

**DENVER FIRE DEPARTMENT POLICY
MARIJUANA PLANT HUSBANDRY FACILITIES
JANUARY 4, 2013**

1. ZONING APPROVAL:

- Parties involved in the establishment of MARIJUANA PLANT HUSBANDRY OCCUPANCIES, must first go through the Denver Zoning Department for approval, PRIOR to construction or alteration of any structure or its electrical / mechanical systems.
- This includes temporary wiring or lighting used to initiate plant growth.
- This process shall include a written application for a change of occupancy/use. (IBC 3408.1)
- No construction shall begin until:
 1. A change of **occupancy** for **F-1** use has been granted, with supporting documentation from the Denver Zoning Department.
 2. Plans have been submitted to and approved by Denver Development Services, including a review by fire protection engineers.
 3. All required permits have been obtained.
 4. **Failure to comply with ALL requirements of this policy will result in the issuance of a “Stop Work Order”, a court summons being issued to all offending parties and the possible confiscation of all plants by the Denver Police Department.**

2. BUILDING DEPARTMENT (DENVER DEVELOPMENT SERVICES) SUBMITTALS:

- Upon approval by the Denver Zoning Department, two sets of signed, stamped plans, prepared by a licensed engineer, must then be submitted to Denver Development Services for review.
 - Engineered plans shall include the following: (IBC 107.1 &107.2)
1. **Building layout**- including floor plans of all rooms, their dimensions and their expected use within the facility. (IBC107.2.1)
 - a. Building layout shall include a reflected ceiling that shows the exact location of any lighting and heating fixtures. A lighting schedule of fixtures used in each room must be supplied. (IBC 107.2 through 107.2.5)
 2. **Site plan** indicating the direction north and, the names of streets or avenues adjacent to the structure. (IBC 107.2.5)
 3. Once construction begins, a clearly visible building address with four (4) inch high, contrasted, numerals shall be required at the main entrance to the facility. (IFC 505.1)
 4. **HVAC/Mechanical** drawings including:
 - a. The anticipated BTU/heat load requirements for each room or compartment within the facility.
 - b. The type of heating/cooling equipment to be used to supply environmental air for all rooms.
 - c. Where this equipment will be located. (i.e. centrally located, roof top units (RTU's) or dedicated room heating/cooling units.)

- d. All ductwork supplying conditioned air and the return air must be constructed of sheet metal. Flexible ductwork can only be used for the last six (6) feet of the air supply to an outlet.
- e. All penetrations through fire walls between spaces (room to room or hallway to room) must be equipped with a fire damper that contains a fusible link to prevent the growth of a fire from one space to another. (IBC 705.10, 716.2 through 716.7)

5. Electrical drawings

- a. Circuit panel schedules shall be provided for each branch circuit, indicating exact equipment wattage and amperage loads and their location within the building.
- b. Provide the sum of these panel schedule loads so that gross electrical demand can be appropriately calculated to determine the size and capacity of the electrical service required. (voltage, amperage and number of phases).
- c. All lighting shall have an overhead power source.
- d. Light fixture cords shall be “trained” and kept in wire cable troughs so that they do not pose an obstruction hazard in aisles or corridors used for foot traffic.
- e. The electrical service shall be rated at 150% of demonstrable load to allow for inevitable changes that take place once the grow operation goes into operation. A one-line schematic of the service and sub-panels shall be provided that outlining an overall picture of the electrical system. (NEC)

6. Plumbing

- a. Layout for domestic water lines are to be shown, both cold and hot water.
- b. Waste/soil plumbing layout shall be engineered per the facilities anticipated usage.
- c. All waste water that becomes contaminated with fertilizers or plant foods will require treatment before being discharged into sanitary waste plumbing systems.
- d. Water treatment systems shall meet Waste Water Managements specified criteria and be approved by that Department. (IBC 2900)

7. Walls

- a. Shall be framed and covered with fire resistive materials.
- b. Lightweight wall board is not permitted for use as it and does not meet fire resistant ratings.
- c. Walls shall be painted with water resistant paint.
- d. Plastic sheeting shall not to be attached to walls or ceilings.
- e. Fire resistive materials shall be used for the ceiling of each room providing a fire resistant rating of one hour. (IBC 803)
- f. Reflective Mylar or plastic sheeting stapled or taped to the walls or ceiling are not approved wall coverings.
- g. All doors and door frames shall be metal and have a one hour fire rating.
- h. Clear exit corridors shall be provided from all rooms within the facility. (IBC 715)
- i. Illuminated exit signs with battery back-up power shall be provided to clearly indicate the closest exit for all grow rooms.(IBC 1006 & IFC 1011)
- j. All door hardware shall be of the single motion type and panic hardware on the main exit doors is required. (IBC 1005)

3.SPECIAL CONSIDERATIONS:

- **Carbon dioxide (CO2) systems**
 - If used in plant husbandry occupancies, equipment (meters or gauges) shall be provided to indicate CO2 levels in each grow area/room.
 - These meters shall be calibrated and inter-connected to gas supply solenoids to limit CO2 levels to a maximum of 1000ppm in each grow area/room.
 - Fail-safe systems shall be provided to completely shut down CO2 systems in the event of leaks or flow rates outside of design parameters.
 - CO2 may be supplied by compressed gas cylinders or cryogenic dewars, located in a dedicated room within the facility, designed for the storage of compressed gases.
 - Gases shall be distributed within the facility by means of a manifolded, rigid piping system.
 - Signage shall be provided on the exterior door of each grow room/area utilizing CO2 stating: "CAUTION – POTENTIAL OXYGEN DEFICIENT ENVIRONMENT".
 - Meters or gauges shall be provided to indicate OXYGEN levels in each grow room/area utilizing CO2 systems.
 - Amber strobes tied to OXYGEN level monitoring equipment shall be provided outside of each grow area/room utilizing CO2 systems
 - Strobes shall flash indicating an alarm condition anytime OXYGEN levels fall below 18% in any area utilizing CO2. (Supervisory Only??)
- **Product concentration processes.**
 - All processing of marijuana plants into refined or concentrated products, utilizing compressed, flammable gases shall:
 1. Be conducted in rooms dedicated for this type production having a fire rating of two hours (walls, floors, ceilings, doors).
 2. Provide ventilation to the exterior of the building for each room in the facility engaging in this type of process.
 3. Store all flammable liquids / gases outside in a flammable gas cage or in a listed flammable liquids cabinet with self-closing door hardware. (Flammable liquids cabinets may be located within the two hour fire rated processing room).
 4. Have an approved fire extinguishing system installed to protect occupants of this room in the event of fire. (IFC 901.4 & 901.6) (Fire protection systems within existing buildings must be evaluated and approved for use in plant husbandry (F1) occupancies). (IFC 903.4)
- **Access controls**
 - Require a Denver Building Department 3B permit with its own submittal and review before the installation takes place.
- **Exiting & Security**
 - Required minimum exit access shall be provided.

- Enhanced building security measures shall by no means impede egress for the facilities occupants or firefighters in the event of an emergency.
- **Fire extinguishers**
 - Portable fire extinguishers shall be provided within the facility, near exits.
 - Travel distance to extinguishers shall not exceed seventy-five (75) feet of travel.
 - Minimum extinguisher size permitted is 2A10BC. (IFC 906 & 906.1)
- **Graphic**
 - An 8 ½” x 11” map displaying a general floor plan of the facility shall be provided near the main entrance in a clear protective cover.

4. BUILDING DEPARTMENT PERMITS:

- Upon approval of submitted plans by Denver Development Services, permits may be obtained by licensed contractors and construction and equipment installation may begin. (IBC 107.3.4 & 109.2)

5. INSPECTIONS:

- Each phase of construction shall be inspected by Denver Development Services Officials for approval and release to the next phase of construction for the project. (IBC 110.1 & 110.2)
- When all inspections have been approved and signed off by Denver Development Services, (IBC 110.1) annual operational permits may be obtained from the Denver Fire Department.

6. FIRE DEPARTMENT ANNUAL OPERATIONAL PERMITS

- Marijuana plant husbandry occupancies require an annual operational permit issued by the Denver Fire Department. (Annual Plant Husbandry Permit).
- Additional annual permits are required for plant husbandry occupancies utilizing:
 - CO2 systems – Requires (Annual Compressed Gas Use & Storage Permit).
 - Extraction/concentration processes – (Annual Flammable/Combustible Liquids Use & Storage Permit)
- When all required operational permits have been obtained a final Safety Inspection from the Denver Fire Department (DFC 106.6) will be conducted.

7. CERTIFICATE OF OCCUPANCY

- Upon successful completion of the final safety inspection a Certificate of Occupancy (CO) will be issued allowing the business to begin operations.
- Temporary Certificates of Occupancy (TCO's) shall not be allowed in lieu of a complete Certificate of Occupancy.

8. BUSINESS LICENSE

- The final step In the establishment of a marijuana plant husbandry occupancy, the business license obtained through Excise and License, may now be obtained.