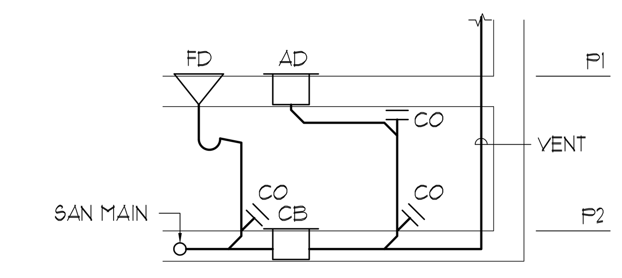
## SANITARY PIT SP-1, SP-2

| QTY. | DESCRIPTION |
|---|---|
| 2 | BARNES 2SE-1054L SUBMERSIBLE PUMPS INSIDE A 1200MM SUMP PIT, EACH C/W 1 HP, 575 VOLT, 3 PHASE, 60 CYCLE MOTOR WITH 20 FT POWER CORD, 2" N.P.T. DISCHARGE, HANDLES 2" DIAMETER SOLIDS AND DELIVERS 50 U.S. G.P.M. AT 30 FT TOTAL HEAD. |
| 1 | LDP 575 DUPLEX ELECTRICAL ALTERNATOR, STARTER AND CONTROL PANEL, WITH LOCKABLE DEAD-FRONT, 575 VOLT, 3 PHASE, 60 CYCLE C/W H.O.A. SELECTOR SWITCHES, RUN LIGHTS, THERMAL OVERLOAD HEATERS TO SUIT PUMP MOTORS WITH RESET BUTTON, AND CIRCUIT BREAKERS IN EEMAC 3R ENCLOSURE. |
| 4 | LS 20 MECHANICAL LEVEL SENSORS, 1 FOR PUMP "ON", 1 FOR PUMP "OFF", 1 FOR BOTH PUMPS "ON", AND 1 FOR ALARM LEVEL. |
| 1 | LHW 115 HIGH WATER ALARM PANEL, 115 VOLT, 1 PHASE WITH PILOT LIGHT, ON-OFF-TEST SWITCH, BUZZER AND EXTRA RELAY FOR REMOTE SIGNALING, IN EEMAC 1 ENCLOSURE. |
| 1 | TRIM BAR CURB FRAME C/W CHECKERED COVER PLATE IN 2 SECTIONS, FOR INSPECTION AND ACCESS. |

## STORM PIT STP-1, STP-2

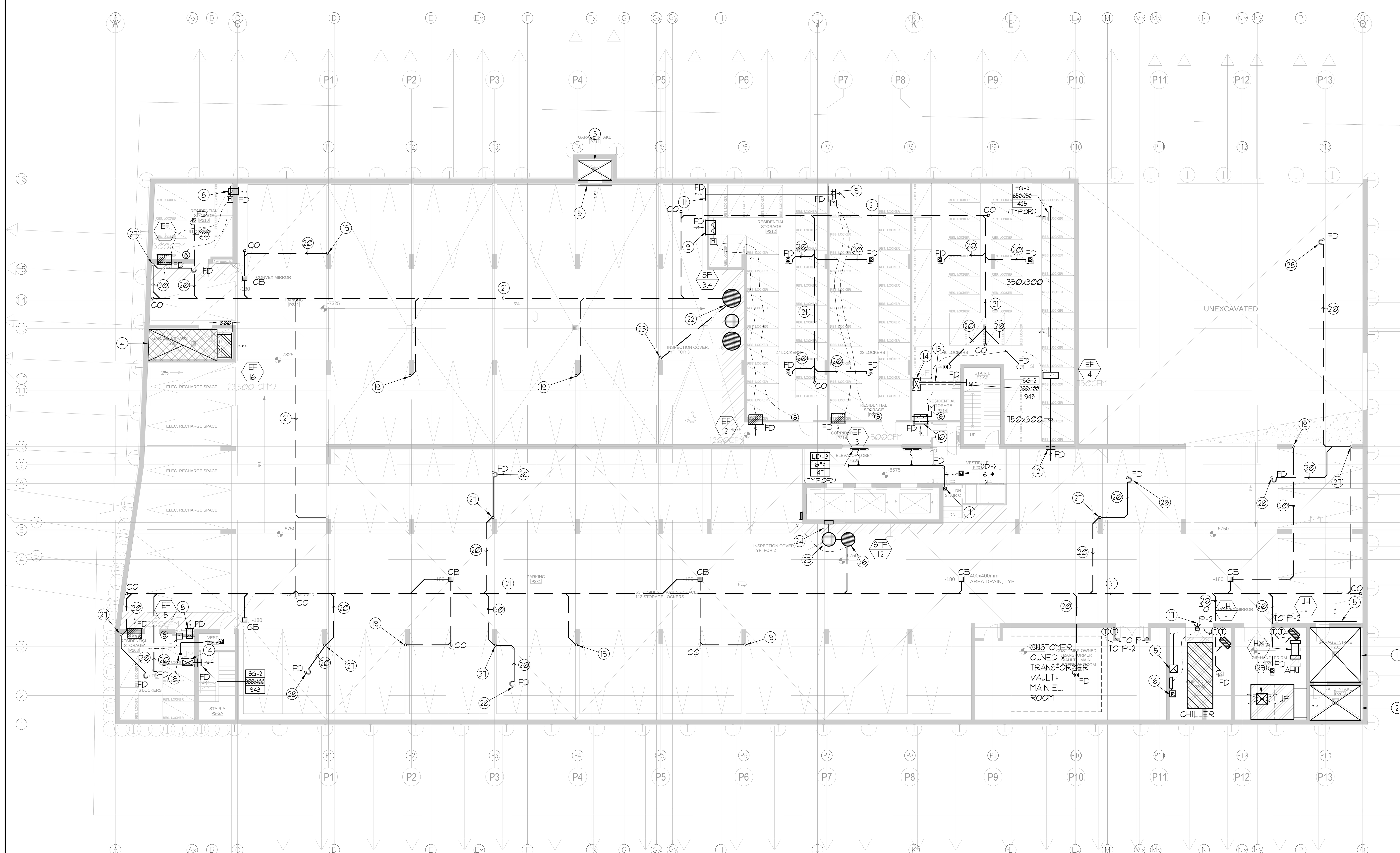
| QTY. | DESCRIPTION |
|---|---|
| 2 | BARNES 2SE-1054L SUBMERSIBLE PUMPS INSIDE A 1200MM SUMP PIT, EACH C/W 1 HP, 575 VOLT, 3 PHASE, 60 CYCLE MOTOR WITH 20 FT POWER CORD, 2" N.P.T. DISCHARGE, HANDLES 2" DIAMETER SOLIDS AND DELIVERS 50 U.S. G.P.M. AT 30 FT TOTAL HEAD. |
| 1 | LDP 575 DUPLEX ELECTRICAL ALTERNATOR, STARTER AND CONTROL PANEL, WITH LOCKABLE DEAD-FRONT, 575 VOLT, 3 PHASE, 60 CYCLE C/W H.O.A. SELECTOR SWITCHES, RUN LIGHTS, THERMAL OVERLOAD HEATERS TO SUIT PUMP MOTORS WITH RESET BUTTON, AND CIRCUIT BREAKERS IN EEMAC 3R ENCLOSURE. |
| 4 | LS 20 MECHANICAL LEVEL SENSORS, 1 FOR PUMP "ON", 1 FOR PUMP "OFF", 1 FOR BOTH PUMPS "ON", AND 1 FOR ALARM LEVEL. |
| 1 | LHW 115 HIGH WATER ALARM PANEL, 115 VOLT, 1 PHASE WITH PILOT LIGHT, ON-OFF-TEST SWITCH, BUZZER AND EXTRA RELAY FOR REMOTE SIGNALING, IN EEMAC 1 ENCLOSURE. |
| 1 | TRIM BAR CURB FRAME C/W CHECKERED COVER PLATE IN 2 SECTIONS, FOR INSPECTION AND ACCESS. |




NOTE:
PRIME AND VENT TRAP OF FD/CB PER OBC PART 7 SECTION 7.5 (TYPICAL).

PARKING AREA DRAIN/CATCH BASIN SCHEMATIC

(29) 750x750 F/A DUCT FROM AHU AND TRANSITION TO 2,000x650 F/A DUCT IN VERTICAL RUN & UP.




GENERAL NOTES:

1) CONTRACTOR SHALL CO-ORDINATE ARCHITECTURAL, STRUCTURAL, LIGHTING, HVAC, SPRINKLER DRAWINGS TO AVOID AREAS OF CONFLICT AND TO MAINTAIN CEILING HEIGHTS.

2) CONTRACTOR SHALL REPORT ALL DISCREPANCIES AND AREAS OF CONFLICT TO THE ENGINEER PRIOR TO BEGINNING WORK.

3) MINIMUM HEAD ROOM IS 2100 mm ABOVE FINISH FLOOR LEVEL.

4) WHERE THERE IS A DROPPED CEILING, GAS PIPING SHALL BE HUNG BELOW AND TIGHT TO CEILING.

5) ALL EQUIPMENT TO BE INSTALLED PER SPECIFICATION AND MANUFACTURER'S INSTALLATION MANUAL. PROVIDE ACCESS PANEL FOR CONCEALED EQUIPMENT VALVES, ETC.

6) ALLOW 3M SEPARATION BETWEEN THE CONNECTION OF THE MAIN SANITARY RISER AND ITS AUXILIARY RISER.

7) ALL SANITARY PIPE OUTSIDE OF HEATED CEILING SPACE SHALL BE INSULATED, CANVASSED AND PAINTED.

8) ALL VENTS SHALL COMPLY WITH O.B.C. AND PLUMBING CODE.

9) FOR STORAGE ROOM VENTILATION SYSTEM, DIV.16 TO PROVIDE CONDUIT, WIRING AND SWITCH TO START / STOP FAN & DAMPER. FAN AND 110V ACTUATOR TO BE SUPPLIED AND INSTALLED BY DIV. 15.

10) FOR UTILITY ROOM VENTILATION SYSTEM, DIV.15 WILL PROVIDE LINE VOLTAGE THERMOSTAT TO DIV.16. DIV.16 TO PROVIDE CONDUIT & WIRING TO START/STOP FAN & DAMPER VIA THERMOSTAT. FAN AND 110V ACTUATOR TO BE SUPPLIED AND INSTALLED BY DIV. 15.

11) FOR UNIT HEATER, DIV. 15 TO PROVIDE LINE VOLTAGE THERMOSTAT TO DIV. 16. DIV. 16 TO PROVIDE CONDUIT & WIRING TO START/STOP UNIT HEATER.

12) FIRE DAMPERS ARE REQUIRED TO BE LISTED AND ARE TO HAVE FIRE-PROTECTION RATING OF THE PENETRATED FIRE SEPARATION.

13) THE PIPING PENETRATING THE VARIOUS FIRE SEPARATION IS REQUIRED TO BE FIRESTOPPED WITH A LISTED FIRESTOPPING MATERIAL IN ACCORDANCE WITH OBC ARTICLE 3.1.9.1.

14) DIV. 16 TO PROVIDE START/STOP FOR ALL THE MAIN GARAGE EXHAUST FANS INSIDE CACF ROOM.

15) ALL TRAPS & PRIMERS TO BE HEAT TRACED BY DIV.16, INSULATED & JACKETTED BY THIS CONTRACTOR.

2550 mm CLEAR
FLOOR TO UNDERSLAB

NOTES:

1. 3,300x3,600 (12.26 M², 132 FT²) FRESH AIR INTAKE SHAFT FOR P-1 & P-2 LEVEL.
2. 3,300x2,300 (7.8 M², 84 FT²) FRESH AIR INTAKE SHAFT FOR MAU.
3. 2,250x1,300 (2.93 M², 31.5 FT²) FRESH AIR SHAFT FOR P-2 LEVEL.
4. 5,500x2,000 (11.61 M², 125 FT²) EXHAUST AIR SHAFT FOR P-1 & P-2 LEVEL.
5. 3,100x2,000 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (16,500 CFM)
6. 2,000x1,300 WEATHERPROOF INTAKE LOUVRE C/W BIRDSCREEN. (7,000 CFM)
7. 200x200 FRESH AIR DUCT FROM ABOVE C/W FIRE DAMPER AT SLAB.
8. 400x200 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
9. 800x400 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
10. 800x800 INTAKE LOUVRE C/W MOTORIZED DAMPER, FIRE DAMPER & WIRE MESH.
11. 800x400 INTAKE LOUVRE C/W FIRE DAMPER& WIRE MESH.
12. 600x400 EXHAUST LOUVRE C/W FIRE DAMPER & WIRE MESH.
13. DUCT INSIDE 2Hr FIRE RATED ENCLOSURE. ENCLOSURE BY OTHERS.
14. 700x350 STAIR PRESSURIZATION DUCT FROM ABOVE C/W FIRE RATED ENCLOSURE. FIRE RATED ENCLOSURE BY OTHERS.
15. ---x--- DUCT DOWN TO 450 mm AFFL C/W OPEN END AND WIRE MESH.
16. REFRIGERANT MONITORING MASTER & SLAVE PANELS AND SENSOR. SLAVE PANEL SHOWING STATUS OF REFRIGERATION MONITORING SYSTEM TO BE MOUNTED OUTSIDE OF CHILLER ROOM. UPON SENSING OF REFRIGERANT LEAKAGE CHILLER WILL BE SHUT DOWN AND EF-10 TO BE ACTIVATED TO RUN IN HIGH SPEED.
17. ALARM STROBE LIGHT SUPPLIED AND WIRED TO THE REFRIGERANT MONITORING SYSTEM BY MECHANICAL CONTRACTOR..
18. 150x100 FRESH AIR DUCT FROM ABOVE c/w FIRE DAMPER AT SLAB.
19. 100φ SAN FROM ABOVE AND DOWN c/w CLEANOUT AT BASE.
20. 100φ SAN @ 1%.
21. 150φ SAN @ 1%.
22. SANITARY SUMP PIT. SEE DETAIL ON THIS DRAWING.
23. 75φ PUMPED SAN UP c/w HEAT TRACING. HEAT TRACING BY DIV. 16. INSULATION AND JACKET BY THIS CONTRACTOR.
24. SCUPPER DRAIN.
25. BACKWATER VALVE AND CLEANOUT PRIMED & VENTED INSIDE 900φ MANHOLE c/w COVER. SEE DETAIL ON THIS DRAWING.
26. ELEVATOR SUMP PIT. SEE DETAIL ON THIS DRAWING.
27. 100φ SAN DOWN c/w CLEANOUT AT BASE.
28. DRAIN TRAP TO BE HEAT TRACED BY DIV. 16. THIS CONTRACTOR TO INSULATE & JACKET (TYPICAL).

## LEGEND MECHANICAL

| SYMBOL | DESCRIPTION |
|---|---|
| | SUPPLY AIR DIFFUSER |
| | SUPPLY AIR TROFFER |
| | LINEAR SUPPLY DIFFUSER |
| T | THERMOSTAT |
| S | FAN SWITCH |
| | RETURN AIR GRILLE |
| | EXHAUST AIR GRILLE |
| | SUPPLY DUCT UP |
| | SUPPLY DUCT DOWN |
| | RETURN DUCT UP |
| | RETURN DUCT DOWN |
| | EXHAUST DUCT UP |
| | EXHAUST DUCT DOWN |
| FD | FIRE DAMPER |
| BD | BALANCING DAMPER |
| M | MOTORIZED DAMPER |
| MFD | MOTORIZED FIRE DAMPER |
| BDD | BACKDRAFT DAMPER |
| OBD | OPPOSED BLADE VOLUME CONTROL DAMPER C/W LOCKING QUADRANT |
| | TURNING VANES |
| | FLEXIBLE CONNECTION |
| | ACOUSTIC INSULATION |
| XX / X | TYPE OF EQUIPMENT; EQUIPMENT IDENTIFICATION |
| XX-X / XXX / XXX | TYPE OF DIFFUSER OR GRILLE; GRILLE SIZE OR DIFFUSER NECK SIZE; AIRFLOW (CFM OR L/S) |
| | STARTER ( 3 PHASE , 1 PHASE ) |
| S | IN-SUITE ERV MASTER SWITCH |
| S | FAN SWITCH / IN-SUITE ERV OVERRIDE BUTTON |
| CO | CO SENSOR |
| G | GAS LINE |
| G | GAS METER |
| | GAS COCK |
| | PRESSURE REDUCING VALVE |
| | SANITARY ABOVE GRADE |
| | SANITARY BELOW GRADE |
| | STORM ABOVE GRADE |
| S | STORM BELOW GRADE |
| | DOMESTIC COLD WATER |
| | DOMESTIC HOT WATER |
| | DOMESTIC HOT WATER RECIRCULATION |
| | SANITARY VENT |
| M | WATER METER |
| FD | FLOOR DRAIN |
| FFD | FUNNEL FLOOR DRAIN |
| HD | HUB DRAIN |
| RD | ROOF DRAIN |
| SLD | SLAB DRAIN |
| AD | AREA DRAIN |
| BLAD | BI-LEVEL AREA DRAIN |
| CB | CATCH BASIN |
| | SANITARY TRAP |
| | ELBOW UP |
| | ELBOW DOWN |
| CO | WALL CLEANOUT |
| CO | FLOOR CLEANOUT |
| HB | HOSE BIBB |
| NFHB | NON-FREEZE HOSE BIBB |
| | GLOBE VALVE |
| | GATE VALVE |
| | BALL VALVE |
| | BUTTERFLY VALVE |
| | PRESSURE REDUCING VALVE |
| | CHECK VALVE |
| | CAP |
| | COMPRESSED AIR OUTLET |
| | BACKFLOW PREVENTER |
| | CIRCUIT BALANCING VALVE |
| | MULTIPLE PIPES / - DENOTES NO. OF PIPES |
| T | TEMPERATURE SENSOR |
| | THERMOMETER |
| | 2-WAY MODULATING VALVE |
| | 3-WAY MODULATING VALVE |
| TW | 1/2"x4"(D) THERMOWELL C/W 1/2" BUSHING & 1/2" PLUG |
| XXX / XXX / XXX | FLOOR ELEVATION ABOVE LEVEL; FLOOR ELEVATION THIS LEVEL; HEADROOM (FLOOR TO U/S HEIGHT) |

## REVISIONS

| DATE | NO. | DESCRIPTION | BY |
|---|---|---|---|
| 07/10/14 | 2 | RE-ISSUED FOR PERMIT | E.P. |
| 05/30/14 | 1 | ISSUED FOR PERMIT | E.P. |

MARK VOID ALL PRINTS DATED PREVIOUS TO FINAL DATE ABOVE

CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND CONDITIONS ON THE JOB AND REPORT DISCREPANCIES TO THE ENGINEERS BEFORE PROCEEDING WITH THE WORK. THIS DRAWING IS THE PROPERTY OF THE ENGINEERS AND MUST BE RETURNED UPON COMPLETION OF THE WORK.

DRAWINGS ARE NOT TO BE SCALED

NOVA TREND ENGINEERING GROUP LTD

LICENSED PROFESSIONAL ENGINEER 07/10/14 ERIC PUI KAI PUN PROVINCE OF ONTARIO


175 West Beaver Creek Road, Unit 31
Richmond Hill, Ontario L4B 3M1
Tel: 905 882-5445
Fax: 905 882-5447
Email: cad@novatrendeng.com


DRAWING TITLE: P-2 FLOOR PLAN MECHANICAL LAYOUT

PROJECT TITLE: ALEXANDRA PARK
XXX
TORONTO ONTARIO

| DRAWN BY: | CHECKED BY: | SCALE: |
|---|---|---|
| G.S. | E.P. | 1:100 |
| DATE: | PROJECT NUMBER: | DRAWING NUMBER: |
| FEB, 13 | 1313 | M-3 OF 39 |


Drawing name: \\CADSERVER\Current Dwg\13\1313 - Alexandra Park\DIV15\1313M- 3(P-2 PLAN - MECHANICAL LAYOUT).dwg Plotted: Jul 09, 2014 - 4:08pm