NORTHPOINT
CONSULTING GROUP, INC.

North Wind Management, LLC

Noise Source Assessment and Mitigation Plan

APN: 401-112-030

Humboldt County, CA

September 2021

Contents

Appendices:

Objective

The purpose of this Noise Source Assessment and Mitigation Plan is to evaluate the potential impacts from the proposed project and describe how the project will conform with the Performance Standard set forth in Section 55.4.12.6 – Performance Standard for Noise at Cultivation Sites in the Humboldt County Commercial Cannabis Land Use Ordinance (CCLUO) – Coastal Zone. Evaluation of potential noise impacts included the establishment of onsite ambient and maximum noise levels, identification of proposed project noise sources, and modeling of proposed project noise sources in relation to current onsite noise.

Proposed Project Overview

North Wind Management, LLC is proposing to permit commercial cannabis activities in accordance with the County of Humboldt's (County) Commercial Cannabis Land Use Ordinance (CCLUO), aka "Ordinance 2.0" on one parcel APN: 401-112-030 near the community of Samoa in Humboldt County, California.

North Wind Management, LLC is proposing to permit commercial cannabis activities in accordance with the County of Humboldt's (County) *Commercial Cannabis Land Use Ordinance* (CCLUO - Coastal), aka "Ordinance 2.0" on legal parcel, APN 401-112-030, near the community of Samoa in Humboldt County,

California. The project requires a Conditional Use Permit and a Coastal Development permit for indoor commercial cannabis cultivation, off-site commercial processing, distribution, infusion, non-volatile manufacturing, and volatile manufacturing.

Site Description, Project Details, and Sensitive Receptors

The proposed project site is located at 936 Vance Ave west of Humboldt Bay and East of the Pacific Ocean. The project is located on APN 401-112-030. The site was part of the historic Samoa Pulp Mill lumber mill activities, historically associated with high levels of noise and disturbance.

Existing structures onsite include a multi-story historic chip silo building (approximately 5,000 sq. ft.) and conveyor belt, a two-story primary office building (16,667 sq. ft.), and a secondary office building (approximately 4,799 sq. ft.). These three structures were constructed in the 1960s/70s as part of lumber mill development.

The indoor cannabis cultivation is designed to be located on existing pavement in a proposed 185' x 275' commercial warehouse building. All indoor cultivation would occur within interior modular structures within the proposed warehouse building. Processing and Infusion activities would occur within the existing secondary office building, and Distribution would occur within the existing primary office building. Volatile and Non-volatile Manufacturing activities would occur within modular structures. See Table 1 for details of activities and existing/proposed structures.

Existing and proposed project-related onsite infrastructure will support the proposed activities. All electricity demand will be met by existing PG&E service. A backup generator is kept on site for use during an emergency. See the attached site map for locations of existing and proposed infrastructure, adjacent residences, watercourses and associated setbacks. No trees are proposed to be removed as a part of this project.

Table 1. Proposed Cannabis Activities and Associated Locations (refer to Appendix A of Operations Plan – Site Plans)

	Proposed Discretionary Activities (± sq. ft.)						***Proposed Activities Ancillary to Cultivation (± sq. ft.)***		
	Indoor Cannabis Cultivation	Off-site Commercial Processing	Distribution	Infusion	Off-site Product Storage	Manufacturing	Ancillary Nursery (10%)	Ancillary Drying	Ancillary Processing
<P> Building 1; Commercial Warehouse (185' x 275')	43,560	-	-	-	-	-	4,350	10,000	5,000
<E> Building 2; Office Building (16,667 sf)	-	-	5,000	-	-	-	-	-	-
<E> Building 3; Secondary Office Building (4,799 sf)	-	2,434	-	1,000	-	-	-	-	-
<P> (2) Modular Structures (12' x 40' each)	-	-	-	-	-	480 (non-volatile) 480 (volatile)	-	-	-
<P> (29) Shipping Container (8' x 20' each)	-	-	-	-	4,640	-	-	-	-
Totals (sf)	**43,560**	**2,434**	**5,000**	**1,000**	**4,640**	**960**	**4,350**	**10,000**	**5,000**

The property has relatively flat terrain, with slopes ranging from <1-2%. The site is zoned Industrial/ Coastal-Dependent and Industrial General (MC/A; MG). Combining zones include Archaeological Resource Area Outside Shelter Cove (A).

The closest neighboring residence is located approximately 3,500 feet from the nearest proposed cultivation activity. The surrounding neighboring residences are shown on the attached site map Appendix A. Additionally, a Natural Resources (NR) zoned area contains habitat for potential sensitive species approximately 800 feet from proposed project activities.

Analysis of Existing Ambient Noise Levels

This section summarizes the data collection procedures that were taken in order to analyze the existing ambient noise levels within the project site. The *existing ambient noise level* is defined as the baseline of sound pressure experienced in an area prior to the proposed cannabis cultivation activities. Existing ambient noise levels included natural and human-induced noise.

Three (3) Monitoring Locations were established throughout the parcel to establish noise levels at property lines (closest to sensitive receptors such as neighboring houses) and habitat areas (closest to

sensitive receptors such as wildlife). Table 2 below describes the Monitoring Locations in more detail and the locations can be seen on the site map attached in Appendix A.

Table 2: Monitoring Location Details

Monitoring Location	Lat., Long.	Description & Notes	Impact Potential
#1	40.8053°, -124.1930°	Adjacent to south property boundary and neighboring industrial site	Adjacent parcel
#2	40.8066°, -124.1934°	Adjacent to cultivation area and west property boundary	Adjacent parcel
#3	40.8067°, -124.1963°	Adjacent to west property boundary and nearest residence	Neighboring residence and Habitat

The sound pressure level was measured in decibels using a type 2 digital sound meter which utilizes an A-weighted filter network (dB(A)). The digital sound meter was mounted to a tripod, allowing it to be positioned approximately 2 feet above the ground to minimize ground noise and maximize unobstructed sound readings. Measurements were taken on July 7th, 2021, which was a cold, cloudy day with a strong intermittent breeze.

Measurement readings consist of continuous 24 hours at each monitoring location. After the measurements were taken, a log was created detailing what outside activity was associated with the increased noise level. The data was then analyzed to determine the existing ambient noise levels. The results from this analysis are presented in Table 3. Table 3 displays the Monitoring Location, the average decibel reading throughout the measurement, the maximum decibel reading, and the outside noise associated with the maximum decibel reading.

Table 3: Onsite Noise Analysis Results

Location	Measurement Length (hours)	Average Decibel Reading (dBA)	Max Noise Level Measured (dBA)
#1	24	46	78
#2	24	45	75
#3	24	51	88

In general, the existing average noise levels range from approximately 46 dBA to 51 dBA. Maximum noise levels ranged from 78 to 88 dBA.

Noise Sources Associated with Proposed Project

Noise sources associated with proposed project will include Heating, Ventilation, and Air conditioning (HVAC), fans, and manufacturing equipment. Vehicular traffic is also likely to cause noise.

The proposed commercial warehouse building will have interior modular structures (Norseman or Similar – see Appendix B) that will utilize several commercial HVAC systems similar to commercial air sanitizer system "AiroClean", and several "Multifan V-FloFan" fans or similar fans. Storage and drying within shipping containers would also be equipped with V-FloFans or similar. Manufacturing activities would occur in pre-packaged modular structures with built-in equipment and fans (See Appendix B). Additionally, fans and dehumidifiers may be utilized in the primary or secondary office buildings for product storage and air conditioning. The HVAC system and fans both have a noise rating range of 45-48 dBA.

In addition, the Multifan V-FloFan fan will be equipped with a variable speed controller to allow for adjustment of fan speed. The fan speed is directly related to the noise of the fan. The applicant will use the variable speed controllers to ensure noise levels do not increase three decibels above ambient.

Energy requirements for all proposed cultivation activities is proposed to be met energy provided by the existing P.G.&E. service. No generators are proposed for main energy requirements. The location of the existing and proposed buildings and facilities can be seen on the site map in Appendix A.

Anticipated Noise Levels and Proposed Attenuation Measures

Indoor cultivation and ancillary drying activities will be contained within interior modular structures within the 275' x 185' commercial warehouse building. Noises from the HVAC systems and fans associated with these activities would be muffled both by the interior modular structures and the outer shell of the warehouse building. Product storage and drying activities would occur within shipping containers and would also be equipped with fans.

Each of the Multifan V-FloFan (or similar) fans will be equipped with a variable speed controller, allowing for precise adjustment of the fan speed. Measuring of noise levels will continues on a regular basis following the proposed activities. If the noise levels are measured to be higher than the anticipated levels, the fans will be adjusted, reducing the noise output from the fans, and reducing the noise impact at the subject monitoring location.

The components of the proposed buildings/facilities that will be used for cultivation and related activities, including walls, doors, foundation, roof, and ventilation components will be constructed of materials that have appropriate Sound Transmission Class (STC) Ratings to reduce generated noise to 50 decibels (dBA) maximum at the property and habitat lines.

Noise from the proposed cultivation activities is not anticipated to result in an increase of more than three (3) decibels of continuous noise above existing ambient noise levels, which range from 46 to 51 dBA with maximum noise instances of 70-80 dBA. Furthermore, the noise levels at all Monitoring Locations are anticipated to be less than 50 dBA.

The site is a historic industrial site surrounded by current industrial and commercial activities. The proposed project is in line with other associated nearby activities and is not expected to cause a source of noise disturbance for nearby sensitive receptors or habitat. Additionally, the applicant will follow all recommendations in the Biological Assessment prepared by Timberland Resource Consultants.

Monitoring

Measuring of noise levels will continue on a regular basis following the proposed activities. If the noise levels are measured to be higher than the anticipated levels, further measures will be implemented to reduce the noise output from the project's activity.

Conclusion

North Wind Management, LLC aims to meet the noise levels and mitigations set forth in this report. The site is an industrial site and the proposed project intensity is in line with surrounding activities. Following the recommendations set forth in this report, the proposed noise sources from the project are not expected to increase onsite ambient noise levels and compliance with Performance Standard 55.4.12.6 will be met. In order to ensure that commercial cannabis activities comply with the Performance Standards, future noise measurements will be taken at the same monitoring locations to ensure no disturbance is occurring to habitat or to neighboring residences. Noise from the proposed cultivation activities is not anticipated to result in an increase of more than three (3) decibels of continuous noise above existing ambient noise levels.

NORSEMAN, LLC

DESIGN CRITERIA

DESIGNED IN ACCORDANCE WITH THE LATEST EDITION OF THE FOLLOWING CODES:

- NFPA 70 (NEC) NATIONAL ELECTRICAL CODE

PAINT CRITERIA

MODULE INTERIOR TO BE COATED AS FOLLOWS:

- STAINLESS STEEL AND ALUMINUM, MILL FINISH.

MODULE EXTERIOR TO BE COATED AS FOLLOWS:

- SURFACE PREP: MECHANICAL CLEAN AS NEEDED
- BASE COAT: SPOT PRIME AS REQUIRED
- TOP COAT: HIGH DURABILITY ENAMEL

PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	8'
OVERALL LENGTH	40'
OVERALL HEIGHT	9'-8"
INTERIOR HEIGHT	~8'-4.5"
FOOTPRINT WIDTH	8'
FOOTPRINT LENGTH	40'
WEIGHT	-

DRYMOD ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	60 AMPS @ 120/240V 3-WIRE 60Hz 1ϕ
ESTIMATED FULL LOAD SERVICE DRAW*	18 AMPS @ 120/240V 3-WIRE 60Hz 1ϕ

*This number is an estimate based on the highest consumption equipment installed and inside the unit.

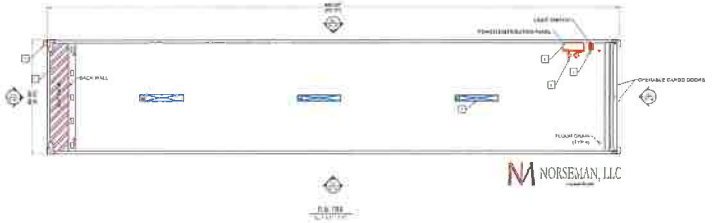
NOTE: HVAC UNIT HAS SEPARATE POWER CONNECTION

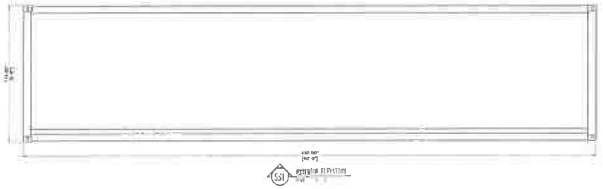
HVAC UNIT ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	30 AMPS @ 460V 4-WIRE 60Hz 3ϕ
ESTIMATED FULL LOAD SERVICE DRAW*	21 AMPS @ 460V 4-WIRE 60Hz 3ϕ

* IF OPTIONAL AUTOTRANSFORMER WILL BE FITTED TO ALLOW OPERATION ON 208/120, 1ϕ/2W, 3 PHASE 4W 60 HERTZ POWER

STANDARD EQUIPMENT		
☐	QTY	DESCRIPTION
☐	1	DISTRIBUTION PANEL
☐	1	POWER INLET BOX
☐	4	LED LIGHTS (CEILING MOUNTED)
☐	1	TOGGLE INDUSTRIAL GRADE SWITCH (SEALED END) (SMOKE)
☐	2	15A DUPLEX OUTLET
☐	1	HVAC UNIT

SYMBOL	DESCRIPTION	TYP	QTY
	HVAC UNIT		1
	DISTRIBUTION PANEL		1
	POWER INLET BOX		1
	LED LIGHTS (CEILING MOUNTED)	TYP	4
	TOGGLE INDUSTRIAL GRADE SWITCH (SEALED END) (SMOKE)	TYP	1
	15A DUPLEX OUTLET	TYP	2





NORSEMAN-LLC
DRYMOD SPEC SHEET

SIGNATURE: _____
PRINT: _____
DATE: _____

REVISION LOG		
1	MM/DD/YY	INITIAL RELEASE

NORSEMAN, LLC
norseman-llc.com

SHEET TITLE: SPEC SHEET 8x40 DRYMOD			PAGE: 1 OF 1
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DRAWN BY: MPG	DATE: 6/21/20	CHECKED BY: — DATE: —/—/—	JOB#: SPEC SHEET

8x20 Standard GrowMod

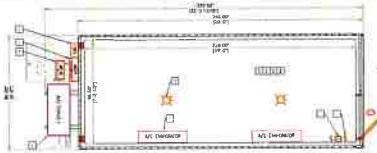
PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	8'
OVERALL LENGTH*	~22'-6"
OVERALL HEIGHT	9'-6"
INTERIOR HEIGHT	~8'-1"
FOOTPRINT WIDTH	8'
FOOTPRINT LENGTH	20'
WEIGHT	~8,042
WEIGHT WITHOUT HVAC	

ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	100 AMPS @ 240/120V 3-WIRE 60Hz 1Φ
ESTIMATED FULL LOAD SERVICE DRAW*	72 AMPS @ 240/120V 3-WIRE 60Hz 1Φ

8x20 MOD - DESIGN PARAMETERS	
AVAILABLE COOLING BTUs	48,000 BTU (4 Tons)
AVAILABLE HEATING BTUs	48,000 BTU (4 Tons)
PANEL INSULATION VALUE	R21 @ 3"†
ESTIMATED BTUs SUMMER COOLING @110°F (Reference, no lights included)	20,500 BTU
ESTIMATED BTUs WINTER HEATING @ -10°F (Reference, no lights included)	40,500 BTU
REMAINING COOLING BTUs FOR LIGHTING AND EQUIPMENT	27,500 BTU

STANDARD CONTAINER EQUIPMENT

QTY	DESCRIPTION
1	48,000 BTU/4 TON MINI SPLIT SYSTEM CONDENSER
1	48,000 BTU/4 TON MINI SPLIT SYSTEM EVAPORATOR
1	POLE SWITCH
1	TIMER
3	CEILING MOUNTED CAGE LIGHTS, GREEN BULB
1	MAIN DISTRIBUTION PANEL (MDP1)
1	MAIN POWER / MDP, ELECT SERVICE CONNECTION W/ USED DISCONNECT (MP-M)
1	LIGHTING RELAY PANEL
6	15A-7A DUPLEX OUTLET
4	20A-7A QUAD OUTLET



8x40 Standard GrowMod

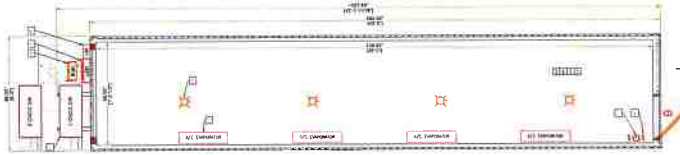
PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	8'
OVERALL LENGTH	~42'-6"
OVERALL HEIGHT	9'-6"
INTERIOR HEIGHT	~8'-1"
FOOTPRINT WIDTH	8'
FOOTPRINT LENGTH	40'
WEIGHT	~13,151
WEIGHT WITHOUT HVAC	

ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	200 AMPS @ 240/120V 3-WIRE 60Hz 1Φ
ESTIMATED FULL LOAD SERVICE DRAW*	155 AMPS @ 240/120V 3-WIRE 60Hz 1Φ

8x40 MOD - DESIGN PARAMETERS	
AVAILABLE COOLING BTUs	96,000 BTU (8 Tons)
AVAILABLE HEATING BTUs	96,000 BTU (8 Tons)
PANEL INSULATION VALUE	R21 @ 3"†
ESTIMATED BTUs SUMMER COOLING @110°F (Reference, no lights included)	38,900 BTU
ESTIMATED BTUs WINTER HEATING @ -10°F (Reference, no lights included)	73,500 BTU
REMAINING COOLING BTUs FOR LIGHTING AND EQUIPMENT	50,200 BTU

STANDARD CONTAINER EQUIPMENT

QTY	DESCRIPTION
2	72,000 BTU/6 TON MINI SPLIT SYSTEM CONDENSER
2	72,000 BTU/6 TON MINI SPLIT SYSTEM EVAPORATOR
2	POLE SWITCH
1	TIMER
6	CEILING MOUNTED CAGE LIGHTS, GREEN BULB
1	MAIN DISTRIBUTION PANEL (MDP1)
1	MAIN POWER / MDP, ELECT SERVICE CONNECTION W/ USED DISCONNECT (MP-M)
1	LIGHTING RELAY PANEL
8	15A-7A DUPLEX OUTLET
4	20A-7A QUAD OUTLET



12x20 Standard GrowMod

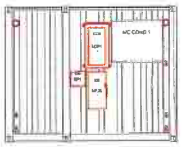
PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	12'
OVERALL LENGTH	~22'-6"
OVERALL HEIGHT	9'-6"
INTERIOR HEIGHT	~8'-1"
FOOTPRINT WIDTH	12'
FOOTPRINT LENGTH	20'
WEIGHT	~11,143
WEIGHT WITHOUT HVAC	

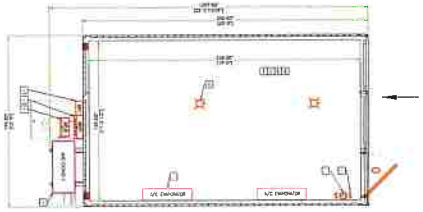
ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	150 AMPS @ 240/120V 3-WIRE 60Hz 1Φ
ESTIMATED FULL LOAD SERVICE DRAW*	109 AMPS @ 240/120V 3-WIRE 60Hz 1Φ

12x20 MOTHER/CLONE MOD - DESIGN PARAMETERS	
AVAILABLE COOLING BTUs	48,000 BTU (4 Tons)
AVAILABLE HEATING BTUs	48,000 BTU (4 Tons)
PANEL INSULATION VALUE	R21 @ 3"†
ESTIMATED BTUs SUMMER COOLING @110°F (Reference, no lights included)	25,000 BTU
ESTIMATED BTUs WINTER HEATING @ 10°F (Reference, no lights included)	44,000 BTU
REMAINING COOLING BTUs FOR LIGHTING AND EQUIPMENT	23,000 BTU

STANDARD CONTAINER EQUIPMENT

QTY	DESCRIPTION
1	48,000 BTU/4 TON MINI SPLIT SYSTEM CONDENSER
1	48,000 BTU/4 TON MINI SPLIT SYSTEM EVAPORATOR
2	POLE SWITCH
1	TIMER
3	CEILING MOUNTED CAGE LIGHTS, GREEN BULB
1	MAIN DISTRIBUTION PANEL (MDP1)
1	MAIN POWER / MDP, ELECT SERVICE CONNECTION W/ USED DISCONNECT (MP-M)
1	LIGHTING RELAY PANEL
6	15A-7A DUPLEX OUTLET
2	20A-7A QUAD OUTLET





12x20 Heavy GrowMod

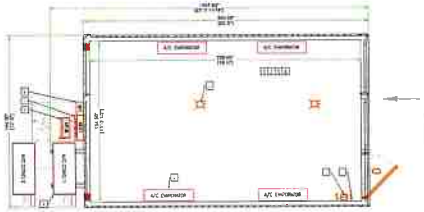
PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	12'
OVERALL LENGTH	~22'-6"
OVERALL HEIGHT	9'-6"
INTERIOR HEIGHT	~8'-1"
FOOTPRINT WIDTH	12'
FOOTPRINT LENGTH	20'
WEIGHT	~11,471
WEIGHT WITHOUT HVAC	

ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	200 AMPS @ 240/120V 3-WIRE 60Hz 1Φ
ESTIMATED FULL LOAD SERVICE DRAW*	142 AMPS @ 240/120V 3-WIRE 60Hz 1Φ

12x20 VEG/FLOWER MOD - DESIGN PARAMETERS	
AVAILABLE COOLING BTUs	96,000 BTU (8 Tons)
AVAILABLE HEATING BTUs	96,000 BTU (8 Tons)
OPTIONAL INSULATION VALUES	R7 @ 1"†, R14 @ 2"†
ESTIMATED BTUs SUMMER COOLING @110°F (Reference, no lights included)	25,000 BTU
ESTIMATED BTUs WINTER HEATING @ 10°F (Reference, no lights included)	44,000 BTU
REMAINING COOLING BTUs FOR LIGHTING AND EQUIPMENT	71,200 BTU

STANDARD CONTAINER EQUIPMENT

QTY	DESCRIPTION
1	48,000 BTU/4 TON MINI SPLIT SYSTEM CONDENSER
1	48,000 BTU/4 TON MINI SPLIT SYSTEM EVAPORATOR
2	POLE SWITCH
1	TIMER
2	CEILING MOUNTED CAGE LIGHTS, GREEN BULB
1	MAIN DISTRIBUTION PANEL (MDP1)
1	MAIN POWER / MDP, ELECT SERVICE CONNECTION W/ USED DISCONNECT (MP-M)
1	LIGHTING RELAY PANEL
9	15A-7A DUPLEX OUTLET
1	20A-7A QUAD OUTLET



12x40 Standard GrowMod

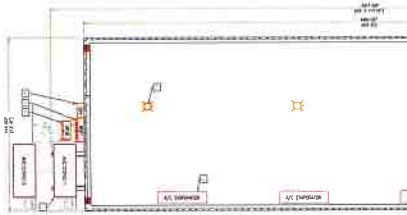
PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	12'
OVERALL LENGTH	~42'-6"
OVERALL HEIGHT	9'-6"
INTERIOR HEIGHT	~8'-1"
FOOTPRINT WIDTH	12'
FOOTPRINT LENGTH	40'
WEIGHT	~18,035
WEIGHT WITHOUT HVAC	

ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	250 AMPS @ 240/120V 3-WIRE 60Hz 1Φ
ESTIMATED FULL LOAD SERVICE DRAW*	216 AMPS @ 240/120V 3-WIRE 60Hz 1Φ

12x40 MOTHER/CLONE MOD - DESIGN PARAMETERS	
AVAILABLE COOLING BTUs	96,000 BTU (8 Tons)
AVAILABLE HEATING BTUs	96,000 BTU (8 Tons)
PANEL INSULATION VALUE	R21 @ 3"†
ESTIMATED BTUs SUMMER COOLING @110°F (Reference, no lights included)	44,500 BTU
ESTIMATED BTUs WINTER HEATING @ -10°F (Reference, no lights included)	77,750 BTU
REMAINING COOLING BTUs FOR LIGHTING AND EQUIPMENT	51,500 BTU

STANDARD CONTAINER EQUIPMENT

QTY	DESCRIPTION
2	72,000 BTU/6 TON MINI SPLIT SYSTEM CONDENSER
2	72,000 BTU/6 TON MINI SPLIT SYSTEM EVAPORATOR
2	POLE SWITCH
1	TIMER
6	CEILING MOUNTED CAGE LIGHTS, GREEN BULB
1	MAIN DISTRIBUTION PANEL (MDP1)
1	MAIN POWER / MDP, ELECT SERVICE CONNECTION W/ USED DISCONNECT (MP-M)
1	LIGHTING RELAY PANEL
16	15A-7A DUPLEX OUTLET
8	20A-7A QUAD OUTLET



12x40 Heavy GrowMod

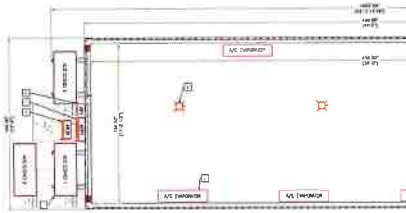
PHYSICAL SPECIFICATIONS	
OVERALL WIDTH	12'
OVERALL LENGTH	~42'-6"
OVERALL HEIGHT	9'-6"
INTERIOR HEIGHT	~8'-1"
FOOTPRINT WIDTH	12'
FOOTPRINT LENGTH	40'
WEIGHT	~18,383
WEIGHT WITHOUT HVAC	

ELECTRICAL REQUIREMENTS	
MINIMUM SERVICE REQUIREMENT	300 AMPS @ 240/120V 3-WIRE 60Hz 1Φ
ESTIMATED FULL LOAD SERVICE DRAW*	254 AMPS @ 240/120V 3-WIRE 60Hz 1Φ

12x40 VEG/FLOWER MOD - DESIGN PARAMETERS	
AVAILABLE COOLING BTUs	144,000 BTU (12 Tons)
AVAILABLE HEATING BTUs	144,000 BTU (12 Tons)
OPTIONAL INSULATION VALUES	R21 @ 3"†
ESTIMATED BTUs SUMMER COOLING @110°F (Reference, no lights included)	44,500 BTU
ESTIMATED BTUs WINTER HEATING @ -10°F (Reference, no lights included)	77,750 BTU
REMAINING COOLING BTUs FOR LIGHTING AND EQUIPMENT	80,500 BTU

STANDARD CONTAINER EQUIPMENT

QTY	DESCRIPTION
3	72,000 BTU/6 TON MINI SPLIT SYSTEM CONDENSER
4	72,000 BTU/6 TON MINI SPLIT SYSTEM EVAPORATOR
3	POLE SWITCH
1	TIMER
9	CEILING MOUNTED CAGE LIGHTS, GREEN BULB
1	MAIN DISTRIBUTION PANEL (MDP1)
1	MAIN POWER / MDP, ELECT SERVICE CONNECTION W/ USED DISCONNECT (MP-M)
1	LIGHTING RELAY PANEL
16	15A-7A DUPLEX OUTLET
8	20A-7A QUAD OUTLET

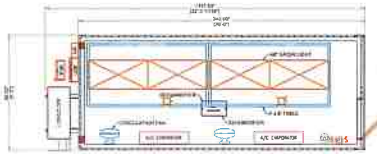


NORSEMAN, LLC

GM SPECS

8x20 MOTHER - DESIGN PARAMETERS	
DESCRIPTION	*QTY
MAXIMUM LIGHT COUNT (based on spacing)	6
MAXIMUM PLANT COUNT (based on 5 plants per light)	30
LIGHTING FIXTURE CONFIGURATION NEEDED (based on lighthouse sources and typical watering machines)	30 amps

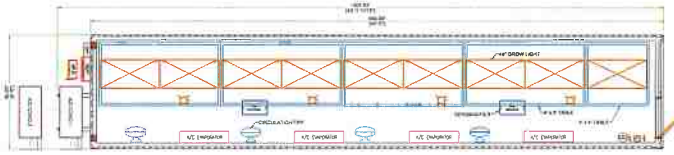
RECOMMENDED MOTHER GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	230w/1ph	6
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12Vdc	1
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	3
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	3
DEHUMIDIFIER	230w/1ph	1
FANS	12Vdc	3



8x20 Mother GrowMod

8x40 MOTHER - DESIGN PARAMETERS	
DESCRIPTION	*QTY
MAXIMUM LIGHT COUNT (based on spacing)	8
MAXIMUM PLANT COUNT (based on 5 plants per light)	40
LIGHTING FIXTURE CONFIGURATION NEEDED (based on lighthouse sources and typical watering machines)	40 amps

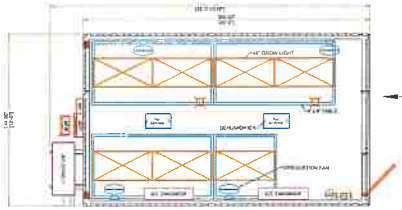
RECOMMENDED MOTHER GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	230w/1ph	8
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12Vdc	1
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	4
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	4
DEHUMIDIFIER	230w/1ph	1
FANS	12Vdc	4



8x40 Mother GrowMod

12x20 MOTHER - DESIGN PARAMETERS	
DESCRIPTION	*QTY
MAXIMUM LIGHT COUNT (based on spacing)	8
MAXIMUM PLANT COUNT (based on 5 plants per light)	40
LIGHTING FIXTURE CONFIGURATION NEEDED (based on lighthouse sources and typical watering machines)	40 amps

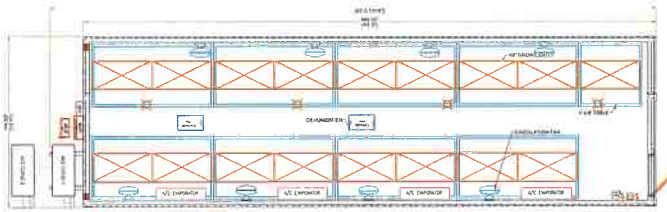
RECOMMENDED MOTHER GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	230w/1ph	8
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12Vdc	1
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	3
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	3
DEHUMIDIFIER	230w/1ph	1
FANS	12Vdc	4



12x20 Mother GrowMod

12x40 MOTHER - DESIGN PARAMETERS	
DESCRIPTION	*QTY
MAXIMUM LIGHT COUNT (based on spacing)	12
MAXIMUM PLANT COUNT (based on 5 plants per light)	60
LIGHTING FIXTURE CONFIGURATION NEEDED (based on lighthouse sources and typical watering machines)	100 amps

RECOMMENDED MOTHER GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	230w/1ph	12
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12Vdc	1
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	3
4'x 4' CASTER GROW TABLE, 12in HEIGHT	n/a	3
DEHUMIDIFIER	230w/1ph	2
FANS	12Vdc	8



12x40 Mother GrowMod

NORSEMAN, LLC

SHEET TITLE: MOTHER RECOMMENDED LAYOUTS

REVISION

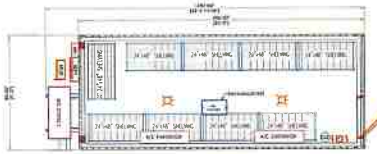
MOTHER

8x20 CLONE - DESIGN PARAMETERS	
DESCRIPTION	*QTY
LIGHT COUNT FOR TWO SHELF RACKS (lighting on each of 2 shelves)	18
w/ LIGHT COUNT FOR THREE SHELF RACKS (lighting on each of 3 shelves)	27
PLANT COUNT FOR TWO(2) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	5616
w/ PLANT COUNT FOR THREE(3) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	8424
ESTIMATED DEHUMIDIFICATION NEEDED (if shelves are used near walls)	1

*Quantities estimated. Your actual quantities may vary

RECOMMENDED CLONE GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT PER SHELF FOR TWO(2) SHELF RACKS	630w/1ph	18
w/ UP TO 4' GROW LIGHT PER SHELF FOR THREE(3) SHELF RACKS	630w/1ph	27
24"x 48" TWO(2) SHELF WIRE RACKS	n/a	5
w/ 24"x 48" THREE(3) SHELF WIRE RACKS	n/a	5
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12v	1
DEHUMIDIFIER	350w/1ph	1
FANS	12v	6

*Quantities estimated. Your actual quantities may vary



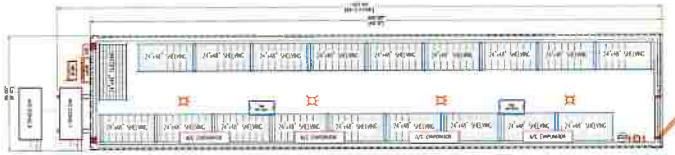
8x20 Clone GrowMod

8x40 CLONE - DESIGN PARAMETERS	
DESCRIPTION	*QTY
LIGHT COUNT FOR TWO SHELF RACKS (lighting on each of 2 shelves)	36
w/ LIGHT COUNT FOR THREE SHELF RACKS (lighting on each of 3 shelves)	54
PLANT COUNT FOR TWO(2) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	11232
w/ PLANT COUNT FOR THREE(3) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	16848
ESTIMATED DEHUMIDIFICATION NEEDED (if shelves are used near walls)	2

*Quantities estimated. Your actual quantities may vary

RECOMMENDED CLONE GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT PER SHELF FOR TWO(2) SHELF RACKS	630w/1ph	36
w/ UP TO 4' GROW LIGHT PER SHELF FOR THREE(3) SHELF RACKS	630w/1ph	54
24"x 48" TWO(2) SHELF WIRE RACKS	n/a	10
w/ 24"x 48" THREE(3) SHELF WIRE RACKS	n/a	10
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12v	1
DEHUMIDIFIER	350w/1ph	2
FANS	12v	6

*Quantities estimated. Your actual quantities may vary



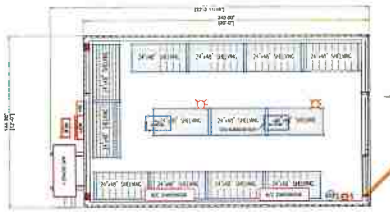
8x40 Clone GrowMod

12x20 CLONE - DESIGN PARAMETERS	
DESCRIPTION	*QTY
LIGHT COUNT FOR TWO SHELF RACKS (lighting on each of 2 shelves)	36
w/ LIGHT COUNT FOR THREE SHELF RACKS (lighting on each of 3 shelves)	54
PLANT COUNT FOR TWO(2) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	8112
w/ PLANT COUNT FOR THREE(3) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	12168
ESTIMATED DEHUMIDIFICATION NEEDED (if shelves are used near walls)	2

*Quantities estimated. Your actual quantities may vary

RECOMMENDED CLONE GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT PER SHELF FOR TWO(2) SHELF RACKS	630w/1ph	36
w/ UP TO 4' GROW LIGHT PER SHELF FOR THREE(3) SHELF RACKS	630w/1ph	54
24"x 48" TWO(2) SHELF WIRE RACKS	n/a	13
w/ 24"x 48" THREE(3) SHELF WIRE RACKS	n/a	13
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12v	1
DEHUMIDIFIER	350w/1ph	2
FANS	12v	6

*Quantities estimated. Your actual quantities may vary



12x20 Clone GrowMod

12x40 CLONE - DESIGN PARAMETERS	
DESCRIPTION	*QTY
LIGHT COUNT FOR TWO SHELF RACKS (lighting on each of 2 shelves)	64
w/ LIGHT COUNT FOR THREE SHELF RACKS (lighting on each of 3 shelves)	81
PLANT COUNT FOR TWO(2) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	16848
w/ PLANT COUNT FOR THREE(3) SHELF RACKS (based on capacity of 4 flats of 72 cells per shelf)	25272
ESTIMATED DEHUMIDIFICATION NEEDED (if shelves are used near walls)	3

*Quantities estimated. Your actual quantities may vary

RECOMMENDED CLONE GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT PER SHELF FOR TWO(2) SHELF RACKS	630w/1ph	64
w/ UP TO 4' GROW LIGHT PER SHELF FOR THREE(3) SHELF RACKS	630w/1ph	81
24"x 48" TWO(2) SHELF WIRE RACKS	n/a	37
w/ 24"x 48" THREE(3) SHELF WIRE RACKS	n/a	37
CO2 INJECTION VALVE & TIMER (TANK NOT INCLUDED)	12v	1
DEHUMIDIFIER	2400w/1ph	3
Fans	12v	9

*Quantities estimated. Your actual quantities may vary

12x40 Clone GrowMod

NORSEMAN, LLC

SHEET TITLE: CLONE RECOMMENDED LAYOUTS

REVISION: A

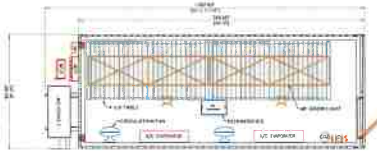
SHEET: CLONE

DATE: 07/31/20

8x20 VEG - DESIGN PARAMETERS	
DESCRIPTION	*QTY
	8
	160
	80 sqft

RECOMMENDED VEG GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	240w/ea	8
CO2 INJECTION VALVE (TANK NOT INCLUDED)	10w	1
4'x 8' DOUBLE STACK RACK	n/a	2
4'x 8' DOUBLE STACK RACK	n/a	2
DEHUMIDIFIER	250w/ea	1
FANS	25w/ea	2

*Quantities estimated. Your actual quantities may vary.

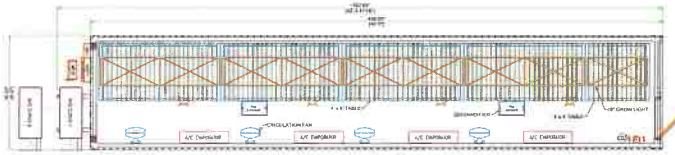


8x20
Veg
GrowMod

8x40 VEG - DESIGN PARAMETERS	
DESCRIPTION	*QTY
	16
	1760
	176 sqft

RECOMMENDED VEG GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	240w/ea	16
CO2 INJECTION VALVE (TANK NOT INCLUDED)	10w	1
4'x 8' DOUBLE STACK RACK	n/a	4
4'x 8' DOUBLE STACK RACK	n/a	4
DEHUMIDIFIER	n/a	2
FANS	25w/ea	4

*Quantities estimated. Your actual quantities may vary.

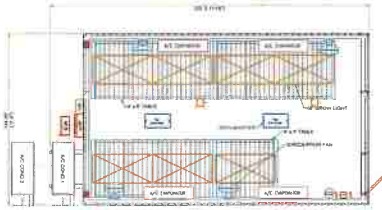


8x40
Veg
GrowMod

12x20 VEG - DESIGN PARAMETERS	
DESCRIPTION	*QTY
	18
	240
	240 sqft

RECOMMENDED VEG GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	240w/ea	18
CO2 INJECTION VALVE (TANK NOT INCLUDED)	10w	1
4'x 8' DOUBLE STACK RACK	n/a	3
4'x 8' DOUBLE STACK RACK	n/a	3
DEHUMIDIFIER	n/a	2
FANS	25w/ea	4

*Quantities estimated. Your actual quantities may vary.

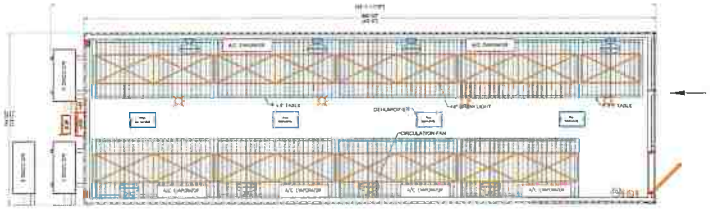


12x20
Veg
GrowMod

12x40 VEG - DESIGN PARAMETERS	
DESCRIPTION	*QTY
	36
	3520
	480 sqft

RECOMMENDED VEG GROW EQUIPMENT		
DESCRIPTION	POWER	*QTY
UP TO 4' GROW LIGHT	30w/ea	36
CO2 INJECTION VALVE (TANK NOT INCLUDED)	10w	1
4'x 8' DOUBLE STACK RACK	n/a	6
4'x 8' DOUBLE STACK RACK	n/a	6
DEHUMIDIFIER	10w	4
FANS	10w	8

*Quantities estimated. Your actual quantities may vary.



12x40
Veg
GrowMod

NORSEMAN, LLC

NEW TITLE VEG RECOMMENDED LAYOUTS

REVISION

SHEET VEG1

DATE 7/31/20