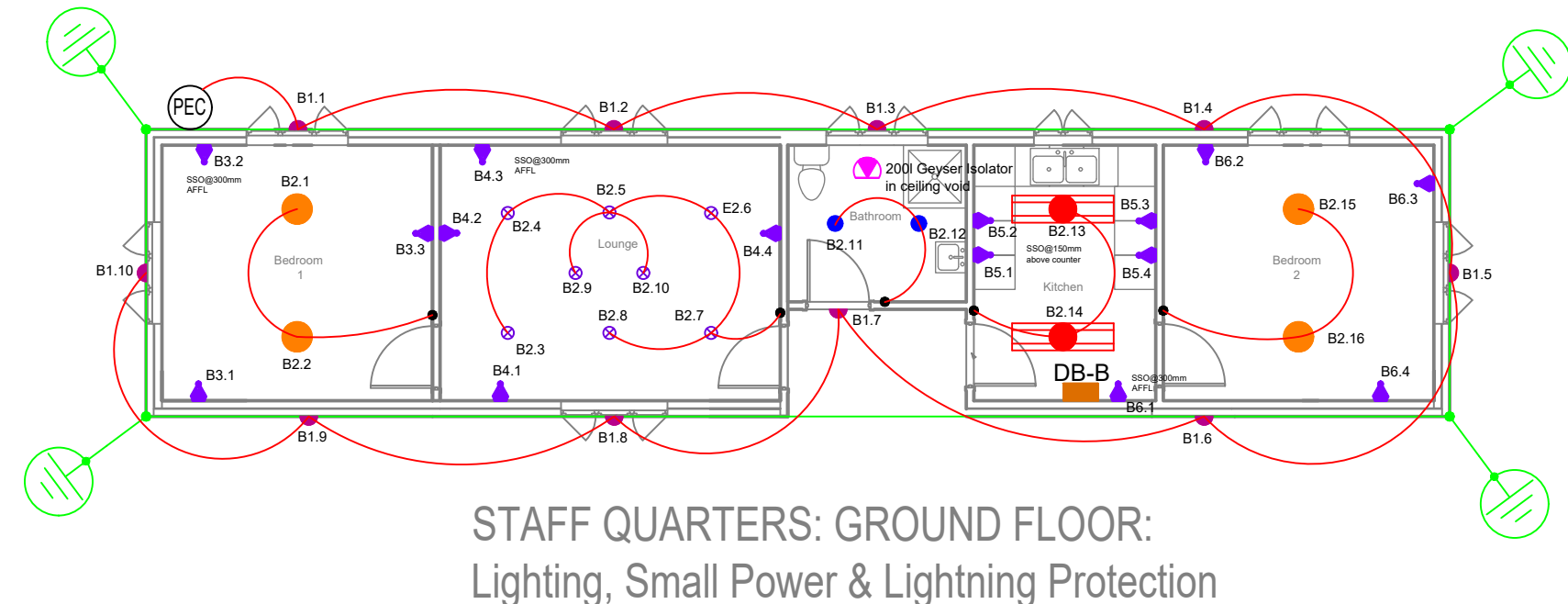
|                                                                              |  |
|------------------------------------------------------------------------------|--|
| 16A Socket shall include 1x 3 Pin (SANS 164-1) 2x 3 Pin (SANS 164-2) On Wall |  |
| 16A 3 Pin Double Socket, SANS 164-1 on Wall                                  |  |
| 16A 3 Pin Single Socket, SANS 164-1 on Wall                                  |  |
| 16A 3 Pin: SANS 164-1 & SANS 164-2                                           |  |
| 16A 3 Pin: Dedicated Socket                                                  |  |



GUARDHOUSE:  
Lighting, Small Power  
& Lightning Protection



FLOCULANT STORAGE &  
DOSING: GROUND FLOOR  
PLAN:  
Lighting, Small Power  
& Lightning Protection



STAFF QUARTERS: GROUND FLOOR:  
Lighting, Small Power & Lightning Protection

**LIGHTNING PROTECTION**

Install 25mm<sup>2</sup> BCL Lightning Protection Dropers Bonded onto roof shingles, drop down in PVC conduit installed inside wall, complete with inspection box and 1.2m earth rod including coupling. The 25mm<sup>2</sup> BCL conductor shall be connected to earth rod at minimum 3m away from building below ground level.

| CEILING LIGHTING OUTLETS                |
|-----------------------------------------|
| ● OTHER THAN LUMINAIRE FLOURESCENT      |
| ● SURFACE MOUNTED LUMINAIRE FLOURESCENT |
| ● RECESSED LUMINAIRE FLOURESCENT        |
| ● FED FROM ESSENTIAL SUPPLY             |
| ● PENDANT LUMINAIRE                     |
| ● SURFACE MOUNTED LUMINAIRE FLOURESCENT |

| DISTRIBUTION SERVICES: LEGEND   |
|---------------------------------|
| ■ DISTRIBUTION BOARD            |
| ■ POWERFEEDING (type class B15) |
| ■ CABLE WIRE (type class B15)   |
| ■ UNARMED CONDUIT & DRAW WIRE   |
| --- LV CABLE (SIZE AS SHOWN)    |
| --- MV CABLE (SIZE AS SHOWN)    |
| ■ MANHOLE (DIMENSIONS AS SHOWN) |

| WALL LIGHTING OUTLETS                   |
|-----------------------------------------|
| ● OTHER THAN LUMINAIRE FLOURESCENT      |
| ● SURFACE MOUNTED LUMINAIRE FLOURESCENT |
| ● FED FROM ESSENTIAL SUPPLY             |
| ● UNARMED WITH BLANK COVERPLATE         |

| SWITCHES                   |
|----------------------------|
| ● 1 WAY LEVER (100A5 BOX)  |
| ● 2 WAY LEVER (100A5 BOX)  |
| ● 3 WAY LEVER (100A5 BOX)  |
| ● 4 WAY LEVER (100A5 BOX)  |
| ● 5 WAY LEVER (100A5 BOX)  |
| ● 6 WAY LEVER (100A5 BOX)  |
| ● 7 WAY LEVER (100A5 BOX)  |
| ● 8 WAY LEVER (100A5 BOX)  |
| ● 9 WAY LEVER (100A5 BOX)  |
| ● 10 WAY LEVER (100A5 BOX) |
| ● 11 WAY LEVER (100A5 BOX) |
| ● 12 WAY LEVER (100A5 BOX) |
| ● 13 WAY LEVER (100A5 BOX) |
| ● 14 WAY LEVER (100A5 BOX) |
| ● 15 WAY LEVER (100A5 BOX) |
| ● 16 WAY LEVER (100A5 BOX) |
| ● 17 WAY LEVER (100A5 BOX) |
| ● 18 WAY LEVER (100A5 BOX) |
| ● 19 WAY LEVER (100A5 BOX) |
| ● 20 WAY LEVER (100A5 BOX) |

| MISCELLANEOUS: LEGEND                                              |
|--------------------------------------------------------------------|
| ● STOVE OUTLET (open class B20)                                    |
| ● WATER HEATER/GEYSER OUTLET (class B20)                           |
| ● SINGLE PHASE OUTLET                                              |
| ● THREE PHASE OUTLET                                               |
| ● SINGLE PHASE FAN (open class B20)                                |
| ● THREE PHASE FAN (open class B20)                                 |
| ● DOUBLE OR TRIPLE POLE LOCAL ISOLATOR CONTROLLING OUTLET AS SHOWN |
| ● FLOOR JUNCTION BOX                                               |
| ● UNARMED TV OUTLET                                                |
| ● UNARMED OUTLET FOR A/C THERMOSTAT                                |

| SOCKET OUTLET: LEGEND                                                   |
|-------------------------------------------------------------------------|
| ● 16A 3 Pin (on wall or pin)                                            |
| ● 16A 3 Pin DOUBLE (100A10 BOX)                                         |
| ● 16A 3 Pin FED FROM ESSENTIAL SUPPLY (on wall or pin)                  |
| ● SHOWER PLUG                                                           |
| ● 16A 3 Pin FED FROM UPS (on wall or pin)                               |
| ● 16A 3 Pin FED FROM PROTECTED                                          |
| ● SPECIAL AS INDICATED IN SCHEDULE OF COSTS/eq. 13A INTERNATIONAL, etc. |
| ● 3 PHASE                                                               |
| ● 5A 3 Pin LIGHTING (UNARMED)                                           |
| ● STOVE / COOKER PLUG (open class B20)                                  |
| ● POWERPOLE                                                             |
| ● 16A 3 Pin: 16A5 SANS 164-1 & 25A5 SANS 164-2                          |

| ANCLARY SERVICES: LEGEND                    |
|---------------------------------------------|
| ● ANCLARY SERVICES JUNCTION BOX (100A5 BOX) |
| ● TELEPHONE OUTLET (100A5)                  |
| ● INTERCOM OUTLET (100A5)                   |
| ● DATA OUTLET (100A5)                       |
| ● FIRE DETECTION (ROUND BOX)                |
| ● EVACUATION SPEAKER (ROUND BOX)            |
| ● BREAKGLASS FIRE ALARM (ROUND BOX)         |
| ● VOLUME CONTROL (100A5)                    |
| ● SCHOOL SIREN                              |
| ● MANUAL SCHOOL BELL                        |
| ● BELL PUSH                                 |
| ● POWERPOLE                                 |

#### REFERENCE DRAWINGS

|                        |     |          |        |
|------------------------|-----|----------|--------|
| Issued For Information | JSM | 31/10/23 | A      |
| Revision Details       | By  | Date     | Suffix |

Client: **NKANGALA DISTRICT MUNICIPALITY**

#### WESTERN HIGHVELD WATER TREATMENT WORKS

|                                              |                                                         |                  |          |
|----------------------------------------------|---------------------------------------------------------|------------------|----------|
| Drawing Title                                | <b>LIGHTING, SMALL POWER &amp; LIGHTNING PROTECTION</b> |                  |          |
| Scale                                        | 1:100                                                   | ON ORIGINAL PLAN |          |
| Drawn                                        | M.S                                                     | Date             | 12/12/23 |
| By                                           | M.S                                                     | Pin No           |          |
| Designed                                     | M.S                                                     | Pin No           |          |
| Signature                                    |                                                         | Date             |          |
| Checked on behalf of HN Consulting Engineers | D.B                                                     | Pin No           |          |
| Signature                                    |                                                         | Date             |          |
| HN Drawing Number                            | E-325WS-02                                              | Revision         | A        |

FOR TENDER