

STAFF REPORT FOR THE PLANNING COMMISSION MEETING OF MARCH 25, 2015

FILE NO.: SUP-15-013

AGENDA ITEM: F-4(B)

STAFF AUTHOR: Susan Dorr Pansky, AICP
Planning Manager

REQUEST: To consider a request from 5SEAT Investments, LLC (property owner: Tim McCarville, LLC) to allow a Medical Marijuana Production Facility on property zoned General Industrial (GI), located at 8001 Highway 50 East, APN 008-611-39.

APPLICANT: 5SEAT Investments, LLC

OWNER: Tim McCarville, LLC

LOCATION: 8001 Highway 50 East

APN: 008-611-39

RECOMMENDED MOTION: "I move to approve SUP-15-012, a Special Use Permit request from 5SEAT Investments, LLC (property owner: Tim McCarville, LLC) to allow a Medical Marijuana Production Facility on property zoned General Industrial, located at 8001 Highway 50 East, APN 008-611-39, based on the findings and subject to the conditions of approval contained in the staff report."



RECOMMENDED CONDITIONS OF APPROVAL:

The following shall be completed prior to commencement of the use:

1. The applicant must sign and return the Notice of Decision for conditions for approval within 10 days of receipt of notification. If the Notice of Decision is not signed and returned within 10 days, then the item may be rescheduled for the next Planning Commission meeting for further consideration.
2. All development shall be substantially in accordance with the development plans approved with this application, except as otherwise modified by these conditions of approval.
3. All on- and off-site improvements shall conform to City standards and requirements.
4. All on- and off-site improvements shall conform to NRS and NAC 453A and the Adopted Regulations of the Division of Public and Behavioral Health of the Department of Health and Human Services, LCB File No. R004-14, as applicable at the time of development.
5. The use for which this permit is approved shall commence within 12 months of the date of final approval. A single, one year extension of time may be requested in writing to the Planning Division thirty days prior to the one year expiration date. Should this permit not be initiated (obtain a Building Permit) within one year and no extension granted, the permit shall become null and void.
6. The applicant shall maintain a State certificate to operate a Medical Marijuana Establishment, specifically a production facility, at the subject location prior to commencement of operation. Failure to maintain this certificate will render this Special Use Permit null and void.
7. The applicant shall obtain and maintain a valid Carson City Business License for the operation of a Medical Marijuana production facility.
8. The project requires application for a Building Permit, issued through the Carson City Building Division. This will necessitate a complete review of the project to verify compliance with all adopted construction codes and municipal ordinances applicable to the scope of the project.
9. All areas where vehicles will be driven or parked must be hard surface, either asphalt or concrete. The existing asphalt parking area is in poor condition and shall be resurfaced to a standard acceptable to the Engineering Division.
10. The existing parking area shall be striped to accommodate all required parking spaces for the proposed production facility.
11. The applicant shall provide parking lot lighting consistent with Carson City Development Standards.
12. The applicant shall provide landscaping as shown on the site plan provided with the application. This landscaping shall be consistent with the Carson City Development Standards, Division 3 – Landscaping.

13. The applicant shall provide architectural detail on the front of the building in compliance with Carson City Development Standards, Division 1 – Land Use and Site Design for review and approval by the Planning Division.
14. Should the applicant desire signage, the applicant shall submit proposed signage to the Planning Division for review and approval prior to installation. A Sign Permit may be required depending on the nature of the proposed signage. All signage shall conform to Division 1.20 and Division 4 of the Carson City Development Standards, as applicable.

The following conditions shall be completed with any Building Permit application:

15. The applicant shall submit a copy of the Notice of Decision and conditions of approval, signed by the applicant and owner, with any Building Permit application.
16. All projects and improvements must be performed in accordance with Nevada Revised Statutes (NRS) 624 and Carson City Municipal Code Section 15.05.020.
17. Repairs, replacements and alterations must comply with 2012 International Building Codes, 2012 Uniform Plumbing Code or 2012 International Plumbing Code, Uniform Mechanical Code or 2012 International Mechanical Code, 2012 Fuel Gas Code, 2011 Electrical Code, and 2012 Northern Nevada Amendments.
18. All contractors are required to carry State and local licenses.
19. The project will need to comply with the 2012 International Fire Code and the 2012 International WUI Code, with Northern NV Amendments.
20. Prior to the issuance of a Building Permit, provide proof of the approval to use the well water as your water system for this facility.
21. Prior to the issuance of a Building Permit, provide an approved, by Nevada Department of Environmental Protection (NDEP), set of engineered plans of the on-site sewage disposal system.
22. Prior to the issuance of a Building Permit, provide a detailed set of drawings, and standard operating procedures on how you will meet the intent of Carson City Municipal Code (CCMC) 12.06.
23. Prior to the issuance of a Certificate of Occupancy, provide a letter from your engineer stating that the system was installed according to the NDEP approved plans.
24. Effluent from the production process is not allowed to be discharged into an Individual Sewage Disposal System per Carson City Municipal Code (CCMC) 12.06.020(B) and 12.06.060(S).
25. Effluent from the production process needs to meet all discharge limits as defined in CCMC 12.06.410, before it can be brought to the Carson City Wastewater Reclamation Plan for disposal.
26. If chemicals are to be used as part of the production process secondary containment will need to be provided for these chemicals per CCMC 12.06.248.

27. Please provide Safety Data Sheets for all chemicals or fertilizers that will be used at this facility.
28. The facility will need to meet all applicable codes found in Title 12.06, 12.2.065 and Appendix 18 Division 15 of CCMC and all applicable codes found in the 2012 Uniform Plumbing Code (UPC).

The following conditions shall be applicable throughout the life of the use:

29. The Special Use Permit for this Medical Marijuana production facility is only valid at the location specified in this application for the operator who obtains the Nevada State certificate for this facility. The Special Use Permit approval shall expire and become null and void if the operator loses or otherwise forfeits his or her State certificate to operate this facility. Special Use Permits for Medical Marijuana Establishments are non-transferable between operators and locations within Carson City.
30. All production facility operations shall conform to NRS and NAC 453A and the Adopted Regulations of the Division of Public and Behavioral Health of the Department of Health and Human Services, LCB File No. R004-14, as may be modified from time to time.
31. Medical marijuana or medical marijuana-infused products intended for disposal shall be rendered unusable and disposed of off-site at the Carson City Landfill as medical material for immediate burial. Temporary exterior on-site storage of product for disposal shall be prohibited. This method of disposal is subject to change and may be modified by Carson City at any time.
32. No consumption of medical marijuana or medical marijuana-infused products shall occur on the premises of this production facility, including the parking lot and surrounding area.
33. The sale of medical marijuana products to the general public from this facility is prohibited.
34. Outdoor display and sales of medical marijuana merchandise is prohibited.
35. Medical marijuana products shall not be visible from outside the production facility at any time.
36. The applicant shall maintain a ventilation and filtration system at all times to prevent offensive odor discharge from the building that could impact the surrounding properties. Failure to maintain this system, as well as the detection of medical marijuana odors in the vicinity may result in citation and possible revocation of this Special Use Permit.

LEGAL REQUIREMENTS: CCMC 18.02.080 (Special Use Permits), CCMC 18.04.150 General Industrial (GI), CCMC DS 1.20 Development Standards for Medical Marijuana Establishments.

MASTER PLAN DESIGNATION: Mixed Use Commercial (MUC)

PRESENT ZONING: General Industrial (GI)

KEY ISSUES: Will the proposed Medical Marijuana Production Facility be compatible with the

surrounding neighborhood and be in keeping with the standards of the Carson City Municipal Code?

SURROUNDING ZONING AND LAND USE INFORMATION:

- EAST: General Industrial/Aggregate Pit
- WEST: General Commercial/Vacant Parcels
- NORTH: General Industrial/Commercial Warehouse Uses
- SOUTH: General Industrial/Retail Commercial Uses

ENVIRONMENTAL INFORMATION:

- FLOOD ZONE: Zone X (areas of minimal flooding)
- EARTHQUAKE FAULT: Zone II
- SLOPE/DRAINAGE: Site has been previously developed and is relatively flat at the western side. The eastern side of the site slopes from northeast to southwest

SITE DEVELOPMENT INFORMATION:

- LOT SIZE: 5.13 acres
- EXISTING STRUCTURE SIZE: 3,120 square feet
- PROPOSED ADDITION TO STRUCTURE: 1,552 square feet
- EXISTING PARKING: Estimated at 7 spaces
- SETBACKS:

	Front	Side	Street Side	Rear
Required	30 feet	0	N/A	0 feet
Proposed	107.5 feet	169 feet	N/A	368.7 feet

- VARIANCES REQUESTED: None

PREVIOUS REVIEWS:

None

HISTORY:

Senate Bill (SB) 374, commonly referred to as the "Medical Marijuana Act," was adopted by the Nevada Legislature and signed into law in 2013, authorizing Medical Marijuana Establishments in Nevada. In July 2014, the Carson City Board of Supervisors adopted zoning regulations to allow Medical Marijuana Establishments in the General Commercial and General Industrial zoning districts in certain locations in Carson City with the approval of a Special Use Permit and subject to specific development standards.

In addition to the Special Use Permit requirements set forth by Carson City, any Medical Marijuana Establishment applicants are also required to apply to the State of Nevada for a certificate to operate a Medical Marijuana Establishment in Nevada. All applications for Medical Marijuana Establishments for 2014 were submitted and provisional certificates were issued by the State on November 3, 2014. A provisional certificate is a preliminary certificate issued by the State that is contingent on applicants receiving all local zoning and business license approvals. Once those approvals have been verified, the State will issue an official certificate to successful Medical Marijuana Establishment operators.

The applicant for this Special Use Permit to operate a Medical Marijuana Establishment, in this case a production facility, has received a provisional certificate from the State. As a result, a condition of approval has been recommended as a part of this staff report that the applicant must maintain their certificate to operate a Medical Marijuana Establishment in Carson City in order for this Special Use Permit to remain valid. The failure to maintain a certificate to operate from the State would result in the Special Use Permit becoming null and void.

DISCUSSION:

The applicant is proposing to operate a medical marijuana production facility in a planned 1,552 square foot expansion to the existing 3,120 square foot building on Highway 50 East. Under a separate Special Use Permit application, the applicant also proposes to operate a medical marijuana cultivation facility in the existing portion of the subject building. This cultivation facility permit is scheduled to be heard on the same agenda as this item. The production facility will use cuttings, clippings and miscellaneous cannabis plant material to create a concentrated resin that will be encapsulated for distribution. At this time, the applicant does not plan to manufacture other products including edibles and topicals at this location and will limit production to the capsule form of product. The production facility will consist of a processing area, a water treatment area, a storage/clean up room, a loading and receiving area and a vault as shown on the floorplans included in the application. The facility will employ approximately 14 people, with up to seven of those positions being on-site at the same time.

Staff estimates water usage for the facility to be up to 1,000 gallons per day, which is under the threshold of 7,500 gallons per day that would require Growth Management Review. In addition, this facility is not connected to municipal water due to its relatively remote location in relation to the water system. The applicant states that water for the project will be supplied by a well that was drilled on the property in 1974. However, no Proof of Completion was completed on the well and the State Engineer's office canceled the permit in 1977 for failure to comply with the original permit conditions. Regardless, the property has continued to operate with the well and without the property owner's knowledge that the well permit had been cancelled. The property owner is now aware of the situation and intends to resubmit an application on the existing well to get it legally permitted. The Engineering Division is aware of this situation but has no objection to the proposed project based on the status of the well. The Health and Human Services Division has indicated that they would like the applicant to provide proof that the well has been approved for the proposed project. Staff has incorporated this requirement into the recommended conditions of approval.

In addition to not being connected to domestic water, the project is also not connected to the city system system, but instead to an existing septic system. Again, due to the relatively remote location of the proposed project, connection to the city's sewer system is not a feasible option. In working with the applicant, Engineering and Health and Human Services staff have determined that continuing to utilize a septic system for the proposed project is acceptable, provided that it be designed and engineered appropriately and to the satisfaction of the Nevada Division of Environmental Protection. Conditions of approval have been recommended by staff to address these requirements.

Traffic volumes are estimated to be relatively low, with daily trips limited to approximately 18 average daily trips. Approximately 14 of these trips will be associated with employees, while the other four trips will be associated with deliveries to and from the facility. Staff notes that the parking area and driveway approach are in poor condition and will be required to be paved and striped as a part of this project.

Along these same lines, staff notes that no landscaping is present on the property currently. Staff has discussed this concern with the applicant and the applicant has provided proposed landscaping areas on the site plan included with the application. Staff finds the proposed landscaping areas to be acceptable and has recommended a condition of approval that the new landscape areas comply with Carson City Development Standards, Division 3 – Landscaping.

Additionally, staff notes that part of the proposal for the existing building for the cultivation facility, as well as the expansion for the production facility, includes removing the existing front-facing windows in the building and making the entire front of the building solid concrete block. Per Carson City Development Standards, Division 1 – Site Design, smooth faced block is not allowed as the predominant building material. Staff has recommended a condition that the applicant provide architectural detail on the portion of the building that faces the public right-of-way in order to comply with the Development Standards. This will be reviewed for approval by the Planning Division at the Building Permit stage.

The applicant proposes a security plan that includes additional perimeter chain-link fencing at the east and south sides of the building, as well as new exterior building lighting, and extensive surveillance that includes the following:

- Devices or a series of devices to detect unauthorized intrusion, which may include a signal system interconnected with a radio frequency method, such as cellular, private radio signals, or other mechanical or electronic device;
- At least one 19-inch or greater call-up monitor;
- A video printer capable of immediately producing a clear still photo from any video camera image;
- Video cameras with a recording resolution of at least 704x480 or the equivalent providing coverage of all entrances to and exits from limited access areas and all entrances to and exits from the building, capable of identifying any activity occurring within the grow rooms in low light conditions;
- A method for storing video recordings from the video cameras for at least 30 calendar days;
- A failure notification system that provides an audible and visual notification of any failure in the electronic monitoring system;
- Sufficient battery backup for video cameras and recording equipment to support at least five minutes of recording in the event of a power outage; and
- Immediate automatic or electronic notification to alert local law enforcement agencies of an unauthorized breach of security at the medical marijuana establishment in the interior of each building of the establishment.

The applicant's proposed hours of operation are 7am to 7pm seven days per week. Staff notes that the limitation on hours of operation set forth in the Carson City Development Standards is for dispensaries only and that the applicant could operate outside of their proposed hours if they choose to do so.

To mitigate concerns of medical marijuana odor from the facility, the applicant proposes to use can filters, charcoal filters and Uvonair ozone systems in each of the bloom rooms of the facility. State regulations require that medical marijuana facilities do not emit odors that are detectable from outside of their facilities. Additionally, staff has recommended a condition of approval to address odor concerns as a part of this report.

A Special Use Permit is required for the proposed project for the following reason:

- Pursuant to Carson City Municipal Code, Section 18.04.150, General Industrial Conditional Uses, a Medical Marijuana Establishment requires the approval of a Special Use Permit subject to Carson City Development Standards, Section 1.20, Medical Marijuana Establishments.

As stated above, Medical Marijuana Establishments are subject to specific criteria outlined in the Carson City Development Standards, Section 1.20 – Medical Marijuana Establishments. These development standards and how the proposed production facility meets them are addressed below:

1.20 Medical Marijuana Establishments.

The following standards are intended to establish minimum standards and Special Use Permit review criteria for Medical Marijuana Establishments, including Cultivation Facilities, Dispensaries, Production Facilities, and Testing Laboratories, as defined in Title 18 and NRS, in addition to other standards for commercial and industrial development.

1. The following standards apply to all Medical Marijuana Establishments.
 - a. All Medical Marijuana Establishments (MMEs) require approval of a Special Use Permit. Special Use Permits for MMEs are only valid at a given location for the operator who obtains the Nevada State certificate for that facility. The Special Use Permit approval shall expire and become null and void if the MME operator loses or otherwise forfeits his or her State certificate to operate that facility. Special Use Permits are non-transferable between operators and locations within Carson City.

Staff has recommended a condition of approval outlining these requirements.

- b. No consumption of Medical Marijuana products shall occur on the premises of any MME.

Consumption on the premises of the production facility is not proposed. Staff has recommended a condition of approval to address this requirement.

- c. All business activities related to MMEs, including cultivation, shall be conducted indoors, within a permanent building. The use of office trailers or other temporary structures is prohibited. All MMEs shall have an appearance, both as to the interior and exterior, which is professional, orderly, dignified, and consistent with the traditional style of pharmacies and medical offices.

The business activities for the production facility are proposed to be conducted inside an existing permanent building. Production activities are in line with industrial-type activities, in buildings that are not accessible by the public. Therefore, a building such as the one proposed is appropriate for this use, rather than a building that is consistent with the traditional style of pharmacies and medical offices. The building is required to be professional, orderly and dignified nonetheless.

- d. Outside display or sales of MME merchandise shall be prohibited.

Outside display and sales is not proposed with the production facility. Staff has recommended a condition of approval to address this requirement.

- e. Accessory outside storage for MMEs shall comply with Title 18.16 Development Standards, Division 1.12 Outside Storage.

Outside storage is not proposed with this production facility.

- f. Access to the MME shall be restricted in compliance with State regulations.

A condition of approval has been recommended that the production facility maintain compliance with all State regulations.

- g. No MME-related products shall be visible from outside the building.

Based on the nature of this production operation, MME-related products are not anticipated to be visible from outside the building. Staff has recommended a condition of approval to address this requirement.

- h. Sign Requirements. All MME signage shall be discreet, professional, and consistent with the traditional style of signage for pharmacies and medical offices. All MMEs shall follow the sign regulations for Office Uses in the Development Standards, Division 4, except that freestanding sign height for Cultivation Facilities, Production Facilities, and Testing Laboratories shall be limited to 10 feet consistent with sign height requirements for industrial uses.

The applicant is not proposing signage with this application. Staff has recommended a condition of approval that will require that signage be reviewed and approved by the Planning Division prior to installation, should the applicant decide to pursue signage.

- i. Parking Requirements. Parking shall be provided for MMEs as follows:

- (1) Production Facilities. One space per 500 square feet of gross floor area.

The proposed building and expansion will house co-located medical marijuana cultivation and production facilities. The cultivation facility portion of the building is expected to be approximately 3,120 square feet, which would require four parking spaces based on the requirement of one space per 1,000 square feet of gross floor area. The required parking for the production facility, estimated at 1,552 square feet, is four spaces based on one space per 500 square feet of gross floor area. Together, the total parking requirement is eight spaces.

The existing parking lot is not currently striped but staff believes that a minimum of eight spaces can be accommodated. The applicant has provided for eight parking spaces on the site plan included in the application. Staff believes the existing parking area is in poor condition and has recommended a condition of approval to repave the area and to restripe for the required parking spaces. Finally, staff recommends a condition that the applicant be required to install parking lot lighting in compliance with Carson City Development Standards,

Division 1.

- j. No more than two Dispensaries shall be permitted in Carson City.

This item is not applicable to medical marijuana production facilities.

- k. A MME shall not be located within 1,000 feet of a public or private school that provides formal education traditionally associated with preschool or kindergarten through grade 12 or within 300 feet of a facility that provides day care to children, a public park, a playground, a public swimming pool, a center or facility, the primary purpose of which is to provide recreational opportunities or services to children or adolescents, that existed on the date on which the application for the proposed MME was submitted to the State Health Division, measured on a straight line from the nearest school or community facility property line to the front door or primary entrance of the MME.

Staff has verified that the proposed production facility meets the minimum distance requirements outlined in this standard. This is further substantiated with the zoning letter provided by staff to the applicant on August 6, 2014 for submission with their State application. The zoning letter is included in the application for reference.

2. The following standards apply to all Medical Marijuana Dispensaries.

- a. A single point of secure public entry shall be provided and identified.

Not applicable to medical marijuana production facilities.

- b. Hours of operation shall be limited to 7:00 a.m. to 8:00 p.m., seven days per week.

Not applicable to medical marijuana production facilities.

- c. Drive-through service is prohibited.

Not applicable to medical marijuana production facilities.

- d. A Dispensary shall not be located on property or within a shopping center with frontage on the same street on which a residentially-zoned property is located unless the Dispensary is located more than 300 feet from the residential property, measured on a straight line from the nearest residential property line abutting the street right-of-way to the front door of the Dispensary.

Not applicable to medical marijuana production facilities.

3. Special Use Permit review standards. The following shall be considered in the review of any Dispensary located within the General Industrial zoning district in addition to the required Special Use Permit findings:

- a. That the proposed Dispensary is located where sufficient, convenient and safe access is provided to the public.

Not applicable to medical marijuana production facilities.

- b. That the proposed location has adequate lighting and street improvements for a use providing public access.

Not applicable to medical marijuana production facilities.

Staff finds that the proposed production facility meets the applicable development standards required. With the recommended conditions of approval and findings provided by the applicant, staff is in support of this Special Use Permit application. Staff recommends that the Planning Commission approve SUP-15-013 based on the required findings as noted on the following pages.

PUBLIC COMMENTS: Public notices were mailed to 36 adjacent property owners within 300 feet of the subject site on March 9, 2015. As of the writing of this report, no comments in support or in opposition of the proposed project have been received. Any comments that are received after this report is completed will be submitted to the Planning Commission prior to or at the meeting on March 25, 2015, depending on the date of submission of the comments to the Planning Division.

OTHER CITY DEPARTMENTS OR OUTSIDE AGENCY COMMENTS: The following comments were received by various city departments. Recommendations have been incorporated into the recommended conditions of approval, where applicable.

Building Division:

1. All projects and improvements must be performed in accordance with Nevada Revised Statutes (NRS) 624 and Carson City Municipal Code Section 15.05.020.
2. Repairs, replacements and alterations must comply with 2012 International Building Codes, 2012 Uniform Plumbing Code or 2012 International Plumbing Code, Uniform Mechanical Code or 2012 International Mechanical Code, 2012 Fuel Gas Code, 2011 Electrical Code, and 2012 Northern Nevada Amendments.
3. All contractors are required to carry State and local licenses.

Fire Department:

The project will need to comply with the 2012 International Fire Code and the 2012 International WUI Code, with Northern Nevada Amendments.

Engineering Division:

All areas where vehicles will be driven or parked must be hard surface, either asphalt or concrete.

Health and Human Services:

1. Prior to the issuance of a Building Permit, provide proof of the approval to use the well water as your water system for this facility.
2. Prior to the issuance of a Building Permit, provide an approved, by Nevada Department

of Environmental Protection (NDEP), set of engineered plans of the on-site sewage disposal system.

3. Prior to the issuance of a Building Permit, provide a detailed set of drawings, and standard operating procedures on how you will meet the intent of Carson City Municipal Code (CCMC) 12.06.
4. Prior to the issuance of a Certificate of Occupancy, provide a letter from your engineer stating that the system was installed according to the NDEP approved plans.

Environmental Control Authority:

1. Effluent from the production process is not allowed to be discharged into an Individual Sewage Disposal System per Carson City Municipal Code (CCMC) 12.06.020(B) and 12.06.060(S).
2. Effluent from the production process needs to meet all discharge limits as defined in CCMC 12.06.410, before it can be brought to the Carson City Wastewater Reclamation Plan for disposal.
3. If chemicals are to be used as part of the production process secondary containment will need to be provided for these chemicals per CCMC 12.06.248.
4. Please provide Safety Data Sheets for all chemicals or fertilizers that will be used at this facility.
5. The facility will need to meet all applicable codes found in Title 12.06, 12.2.065 and Appendix 18 Division 15 of CCMC and all applicable codes found in the 2012 Uniform Plumbing Code (UPC).

FINDINGS: Staff's recommendation is based upon the findings as required by CCMC Section 18.02.080 (Special Use Permits) enumerated below and substantiated in the public record for the project.

1. **Will be consistent with the master plan elements.**

Chapter 5: Economic Vitality, Goal 5.1d – Industrial Specializations

The addition of a medical marijuana production facility meets the Master Plan goal of promoting a variety of industrial specializations. The proposed production facility will provide medical marijuana products to retail dispensary outlets in the region and will help to support the needs of current and future medical marijuana patients.

2. **Will not be detrimental to the use, peaceful enjoyment, economic value, or development of surrounding properties or the general neighborhood; and will cause no objectionable noise, vibrations, fumes, odors, dust, glare or physical activity.**

The proposed production facility will be located in an existing building. The nature of the business is in line with general industrial uses and is not expected to cause objectionable noise, vibrations, fumes, dust, glare or physical activity. The production facility does have

the potential to produce medical marijuana plant odors that may be detected from outside the facility. To address this concern, the applicant proposes a ventilation system to control odors. Staff has also recommended a condition of approval to address potential odor concerns.

3. Will have little or no detrimental effect on vehicular or pedestrian traffic.

The proposed production facility is anticipated to generate very low levels of vehicular traffic and essentially no additional pedestrian traffic. The applicant indicates that the facility will employ up to 14 employees, with seven employees on site at any given time. The applicant estimates that up to 18 average daily trips will be generated per day between employees and deliveries. The proposed traffic level is lower than what is generally anticipated for general industrial uses and is not expected to have a detrimental impact.

4. Will not overburden existing public services and facilities, including schools, police and fire protection, water, sanitary sewer, public roads, storm drainage, and other public improvements.

The proposed production facility is located in an existing building and should not have impact on existing public services such as water, sanitary sewer, storm drainage or other public improvements. Staff estimates the water usage for the property to be up to 1,000 gallons per day but this demand will be served by an existing well and not by city services. Additionally, there will likely be an increase in sewage disposal above what is currently generated at the building, but it will be handled by a septic system and holding tank on the site and will not impact the sewer system. The storm drainage should be unaffected.

There is no anticipated impact on schools and the impacts on police and fire protection are unknown at this time as this is a new use in Nevada. The applicant has proposed security measures that are intended to supplement police services so that impacts to such services would be minimal.

5. Meets the definition and specific standards set forth elsewhere in this title for such particular use and meets the purpose statement of that district.

Medical Marijuana Establishments are a conditional use in accordance with Title 18.04.135 General Industrial Conditional Uses and require a Special Use Permit. With the approval of this Special Use Permit and recommended conditions of approval, the project will meet the definition and specific standards required to support this use in the General Industrial zoning district.

6. Will not be detrimental to the public health, safety, convenience and welfare.

The proposed production facility will be located in an inconspicuous, secure space with limited access by only those employed by the facility or authorized to enter it. This facility will not be open to the public and is not anticipated to be detrimental to the public health, safety, convenience and welfare.

7. Will not result in material damage or prejudice to other property in the vicinity.

The production facility is proposed in an existing building within the General Industrial zoning district. The operation will not be accessible by the public and is intended to be inconspicuous and unobtrusive as all operations will be conducted inside. It is not anticipated to result in material damage or prejudice to other property in the vicinity.

Attachments:

Site Photos
Building Division Comments
Fire Department Comments
Engineering Division Comments
Health and Human Services Comments
Environmental Control Division Comments
Supplemental Application Information
Application (SUP-15-013)



CARSON
TIRE + WHEEL

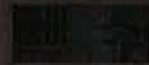


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CARSON USED TIRE & WHEEL





CARSON USED TIRE & WHEEL

DODGE
4-DOOR

February 24, 2015

Susan, see below for comments on # SUP-15-013 MME Facility.

1. All projects and improvements must be performed in accordance with Nevada State Revised Statute (NRS) 624 and Carson City Municipal Code (CCMC) 15.05.020.
2. Repairs, Replacement, and Alterations must comply with 2012 International Building Codes, 2012 Uniform Plumbing Code or 2012 International Plumbing Code, Uniform Mechanical Code or 2012 International Mechanical code, 2012 Fuel Gas Code, 2011 Electrical Code, Adopted International Energy Conservation Code, and 2012 Northern Nevada Amendments.
3. All Contractors are required to carry State and local license.

Thanks.

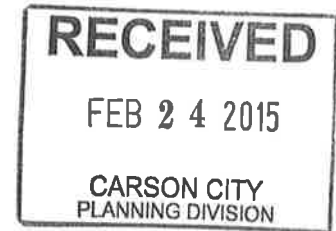
Shawn Keating

Chief Building Official
Carson City Community Development
108 E. Proctor Street
Carson City, NV 89701

Main 775-887-2310
FAX 775-887-2202

February 24, 2015

Comments for SUP 15-013



1. The project will need to comply with the 2012 International Fire Code and the 2012 International WUI Code, with Northern NV Amendments.

Dave Ruben

Captain – Fire Prevention
Carson City Fire Department
777 S. Stewart Street
Carson City, NV 89701

Direct 775-283-7153
Main 775-887-2210
FAX 775-887-2209

**Engineering Division
Planning Commission Report
File Number SUP 15-013**

TO: Planning Commission

FROM: Rory Hogen, E.I.

DATE: February 26, 2015

MEETING DATE: March 25, 2015

SUBJECT TITLE:

Action to consider an application for a Special Use Permit from 5SEAT Investments, LLC to establish a medical marijuana production facility at 8001 Hwy 50 E, apn 08-611-39.

RECOMMENDATION:

The Engineering Division has no preference or objection to the special use request. The following item must be addressed:

1. All areas where vehicles will be driven or parked must be hard surface, either asphalt or concrete.

DISCUSSION:

The Engineering Division has reviewed the conditions of approval within our areas of purview relative to adopted standards and practices and to the provisions of CCMC 18.02.080, Conditional Uses. All construction and improvements must meet the requirements of Carson City and State of Nevada Codes and Development Standards.

CCMC 18.02.080 (2a) - Adequate Plans

The information submitted by the applicant is adequate for this analysis.

CCMC 18.02.080 (5a) - Master Plan

The request is not in conflict with any Engineering Master Plans for streets or storm drainage.

CCMC 18.02.080 (5c) - Traffic/Pedestrians

The proposal will not affect traffic or pedestrian facilities.

CCMC 18.02.080 (5d) - Public Services

Existing facilities appear to be adequate for this project. There is no City sewer or water service near this site.

Susan Dorr Pansky

From: Dustin Boothe
Sent: Tuesday, March 10, 2015 4:20 PM
To: Susan Dorr Pansky

SUP-15-012

Carson City Health and Human Services

Water

Prior to the issuance of your building permit, provide proof of your approval to use the well water as your water system for this this facility.

Sewer

Prior to the issuance of your building permit, provide an approved, by Nevada Department of Environmental Protection (NDEP), set of engineered plans of the On Site Sewage Disposal System.

Prior to the issuance of your building permit, provide a detailed set of drawings, and standard operating procedures on how you will meet the intent of CCMC 12.06.

Prior to the issuance of your Certificate of Occupancy, provide a letter from your engineer stating that the system was installed according to the NDEP approved plans.

SUP-15-013

Carson City Health and Human Services

Water

Prior to the issuance of your building permit, provide proof of your approval to use the well water as your water system for this this facility

Sewer

Prior to the issuance of your building permit, provide an approved, by Nevada Department of Environmental Protection (NDEP), set of engineered plans of the On Site Sewage Disposal System.

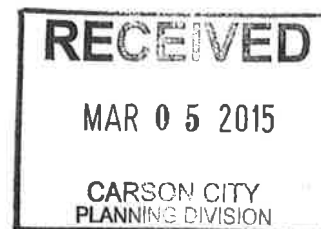
Prior to the issuance of your building permit, provide a detailed set of drawings, and standard operating procedures on how you will meet the intent of CCMC 12.06.

Prior to the issuance of your Certificate of Occupancy, provide a letter from your engineer stating that the system was installed according to the NDEP approved plans.

Dustin Boothe, MPH, REHS
Carson City Health and Human Services
900 E. Long St.
Carson City, NV 89706
(775) 887-2190 ext. 7220

dboothe@carson.org

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March 3, 2015

Major Project Review Committee

Re: # SUP 15-013

Dear Kathe,

After initial plan review the Carson City Environmental Control Authority (ECA), a Division of Carson City Public Works Department (CCPW), has the following requirements per the Carson City Municipal Code (CCMC) and the Uniform Plumbing Code (UPC) for the SUP 15-013 located at 8001 Hwy 50 East project:

1. Effluent from Production processes not allowed to be discharged into a Individual Sewage Disposal System per Carson City Municipal Code (CCMC) 12.06.020(B), and 12.06.060(S).
2. Effluent from the Production processes needs to meet all discharge limits as defined (CCMC) 12.06.410, before it could be brought to the Carson City Wastewater Reclamation Plant for disposal.
3. If chemicals are to be used as part of the production process secondary containment will need to be provided for these chemicals per CCMC 12.06.248.
4. Please provide Safety Data Sheets for all chemicals that will be used at this facility.
5. Facility will need to meet all applicable codes found in Title 12.06, 12.2.065 and Appendix 18 Division 15 of the Carson City Municipal Code (CCMC) and all applicable codes found in the 2012 Uniform Plumbing Code (UPC).
6. Facility will need to meet all applicable codes found in Title 12.06, 12.12.065 Appendix 18 Division 15 of the Carson City Municipal Code (CCMC) and all applicable codes found in the 2012 Uniform Plumbing Code (UPC).

Please notify Mark Irwin if you have any questions regarding these comments, I can be reached at 775-283-7380.

Sincerely;

Mark Irwin
Environmental Control Officer 3

c: David Bruketta, Utility Manager.
Kelly Hale, Environmental Control Supervisor.



SUP - 15 - 013

SUP - 15 - 012

Civil Engineering

Surveying

Water Resources Management

Water & Wastewater Engineering

Supply Chain Logistics

Construction Management

Environmental Sciences

Landscape Architecture

Land Planning

February 20, 2015

Susan Dorr-Pansky, AICP
Planning Manager
108 East Proctor Street
Carson City, NV 89701



Re: SUP-15-012 & SUP-15-013

Dear Susan,

On Behalf of 5SEAT Investments, Manhard Consulting is providing the following additional information in response to your request letter dated February 18, 2015.

1. Provide information on the general cultivation process. This does not need to include information that may be deemed as proprietary, but we would like to know, in general terms, how the cultivation process will work at this facility.

A detailed Cultivation Methodology summary is included as an attachment to this letter and also been inserted into Appendix D of SUP-15-012.

2. Provide information on the infusion side of the production process including the types of products that are anticipated to be produced. This does not need to include information that may be deemed as proprietary, but we would like to know, in general terms, how the infusion side of the production process will work at this facility.

Detailed information on the infusion side of the production process including a product list has been included as an attachment to this letter and also been inserted in to Appendix D of SUP-15-013.

3. Provide general information on methods of security that will be used for the building. Detailed security information is not required, but information on the types of security measures that will be employed is required.

A complete preliminary security plan has been included as an attachment to this letter and also been inserted into Appendix D of both of the SUP applications

4. Provide information on ventilation measures that will be taken to ensure that odor will not be detected from outside the building.

Detailed information on the proposed ventilation measures has been included as an attachment to this letter and also inserted into Appendix D of both SUP applications

5. Provide information on the anticipated plans for the accessory structure that is located on the property.

The current plans for the existing accessory structure on the property are to use the building for noncombustible storage and freeze protection for the well pressure tank and supply lines.

6. Expand on the traffic information to include anticipated daily trips of employees as well as weekly trips for deliveries in and out of the facility.

Estimated traffic generated from the project is 18 ADT. These trips are estimated to be composed of 14 ADT generated by employees and 4 ADT by associated deliveries.

7. Provide hours of operation for each facility.

Anticipated hours of operation of the facilities will be 7 am to 7pm.

8. Provide general information on proposed fencing if more is planned beyond what currently exists on the site. Type of fencing and location will be sufficient.

The site plan provided proposes new chain link fencing to be installed on the south and east portions of the property at the limits of the proposed improvements. The new fencing is proposed to tie into the existing fencing located on the north and west side of the property.

9. Provide general information on lighting proposed for the project. Location and general type of lighting including site, parking lot and building lighting will be sufficient, no spec sheets are required.

General lighting information for the project has been included as an attachment to this letter and also inserted in Appendix D of both SUP applications.

If you have any questions, or require any additional information, please feel free to contact me directly.

Sincerely,
Manhard Consulting



Christopher Baker, LEED AP
Planning Manager

Cultivation Methodology

To ensure quality, consistency, and safety of all medical Cannabis products produced in its facilities, MedCanna Consulting, an industry leading Cannabis agronomy consultancy, has developed a detailed plan with strict policies and procedures for its cultivation operations. This plan consists of a proven methodology developed by MedCanna and its members, who bring a combined experience of nearly 75 years in producing high quality Cannabis.

MedCanna's plan incorporates proper genetic selection of strains (chemovars) with established and tested cannabinoid profiles that have proven and/or anecdotal evidence of efficacy in treating medical ailments. Their advanced bio-organic cultivation techniques, include strict environmental controls, software tracking of all products from seed to sale, organic pest control methods, in-house and third party testing for molds and contaminants as well as advanced curing and packaging methods.

MedCanna in conjunction with T.H. Seeds[®] holds a vast library of different Cannabis genetics. Most have already been tested for their Cannabinoid profiles, and all have amassed anecdotal evidence of medicinal efficacy for various ailments. Through using specific chemovars that exhibit known medicinal values and cultivating them within their preferred environment a very high level of consistency and purity can be attained. They incorporate pruning and screening techniques to help with even hormone distribution throughout the plant. All undergrowth is removed at different stages to allow for an even Cannabinoid profile throughout each plant. Any parts of the crop deemed less than exceptional can be used for processing for extraction and incorporated into extract production.

Each crop will be tested first in-house and ultimately by a third party lab prior to any product being released for sale. Crops will be tested for molds (ultraviolet light and high powers microscope inspection) residual insecticides, fungicides (both through chromatographic analysis), and Cannabinoid profiles (THC/THC-A/THC-V/CBN/CBD/CBD-A) using HPLC (High Performance Liquid Chromatography) to third party standards. By utilizing all known safeguards and following their well-practiced Integrated Pest Management system there will be no chance of any contaminated product reaching the patient.

Any plant genetics entering the facility will be kept under quarantine for a period of six days, during which a three-part sterilization procedure will take place. This process involves the use of both Ozonated water and CO2/Nitrogen gas; this ensures the

cleanliness of the "stock" plants, which in turn will eliminate the need for any chemicals to be used during the growth stage. A once weekly fumigation of vegetative plants/units with Ozonated or electrolyzed water will ensure an environment free of unwanted pathogens. Application of all facets of Integrated Pest Management will be rigorously adhered to. Cleanliness of the individual units as well as the rest of the facility is key. Daily monitoring of plants and traps will allow for the immediate implementation of measured responses should safe operating parameters be exceeded.

Keeping the climate in the grow space and the root zone at optimal levels, coupled with regular inoculation with beneficial organisms will ensure that pathogens cannot take hold and proliferate. Sterilization of units during changeover will be carried out as a standard. Sterilization of the drying and curing section will be performed before the product enters, and after the product leaves the chamber. A gas flush with CO₂ or Nitrogen gas of the drying unit with the product inside will ensure sterility of the finished medicinal product. All finished product is to be stored under vacuum with Nitrogen gas.

There are a number of OMRI listed insecticides and fungicides available on the market, Many of these work reasonably well, especially when sprayed preventatively, although they are no replacement for good practices. All of the organic products used have a defined time in which they break down. If necessary, these products can be incorporated for use, well within their recommended dosages and use timelines. These products include organically based pyrethrums, neem oils, mineral oil or alcohol based products and biologically active products such as BT and Spinosad.

A well-structured fertilization schedule gives the plants just what they need, but not more, this eliminates the presence of ballast salts and un-used fertilizers in the end product. They incorporate three different types of organically based enzymes throughout the growth process, coupled with a flushing period toward the end of the bloom cycle. Ballast feed levels will be measured from run off and basic lab tests of the grow medium. This allows on the spot decisions about nutrient dosing. Plant tissue analysis will also be used in determining nutrient levels and allow us to ensure that there are no extra ballast materials in the end product.

The use of the BioTrackTHC "seed to sale" software system will aid us in maintaining strict controls within the cultivation facility. BioTrackTHC provides the ability to "tag" or barcode each plant and track its treatment and environmental conditions from the beginning its of life through harvest, processing, and ultimately sale. Via this barcoding and tracking system all end user product will track back to a production lot and in the unlikely event of contamination of any kind or residual ballast, insecticide or fungicide

level deemed unacceptable by third party standards, the entire lot can easily be identified and disposed of in a legal and safe manner.

Extraction Methodology

MedCanna Consulting's extraction plan includes extracts and concentrates for multiple end uses. The goal is to provide consistent and safe extracts for both the producer and consumer. MedCanna utilizes traditional sieved extraction methods, both dry and water-assisted, as well as CO₂ supercritical fluid extraction (SFE). Sifted extracts involve mechanical separation of the trichomes from the plant material. The trichomes contain the essential oils and cannabinoids of the plant. Once separated from the raw botanical material the trichomes can then be used for vaporization and further processing into infused products and edibles. Ultimately these extracts will be used to produce hashish, oils, tinctures, sublingual sprays, medicated gels, and food products of consistent dose and cannabinoid profile.

We also plan on using supercritical fluids for extraction. A supercritical fluid is any substance at pressures and temperatures above its critical point where it acts both like a gas and a liquid. This allows the solvent or CO₂ to pass through the raw botanical material and extraction of the cannabinoids and essential oils in a safe and efficient manner. Traditionally this has been done with more dangerous solvents such as butane or acetone. However there are numerous studies showing that butane as well as other solvent based extracts can contain high levels of residual hydrocarbons or solvents which are potentially toxic and can lead to pulmonary issues. Butane is also highly flammable and butane extraction is responsible for numerous near fatal explosions throughout the industry.

MedCanna Consulting uses safe and environmentally friendly carbon dioxide (CO₂). Carbon Dioxide is the most commercially used supercritical solvent. It has been used on a large scale for extraction of hops for beer production and decaffeination of coffee beans as well as production of essential oils for pharmaceutical purposes. CO₂ is non-toxic and is Generally Regarded As Safe (GRAS) by the FDA for use in food products; has no added heavy metals or toxic contaminants that other solvents may have; and is also nonflammable, greatly reducing the need for an explosion proof environment for making extracts. The CO₂ utilized in extraction is a renewable resource as it is a byproduct of the manufacturing industry. In a closed-loop SFE extraction setup it is possible to recapture as much as 95% of the CO₂ used.

A CO₂ SFE extraction setup must contain a pump for the CO₂, a pressure cell to contain the sample, a means of maintaining pressure in the system, and a collecting vessel. The liquid is pumped to a heating zone where it is heated to supercritical conditions. It

then passes into the extraction vessel where it rapidly diffuses into the solid matrix and dissolves the material to be extracted. The dissolved material is swept from the extraction cell into a separator at lower pressure and the extracted material settles out. The CO₂ can then be cooled, re-compressed and recycled.

By regulating and varying the pressure and temperature you can control the extraction instrument and selectively extract various parts of the plant. Ideally a higher pressure would be initially run, then the essential oil purified in further stages. At higher pressures CO₂ will extract cannabinoids, terpenes, plant waxes and even pigments. All of these have numerous end uses and a great medicinal value. Depending on the unit which could hold anywhere from a 1 liter to a larger 20 liter unit it would take one to six hours to run its complete cycle. Since CO₂ does not have the dissolving power of traditional hydrocarbons there may still be valuable essential oils left in the botanical material that may need to be run again.

MedCanna plans on refining these extracts and offering them in infused products and other end-user consumables. The use of CO₂ extracts during extract production ensures consistency and quality throughout the manufacturing process and ensures a safe and desirable end product. The nature of CO₂ extracts provides a more rich and full spectrum extract from the plant as well, this will allow for further purification and isolation of specific compounds to tailor treatments towards the patients needs.

Once the system is done running the oleoresin that comes out of the machine is set aside for further purification. At this point, the Cannabis oleoresin (raw oil) has a wide variety of medicinal components from the plant. With basic lab equipment these can be separated depending on their ideal end use. The cannabinoids and terpenes ideally are going to be used in aromatherapy devices or infused products. These products may need to be vacuum dried to ensure stability and preservation for future use. The plant waxes and some of the pigments from the plant have amazing value as topical products. Once isolated and identified they can be put into numerous products to treat a number of skin conditions.



5SEAT INVESTMENTS LLC

Product list and Description for: File#SUP: 15-013

#1-Master concentrate:

- **A fully destearinated cannabis resin.**
- **Available as tincture standardized to 50mg/ml.**
- **Tincture is in 2 and 4oz bottles.**
- **Available as solid resin for vaporization or raw ingestion.**
- **Solid resin available in .5g, 1g and 3.5 g packages for vaporization or raw ingestion.**

#2-Cannabis Lipid Fraction:

- **Waxes, Phytosterols, Fatty acids and alcohols of the cannabis plant.**
- **Used in topical products.**
- **Promotes circulation and healing.**
- **Used in topical oil in the place of other waxes.**
- **Packaged in 8oz plastic tubs.**

#3-Custom ratio extract:

- **Extraction is prepared in the same fashion as product #1.**
- **Selected strains such as AC/DC provide a CBD dominant extract.**
- **Any of the high THC and low CBD (>1%) strains on file provide a THC dominant extract.**
- **Extracts are accurately assayed for cannabinoid content.**
- **Extract are either sold as a CBD dominant or as an assayed blend in a**
- **50:50 ratio THC:CBD.**
- **Resulting extract is offered as tincture or solid resin.**
- **Resulting extract is offered as tincture or solid resin.**
- **Custom Ration Extract tincture is packed in 2 and 4oz bottles.**
- **Custom Ratio Resin is packaged in .5g,1g, and 3.5g amounts.**

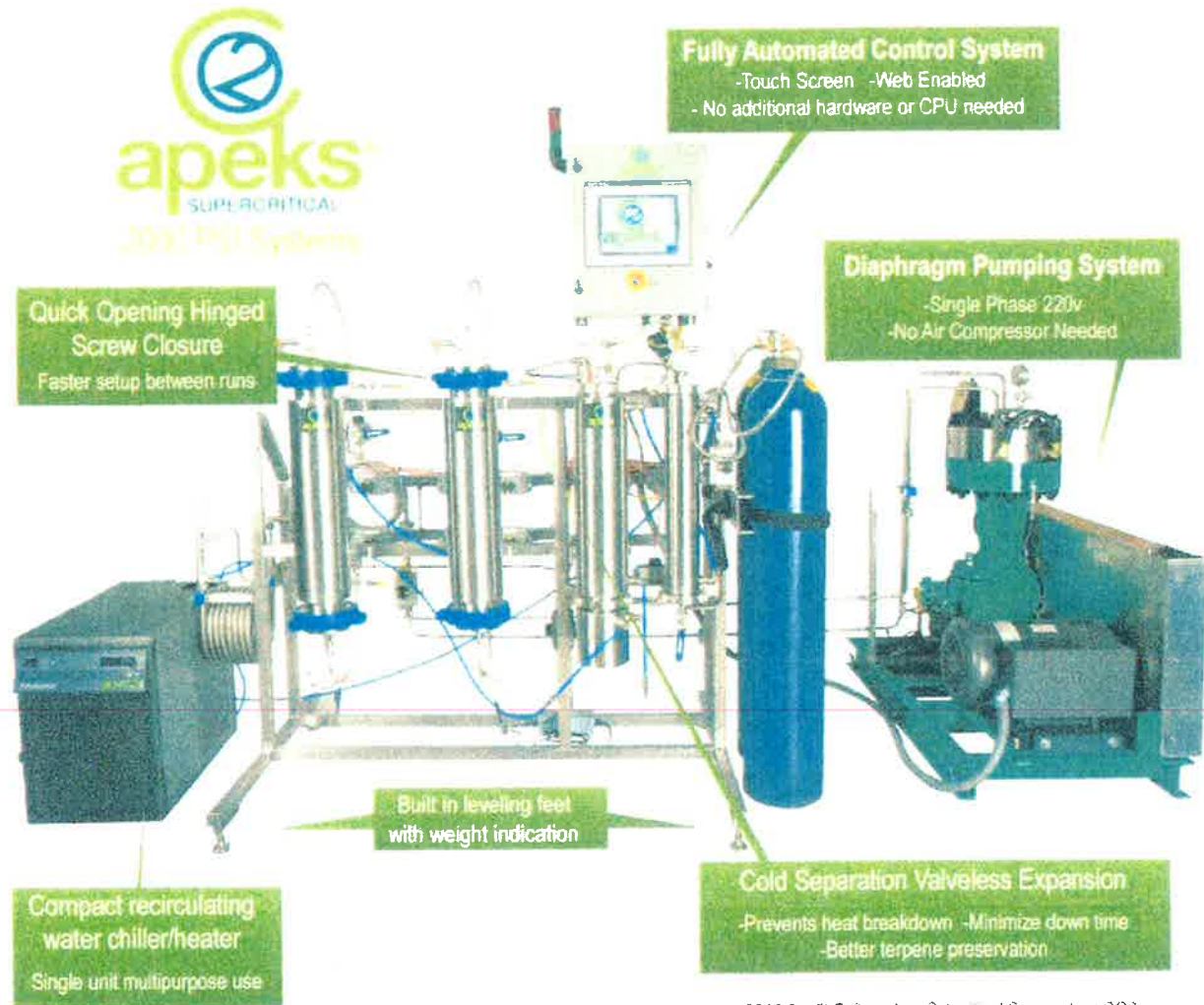
#4-Topical Oil:

- **A high quality massage oil blend of coconut, avocado, almond and Cannabis Lipid Fraction with essential oils.**
- **infused to 150mg/oz using the Master concentrate.**
- **Packaged in 4 and 8oz bottles.**

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Electrically Efficient 2000psi Subcritical/ Supercritical CO2 Systems for Botanical Oil Extractions



2000-5Lx5LO Complete Subcritical Supercritical CO2 Extraction System

Apeks Supercritical's 2000psi systems are designed to provide subcritical and supercritical CO2 botanical oil extractions with low overall power consumption in a compact design. All 2000psi systems come equipped with our energy efficient, 220v single phase diaphragm pumping system.

Our fully automated 2000psi systems utilize our patent pending [Industrial Pressure Controller](#) to provide reliable and consistent operation.

Reduced power consumption

20% faster than older systems

Less Complexity and Maintenance

[Click here to see the benefits of our award winning fully automatic systems.](#)

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The benefits of our new 2000psi systems with diaphragm pumping technology are summarized below:



- **Processing Time Reduction** – Extraction times have been demonstrated to be up to 20% faster compared to our older 1500psi system extraction times
- **Ambient Noise Reduction** – New recirculation technology eliminates the need for a costly commercial compressed air system, which can reduce ambient noise levels up to 75%
- **Waste Heat Elimination** – Motor driven system completely eliminates the waste heat that is produced by compressed air drive systems. This reduces facility air conditioning loads and eliminates the need for ductwork to manage the waste heat
- **Reduced Power Consumption** – Improved recirculation technology reduces overall power required for the system as much as 50%. Regenerative heat exchangers are employed to manage thermal byproducts and eliminate the need for multiple heaters and chillers
- **95% CO₂ Gas Recovery** – Gaseous CO₂ pumping technology allows for 95% CO₂ recovery which minimizes operational costs and improves worker safety
- **Power Friendly** – Commonly available single phase 220V electricity is required for the system. No need to search for a facility with 3 phase power
- **Less Complexity and Maintenance** – New recirculation technology has significantly fewer moving parts improving reliability and reducing maintenance costs by as much as 80%
- **Smaller Footprint** – Overall space required for the system has been reduced by 25%
- **Fully Automated** – All Apeks Supercritical systems are fully automated which allows for safe, consistent and reliable extractions while reducing operator skill level and training times compared to manually operated systems

All Apeks Supercritical systems have undergone a third party Engineering Peer Review which has approved by the Washington State LCB, the Colorado MED and multiple Fire Departments!

System Features:

- **Single or dual 5L and 20L extraction vessel options**
- **Simple to operate** – no complicated control systems or computer interfaces
- **Internet Messaging** – real time email/text notification of system condition changes
- **Safe** – All vessels are designed and manufactured in accordance with ASME specifications and pressure ratings. Redundant safety features protect the system from accidental overpressurization. Tubing connections are made with proven compression fitting technology – the same fittings are used on aircraft and off-shore oil platforms. Non-isolable pressure gauges are on each pressure containing vessel for visual verification of depressurization prior to opening.
- **Environmentally Friendly** – System recirculates CO₂ during extraction and allows for recovery of CO₂ after extraction is complete.
- **Easy to clean** – All stainless steel construction. Vessels have polished interiors and quick opening/closing mechanisms. All tubing can be removed and re-assembled for thorough cleaning. Separators/collection vessels use FDA sanitary fitting and connections.
- **Reliable** – VET (Valveless Expansion Technology) – no constrictions or regulating valves to cause clogging of the system and loss of production time
- **Efficient** – Regenerative heat transfer significantly reduces overall energy consumption. Jacketed vessels and water recirculation allow for capture and transfer of heat through extraction cycle
- **Effective** – Extraction media is contained in extraction vessel with integral filters. Filters also act as a liquid CO₂ dispersant to avoid channeling in the product. Reversible flow through the extractor ensures all material is extracted.
- **Flexible** – variable separation/collection vessel sizes can accommodate varying yield amounts. Jacketed vessels can be configured for larger differential temperature if needed
- **Easy to understand** – open frame design and visual indication of valve positions allows for easy assessment of flow paths and system configuration. No mysterious boxes with inlet and outlet connections on the outside
- **Modular** – additional extraction vessels can be added to the system with no welding required
- **Small footprint** – systems are designed to minimize space requirements – all operations occur from the front of the system
- **Production friendly** – integral weighing scale and system timer help users efficiently run their extractions

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System Specifications:

[Click here for the P&ID diagram](#)

Extraction Vessel

- Multiple vessel configurations available - 5 liter, 20 liter, two 5 liter, or two 20 liter vessels
- Volume
 - 5L vessel holds up to 3 pounds of dry, ground material
 - 20L vessel holds up to 12 pounds of dry, ground material
 - NOTE - vessel does not need to be full in order to perform an extraction
- Pressure - maximum pressure = 2000 psi (137 bar)
- Temperature - max 160F (71C)
- Materials - 304 stainless steel - Vessel interior is polished to food grade level
- Closures - Hammer Union (commonly used in oil and gas industry for temporary piping) top with integral hinge
- Sealing mechanism - self energized o-ring seals, Buna-90 material
- Filter - integral filters on closure heads - 20 micron standard - other sizes available
- Temperature measurement - internal K type thermocouple senses actual extraction temperature
- Jacket volume - 20L vessel - 18 Liters (4.8 gallon) - 5L vessel - 1.5 Liters (1.2 gallon)
- Safety - non-isolable spring loaded safety relief valve prevents accidental over-pressurization
- Addition of a second Extraction Vessel can be used to double system capacity

CO2 Recirculation Pump

- Flowrate - 15 CFM gas flow
- Construction - hydraulically actuated diaphragm
- Materials - all wetted parts are 316 stainless steel
- Filter - coalescing filter on inlet to minimize oil introduction
- Safety - non-isolable spring loaded safety relief valve prevents accidental over-pressurization

Separators

- 2 separators standard on each unit - Larger collection cup on 1st separator available
- Volume - Separator 1 = 5L - Separator 2 = 2.5 liters
- Pressure - Maximum pressure = 600 psi (41 bar)
- Temperature - up to 160F (71C)
- Materials - 304 stainless steel
- Closures - FDA sanitary style bolted
- Sealing mechanism - sanitary gaskets, cured silicone
- Safety - non-isolable spring loaded safety relief valve prevents accidental over-pressurization

Separation Mechanism

- [Click here for separation description \(3/2/1\)](#) - flow path from extractor to 1st separator is continuous diameter with no constrictions - Separation occurs in 1st separator utilizing centrifugal separation and depressurization

Heat Exchangers

- Construction - tube in tube style
- Materials - 304 stainless steel
- Cooling/Heating media - water

Chiller/Heater

- Recirculating chiller/heater
- Temperature range -10C to 70C (14F to 158F)

Dimensional Information

- 5L vessel configurations
 - [Click here for the 2400-5L footprint](#)
 - [Click here for the 2000-5L footprint](#)
 - [Click here for the alternate 2000-5L footprint](#)
- 20L vessel configurations

- [Click here for the 2009-2011 footprint](#)
- [Click here for the 2010-2012 footprint](#)
- [Click here for the alternate 2010-2012 footprint](#)

Control System

- Functions – Fully automatic Programmable Logic Controller (PLC) touch screen interface with first level safety functionality and user programmable pressure, temperature and time. Also has built in hour and maintenance timers, electronic weighing scale, and alarm log.
- Safety – pressure transducers monitor system pressure and shut down system to prevent accidental over-pressurization
- Optional – Data acquisition

User Supplied System Requirements

- Extractor Electrical - 115V AC, 60 hz, 15A
- Chiller/Heater Electrical - 220V AC, 1 phase, 60 hz, 15A. Plug is NEMA 6-15R
- CO2 – Gaseous CO2 (no dip tube), food grade or better. No regulator needed.
- Diaphragm Pump Electrical- 220V, 1 phase, 50A service. Plug is NEMA 6-50R

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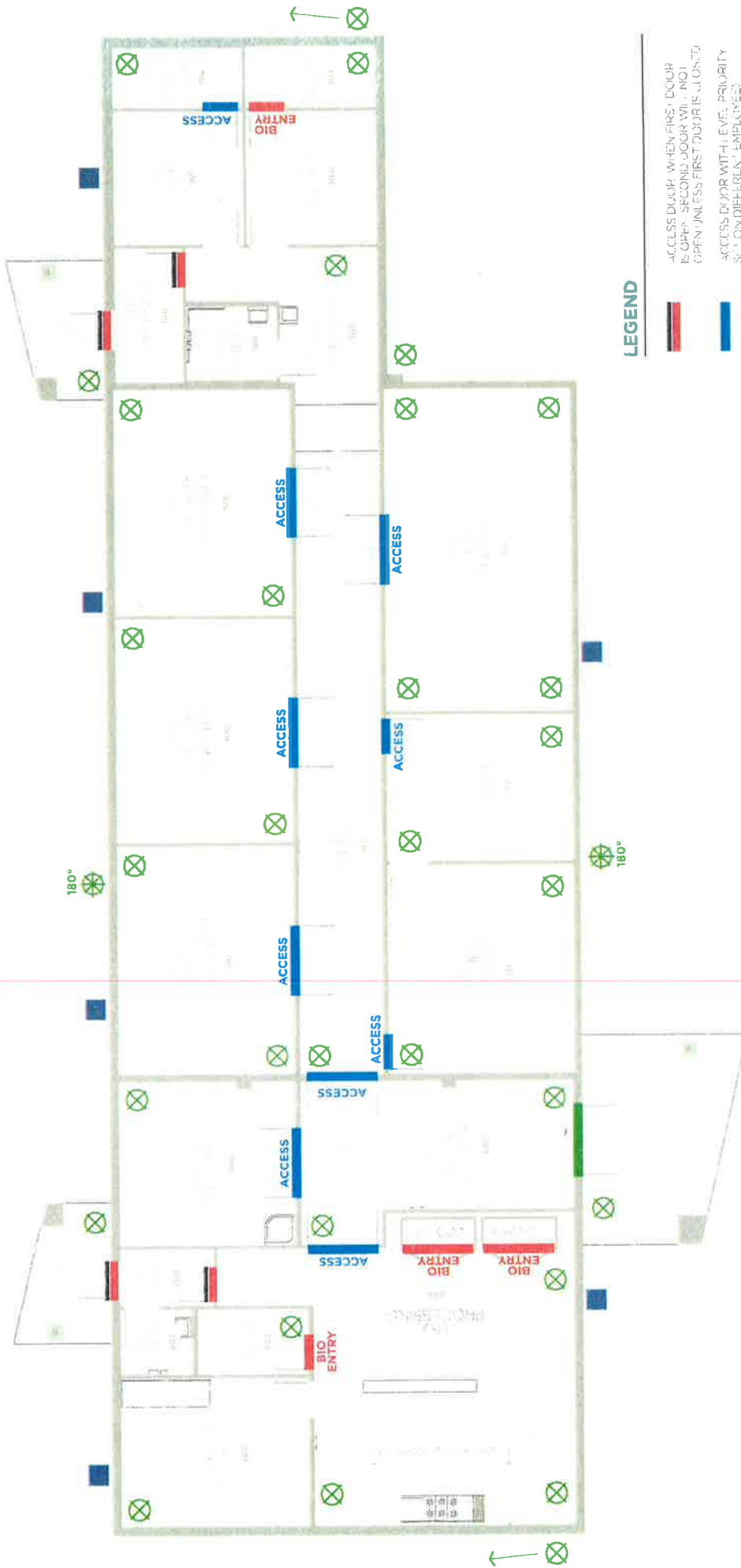
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LEGEND

-  ACCESS DUPLICATION WHEN FIRST DOOR IS OPEN, SECOND DOOR WILL NOT OPEN UNLESS FIRST DOOR IS CLOSED
-  ACCESS DOOR WITH LEVEL PRIORITY SCHEDULE DIFFERENT EMPLOYEE
-  BIOMETRIC ENTRY
-  ACCESS DOOR ENTRY CONTROLLED FROM INSIDE
-  WALL MOUNT CLOUPEE LIGHT FIXTURE
-  90° CAMERA
-  SINGLE FIXED CAMERA



NEW SECURITY FLOOR PLAN





Security Plan

Kanna

8001 Highway 50 East

Carson City, NV 89701

Prepared By:

Tim Kolakowski

All Pro Security, Inc.

1295 East Moana Lane Suite D

Reno, NV 89502

NV License 56430

COMPANY INTRO:

All Pro Security, Inc.: Since inception date of Sept. 2002, with over 40 years of combined experience we provide advanced on-time installations needed to protect people and property at the fullest ability. We are a full service design, install and service company. The applications we provide are security, fire, monitoring, access control and video solutions. We design and complete the installation to each customer's needs and requirements by any local and federal regulations per industry standards. Our 24/7 service and dedication to our customers, quality and on-site support are a few of the many advantages to having All Pro Security, Inc. as your full service security provider.

Proposed Security Plan:

Intrusion Detection System: The system will consist of Honeywell security panel (Vista 20P). The panel will communicate via a Honeywell GSMV4G GSM cellular radio that communicates in Contact ID format. This combination panel/communicator transmits all signals (ie: alarm, trouble, and test) to Rapid Response Monitoring. Both Underwriter Laboratories (UL) and Factory Mutual (FM) certify rapid Response Monitoring central station.

The system will send a test signal to the central station from both the main control panel and the GSM radio on a 24-hour basis. The back-up power supply will also be capable of supplying power in the event of power loss for a period of 24 hours. Once power is lost an "AC Loss" signal will be sent to the central station and the proper persons will be notified.

The vault area will have a separate partitioned portion of the system which will allow this area to be armed at all times when it is not occupied.

The system will have the following levels of protection:

- A. Exterior Door Contacts: In the event of breach during after hours
- B. Interior Door Contacts: Vault Area Protection for higher level employees with access
- C. Motion Detection: For Common Areas and near doors.
- D. Glass Break Detection: In areas with any glass to outer building perimeters.
- E. Panic Buttons: Remote and Stationary in event of a breach of security and imminent danger

Any signals (i.e. Bypassing of zones, low battery, loss of AC, Alarms) will be sent via text or email to any owner or manager as requested.

Access Control System: The Access Control System will be The Honeywell NetAXS-123. This panel is self-contained and is programmed on-site with a web browser. All access cards will be programmed based on door location, schedule and employee duties, limiting the ability of unauthorized entry into a secure portion of the building. For high security areas (ie. Vault) employees will be required to present their card/keyfob followed by presenting their fingerprint in order to gain entry. Further, these areas will then require the alarm system being disarmed. This will provide redundancy on the security of these areas.

The access control system will store a log of all authorized access to doors as well as unauthorized attempts to access a door. All events are time stamped with date and time.

Upon approval of Authority Having Jurisdiction, there will be an extra security measure at the two employee entrances to avoid the breach with multiple persons entering, by means of only allowing one

door to be open at one time. In case of fire, the exit doors will have an emergency relay to cut power to the mag-locks to enable egress out and ingress in for fire department as needed. AHJ may require additional egress for emergency if this type of system is enforced.

IP Video Surveillance System: The video security surveillance system will operate 24 hours a day, 7 days per week. The cameras will be positioned on the exterior and interior of the building. Some areas which will be covered but not limited to are the parking lot, all exterior sides of the building, all entrances to and from the building and all interior rooms and hallways.

The Exacq Video Server will have the following features: The hard drives are a RAID 5 configuration providing a high level of reliability. Having all storage of video on a main server allows for this device to be stored in a very high security area preventing the ability of being tampered with by unauthorized individuals. This server and all POE network switches will have an uninterrupted power supply (UPS) so that it will continue to operate in the event of power loss. All cameras are powered by "power over Ethernet (POE)" so they are also protected from a loss of building power.

The software installed on the server is Exacq IP video surveillance and security platform, is a comprehensive video management system that combines powerful network video recorders (NVRs) with physical security information management (PSIM) functionality. Ocularis represents the latest evolution in IP video surveillance and security. As an integrated video and event management platform, it includes a full-fledged video management system (VMS) for streaming, recording and managing an unlimited number of cameras at multiple sites. Ocularis' straightforward workflow provides a collaborative environment in which video and alerts from across the organization are converted into meaningful events, for efficient shared handling and building a video-evidence case file. Monitors installed will all be 19" and larger. Access into the software is password protected.

Exterior cameras will consist of Arecont Vison 180 degree cameras and HikVision 3 MP fixed cameras protecting the entire perimeter. Interior cameras will consist of HikVision 1.3 and 3MP vandal domes in all areas inside.

Closing

All Questions regarding the proposed schedule of protection can be directed to:

Tim Kolakowski
President
All-Pro Security, Inc.
775-560-6623



5SEAT INVESTMENTS LLC

KANNA SECURITY NARRATIVE

FILE # SUP 15- 013 MME Production

8001 Hwy 50 East Carson City, NV

To prevent unauthorized access to medical marijuana at a medical marijuana establishment, the Kanna MME project will have:

1. Security equipment to deter and prevent unauthorized entrance into limited access areas that includes, without limitation:

- (a) Devices or a series of devices to detect unauthorized intrusion, which may include a signal system interconnected with a radio frequency method, such as cellular, private radio signals, or other mechanical or electronic device.
- (b) Exterior lighting to facilitate surveillance.
- (c) Electronic monitoring including, without limitation:
 - (1) At least one 19-inch or greater call-up monitor;
 - (2) A video printer capable of immediately producing a clear still photo from any video camera image;
 - (3) Video cameras with a recording resolution of at least 704 x 480 or the equivalent providing coverage of all entrances to and exits from limited access areas and all entrances to and exits from the building, capable of identifying any activity occurring in or adjacent to the building;
 - (4) A video camera at each point of sale location allowing for the identification of any person who holds a valid registry identification card or his or her designated primary caregiver purchasing medical marijuana;
 - (5) A video camera in each grow room capable of identifying any activity occurring within the grow room in low light conditions;
 - (6) A method for storing video recordings from the video cameras for at least 30 calendar days;
 - (7) A failure notification system that provides an audible and visual notification of any failure in the electronic monitoring system; and
 - (8) Sufficient battery backup for video cameras and recording equipment to support at least five minutes of recording in the event of a power outage.
- (d) Immediate automatic or electronic notification to alert local law enforcement agencies of an unauthorized breach of security at the medical marijuana establishment in the interior of each building of the establishment.

2. Policies and procedures:

- (a) That restrict access to the areas of the establishment that contain marijuana to persons authorized to be in that area only;
- (b) That provide for the identification of persons authorized to be in the areas of the establishment that contain marijuana;
- (c) That prevent loitering;
- (d) For conducting electronic monitoring; and
- (e) For the use of the automatic or electronic notification to alert local law enforcement agencies of an unauthorized breach of security at the medical marijuana establishment.



5SEAT INVESTMENTS LLC

KANNA SECURITY NARRATIVE *cont;*

FILE # SUP 15- 013 MME Production

8001 Hwy 50 East Carson City, NV

Lighting;

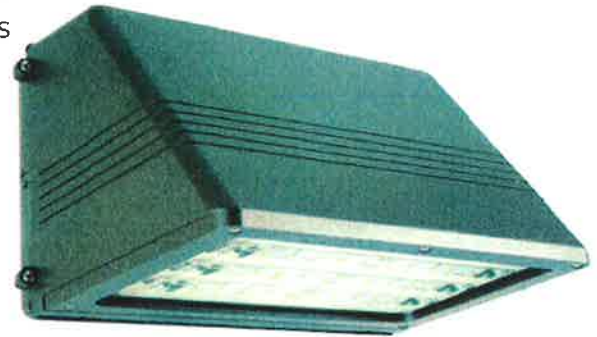
Kanna will install sufficient lighting outside of the registered premises to be used each day between sunrise and sunset that adequately illuminates the cultivation center and its immediate surrounding area, including storage areas, parking lots, and entry areas. Specifically, Kanna will install ViVidleds Wall Mount77-5036 1m-700ma security lights.

Exterior lighting will be installed near video surveillance devices to ensure proper illumination for the identification of people, vehicles and license plates within 40 feet of the building. The outdoor lighting we be hooded to deflect light away from adjacent properties. Sufficient exterior lighting serves as a deterrent for robbery and burglary.

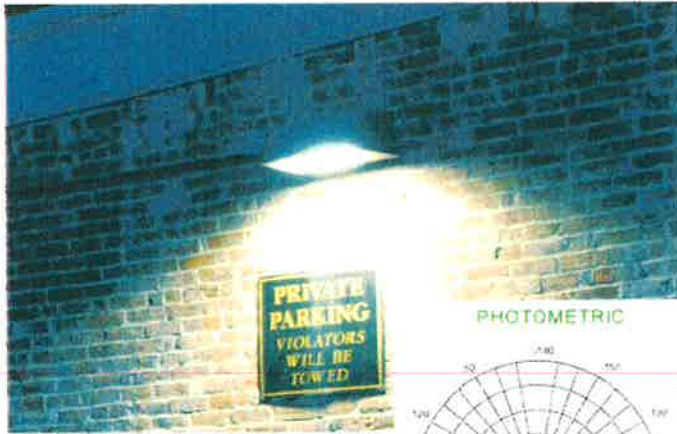
LED Features:

- Highest quality, long life CREE XTE R2 LEDs
- UL and CUL Listed for wet location - IP65
- Long lasting die-cast aluminum housing
- Architectural bronze UV resistant powdercoat finish
- Position adjustable for 2 different light distributions
- Heavy duty silicone foam gasket included
- Extremely long life stylized design
- High quality thermal heatsinks
- Rugged product construction throughout
- Excellent CRI: RA>75
- Low Tj for long life and low lumen depreciation
- Low starting temperature: -30C
- IC controlled LED circuits
- 3 year system warranty

Wall Mount Trapezoid Cut-off Series



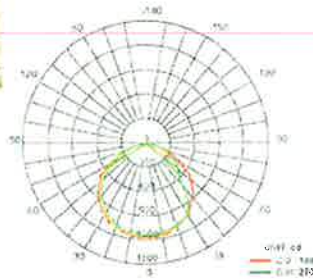
LED POWERED BY:
CREE



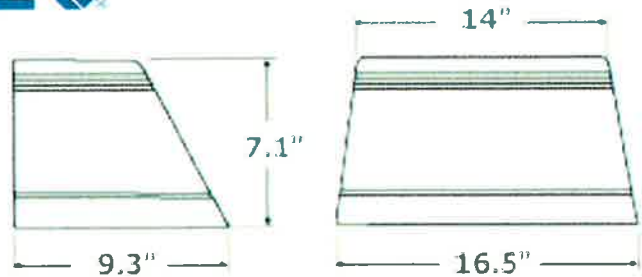
DISTRIBUTION



PHOTOMETRIC



Average Beam Angle(50%) 108.0°



Simple One Person Mounting



Models:

- VVD31115FR: 15 LEDs - 40W - 2752 Lm - 700mA
- VVD31130FR: 30 LEDs - 77W - 5036 Lm - 700mA

Ordering:

Part # Color Temp Voltage
 VVD31115FR N - Natural - 4700K UNV - 100-277V
 VVD31130FR

Ordering Example: VVD31115FR-N-UNV



exacqVision

Powerful, Intuitive IP Video Surveillance Software & Servers
From Complete Single Camera to Enterprise Solutions

Product Brochure



Now Featuring **EasyConnect**

The Power of IP Cameras with the Simplicity of Analog



exacq www.exacq.com



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+44 208 7505660
+852 8120 9275
+65 6319 9826

USA (Corporate Headquarters)
United Kingdom/Europe
Hong Kong
Asia / Pacific



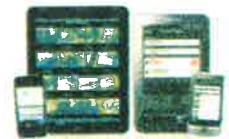
exacqVision A-Series

IP Camera Servers
IP Cameras and Encoders

exacqVision A-Series IP Camera Servers Reliable, Professional Grade Systems

Key Features & Benefits:

- **All-in-One Solution** — Video recording, web/mobile client hosting, and local live video display from the same server.
- **Network Video Recording Servers - IP Camera Servers** — Record IP cameras and encoders. Live and recorded video viewable through free exacqVision client application.
- **Up to 64 IP Cameras Per Server** — Up to 64 IP cameras per server. Compatible with over 1,800 IP camera models. Continuously record up to 550Mbps of video. Use our configuration calculator to find the perfect exacqVision server for your application.
- **Enterprise-Class Storage** — Up to 32 TB of storage per server using continuous duty enterprise-class drives. Optional RAID on 4U models.
- **Cross-Compatible Local, Remote and Mobile User Interfaces** — Access live and recorded video on multiple client PCs with free Windows, Mac or Linux client application. exacqVision web server application is pre-installed on the server to access video through a web browser or free Mobile iPhone/iPad and Android apps.
- **Professional Chassis for all Requirements** — 2U and 4U rackmount chassis ideal for server rooms with optional rack mounting kits. Compact desktop chassis ideal for space constrained applications.
- **Unlimited Scalability** — Pre-loaded with exacqVision Professional video management system (VMS) software. Easily add additional IP camera licenses and change out cameras. Add unlimited additional servers for greater capacity or dispersed geographic location. Manage individual systems from the same user interface or upgrade to exacqVision enterprise to easily manage multiple servers simultaneously.
- **CPU Upgrade Option** — Available CPU upgrade option increases local client and web server performance up to 100% and enables hosting of Certified Software Applications (CSA) such as video analytics or point-of-sale interfaces on exacqVision servers. CSAs are software developed by Exacq technology partners and tested by Exacq for reliable operation on exacqVision servers. Save hardware costs, rack space, and support costs by loading multiple applications on one exacqVision server.
- **3-Year Hardware Warranty, 3-Year Software Subscription Agreement (SSA)** — 3-year hardware warranty and SSA included. Update client, server and web server software with the latest exacqVision software features at no additional cost during the 3-year SSA period.



www.exacq.com

exacq
Technologies

TECHNICAL SPECIFICATIONS

A-Series IP Camera Servers

Camera Settings	2U	4U	Desktop
Maximum IP Cameras	Expandable up to 64 cameras per server (data rate dependent)		
Included IP Licenses	4	4	4
Server	2U	4U	
Pre-Loaded VMS Software	exacqVision Professional (standard), exacqVision Enterprise Server (optional)		
Typical Video Storage Rate (Mbps)	300Mbps (Windows), 450Mbps (Linux)	350Mbps (Windows), 550 Mbps (Linux)	250Mbps (Windows), 300Mbps (Linux)
Local Client Display Rate (FPS)	450/750 (Windows, Standard/Optional CPU) 300/500 (Linux, Standard / Optional CPU)		
Maximum Hard Drives	3	8	2
Maximum Storage	12 TB	32 TB	8 TB
Monitor Output	1 DVI-I, 1 DVI-D, 1 Display Port, maximum 2 simultaneous monitors		
Operating System	Windows 7 64 bit, Windows 2008 R2 (Optional), Ubuntu Linux 10.04		
Operating System Drive	32 GB SSD (Linux), HD (Windows), 64 GB SSD (Optional)		
Processor	Gen 3 Intel® i3 (standard), Intel® Core i5 or i7 (optional)		
RAM	4 GB (standard), 8 GB (optional)		
NIC	2 (standard), 4 (optional)		
USB Ports	5 x USB 2.0, 2 x USB 3.0		
DVD/CD RW	Included		
Serial Connection	N/A	N/A	N/A
Audio Outputs	1	1	1
Keyboard & Mouse	Included		
General	2U	4U	
Dimensions (LxWxH)	21.25 x 16.75 x 3.5 in 54.7 x 42.6 x 8.9 cm	28 x 16.75 x 7 in 71.2 x 42.6 x 17.8 cm	15.675 x 13 x 5.375 in 39.7 x 33.1 x 14.6 in
Weight	27 - 31 lbs 12.3 - 14.1 kg	44 - 60 lbs 20 - 27.3 kg	13.5 - 22 lbs 8.4 - 10 kg
Regulatory	CE (Class A), FCC (Class A), UL Listed		
Input Voltage	120, 240 VAC auto-sensing		
Power Supplies	Single	Single (Dual Optional)	Single
Power & Heat	150 Watts/540 BTU/h (Max) 110 Watts/370 BTU/h (Typical)	240 Watts/790 BTU/h (Max) 140 Watts/470 BTU/h (Typical)	50 Watts/500 BTU/h (Max) 110 Watts/370 BTU/h (Typical)
Operating Temperature	40 - 95 F (4.5 - 35 C)		
Server Revision	G1	G1	H1
Compatible Client Operating System	Windows 7, Vista, XP, Server 2003/2008 32-bit or 64-bit Linux (Ubuntu) Mac OS X		

All part numbers can be found in the product catalog at: <https://exacq.com/catalog/>
 Specifications subject to change. Visit www.exacq.com for the most current product specifications.



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exacq
 Technologies

www.exacq.com 05-13



Enterprise System Manager (ESM)

Maximize the uptime of your exacqVision Enterprise recorders with ESM. Access via browser on PC or mobile device.



USB I/O Module

Auto-configurable trigger inputs, outputs and serial connections to expand your surveillance system.



Surveillance Keyboard

Pre-configured for quick, easy installation and efficient control of live and recorded video from the exacqVision client.



Exacq Mobile

Free app provides live & recorded video from multiple systems, simultaneously. iOS, Android, Windows Phone 8.



exacqVision Edge/Edge+

exacqVision Edge/Edge+ install exacqVision Edge or Edge+ directly onto compatible IP cameras for a complete, full-featured VMS without a server.

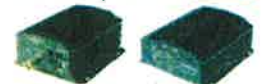
exacqVision



exacqVision Virtual

Pre-configured VMware Ready virtual appliance supported on systems with exacqVision Enterprise licenses.

exacqVision E-Series



E-Series Encoders

Single and 4-channel cost-effective encoders to convert analog cameras to IP to utilize exacqVision IP camera servers.

Software specific details are subject to change without notice		Start	Professional	Enterprise
System	Max Cameras Per Server	16 Analog / 16 IP	64 Analog / 128 IP	64 Analog / 128 IP
	Max Server Connections Per Client	1	512 (Client) / 15 (Web Browser Client)	512 (Client) / 15 (Web Browser Client)
	Windows & Linux Server Compatibility	☒	☒	☒
	Free Windows, Linux & Mac Clients	☒	☒	☒
	Browser-Based Viewing of Live/Stored Events	☒	☒	☒
	Compatible with Free Exacq Mobile App	☒	☒	☒
	EasyConnect Auto-Detect/Connect to Compatible IP Cameras	☒	☒	☒
	Fisheye/Panoramic Lens Support (Live & Recorded)	☒	☒	☒
	Client Bandwidth Throttling	☒	☒	☒
	Pre-Post Alarm Recording	☒	☒	☒
	Soft Triggers	☒	☒	☒
	Time-Lapse Recording	☒	☒	☒
	Extended Storage	☒	☒	☒
	Archiving	☒	☒	☒
	Per-Camera Min/Max Retention	☒	☒	☒
	Audit Trail	☒	☒	☒
	Custom User Groups	☒	☒	☒
	Third-Party Integrations	☒	☒	☒
	Smart Search	☒	☒	☒
	Email Notification for System Health Events	☒	☒	☒
	exacqVision Surveillance Keyboard Support	☒	☒	☒
	ESM Fanlover	☒	☒	☒
	Enterprise Camera Management	☒	☒	☒
	Enterprise Server Monitoring	☒	☒	☒
	Enterprise User Management	☒	☒	☒
iBAP/Active Directory	☒	☒	☒	
Compatible with exacqVision Virtual Appliance	☒	☒	☒	
Software Updates Included (exacqVision Servers)	3 years	3 years	3 years	
Software Updates Included (3rd Party Servers)	90 days	1 year	1 year	
Live View	View Cameras on Multiple Monitors	☒	☒	☒
	PTZ Control & Presets	☒	☒	☒
	Digital PTZ Control & Presets	☒	☒	☒
	Motion & Alarm Indication	☒	☒	☒
	Event Linking on Discreet Joints	☒	☒	☒
	Event Linking on Video, Serial & Health Events	☒	☒	☒
	Event Overlay & Time-Lapse Video Switching	☒	☒	☒
	Camera Groups	☒	☒	☒
	Multi-Streaming	☒	☒	☒
	Event Notifications	☒	☒	☒
	Two-Way Audio	☒	☒	☒
	Maps	☒	☒	☒
	VideoPush Video Wall	☒	☒	☒
Search, Playback, Export & Archive	exacqReplay Instant Replay	☒	☒	☒
	Thumbnail & Timeline Event Search	☒	☒	☒
	POS & ATM Serial Text Search	☒	☒	☒
	Multi-Camera Playback	☒	☒	☒
	Export to DVD	☒	☒	☒
	Export to AVI or .EXE File	☒	☒	☒
	Bookmarking	☒	☒	☒
	Multiple Camera Export	☒	☒	☒
Case Management	☒	☒	☒	

Try exacqVision Now!

Contact our demo servers or install the server software to your own computer and IP cameras with a full-featured free trial license. Try the exacqVision web browser client or the free Exacq Mobile app.

www.exacq.com/tryexacqvision

exacqVision Server & Hardware Cheatsheet

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	LC-Series		ELP-Series		A-Series		Z-Series	
	IPS	Hybrid	IPS	Hybrid	IPS	Hybrid	IPS	Hybrid
Form Factor	4U	4U	4U	4U	4U	4U	4U	4U
Video Inputs	16	16	16	16	16	16	16	16
Frame Rate	25 FPS per input	25 FPS per input	25 FPS per input	25 FPS per input	25 FPS per input	25 FPS per input	25 FPS per input	25 FPS per input
Alarm Inputs	16	16	16	16	16	16	16	16
Alarm Outputs	16	16	16	16	16	16	16	16
Audio Inputs	16	16	16	16	16	16	16	16
Max IP Cameras	16	16	16	16	16	16	16	16
Included IP Camera License	16	16	16	16	16	16	16	16
Alarm Inputs/Outputs	16	16	16	16	16	16	16	16
Pre-Loaded VMS Software	Start/Professional (Optional)	Start/Professional (Optional)	Start/Professional (Optional)	Start/Professional (Optional)	Start/Professional (Optional)	Start/Professional (Optional)	Start/Professional (Optional)	Start/Professional (Optional)
Typical Video Storage Rate (Mbps)	150	150	150	150	150	150	150	150
Local Client Display Rate (FPS)	150	150	150	150	150	150	150	150
Max Storage	4 TB	4 TB	4 TB	4 TB	4 TB	4 TB	4 TB	4 TB
Removable HD	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
RAID Configuration	RAID 5	RAID 5	RAID 5	RAID 5	RAID 5	RAID 5	RAID 5	RAID 5
Operating System	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04
Operating System Location	HD	HD	HD	HD	HD	HD	HD	HD
Monitor Output	DP-DVI	DP-DVI	DP-DVI	DP-DVI	DP-DVI	DP-DVI	DP-DVI	DP-DVI
NIC	1x 1 Gbps	1x 1 Gbps	1x 1 Gbps	1x 1 Gbps	1x 1 Gbps	1x 1 Gbps	1x 1 Gbps	1x 1 Gbps
Redundant Power Supply	1	1	1	1	1	1	1	1
Serial	1	1	1	1	1	1	1	1
Audio Outputs (Server)	1	1	1	1	1	1	1	1

S-Series - Networked Video Storage for exacqVision Recorders

	Professional	Enterprise (1)	Enterprise (2)
Form Factor	16	32	64
Archiving - Max Video Recorders	750 (single NIC / 1000 (dual NIC bonding)	1500 (single NIC) / 2000 (dual NIC bonding)	3000 (single NIC) / 4000 (dual NIC bonding)
Archiving - Max Data Rate (Mbps)	8	32	64
Ext. Storage - Max Video Recorders	250	350	500
Ext. Storage - Max Data Rate (Mbps)	8	32	64
Ext. Storage - Designed for ESM	Yes	Yes	Yes
Ext. Storage - Minimum Video Recorder OS	Microsoft Server 2008, Windows 7, Linux Ubuntu 10.04	Microsoft Server 2008, Windows 7, Linux Ubuntu 10.04	Microsoft Server 2008, Windows 7, Linux Ubuntu 10.04
Pre-Loaded VMS Software	exacqVision Storage Enterprise	exacqVision Storage Enterprise	exacqVision Storage Enterprise
ESM Monitoring Compatible	Yes	Yes	Yes
Storage Maximum (Internal)	32 TB	32 TB RAID 5	40 TB RAID 6
NIC	2x 1 Gbps	2x 1 Gbps / 2x 10 Gbps	2x 1 Gbps / 2x 10 Gbps / 2x 10 Gbps / 2x 10 Gbps
Operating System	Ultimate Linux 2.04	Ultimate Linux 2.04	Ultimate Linux 2.04
Redundant Power Supply	1	2	Built Redundant

exacqVision S-Series

exacqVision A-Series

exacqVision Z-Series

What you get with an exacqVision purpose-built server:
 3-year warranty
 3-year software updates
 Factory-installed VMS

SurroundVideo® Omni Megapixel IP Cameras

12MP WDR or 20MP H.264 All-in-One Omni-Directional User-Configurable Multi-Sensor Day/Night Indoor/Outdoor Dome IP Cameras



(Example images from 12MP "SurroundVideo" Omni with WDR and Ultra/Profil with one 12MP lens)

Use One Megapixel SurroundVideo® Omni for a Wide Range of Requirements.

Tracking, intrusion, flexible, wide-angle non-SurroundVideo® Omni multi-sensor megapixel cameras provide unique resolution to observe for detail and recorded video with multiple images, each with a 1080p or 1080i resolution. The SurroundVideo® Omni can replace 4 standard cameras, depending on a single installation, with 95% less cabling work.

A unique track design allows for individual sensor gimbal to be independently gimbal in every 1st configuration. Perfect use of SurroundVideo® Omni (Profil, Ultra) weather resistant camera can be

cover the intended 360° hallway or indoor area with 100% view of the entire area looking.

SurroundVideo® Omni camera is available in total resolutions of 4x megapixel (MP) or 20 megapixel. Optional lenses can be selected from 1.8mm to 2.8mm, 4mm, 6mm and 8mm wide dynamic range (WDR) that delivers up to 120dB of resolution coverage in the 12MP model, motion compression reduces bandwidth and storage requirements, while delivering full frame rates and resolution, without sacrificing image quality.



Omni-Directional Track with 4 Customizable Sensors



270° FOV Capable



Wide Dynamic Range on 12MP Models



True Day/Night with IR Cut Filter



Pixel Binning Mode



Dual Encoder H.264/MJPEG



Ultra Low Profile Design



Impact 7 Weather Resistant IK-10 and IP66 Rated

SurroundVideo® Omni



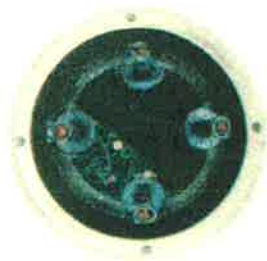
Highlighted Features:

- 12MP WDR and 20MP Configurations
- Up to 4 Individual Camera Outputs with 60 FPS Independent Playback Any Orientation Around a 360° Track with Extra Position for Looking Straight Down
- Multiple Lens Options in a Single Camera Housing from 2.8mm to 16mm
- True WDR up to 120dB at Full Resolution. See Clear in Starburst and Bright Light Conditions. Simultaneous
- True Day/Night Functionality with Hemispherical IR Cut Filter
- Sensing Mode for Strong Low Light Performance
- Forensic Zooming - 2x Magnification Above the Event - Video Recording Full-HDR 10-bit Raw in H.265 - Replace PTZ Devices
- Privacy Mask, Motion Detection, Flexible Cropping, Bi-Path Control and Multi-Streaming
- Dual Encoder in 2x4 to 1080p
- PoE and Auxiliary Power: 12-48V DC/24V AC
- Ultra-Discrete, Low-Profile Housing
- Complete Mounting Options
- Outdoor Rated IP68 and IK-10 Impact Resistant Housing
- Made in USA

SurroundVideo® Omni Versatility

The SurroundVideo® Omni can replace multiple single sensor cameras. One example of this is a hallway intersection where the ability to choose different lenses will provide the best possible image quality and pixel density.

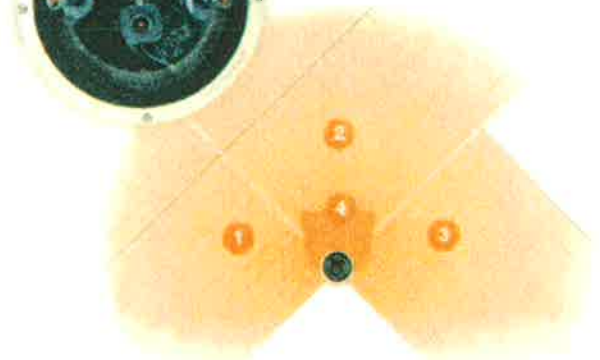
Another great example of the versatility of the SurroundVideo® Omni is the corner layout. Configuring the camera's 4 sensors in the corner layout will provide a seamless 270° field of view as well as a view looking directly underneath the camera. No other camera can provide this level of coverage in a building corner.



Indoor Hallway Intersection Layout
2 Telephoto and 2 Wide-Angle Lenses



270° Outdoor Corner Layout
(4 60° sensors)



Sensor 1



Sensor 2



Sensor 3



Sensor 4



Sensor 1



Sensor 2



Sensor 3



Sensor 4

Reduce the Number of Cameras to Improve Coverage and Simplify Installation

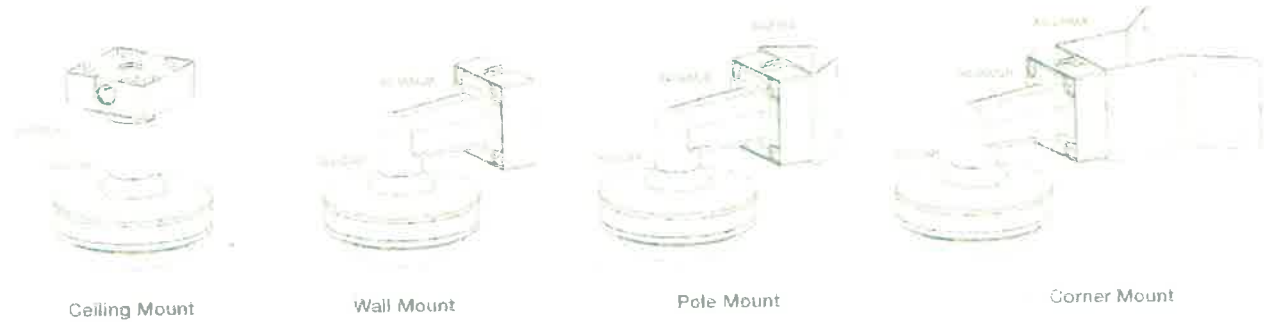
Surround Video megapixel technology delivers superior image quality and reduces overall system costs by covering larger areas with fewer cameras.

An area typically requiring multiple pan-tilt-zoom (PTZ) cameras or multiple fixed cameras can be covered with a single SurroundVideo® Omni

multi-sensor camera. SurroundVideo® Omni delivers comprehensive coverage and forensic detail. It is user-configurable to achieve maximum coverage in the desired areas of interest. As a result, SurroundVideo® Omni eliminates the propensity of a PTZ to be facing the wrong way when an incident occurs.

SurroundVideo® Omni Megapixel IP Cameras

Accessory Configurations



Ceiling Mount

Wall Mount

Pole Mount

Corner Mount

Accessories

SO-CAP

Cap for SuperVision™ VNC

AV-WMJB

Wall Mount Bracket with SuperVision™

AV-PMJB

Pole Mount Bracket with SuperVision™

AV-PMA

Pole Mount Adapter

AV-CRMA

Corner Mount Adapter

SV-EBA

External Box Adapter



Surface Mount (Standard)



Lens Options

Focal Length	2.8mm	4mm	6mm	8mm	12mm	16mm
F Stop	1.8	2.0	2.2	2.4	2.8	3.2
Horizontal FOV	1.3MP	100°	80°	60°	45°	35°
	1080p	100°	80°	60°	45°	35°
	1080p WDR	100°	80°	60°	45°	35°
	3MP	100°	80°	60°	45°	35°
	3MP WDR	100°	80°	60°	45°	35°
5MP	100°	80°	60°	45°	35°	25°
Option	Optional 2.8mm	Optional 4mm	Optional 6mm	Optional 8mm	Optional 12mm	Optional 16mm



Global Sales and Support

Arecont Vision is the leading manufacturer of high-performance megapixel IP cameras and associated IP software. All Arecont Vision cameras are made in the USA.

Antennas

Los Angeles, CA, USA

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Fax: (818) 907-0700
Email: sales@arecontvision.com

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Fax: (818) 907-0700
Email: sales@arecontvision.com

Sales

Phone: (818) 907-0700 x11
Email: sales@arecontvision.com

Support

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Email: Sales.LatAm@arecontvision.com

EMEA

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Phone: (49) 69 40000000
Email: europe@arecontvision.com

Moscow, Russia

Phone: (7) 495 6600000
Email: (7) 495 6600000
Fax: (7) 495 6600000
Email: moscow@arecontvision.com

Middle East

Email: ME@arecontvision.com

Africa

Email: Africa@arecontvision.com

APAC

China

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MegaDynamic® Wide Dynamic Range (WDR)

The 12MP SurroundVideo® Omni camera produces clear images in extremely challenging lighting conditions. Arecont Vision's WDR technology delivers a dynamic range of up to 100dB at full resolution, without lowering frame rates. WDR maximizes the amount of detail in both bright and dark areas of a scene. The WDR performance of the SurroundVideo® Omni megapixel camera represents an up to 50dB improvement (200x in dynamic range) versus 16 non-WDR cameras.



Three Megapixel Image Sensors with Wide Dynamic Range SurroundVideo® Omni Series

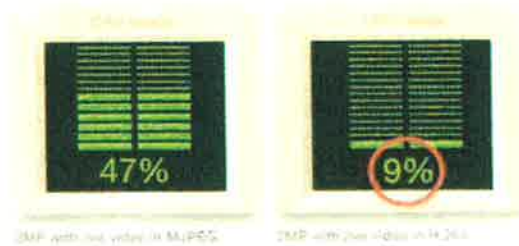
Enhanced Low Light Performance

As part of their superior Day/Night operation, SurroundVideo® Omni cameras include low light enhancing technology with a mechanical IR (infrared) cut filter, pixel binning and adaptive noise-cancellation. Day/Night capability automatically switches from color to black/white operation to increase sensitivity and image clarity at night or in unlit spaces.



Four Megapixel Image Sensors with Night Mode. Shows an H.264 Color view.

H.264 Decompression (example)



2MP with live video in MJPEG

2MP with live video in H.264

Compliant H.264 Compression by Arecont Vision

SurroundVideo® Omni's compliant implementation of H.264 allows full frame rates and full resolution without sacrificing image quality. With bit rate control, the CPU load of the NVR or VMS servers is decreased at both the client (decompression) side and the server/storage side. That allows lower bandwidth and storage relative to MJPEG. Real Time Streaming Protocol (RTSP) allows for compatibility with Apple QuickTime, VLC, and other media players.

Model Comparison

Model	Sensor	Full Resolution	Max Frame Rate @ Full Resolution	Minimum Illumination	Lens	H.264/ MJPEG	Day/ Night	WDR	Binning Mode
AV12176DN-NL	1/2.8" 12MP	1920 x 1080 @ 20FPS	30FPS	0.01 lux with 100% IR illumination (0.001 lux with 200% IR)	4.3mm, 1.0mm ICR	Y	Y	Y	Y
AV12176DN-28	1/2.8" 12MP	1920 x 1080 @ 28FPS	30FPS	0.01 lux with 100% IR illumination (0.001 lux with 200% IR)	4.3mm, 1.0mm ICR	Y	Y	Y	Y
AV12176DN-08	1/2.8" 12MP	1920 x 1080 @ 08FPS	30FPS	0.01 lux with 100% IR illumination (0.001 lux with 200% IR)	4.3mm, 1.0mm ICR	Y	Y	Y	Y
AV20175DN-NL	1/3" 12MP	2048 x 1536 @ 30FPS	30FPS	0.01 lux with 100% IR illumination (0.001 lux with 200% IR)	4.3mm, 1.0mm ICR	Y	Y	Y	Y
AV20175DN-28	1/3" 12MP	2048 x 1536 @ 28FPS	30FPS	0.01 lux with 100% IR illumination (0.001 lux with 200% IR)	4.3mm, 1.0mm ICR	Y	Y	Y	Y
AV20175DN-08	1/3" 12MP	2048 x 1536 @ 08FPS	30FPS	0.01 lux with 100% IR illumination (0.001 lux with 200% IR)	4.3mm, 1.0mm ICR	Y	Y	Y	Y

Options

-NL	Non-LED lens - 100% IR illumination
-28	28FPS frame rate - 28FPS @ 1080p resolution
-08	08FPS frame rate - 08FPS @ 1080p resolution



Leading the Way in Megapixel Video™

DS-2CD2112-I 1.3MP Outdoor Dome Camera



Key features

- 1.3 Megapixel (1280 x 960) High Resolution
- HD 720p Real-time Video
- True Day / Night Auto Switch
- IP66 Ingress Protection
- IR LEDs up to 30m
- Vandal-proof Housing

Specifications

DS-2CD2112-I	
Camera	
Image sensor	1/3" progressive scan CMOS
Min. illumination	0.028 lux@F2.0, AGC ON 0 lux with IR
Shutter time	1/30s ~ 1/100,000s
Lens	4mm@F2.0, angle of view: 52° (2.8mm, 6mm, 12mm optional)
Lens mount	M12
Angle adjustment (2-Axis)	Pan: 0° ~ 355°, tilt: 0° ~ 65°
Day & night	ICR
Compression standard	
Video compression	H.264 / MJPEG
Bit rate	32 Kbps ~ 16 Mbps
Dual stream	Yes
Image	
Max. image resolution	1280 × 960
Frame rate	60 Hz: 30 fps (1280 × 960), 30 fps (1280 × 720)
Image settings	Saturation, brightness, contrast adjustable through client software or web browser
Network	
Network storage	NAS
Alarm trigger	Motion detection, tampering alarm, network disconnect, IP address conflict, storage exception
Protocols	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, SNMP, HTTPS, FTP, 802.1x, Qos
System compatibility	ONV1F, PSIA, CGI
General functionalities	Flickerless, heartbeat, mirror, user authentication, video mask, watermark
Interface	
Communication interface	1 RJ45 10M / 100M ethernet port
General	
Operating conditions	-30°C ~ 60°C (-22°F ~ 140°F) humidity 90% or less (non-condensing)
Power supply	12 VDC ± 10%, PoE (802.3af)
Power consumption	2 W ~ 4 W (IR LEDs, +2W)
Impact protection	IEC60068-275Eh, 50J; EN50102, up to IK10
IR range	approx 20 to 30 meters
Dimensions	Φ 140 × 92 mm
Weight	600g

Dimensions



Available models

DS-2CD2112-I (1.3MP)

Accessories



DS-1258Z
(Wall mount)

DS-127ZZ-I108
(Wall mount)

DS-1280Z-DM19
Junction box

DS-2CD2132-I

3MP IR Fixed Focal Dome Camera



Key features

- 3 megapixel (2048 x 1536) resolution
- Full HD1080p real-time video
- 3D DNR & DWDR & BLC
- IR LEDs, up to 30m
- IP66
- PoE
- Vandal-proof

Dimensions



DS-2CD2132-I	
Camera	
Image sensor	1/3" progressive scan CMOS
Min. illumination	0.19 lux@F2.0 AGC on 0 lux with IR
Shutter time	1/30s ~ 1/100,000s
Lens	4mm @F2.0, angle of view 75.8° (2.8mm, 6mm, 12mm optional)
Lens mount	M12
Angle adjustment	Pan: 0° ~ 355°, tilt: 0° ~ 65°
Digital noise reduction	3D DNR
Wide dynamic range	Digital WDR
Day & night	True
Compression standard	
Video compression	H.264 / MJPEG
H.264 codec profile	Main profile
Bit rate	32 Kbps ~ 15 Mbps
Dual stream	Yes
Image	
Max. image resolution	2048 x 1536
Frame rate	60Hz: 15fps (2048 x 1536), 30fps (1920 x 1080), 30fps (1280 x 720)
Image settings	Saturation, brightness, contrast adjustable through client software or web browser
BLC	Yes, zone configurable
Network	
Network storage	NAS
Alarm trigger	Motion detection, tampering alarm
Protocols	TCP/IP, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, SNMP, HTTPS, FTP, S21, GSI
System compatibility	ONVIF, PSIA, CGI
General functionalities	User authentication, watermark
Port(s)	
Communication interface	1 RJ45 10M / 100M ethernet port
General	
Operating conditions	-30°C ~ 60°C (-22°F ~ 140°F); humidity 95% or less (non-condensing)
Power supply	12 VDC ± 10%, PoE (802.3af)
Power consumption	Max. 5W (7W with IR on)
Impact protection	IEC60066-275En 50V, EN50102, up to IK10
Ingress protection	IP66 / IK10
IR range	approx. 10 to 50 meters
Dimensions	Φ 111 x 82 mm
Weight	500g (1.1 lbs)

Available models

DS-2CD2132-I

Accessories

DS-1258ZJ	DS-1280ZJ-DM18	DS-1270ZJ-110	DS-1272ZJ-110B
Wall Mount Plastic Bracket	Conduit Base for 21x2 Dome Cameras	Pendant Cap for 21x2 Dome (thread adapters included)	Wall mount with junction box for 21x2 dome

VISTA-20P

VISTA® CONTROL PANEL



The high capacity, feature-rich VISTA-20P lets you deliver more value to your customers on each and every sale with up to 48 zones of protection. Internet uploading/downloading, graphic keypad support and dual partitions. VISTA-20P gives you the ability to send alarm signals and upload/download via an internet Protocol (IP), improving the speed at which information can be delivered to and from the control panel.

In addition, the VISTA-20P, used with an AlarmNet® Internet or 4G communicator can be installed in premises without TELCO lines. The panel's installation advantages, innovative end-user benefits and robust system capacity make the value-priced VISTA-20P an ideal choice for higher end installations.

FEATURES

- IP alarm reporting and uploading/downloading capability for Internet and Intranet use via GSMV4G, P845-ENT, GSMV4G or GSMX4G
- Supports four graphic touchscreen keypads
- Wireless keys can be programmed without using zones
- Eight on-board hardwired zones standard (15 when Zone Doubling feature is used)
 - 40 hardwire expansion zones
 - 40 wireless expansion zones
- Two low current on-board trigger outputs
- 100 Event Log viewable at system keypads with time/date stamp
- 48 system user codes assignable to either partition
- Expandable to 48 total zones when used with hardwired and/or wireless expansion modules
- Two independent partitions plus a common partition
 - Global Arming from any system keypad
 - Go to function to view or operate one partition from the other
 - Separate partition account numbers

- 16 output devices
 - Relays (Model 4204 Relay Modules or 4229 Expansion Module)
- Four installer-configurable zone types allows the installer to create custom zone types by assigning all zone attributes
- Supports four-wire and up to 16 two-wire smokes
 - Works with Sentrol CleanMe™ maintenance signal
- Multiple actions on output devices depending on system state
 - Turns lights off when system arms
 - Turns the same light on when system disarms
 - Flashes same lights when system is in alarm
- Built-in phone line cut monitor with programmable delay and annunciation options
 - Display on system keypads
 - Trigger local sounders
 - Trigger system bell

Security Dealer Features

- Automatic System Load Shed
 - During extended AC power fail, the system battery will be disconnected to prevent irreversible battery failure. Reduces service calls to replace batteries.

- Dynamic Signaling
 - Reduces redundant reporting to the central station when multiple reporting methods are used: i.e. digital dialer and AlarmNet radio

Valuable End-user Features

- Viewable on system keypads:
 - Exit countdown
 - Time and date display*
 - Event log*
- Auto keypad backlighting on entry
- Keyswitch arming
- Programmable macro buttons and single-button arming
- Supports a variety of wireless remote controls for single-button operation
- User Scheduling
 - Latchkey reports to pagers
 - Auto arm/disarm
 - "User access" time windows
- VIP Module allows system control from any touchtone phone
- Chime by zone
- Fully compatible with Honeywell Total Connect™ Remote Services

*Requires custom alpha keypad

VISTA-20P

VISTA® CONTROL PANEL

SPECIFICATIONS

Electrical

- Aux. power 12VDC, 600mA maximum
- Seven hour standby at 400mA aux. load with four amp hour battery
- 16.5VAC/25VA transformer
- Alarm output 12VDC, 2.0 amps max.
- For UL installations, combined aux. and alarm output cannot exceed 700mA

Output Control

- Supports up to four relay boards (up to 16 relays)
- Optional X-10 transformer/interface (part no. 4360) may be used to control up to 16 X-10 receiving devices

Zones

- Eight hardwired zones (15 with zone doubling)
- Selectable response 10msec, 350msec, 750msec
- Assignable to any partition
- 20 selectable zone types plus four configurable zone types
- Programmable swinger suppression

Expansion Devices

- 4219 – Eight hardwired zones – 16mA
- 4204 – Up to four relays – 15mA standby (each active relay draws an additional 40mA)
- 4229 – Eight hardwired zones and two relays – 36mA (each active relay draws an additional 40mA)

Accessories

- iGSMV4G Internet and Digital Cellular Communicator with Remote Service Capability
- 7845i-ENT Enterprise Internet Communicator

- GSMV4G Digital Cellular Communicator with Remote Service Capability
- GSMX4G Digital Cellular Communicator for VISTA Control Panels
- 5881ENL RF Receiver supports up to eight zones – 60mA
- 5881ENM supports up to 16 zones – 60mA
- 5881ENH supports up to 48 zones – 60mA
- 5883 Transceiver supports up to 40 zones – 30mA

Keypads

- 6162 Custom Alpha Security Keypad – 40mA/120mA
- 6162V Voice Custom Alpha Security Keypad – 60mA/190mA
- 6162RF Custom Alpha Receiver/Security Keypad – 120mA/210mA
- 6152 Fixed-English Security Keypad – 40mA/70mA
- 6152V Voice Fixed-English Security Keypad – 60mA/190mA
- 6152RF/6152RFFR Fixed-English/French Receiver/Security Keypad – 30mA/105mA
- 6152ZN/6152ZNFR Fixed-English/French Security Keypad with Hardwired Zone – 35mA/80mA
- 6148 Fixed English LCD – 30mA/65mA
- 6280 Color Graphic Touchscreen Keypad with Voice
- Tuxedo Touch™ (TUXW) Color Graphic Voice Touchscreen Security Keypad and Home/Business Controller (White)
- Tuxedo Touch with Integrated Wi-Fi® (TUXWIFW) Color Graphic Voice Touchscreen Security Keypad and Home/Business Controller with Integrated Wi-Fi (White)

Agency Listings

ETL listing

- Residential Fire and Burglary:
– Household Fire Warning System Units – ANSI/UL 985, 2000/05/26 (5th edition) with revisions up to 2004/04/29

Smoke Detectors

- Supports up to 16 two-wire smoke detectors
- Supports four-wire smoke detectors

Communications

- iGSMV4G Internet and Digital Cellular Communicator with Remote Service Capability
- 7845i-ENT Enterprise Internet Communicator
- GSMV4G Digital Cellular Communicator with Remote Service Capability
- GSMX4G Digital Cellular Communicator for VISTA Control Panels
- Touchtone or pulse
- Formats supported
– ADEMCO® Contact ID
– ADEMCO 4 + 2 Express
– ADEMCO low speed
– Secoair/Radiolink
- 3 + 1, 4 – 1 and 4 + 2 reporting
- Reporting capabilities
– Split
– Dual
– Split/Dual – True dial tone detection
- Low battery reports 11.2 – 11.6VDC
- AC loss and restore reporting supported

ORDERING

VISTA-20P	Control Panel
VISTA-20PSIA	Control Panel for CP-01 SIA Certifications

For more information:

www.honeywell.com/security

Automation and Control Solutions

Honeywell Security Products Americas
2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747
1.800.467.5875
www.honeywell.com

Honeywell

NetAXS™

Web-based Access Control System



Honeywell's web-based access control offering now provides solutions for installations of any size. NetAXS™ enables users to manage their system anywhere there's an Internet connection—with no dedicated PC costs. The user-friendly design makes it simple to install and easy to operate and maintain. NetAXS gives you all the benefits of traditional access control such as helping you secure your doors, manage employee access, and manage sites remotely. It also lets you pull reports easily to meet compliance requirements. With a browser-based interface, your learning curve and training time are significantly decreased. And you don't have to have a dedicated PC—simply log on and you're ready to go, securely—from the office or anywhere. NetAXS has been developed with an installer-friendly design that easily adapts to existing IT infrastructure and methods. This means reduced installation and support cost. Its superior

scalability means you can purchase the exact amount of access control you need now—and add doors later as business needs change. Plus, NetAXS integrates with Honeywell's fully-featured WIN-PAK software to enable more robust and sophisticated NetAXS integrations. So as your system grows, NetAXS grows with you.

System Highlights:

- **SIMPLE:** Manage your access control anywhere with an Internet connection.
- **SCALABLE:** Purchase the exact amount of access control you need now and easily add doors later.
- **FLEXIBLE:** Compatible with WIN-PAK® XE, WIN-PAK SE, WIN-PAK PE and WIN-PAK PRO OS (managed access) software.

NETAXS OFFERINGS

ENCLOSURES and ADD-ON BOARDS

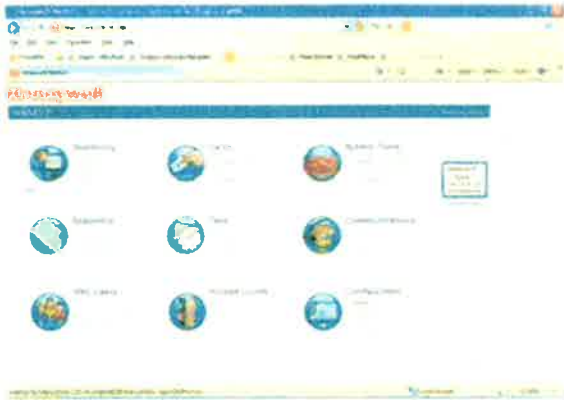
1 Door	NX1P*	NetAXS-123: One door, compact (plastic) enclosure
	NX1MPS	NetAXS-123: One door, standard (metal) enclosure with power supply and battery
2 Doors	NX1P*	NetAXS-123: One door, compact (plastic) enclosure —and—
	NXD1*	NetAXS-123: One door add-on board
	NX1MPS	NetAXS-123: One door, standard (metal) enclosure with power supply and battery —and—
3 Doors	NXD1	NetAXS-123: One door add-on board
	NX1MPS	NetAXS-123: One door, standard (metal) enclosure with power supply and battery —and—
4 Doors	NXD2	NetAXS-123: Two door add-on board
	NX4S1	NetAXS-4: 4 Door control panel (standard enclosure)
	NX4L1	NetAXS-4: Pre-wired 4 door control panel (deluxe enclosure)

*450 mA @ 12 VDC is the maximum current available to power strike, reader(s) and input devices when using a 802.3af Power Over Ethernet (PoE) connection. If additional current is required, an external 12 VDC power supply is needed.

NetAXS™

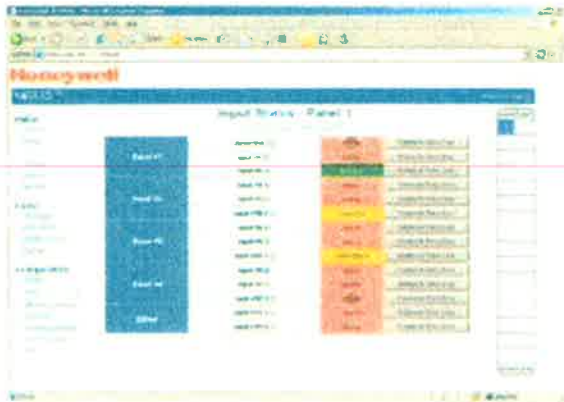
Web-based Access Control System

SYSTEM BENEFITS



User Friendly

Easy to use landing page provides a user-friendly experience so you can provide end user training in less than 30 minutes. Whether you're showing customers how to set up the basic parameters such as time zones and access levels, or teaching them how to add or delete cards, everything you need is all located on one page. Simply log into your IP address and navigate the system like you would any other internet site.

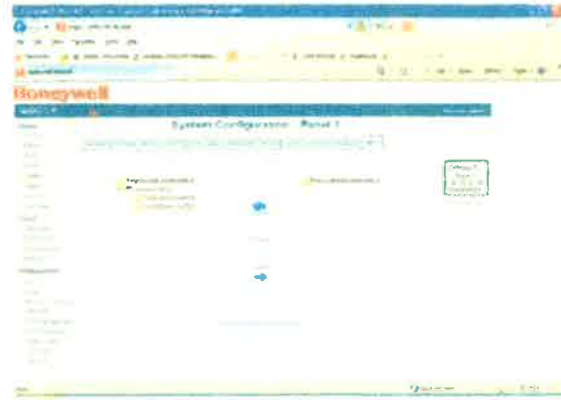


Dynamic Screen Updates

With NetAXS, dynamic screens refresh data automatically without having to refresh the page. This allows status updates from NetAXS to be pushed out to the web screens automatically, without user interaction.

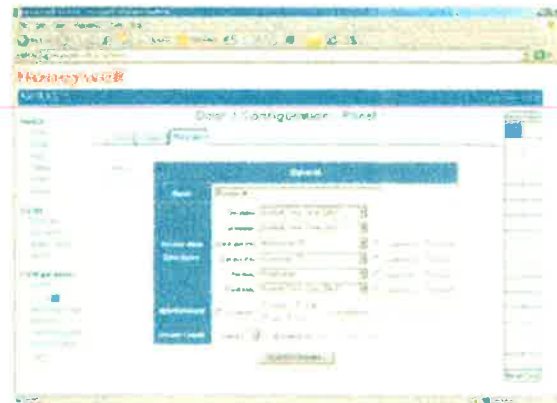
Alarms, events, inputs, outputs, and status screens all automatically update as information is received.

Data transfer between the controller and web browsers has been optimized to reduce bandwidth requirements, improving screen response times.



RS-485 or Ethernet Virtual Loop (EVL) with NetAXS-123

Ethernet Virtual Loop (EVL), a NetAXS-123 v5.0 feature, for web-hosted systems (EVL is not supported by WIN-PAK), allows up to 16 IP network connected NetAXS-123 controllers to be managed as a group. The group is called a "Virtual Loop" as its functionality is similar to an RS-485 loop also featured with version 5.0 and previous releases of NetAXS firmware. NetAXS-123 downstream panels operating EVL and on the same subnet as the gateway panel are automatically discovered by the gateway panel, greatly reducing installation time and making system expansion easy. Systems using NetAXS-4 or a mix of NetAXS-123 and NetAXS-4 must use RS-485 to loop panels.



Door Access Modes and Options

NetAXS allows you to assign cardholders different levels of access. Supervisor access allows an employee to present their card once to the reader to give individual access. If the supervisor presents their card twice, they enable access for their team during the specified time zone.

Escort access requires a supervisor escort for a non-supervisor cardholder. The supervisor must present his card first, then the non-supervisor must present his card within ten seconds.

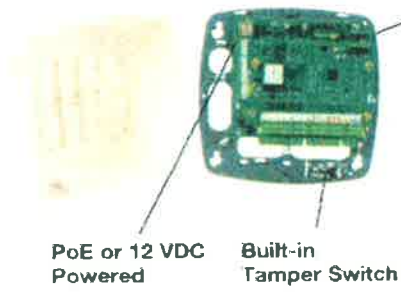
NetAXS™

Web-based Access Control System

ENCLOSURE OPTIONS

NetAXS-123

**NetAXS-123
Compact Plastic Enclosure**

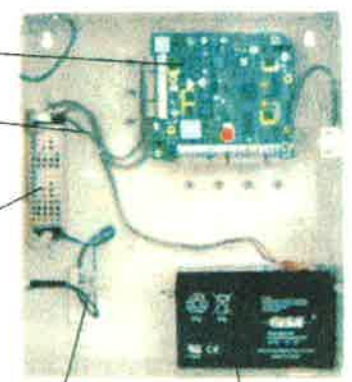


- Control Panel (NXC1)**
- Ethernet Port: Connect to web browser or WIN-PAK software
 - RS485 or Ethernet: Connect panels downstream and/or connect to WIN-PAK software
 - USB Port: Easy setup and diagnostics from your laptop
 - Color coded terminal labels
 - Removable terminal blocks

PoE or 12 VDC Powered

Built-in Tamper Switch

**NetAXS-123
Standard Metal Enclosure**



Multiple Tie-Down and Grounding Points

- Cleaner and more consistent installations

4 A, 12 VDC Power Supply

- Universal input (100-240 VAC)
- 3.5 A available to power accessories - over 1 A to power each door

Terminal Block with Input Fuse

12V Battery Backup

NetAXS-123 Add-On Boards

**NetAXS-123
One Door Add-on Board**



**NetAXS-123
Two Door Add-on Board**



NetAXS-4

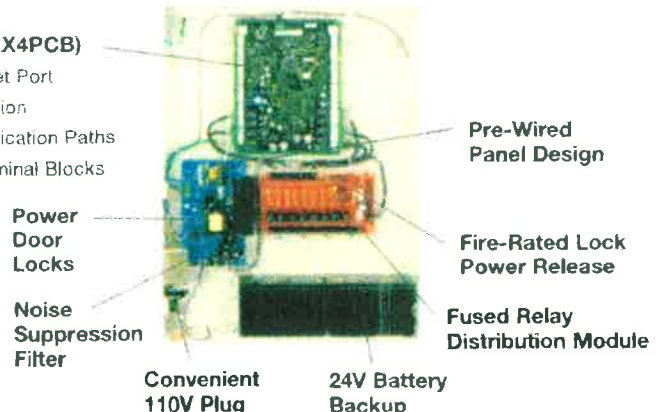
**NetAXS-4
Standard Metal Enclosure**



- Control Panel (NX4PCB)**
- On-Board Ethernet Port
 - Built-In PCI Function
 - Multiple Communication Paths
 - Color Coded Terminal Blocks

12V Battery Backup

**NetAXS-4
Deluxe Metal Enclosure**



Pre-Wired Panel Design

Fire-Rated Lock Power Release

Fused Relay Distribution Module

Power Door Locks

Noise Suppression Filter

Convenient 110V Plug

24V Battery Backup

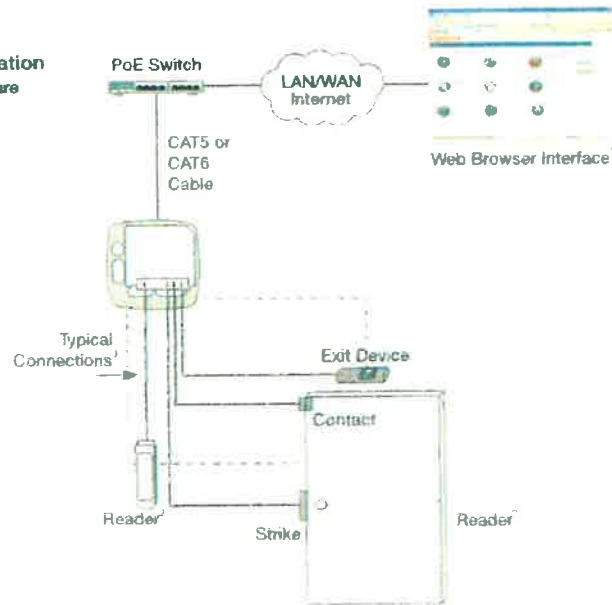
NetAXS™

Web-based Access Control System

SYSTEM OVERVIEW

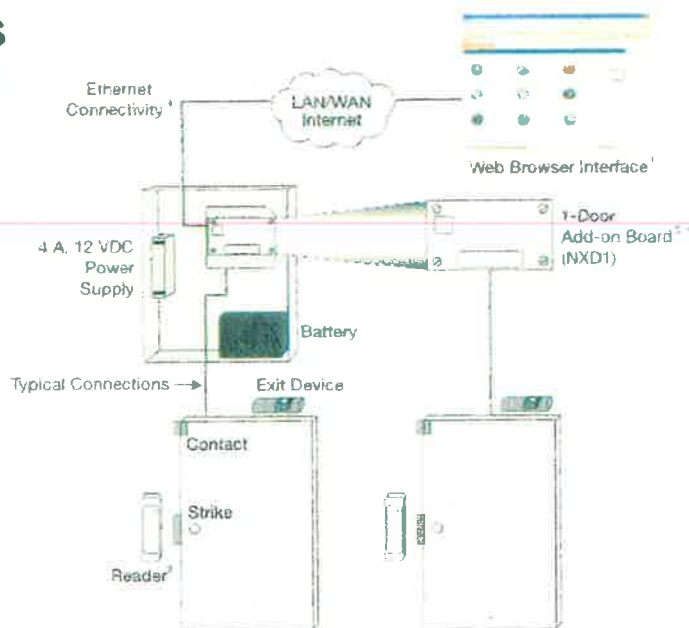
1 DOOR

Typical PoE Configuration
Compact Plastic Enclosure



2 DOORS

1 Door Standard
Metal Enclosure
shown with 1-Door
Add-on Board



1. Also compatible with WIN-PAK* XE, WIN-PAK SE, WIN-PAK PE and WIN-PAK PRO CS (Managed Access)

2. When using an IN and OUT reader, BOTH readers must have HOLD lines

3. 450 mA, 12 VDC is maximum available to power strike, reader(s) and input devices when using a 802.3af PoE connection. If unit is externally powered with a 12 VDC supply, higher current is available.

4. USB compatibility for local configuration

5. 1-door add-on board compatible with compact plastic enclosure

4

6. Requires external power when used in compact plastic enclosure

7. 2-door add-on board is not compatible with compact plastic enclosure

8. When mixing NetAXS-123 and 4-door NetAXS (NetAXS-4) controllers, the NetAXS-123 must be configured as the first panel or gateway

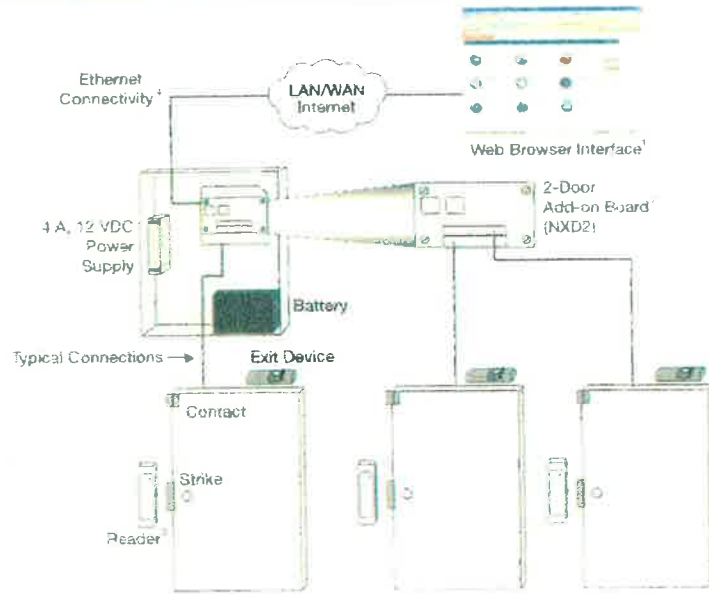
NetAXS™

Web-based Access Control System

SYSTEM OVERVIEW

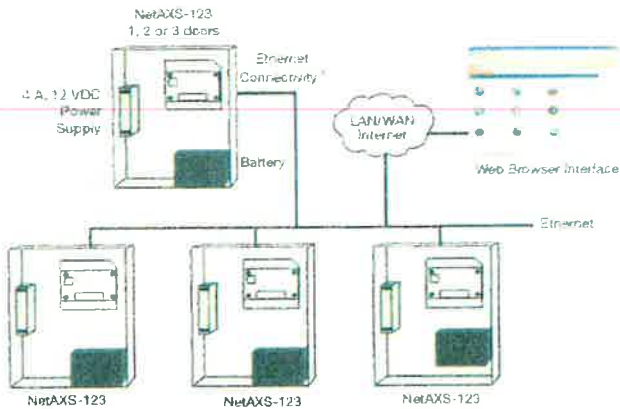
3 DOORS

1 Door Standard Metal Enclosure shown with 2-Door Add-on Board



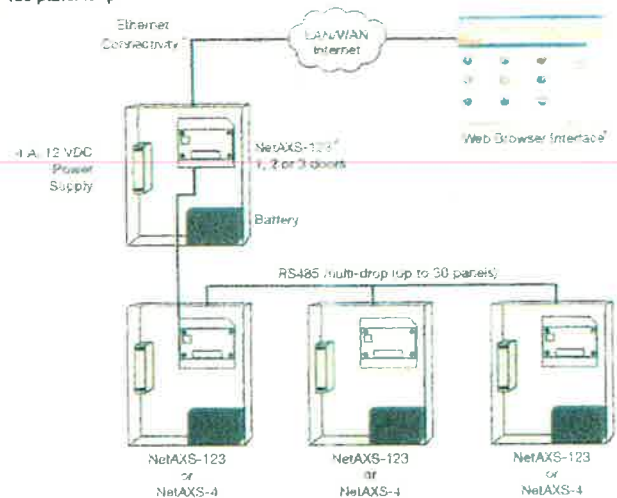
>3 DOORS

Scalable Architecture
Ethernet Virtual Loop



>3 DOORS

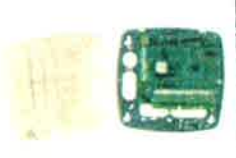



Scalable Architecture
RS-485 panel loop



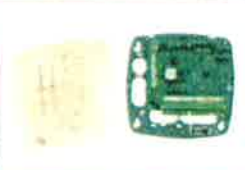


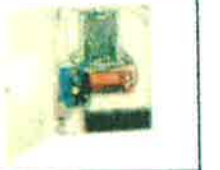
1. Also compatible with WIN-PAK® XE, WIN-PAK SE, WIN-PAK PE and WIN-PAK PRO CS (Managed Access)
2. When using an IN and OUT reader, BOTH readers must have HOLD lines
3. 150 mA, 12 VDC is maximum available to power strike, reader(s) and input devices when using a 802.3af PoE connection. If unit is externally powered with a 12 VDC supply, higher current is available.
4. USB compatibility for local configuration
5. 1-door add-on board compatible with compact plastic enclosure

6. Requires external power when used in compact plastic enclosure
7. 2-door add-on board is not compatible with compact plastic enclosure
8. When mixing NetAXS-123 and 4-door NetAXS (NetAXS-4) controllers, the NetAXS-123 must be configured as the first panel or gateway
9. NetAXS-123 v5.0 or later supports Ethernet Virtual Loop (EVL). NetAXS-4 DOES NOT SUPPORT EVL. Therefore, systems using EVL must use NetAXS-123 panels.

SPECIFICATIONS AND FEATURES

		NetAXS-123		NetAXS-4	
					
		NX1P	NX1MPS	NX4S1	NX4L1
READERS/DOORS	Door/Reader Capability	1 DOOR Controller ^{1,4}	1, 2 or 3 DOOR Controller (NXD1 or NXD2 add-on board is required for 2nd or 3rd door)	Four READER controller	
	Expandability	Expandable up to 93 DOORS (186 readers) per controller loop ^{2,3}		Expandable up to 124 doors (124 readers) per controller loop ^{2,3}	
	Dual Reader Control Capability (IN/OUT Reader per Door)	YES ⁵ - IN and OUT reader capability per door (readers must have HOLD line capability)		---	
	Reader Compatibility	Standard Wiegand protocol supported ABA not supported		Standard Wiegand protocol supported ABA not supported	
OUTPUTS	Number of Outputs	Two SPDT relays (Jumper selectable NO or NC contacts) per door rated at 3 A @ 28 VDC Two open collector outputs (OC) (16 ma, 12 VDC); reader LED (Aux) and reader buzzer (Aux) per door are available.		Eight SPDT, Form C relays rated at 10 A @ 28 VDC Eight open collector outputs (OC) (16 ma, 12 VDC); 4 reader LED (Aux Output) and 4 reader buzzer (Aux Output) are available.	
	Output Expandability	2-door solution has 8 total outputs: 4 relays, 4 OC (requires NXD1 add-on board)	2-door solution has 6 total outputs: 4 relays, 4 OC (requires NXD1 add-on board); 3-door solution has 12 total outputs: 6 relays, 6 OC (requires NXD2 add-on board)	4-door solution expandable to 72 total outputs using a maximum of four (4) NX4OUT relay output boards.	
	Relay Power Source	Selectable: +12 VDC self-powered - OR - 0 to 28 VDC externally supplied source		0 to 28 VDC externally supplied source	+24 VDC self-powered
INPUTS	Number of Inputs	Controller has a total of six configurable four-state supervised input points. (Factory default settings are Status, REX, Reader Tamper A, Reader Tamper B, Power Fail and General Input)		14 configurable four-state supervised input points	
	Input Expandability	2-door solution has a total of 10 inputs (requires NXD1 add-on board)	2-door solution has a total of 10 inputs (requires NXD1 add-on board). 3-door solution has a total of 14 inputs (requires NXD2 add-on board)	4-door solution expandable to 78 total inputs ⁵ using a maximum of two NX4IN relay input boards.	
	Power-Fail and Panel Tamper "Off the Wall" Tamper Capability	Yes Yes	Yes ---	Yes ---	Yes ---
POWER INPUT	Unit Input	Power over Ethernet (PoE) 802.3af or external 12 VDC supply	93 VAC to 264 VAC, 50/60 Hz input provides 12 VDC, 4 A output Yes	120 VAC, 6 A, 60 Hz input for wall transformer provides 16.5 VAC @ 50 VA output ---	115 VAC, 60 Hz, 2 A power supply input provides 24 VDC, 6 A output Yes
	Socket or Hardware AC Input	---	---	---	---
	Control Board Power Input	Power over Ethernet (PoE) or +12 VDC	+12 VDC from included power supply	16.5 VAC from included wall mount transformer	+24 VDC from included power supply
POWER OUTPUT	Power for Reader(s) and Input Devices	450 mA, 12 VDC is available to power strike, reader(s) and input devices when using PoE if higher current is needed, power by external 12 VDC supply	1.15 A per door for locks/strikes, readers and input devices (3.5 A @ 12 VDC total)	600 mA auxiliary current available to power the readers and other devices Locks/strikes must be externally powered	600 mA auxiliary current available to power the readers and other devices 1.1 A per door for locks/strikes (4.4 A @ 24 VDC total)
	Power for Locks/Strikes	---	---	---	---
	Backup Battery System	External ⁶	12 VDC, 7 AH battery	12 VDC, 7 AH battery	Two 12 VDC, 7 AH batteries
ENCLOSURE	Material	High Impact Plastic	Metal	Metal	Metal
	Physical Enclosure Size	7.75"H x 7.75"W x 2.75"D	13.9"H x 11.9"W x 4.7"D	18"H x 15"W x 4.5"D	23.9"H x 17.7"W x 4"D
	Wiring Access Holes/Knockouts	7	19	8	30
INSTALLATION	Removable Terminal Blocks with Color Coded Labels	Yes	Yes	Yes	Yes
	Graphic Wiring Cards/Labels	Yes	Yes	Yes	Yes
	Captive Mounting Hardware	Yes	Yes	---	---
	Cable Shield Termination Points	---	Yes	Yes	Yes
SYSTEM INFORMATION	Real Time Clock	Global Geographic Time Zone Support Daylight Saving Time Support Yes - via NTP network server			
	Clock Synchronization Processor	Freescale Coldfire 32-bit		Freescale Coldfire 32-bit	
	System MTBF (mean time between failures)	250,000 hours		250,000 hours	
	Temperature Ratings	32 to 120°F (0°C to 49°C) Operating -67 to 185°F (-55°C to +85°C) Storage			
CERTIFICATIONS AND APPROVALS	CE and FCC compliant UL-294 listing		CE and FCC compliant UL-294 listing		FCC compliant UL-294 listing

SPECIFICATIONS AND FEATURES

		NetAXS-123		NetAXS-4	
					
		NX1P	NX1MPS	NX4S1	NX4L1
LEDS	Status LEDs	12 LEDs total (12V power, PoE, over current, Ethernet, RS485, reader(s), door state, run, relay status)		19 LEDs total (Power, system run, Ethernet, RS232, loop, downstream, readers, relay status)	
COMMS	Built-in Communication Options I/O Expansion Module Connectivity Controller Loop Capability	Ethernet, USB ⁶ , RS485 Use RS485 port to connect a maximum of 6 downstream I/O modules (4 output and 2 input) Total of 16(EVL)/31(RS485) panels in a loop ^{2,3}		Ethernet, RS485, RS232 Use RS485 port to connect a maximum of 6 downstream I/O modules (4 output and 2 input) Total of 31 panels in a loop ^{2,3}	
HOST	Software Compatibility ³	WIN-PAK XE/SE/PE/CS – See Note 9 below			
	NetAXS-123 as Gateway Panel NetAXS-4 as Gateway Panel using PCI3 Converter using N-485-PCI-2 Converter	Supported downstream panels include NetAXS-123 and NetAXS-4 See notes 2 & 3. Currently supported downstream panels include NetAXS-4 only See notes 2 & 3. Supported downstream panels include NetAXS-123, NetAXS-4, N-1000 family and NS2 Not compatible with NetAXS-123 or NetAXS			
DOOR CONTROL	Door Control Modes	Card only, card and PIN, card or PIN, PIN only, lockdown, disabled, supervisor, escort, limited use card, expire on date, first card rule, snow day rule, time zone toggle, anti-passback, duress ⁵			
	Interlocks for custom actions Anti-Passback Capability	Yes	Yes	Yes	Yes
CARDS and DATABASE	Card and Event Buffer Capacity	10,000 card capacity, 25,000 event capacity			
	Firmware Revision	On-board flash memory for field firmware revision updates and feature expansion			
	Offline Database backup available	Card and configuration databases			
	Export Capabilities	Card database, alarms and events (CSV format) ⁵			
	Number of Card Formats	128 unique card formats can be supported ⁵			
	Site Codes	3			
	Maximum Card Format Size	75-bit (maximum card # = 64-bits) ^{5,7}			
	Time Zones Access Levels Holidays	127 ⁵ 128 255 ⁵			
REPORTING and ANALYSIS	Integrated basic reports	Yes	Yes	Yes	Yes
	Import/export of card database	Yes	Yes	Yes	Yes
	Alarms and events can be exported and saved in offline storage	Yes	Yes	Yes	Yes
EMBEDDED WEB SERVER	Supported Browsers	Internet Explorer and Mozilla Firefox			
	Icon Driven Landing Page	Yes	Yes	--	--
	Web Browser Control Web Server Support Secure Web Browsing Dynamic Screen Refresh Multiple user connections	Full control monitor and view live events manually control doors and readers All access control functions SSL and SHA-1 secure socket layer encryption Yes			
		Yes	Yes	Yes	Yes
WORLDWIDE ACCEPTABILITY	Global Languages Supported	English, Italian, French, Dutch, Spanish, Czech, Simplified Chinese and Arabic		English, Italian, French, Dutch, Spanish, Czech and Simplified Chinese	
	Printed Documentation	English, Italian, French, Dutch, Spanish, Czech, Simplified Chinese and Arabic		English	
	Quick Start Guides	Yes	Yes	--	--
	Full User and Installation Guides	on product CD	on product CD	Printed	Printed
	Multi-Language Basic Installation Guides	Yes	Yes	--	--
	User Translated Files	Customer ability to export, import, modify, create and add language files.Can be selected for use with unique login accounts.			
	Universal Power Supply Input	Power over Ethernet (PoE) 802.3af	Yes 93-264 VAC, 50/60 Hz input	--	--

- A second door may be added with a NXD1 add-on board however, PoE power restrictions apply (see footnote 4).
- RS-485 panel loop: A total of 31 NetAXS-123 and NetAXS-4 panels may be combined in a controller loop for a maximum of 123 doors. Ethernet Virtual Loop (EVL): A total of 16 NetAXS-123 panels may be combined in a controller loop for a maximum of up to 48 doors. NetAXS-4 panels CANNOT be used with an EVL.
- When mixing NetAXS-123 and NetAXS-4 controllers, NetAXS-123 must be the gateway Panel and the panel loop must be RS-485.
- 450 mA, 12 VDC is maximum current available to power strike, reader(s) and input devices when using a 802.3af PoE connection. If unit is externally powered, higher current is available.
- When using WIN-PAK software, this feature may have limitations or not exist.

- An external UPS is required to power the PoE power source for battery backup.
- Suitable for handling the 75-bit transparent card format of PIN, TWIC and FRAC cards.
- USB port for setup and troubleshooting.
- WIN-PAK software compatibility for NetAXS
 - All NetAXS versions programmed as an N1000:
 - WIN-PAK SE, WIN-PAK PE, WIN-PAK PRO CS, WIN-PAK CS 4.1
 - WIN-PAK 2005, WIN-PAK PRO 2005, WIN-PAK 2.0 Release 4
 - NetAXS v3.x: WIN-PAK v3.0-3.2 (Builds 670,14 or greater) or WIN-PAK CS 4.2 (Build 1017.33 or greater)
 - NetAXS v4.0 or greater: WIN-PAK v3.3 (Build 670.21) or greater or WIN-PAK CS 4.2 (Build 1017.33) or greater

NetAXS™

Web-based Access Control System

ORDERING

Part Number	Description
NetAXS-123	
1 Door Solutions	
NX1P	NetAXS-123: One door, compact (plastic) enclosure - PoE or externally powered
NX1MPS	NetAXS-123: One door, standard (metal) enclosure with tamper switch and terminal block. Includes 4 A, 12 VDC output/100-240 VAC input power supply and 12V, 7 AH battery
Add-on Boards (For 2 and 3 door solutions)	
NXD1*	NetAXS-123: One door add-on board (Adds 1 door to your existing 1-door system = 2 doors)
NXD2**	NetAXS-123: Two door add-on board (Adds 2 doors to your existing 1-door system = 3 doors)
NetAXS-123 Components & Accessories	
NXC1	NetAXS-123 - Control Board only
NetAXS-123 Access Control Starter Kits with Readers	
NX1P10	NetAXS-123: Includes NX1P One door compact (plastic) enclosure and (1) OP10HONR mini-multron proximity reader
NX1MPS10	NetAXS-123: Includes NX1MPS One door, standard (metal) enclosure with power supply and battery and (1) OP10HONR mini-multron proximity reader
NXD1OP10	NetAXS-123: Includes NXD1 One door add-on and (1) OP10HONR mini multron proximity reader (Adds 1 door to your existing 1-door system = 2 doors)
NXD2OP10	NetAXS-123: Includes NXD2 Two door add-on and (2) OP10HONR mini-multron proximity readers (Adds 2 doors to your existing 1-door system = 3 doors)
NetAXS-4	
NetAXS-4 Web Based Access Control Panels	
NX4S1	NetAXS-4: 4 Door Control Panel (Standard Enclosure)
NX4L1	NetAXS-4: Pre-wired 4 Door Control Panel (Deluxe Enclosure)
NX4PCB	NetAXS-4: NetAXS PCB Board with Manual and (4) Surge Suppressors
NetAXS-4 Access Control Starter Kits with Readers	
WPNX4L30	NetAXS-4: IP Ready Access Starter Kit with WIN-PAK, NX4S1 Deluxe Standard Enclosure Option and (4) OP30HONR Multron Proximity Readers
WPNX4S30	NetAXS-4: IP Ready Access Starter Kit with WIN-PAK, NX4S1 Standard Enclosure Option and (4) OP30HONR Multron Proximity Readers
NX4OP30S	NetAXS-4: NetAXS with Standard Enclosure - Standalone Web-based Access 4 Door Kit with (4) OP30HONR
NX4OP40S	NetAXS-4: NetAXS with Standard Enclosure - Standalone Web-based Access 4 Door Kit with (4) OP40HONR
NX4OP30L	NetAXS-4: NetAXS with Deluxe Enclosure - Standalone Web-based Access 4 Door Kit with (4) OP30HONR
NX4OP40L	NetAXS-4: NetAXS with Deluxe Enclosure - Standalone Web-based Access 4 Door Kit with (4) OP40HONR
NetAXS Accessories	
NX4IN	NetAXS Input Board - 32 inputs per board, Connect 2 per panel, Total 64 inputs
NX4OUT	NetAXS Output Board - 16 relays per board, Connect 4 per panel, Total 64 relays
External power adapter required for NX4IN and NX4OUT	Input: 100-240VAC, 1.3A, 50-60Hz Output: 24 VDC, 2.3A, 55 Watts
NXIOENCKT	Double board enclosure for NX4IN, NX4OUT

* Requires external power when used in compact plastic enclosure

** 2-door add-on board is not compatible with compact plastic enclosure

For more information:

www.honeywell.com/security

Automation and Control Solutions

Honeywell Security Products Americas

2700 Blankenbaker Pkwy, Suite 150

Louisville, KY 40299

1.800.323.4576

www.honeywell.com

Honeywell

LNXS123D

September 2014

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DanF

From: Michael Bove <mrbove2003@yahoo.com>
Sent: Friday, February 13, 2015 6:03 PM
To: Dan Flannigan
Subject: Fw: equipment list

From: Sjoerd Broeks <sbroeks@med-canna.com>;
To: Michael Bove <mrbove2003@yahoo.com>;
Subject: equipment list
Sent: Sat, Feb 14, 2015 1:03:07 AM

http://www.cannafilters.com/max_fan_8_12.html
room

Thats the link to the exhaust fan, 1 per bloom

http://uvonair.com/pdf/uvonair_cd.pdf
using the CD1200 1 per bloom room

Thats is the inline Uvonair ozone system, we are

<http://www.pbr-shredder.com/about/charcoal-filter-pipeprun.aspx>
room. each filter is 950 CFM The part number is 701025

Thats the charcoal filter x2 for each bloom

I will find the policies and procedures manual and send it to you asap

Sjoerd Broeks
800.556.9892 x701
sbroeks@med-canna.com



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Phresh Filter Blueprint



- Aluminum tops & bases for reduced weight
Half the weight of competitive filters
- 46mm (1.8") RC-48 activated, certified virgin carbon bed
- Machine packed carbon means more carbon & less movement
- Cone shaped internal base for optimum air flow
- Sealed, bagged, boxed & labeled directly after being manufactured for optimum life span handling & presentation
- 51% open air custom mesh
- Unique "Anti Air Bypass" System
- Large selection of sizes available to fit any application

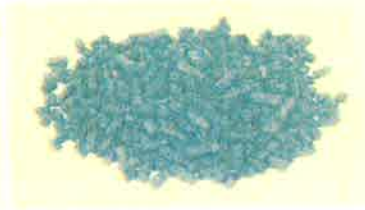
What Size Filter Do You Need?



NOTE: A high-quality custom fit pre-filter is included with every Phresh® Filter



Phresh® Filter RC 48 Australian Carbon



Competitive Filter Carbon

UVONAIR CD

Éliminateur d'odeurs

Modèles :

CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

uvonair CD

Odor Eliminator
Eliminador de olores
Éliminateur d'odeurs

Modelos/ Modelos/ Modèles

CD-800

CD-1000-1

CD-1000-2

CD-1200

Manufactured in Canada by
Fabricado en Canadá por:
Fabriqué au Canada par

Ozone Environmental Technologies

361 Rowntree Dairy Road, Unit 4
Woodbridge, Ontario, Canada L4L 8H1
Tel: 1-800-765-2098

Website: www.uvonair.com

Système d'ozone en conduit

Considérations pour l'installation:

Veuillez lire toutes les directives avant de procéder à l'installation.

- 1) Les générateurs d'ozone Uvonair CD sont conçus pour traiter les odeurs dans les conduits d'aération pendant que l'air est évacué. Le modèle CD-800 doit être installé dans un conduit de 8 po (20 cm). Les deux CD-1000 doivent être installés dans un conduit de 10 po (25 cm). Le modèle CD-1200 doit être installé dans un conduit de 12 po (30 cm). Les adaptateurs de conduits peuvent être utilisés pour l'installation dans des conduits de dimensions différentes. L'installation d'une unité plus petite dans un conduit plus grand peut réduire la circulation d'air.
- 2) Dans la plupart des cas, le modèle CD-800 et le modèle CD-1-1000 traitera toutes les odeurs évacuées hors des pièces dont la superficie ne dépasse pas 20 000 pi² (600 m²). Le modèle CD-2-1000 traitera toutes les odeurs évacuées hors des pièces dont la superficie ne dépasse pas 40 000 pi² (1200 m²). Le modèle CD-1200, dont le débit est considérablement plus élevé, traitera toutes les odeurs évacuées hors des pièces dont la superficie ne dépasse pas 100 000 pi² (3000 m²). Pour les odeurs particulièrement fortes, il est préférable d'utiliser le modèle ayant le débit d'air le plus élevé.
- 3) Dans la mesure du possible, placez le générateur Uvonair à un minimum de 15 pi (5 m) de l'extrémité du conduit d'échappement afin d'assurer un temps de réaction suffisant des odeurs.
- 4) Lorsque vous utilisez un ventilateur placez toujours l'ozoniseur du côté sortie ventilateur.

Exigences en matière d'électricité:

Installez conformément aux normes de sécurité sur l'électricité de votre localité. Fournissez une alimentation électrique de 110 volts 60 Hz au générateur d'ozone Uvonair CD synchronisé avec le ventilateur. Comme mesure de sécurité, l'unité Uvonair CD doit fonctionner en tandem avec le ventilateur. L'unité Uvonair CD est munie d'un cordon de 6 pi (2 m) avec une prise à trois broches mise à la terre et d'un fusible de protection contre les surtensions.

Installation:

1. Fixez les deux supports fournis au haut de l'unité à l'aide des quatre vis déjà en place.

2. Fermez le ventilateur et assurez-vous que l'unité Uvonair n'est pas branchée.

3. **Pour l'installation dans un conduit de métal :**

- a) Il sera nécessaire d'enlever une section de conduit d'environ 11,5 po (29 cm) à l'endroit où l'unité doit être installée. Consultez un technicien en ventilation pour connaître la longueur précise du conduit puisque celle-ci peut varier selon l'installation du conduit existant et la possibilité de l'adapter aux fins de l'insertion du générateur Uvonair CD.
- b) Soutenez le poids de l'unité en suspendant des câbles fixés sur les supports à un crochet ou à un clou enfoncé dans les poutrelles supérieures. Procédez au réglage final après l'installation finale.
- c) Insérez l'unité dans les conduits existants jusqu'aux arêtes de montage et rendez l'installation hermétique en utilisant du ruban adhésif en toile ou des crampons de serrage.

Pour l'installation à l'aide d'un conduit flexible

- a) Enlevez une section du conduit de 36 po (91 cm).
- b) Coupez 2 morceaux de 17 po (43 cm) du conduit flexible de 8 po (20 cm) de diamètre.
- c) Fixez-les de chaque côté du générateur Uvonair et immobilisez le réseau de gaines en le rendant hermétique à l'aide de ruban adhésif en toile ou de crampons de serrage.

Fonctionnement:

Les modèles Uvonair CD comportent deux réglages de débit, «High» (élevé) et «Low» (bas) afin que vous puissiez régler le niveau des odeurs. Le modèle CD-1200 produira des niveaux d'ozone très élevés lorsqu'il est réglé à «High». Déterminez le niveau d'ozone requis en surveillant le niveau d'odeur de l'air évacué. Les niveaux peuvent varier au cours du cycle croissant.

Ces unités n'ont pas besoin d'entretien.

Garantie et politique de réparation:

- Les unités Uvonair CD sont garanties contre tout défaut de matériau et de fabrication pour une durée d'un an à partir de la date d'achat. Elles sont garanties seulement pour l'usage décrit. Conservez votre reçu d'achat aux fins de réclamation au titre de la garantie.
- Appelez le fabricant au 1 800 765-2098 pour obtenir le numéro d'autorisation de retour de marchandises ainsi que les instructions d'expédition.
 - Les envois doivent être préparés et comprendre le numéro d'autorisation de retour des marchandises.
 - Les produits garantis seront réparés sans frais et retournés port payé dans les 24 heures suivant la réception.

Mise en garde : Ce modèle est recommandé aux fins d'utilisation commerciale. Lorsque les concentrations sont supérieures à 0,05 ppm, l'ozone peut nuire à la santé. L'ozone comporte une demi-vie de ~ 30 minutes, il se dissiperait donc et ne s'accumulerait pas.

Modelos: CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

Eliminador de olores
Ozono por efecto corona

UVONAIR CD

Modelos: CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

Odor Eliminator
Ozone by Corona Discharge

UVONAIR CD

In-Duct Ozone System

Installation considerations:

Please read all instructions prior to installation.

1. Uvonaair CD ozone generators are engineered to treat odors in ventilation ducts as air is being exhausted. Model CD 800 is for installation into 8" (20 cm) ducts. Both model CD-1000s are for 10" (25 cm) ducts. Model CD-1200 is for 12" (30 cm) ducts. Duct adapters may be used for installation into other size ducts. Installing the smaller unit into larger ducts may restrict airflow.
2. Under most circumstances Model CD-800 and CD-1000-1 will treat all odors being exhausted from rooms up to 20,000 cu ft. (600 m³). Model CD-1000-2 will treat all odors being exhausted from rooms up to 40,000 cu. ft. (1200 m³).
3. Model CD-1200, with its significantly higher output, will treat all odors being exhausted from rooms up to 100,000 cu. ft. (3000 m³). For extreme odors, it is better to use the higher output unit.
4. Position the Uvonaair generator if possible a minimum of 15 ft. (5 m) from the end of the exhaust duct to ensure adequate reaction time with odors. We recommend a minimum of 15 ft. (5m) of ductwork.
5. When using a fan, always put the ozonator on the output side of the fan.

Electrical requirements:

Install in accordance to local electrical standards. Provide 110V 60Hz electrical power to the Uvonaair CD ozone generator synchronized with the ventilation fan. As a safety feature, Uvonaair CD unit must be working in tandem with the ventilation exhaust fan. Uvonaair CD is equipped with a 6 ft. (2 m) cord with a grounded three-prong plug and a surge protection fuse.

Installation:

1. Attach the two supplied support brackets to the top of the unit using the four screws already set in place.
2. Turn off the ventilation fan and ensure the Uvonaair unit is not plugged in.
3. **For installation into metal duct:**
 - a) It will be necessary to remove an approximate 11.5" (29 cm) section of duct where the unit is to be installed, and its ability to adjust for the insertion of the Uvonaair CD generator.
 - b) Consult a ventilation professional for the specific length as this may vary depending on the existing duct setup above. Make final adjustment after final installation.
 - c) Support the weight of the unit with duct-hanging wire from the support bracket to a hook or nail on the joists above. Make final adjustment after final installation.
 - d) Insert the unit into the existing ducts up to mounting ridges and make it airtight using duct tape or clamps.

For installation using flex duct as an option:

- a) Remove a 36" (91cm) section of duct.
- b) Cut two 17" (43cm) pieces of flex 8" (20cm) diameter duct.
- c) Attach to each side of the Uvonaair generator and then secure to the ductwork making it airtight with duct tape or clamps

Operations:

Both Uvonaair CD models have High and Low output settings so you can adjust to the odor level. Model CD-1200 will produce very high levels of ozone at its high setting. Determine the ozone level required by monitoring the exhaust air for odors. Levels may vary throughout the growing cycle.

No maintenance is required of these units.

Warranty & Repair Policy:

Uvonaair CD units are warranted for one year from the time of purchase against any defects in material and manufacturing. It is warranted only for the application described. Keep your purchase receipt for warranty claim.

- Call the manufacturer at 1 800 765 2098 for the RGA# (Returned Goods Authorization Number) and shipping instructions
- Shipments must be prepaid and accompanied with the RGA#.
- Products qualifying for warranty will be repaired at no charge and shipped back prepaid within 24 hours of receipt.

Warning: Recommended for commercial use. Ozone, in concentrations above 05 PPM, may be injurious to health. Ozone has a half-life of ~ 30 minutes, therefore it will dissipate and not accumulate.

Sistema de ozono en conductos

Factores a tener en cuenta en la instalación:

Sírvase leer todas las instrucciones antes de la instalación.

1. Los generadores de ozono Uvonaair CD son diseñados para tratar los olores en los conductos de ventilación a medida que se expulsa el aire. El modelo CD-800 se instala en conductos de 8" (20 cm). Ambos modelos CD-1000 por instala en conductos de 10" (25 cm). El modelo CD-1200 es para conductos de 12" (30 cm). Se puede instalar en conductos de otros tamaños con la ayuda de adaptadores. La instalación de una unidad más pequeña en conductos más grandes puede restringir la circulación de aire.
2. En la mayoría de los casos, los modelos CD-800 y CD-1000-1 puede tratar todos los olores que se expulsan de las habitaciones hasta de 20,000 pies cúbicos (600 m³). El modelo CD-1000-2 puede tratar todos los olores que se expulsan de las habitaciones hasta de 40,000 pies cúbicos (1,200 m³). El modelo CD-1200, con su capacidad considerablemente mayor, puede tratar todos los olores de habitaciones hasta de 100,000 pies cúbicos (3,000 m³). Para olores sumamente fuertes es mejor usar la unidad de mayor capacidad.
3. Si es posible, ubique el generador Uvonaair a una distancia mínima de 15 pies (5 m) del extremo del conducto de escape para garantizar un tiempo de reacción adecuado a los olores.
4. Si utilice un ventilador, ubique siempre el generador del lado de la salida del ventilador.

Requisitos eléctricos:

La instalación debe realizarse según las normas eléctricas locales. El generador de ozono Uvonaair CD debe conectarse, sincronizado con el ventilador, a corriente eléctrica de 110V 60Hz. Como característica de seguridad, la corriente a la unidad Uvonaair CD debe apagarse cuando se apaga el ventilador. El generador Uvonaair CD viene equipado con un cordón de 6 pies (2 m), con un enchufe de 3 patas conectado a tierra y un fusible de protección contra la sobretensión.

Instalación:

1. Coloque las dos escaradas de soporte que vienen con la unidad en la parte superior de esta, utilizando los cuatro tornillos ya instalados en su lugar.
2. Apegue al ventilador y cerciórese de que la unidad Uvonaair no este conectada.
3. **Para la instalación en un conducto metálico:**
 - a) Es necesario recortar un tramo de aproximadamente 11.5" (29 cm) del conducto en el lugar donde se va a instalar la unidad. Consulte con un técnico en ventilación sobre la longitud específica, pues esta puede variar, dependiendo de la instalación del conducto existente y de la posibilidad de alustario para poder introducirle el generador Uvonaair CD.
 - b) Soporte el peso de la unidad con alambres para colgar conductos, desde un gancho o clavo en las vigas de la parte superior al soporte. Una vez instalada, haga los ajustes necesarios.
 - c) Introduzca la unidad en los conductos existentes hasta los rebordes de montaje y selle herméticamente con cinta adhesiva para conductos o con abrazaderas.

Instalación opcional utilizando conductos flexibles:

- a) Recorte un tramo de 36" (91 cm) del conducto.
- b) Corte dos piezas de 17" (43 cm) de conducto flexible de 8" (20 cm) de diámetro.
- c) Colóquelos a cada lado del generador Uvonaair y luego asegúrelos al sistema de conductos y selle herméticamente con cinta adhesiva para conductos o con abrazaderas.

Funcionamiento:

Los modelos Uvonaair CD tienen graduaciones de salida alta y baja de manera que puede graduarlas según el nivel de los olores. El modelo CD-1200 produce, en la graduación más elevada, niveles muy altos de ozono. Para determinar el nivel de ozono necesario controle el nivel de olores del aire de escape. Este puede variar durante el ciclo creciente. Estas unidades no requieren de servicio de mantenimiento.

Garantía y política sobre reparaciones:

Las unidades Uvonaair CD tienen una garantía de un año, desde la fecha de compra, contra defectos de material y de fabricación. La garantía sólo es válida para el uso descrito. Conserve el comprobante de compra para efectos de las reclamaciones de garantía.

- Llame al fabricante al 1 800 765 2098 para solicitar el número RGA (número de autorización para la devolución de mercancías) e instrucciones para el envío.
- Los envíos deben ser con flete pagado y deben incluir el número RGA.
- Los aparatos cuya reparación esté cubierta por la garantía, serán reparados sin cargo y devueltos con el flete pagado dentro de las 24 horas de haberlos recibido.

ADVERTENCIA

Se recomienda para usos comerciales. El ozono, en concentraciones superiores a las .05 PPM, pudiera ser dañino para la salud. El ozono tiene una vida media de ~ 30 minutos, en consecuencia se disipará y nunca se llega a acumular. Nunca mire la luz directamente. Una exposición prolongada a la luz U.V. puede causar daños a los ojos.



Max-Fan Home

- 6" Max
- 8" Max
- 10" Max
- 12" Max
- 14" Max
- 16" Max
- 18" Max
- 20" Max

Max-Fan™ Series

The Max Fan Saves Energy!

- Extremely energy efficient!
- Lower Lifetime Cost!
- Cost of Energy is 70-90% of life time cost!

Save on shipping costs!

The Max-Fan Is Quiet!

- Very High Aerodynamic Efficiency!
- Optimized Mixed Flow is quieter than other fans of the same size!

The Max-Fan Saves Space!

- Small Airtight
- Easy Installation!
- Light Weight & Compact

FAN MODEL	CFM	RPM	MAX WATTS	MAX AMPS	SONES	DUCT DIA.	LENGTH	BLADE DESIGN	HOUSING	INLE OUTL
8"	667	3250	179	1.5		3"	8 7/8"	Mixed Flow	Plastic	8"
12"	1708	3374	489	4.1		12"	12 1/8"	Mixed Flow	Galvanized	12"



Performance Data

----- in.

wg	FAN MODEL	0"	.125"	.25"	.375"	.5"	.75"	1.0"	1.25"	1.5"
CFM	8"	667	650	630	610	585	520	420	150	100
CFM	12"	1708	1680	1655	1630	1595	1530	1460	1380	1300

To Speed control the 12" Max Fan the Can Trol is required to avoid growing and overheati
All fans should not be reduced more than 50% as this results in the fans overheating.



Performance certified is for installation type D - Ducted inlet.
Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories)

The sound ratings shown are for loudness values in spherical sones at 5ft. (1.5m) in a spherical free field calculated per Annex B of AMCA 311. Values shown are for installation Type D : Duct inlet spherical sone levels. Ratings do not include the effect of duct end correction. All sone valu shown are calculated at 0.1" Static Pressure in inches W.G.).

* Speed (RPM) shown is nominal. Performance is based on actual speed of test.





A Division of 5SEAT Investments, LLC

March 10, 2015

Carson City, Nevada
Community Planning Department
Planning Division
108 E. Proctor Street
Carson City, NV 89701
Attn: Susan Dorr Pansky, AICP Planning Manager

Re; File# SUP 15-013 – MME- 8001 Hwy 50 East- 5SEAT Investments, LLC- MME Identifier #CO54

Dear Ms. Pansky,
Per your request, the following information describes the basic operational procedures for the above SUP project:

The MME production operation is based on the use of cuttings, clippings and miscellaneous cannabis plant matter received from our MME cultivation facilities. During each bi-weekly production cycle, an approximate total of 200 ounces of this plant matter will be converting to a master concentrate of destearinated cannabis resin (DCR) with the use of a 2000+ psi Co2 extraction unit only.

It is estimated that the production facility will produce 30 ounces of DCR per production cycle.

After quality control approvals, the DCR will be encapsulated into MME approved disbursement cartridges. These cartridges will then be packaged in State of Nevada approved and industry certified child proof containers for shipment to approved MME dispensaries pursuant to NAC 453A.416.

All DCR products produced within this facility will be disbursed to qualified recipients through a State of Nevada, Department of Health and Human Services, Division of Public and Behavioral approved MME dispensary pursuant to NRS and NAC 453A.

Please contact me if you need additional information,
Regards,

Dan Flannagan
Designated Agent for 5SEAT Investments, LLC
(775) 376-0392



**SPECIAL USE PERMIT
APPLICATION**

For

**5SEAT INVESTMENTS, LLC
MME PRODUCTION FACILITY**

Prepared By:



Manhard
CONSULTING

3476 Executive Point Way, Suite 12
Carson City, Nevada 89706

Prepared for:

5Seat Investments, LLC
275 Hill Street, Suite 290
Reno, NV 89501

FEBRUARY 2015



Local Government
Planning
Water/Wastewater Management
Water/Wastewater Treatment
Capital Construction
Transportation Management
Development/Urban Form
Landmarks/Heritage
Housing

February 12, 2015

Susan Dorr-Pansky, AICP
Planning Manager
108 East Proctor Street
Carson City, NV 89701

Re: 5SEAT Investments, LLC Special Use Permit Requests for two (2) MME Facilities

Dear Susan,

On Behalf of 5SEAT Investments, Manhard Consulting appreciates your consideration of the enclosed application requests. The proposed project site consists of one (1) parcel (APN: 008-611-39) that is +/- 5.13 acres and is located at 8001 Highway 50 East in Carson City, NV.

The enclosed applications are requesting two (2) separate Special Use Permits to allow for two (2) Medical Marijuana Establishments as required by Carson City Municipal 18.04.150.

The First Special Use Permit is being requested to establish a Medical Marijuana Cultivation Facility utilizing the existing 3,108 square foot building on APN: 008-611-39.

A second Special Use Permit is being request to establish a Medical Marijuana Production Facility utilizing a new 1,552 square foot addition to the existing building located on APN: 008-611-39.

If you have any questions, or require any additional information, please feel free to contact me directly.

Sincerely,
Manhard Consulting

A handwritten signature in blue ink that reads "Baker".

Christopher Baker, LEED AP
Planning Manager

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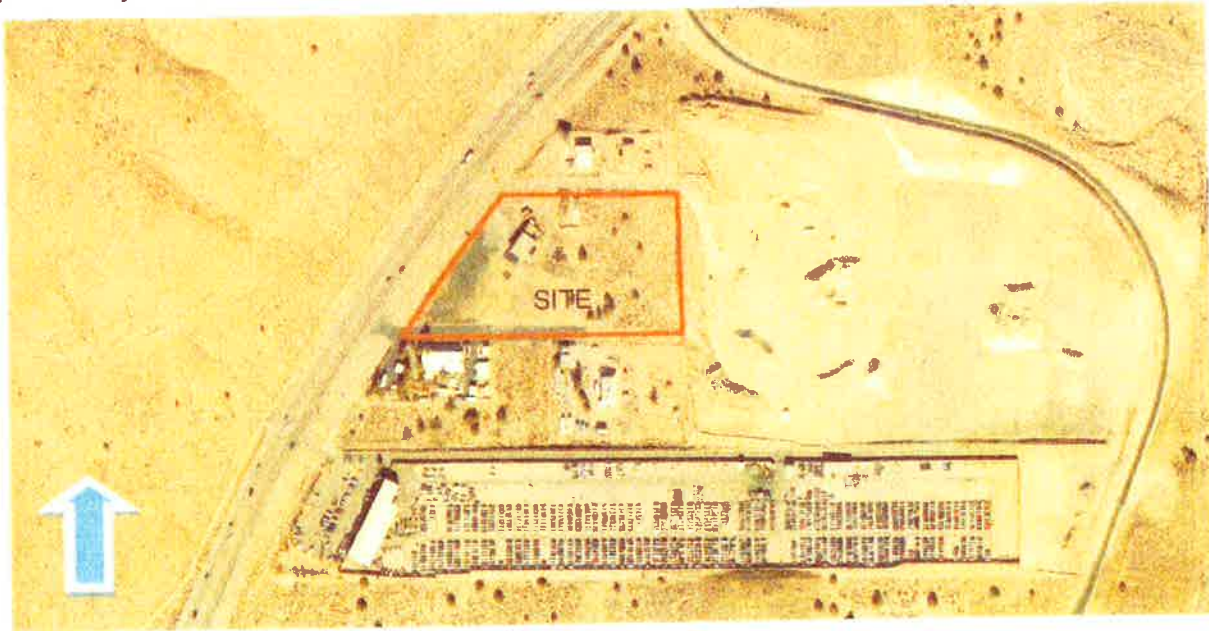
APPEDICES

Applications	Appendix A
Site Plan	Appendix B
Architectural Plans	Appendix C
Supporting Information	Appendix D

PROJECT LOCATION

The proposed project site consists of one (1) parcel (APN: 008-611-39) that is +/- 5.13 acres and is located at 8001 Highway 50 East in Carson City, NV. The proposed site is in accordance with Carson City Municipal Code 108.04.150 which states, "a Medical Marijuana Cultivation, Production or Laboratory may be located in those areas zoned General Industrial (GI), east of the I-580 freeway and north of the boundary of Sections 13 through 18 of Township 15N, Range 20E.

Figure 1: Project Location



EXISTING SITE CONDITIONS

The proposed project site has a current master plan designation of Mixed Use Commercial (MUC) and a current zoning designation of General Industrial (GI). The property is currently occupied by Carson Used Tire & Wheel and contains an existing building that is 3,108 square feet. The proposed facilities will replace the existing land use. The access for the parcel is directly from Highway 50 East. The existing building and business are generally only using the front (western) half of the parcel, with the eastern portion of the parcel being vacant with native vegetation. This parcel is designated by FEMA as being in a Zone X area which is an area determined to be outside the 0.2% annual chance floodplain.

EXISTING MASTER PLAN & ZONING DESIGNATIONS

Figure 2: Existing Master Plan Designation (<http://ccapps.org/publicqis/>)

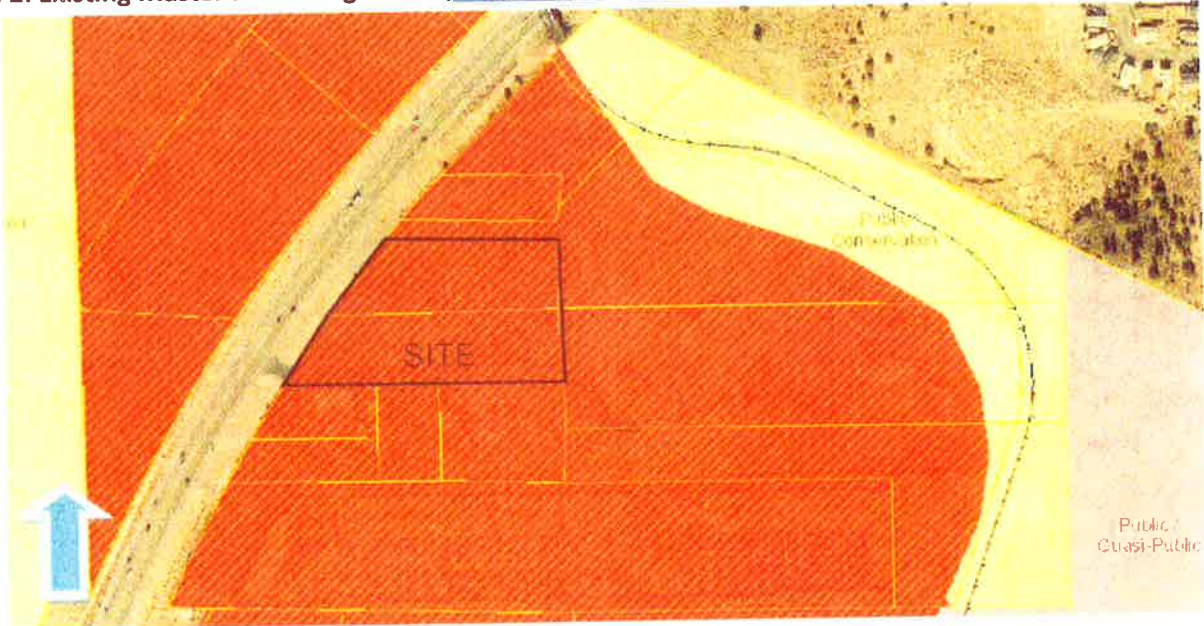


Figure 3: Existing Zoning Designation



SURROUNDING PROPERTIES

Table 1: Surrounding Property Designations

Location	Master Plan Designation	Zoning Designation	Current Land Use
North	Mixed Use Commercial	General Industrial (GI)	Commercial Business
South	Mixed Use Commercial	General Industrial (GI)	Commercial Business, Vacant
East	Mixed Use Commercial	General Industrial (GI)	Commercial Business
West	Mixed Use Commercial	General Commercial (GC)	Highway 50, Vacant

APPLICATION REQUEST

Two (2) separate Special Use Permit applications are being requested to allow for two (2) Medical Marijuana Establishments as required by Carson City Municipal 18.04.150.

The First Special Use Permit is being requested to establish a Medical Marijuana Cultivation Facility utilizing the existing 3,108 square foot building on APN: 008-611-39.

A second Special Use Permit is being request to establish a Medical Marijuana Production Facility utilizing a new 1,552 square foot addition to the existing building located on APN: 008-611-39.

PROJECT DESCRIPTION

The proposed project includes a total of two (2) Medical Marijuana Establishments (MME's), included in two (2) separate phases, and proposed to be established under two (2) separate Special Use Permits.

Phase 1 includes exterior and interior renovations of an existing building to accommodate a Medical Marijuana Cultivation Facility. As detailed in the attached floor plans, the cultivation facility will include 3,108 square feet comprised of three (3) bloom chambers, a vegetation room, drying room, a trimming and packaging area, one (1) unisex bathroom, a vault and associated staff and office space. Also included in the interior floor plan is an air lock room for ingress and egress.

The cultivation facility will grow Medical Marijuana for distribution, no sales will occur on site. It is anticipated that the cultivation process will include both hydroponic and soil base systems. More detailed information as to the technical processes of the cultivation facility can be provided as a supplement to this application request if necessary.

Also included as part of Phase 1 are site improvements including new paved access of Highway 50, parking improvements, landscaping, fencing, security improvements including lighting (In accordance State of Nevada and Carson City Codes) and septic and water upgrades as necessary to accommodate the proposed facility.

Phase 2, which is proposed under a separate special use permit request, includes the construction of a new 1,552 square feet addition to the existing 3,108 square foot building. This addition will house a Medical Marijuana Production Facility comprised of a processing area, including a commercial kitchen, freezer, cooler, sink, stove, a water treatment room, storage and clean up room, one (1) unisex bathroom, a vault and loading and receiving area.

The production facility will focus on extraction of cannabinoids from the marijuana flower and convert the cannabinoids into a concentrated form to be used in other forms including edibles. More detailed information on the production and extraction methodology is provided as part of the Appendix.

All business activities completed at the proposed facility including both the cultivation and production processes will be conducted solely within the building.

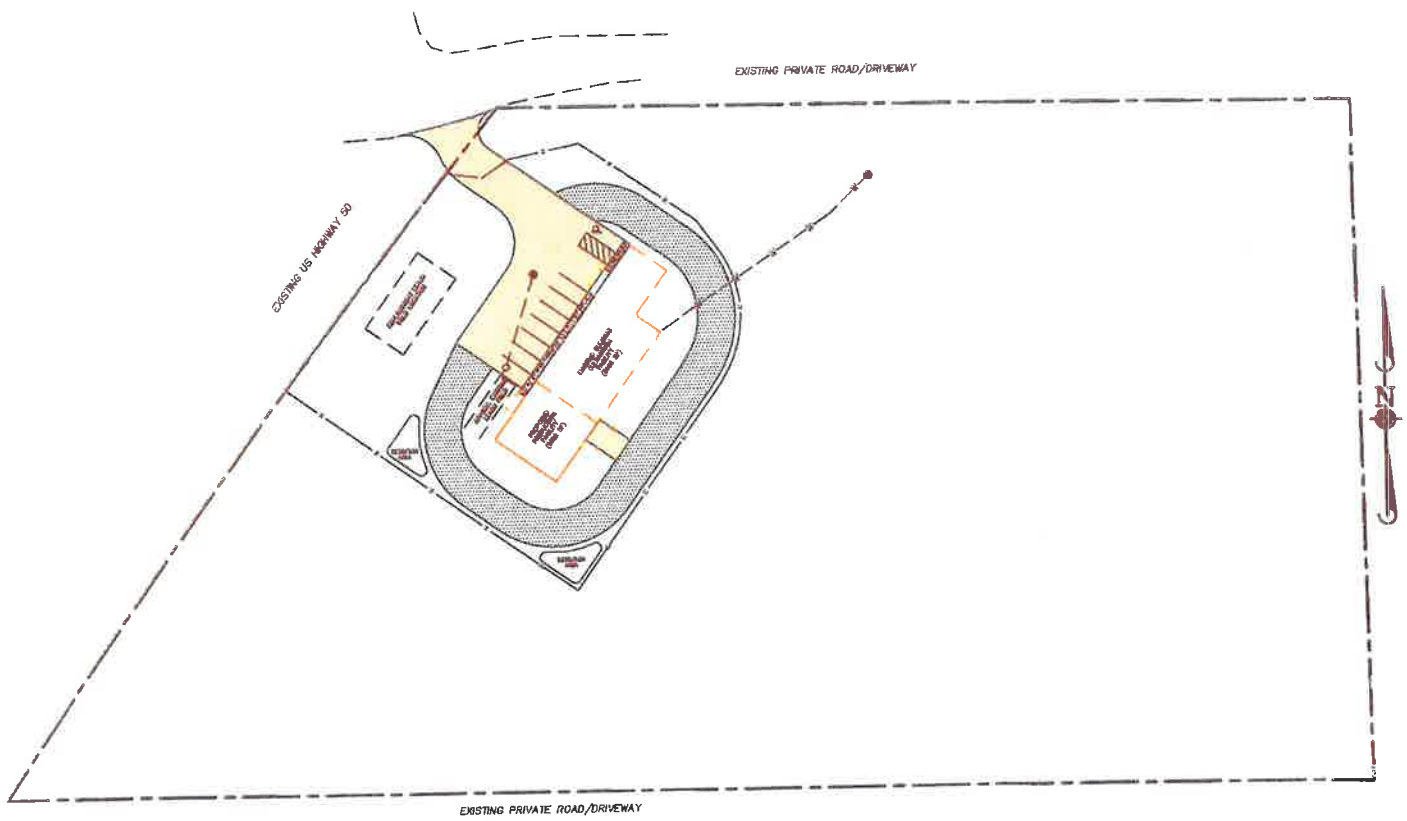
Table 2: Project Statistics

Total Site Area	+/- 5.13 Acres
Total Building Area	+/- 4,660 SF
Total Landscaped Area	+/- 2,600 SF
Total Paved Area	+/- 6,290 SF

SITE PLAN

A reduced Site Plan is shown in Figure 4 for reference. A full size version of the site plan is located in Appendix B.

Figure 4: Site Plan



BUILDING

Phase 1: MME Cultivation Facility:

This phase includes commercial tenant improvements utilizing the existing 3,108 square foot (sf) commercial building located at 8001 Highway 50 East to create and operate a Medical Marijuana (MME) Cultivation Facility. These improvements include renovations to both interior and exterior of the existing building per the attached plans, details and specifications supplied by Miles Architectural.

The new MME cultivation facility shall be constructed, licensed and operated in compliance with NRS 453A and NAC 453A. All tenant improvements and facility operations shall be in accordance with current Carson City and Nevada State Codes and Statutes (See Appendix C).

Phase 2: MME Production Facility:

This phase includes construction of a new 1,552 square foot (sf) addition to be attached to the existing 3,108 sf commercial building located 8001 Highway 50 East for the purposes of creating and operating a Medical Marijuana (MME) Production Facility. The applicant proposes to construct the new commercial addition and perform site improvements as per attached plans, details and specifications supplied by Miles Architectural Group.

Within the new MME production facility, the applicant proposes to install a commercial kitchen preparation area that shall not produce industrial or non-domestic waste discharges, specifically pursuant the State of Nevada, Division of Environmental Protection (OSDS) General Permit provisions I.A.3, I.A.6 and I.A.7.

The new MME production facility shall be constructed, licensed and operated in compliance with NRS 453A and NAC 453A. All tenant improvements and facility operations shall be in accordance with current Carson City and Nevada State Codes and Statutes (See Appendix C).

PRELIMINARY ELEVATIONS AND FLOOR PLANS

The building elevations and floor plans are preliminary in nature and are intended to demonstrate building scale and general building appearance.

Figure 5: Elevations

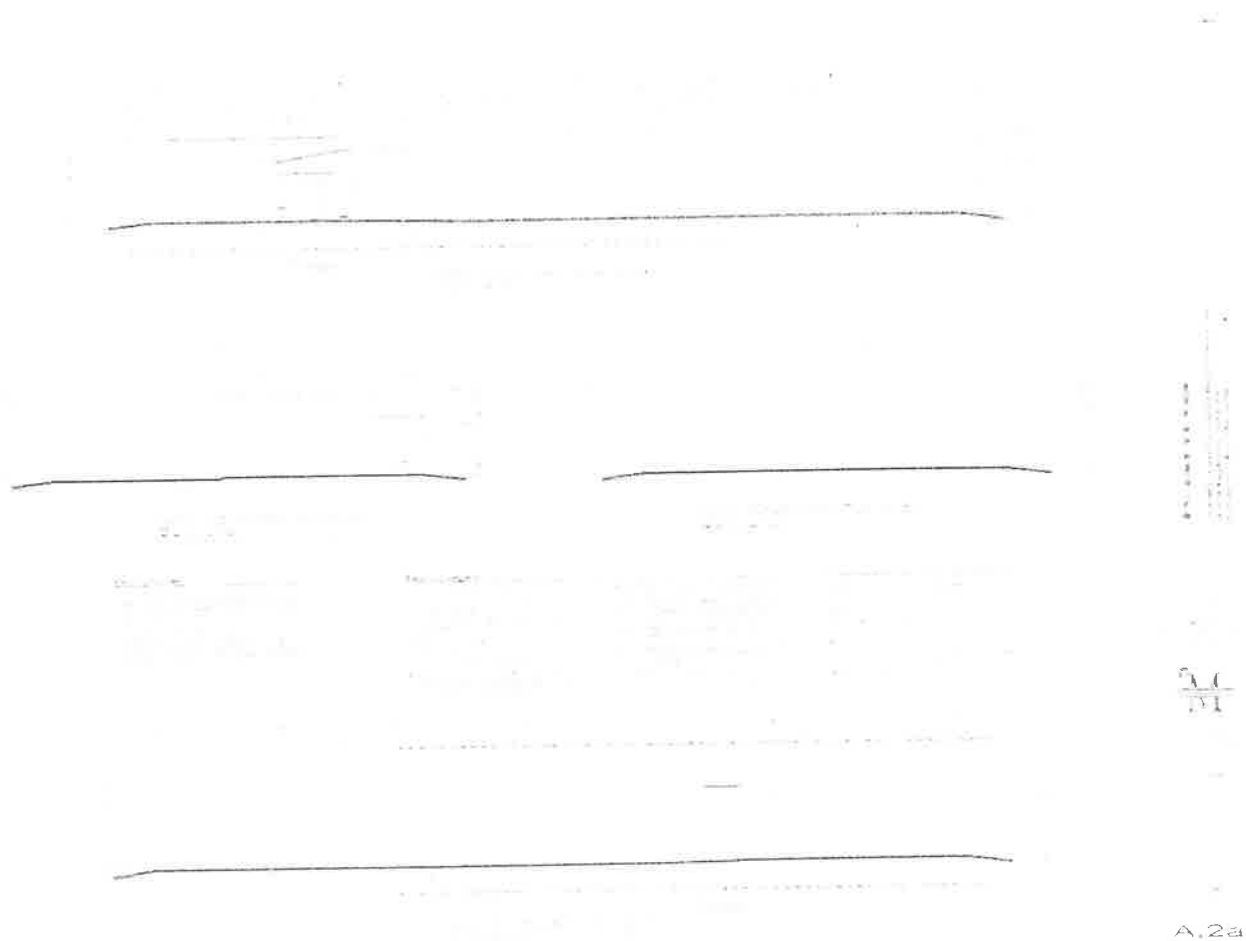
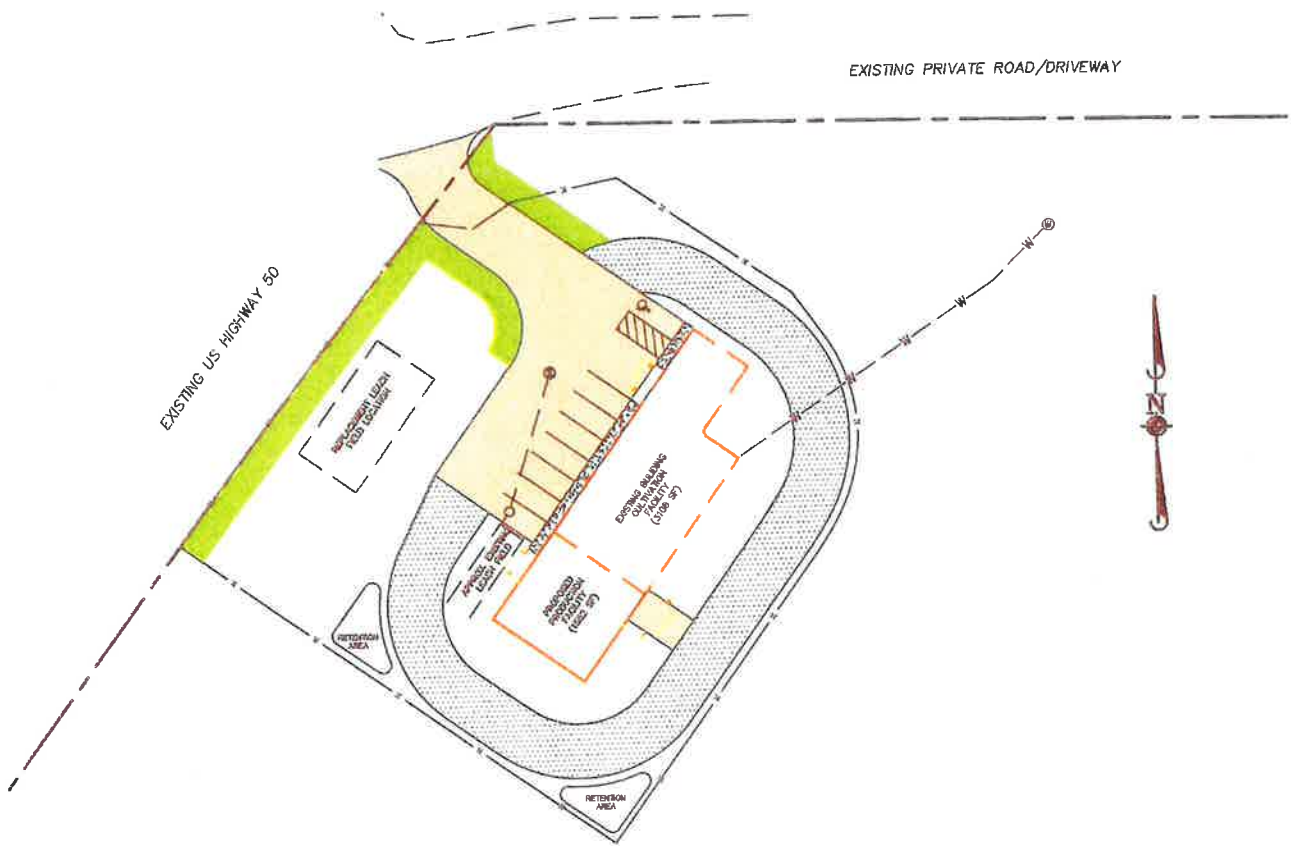


Figure 6: Floor Plan



LANDSCAPE

Figure 7: Conceptual Landscape Plan



HYDROLOGY

The parcel as it sits today has partially been developed and is currently being used as a commercial business. The west portion of the site is in a disturbed state with the drainage trending in a southerly direction. The existing topography on the western portion of the site is fairly flat with slopes between 3% and 4%. There are no defined drainage conveyance facilities, with all of the disturbed areas sheet flowing to the south where it is conveyed through the adjacent properties. The eastern portion of the site is undisturbed with native vegetation and steeper slopes that range between 7% and 12%. This drainage generally sheets flows to the southwest where it is conveyed through the adjacent properties to the south. This parcel is designated by FEMA as being in a Zone X area which is an area determined to be outside the 0.2% annual chance floodplain.

In the proposed condition, flows from the improved areas will be routed to a retention / detention facility on the south side of the proposed development area. With the development of the property, the peak discharge from the site will be increased minimally due to the addition of paved areas, sidewalk, and roof area from the proposed building expansion. The retention / detention facility will be sized to reduce the peak flow from the increase in impervious area to match the flows prior to the new improvements.

WATER SUPPLY

Water supply for the subject site is provided by a well that was drilled on the property in 1974. The current proposed development plans to use this well to provide water service for use in the modified and expanded building. The applicant and owner will need to work with the State of Nevada and Carson City to get this well properly permitted for use. After the well was drilled in 1974, no Proof of Completion was submitted to the State Engineer's office and the permit was cancelled in 1977 for failure to comply with the permit conditions. The current property owner was not aware of this situation until recently when he called the State Engineer's office to get information on his well. To get the well properly permitted, the property owner will need to re-submit an application for the well, with the appropriate maps, and provide proof of completion. Verification of a functioning meter on the well will need to be provided as well as water rights that match the required project need. The proper amount of water rights will be determined based on the final fixture unit count in the building, the required amount of water needed for the landscape improvements, and daily demand for the cultivation operation. At this time, municipal water service is not available in the vicinity of the proposed project.

SEWER IMPACT

The subject parcel currently uses an onsite sewer disposal system (OSDS) for disposal of sewer waste. At this time, municipal sewer improvements are not available in the vicinity of the proposed project. The existing OSDS system takes sewer flow from both the existing commercial business and the auxiliary

structure on the north side of the site. The OSDS system consists of a 1,000 gallon septic tank that sits to the west of the existing structure. The septic tank discharges to the south to the existing distribution box and leach field. An emergency, or replacement, leach field location has been planned for on the west side of the project site, between the landscape area and parking lot. It is anticipated that the sewer flows for the proposed project will be similar to the existing facility. Please reference the site plan in Appendix B for the location of the sewer improvements.

PARKING

Table 3: Parking Calculations

Medical Marijuana Establishment (MME)				
Land Use	CCMC Requirement	Facility Count	Required Stalls	Provided Stalls
MME Cultivation	1 space per 1,000 sf	3,108 sf	4	4
MME Production	1 space per 500 sf	1,552 sf	4	4
Totals:		4,660 sf	8	8

TRAFFIC

Traffic generation associated with the proposed facility will be minimal. Traffic related to the project will be limited to employees and associated facility deliveries. It is anticipated that with full build-out, of both the cultivation and production facilities, no more than 7 employees will be on site at any given time.

CARSON CITY DEVELOPMENT STANDARDS, DIVISION 120 REQUIREMENTS

1.20 Medical Marijuana Establishments.

The following standards are intended to establish minimum standards and Special Use Permit review criteria for Medical Marijuana Establishments, including Cultivation Facilities, Dispensaries, Production Facilities, and Testing Laboratories, as defined in Title 18 and NRS, in addition to other standards for commercial and industrial development.

1. The following standards apply to all Medical Marijuana Establishments.
 - a. All Medical Marijuana Establishments (MMEs) require approval of a Special Use Permit. Special Use Permits for MMEs are only valid at a given location for the operator who obtains the Nevada State certificate for that facility. The Special

Use Permit approval shall expire and become null and void if the MME operator loses or otherwise forfeits his or her State certificate to operate that facility. Special Use Permits are non-transferable between operators and locations within Carson City.

The attached applications are requesting two (2) separate Special Use Permits to legally establish both a Medical Marijuana Cultivation Facility and a Medical Marijuana Production Facility. It is understood that these facilities and their operators are required to maintain a state certificate and that if approved special use permits are non-transferable.

- b. No consumption of Medical Marijuana products shall occur on the premises of any MME.

No consumption of medical marijuana products will occur on the premises.

- c. All business activities related to MMEs, including cultivation, shall be conducted indoors, within a permanent building. The use of office trailers or other temporary structures is prohibited. All MMEs shall have an appearance, both as to the interior and exterior, which is professional, orderly, dignified, and consistent with the traditional style of pharmacies and medical offices.

All business activities completed at the proposed facility including both the cultivation and production processes will be conducted solely within the building.

- d. Outside display or sales of MME merchandise shall be prohibited.

No outside display or sales of merchandise will occur on the premises.

- e. Accessory outside storage for MMEs shall comply with Title 18.16 Development Standards, Division 1.12 Outside Storage.

It is proposed that all business activity including storage will occur within the building. If for some reason these operation practices are modified in the future, any outdoor storage will comply with Title 18.16 Development Standards, Division 1.12 Outside Storage.

- f. Access to the MME shall be restricted in compliance with State regulations.

The proposed facilities will in no way be open to the public. As required, the site and facility are designed with the necessary security measures including perimeter fencing, secure ingress and egress to the building, lighting and surveillance.

- g. No MME-related products shall be visible from outside the building.

The site and building are designed so that no MME products are visible from outside the building.

- h. Sign Requirements. All MME signage shall be discreet, professional, and consistent with the traditional style of signage for pharmacies and medical offices. All MMEs shall follow the sign regulations for Office Uses in the Development Standards, Division 4, except that freestanding sign height for Cultivation Facilities, Production Facilities, and Testing Laboratories shall be limited to 10 feet consistent with sign height requirements for industrial uses.

No signage is proposed as part of either of these applications.

- i. Parking Requirements. Parking shall be provided for MMEs as follows:

- (1) Dispensaries. One space per 300 square feet of gross floor area.
- (2) Cultivation Facilities. One space per 1,000 square feet of gross floor area.
- (3) Production Facilities. One space per 500 square feet of gross floor area.
- (4) Testing Laboratories. One space per 400 square feet of gross floor area.

The total facility at build out will include 4,660 square feet and require 8 total parking stalls, one (1) of which will be accessible.

- j. No more than two Dispensaries shall be permitted in Carson City.

The proposed project is limited to both a cultivation and production facility, no dispensaries are proposed to operate at this location.

- k. A MME shall not be located within 1,000 feet of a public or private school that provides formal education traditionally associated with preschool or kindergarten through grade 12 or within 300 feet of a facility that provides day care to children, a public park, a playground, a public swimming pool, a center or facility, the primary purpose of which is to provide recreational opportunities or services to children or adolescents, that existed on the date on which the application for the proposed MME was submitted to the State Health Division, measured on a straight line from the nearest school or community facility property line to the front door or primary entrance of the MME.

A state license application for both a Cultivation and Production Facility were approved which included and zoning verification letter demonstrating the proposed site complies with the above requirements.

SPECIAL USE PERMIT GENERAL REVIEW QUESTIONS

Question 1. How will the proposed development further and be in keeping with, and not contrary to, the goals of the Master Plan Elements?

Explanation A. Turn to the Master Plan Policy Checklist. The Master Plan Policy Checklist for Special Use Permits and Major Project Reviews address five items that appear in the Carson City Master Plan. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. Address each theme; a check indicates that the proposed development meets the applicable Master Plan Policy. In your own words provide written support of the policy statement. You may want to acquire a free CD or purchase a paper copy of the Master Plan from the Planning Division, or review the copy in the Planning Office or in the reference section of the Ormsby Public Library on Roop Street, or use our website at www.ci.carsoncity.nv.us

The proposed project helps to achieve A Balanced Land Use Pattern in that the proposed project site is located in a General Industrial (GI) zone which has been identified as an appropriate designation for uses of this type.

Question 2. Will the effect of the proposed development be detrimental to the immediate vicinity? To the general neighborhood?

Explanation A. Describe the general types of land uses and zoning designations adjoining your property

The proposed project site is surrounded by other industrial type uses and similar General Industrial (GI) and General Commercial (GC) zoning designations.

Location	Master Plan Designation	Zoning Designation	Current Land Use
North	Mixed Use Commercial	General Industrial (GI)	Commercial Business
South	Mixed Use Commercial	General Industrial (GI)	Commercial Business, Vacant
East	Mixed Use Commercial	General Industrial (GI)	Commercial Business
West	Mixed Use Commercial	General Commercial (GC)	Highway 50, Vacant

B. Explain why your project is similar to existing development in the neighborhood, and why it will not hurt property values or cause problems, such as noise, dust, odors, vibration, fumes, glare, or physical activity, etc. with neighboring property owners. Will the project involve any uses that are not contained within a building? If yes, please describe. If not, state that all uses will be within a building. Explain how construction-generated dust (if any) will be controlled. Have other properties in your area obtained approval of a similar request? How will your project differ in appearance from your neighbors? Your response

should consider the proposed physical appearance of your proposal, as well as comparing your use to others in the area.

The proposed project includes significant site and building improvements. The proposed land use will not create additional noise, dust, odors, vibration, fumes, glare, or physical activity above and beyond the property's previous use. With this unique land use comes significant security upgrades to the property which may help surrounding properties.

- C. Provide a statement explaining how your project will not be detrimental to the use, peaceful enjoyment or development of surrounding properties and the general neighborhood.**

The proposed project will be contained completely within the building and therefore will blend nicely into the area and not be detrimental to the peaceful enjoyment of the surrounding properties.

- D. Consider the pedestrian and vehicular traffic that currently exists on the road serving your project. What impact will your development have when it is successfully operating? Will vehicles be making left turns? Will additional walkways and traffic lights be needed? Will you be causing traffic to substantially increase in the area? What will be the emergency vehicle response time? State how you have arrived at your conclusions. What City department have you contacted in researching your proposal? Explain the effect of your project with the existing traffic in the area.**

The project site is accessed off Highway 50 which has significant vehicular traffic but very limited pedestrian traffic. The proposed facility will not actually be open to the public and therefore traffic, both vehicular and pedestrian, will be limited to employees and deliveries. These factors will produce a significant reduction in traffic counts versus the previous business on site. Carson City Fire has been on site to discuss the project and has concluded that the proposed improvements meet or exceed their requirements.

- E. Explain any short-range and long-range benefit to the people of Carson City that will occur if your project is approved.**

The proposed project is a reuse/ redevelopment of an existing site which includes extensive improvements. Additional benefits of the project include added employment opportunities, and tax revenue.

- Question 3. Has sufficient consideration been exercised by the applicant in adapting the project to existing improvements in the vicinity?**

Explanation A. How will your project affect the school district? Will your project add to the student population or will it provide a service to the student population? How will your project affect the Sheriff's Office?

The proposed development will not create any changes in the needs from internal service departments. The Sheriff's office may actually see a reduction to crime in the area with the addition of the required security features associated with a facility of this nature.

B. If your project will result in the covering of land area with paving or a compacted surface, how will drainage be accommodated? Talk to Engineering for the required information.

See the attached hydrology section.

C. Are the water supplies serving your project adequate to meet your needs without degrading supply and quality to others in the area? Is there adequate water pressure? Are the lines in need of replacement? Is your project served by a well? Talk to Public Works for the required information.

See attached water section.

D. Is there Adequate capacity in the sewage disposal trunk line that you will connect to in order to serve your project, or is your site on a septic system? Please contact Public Works for the required information.

See attached sewer section.

E. What kind of road improvements are proposed or needed to accommodate your project? Have you spoken to Public Works or Regional Transportation regarding road improvements?

The only proposed improvements will be on site. Additional road improvements will not be needed.

F. Indicate the source of the information that you are providing to support your conclusions and statements made in this packet (private engineer, Public Works, Regional Transportation, title report, or other sources).

The information provided is a collaboration between Manhard Consulting, Miles Architectural Group and MedCanna. The information is in compliance with Carson City Municipal Code, NAC and NRS.

- G. If outdoor lighting is to be a part of the project, please indicate how it will be shielded from adjoining property and the type of lighting (wattage/height/placement) provided.**

Although it is anticipated that outdoor lighting will ultimately be part of the proposed project, a detailed lighting plan is not included as part of this submittal package. Any lighting associated with the proposed development will be in accordance with Carson City Municipal Code Development standards Lighting Section 1.3.

- H. Describe the proposed landscaping, including screening and arterial landscape areas (if required by the zoning code). Include a site plan with existing and proposed landscaping shown on the plan which complies with City ordinance requirements.**

A conceptual landscape plan is provided as part of this application (Figure 7). All landscaped areas will comply with Carson City Ordinance requirements.

- I. Provide a parking plan for your project. If you are requesting approval for off-site parking within 300 feet, provide site plans showing (1) parking on your site, (2) parking on the off-site parking lot, and (3) how much of the off-site parking area is required for any business other than your own. Design and dimensions of parking stalls, landscape islands, and traffic aisles must be provided.**

The proposed site plan also functions as the parking plan, which shows all dimensioned parking stalls.

Appendix A

Carson City Planning Division
 103 E. Proctor Street · Carson City NV 89701
 Phone: (775) 887-2180 · E-mail: planning@carson.org

FOR OFFICE USE ONLY:

CCMC 18.02

SPECIAL USE PERMIT

FEE: \$2,450.00 MAJOR
 \$2,200.00 MINOR (Residential zoning districts)

+ noticing fee

SUBMITTAL PACKET

- 8 Completed Application Packets (1 Original + 7 Copies) including:
 - Application Form
 - Written Project Description
 - Site Plan
 - Building Elevation Drawings and Floor Plans
 - Proposal Questionnaire With Both Questions and Answers Given
 - Applicant's Acknowledgment Statement
 - Documentation of Taxes Paid-to-Date (1 copy)
 - Project Impact Reports (Engineering) (4 copies)
 - CD containing application digital data (to be submitted once the application is deemed complete by staff)

Application Reviewed and Received By:

Submittal Deadline: See attached PC application submittal schedule.

Note: Submittals must be of sufficient clarity and detail such that all departments are able to determine if they can support the request. Additional information may be required.

FILE # SUP - 15 -

APPLICANT PHONE #
 5SEAT Investments, LLC - Dan Flannagan 877-723-0543

MAILING ADDRESS, CITY, STATE, ZIP
 275 Hill Street, Suite 290, Reno, NV 89501

EMAIL ADDRESS
 dflann@dmnovo.com

PROPERTY OWNER PHONE #
 Tim McCarville, LLC 775-883-3499

MAILING ADDRESS, CITY, STATE, ZIP
 PO Box 20581, Carson City, NV 89721

EMAIL ADDRESS

APPLICANT AGENT/REPRESENTATIVE PHONE #
 Manhard Consulting, LTD - Mark Rotter 775-882-5630

MAILING ADDRESS, CITY STATE, ZIP
 3476 Executive Point Way, Suite 12, Carson City, NV 89706

EMAIL ADDRESS
 mrotter@manhard.com

Project's Assessor Parcel Number(s): 008-611-39	Street Address ZIP Code 8001 Highway 50 East, Carson City, NV 89701
--	--

Project's Master Plan Designation Mixed Use Commercial	Project's Current Zoning GI - General Industrial	Nearest Major Cross Street(s) Arrowhead Drive and Highway 50 East
---	---	--

Briefly describe your proposed project: (Use additional sheets or attachments if necessary). In addition to the brief description of your project and proposed use, provide additional page(s) to show a more detailed summary of your project and proposal. In accordance with Carson City Municipal Code (CCMC) Section: _____, or Development Standards, Division _____, Section _____, a request to allow as a conditional use is as follows:

Reference attached additional information

PROPERTY OWNER'S AFFIDAVIT

I, _____, being duly deposed, do hereby affirm that I am the record owner of the subject property, and that I have knowledge of, and I agree to, the filing of this application

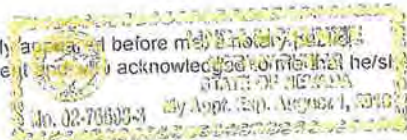
Signature _____ Address 8001 Highway 50 East, Carson City, NV 89701 Date _____

Use additional page(s) if necessary for other names

STATE OF NEVADA)
 COUNTY)

On _____, 20____, personally appeared _____, personally known (or proved) to me to be the person whose name is subscribed to the foregoing document, and he/she executed the foregoing document.

Notary Public



NOTE: If your project is located within the historic district, airport area, or downtown area, it may need to be scheduled before the Historic Resources Commission, the Airport Authority, and/or the Redevelopment Authority Citizens Committee prior to being scheduled for review by the Planning Commission. Planning personnel can help you make the above determination.

Master Plan Policy Checklist

Special Use Permit, Major Project Review & Administrative Permits

PURPOSE

The purpose of a development checklist is to provide a list of questions that address whether a development proposal is in conformance with the goals and objectives of the 2006 Carson City Master Plan that are related to non-residential and multi-family residential development. This checklist is designed for developers, staff, and decision-makers and is intended to be used as a guide only.

Development Name: _____

Reviewed By: _____

Date of Review: _____

DEVELOPMENT CHECKLIST

The following five themes are those themes that appear in the Carson City Master Plan and which reflect the community's vision at a broad policy level. Each theme looks at how a proposed development can help achieve the goals of the Carson City Master Plan. A check mark indicates that the proposed development meets the applicable Master Plan policy. The Policy Number is indicated at the end of each policy statement summary. Refer to the Comprehensive Master Plan for complete policy language.

CHAPTER 3: A BALANCED LAND USE PATTERN



The Carson City Master Plan seeks to establish a balance of land uses within the community by providing employment opportunities, a diverse choice of housing, recreational opportunities, and retail services.

Is or does the proposed development:

- Meet the provisions of the Growth Management Ordinance (1.1d, Municipal Code 18.12)?
- Use sustainable building materials and construction techniques to promote water and energy conservation (1.1e, f)?
- Located in a priority infill development area (1.2a)?
- Provide pathway connections and easements consistent with the adopted Unified Pathways Master Plan and maintain access to adjacent public lands (1.4a)?
- Protect existing site features, as appropriate, including mature trees or other character-defining features (1.4c)?



Special Use Permit & Major Project Review Development Checklist:

- At adjacent county boundaries or adjacent to public lands, coordinated with the applicable agency with regards to compatibility, access and amenities (1.5a, b)?
- In identified Mixed-Use areas, promote mixed-use development patterns as appropriate for the surrounding context consistent with the land use descriptions of the applicable Mixed-Use designation, and meet the intent of the Mixed-Use Evaluation Criteria (2.1b, 2.2b, 2.3b, Land Use Districts, Appendix C)?
- Meet adopted standards (e.g. setbacks) for transitions between non-residential and residential zoning districts (2.1d)?
- Protect environmentally sensitive areas through proper setbacks, dedication, or other mechanisms (3.1b)?
- Sited outside the primary floodplain and away from geologic hazard areas or follows the required setbacks or other mitigation measures (3.3d, e)?
- Provide for levels of services (i.e. water, sewer, road improvements, sidewalks, etc.) consistent with the Land Use designation and adequate for the proposed development (Land Use table descriptions)?
- If located within an identified Specific Plan Area (SPA), meet the applicable policies of that SPA (Land Use Map, Chapter 8)?

CHAPTER 4: EQUITABLE DISTRIBUTION OF RECREATIONAL OPPORTUNITIES



The Carson City Master Plan seeks to continue providing a diverse range of park and recreational opportunities to include facilities and programming for all ages and varying interests to serve both existing and future neighborhoods.

Is or does the proposed development:

- Provide park facilities commensurate with the demand created and consistent with the City's adopted standards (4.1b)?
- Consistent with the Open Space Master Plan and Carson River Master Plan (4.3a)?

CHAPTER 5: ECONOMIC VITALITY



The Carson City Master Plan seeks to maintain its strong diversified economic base by promoting principles which focus on retaining and enhancing the strong employment base, include a broader range of retail services in targeted areas, and include the roles of technology, tourism, recreational amenities, and other economic strengths vital to a successful community.

Is or does the proposed development:

- Encourage a citywide housing mix consistent with the labor force and non-labor force populations (5.1j)
- Encourage the development of regional retail centers (5.2a)
- Encourage reuse or redevelopment of underused retail spaces (5.2b)?
- Support heritage tourism activities, particularly those associated with historic resources, cultural institutions and the State Capitol (5.4a)?
- Promote revitalization of the Downtown core (5.6a)?

- Incorporate additional housing in and around Downtown, including lofts, condominiums, duplexes, live-work units (5.6c)?

CHAPTER 6: LIVABLE NEIGHBORHOODS AND ACTIVITY CENTERS



The Carson City Master Plan seeks to promote safe, attractive and diverse neighborhoods, compact mixed-use activity centers, and a vibrant, pedestrian-friendly Downtown.

Is or does the proposed development:

- Use durable, long-lasting building materials (6.1a)?
- Promote variety and visual interest through the incorporation of varied building styles and colors, garage orientation and other features (6.1b)?
- Provide variety and visual interest through the incorporation of well-articulated building facades, clearly identified entrances and pedestrian connections, landscaping and other features consistent with the Development Standards (6.1c)?
- Provide appropriate height, density and setback transitions and connectivity to surrounding development to ensure compatibility with surrounding development for infill projects or adjacent to existing rural neighborhoods (6.2a, 9.3b 9.4a)?
- If located in an identified Mixed-Use Activity Center area, contain the appropriate mix, size and density of land uses consistent with the Mixed-Use district policies (7.1a, b)?
- If located Downtown:
 - Integrate an appropriate mix and density of uses (8.1a, e)?
 - Include buildings at the appropriate scale for the applicable Downtown Character Area (8.1b)?
 - Incorporate appropriate public spaces, plazas and other amenities (8.1d)?
- Incorporate a mix of housing models and densities appropriate for the project location and size (9.1a)?

CHAPTER 7: A CONNECTED CITY



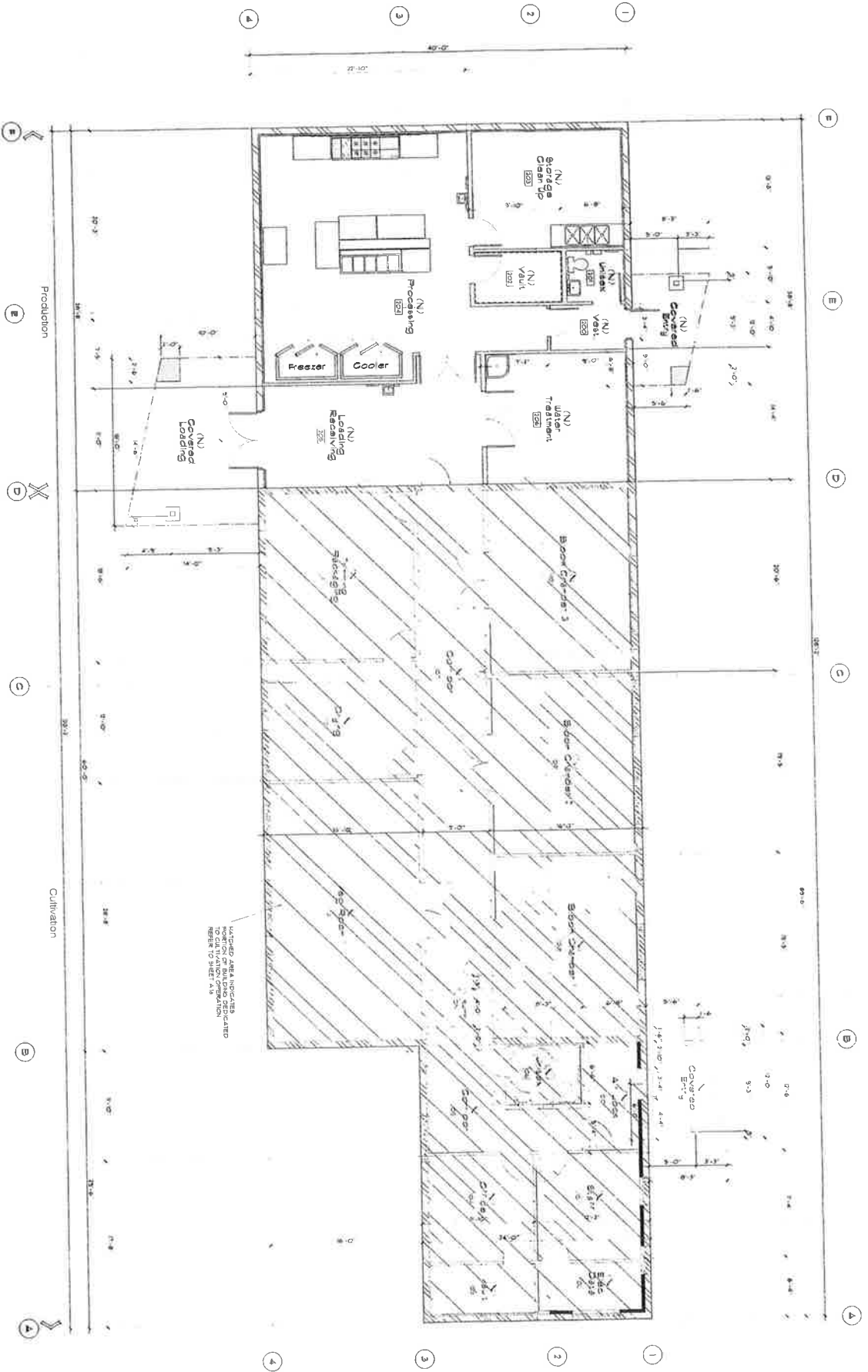
The Carson City Master Plan seeks promote a sense of community by linking its many neighborhoods, employment areas, activity centers, parks, recreational amenities and schools with an extensive system of interconnected roadways, multi-use pathways, bicycle facilities, and sidewalks.

Is or does the proposed development:

- Promote transit-supportive development patterns (e.g. mixed-use, pedestrian-oriented, higher density) along major travel corridors to facilitate future transit (11.2b)?
- Maintain and enhance roadway connections and networks consistent with the Transportation Master Plan (11.2c)?
- Provide appropriate pathways through the development and to surrounding lands, including parks and public lands, consistent with the Unified Pathways Master Plan (12.1a, c)?

Appendix B

Appendix C



Wall Legend

- NEAR CH WALLS
- NEUTRAL STUD WALLS
- EXISTING 8" CH WALLS TO REMAIN
- EXISTING INSURED WALLS OR PARTIALS TO REMAIN
- EXISTING WALLS OR PORTIONS OF EXISTING WALLS TO BE DEMOLISHED (CONFORMS WITH STRUCTURAL SPECIFICATIONS)

New Floor Plan - Production

1/11/0

3028 & I, EXHIBIT
1/25/01 NEW



Kanna
Addition and Tenant Improvements
8001 Highway 50 East
Carson City, Nevada

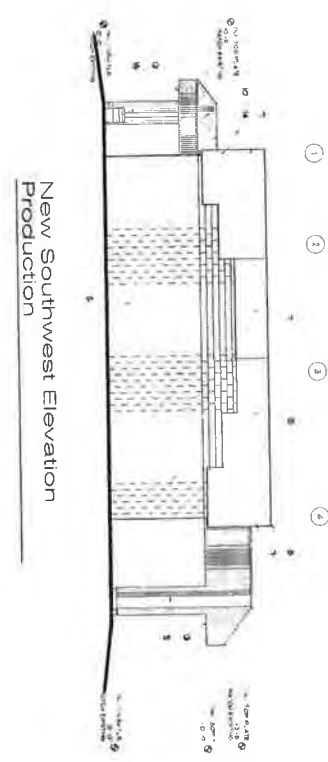
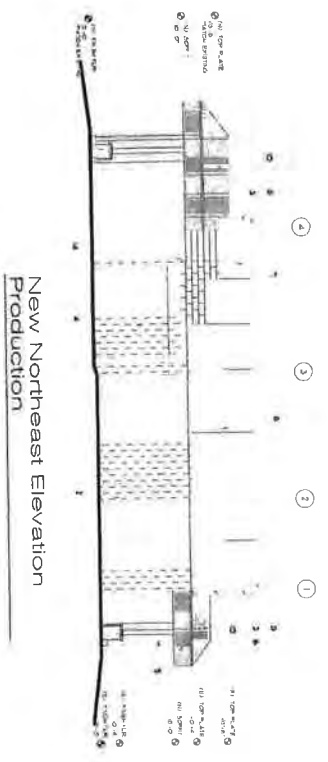
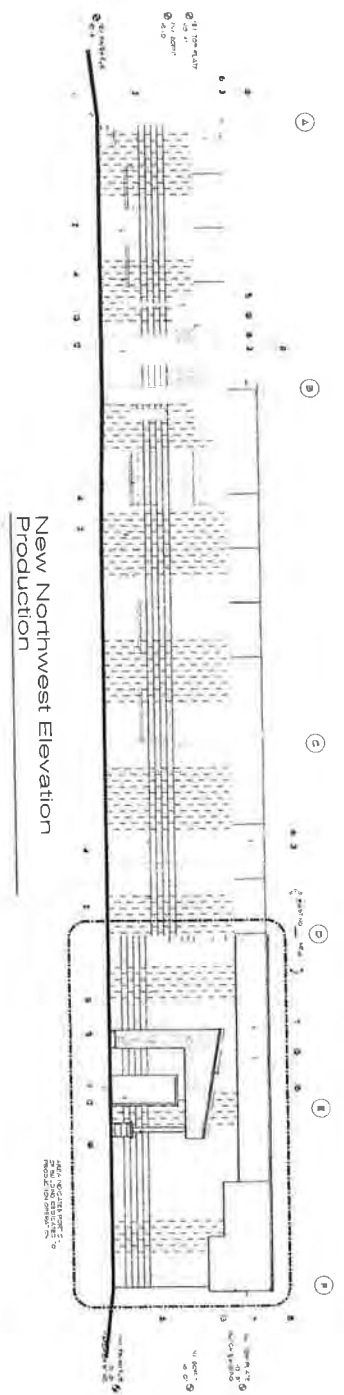
Miles
Architectural
Group



ONE LOWRY AVENUE
SUITE 200
CARSON CITY, NEVADA 89701
PHONE: 775-885-1100
WWW.MILESARCHITECTURAL.COM

A.1b

DATE: 10/11/01
JOB NO. 61



Elevation Notes

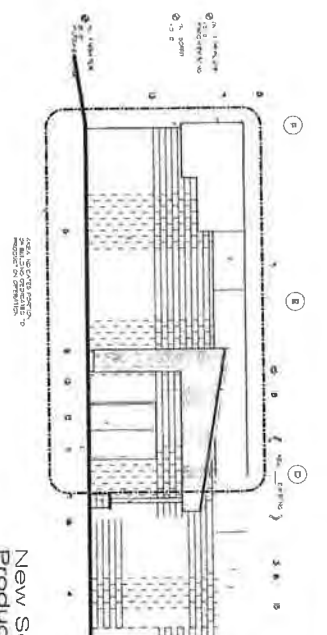
1. ALL MATERIALS AND FINISHES TO BE IDENTICAL TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
2. ALL FINISHES TO BE IDENTICAL TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
3. ALL FINISHES TO BE IDENTICAL TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
4. ALL FINISHES TO BE IDENTICAL TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
5. ALL FINISHES TO BE IDENTICAL TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.
6. ALL FINISHES TO BE IDENTICAL TO THOSE SHOWN ON THE ARCHITECTURAL DRAWINGS.

Elevation Legend

1. BRICK - 8" RIBBON COURSE
2. STAINLESS STEEL PANELS - 1/4" THICK
3. BRICK - 8" RIBBON COURSE
4. STAINLESS STEEL PANELS - 1/4" THICK
5. BRICK - 8" RIBBON COURSE
6. STAINLESS STEEL PANELS - 1/4" THICK
7. BRICK - 8" RIBBON COURSE
8. STAINLESS STEEL PANELS - 1/4" THICK
9. BRICK - 8" RIBBON COURSE
10. STAINLESS STEEL PANELS - 1/4" THICK
11. BRICK - 8" RIBBON COURSE
12. STAINLESS STEEL PANELS - 1/4" THICK

Elevation Legend

1. NEW BRICK - 8" RIBBON COURSE
2. NEW STAINLESS STEEL PANELS - 1/4" THICK
3. NEW BRICK - 8" RIBBON COURSE
4. NEW STAINLESS STEEL PANELS - 1/4" THICK
5. NEW BRICK - 8" RIBBON COURSE
6. NEW STAINLESS STEEL PANELS - 1/4" THICK
7. NEW BRICK - 8" RIBBON COURSE
8. NEW STAINLESS STEEL PANELS - 1/4" THICK
9. NEW BRICK - 8" RIBBON COURSE
10. NEW STAINLESS STEEL PANELS - 1/4" THICK
11. NEW BRICK - 8" RIBBON COURSE
12. NEW STAINLESS STEEL PANELS - 1/4" THICK



New Southeast Elevation Production

Kanna
 Addition and Tenant Improvements
 8001 Highway 50 East
 Carson City, Nevada

Miles
 Architectural
 Group

A.2b

DATE: 11/15/02
 DRAWING NO.: 1000
 PROJECT NO.: 0201

Appendix D

Extraction Methodology

MedCanna Consulting's extraction plan includes extracts and concentrates for multiple end uses. The goal is to provide consistent and safe extracts for both the producer and consumer. MedCanna utilizes traditional sieved extraction methods, both dry and water-assisted, as well as CO₂ supercritical fluid extraction (SFE). Sifted extracts involve mechanical separation of the trichomes from the plant material. The trichomes contain the essential oils and cannabinoids of the plant. Once separated from the raw botanical material the trichomes can then be used for vaporization and further processing into infused products and edibles. Ultimately these extracts will be used to produce hashish, oils, tinctures, sublingual sprays, medicated gelcaps, and food products of consistent dose and cannabinoid profile.

We also plan on using supercritical fluids for extraction. A supercritical fluid is any substance at pressures and temperatures above its critical point where it acts both like a gas and a liquid. This allows the solvent or CO₂ to pass through the raw botanical material and extraction of the cannabinoids and essential oils in a safe and efficient manner. Traditionally this has been done with more dangerous solvents such as butane or acetone. However there are numerous studies showing that butane as well as other solvent based extracts can contain high levels of residual hydrocarbons or solvents which are potentially toxic and can lead to pulmonary issues. Butane is also highly flammable and butane extraction is responsible for numerous near fatal explosions throughout the industry.

MedCanna Consulting uses safe and environmentally friendly carbon dioxide (CO₂). Carbon Dioxide is the most commercially used supercritical solvent. It has been used on a large scale for extraction of hops for beer production and decaffeination of coffee beans as well as production of essential oils for pharmaceutical purposes. CO₂ is non-toxic and is Generally Regarded As Safe (GRAS) by the FDA for use in food products; has no added heavy metals or toxic contaminants that other solvents may have; and is also nonflammable, greatly reducing the need for an explosion proof environment for making extracts. The CO₂ utilized in extraction is a renewable resource as it is a byproduct of the manufacturing industry. In a closed-loop SFE extraction setup it is possible to recapture as much as 95% of the CO₂ used.

A CO₂ SFE extraction setup must contain a pump for the CO₂, a pressure cell to contain the sample, a means of maintaining pressure in the system, and a collecting vessel. The liquid is pumped to a heating zone where it is heated to supercritical conditions. It

then passes into the extraction vessel where it rapidly diffuses into the solid matrix and dissolves the material to be extracted. The dissolved material is swept from the extraction cell into a separator at lower pressure and the extracted material settles out. The CO₂ can then be cooled, re-compressed and recycled.

By regulating and varying the pressure and temperature you can control the extraction instrument and selectively extract various parts of the plant. Ideally a higher pressure would be initially run, then the essential oil purified in further stages. At higher pressures CO₂ will extract cannabinoids, terpenes, plant waxes and even pigments. All of these have numerous end uses and a great medicinal value. Depending on the unit which could hold anywhere from a 1 liter to a larger 20 liter unit it would take one to six hours to run its complete cycle. Since CO₂ does not have the dissolving power of traditional hydrocarbons there may still be valuable essential oils left in the botanical material that may need to be run again.

MedCanna plans on refining these extracts and offering them in infused products and other end-user consumables. The use of CO₂ extracts during extract production ensures consistency and quality throughout the manufacturing process and ensures a safe and desirable end product. The nature of CO₂ extracts provides a more rich and full spectrum extract from the plant as well, this will allow for further purification and isolation of specific compounds to tailor treatments towards the patients needs.

Once the system is done running the oleoresin that comes out of the machine is set aside for further purification. At this point, the Cannabis oleoresin (raw oil) has a wide variety of medicinal components from the plant. With basic lab equipment these can be separated depending on their ideal end use. The cannabinoids and terpenes ideally are going to be used in aromatherapy devices or infused products. These products may need to be vacuum dried to ensure stability and preservation for future use. The plant waxes and some of the pigments from the plant have amazing value as topical products. Once isolated and identified they can be put into numerous products to treat a number of skin conditions.



5SEAT INVESTMENTS LLC

Product list and Description for: File#SUP: 15-013

#1-Master concentrate:

- A fully destearinated cannabis resin.
- Available as tincture standardized to 50mg/ml.
- Tincture is in 2 and 4oz bottles.
- Available as solid resin for vaporization or raw ingestion.
- Solid resin available in .5g, 1g and 3.5 g packages for vaporization or raw ingestion.

#2-Cannabis Lipid Fraction:

- Waxes, Phytosterols, Fatty acids and alcohols of the cannabis plant.
- Used in topical products.
- Promotes circulation and healing.
- Used in topical oil in the place of other waxes.
- Packaged in 8oz plastic tubs.

#3-Custom ratio extract:

- Extraction is prepared in the same fashion as product #1.
- Selected strains such as AC/DC provide a CBD dominant extract.
- Any of the high THC and low CBD (>1%) strains on file provide a THC dominant extract.
- Extracts are accurately assayed for cannabinoid content.
- Extract are either sold as a CBD dominant or as an assayed blend in a
- 50:50 ratio THC:CBD.
- Resulting extract is offered as tincture or solid resin.
- Resulting extract is offered as tincture or solid resin.
- Custom Ration Extract tincture is packed in 2 and 4oz bottles.
- Custom Ratio Resin is packaged in .5g,1g, and 3.5g amounts.

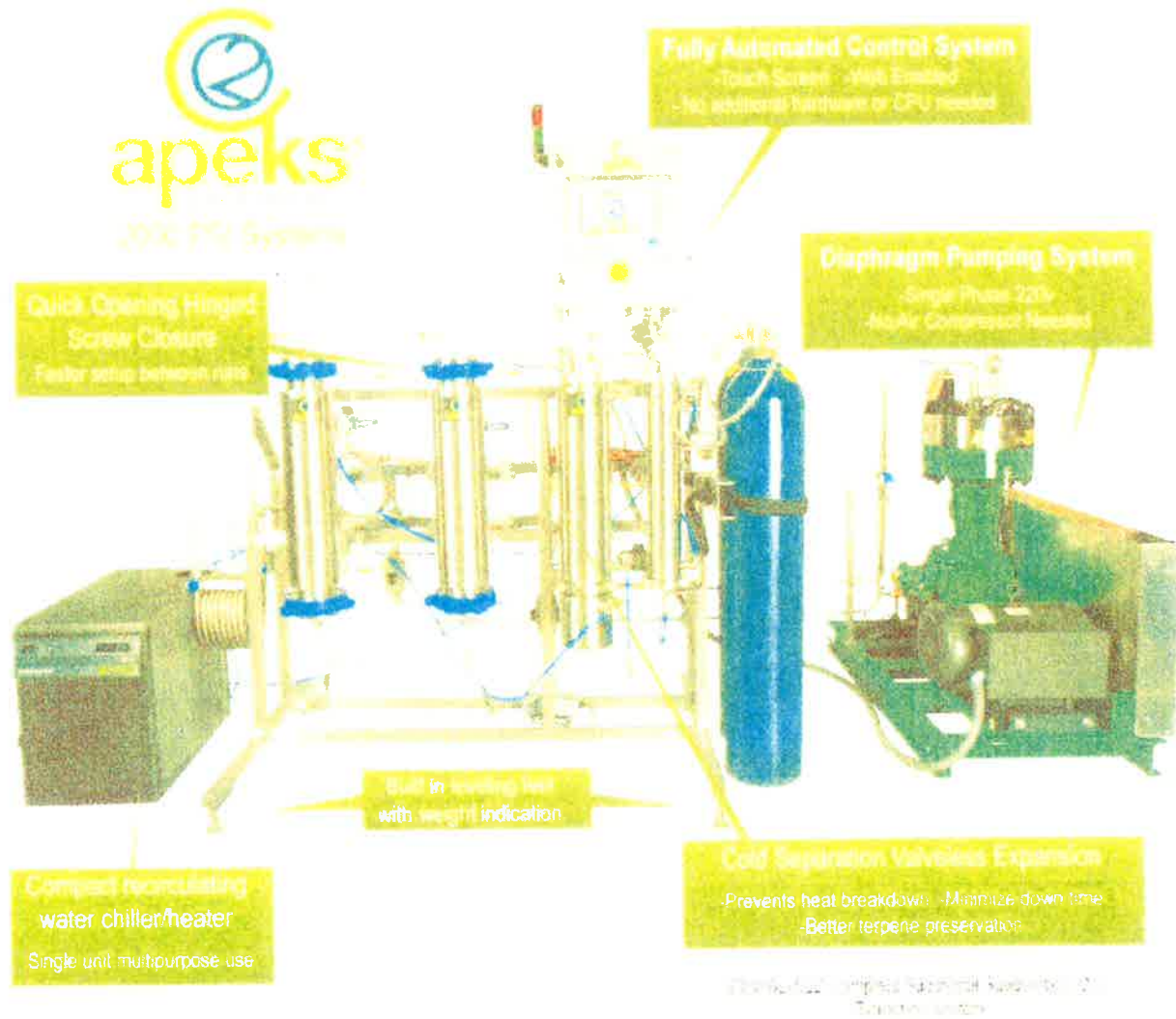
#4-Topical Oil:

- A high quality massage oil blend of coconut, avocado, almond and Cannabis Lipid Fraction with essential oils.
- infused to 150mg/oz using the Master concentrate.
- Packaged in 4 and 8oz bottles.

- 2000psi
- 2000psi
- 2000psi
- 2000psi



Electrically Efficient 2000psi Subcritical/ Supercritical CO2 Systems for Botanical Oil Extractions



Apeks Supercritical + 2000psi systems are designed to provide subcritical and supercritical CO2 botanical oil extractions with low overall power consumption in a compact design. All 2000psi systems come equipped with our energy efficient, 220V, single phase diaphragm pumping system.

Our fully automated 2000psi systems utilize our patent pending [weight indication system](#) to provide reliable and consistent operation.

Reduced power consumption

20% faster than older systems

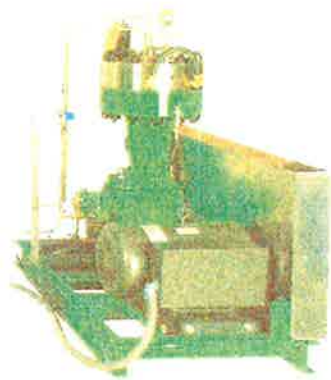
Less Complexity and Maintenance

100% [View our 2000psi systems with diaphragm pumping technology](#)

100% [View our 2000psi systems with diaphragm pumping technology](#)

100% [View our 2000psi systems with diaphragm pumping technology](#)

The benefits of our new 2000psi systems with diaphragm pumping technology are summarized below:



- **Preheating Time Reduction** – Extraction times have been demonstrated to be up to 30% faster compared to our older 1500psi system extraction times.
- **Ambient Noise Reduction** – New recirculation technology eliminates the need for a costly commercial compressed air system, which can reduce ambient noise levels up to 75%.
- **Waste Heat Elimination** – Motor driven system completely eliminates the waste heat that is produced by compressed air drive systems. This reduces facility air conditioning needs and eliminates the need for ductwork to manage the waste heat.
- **Reduced Power Consumption** – Improved electric start technology reduces overall power required for the system as much as 50%. Regenerative heat exchangers are employed to manage thermal byproducts and eliminate the need for multiple heaters and chillers.
- **99% CO₂ Gas Recovery** – Gasoline CO₂ pumping technology allows for 99% CO₂ recovery, which minimizes operational costs and improves safety.
- **Power Friendly** – Commonly available, single phase, 220V electricity is required for the system. No need to search for a facility with 3 phase power.
- **Less Complexity and Maintenance** – New recirculation technology has significantly fewer moving parts, improving reliability and reducing maintenance costs by as much as 30%.
- **Smaller Footprint** – Overall space required for the system has been reduced by 25%.
- **Fully Automated** – All Apex Supercritical systems are fully automated, which allows for consistent and reliable extractions while reducing operator skill level and training times compared to manually operated systems.

[All Apex Supercritical Systems: The Complete Guide to the Industry's Largest Selling CO₂ Extraction System. Request a Free Brochure Today! \[http://www.apexsupercritical.com/AllApexSystems.html\]\(#\)](#)

System Features:

- Simple or dual 50 and 700 extraction vessel options
- Simple to operate – no complicated control system or computer interface
- Inerting Mission – real time online verification of system condition change
- Safe – All vessels are designed and manufactured to ASME specifications and pressure ratings. Redundant safety features protect the system from accidental over-pressurization. Tubing connections are made with proven compression fitting technology – the same fittings are used on inerts and off-gas on platform – non-toxic pressure gauges are on each pressure containing vessel for visual verification of over-pressurization point or opening.
- Environmentally Friendly – System recirculates CO₂ during extraction and allows for recovery of CO₂ after extraction is complete.
- Easy to clean – All stainless steel construction. Vessels incorporate mixers and quick opening closing mechanisms. All tubing can be removed and re-secured for thorough cleaning. Separator collection vessels use FDA sanitary fitting and connections.
- Reliable – VETV® (Vessel Expansion Technology) – no constrictions or regulating valves to cause clogging of the system and loss of production time.
- Efficient – Regenerative heat transfer significantly reduces overall energy consumption. Insulated vessels and water recirculation allow for capture and transfer of heat through extraction cycle.
- Effective – Extraction media is contained in extraction vessel with integral filters – filters also act as a liquid CO₂ dispersant to avoid channelling in the product. Reversible flow through the extractor ensures all material is extracted.
- Flexible – Variable separation collection vessel system accommodate varying yield amounts. Jacketed vessels can be configured for larger differential temperature if needed.
- Easy to inspect and operate – design and visual indication of valve positions allows for easy assessment of flow paths and system configuration. No mysterious boxes with inlet and outlet connections on the outside.
- Modular – additional extraction vessels can be added to the system with no welding required.
- Small footprint – systems are designed to minimize space requirements – all operations occur from the front of the system.
- Production friendly – integral weighing scale and system timer help users efficiently run their extractions.

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System Specifications:

Extraction Vessel

- Multiple vessel configurations available: 5 liter, 20 liter, two 5 liter or two 20 liter vessels
- Volume
 - 5L vessel holds up to 5 pounds of dry ground material
 - 20L vessel holds up to 12 pounds of dry ground material
 - NOTE: vessel does not need to be full in order to perform an extraction
- Pressure: maximum pressure: 2000 psi (137 bar)
- Temperature: max: 160F (71C)
- Materials: 304 stainless steel. Vessel interior is polished to food grade (6-CL)
- Claws: Hammer Union (commonly used in an industry industry for temporary grip) is used with 10000 lbs
- Sealing mechanism: self-energizing o-ring seals. Buna-N material
- Filter: integral filter on closure needs 20 micron standard coffee size 3.0 micron
- Temperature measurement: internal type thermocouple senses actual extraction temperature
- Capacity: 20L vessel: 18.1 liters (4.5 gallons); 5L vessel: 4.54 liters (1.2 gallons)
- Safety: non-soluble spring loaded safety relief valve prevents accidental over-pressurization
- Addition of a second Extraction Vessel can be used to double system capacity

CO2 Recirculation Pump

- Flow rate: 15 GPM (0.5 w)
- Construction: hydraulic actuated diaphragm
- Materials: all wetted parts are 316 stainless steel
- Filter: coalescing filter on inlet to minimize oil introduction
- Safety: non-soluble spring loaded safety relief valve prevents accidental over-pressurization

Separators

- 2 separator: standard on each unit. Larger collection can be separator available
- Volume: Separator = 5L. Separator = 2 x 2.5 L liters
- Pressure: maximum pressure: 2000 psi (137 bar)
- Temperature: up to 160F (71C)
- Materials: 304 stainless steel
- Claws: FDA sanitary style belted
- Sealing mechanism: sanitary gasket, o-ring silicone
- Safety: non-soluble spring loaded safety relief valve prevents accidental over-pressurization

Separation Mechanism

- Flow path from extractor to 1st separator is common diameter with no constrictions. Separator acts in its separation using centrifugal separation and depressionation

Heat Exchangers

- Construction: tube in tube style
- Materials: 316 stainless steel
- Cooling/Heating media: water

Chiller/Heater

- Recirculating chiller/heater
- Temperature range: -10C to 30C (14F to 58F)

Dimensional Information

- 5L vessel configurations

20L Vessel Configurations

- 20L vessel configurations

Control System

- Functions: Fully automatic Programmable Logic Controller (PLC) touch screen interface with first level safety functionality and user programmable pressure, temperature and time. Also has built in hour and maintenance timers, electronic weighing scale and alarm log.
- Safety: pressure transducers monitor system pressure and shut down system to prevent accidental over pressurization.
- Optional: Data acquisition.

User Supplied System Requirements

- Extractor Electrical: 115V AC (or by 115V)
- Chiller/Heater Electrical: 220V AC 1 phase 50/60hz 5A Plug is NEMA 6-15R
- CO₂: Gaseous CO₂ (no dip tube) food grade or better. No regulator needed.
- Dispensing Pump Electrical: 220V 1 phase 50A service Plug is NEMA 6-50R

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Security Plan

Kanna

8001 Highway 50 East

Carson City, NV 89701

Prepared By:

Tim Kolakowski

All Pro Security, Inc.

1295 East Moana Lane Suite D

Reno, NV 89502

NV License 56430

COMPANY INTRO:

All Pro Security, Inc.: Since inception date of Sept. 2002, with over 40 years of combined experience we provide advanced on-time installations needed to protect people and property at the fullest ability. We are a full service design, install and service company. The applications we provide are security, fire, monitoring, access control and video solutions. We design and complete the installation to each customer's needs and requirements by any local and federal regulations per industry standards. Our 24/7 service and dedication to our customers, quality and on-site support are a few of the many advantages to having All Pro Security, Inc. as your full service security provider.

Proposed Security Plan:

Intrusion Detection System: The system will consist of Honeywell security panel (Vista 20P). The panel will communicate via a Honeywell GSMV4G GSM cellular radio that communicates in Contact ID format. This combination panel/communicator transmits all signals (ie: alarm, trouble, and test) to Rapid Response Monitoring. Both Underwriter Laboratories (UL) and Factory Mutual (FM) certify rapid Response Monitoring central station.

The system will send a test signal to the central station from both the main control panel and the GSM radio on a 24-hour basis. The back-up power supply will also be capable of supplying power in the event of power loss for a period of 24 hours. Once power is lost an "AC Loss" signal will be sent to the central station and the proper persons will be notified.

The vault area will have a separate partitioned portion of the system which will allow this area to be armed at all times when it is not occupied.

The system will have the following levels of protection:

- A. Exterior Door Contacts: In the event of breach during after hours
- B. Interior Door Contacts: Vault Area Protection for higher level employees with access
- C. Motion Detection: For Common Areas and near doors.
- D. Glass Break Detection: In areas with any glass to outer building perimeters.
- E. Panic Buttons: Remote and Stationary in event of a breach of security and imminent danger

Any signals (i.e. Bypassing of zones, low battery, loss of AC, Alarms) will be sent via text or email to any owner or manager as requested.

Access Control System: The Access Control System will be The Honeywell NetAXS-123. This panel is self-contained and is programmed on-site with a web browser. All access cards will be programmed based on door location, schedule and employee duties, limiting the ability of unauthorized entry into a secure portion of the building. For high security areas (ie. Vault) employees will be required to present their card/keyfob followed by presenting their fingerprint in order to gain entry. Further, these areas will then require the alarm system being disarmed. This will provide redundancy on the security of these areas.

The access control system will store a log of all authorized access to doors as well as unauthorized attempts to access a door. All events are time stamped with date and time.

Upon approval of Authority Having Jurisdiction, there will be an extra security measure at the two employee entrances to avoid the breach with multiple persons entering, by means of only allowing one

door to be open at one time. In case of fire, the exit doors will have an emergency relay to cut power to the mag-locks to enable egress out and ingress in for fire department as needed. AHJ may require additional egress for emergency if this type of system is enforced.

IP Video Surveillance System: The video security surveillance system will operate 24 hours a day, 7 days per week. The cameras will be positioned on the exterior and interior of the building. Some areas which will be covered but not limited to are the parking lot, all exterior sides of the building, all entrances to and from the building and all interior rooms and hallways.

The Exacq Video Server will have the following features: The hard drives are a RAID 5 configuration providing a high level of reliability. Having all storage of video on a main server allows for this device to be stored in a very high security area preventing the ability of being tampered with by unauthorized individuals. This server and all POE network switches will have an uninterrupted power supply (UPS) so that it will continue to operate in the event of power loss. All cameras are powered by "power over Ethernet (POE)" so they are also protected from a loss of building power.

The software installed on the server is Exacq IP video surveillance and security platform, is a comprehensive video management system that combines powerful network video recorders (NVRs) with physical security information management (PSIM) functionality. Ocularis represents the latest evolution in IP video surveillance and security. As an integrated video and event management platform, it includes a full-fledged video management system (VMS) for streaming, recording and managing an unlimited number of cameras at multiple sites. Ocularis' straightforward workflow provides a collaborative environment in which video and alerts from across the organization are converted into meaningful events, for efficient shared handling and building a video-evidence case file. Monitors installed will all be 19" and larger. Access into the software is password protected.

Exterior cameras will consist of Arecont Vison 180 degree cameras and HikVision 3 MP fixed cameras protecting the entire perimeter. Interior cameras will consist of HikVision 1.3 and 3MP vandal domes in all areas inside.

Closing

All Questions regarding the proposed schedule of protection can be directed to:

Tim Kolakowski
President
All Pro Security, Inc.
775-560-6623



5SEAT INVESTMENTS LLC

KANNA SECURITY NARRATIVE

FILE # SUP 15- 013 MME Production

8001 Hwy 50 East Carson City, NV

To prevent unauthorized access to medical marijuana at a medical marijuana establishment, the Kanna MME project will have:

1. Security equipment to deter and prevent unauthorized entrance into limited access areas that includes, without limitation:
 - (a) Devices or a series of devices to detect unauthorized intrusion, which may include a signal system interconnected with a radio frequency method, such as cellular, private radio signals, or other mechanical or electronic device.
 - (b) Exterior lighting to facilitate surveillance.
 - (c) Electronic monitoring including, without limitation:
 - (1) At least one 19-inch or greater call-up monitor;
 - (2) A video printer capable of immediately producing a clear still photo from any video camera image;
 - (3) Video cameras with a recording resolution of at least 704 x 480 or the equivalent providing coverage of all entrances to and exits from limited access areas and all entrances to and exits from the building, capable of identifying any activity occurring in or adjacent to the building;
 - (4) A video camera at each point of sale location allowing for the identification of any person who holds a valid registry identification card or his or her designated primary caregiver purchasing medical marijuana;
 - (5) A video camera in each grow room capable of identifying any activity occurring within the grow room in low light conditions;
 - (6) A method for storing video recordings from the video cameras for at least 30 calendar days;
 - (7) A failure notification system that provides an audible and visual notification of any failure in the electronic monitoring system; and
 - (8) Sufficient battery backup for video cameras and recording equipment to support at least five minutes of recording in the event of a power outage.
 - (d) Immediate automatic or electronic notification to alert local law enforcement agencies of an unauthorized breach of security at the medical marijuana establishment in the interior of each building of the establishment.
2. Policies and procedures:
 - (a) That restrict access to the areas of the establishment that contain marijuana to persons authorized to be in that area only;
 - (b) That provide for the identification of persons authorized to be in the areas of the establishment that contain marijuana;
 - (c) That prevent loitering;
 - (d) For conducting electronic monitoring; and
 - (e) For the use of the automatic or electronic notification to alert local law enforcement agencies of an unauthorized breach of security at the medical marijuana establishment.



5SEAT INVESTMENTS LLC

KANNA SECURITY NARRATIVE *cont;*

FILE # SUP 15- 013 MME Production

8001 Hwy 50 East Carson City, NV

Lighting;

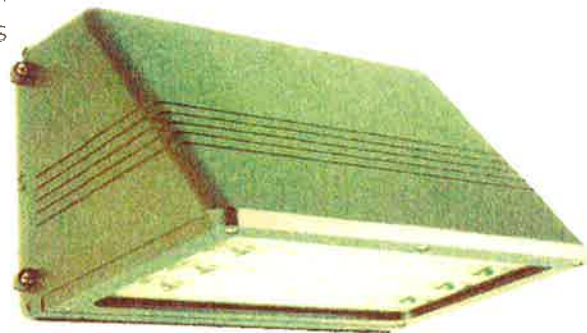
Kanna will install sufficient lighting outside of the registered premises to be used each day between sunrise and sunset that adequately illuminates the cultivation center and its immediate surrounding area, including storage areas, parking lots, and entry areas. Specifically, Kanna will install ViVidleds Wall Mount77-5036 1m-700ma security lights.

Exterior lighting will be installed near video surveillance devices to ensure proper illumination for the identification of people, vehicles and license plates within 40 feet of the building. The outdoor lighting will be hooded to deflect light away from adjacent properties. Sufficient exterior lighting serves as a deterrent for robbery and burglary.

LED Features:

- Highest quality, long life CREE XTE R2 LEDs
- UL and CUL Listed for wet location - IP65
- Long lasting die-cast aluminum housing
- Architectural bronze UV resistant powdercoat finish
- Position adjustable for 2 different light distributions
- Heavy duty silicone foam gasket included
- Extremely long life stylized design
- High quality thermal heatsinks
- Rugged product construction throughout
- Excellent CRI: RA>75
- Low Tj for long life and low lumen depreciation
- Low starting temperature: -30C
- IC controlled LED circuits
- 3 year system warranty

Wall Mount Trapezoid Cut-off Series

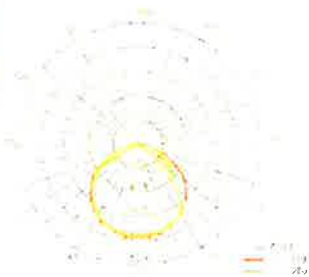


LED POWERED BY:
CREE

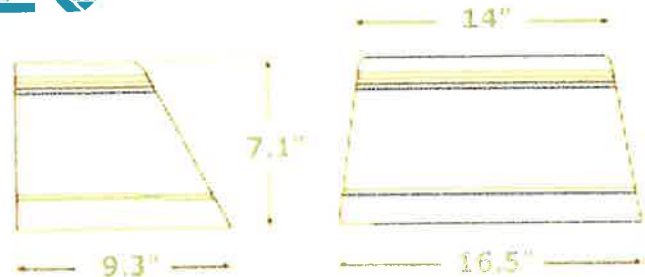


CU TRILUMIN

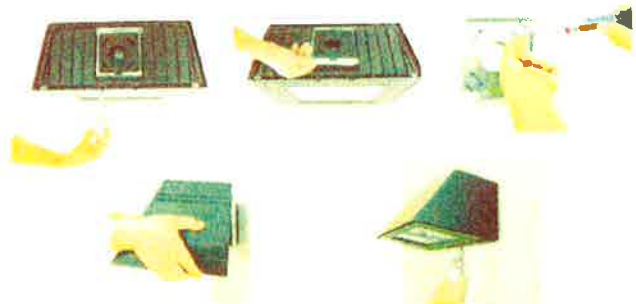
PHOTOMETRIC



Average Beam Angle(50%): 108°



Simple One Person Mounting



Models:

- VVD31115FR: 15 LEDS - 40W - 2752 Lm - 700mA
- VVD31130FR: 30 LEDS - 77W - 5036 Lm - 700mA

Ordering:

Part #	Color Temp	Voltage
VVD31115FR	N - Natural - 4700K	UNV - 100-277V
VVD31130FR		

Ordering Example: VVD31115FR-N-UNV



exacqVision

Powerful, Intuitive IP Video Surveillance Software & Servers
From Complete Single Camera to Enterprise Solutions

Product Brochure



Now Featuring

Connect

The power of IP cameras with the simplicity of Analog



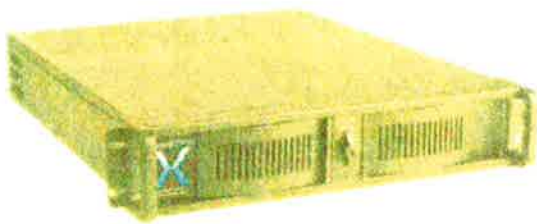
exacq

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exacqVision A-Series

IP Camera Servers
IP Cameras and Encoders

exacqVision A-Series IP Camera Servers

Reliable, Professional Grade Systems

Key Features & Benefits:

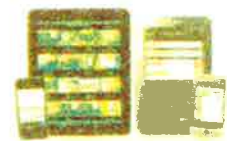
All-in-One System — Video recording, web/mobile client hosting, and local live video display from the same server.

Network Video Recorders and Servers — IP Camera Servers — Record IP cameras and encoders. Live and recorded video viewable through free exacqVision client application.

Up to 64 IP Camera Servers — Up to 64 IP cameras per server. Compatible with over 1,000 IP camera models. Continuously record up to 950Mbytes of video. Use our configuration calculator to find the perfect exacqVision server for your application.

Enterprise-Class Storage — Up to 3 TB of storage per server using continuous duty enterprise-class drives. Optional RAID on 4U models.

Client Compatibility — Remote and Native Client Devices — Access live and recorded video on multiple client PCs with free Windows, Mac or Linux client application. ExacqVision web server application pre-installed on the server. Access video through a web browser or free Apple iPhone/iPad and Android apps.



Professional On-Line 24/7 Support — Exacq 4U customer support ideal for server rooms with optional rack mounting kit. Compact design chassis ideal for space constrained applications.

Unlimited Scalability — Pre-loaded with exacqVision Professional video management system (VMS) software. Easily add additional IP camera licenses and change configurations. Add unlimited additional servers for greater capacity or dispersed geographic location. Manage individual systems from the same user interface. Upgrade to ExacqVision enterprise to easily manage multiple servers simultaneously.

1U to 4U Upgrade Option — Available CPU upgrade option increases local client and web server performance up to 100% and enables hosting of Certified Software Applications (CSA) such as video analytics or point-of-sale interfaces on exacqVision servers. CSAs are software developed by Exacq technology partners and tested by Exacq for reliable operation on exacqVision servers. Save hardware costs, rack space, and support costs by loading multiple applications on one exacqVision server.

3 Year Hardware Warranty, 3 Year Software Subscription Agreement (SSA) — 3-year hardware warranty and SSA included. Update client, server and web server software with the latest exacqVision software features at no additional cost during the 3-year SSA period.

www.exacq.com

exacq
Technologies

TECHNICAL SPECIFICATIONS

A-Series IP Camera Servers

Camera Settings	2U	4U	Desktop
Maximum IP Cameras	Expandable up to 64 cameras per server (data dependent)		
Included IP Licenses	4	8	4
Server	2U	4U	Desktop
Pre-Loaded/MS Software	exacqVision Professional (standard), exacqVision Enterprise (extra optional)		
Typical Rated Storage Rate/Array	200Mbps / Minimum 450Mbps / RAID	250Mbps / Minimum 550Mbps / RAID	250Mbps / Minimum 500Mbps / RAID
Linux/Windows Display Resolution	1920x1080 (Windows), 1280x800 (Linux) 1920x1080 (Windows), 1280x800 (Linux) / Optional CPU		
Maximum Hard Drives	4	4	2
Maximum Storage	16 TB	32 TB	8 TB
Monitor Output	1 DVI, 1 VGA, 1 Display Port, maximum 2 simultaneous monitors		
Operating System	Windows 7/MSDN, Windows 8/MSDN, Optional: Ubuntu Linux 10.04		
Operating System Drive	32 GB SATA (Linux), 60 GB SATA (Windows)		
Processor	2x Intel® i5 (optional Intel® Core i5 or i7 optional)		
RAM	4GB (minimum 2GB required)		
MS	Microsoft® Office 2010		
USB Drive	Optional 2x 2GB or 4GB		
Case CPU Fan	included		
Serial Interfaces	N/A	N/A	2x
Audio Output	included		
Keyboard & Mouse	included		
General	2U	4U	Desktop
Dimensions (width)	21.25" x 17.75" x 17.75" 540mm x 450mm x 450mm	21" x 17.75" x 17" 533mm x 450mm x 430mm	17.75" x 17.75" x 17.75" 450mm x 450mm x 450mm
Weight	27 lbs net 100 lbs max	44 lbs net 29 lbs max	16 lbs net 55 lbs max
Regulation	CE (Class B), FCC (Class B), RoHS		
Mounting	12U rack or VESA (optional)		
Power Supplies	Single (2U/4U) or Dual (Desktop)		
Power Input	1x 120V AC 15A 60Hz 1x 240V AC 15A 50/60Hz	2x 120V AC 15A 60Hz 1x 240V AC 15A 50/60Hz	1x 120V AC 15A 60Hz 1x 240V AC 15A 50/60Hz
Operating Temperature	40° - 100°F (4° - 38°C)		
Storage Temp	5° - 130°		
Compliance: Green, RoHS, Energy Star	Meets or Exceeds Energy Star 2009, RoHS, and Energy Star Linux, Ubuntu MS Office		

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exacq
 Technologies

www.exacq.com 05-13

	Start	Professional	Enterprise
System			
Star Camera Protection	✓	✓	✓
Max Camera Connections Per Client	10	20	50
Windows & Linux Support Compatibility	✓	✓	✓
Live Windows (Data & Meta-Data)	✓	✓	✓
Hardware-Serial Viewing of Live Stored Events	✓	✓	✓
Compatible with True-Codec Mobile App	✓	✓	✓
EasyConnect Auto-Detect Support for Compatible IP Camera	✓	✓	✓
Display/Fullscreen Live Support (Data & Metadata)	✓	✓	✓
Client Interacts with Live/Play	✓	✓	✓
Client Interacts with Playback	✓	✓	✓
Live Storage	✓	✓	✓
Live Storage Archiving	✓	✓	✓
Extended Storage	✓	✓	✓
Lighting	✓	✓	✓
Per Camera Video Map Annotation	✓	✓	✓
Multi-Track	✓	✓	✓
Custom User Groups	✓	✓	✓
Group Policy Management	✓	✓	✓
Local Storage	✓	✓	✓
Local Administration (System Health Check)	✓	✓	✓
Remote/Local Surveillance Application Support	✓	✓	✓
ISAP Features			
Integrated Service Management	✓	✓	✓
Integrated Service Discovery	✓	✓	✓
Integrated Policy Management	✓	✓	✓
ISAP Design Structure	✓	✓	✓
Compatible with existing third-party applications	✓	✓	✓
Supports 4K/8Kps (included) Compression Support	✓	✓	✓
Supports 4K/8Kps (included) 240 FPS Support	✓	✓	✓
Live View			
Area Configuration (Metadata Annotation)	✓	✓	✓
HD/Quad/4K Support	✓	✓	✓
Supports 4K/8Kps (included) Support	✓	✓	✓
Area & Mask Annotation	✓	✓	✓
Event Linking via Detect Match	✓	✓	✓
Event Linking via Video Search & Search Index	✓	✓	✓
Event System & Data Export Data Integration	✓	✓	✓
Event System	✓	✓	✓
Multi-Viewing	✓	✓	✓
Event History Search	✓	✓	✓
Live View Audio	✓	✓	✓
Area	✓	✓	✓
Search, Playback, Export & Archive			
Search/Playback/Export	✓	✓	✓
Thumbnail & Timeline Event Search	✓	✓	✓
URL & API Event Feed Search	✓	✓	✓
Multi-View Playback	✓	✓	✓
Event API	✓	✓	✓
Event to API to API	✓	✓	✓
Event to API	✓	✓	✓
Multiple Camera Support	✓	✓	✓
Case Management	✓	✓	✓



Enterprise System Manager (ESM)

Enterprise System Manager (ESM) is a powerful tool for managing your surveillance system. It provides a central interface for configuring cameras, users, and system settings. ESM also offers advanced features like event search, playback, and reporting.



USB I/O Module

The USB I/O Module allows you to connect your surveillance system to a computer via a USB port. This is useful for easy installation and configuration. It also provides a secure connection for data transfer.



Surveillance Keyboard

The Surveillance Keyboard is designed for use in surveillance environments. It features a rugged design and is resistant to tampering. It provides a convenient way to interact with the surveillance system's interface.



Exacq Mobile

Exacq Mobile is a mobile application that allows you to view and manage your surveillance system from your smartphone or tablet. It provides a user-friendly interface for checking camera status, viewing live feeds, and searching through event history.



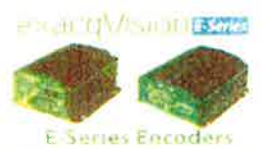
ExacqVision-Edge Edge

ExacqVision-Edge Edge is a compact, edge device that can be installed directly on a camera. It provides local storage and processing capabilities, reducing the need for a central server. It also offers easy configuration and management.



ExacqVision Virtual

ExacqVision Virtual is a software solution that allows you to run the ExacqVision software on a virtual machine. This provides flexibility in deployment and makes it easier to integrate with existing IT infrastructure.



E-Series Encoders

The E-Series Encoders are high-performance video encoding devices. They support a wide range of video formats and resolutions, ensuring optimal performance and reliability. They are easy to install and maintain.

Try exacqVision Now!
 Connect to our demo servers or install the server software to your own computer and IP cameras with a full-featured free trial license. Try the exacqVision web browser client or the free Exacq Mobile app.
www.exacq.com/tryexacqvision

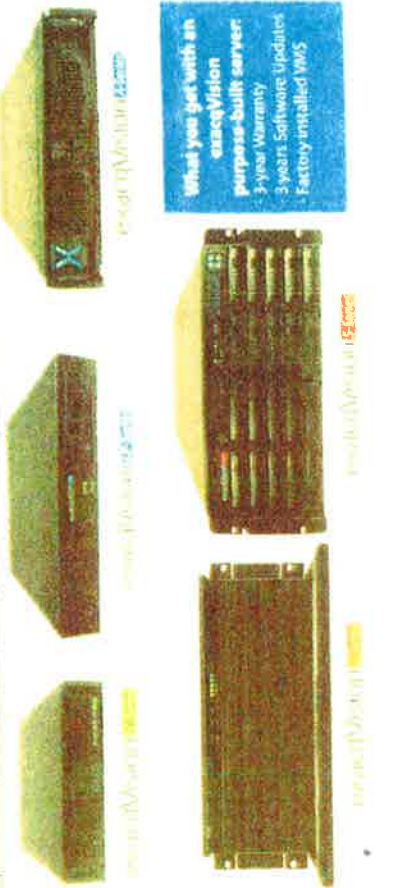
exaccqVision

100% 1080p 60 FPS software (license) level

Feature	S-Series			A-Series			BLP-Series			Z-Series		
	6S	7S	8S	9S	10S	11S	12S	13S	14S	15S	16S	17S
Form Factor	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U	1U
Video Inputs	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI
Video Outputs	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI	2x HD-SDI
Audio Inputs	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog
Audio Outputs	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog
Audio Inputs	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog
Audio Outputs	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog	2x Analog
Max IP Streams	16	16	16	16	16	16	16	16	16	16	16	16
Installed IP Camera Drivers	16	16	16	16	16	16	16	16	16	16	16	16
Alarm Inputs / Outputs	16	16	16	16	16	16	16	16	16	16	16	16
File Location / Video Software	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network
System Time / Storage / Retention	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network
Serial / Smart / Display / Retention / CPU	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network	Local / Network
Max Storage	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB
Responsive API	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
API Configuration	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operating System	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows
Operating System Condition	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows
Monitor Output	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
NIC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Redundant Power Supply	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Serial	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Audio Output (Server)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

S-Series - Networked Video Storage for exaccqVision Recorders

Feature	6S	7S	8S	9S	10S	11S	12S	13S	14S	15S	16S	17S
Archiving - Max Video Recorders	16	16	16	16	16	16	16	16	16	16	16	16
Archiving - Max Data Rate (Mbps)	256	256	256	256	256	256	256	256	256	256	256	256
Archiving - Designed for ESX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ext. Storage - Max Video Recorders	16	16	16	16	16	16	16	16	16	16	16	16
Ext. Storage - Max Data Rate (Mbps)	256	256	256	256	256	256	256	256	256	256	256	256
Ext. Storage - Designed for ESX	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Ext. Storage - Minimum Video Recorder OS	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows
File-based VMS Software	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
ESX Management Capabilities	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Storage (Maximum, Theoretical)	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB
NIC	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Operating System	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows	Windows
Maximum Power Supply	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB	16TB



What you get with an exaccqVision purpose-built server:
 - 3-year Warranty
 - Factory-installed VMS

SurroundVideo Omni

Highlighted Features



SurroundVideo Omni is a compact, ceiling-mounted camera that provides 360-degree coverage in a single camera. It is ideal for indoor and outdoor applications, including hallways, intersections, and corners.

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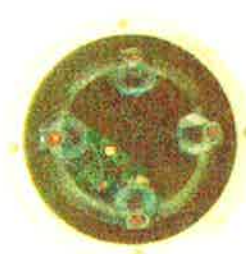
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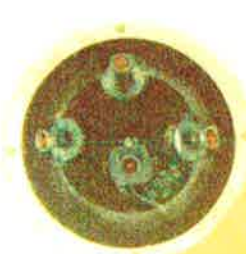
SurroundVideo Omni Versatility

The SurroundVideo Omni camera is a compact, ceiling-mounted camera that provides 360-degree coverage in a single camera. It is ideal for indoor and outdoor applications, including hallways, intersections, and corners.

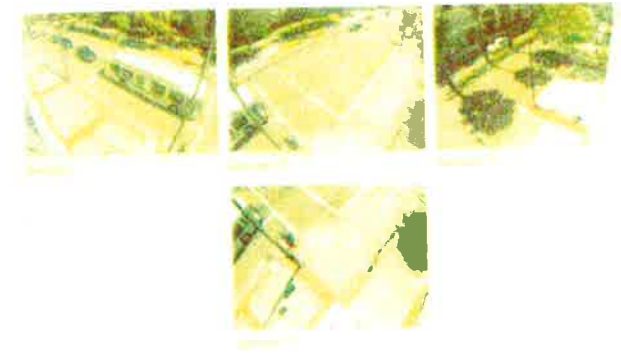
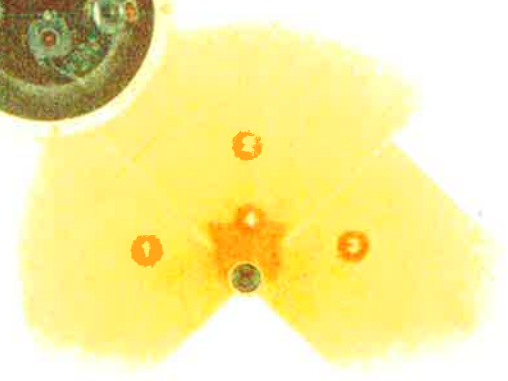
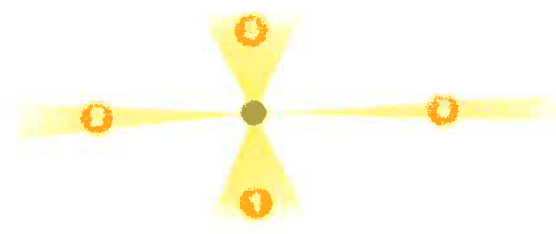
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Indoor Hallway Intersection Layout



270° Outdoor Corner Layout



Reduce the Number of Cameras to Improve Coverage and Simplify Installation

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SurroundVideo® Omni Megapixel IP Cameras

Accessory Configurations



Ceiling Mount



Wall Mount



Pole Mount



Corner Mount



Surface Mount (Standard)

Accessories

SO-CAP

AV-WMJB

AV-PMJB

AV-PMA

AV-ORMA

AV-EBA



Lens Options

Focal Length	2.8mm	4mm	6mm	8mm	12mm	16mm
F Stop						
Horizontal FOV	1.3MP					
	1080p					
	1080p WDR					
	JMP					
	JMP WDR					
	5MP					
Option						



Global Sales and Support

- USA
- Canada
- UK
- France
- Germany
- Spain
- Italy
- Japan
- China
- India
- Australia

- Product Support
- Technical Support
- Manuals & Downloads
- Webinars
- Training
- Partners



MegaDynamic Wide Dynamic Range (WDR)

The AV1000 MegaDynamic Wide Dynamic Range (WDR) image processing technology captures both bright highlights and deep shadows, providing superior contrast and detail. This technology is designed to handle a wide range of lighting conditions, from bright sunlight to deep shadows, ensuring that all details are captured and visible in the final image. This technology is available on the AV1000 and AV1000-08 models.

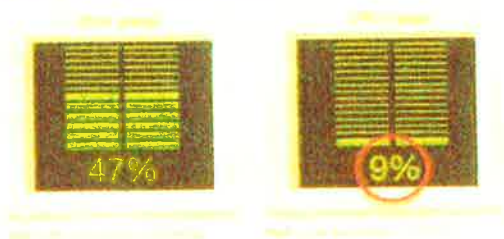


Enhanced Low Light Performance

The AV1000 Enhanced Low Light Performance image processing technology captures more detail in low light conditions, providing superior contrast and detail. This technology is designed to handle a wide range of lighting conditions, from bright sunlight to deep shadows, ensuring that all details are captured and visible in the final image. This technology is available on the AV1000 and AV1000-08 models.



H.264 Decompression Example



Compliant H.264 Compression by Arecont Vision

Arecont Vision's H.264 compliant compression technology provides superior image quality and performance. This technology is designed to handle a wide range of lighting conditions, from bright sunlight to deep shadows, ensuring that all details are captured and visible in the final image. This technology is available on the AV1000 and AV1000-08 models.

Model Comparison

Model	Sensor	Full Resolution	Max Frame Rate @ Full Resolution	Minimum Illumination	Lens	H.264 MJPEG	Day/Night	WDR	Blind Spot
AV101700N-NL	1/3" CCD	700x700	30 FPS	0.05 Lux	3.6mm	Yes	Yes	Yes	None
AV101700N-08	1/3" CCD	700x700	30 FPS	0.05 Lux	3.6mm	Yes	Yes	Yes	None
AV101700N-08	1/3" CCD	700x700	30 FPS	0.05 Lux	3.6mm	Yes	Yes	Yes	None
AV201700N-NL	1/3" CCD	700x700	30 FPS	0.05 Lux	3.6mm	Yes	Yes	Yes	None
AV201700N-08	1/3" CCD	700x700	30 FPS	0.05 Lux	3.6mm	Yes	Yes	Yes	None
AV201700N-08	1/3" CCD	700x700	30 FPS	0.05 Lux	3.6mm	Yes	Yes	Yes	None

Options

- NL
- 28
- 08



Mastering the Way We See the World

DS-2CD2112-I

1.3MP Outdoor Dome Camera



Key features

- 1.3 Megapixel (1280 x 960) High Resolution
- HD 720p Real-time Video
- True Day / Night Auto Switch
- IP66 Ingress Protection
- IR LEDs up to 30m
- Vandal-proof Housing

Dimensions



Accessories

Specifications

DS-2CD2112-I	
Image sensor	1/2" progressive scan CMOS
Min. Illumination	0.026 lux@F2.0 AGC ON 0 lux with IR
Shutter time	1/30s - 1/100,000s
Lens	4mm@F2.0, angle of view: 52° (2.8mm, 6mm, 8mm available)
Lens cover	M12
Angle adjustment (Z-axis)	Pan: 0° - 355°, tilt: 0° - 15°
Day & night	ICR
Video compression	H.264 / MJPEG
Bit rate	32 Kbps - 16 Mbps
Dual stream	Yes
Max. image resolution	1280 x 960
Frame rate	25 fps @ 1280 x 960 / 30 fps @ 1280 x 720
Image settings	Saturation, brightness, contrast, sharpness, hue, gamma, white balance, web browser
Network storage	NAS
Network port	10/100 Mbps, auto negotiation, 100Mbit/s, IR, address conflict, storage protection
Protocols	POE/P, HTTP, DHCP, DNS, DDNS, RTP, RTSP, PPPoE, SMTP, NTP, SNMP, HTTPS, RTSP, RS232C, GDM
System compatibility	ONVIF, PSIA, CGI
General functions	Pictureless, heartbeat, motion, user authentication, video mask, watermark
Communication interface	1 RJ45 10M/100M Ethernet port
Operating conditions	-30°C - 60°C (-22°F - 140°F), humidity: 90% or less (non-condensing)
Power supply	12 VDC ± 10%, PoE (802.3af)
Power consumption	3W (4W with IR LED) (max)
Mounting bracket	180°/360°/0°/90°/180°/270°/360°
Weight	approx. 200g (0.44 lbs)
Dimensions	Ø 120 x 32 mm
Color	White

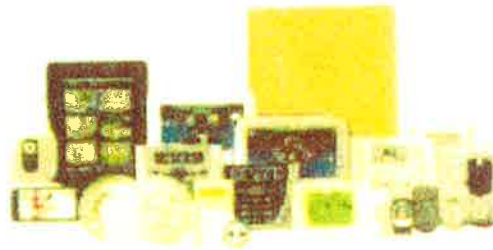
Available models

DS-2CD2112-I (1.3MP)

Honeywell

VISTA-20P

VISTA® CONTROL PANEL



The high capacity, feature-rich VISTA-20P lets you deliver more value to your customers on each and every sale with up to 48 zones of protection, Internet uploading/downloading, graphic keypad support and dual partitions. VISTA-20P gives you the ability to send alarm signals and upload/download via an Internet Protocol (IP), improving the speed at which information can be delivered to and from the control panel.

In addition, the VISTA-20P, used with an AlarmNet™ Internet or 4G communicator, can be installed in premises without TELCO lines. The panel's installation advantages, innovative end-user benefits and robust system capacity make the value-priced VISTA-20P an ideal choice for higher end installations.

FEATURES

- IP alarm reporting and uploading/downloading capability for Internet and intranet use via GSMV4G, T543-ENT, GSMV4G or GSMX4G
- Supports four graphic touchscreen keypads
- Wireless keys can be programmed without using dials
- Eight on-board hardwired zones standard, 15 when Zone Doubling feature is used:
 - 10 hardwire expansion zones
 - 10 wireless expansion zones
- Two low current, open-drain trigger outputs
- 100 Event Log viewable at system keypads with immediate search
- 48 system user codes assignable to either partition
- Expandable to 48 total zones when used with hardwired and/or wireless expansion modules
- Two independent partitions plus a common partition:
 - Global Arming from any system keypad
 - Go to function to view or operate one partition from the other
 - Separate partition account numbers

- 16 output devices
 - Relays (Model 4204 Relay Modules, 4229 Expansion Module)
- Four installer-configurable zone types allows the installer to create custom zone types by assigning all zone attributes
- Supports four wire and up to 16 two-wire smokes
 - Works with Sentrol CleanMe™ maintenance signal
- Multiple actions on output devices depending on system state
 - Turns lights off when system arms
 - Turns the alarm light on when system disarms
 - Flashes same lights when system is in alarm
- Built-in phone line cut monitor with programmable delay and annunciation options
 - Display on system keypads
 - Trigger local sounders
 - Trigger system bell

Security Dealer Features

- Automatic System Load Shed
 - During extended AC power fail the system battery will be disconnected to prevent irreversible battery failure. Reduces service calls to replace batteries.

- Dynamic Signaling
 - Reduces red alarm reporting to one central station when multiple reporting methods are used, e.g. digital panel and AlarmNet™

Valuable End-user Features

- Viewable on system keypads
 - Event log viewable
 - Time and date display
 - Event log
- Auto keypad backlighting on alarm
- Keyswitch arming
- Programmable single buttons and single-button arming
- Supports a variety of wireless remote controls for single-button operation
- User Scheduling
 - Customizable time delays
 - Auto arming
 - User access time windows
- VIP Module allows system control from any touch tone phone
- Chime by zone
- Fully compatible with Honeywell Total Connect™ Remote Services
 - Requires basic alpha keypad

VISTA-20P

VISTA® CONTROL PANEL

SPECIFICATIONS

Electrical

- Aux. power: 12VDC, 600mA maximum
- Seven-hour standby at 400mA aux. load with four amp-hour battery
- 16 5VAC/25VA transformer
- Alarm circuit: 12VDC, 2.0 amps max. For UL notations, combined aux. and alarm circuit cannot exceed 2.0A

Output Control

- Supports up to four relay boards (up to 16 relays)
- Optional X-10 transformer interface (part no. 1300) may be used to control up to 16 X-10 receiving devices

Zones

- Eight hardwired zones (13 with zone doubling)
- Selectable response times: 10 msec, 30 msec, 750 msec
- Assignable to any partition
- 20 selectable zone types and 200 configurable zone types
- Programmable swinger suppression

Expansion Devices

- 40-9 - Eight relays; 9 zones - 10mA
- 4204 - Up to four relays - 15mA standby (each active relay draws an additional 40mA)
- 4229 - Eight relays; 8 zones and 160 relays - 36mA (each active relay draws an additional 40mA)

Accessories

- GSM4G InLine and Digital Cellular Communicator with Remote Service Capability
- 1845i-ENT Enterprise InLine Communicator

- GSM4G Digital Cellular Communicator with Remote Service Capability
- GSMX4G Digital Cellular Communicator for VISTA Control Panels
- 5981ENL RF Receiver supports up to eight zones - 50mA
- 5981ENM supports up to 16 zones - 50mA
- 5981ENR supports up to 48 zones - 50mA
- 5983 Transceiver supports up to 40 zones - 30mA

Keypads

- 4182 Custom Alpha Security Keypad - 40mA/120mA
- 4162i Voice Custom Alpha Security Keypad - 60mA/150mA
- 4162PF Custom Alpha Receiver Security Keypad - 120mA/210mA
- 4152 Fixed-English Security Keypad - 10mA/70mA
- 4152i Voice Fixed-English Security Keypad - 30mA/130mA
- 4152PFR 152RFR Fixed-English/French Receiver Security Keypad - 30mA/105mA
- 4152EN 4152NFR Fixed-English/French Security Keypad with Mechanical Zone - 35mA/200mA
- 4143 Fixed-English LCD - 30mA/55mA
- 6283 Color Graphic Touchscreen keypad with voice
- Tuxedo Touch™ (TUXM) Color Graphic Touchscreen Security Keypad with Home Business Controller (white)
- Tuxedo Touch™ with Integrated AM-FM (TUXMFM) Color Graphic Touchscreen Security Keypad with Home Business Controller with Integrated AM-FM (white)

Agency Listings

ETL listing

- Residential Fire and Burglar - Household Fire Warning System Units - ANSI A 965-2000/30-26 (5th edition, with revisions up to 2004/04-29)

Smoke Detectors

- Supports up to 16 two-wire smoke detectors
- Supports four-wire smoke detectors

Communications

- GSM4G InLine and Digital Cellular Communicator with Remote Service Capability
- 1845i-ENT Enterprise InLine Communicator
- GSMX4G Digital Cellular Communicator with Remote Service Capability
- GSMX4G Digital Cellular Communicator for VISTA Control Panels
- Touchtone dialer
- Formats supported:
 - ADEMOC 4 and 10
 - ADEMOC 4 - 1 Express
 - ADEMOC low speed
 - Session Reliance
- 4211-24-1 Single Line Ringing
- Ringing modes:
 - Split
 - Dual
 - Split Dual - Full panache detection
- Low battery reports: 2 - ADEMOC
- AC loss and external reporting supported

ORDERING

VISTA-20P Control Panel

VISTA-20PSIA Control Panel for CP-C1 SIA Certifications

For more information:
www.honeywell.com/security

Automation and Control Solutions
Honeywell Security Products Americas
2 Corporate Center Dr. Suite 100
P.O. Box 9040
Melville, NY 11747
1.800.467.5375
www.honeywell.com

VISTA-20P
October 2010
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Honeywell

NetAXS™

Web-based Access Control System



Honeywell's web-based access control offering now provides solutions for installations of any size. NetAXS™ enables users to manage their system **anywhere** there's an Internet connection—**with no dedicated PC costs**. The user-friendly design makes it **simple to install and easy to operate and maintain**. NetAXS gives you all the benefits of traditional access control such as helping you **secure your doors**, **manage employee access**, and **manage sites remotely**. It also lets you **pull reports easily** to meet compliance requirements. With a browser-based interface, your **learning curve and training time are significantly decreased**. And you don't have to **have a dedicated PC—simple to log on and you're ready to go**, securely—from the office or anywhere. NetAXS has been developed with an **installer-friendly design** that easily adapts to existing IT infrastructure and methods. This means **reduced installation and support costs**. Its superior

scalability means you can purchase the exact amount of access control you need now—and add doors later as business needs change. Plus, NetAXS integrates with Honeywell's fully-featured WIN-PAK software to enable more robust and sophisticated NetAXS integrations. So as your system grows, NetAXS grows with you.

System Highlights:

- **SIMPLE** Manage your access control anywhere with an internet connection.
- **SCALABLE** Purchase the exact amount of access control you need now, and easily add doors later.
- **FLEXIBLE** Compatible with WIN-PAK XLE, WIN-PAK SE, WIN-PAK PE and WIN-PAK PRO OS (managed access) software.

NETAXS OFFERINGS

ENCLOSURES and ADD-ON BOARDS

Doors	Model	Description
1 Door	NX1P*	NetAXS-123: One door, compact (plastic) enclosure
	NX1MPS	NetAXS-123: One door, standard (metal) enclosure with power supply and battery
2 Doors	NX1P*	NetAXS-123: One door, compact (plastic) enclosure —and—
	NXD1*	NetAXS-123: One door add-on board
	NX1MPS	NetAXS-123: One door, standard (metal) enclosure with power supply and battery —and—
	NXD1	NetAXS-123: One door add-on board
3 Doors	NX1MPS	NetAXS-123: One door, standard (metal) enclosure with power supply and battery —and—
	NXD2	NetAXS-123: Two door add-on board
4 Doors	NX4S1	NetAXS-4: 4 Door control panel (standard enclosure)
	NX4L1	NetAXS-4: Pre-wired 4 door control panel (deluxe enclosure)

1450 mA @ 12 VDC is the maximum current available to power strike reader(s) and input devices when using a 802.3at Power Over Ethernet (PoE) connection. If additional current is required, an external 12 VDC power supply is needed.

NetAXS™

Web-based Access Control System

SYSTEM BENEFITS



User Friendly

Easy to use landing page provides a user-friendly experience so you can provide end user training in less than 30 minutes. Whether you're showing customers how to set up the basic parameters such as time zones and access levels, or teaching them how to add or delete cards, everything you need is all located on one page. Simply log into your IP address and navigate the system like you would any other internet site.



Dynamic Screen Updates

With NetAXS, dynamic screens refresh data automatically without having to refresh the page. This allows status updates from NetAXS to be pushed out to all web screens automatically, without user interaction.

Alarms, events, inputs, outputs, and status screens all automatically update as information is received.

Data transfer between the controller and web browsers has been optimized to reduce bandwidth requirements, improving screen response times.



RS-485 or Ethernet Virtual Loop (EVL) with NetAXS-123

Ethernet Virtual Loop (EVL), a NetAXS-123 (5.0) feature for web-hosted systems (EVL is not supported by Win-PAK), allows up to 16 IP network connected NetAXS-120 controllers to be managed as a group. The group is called a Virtual Loop, as its functionality is similar to an RS-485 loop also featured with version 5.0 and previous releases of NetAXS firmware. NetAXS-120 administration panels operating EVL and on the same subnet as the gateway panel are automatically discovered by the gateway panel, greatly reducing installation time and making system expansion easy. Systems using NetAXS-4 or a mix of NetAXS-120 and NetAXS-4 must use RS-485 to not panels.



Door Access Modes and Options

NetAXS allows you to assign cardholders different levels of access. Supervisor access allows an employee to present their card, open the reader to give individual access, if the supervisor presents their card type, they enable access for their team during the specified time zone.

Escort access requires a supervisor escort (or a non-supervisor cardholder). The supervisor must present his card first, then the non-supervisor must present his card within ten seconds.

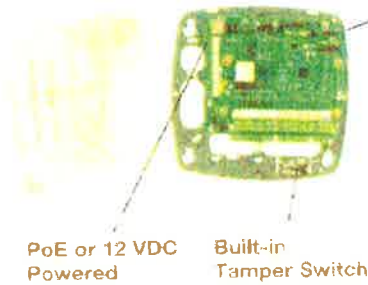
NetAXS™

Web-based Access Control System

ENCLOSURE OPTIONS

NetAXS-123

NetAXS-123
Compact Plastic Enclosure



PoE or 12 VDC
Powered

Built-in
Tamper Switch

Control Panel (NXC1)

- Ethernet Port: Connect to web browser or WIN-PAK software
- RS485 or Ethernet: Connect panels downstream and/or connect to WIN-PAK software
- USB Port: Easy setup and diagnostics from your laptop
- Color coded terminal labels
- Removable terminal blocks

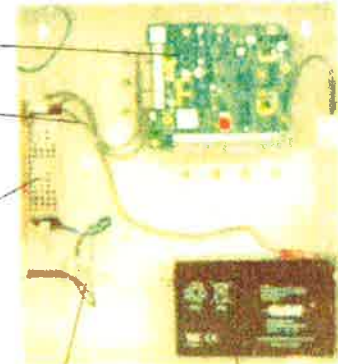
Multiple Tie-Down and Grounding Points

- Cleaner and more consistent installations

4 A, 12 VDC Power Supply

- Universal input (100-240 VAC)
- 3.5 A available to power accessories - over 1 A to power each door

NetAXS-123
Standard Metal Enclosure



Terminal Block
with Input Fuse

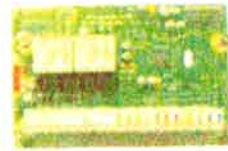
12V Battery
Backup

NetAXS-123 Add-On Boards

NetAXS-123
One Door Add-on Board

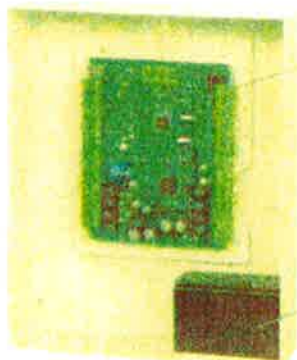


NetAXS-123
Two Door Add-on Board



NetAXS-4

NetAXS-4
Standard Metal Enclosure



12V
Battery
Backup

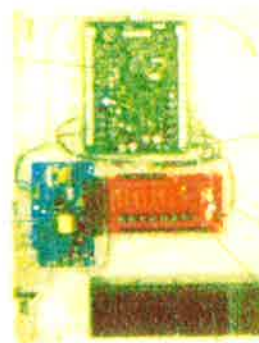
Control Panel (NX4PCB)

- On-Board Ethernet Port
- Built-in PCI Function
- Multiple Communication Paths
- Color Coded Terminal Blocks

Power
Door
Locks

Noise
Suppression
Filter

NetAXS-4
Deluxe Metal Enclosure



Pre-Wired
Panel Design

Fire-Rated Lock
Power Release

Fused Relay
Distribution Module

Convenient
110V Plug

24V Battery
Backup

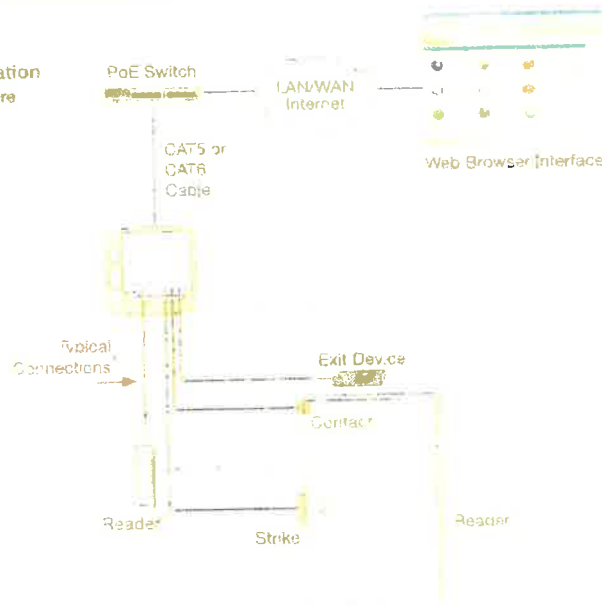
NetAXS™

Web-based Access Control System

SYSTEM OVERVIEW

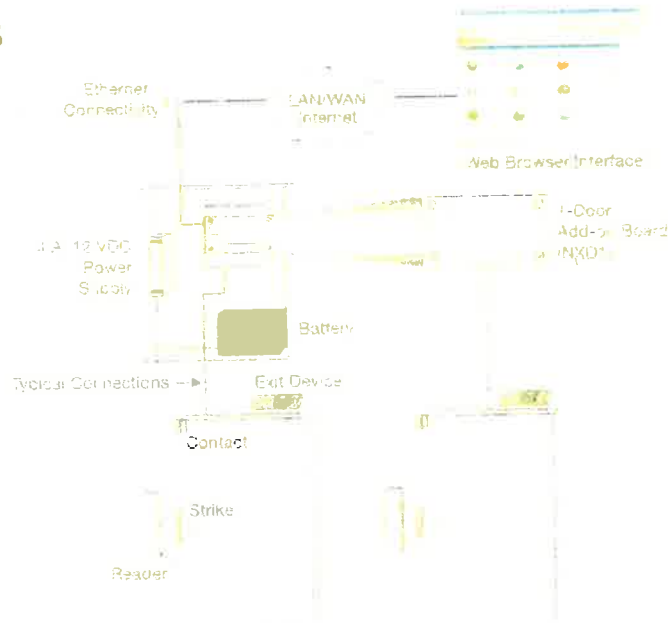
1 DOOR

Typical PoE Configuration
Compact Plastic Enclosure



2 DOORS

1 Door Standard
Metal Enclosure
shown with 1-Door
Add-on Board



1. All components must be wired to a PoE switch (E-PAK, MIN-PAK, GE, WIT-PAK, PE, and WIN-PAK) or to a NetAXS Manager (3000).
2. When using an IN and OUT reader, both readers must have 800 mA.
3. The only 12 VDC is maximum available to power strike readers and exit devices when using a 502 3A PoE connection. If unit is externally powered with a 12 VDC supply, higher current is available.
4. USB compatibility for local configuration.
5. 1-door add-on board compatible with compact plastic enclosure.

6. Requires external power when used in compact plastic enclosure.
7. 1-door add-on board is not compatible with compact plastic enclosure.
8. When mixing NetAXS 120 and 1-door NetAXS (NetAXS-4) controllers, the NetAXS-120 must be configured as the first panel or gateway.

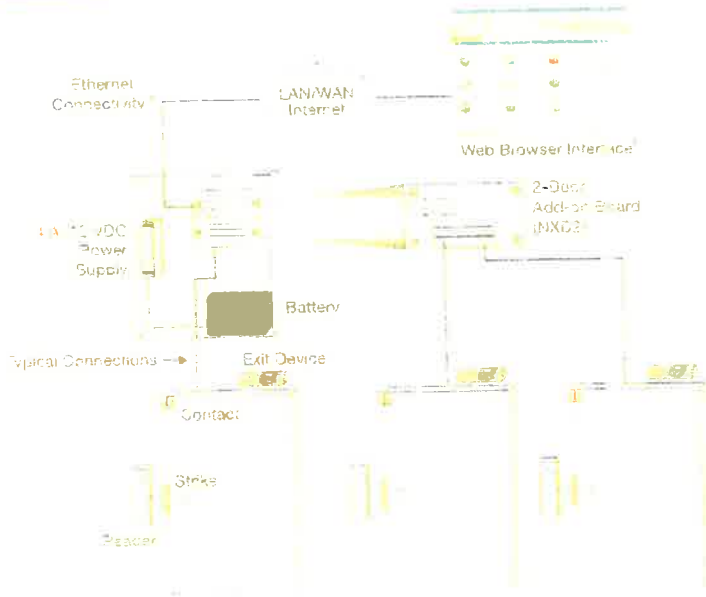
NetAXS™

Web-based Access Control System

SYSTEM OVERVIEW

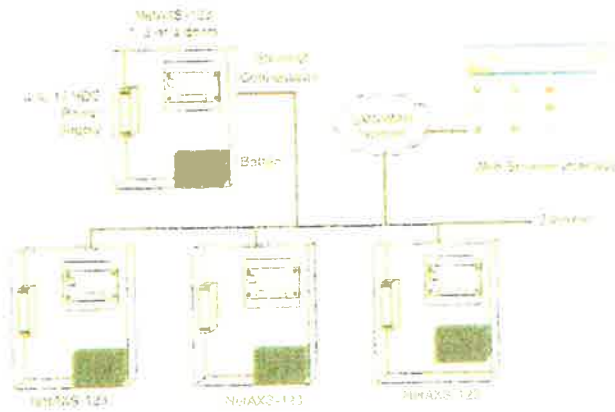
3 DOORS

1 Door Standard Metal Enclosure shown with 2-Door Add-on Board



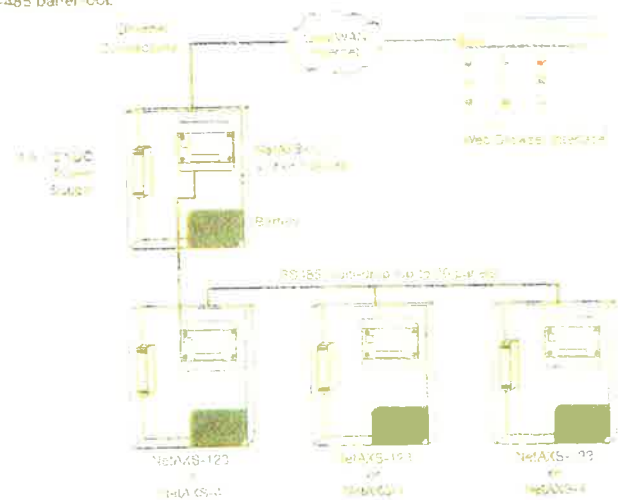
>3 DOORS

Scalable Architecture
Ethernet Virtual Loop



>3 DOORS

Scalable Architecture
RS-485 panel loop



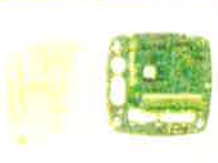



Also compatible with WIN-PAK SE, WIN-PAK SE, WIN-PAK SE, and WIN-PAK SE (Managed Access)

- When using an IN and OUT reader, both readers must have OUT wires.
- 1A 12VDC is maximum capacity for power supply. Backdoor panel door device wrap using a 302.34A PE connection if it is externally powered with a 12VDC supply, higher current is available.
- RSM compatibility for local substitution.
- 2-door add-on board compatible with standard plastic enclosure.


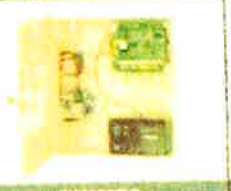


Requires external power when used in compact plastic enclosure.

- 2-door add-on board is not compatible with compact plastic enclosure.
- When mixing NetAXS-120 and 4-door NetAXS-120 controllers, the NetAXS-120 must be configured as the controller or gateway.
- NetAXS-120 (1 or later) supports Ethernet Virtual Loop (EVL). NetAXS-120 (2-NGE), SUPREPLY, and NetAXS-120 (2-NGE) NetAXS-120 panels.

SPECIFICATIONS AND FEATURES

		NetAXS-123		NetAXS-4	
					
		NX1P	NX1MPS	NX4S1	NX4L1
READERS/DOORS	Door/Reader Capability	1 DOOR Controller ^{1,4}	1 2 or 3 DOOR Controller (NXD1 or NXD2 add-on board is required for 2nd or 3rd door)	Four READER controller	
	Expandability	Expandable up to 93 DOORS (186 readers) per controller loop ^{2,3}		Expandable up to 124 doors (124 readers) per controller loop ^{2,3}	
	Dual Reader Control Capability (IN/OUT Reader per Door) Reader Compatibility	YES ⁵ - IN and OUT reader capability per door (readers must have HOLD line capability) Standard Wiegand protocol supported ABA not supported		Standard Wiegand protocol supported ABA not supported	
OUTPUTS	Number of Outputs	Two SPDT relays (jumper selectable NO or NC contacts) per door rated at 3 A @ 28 VDC Two open collector outputs (OC) 16 ma, 12 VDC; reader LED (Aux) and reader buzzer (Aux) per door are available.		Eight SPDT, Form C relays rated at 10 A @ 28 VDC; Eight open collector outputs (OC) 16 ma, 12 VDC; 4 reader LED (Aux) Output and 4 reader buzzer (Aux) Output are available.	
	Output Expandability	2-door solution has 3 total outputs: 4 relays, 4 OC (requires NXD1 add-on board)	2-door solution has 8 total outputs: 4 relays, 4 OC (requires NXD1 add-on board); 3-door solution has 12 total outputs: 6 relays, 6 OC (requires NXD2 add-on board)	4-door solution expandable to 72 total outputs using a maximum of four (4) NX4OUT relay output boards	
	Relay Power Source	Selectable: +12 VDC self-powered - OR - 0 to 28 VDC externally supplied source		0 to 28 VDC externally supplied source	-24 VDC self-powered
INPUTS	Number of inputs	Controller has a total of six configurable four-state supervised input points. Factory default settings are Status, REX, Reader Tamper A, Reader Tamper B, Power Fail and General Input		14 configurable four-state supervised input points	
	Input Expandability	2-door solution has a total of 10 inputs (requires NXD1 add-on board)	2-door solution has a total of 10 inputs (requires NXD1 add-on board); 3-door solution has a total of 14 inputs (requires NXD2 add-on board)	4-door solution expandable to 78 total inputs ⁵ using a maximum of two NX4IN relay input boards	
	Power-Fail and Panel Tamper Off the Wall Tamper Capability	Yes Yes	Yes	Yes --	Yes --
POWER INPUT	Unit Input	Power over Ethernet (PoE) 302.3af or external 12 VDC supply	93 VAC to 264 VAC, 50/60 Hz input provides 12 VDC, 4 A output yes	120 VAC 6 A 60 Hz input for all transformer provides 15.5 VA @ 50 VA output --	115 VAC 60 Hz 2 A power supply input provides 24 VDC, 6 A output Yes
	Socket or Hardwire AC Input Control Board Power Input	Power over Ethernet (PoE) or +12 VDC	+12 VDC from included power supply	+12 VDC from included power supply	+24 VDC from included power supply
POWER OUTPUT	Power for Readers and Input Devices	450 mA, 12 VDC is available to power strike readers and input devices when using PoE; if higher current is needed, power by external 12 VDC supply	1.15 A per door for locks/strikes readers and input devices (0.5 A @ 12 VDC total)	600 mA auxiliary current available to power the readers and other devices (locks/strikes must be externally powered)	600 mA auxiliary current available to power the readers and other devices
	Power for Locks/Strikes Backup Battery System	External ⁶	12 VDC, 7 AH battery	12 VDC, 7 AH battery	Two 12 VDC, 7 AH batteries
ENCLOSURE	Material	High Impact Plastic	Metal	Metal	Metal
	Physical Enclosure Size	7.75" H x 7.75" W x 2.75" D	13.9" H x 11.9" W x 4.7" D	18.9" H x 15" W x 4.5" D	23.9" H x 17" W x 4.1" D
INSTALLATION	Wiring Access Holes/Knockouts	7	19	5	30
	Removable Terminal Blocks with Color Coded Labels	Yes	Yes	Yes	Yes
	Graphic Wiring Cards/Labels	Yes	Yes	Yes	Yes
	Captive Mounting Hardware Cable Shield Termination Points	Yes --	Yes Yes	-- Yes	-- Yes
SYSTEM INFORMATION	Real Time Clock	Global Geographic Time Zone Support Daylight Saving Time Support Yes - via NTP network server			
	Clock Synchronization Processor	Freescale Coldfire 32-bit		Freescale Coldfire 32-bit	
	System MTBF (mean time between failures)	250,000 hours		250,000 hours	
	Temperature Ratings	32 to 120 F (0 C to 49 C) Operating -67 to 185 F (-55 C to -85 C) Storage			
CERTIFICATIONS AND APPROVALS	CE and FCC compliant UL-294 listing		CE and FCC compliant UL-294 listing		
			FCC compliant UL-294 listing		

SPECIFICATIONS AND FEATURES

		NetAXS-123		NetAXS-4	
					
LEDs	Status LEDs	12 LEDs total (12V power, PoE, over current, Ethernet, RS485 readers), door state, run, relay status)		13 LEDs total (Power, system run, Ethernet, RS232, loop downstream, readers, relay status)	
COMMS	Built-in Communication Options I/O Expansion Module Connectivity Controller Loop Capability	Ethernet, USB ² , RS485 Use RS485 port to connect a maximum of 6 downstream I/O modules (4 output and 2 input) Total of 18 (EVL-31 RS485) panels in a loop ^{2,3}		Ethernet, RS485, RS232 Use RS485 port to connect a maximum of 6 downstream I/O modules (4 output and 2 input) Total of 24 panels in a loop ^{2,4}	
HOST	Software Compatibility ⁵ NetAXS-123 as Gateway Panel NetAXS-4 as Gateway Panel using PCI3 Converter using N-485-PCI-2 Converter	WIN-PAK XE/SE/PE/CS – See Note 9 below Supported downstream panels include NetAXS-123 and NetAXS-4. See notes 2 & 3. Currently supported downstream panels include NetAXS-4 only. See notes 2 & 3. Supported downstream panels include NetAXS-123, NetAXS-4, N-1000 family and NS2. Not compatible with NetAXS-123 or NetAXS.			
DOOR CONTROL	Door Control Modes Interlocks for custom actions Anti-Passback Capability	Card only, card and PIN, card or PIN, PIN only, lockdown, disabled, supervisor, escort, limited use card, expiration date first, card rule, show day rule, time zone toggle, anti-passback, future ⁶ Yes Yes Yes Yes Yes Yes			
CARDS and DATABASE	Card and Event Buffer Capacity Firmware Revision Offline Database backup available Export Capabilities Number of Card Formats Site Codes Maximum Card Format Size Time Zones Access Levels Holidays	10,000 card capacity, 15,000 event capacity On-board flash memory for field firmware revision updates and feature expansion Card and configuration databases Card database, alarms and events (CSV format) ⁷ 128 unique card formats can be supported ⁸ 75-bit (maximum card # = 64-bit) ^{8,9} 128 255 ⁹			
REPORTING and ANALYSIS	Integrated logging reports Import/export of card database Alarms and events can be reported and saved in offline storage	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes	Yes Yes Yes
EMBEDDED WEB SERVER	Supported Browsers Icon Driven Landing Page Web Browser Control Web Server Support Secure Web Browsing Dynamic Screen Refresh Multiple user connections	Yes	Yes	Yes	Yes
WORLDWIDE ACCEPTABILITY	Global Language Support Region Accommodations: Quick Start Guides Full User and Installation Guides Multi-Language Browser Installation Guides User Translated Files Universal Power Supply Input	English, Italian, French, Dutch, Spanish, Czech, Simplified Chinese and Arabic	English, Italian, French, Dutch, Spanish, Czech, Simplified Chinese and Arabic	English, Italian, French, Dutch, Spanish, Czech and Simplified Chinese	English, Italian, French, Dutch, Spanish, Czech and Simplified Chinese

A second door may be added with a NKD1 add-on board however, PoE power restrictions apply (see footnote 4).
² RS-485 panel loop: A total of 24 NetAXS-123 and NetAXS-4 panels may be combined in a controller loop for a maximum of 120 doors. Ethernet virtual loop (EVL): A total of 18 NetAXS-123 panels may be combined in a controller loop for a maximum of up to 48 doors. NetAXS-4 panels CANNOT be used with an EVL.
³ When mixing NetAXS-123 and NetAXS-4 controllers, NetAXS-123 must be the gateway Panel and the panel loop must be RS-485.
⁴ 450 mA, 12 VDC is maximum current available to power strike, readers and input devices when using a 302.3af PoE connection. If unit is externally powered, higher current is available.
⁵ When using WIN-PAK software, this feature may have limitations or not exist.

⁶ An external UPS is required to power the PoE power source for battery backup.
⁷ Suitable for handling the 75-bit transparent card format of PV, TWIC and FRAC cards.
⁸ USB port for setup and troubleshooting.
⁹ WIN-PAK software compatibility for NetAXS:
 a) All NetAXS versions programmed as an N1000:
 WIN-PAK SE, WIN-PAK PE, WIN-PAK PRO CS, WIN-PAK CS 4.1
 WIN-PAK 2005, WIN-PAK PRO 2005, WIN-PAK 2.0 (Release 4)
 b) NetAXS v3.x, WIN-PAK v3.0-3.2 (Builds 670-14 or greater) or WIN-PAK CS 4.2 (Build 1017-33 or greater).
 c) NetAXS v4.0 or greater, WIN-PAK v3.3 (Build 670-21 or greater) or WIN-PAK CS 4.2 (Build 1017-33) or greater.

NetAXS™

Web-based Access Control System

ORDERING

Part Number	Description
NetAXS-123	
1 Door Solutions	
NX1P	NetAXS-123 One door compact plastic enclosure. PoE or externally powered.
NX1MPS	NetAXS-123 One door standard (metal) enclosure with tamper switch and terminal block. Includes 4.7A 12VDC output (10A 24V VAC input) power supply and 12V 7.5Ah battery.
Add-on Boards (For 2 and 3 door solutions)	
NXD1*	NetAXS-123 One door add-on board. (Adds 1 door to your existing 1-door system = 2 doors)
NXD2**	NetAXS-123 Two door add-on board. (Adds 2 doors to your existing 1-door system = 3 doors)
NetAXS-123 Components & Accessories	
NXC1	NetAXS-123 Control Board only.
NetAXS-123 Access Control Starter Kits with Readers	
NX1P10	NetAXS-123 includes NX1P One door compact plastic enclosure with 1 OP10-HONIP mini-multiplex proximity reader.
NX1MPS10	NetAXS-123 includes NX1MPS One door standard metal enclosure with power supply and battery and 1 OP10-HONIP mini-multiplex proximity reader.
NXD1OP10	NetAXS-123 includes NXD1 One door add-on board, 1 OP10-HONIP mini-multiplex proximity reader. (Adds 1 door to your existing 1-door system = 2 doors)
NXD2OP10	NetAXS-123 includes NXD2 Two door add-on board, 2 OP10-HONIP mini-multiplex proximity readers. (Adds 2 doors to your existing 1-door system = 3 doors)

NetAXS-4

NetAXS-4 Web Based Access Control Panels

NX4S1	NetAXS-4 1 Door Control Panel Standard Enclosure
NX4L1	NetAXS-4 Pre-wired 4 Door Control Panel Deluxe Enclosure
NX4PCB	NetAXS-4 NetAXS PCB Board with Manual and 4 Surge Suppressors

NetAXS-4 Access Control Starter Kits with Readers

WPNX4L30	NetAXS-4 1 IP Panel Access Starter Kit with WPA PAK, NX4S1 Standard Enclosure and 4 OP10-HONIP Mini Multiplex Proximity Readers
WPNX4S30	NetAXS-4 1 IP Panel Access Starter Kit with WPA PAK, NX4S1 Standard Enclosure and 4 OP10-HONIP Mini Multiplex Proximity Readers
NX4OP30S	NetAXS-4 NetAXS with Standard Enclosure Standard Web-based Access 1 Door Kit with 1 OP10-HONIP
NX4OP40S	NetAXS-4 NetAXS with Standard Enclosure Standard Web-based Access 4 Door Kit with 4 OP10-HONIP
NX4OP30L	NetAXS-4 NetAXS with Deluxe Enclosure Standard Web-based Access 1 Door Kit with 1 OP10-HONIP
NX4OP40L	NetAXS-4 NetAXS with Deluxe Enclosure Standard Web-based Access 4 Door Kit with 4 OP10-HONIP

NetAXS Accessories

NX4IN	NetAXS Input Board - 24 inputs per board. Connect 2 per panel. Total 64 inputs
NX4OUT	NetAXS Output Board - 16 relays per board. Connect 1 per panel. Total 64 relays
External power adapter required for NX4IN and NX4OUT	Input: 12V 3A/36W Output: 12V 5A/60W
NX10ENCKT	Double board enclosure for NX4IN, NX4OUT

*Requires external power when used in compact plastic enclosure.
 **Double board kit for use in compact plastic enclosure with compact plastic enclosure.

For more information:

www.honeywell.com/security

Automation and Control Solutions

Honeywell Security Products Americas
 2700 Blackhawk Pkwy, Suite 150
 Louisville, KY 40299
 1-800-323-4576
www.honeywell.com

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Honeywell

Danf

From: Michael Bove <mrbove2003@yahoo.com>
Sent: Friday, February 13, 2015 6:03 PM
To: Dan Flannigan
Subject: Fw: equipment list

From: Sjoerd Broeks <[redacted]> >
To: Michael Bove <[redacted]> >
Subject: equipment list
Sent: Sat, Feb 14, 2015 1:03:07 AM

That's the link to the exhaust fan, 1 per bloom

room

That's the inline Uvonair ozone system, we are

using the CD1200 1 per bloom room

That's the charcoal filter x2 for each bloom

room, each filter is 950 CFM. The part number is 701025

I will find the policies and procedures manual and send it to you asap

Sjoerd Broeks
800.555.9892 x701

STATEMENT OF CONFIDENTIALITY

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- Aluminum tops & bases for reduced weight. Half the weight of competitive filters.
- 46mm (1.8") RC-48 activated certified virgin carbon bed
- Machine packed carbon means more carbon & less movement
- Cone shaped internal base for optimum air flow
- Sealed, bagged, boxed & labeled directly after being manufactured for optimum life span, handling & presentation.
- 51% open air custom mesh
- Unique "Anti Air Bypass" System
- Large selection of sizes available to fit any application



NOTE: A high-quality custom fit pre-filter is included with every Phresh® Filter



Phresh® Filter RC 48 Australian Carbon



Competitive Filter Carbon

UVONAIR CD

Éliminateur d'odeurs

Modèles :

CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

uvonair CD

Odor Eliminator
Eliminador de olores
Éliminateur d'odeurs

Modelos/ Modelos/ Modèles

CD-800
CD-1000-1
CD-1000-2
CD-1200

Manufactured in Canada by
Fabricado en Canadá por
Fabricqué au Canada par

Ozone Environmental Technologies

361 Rowntree Dairy Road, Unit 4
Woodbridge, Ontario, Canada L4L 8H1
Tel: 1-800-765-2098

Website: www.uvonair.com

Système d'ozone en conduit

Considérations pour l'installation :

Veillez lire toutes les directives avant de procéder à l'installation.

- 1) Les générateurs d'ozone Uvonair CD sont conçus pour traiter les odeurs dans les conduits d'aération pendant que l'air est évacué. Le modèle CD-800 doit être installé dans un conduit de 8 po (20 cm). Les deux CD-1000 doivent être installés dans un conduit de 10 po (25 cm). Le modèle CD-1200 doit être installé dans un conduit de 12 po (30 cm). Les adaptateurs de conduits peuvent être utilisés pour l'installation dans des conduits de dimensions différentes. L'installation d'une unité plus petite dans un conduit plus grand peut réduire la circulation d'air.
- 2) Dans la plupart des cas, le modèle CD-800 et modèle CD-1-1000 traitera toutes les odeurs évacuées hors des pièces dont la superficie ne dépasse pas 20 000 pi² (6000 m²). Le modèle CD-2-1000 traitera toutes les odeurs évacuées hors des pièces dont la superficie ne dépasse pas 40 000 pi² (12000 m²). Le modèle CD-1200, dont le débit est considérablement plus élevé, traitera toutes les odeurs évacuées hors des pièces dont la superficie ne dépasse pas 100 000 pi² (30000 m²). Pour les odeurs particulièrement fortes, il est préférable d'utiliser le modèle ayant le débit d'air le plus élevé.
- 3) Dans la mesure du possible, placez le générateur Uvonair à un minimum de 15 pi (5 m) de l'extrémité du conduit d'échappement afin d'assurer un temps de réaction suffisant les odeurs.
- 4) Lorsque vous utilisez un ventilateur placez toujours l'ozoneur du côté sortie ventilateur.

Exigences en matière d'électricité :

Installez conformément aux normes de sécurité sur l'électricité de votre localité. Fournissez une alimentation électrique de 110 volts 60 Hz au générateur d'ozone Uvonair CD synchronisée avec le ventilateur. Comme mesure de sécurité, l'unité Uvonair CD doit fonctionner en tandem avec le ventilateur. L'unité Uvonair CD est munie d'un cordon de 6 pi (2 m) avec une prise à trois broches mise à la terre et d'un fusible de protection contre les surtensions.

Installation :

1. Fixez les deux supports fournis au haut de l'unité à l'aide des quatre vis déjà en place.
2. Fermez le ventilateur et assurez-vous que l'unité Uvonair n'est pas branchée.
3. **Pour l'installation dans un conduit de métal :**
 - a) Il sera nécessaire d'enlever une section de conduit d'environ 11,5 po (29 cm) à l'endroit où l'unité doit être installée. Consultez un technicien en ventilation pour connaître la longueur précise du conduit puisque celle-ci peut varier selon l'installation du conduit existant et la possibilité de l'adapter aux fins de l'insertion du générateur Uvonair CD.
 - b) Soutenez le poids de l'unité en suspendant des câbles fixés sur les supports à un crochet ou à un clou enfoncé dans les poutrelles supérieures. Procédez au réglage final après l'installation finale.
 - c) Insérez l'unité dans les conduits existants jusqu'aux arêtes de montage et rendez l'installation hermétique en utilisant du ruban adhésif en toile ou des crampons de serrage.

Pour l'installation à l'aide d'un conduit flexible

- a) Enlevez une section du conduit de 36 po (91 cm)
- b) Coupez 2 morceaux de 17 po (43 cm) du conduit flexible de 8 po (20 cm) de diamètre.
- c) Fixez-les de chaque côté du générateur Uvonair et immobilisez le réseau de gaines en le rendant hermétique à l'aide de ruban adhésif en toile ou de crampons de serrage.

Fonctionnement :

Les modèles Uvonair CD comportent deux réglages de débit « High » (élevé) et « Low » (bas) afin que vous puissiez régler le niveau des odeurs. Le modèle CD-1200 produira des niveaux d'ozone très élevés lorsqu'il est réglé à « High ». Déterminez le niveau d'ozone requis en surveillant le niveau d'odeur de l'air évacué. Les niveaux peuvent varier au cours du cycle croissant. Ces unités n'ont pas besoin d'entretien.

Garantie et politique de réparation :

Les unités Uvonair CD sont garanties contre tout défaut de matériau et de fabrication pour une durée d'un an à partir de la date d'achat. Elles sont garanties seulement pour l'usage décrit. Conseillez votre reçu d'achat aux fins de réclamation au titre de la garantie.

- Appelez le fabricant au 1 800 765-2098 pour obtenir le numéro d'autorisation de retour de marchandises ainsi que les instructions d'expédition.
- Les envois doivent être prépayés et comprendre le numéro d'autorisation de retour des marchandises.
- Les produits garantis seront réparés sans frais et retournés port payé dans les 24 heures suivant la réception.

Mise en garde : Ce modèle est recommandé aux fins d'utilisation commerciale. Lorsque les concentrations sont supérieures à 0,05 ppm, l'ozone peut nuire à la santé. L'ozone comporte une demi-vie de ~ 30 minutes, il se dissipe donc et ne s'accumulera pas.

UvonaIR CD
Eliminador de olores
Ozono por efecto corona
Modelos: CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

UvonaIR CD
Eliminador de olores
Ozono por efecto corona
Modelos: CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

UvonaIR CD
Odor Eliminator
Ozone by Corona Discharge
Models: CD - 800
CD - 1000-1
CD - 1000-2
CD - 1200

Sistema de ozono en conductos

Factores a tener en cuenta en la instalación:
Siempre leer todas las instrucciones antes de la instalación.

- Los generadores de ozono UvonaIR CD son diseñados para tratar los olores en los conductos de ventilación a medida que se expulsa el aire. El modelo CD-800 se instala en conductos de 8" (20 cm). Se puede instalar en conductos de otros conductos de 10" (25 cm). El modelo CD-1200 es para conductos de 12" (30 cm). La instalación de una unidad más grande puede tenerse en cuenta si se requiere. La instalación de una unidad más pequeña en conductos más grandes puede restringir la circulación de aire.
- En la mayoría de los casos, los modelos CD-800 y CD-1000-1 pueden tratar todos los olores que se expulsan de las habitaciones hasta de 20,000 pies cúbicos (600 m³). El modelo CD-1000-2 puede tratar todos los olores que se expulsan de las habitaciones hasta de 40,000 pies cúbicos (1,200 m³). El modelo CD-1200, con su capacidad considerablemente mayor, puede tratar todos los olores de habitaciones hasta de 100,000 pies cúbicos (3,000 m³). Para olores sumamente fuertes es mejor usar la unidad de mayor capacidad.
- Si es posible, ubique el generador UvonaIR a una distancia mínima de 15 pies (5 m) del extremo del conducto de escape para garantizar un tiempo de reacción adecuado a los olores.
- Si utiliza un ventilador, ubique siempre el generador del lado de la salida del ventilador.

Requisitos eléctricos:

La instalación debe realizarse según las normas eléctricas locales. El generador de ozono UvonaIR CD debe conectarse sincronizado con el ventilador, a corriente eléctrica de 110V 60Hz. Como característica de seguridad, le conviene a la unidad UvonaIR CD debe apagarse cuando se apaga el ventilador. El generador UvonaIR CD viene equipado con un cordón de 6 pies (2 m), con un enchufe de 3 patas conectado a tierra y un fusible de protección contra la sobretensión.

- Coloque las dos escuadras de soporte que vienen con la unidad en la parte superior de esta, utilizando los cuatro tornillos ya instalados en su lugar.
- Apague el ventilador y cerciórese de que la unidad UvonaIR no esté conectada.
- Para la instalación en un conducto metálico:
 - Es necesario reconstruir un tramo de aproximadamente 11.5" (29 cm) del conducto en el lugar donde se va a instalar la unidad. Consulte con un técnico en ventilación sobre la longitud específica, pues ésta puede variar, dependiendo de la instalación del conducto existente y de la posibilidad de ajustarlo para poder introducir el generador UvonaIR CD.
 - Soporte el peso de la unidad con alambre para colgar conductos, deslice un gancho o clavo en las vigas de la parte superior al soporte. Una vez instalada, haga los ajustes necesarios.
 - Introduzca la unidad en los conductos existentes hasta los rebordes de montaje y selle herméticamente con cinta adhesiva para conductos o con abrazaderas.

Instalación opcional utilizando conductos flexibles:

- Recorte un tramo de 36" (91 cm) del conducto.
- Corte dos piezas de 17" (43 cm) de conducto flexible de 8" (20 cm) de diámetro.
- Colóquelos a cada lado del generador UvonaIR y luego asegúrelos al sistema de conductos y selle herméticamente con cinta adhesiva para conductos o con abrazaderas.

Funcionamiento:

Los modelos UvonaIR CD tienen graduaciones de salida alta y baja de manera que puede graduarlas según el nivel de los olores. El modelo UvonaIR CD produce, en la graduación más elevada, niveles muy altos de ozono. Para determinar el nivel de ozono necesario controle el nivel de olores del aire de escape. Este puede variar durante el ciclo creciente.

Estas unidades no requieren de servicio de mantenimiento.

Garantía y política sobre reparaciones:

Las unidades UvonaIR CD tienen una garantía de un año, desde la fecha de compra, contra defectos de material y de fabricación. La garantía solo es válida para el uso descrito. Conserve el comprobante de compra para efectos de las reclamaciones de garantía.

- Llame al fabricante al 1 800 765 2098 para solicitar el número RGA (número de autorización para la devolución de mercancías e instrucciones para el envío).
- Los envíos deben ser con flete pagado y deben incluir el número RGA.
- Los aparatos cuyo reparación esté cubierta por la garantía, serán reparados sin cargo y devueltos con el flete pagado dentro de las 24 horas de haberlos recibido.

ADVERTENCIA:

Se recomienda para usos comerciales. El ozono, en concentraciones superiores a las .05 PPM, pudiera ser dañino para la salud. El ozono tiene una vida media de ~ 30 minutos, en concentraciones se disipará y nunca se llega a acumular. Nunca mire la luz directamente. Una exposición prolongada a la luz U.V. puede causar daños a los ojos.

Installation considerations:

Please read all instructions prior to installation.

- UvonaIR CD ozone generators are engineered to treat odors in ventilation ducts as air is being exhausted. Model CD 800 is for installation into 8" (20 cm) ducts. Both model CD-1000s are for 12" (30 cm) ducts. Duct adapters may be used for installation into other size ducts. Installing the smaller unit into larger ducts may restrict airflow.
- Under most circumstances Model CD-800 and CD-1000-1 will treat all odors being exhausted from rooms up to 20,000 cu. ft. (600 m³). Model CD-1000-2 will treat all odors being exhausted from rooms up to 40,000 cu. ft. (1200 m³). Model CD-1200, with its significantly higher output, will treat all odors being exhausted from rooms up to 100,000 cu. ft. (3000 m³). For extreme odors it is better to use the higher output unit.
- Position the UvonaIR generator if possible a minimum of 15 ft. (5 m) from the end of the exhaust duct to ensure adequate reaction time with odors. We recommend a minimum of 15 ft. (5m) of ductwork.
- When using a fan, always put the generator on the output side of the fan.

Electrical requirements:

Installation must be done in accordance to local electrical standards. Provide 110V 60-hz electrical power to the UvonaIR CD ozone generator synchronized with the ventilation fan. As a safety feature, UvonaIR CD unit must be working in tandem with the ventilation exhaust fan. UvonaIR CD is equipped with a 6 ft. (2 m) cord with a grounded three-prong plug and a surge protection fuse.

- Attach the two supplied support brackets to the top of the unit using the four screws already set in place
- Turn off the ventilation fan and ensure the UvonaIR unit is not plugged in.
- For installation into metal duct:
 - It will be necessary to remove an approximate 11.5" (29 cm) section of duct where the unit is to be installed. Consult a ventilation professional for the specific length as this may vary depending on the existing duct set up and its ability to adjust for the insertion of the UvonaIR CD generator.
 - Support the weight of the unit with duct-hanging wire from the support bracket to a hook or nail on the joists above. Make final adjustment after final installation.
 - Insert the unit into the existing ducts up to mounting ridges and make it airtight using duct tape or clamps

For installation using flex duct as an option:

- Remove a 36"(91cm) section of duct.
- Cut two 17"(43cm) pieces of flex 8"(20cm) diameter duct.
- Attach to each side of the UvonaIR generator and then secure to the ductwork making it airtight with duct tape or clamps

Operations:

Both UvonaIR CD models have High and Low output settings so you can adjust to the odor level. Model CD-1200 will produce very high levels of ozone at its high setting. Determine the ozone level required by monitoring the exhaust air for odors. Levels may vary throughout the growing cycle.

No maintenance is required of these units.

Warranty & Repair Policy:

Both UvonaIR CD units are warranted for one year from the time of purchase against any defects in material and manufacturing. It is warranted only for the application described. Keep your purchase receipt for warranty claim.

- Call the manufacturer at 1 800 765 2098 for the RGA# (Returned Goods Authorization Number) and shipping instructions.
- Shipments must be prepaid and accompanied with the RGA#
- Products qualifying for warranty will be repaired at no charge and shipped back prepaid within 24 hours of receipt

Warning: Recommended for commercial use. Ozone, in concentrations above .05 PPM, may be injurious to health. Ozone has a half-life of ~ 30 minutes, therefore it will dissipate and not accumulate.



Max-Fan™ Series

The Max Fan Saves Energy!

- Extremely energy Efficient!
- Lower Lifetime Cost!
- Cost of Energy is 70-90% of life time cost!

Save on shipping costs!

The Max-Fan Is Quiet!

- Very High Aerodynamic Efficiency!
- Optimized Mixed Flow is quieter than other fans of the same size!

The Max-Fan Saves Space!

- Small Airtight Housing!
- Easy Installation!
- Light Weight & Compact

FAN MODEL	CFM	RPM	MAX WATTS	MAX AMPS	SONES	DUCT DIA.	LENGTH	BLADE DESIGN	HOUSING	INLE OUTL
8"	667	3250	179	1.5		8"	8 7/8"	Mixed Flow	Plastic	8"
12"	1700	3374	489	4.1		12"	12 1/8"	Mixed Flow	Galvanized	12"



Performance Data

FAN MODEL	in.									
	8"	.125"	.25"	.375"	.5"	.75"	1.0"	1.25"	1.5"	
CFM	667	550	530	510	585	520	420	150	100	
CFM	1700	1630	1555	1530	1595	1530	1460	1380	1300	

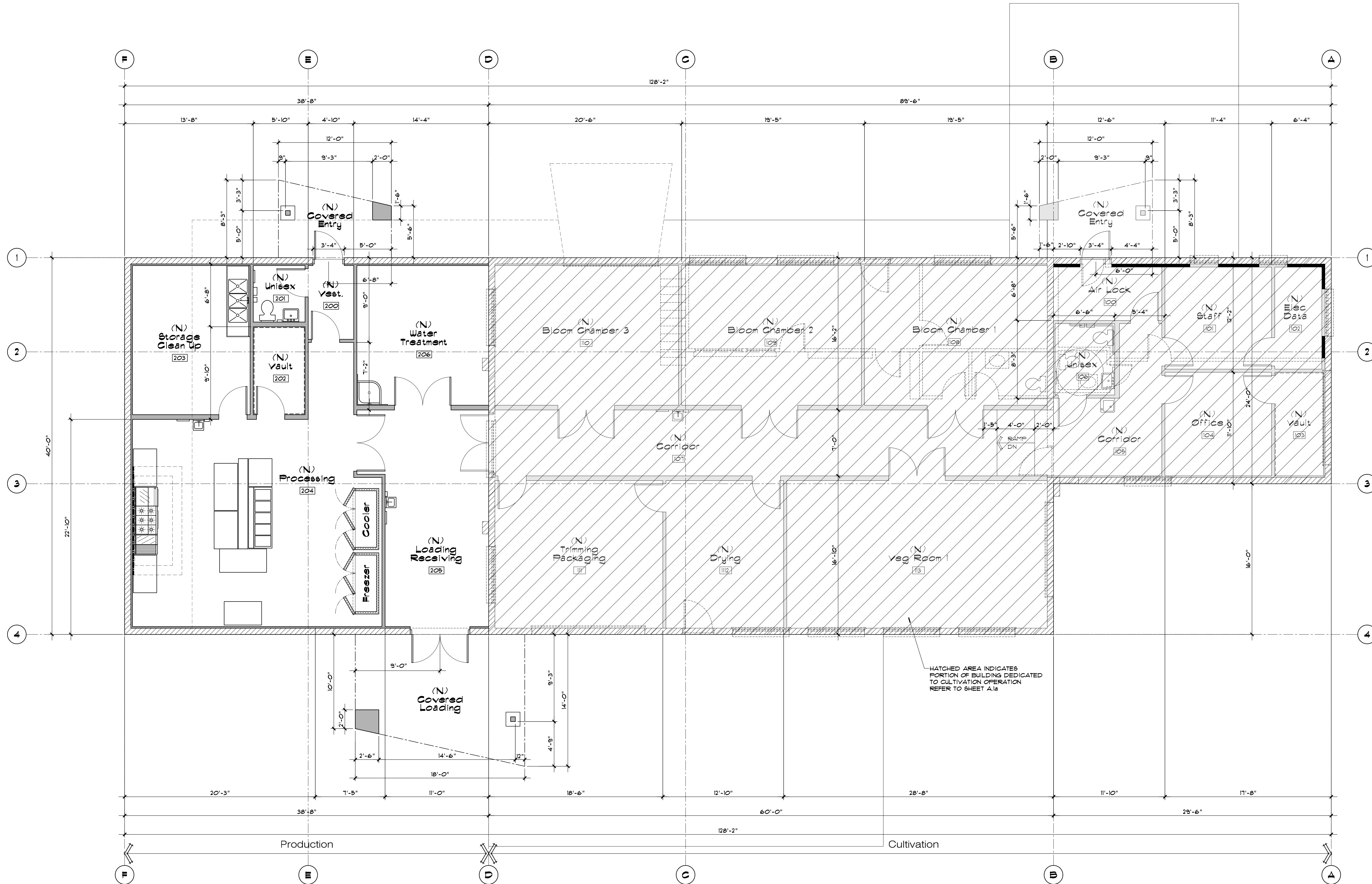
To Speed control the 12" Max Fan the Can Trol is required to avoid growing and overheat! All fans should not be reduced more than 50% as this results in the fans overheating.

Performance certified is for installation type D - Ducted inlet. Ducted outlet. Performance ratings do not include the effects of appurtenances (accessories).

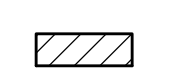

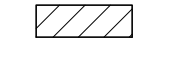


The sound ratings shown are for loudness values in spherical zones at 5ft. (1.5m) in a spherical free field calculated per Annex B of AMCA 310. Values shown are for installation Type D: Duct inlet spherical zone levels. Ratings do not include the effect of duct end correction. All zone values shown are calculated at 0.1" Static Pressure in inches W.G.

* Speed (RPM) shown is nominal. Performance is based on actual speed of test.





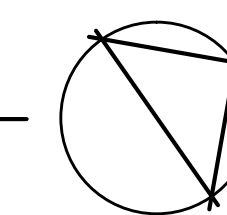
Wall Legend:

-  NEW 8" CMU WALLS
-  NEW METAL STUD WALLS
-  EXISTING 8" CMU WALLS TO REMAIN
-  EXISTING FRAMED WALLS OR FURRING TO REMAIN
-  EXISTING WALLS OR PORTIONS OF EXISTING WALLS TO BE REMOVED; COORDINATE WITH STRUCTURAL DRAWINGS, TYPICAL

New Floor Plan - Production

1/4"=1'-0"

3108 s.f. Existing
1952 s.f. New



KARANA
 Addition and Tenant Improvements
 8001 Highway 50 East
 Carson City, Nevada

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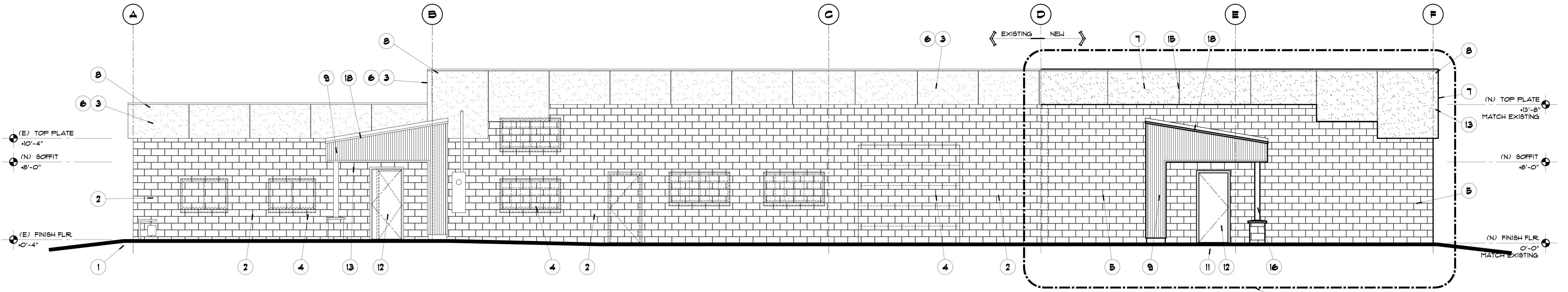
4395 Great Falls Loop
 Reno, Nevada 89511

phone 775.852.8802
 www.renoarchitect.com

date Feb. 3, 2015

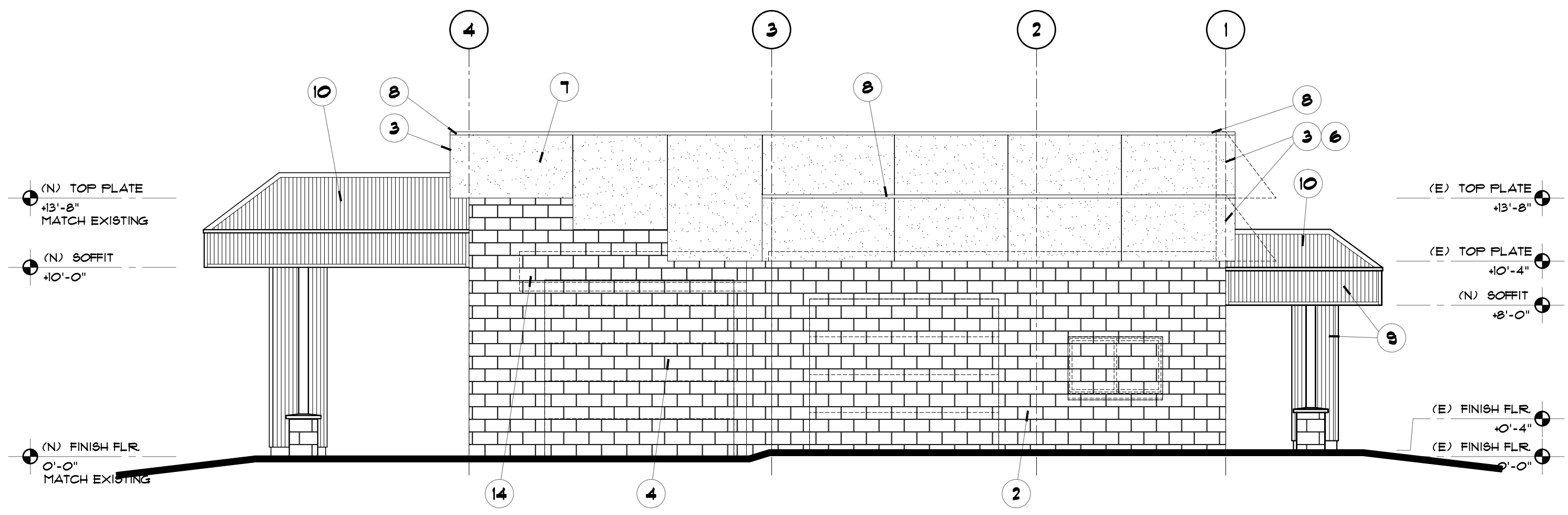
job no. 854

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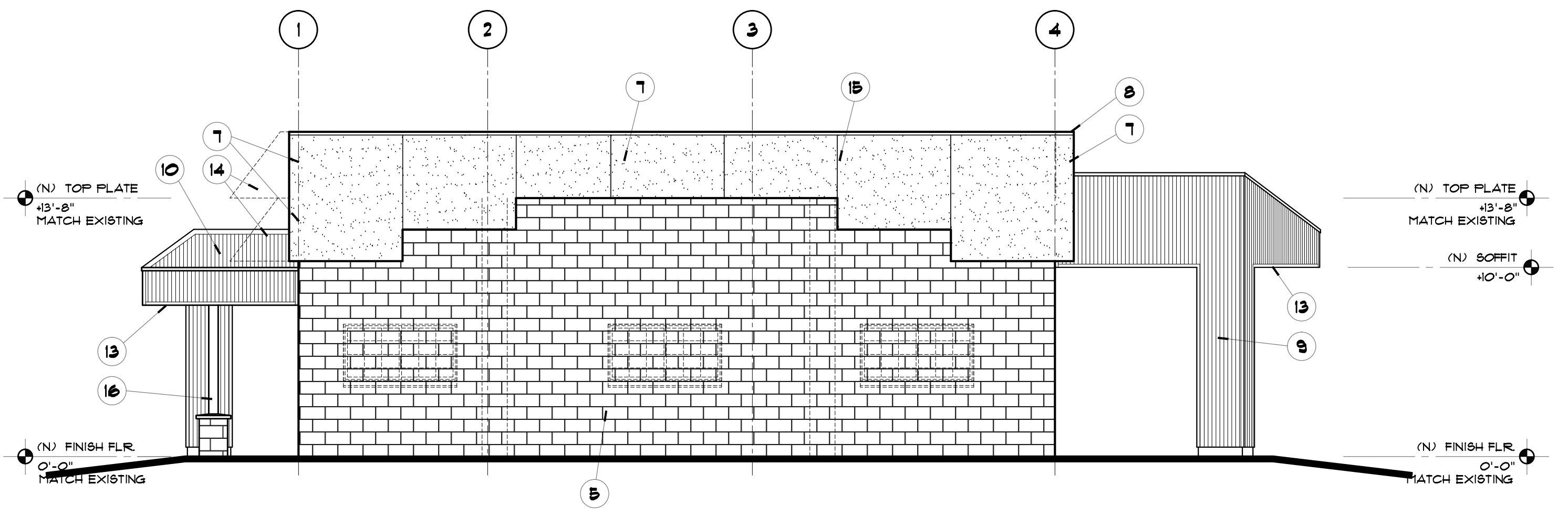
New Northwest Elevation
Production

3/16"=1'-0"



New Northeast Elevation
Production

3/16"=1'-0"



New Southwest Elevation
Production

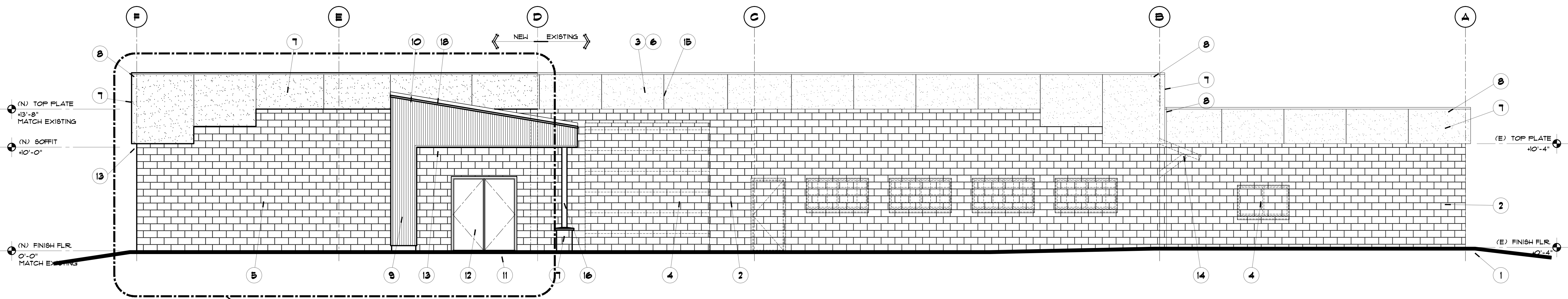
3/16"=1'-0"

Elevation Notes:

1. ALL MATERIALS AND FINISHES INDICATED ON THESE ELEVATIONS ARE TYPICAL TO ALL ELEVATIONS REGARDLESS IF THEY ARE NOTED AS SUCH OR NOT. THERE WILL BE NO EXCEPTIONS OR SUBSTITUTIONS TO THE MATERIALS AND FINISHES INDICATED ON THE ELEVATIONS
2. ALL EXTERIOR FINISH MATERIAL MUST BE INSTALLED IN STRICT ACCORDANCE WITH THE MANUFACTURERS SPECIFICATIONS, DETAILS AND INSTALLATION GUIDELINES, TYPICAL. COORDINATE ALL TRANSITIONS AND DETAILING REQUIRED BETWEEN DISSIMILAR MATERIALS WITH THE RELATED MANUFACTURERS FOR PROPER WEATHERSEALING, TRANSITIONS AND TERMINATIONS, TYPICAL

Elevation Legend:

- 1 EXISTING FINISH GRADE TO REMAIN
- 2 EXISTING CMU EXTERIOR WALLS TO REMAIN, PAINT, COLOR PER OWNER
- 3 EXISTING PARAPET TO REMAIN, REPAIR AS NEEDED TO ENSURE INTEGRITY. PROVIDE STUCCO FINISH PER ITEM 6
- 4 DEMO EXISTING DOORS AND WINDOWS, TYPICAL, SEE PLAN. INFILL WITH NEW CMU BLOCK PER ITEM 5
- 5 NEW CMU EXTERIOR WALLS TO MATCH EXISTING, PAINT, COLOR PER OWNER -SEE STRUCTURAL
- 6 NEW 2 COAT STUCCO FINISH OVER PAPER BACKED METAL LATH DRYVIT w/ SANDPEBBLE FINISH, COLOR PER OWNER. INSTALL PER MANUFACTURER o/ TYVEK STUCCOWRAP AND PAPER BACKED METAL LATH
- 7 NEW PARAPET TO MATCH EXISTING, EXTEND 6" BEYOND FACE OF CMU EXTERIOR WALL, PROVIDE STUCCO FINISH PER ITEM 6 (12" OVERHANG AT SOUTHEAST ELEV.)
- 8 NEW 24 GA SHEET METAL PARAPET COPING FLASHING w/ 1/2" DRIP EDGE, PAINT, COLOR PER OWNER
- 9 NEW CORRUGATED STEEL PREFINISHED SIDING o/ 30" FELT UNDERLAYMENT, PROVIDE FLASHING AND TRIM INSTALL PER MANUF.
- 10 NEW CORRUGATED STEEL PREFINISHED ROOFING o/ GRACE ICE AND WATER SHIELD, PROVIDE FLASHING AND TRIM INSTALL PER MANUF.
- 11 NATURAL COLOR CONCRETE SIDEWALK AND APRONS w/ BROOM FINISH, TYPICAL
- 12 NEW STEEL DOOR, PAINT, COLOR PER OWNER
- 13 NEW 2 COAT STUCCO FINISH o/ SELF FURRING METAL LATH AT ALL SOFFITS, TYPICAL, PER ITEM 6
- 14 DEMO EXISTING OVERHANG AND AWNING AS INDICATED
- 15 1/4" VERTICAL EXPANSION JOINTS AT STUCCO, TYPICAL
- 16 NEW STEEL COLUMN, PAINT, COLOR PER OWNER
- 17 NEW CMU COLUMN BASE AT +24" w/ SLOPED CAST CONCRETE SILL CAP.
- 18 NEW 24 GA SHEET METAL FLASHING AT ROOF TO WALL TRANSITIONS



New Southeast Elevation
Production

3/16"=1'-0"

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