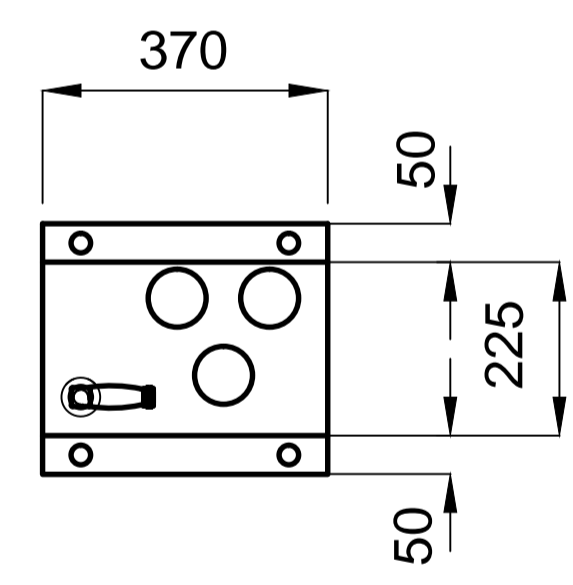


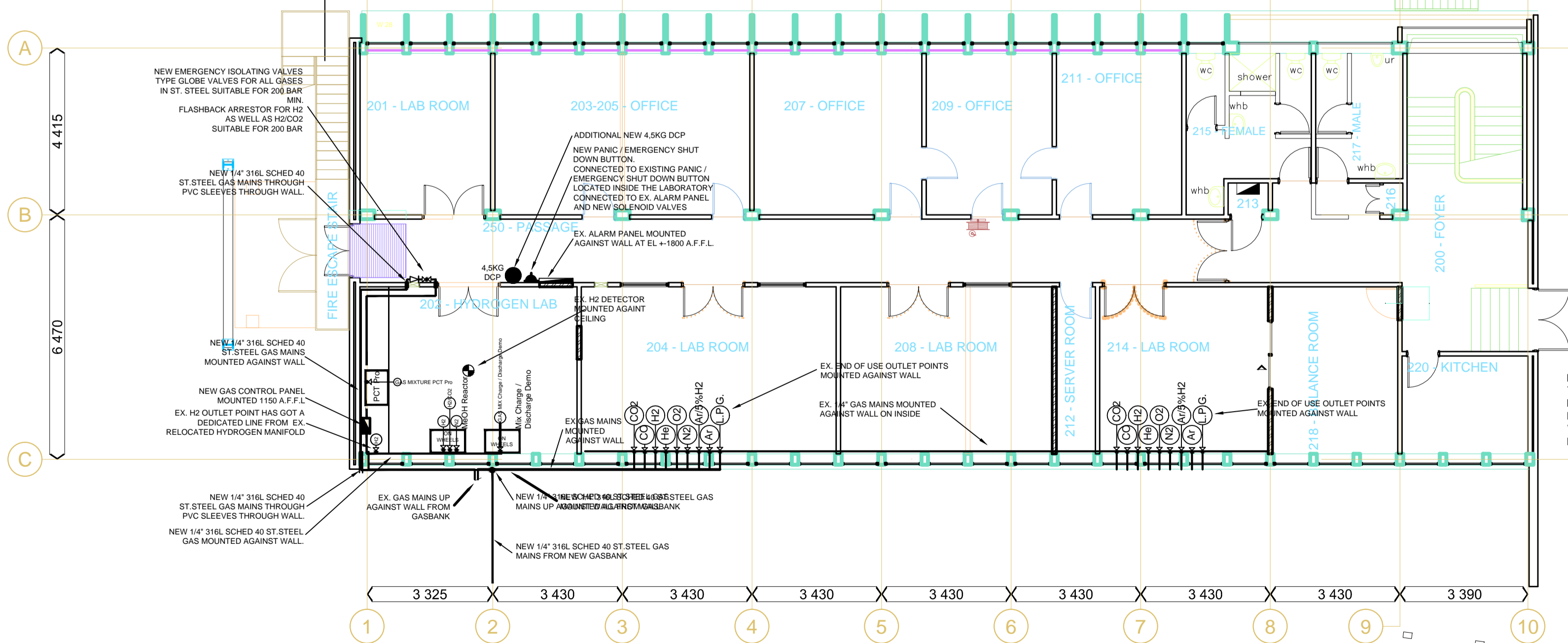
**GROUND FLOOR PLAN**  
scale 1: 100

- LEGEND:**
- ⊕ H<sub>2</sub> EX. HYDROGEN
  - ⊕ He EX. HELIUM
  - ⊕ O<sub>2</sub> EX. OXYGEN
  - ⊕ N<sub>2</sub> EX. NITROGEN
  - ⊕ Ar EX. ARGON / HELIUM MIX
  - ⊕ Cl<sub>2</sub> EX. ARGON
  - ⊕ CO EX. CARBON MONOXIDE
  - ⊕ CO<sub>2</sub> EX. CARBON DIOXIDE
  - ⊕ CH<sub>4</sub> EX. METHANE
  - ⊕ L.P.G. EX. L.P.G.
  - ⊕ H<sub>2</sub> / CO<sub>2</sub> NEW HYDROGEN FOR MeOH Reactor / PCT Pro / Charge / Discharge Demo
  - ⊕ N<sub>2</sub> / CO<sub>2</sub> NEW HYDROGEN / CO<sub>2</sub> MIX FOR MeOH Reactor
  - ⊕ N<sub>2</sub> NEW N<sub>2</sub> FOR MeOH Reactor
  - ⊕ MIX NEW MIXTURE FOR PCT Pro / Charge / Discharge Demo
  - ⊕ NEW EMERGENCY GLOBE TYPE ISOLATING VALVE
  - ⊕ NEW FLASHBACK ARRESTOR FOR HYDROGEN

- NOTES:**
- THE LATEST AMENDMENTS OF THE FOLLOWING SHALL BE COMPLIED WITH:  
1. THE STANDARD REGULATIONS FOR WIRING OF PREMISES ISSUED BY THE SOUTH AFRICAN INSTITUTE OF ELECTRICAL ENGINEERS.  
2. MACHINERY AND OCCUPATIONAL SAFETY ACT NO. 85 OF 1993 AS AMENDED.  
3. SANS 10087: PART 1, 2, 3, 7 OF 2000 LATEST AMENDMENT.  
4. SANS 10260: PART 1, 2, 3, 4 OF 2000 LATEST AMENDMENT.  
5. ALL PIPEWORK SHALL BE COLOUR CODED ACCORDING TO SANS 10140-3 OF 2010.  
6. WARNING NOTICES SHALL BE POSITIONED ADJACENT TO THE VALVES CLEARLY AND PROMINENTLY STATING THAT THE VALVES SHALL NOT BE CLOSED BY UNAUTHORISED PERSONS.  
7. PRESSURE GAUGES SHALL BE OF THE BOURDON DIAL TYPE.  
8. ALL TESTING OPERATIONS SHALL BE WITNESSED BY THE ENGINEER.  
9. GASBANK IS TO BE FURNISHED WITH 1 x 9 KG DCP FIRE EXTINGUISHERS IN A LOCKABLE CABINET WITH BREAK GLASS.  
10. ALL GAS PIPES SHALL BE SLEEVED WHERE PIPES PASS THROUGH WALLS AND SLABS, AND SEALED WITH SUITABLE FLUE GAUZE.  
11. ALL RELEVANT SAFETY SIGNS MUST BE MOUNTED AT THE GASBANK. NO NAKED FLAME, NO SMOKING FLAMMABLE AND DANGER.  
12. DUE TO THE HIGH LINE PRESSURES INVOLVED ONLY SUITABLE QUALIFIED GAS CONTRACTORS FOR HIGH PRESSURES MAY PERFORM THE LABORATORY GAS INSTALLATION.  
13. NON FLAMMABLE GASES: 191.91 KG  
FLAMMABLE GASES: 2.22 KG



**GAS CONTROL PANEL**



**FIRST FLOOR PLAN**  
scale 1: 100

NOTE:  
THE FOLLOWING EX. GASES ARE SHARED GASES.  
L.P.G., CO, CO<sub>2</sub>.  
EACH OF THESE GASES HAS A 1 CHANGE OVER MANIFOLD FROM WHERE DEDICATED LINES SUPPLY THE GROUND FLOOR AND FIRST FLOOR SEPARATELY.

REV	DESCRIPTION	BY	DATE

CLIENT/PROJECT  
C.S.I.R. BRUMMERIA, PRETORIA

TITLE  
PROPOSED LABORATORY GAS INSTALLATION FOR H<sub>2</sub>SA AT BUILDING NO.15

SCALE - 1:100 : 1:50

DRAWN	NAME	DATE	REF. No.
-	-	12-02-2020	-
CHECKED	NAME	DATE	REF. No.
-	-	12-02-2020	-
APPROVED	NAME	DATE	REF. No.
-	-	12-02-2020	-

DRAWING NO. 01/02/2020-MG-02