



November 13, 2019

Planning & Economic Development Department
100 Santa Rosa Avenue
Santa Rosa, CA 95404

RE: Cannabis Odor Mitigation Plan
2715 Giffen Avenue, Santa Rosa, CA
Cannabis Manufacturing, Type-7

To Whom It May Concern:

Giffen Avenue Property, Inc. has retained my services to develop the odor mitigation systems for the project located at 2715 Giffen Avenue in Santa Rosa. The project does not require special odor mitigation systems.

The included plan has been developed to comply with Title-20, Division 4, Chapter 20-46.050 General Operating Requirements, Paragraph 'H' Odor Control requirements as set forth by The City of Santa Rosa.

Successful application of this plan will effectively mitigate cannabis odor detection outside the structure in which the proposed business is to operate.

Thank you for your consideration. I am available to discuss the plan at your convenience.

Regards,

Jeff Warner, PE
Warner Mechanical Engineering, Inc.
CEO, Principal Engineer
CA No: M32903

City of Santa Rosa
NOV 15 2019
Planning & Economic
Development Department

WARNER MECHANICAL ENGINEERING, INC.

JEFF WARNER, PE | EMAIL: jwarner@wme-consulting.com | PHONE: 707-322-0676



City of Santa Rosa

NOV 15 2019

Planning & Economic
Development Department

ODOR MITIGATION PLAN

Giffen Building 2 Flex Mod
2715 Giffen Avenue, Santa Rosa CA

Abstract

The following plan has been developed to comply with City of Santa Rosa Title-20, Division 4, Chapter 20-46.050 General operating Requirements, paragraph 'H' Odor Control requirements.



WARNER MECHANICAL ENGINEERING, INC.

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Introduction

The following plan has been developed to comply with City of Santa Rosa Title-20, Division 4, Chapter 20-46.050 General Operating Requirements, paragraph 'H' Odor Control Requirements.

This plan has been developed based on the applicant's proposed operational criteria as outlined in the general application. Administrative, operational and engineering controls noted are consistent with the commonly accepted best available cannabis-industry-specific technologies designed to mitigate cannabis odors.

Successful application of this plan will effectively mitigate cannabis odor detection outside the structure in which the proposed business is to operate.

Project Details

Type-7 (level-2) Manufacturing: license allows a licensee to engage in volatile solvent and mechanical extraction (ex: n-butane), as specified in the application. Odor sources and intensity by cannabis activity are noted below. Refer to **Engineering Controls** (below) for mechanical system details.

Extraction equipment located within the Flex Mod unit will be loaded with frozen bio-mass material for manufacturing. Frozen bio-mass material volatile organic compound emissions (VOC: odorous terpenes, etc.) are very low and intermittently present during the loading process only. Bio-mass material will be transferred to the Flex Mod in sealed containers. Bio-mass material will not be stored in the Flex Mod. Spent bio-mass (post extraction) has negligible VOC emissions. The Flex Mod unit exhaust air system discharges in a vertical orientation at a high velocity. We expect negligible cannabis odors from the Flex Mod unit. As such carbon filtration will not be necessary.

On-site consumption through incineration (smoking and vaping) will not be permitted. This plan does not address incineration related odors.

Engineering Controls

Mechanical plans developed for building permit application will include the following features and capabilities:

1. Exhaust air inlets will be located in areas of the facility where odor generating processes occur.
2. Odors will be contained within the building through system air balancing



- techniques to eliminate uncontrolled exfiltration of odor to the outdoor environment.
3. Exhaust air streams that are part of the odor mitigation system will be released to the environment in an upward discharge pattern.
 4. System testing and balancing will be required of the installing contractor to demonstrate air balancing effectiveness.
 5. Filters, fans and other components integral to the odor mitigation plan shall be clearly labeled in accordance with the plans.
 6. Contractor shall provide a test and balance report to the applicant including: initial carbon filter differential pressure measurements; outdoor air rates at space conditioning and make-up air equipment; and environmental exhaust rates where necessary.
 7. Installing contractor shall provide written monitoring instructions and provide operational training to the applicant upon placing the system in service.
 8. Contractor operational training shall be the basis for routine maintenance and testing standard operating procedures.
 9. Construction administration services provided by a licensed mechanical engineer are required to verify the installation is consistent with this plan, including review of test and balance report.

Operational Processes and Maintenance Plan

Detailed operational and maintenance plans should be developed by the applicant. The following items should be included for odor mitigation purposes:

1. Routine verification of odor mitigation effectiveness through inspection of odors in the general vicinity of the building.

Staff Training

Standard operating procedures, including staff training, should be developed by the applicant. The following items should be included for odor mitigation purposes:

1. Routine verification of odor mitigation effectiveness monitoring: It should be clear who is responsible for this activity, where and how data is collected and cataloged. A map with clearly indicated data collection test points should be available for reference. Testing should be conducted while processing is



occurring and exhaust systems are active. Testing should occur both in the morning (when winds are calm); and in the afternoons (when winds are typically greater). Results should be recorded in a log and should include: operator name, time of day, date, results by test location, relative wind speed and weather conditions.

2. Reporting of cannabis odors outside the building: It should be clear what an employee is to do in the event cannabis odors are detected outside the building. The General Manager or other supervisor should be notified immediately upon detection. The person responsible for receiving notifications should take immediate steps to remedy the problem including, but not limited to, notifying service personnel for repairs or routine maintenance. If odors persist, odor producing operations should be stopped until an effective solution can be implemented.
3. Odor mitigation effectiveness monitoring training: All employees should be trained to conduct odor mitigation effectiveness tests. Training procedures should be included in readily available employee handbooks for reference.