Form # P 04 DISPLAY THIS CARE	O ON PRINCIPAL FRONTAGE OF WORK
Application And Notes, If Any, Attached	PERIVIT Permit Number: 061528
This is to certify that PORTER DRYWALL INC	rth Star Woodworking Inc PERMIT ISSUED
has permission tointernal addition of a 20' x 1	pray Bo
AT _653 RIVERSIDE ST	L 311 AQ0600 OCT 3 1 2006
provided that the person or persons of the provisions of the Statutes of the construction, maintenance and this department.	rm or the section an epting this permit shall comply with all tine and of the Section ances of the City of Fortland regulating e of buildings and suctures, and of the application on file in
Apply to Public Works for street line and grade if nature of work requires such information.	A certificate of occupancy must be pre this ilding or art there is ed or convince osed-in 4 UR NO converse.
OTHER REQUIRED APPROVALS	
Fire Dept. () Constant Consta	
Appeal Board	
Other	Manage Ching 12/27/06
PENAI	LTY FOR REMOVING THIS CARD

C '4		D. U.P The Y	D	Permit No:	PERMIT IS	SUED
City 389	Congress Street, 04101	- Building or Use . Tel: (207) 874-8703	Fermit Applicatio , Fax: (207) 874-871	n 16 06-1528		311 A006001
Loca	tion of Construction:	Owner Name:		Owner Addres:	OCT 3 1	2008Phone:
653	RIVERSIDE ST	PORTER DR	YWALL INC	655 RIVERSIDE S	T	
Busi	iess Name:	Contractor Name		Contractor Address:	NTV OF DO	DTIAND
		North Star Wo	odworking Inc	651 Riversice Por	kindi UF FU	KIL 1011976899
Less	ee/Buyer's Name	Phone:		Permit Type: Additions - Comm	ercial	Zone: I-M
Past	Use:	Proposed Use:		Permit Fee:	Cost of Work:	CEO District:
Co	nmercial	Commercial -	internal addition of a	\$50.00	\$3,000.00	5
		20' x 14' Spray Booth		FIRE DEPT:	Approved INSE Denied Use	ECTION: Group: 172 Type: 3B
Prop	osed Project Description:			-	T	BITTAL JUNZ
internal addition of a 20' x 14' Spray Booth			Signature:	Cises Sign	ature: 10/27	
				Action: Approve	d 🗌 Approved	w/Conditions Denied
				Signature:		Date:
Pern	uit Taken By:	Date Applied For:		Zoning A	Approval	
ldo	bson	10/17/2006				/
1.	This permit application d	oes not preclude the	Special Zone or Revi	ews Zoning	, Appeal	Historic Preservation
	Applicant(s) from meetin Federal Rules.	g applicable State and	Shoreland	Variance		Not in District or Landmark
2.	Building permits do not is septic or electrical work.	nclude plumbing,	Wetland	Miscelland	eous	Does Not Require Review
3. Building permits are void if work is not started within six (6) months of the date of issuance.		Flood Zone	Condition	al Use	Requires Review	
	False information may in permit and stop all work.	validate a building	Subdivision	Interpretat	tion	Approved
			Site Plan	Approved		Approved w/Conditions
			J			
			Maj Minor M	Denied		Denied

CERTIFICATION

I hereby certify that I am the owner of record of the named property, or that the proposed work is authorized by the owner of record and that I have been authorized by the owner to make this application as his authorized agent and I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in the application is issued, I certify that the code official's authorized representative shall have the authority to enter all areas covered by such permit at any reasonable hour to enforce the provision of the code(s) applicable to such permit.

SIGNATURE OF APPLICANT	ADDRESS	DATE	PHONE
RESPONSIBLE PERSON IN CHARGE OF WORK, TITLE		DATE	PHONE

BUILDING PERMIT INSPECTION PROCEDURES Please call 874-8703 or 874-8693 to schedule your inspections as agreed upon

Permits expire in 6 months, if the project is not started or ceases for 6 months.

The Owner or their designee is required to notify the inspections office for the following inspections and provide adequate notice. Notice must be called in 48-72 hours in advance in order to schedule an inspection:

By initializing at each inspection time, you are agreeing that you understand the inspection procedure and additional fees from a "Stop Work Order" and "Stop Work Order Release" will be incurred if the procedure is not followed as stated below.

A Pre-construction Meeting will take place upon receipt of your building permit.

Footing/Building Location Inspection	Prior to pouring concrete
Re-Bar Schedule Inspection:	Prior to pouring concrete
	Prior to placing ANY backfill
Framing/Rough Plumbing/Electrical:	Prior to any insulating or drywalling
Final/Certificate of Occupancy: Prior use. I	to any occupancy of the structure or NOTE: There is a \$75.00 fee per ction at this point.

Certificate of Occupancy is not required for certain projects. Your inspector can advise you if your project requires a Certificate of Occupancy. All projects **DO** require a final inspection

 ν If any of the inspections do not occur, the project cannot go on to the next phase, REGARDLESS OF THE NOTICE OR CIRCUMSTANCES.

_____ CERIFICATE OF OCCUPANICES MUST BE ISSUED AND PAID FOR, BEFORE THE SPACE MAY BE OCCUPIED

 $\frac{1}{10} \frac{1}{2} \frac{1$ Signature of Applicant/Designee Signature of Inspections Official Date CBL: Building Permit #: ___

City of Portland, Maine - Buil	ding or Use Permit		Permit No:	Date Applied For:	CBL:
389 Congress Street, 04101 Tel: (1	207) 874-8703, Fax: (207) 87	74-8716	06-1528	10/17/2006	311 A006001
Location of Construction: Owner Name: O		0	wner Address:		Phone:
653 RIVERSIDE ST	PORTER DRYWALL INC	6	655 RIVERSIDE ST		
Business Name:	Contractor Name:	C	Contractor Address:		Phone
	North Star Woodworking Inc	6	51 Riverside Portl	and	(207) 797-6899
Lessce/Buyer's Name	Phone:	P6	ermit Type:		
			Additions - Comm	ercial	
Proposed Use:		Proposed	Project Description:		
Commercial - internal addition of a 20)' x 14' Spray Booth	internal	addition of a 20' x	14' Spray Booth	
		1			
		1			
Dept: Zoning Status: A	pproved Re	eviewer:	Marge Schmuckal	Approval Da	te: 10/23/2006
Note:			C		Ok to Issue: 🔽
Dept: Building Status: A	pproved with Conditions Re	eviewer:	Michael A. Collin	s Approval Da	te: 10/27/2006
Note:					Ok to Issue: 🔽
1) Equipment must be installed in co	mpliance with the manufacturer	's specific	ations		
2) Separate permits are required for	any electrical plumbing or HV	AC system	n c		
Separate plans may need to be sub	omitted for approval as a part of	this proce	ns. SS.		
3) Must comply with Article 516 NE		F			
3) Must comply with Afficie 510 M	rA /0.				
Dept: Fire Status: A	pproved with Conditions Re	eviewer:	Cptn Greg Cass	Approval Da	te: 10/24/2006
Note:				-	Ok to Issue: 🔽
1) Spray booths shall meet the requir	ements of NFPA 1 CHAPTER	43. See at	tached		
2) The quantity of of flore the light	d stored shall be limited to NED	A LOUAT	$\mathbf{OTED} \ 12 \ 14 \ 6 \ $	techod	
(2) The quanty of of frammible figure	i stored shall be infilted to NFP/	AICHAR	71EK 45.1.0 see at	tached	
3) A permit fee of \$100.00 for Spray occupancy being issued.	operations and \$ 25.00 Woodw	vorking pla	ants. Shall be requi	ired prior to the certi	ficate of

PERM	IT	IS	SUED	1
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CITY OF PORTLAND

42.5.2.7.4 The vehicle shall not be parked near sources of heat, open flarns, or similar sources of ignition, or near inadequately ventil atd pits. [58:8.6]

42.5.3* Liquefiel Natural Gas (LNG). Fuel dispensing facilities for marine, highway, rail, off-road, and industrial vehicles using LNG and ING storage in ASME containers of 70,000 gal (265 m³) or lessshall comply with NFPA 57, Liquefied Natural Gas (LNG) Vehicular Fuel Systems Code.

42.5.3.1 Permits. Permits, where required, shall comply with 1.12.19.

Chapter 43 Spraying, Dipping, and Coating Using Flammable or Combustible Materials

43.1 Application.

43.1.1* Operations involving the spray application of flammable and combustible materials shall comply with NFPA 33, *Standard for SprayApplication Using Flammable or Combustible Materials* and Section 43.1.

43.1.1.1 Section 43.1 shall apply to the spray application of flammable liquids, combustible liquids, or combustible powders either continuously or intermittently, by any of the following methods:

- (1) Compressedair atomization
- (2) Airless or hydraulic atomization
- (3) Electrostatic application methods
- (4) Fluidized bed application methods
- (5) Electrostatic fluidized bed application methods
- (6) Other acceptable application means

43.1.1.2 Section 43.1 shall not apply to the following:

- (1)*Spray application processes or operations that are conducted outdoors
- (2)*Small portable spraying equipment or aerosol products that are not used repeatedly in the same location
- (3) Spray application of noncombustible materials
- (4) The hazards of toxicity or industrial health and hygiene

43.1.1.3 Where certain waterborne, spray-applied materials that contain flammable or combustible liquids or that produce combustible residues or deposits are used, the applicable provisions of Section 43.1 shall apply.

43.1.1.4 Permits. Permits, where required, shall comply with 1.12.19.

43.1.2 Location of Spray Application Operations.

43.1.2.1* General. Spray application operations and processes shall be confined to spray booths, spray rooms, or spray areas, as defined in this *Code*. [**33**:2.1]

43.1.2.2 Locations in Other Occupancies. Spray application operations and processes shall not be conducted in any building that is classified as an assembly, educational, institutional, or residential occupancy, unless they are located in a room that is separated both vertically and horizontally from all surrounding areas by construction having a fire resistance rating of not less than 2 hours and that is protected by an approved automatic sprinkler system designed and installed in accordance with NFPA 13, Standard for the Installation of Sprinkler Systems. [33:2.2]

43.1.3 Construction and Design of Spray Areas, Spray Rooms, and Spray Booths.

43.1.3.1* Walls and Ceilings. Walls and ceilings that intersect or enclose a spray area shall be constructed of noncombustible or limited-combustible materials or assemblies and shall be securely and rigidly mounted or fastened. The interior surfaces of the spray area shall be smooth, designed and installed to prevent pockets that can trap residues, and designed to facilitate ventilation and cleaning. **[33:3.1]**

43.1.3.1.1 Air intake filters that are a part of a wall or ceiling assembly shall be listed as Class 1 or Class 2, in accordance with UL 900, *Standard for Test Performance of Air Filter Units.* [**33**:3.1]

43.1.3.1.2 The floor of the spray area shall be constructed of noncombustible material, limited-combustible material, or combustible material that is completely covered by noncombustible material. **[33:3.1]**

43.1.3.1.3 Aluminum shall not be used for structural support members or the walls or ceiling of a spray booth or spray room enclosure. Aluminum shall also not be used for ventilation ductwork associated with a spray booth or spray room. Aluminum shall be permitted to be used for interior components, such as platforms, spray apparatus components, and other ancillary devices. **[33:3.1]**

43.1.3.1.4 If walls or ceiling assemblies are constructed of sheet metal, single-skin assemblies shall be no thinner than 0.0478 in. (1.2 mm) and each sheet of double-skin assemblies shall be no thinner than 0.0359 in. (0.9 mm). [**33**:3.1.1]

43.1.3.1.5 Structural sections of spray booths shall be permitted to be sealed with a caulk or sealant to minimize air leakage. [**33**:3.1.2]

43.1.3.1.6 Spray rooms shall be constructed of and separated from surrounding areas of the building by construction assemblies that have a fire resistance rating of 1 hour. [**33:3.1.3**]

43.1.3.1.7 Enclosed spray booths and spray rooms shall be provided with means of egress that meet the requirements of NFPA 101[®], Life Safety Code[®]. [**33:3.1.4**]

43.1.3.1.8 Spray booths that are used exclusively for powder coating shall meet the requirements of Chapter 13 of NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials.* They shall be permitted to be constructed of fire-retardant combustible materials where approved by the AHJ.

Exception: Listed spray booth assemblies that are constructed of other materials shall be permitted. [33:3.1.5]

43.1.3.2 Conveyor Openings. Conveyor openings that are necessary for transporting or moving work into and out of the spray area shall be as small as practical. **[33:3.2]**

43.1.3.3* Separation from Other Occupancies. Spray booths shall be separated from other operations by a minimum distance of 3 ft (915 mm) or by a partition, wall, or floor/ceiling assembly having a minimum fire resistance rating of 1 hour. Multiple connected spray booths shall not be considered as "other operations."

Exception: As provided for in Section 11.3 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials. [33:3.3]

43.1.3.3.1 Spray booths shall be installed so that all parts of the booth are readily accessible for cleaning. [**33:**3.3.1]

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43.1.3.3.2 A clear space of not less than 3 ft (915 mm) shall be maintained on all sides of the spray booth. This clear space shall be kept free of any storage or combustible construction.

Exception No. 1: This requirement shall not prohibit locating a spray booth closer than 3 ft (915 mm) to or directly against an interior partition, wall, or floor/ceiling assembly that has a fire resistance rating of not less than 1 hour, provided the spray booth can be maintained and cleaned.

Exception No. 2: This requirement shall not prohibit locating a spray booth closer than 3 ft (915 mm) to an exterior wall or a roof assembly provided the wall or roof is constructed of noncombustible material and provided the spray booth can be adequately maintained and cleaned. [33:3.3.2]

43.1.3.4 Movement of Powered Vehicles. Powered vehicles shall not be moved into or out of a spray area or operated in a spray area unless the spray application operation or process is stopped and the ventilation system is maintained in operation.

Exception: This requirement shall not apply to vehicles that are listed for the specific hazards of the spray area. [33:3.4]

43.1.3.5 Vision Panels. Panels for light fixtures or for observation shall be of heat-treated glass, wired glass, or hammered-wired glass and shall be sealed to confine vapors, mists, residues, dusts, and deposits to the spray area. Panels for light fixtures shall be separated from the fixture to prevent the surface temperature of the panel from exceeding 200°F (93°C). **[33:**3.5]

43.1.3.6 Ventilation. Spray areas that are equipped with ventilation distribution or baffle plates or with dry overspray collection filters shall meet the requirements of 43.1.3.6.1 through 43.1.3.6.5. **[33:**3.6]

43.1.3.6.1 Distribution plates or baffles shall be constructed of noncombustible materials and shall be readily removable or accessible for cleaning on both sides. [**33:**3.6.1]

43.1.3.6.2 Filters shall not be used when applying materials known to be highly susceptible to spontaneous heating or spontaneous ignition. [**33:**3.6.2]

43.1.3.6.3 Supports and holders for filters shall be constructed of noncombustible materials. **[33:**3.6.3]

43.1.3.6.4 Overspray collection filters shall be readily removable or accessible for cleaning or replacement. [**33**:3.6.4]

43.1.3.6.5 Filters shall not be alternately used for different types of coating materials if the combination of the materials might result in spontaneous heating or ignition. (See also Section 8.8 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials.) [**33**:3.6.5]

43.1.4 Electrical and Other Sources of Ignition.

43.1.4.1* General. Electrical wiring and utilization equipment shall meet all the applicable requirements of Articles 500, 501, 502, and 516 of NFPA 70, *National Electrical Code*[®], and 43.1.4.1 through 43.1.4.7.

Exception No. 1: Powered vehicles shall meet the requirements of Section 3.4 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials.

Exception No. 2: Resin application operations shall meet the requirements of Chapter 15 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials. [33:4.1] **43.1.4.1.1** Electrostatic spray application apparatus also shall meet the requirements of Chapter 9 or Chapter 10 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials, whichever is applicable. [**33:**4.1.1]

43.1.4.1.2 Drying, curing, and fusing apparatus also shall meet the requirements of Chapter 11 of NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials.* [33:4.1.2]

43.1.4.1.3 Vehicle undercoating and body lining operations also shall meet the requirements of Section 12.1 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials. [**33**:4.1.3]

43.1.4.1.4 Powder coating apparatus also shall meet the requirements of Chapter 13 of NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials.* [33:4.1.4]

43.1.4.1.5* Open flames, spark-producing equipment or processes, and equipment whose exposed surfaces exceed the autoignition temperature of the material being sprayed shall not be located in the spray area or in surrounding areas classified as Division 2.

Exception: This requirement shall not apply to drying, curing, or fusing apparatus as covered by Chapter 11 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials. [33:4.1.5]

43.1.4.1.6* Any utilization equipment or apparatus that is capable of producing sparks or particles of hot metal and is located above or adjacent to either the spray area or the surrounding Division 2 areas shall be of the totally enclosed type or shall be constructed to prevent the escape of sparks or particles of hot metal. **[33:**4.1.6]

43.1.4.2 Electrical Devices in Spray Areas.

43.1.4.2.1* Electrical wiring and utilization equipment that is located in the spray area and is not subject to deposits of combustible residues shall be suitable for Class I, Division 1 or Class II, Division 1 locations, whichever is applicable. **[33:**4.2.1]

43.1.4.2.2* Electrical wiring and utilization equipment that is located in the spray area and is subject to deposits of combustible residues shall be listed for such exposure and shall be suitable for Class I, Division 1 or Class II, Division 1 locations, whichever is applicable. [**33**:4.2.2]

43.1.4.3 Electrical Devices Adjacent to Spray Areas. Electrical wiring and utilization equipment located adjacent to the spray area shall be classified in accordance with 43.1.4.3.1 through 43.1.4.3.5. **[33:**4.3]

43.1.4.3.1 Electrical wiring and utilization equipment located outside, but within 20 ft (6100 mm) horizontally and 10 ft (3050 mm) vertically, of an unenclosed spray area and not separated from the spray area by partitions extending to the boundaries of the area designated as Division 2 in Figure 43.1.4.3.1 shall be suitable for Class I, Division 2 or Class II, Division 2 locations, whichever is applicable. **[33:**4.3.1]

43.1.4.3.2 If spray application operations are conducted within a closed-top, open-face or open-front booth or room, any electrical wiring or utilization equipment located outside of the booth or room but within the boundaries designated as Division 2 in Figure 43.1.4.3.2(a) and Figure 43.1.4.3.2(b) shall be suitable for Class I, Division 2 or Class II, Division 2 locations, whichever is applicable.[**33**:4.3.2]

1 - 179









FIGURE 43.1.4.3.2(a) Class I (or Class II), Division 2 Locations Adjacent to an Open-Faced or Open-Front Spray Booth or Spray Room Where Exhaust Ventilation Interlocked with Spray Application Equipment. [33:Figure 4.3.2(a)]

43.1.4.3.2.1 The Class I, Division 2 or Class II, Division 2 locations shown in Figure 43.1.4.3.2(a) and Figure 43.1.4.3.2(b) shall extend from the edges of the open face or open front of the booth or room in accordance with the following:

 If the exhaust ventilation system is interlocked with the spray application equipment, then the Division 2 location shall extend 5 ft (1525 mm) horizontally and 3 ft



FIGURE 43.1.4.3.2(b) Class I (or Class II), Division 2 Locations Adjacent to an Open-Faced or Open-Front Spray Booth or Spray Room Where Exhaust Ventilation Not Interlocked with Spray Application Equipment. [33:Figure 4.3.2(b)]

(915 mm) vertically from the open face or open front of the booth or room, as shown in Figure 43.1.4.3.2(a).

(2) If the exhaust ventilation system is *not* interlocked with the spray application equipment, then the Division 2 location shall extend 10 ft (3050 mm) horizontally and 3 ft (915 mm) vertically from the open face or open front of the booth or room, as shown in Figure 43.1.4.3.2(b).[33:4.3.2]

43.1.4.3.2.2 For the purposes of this subsection, *interlocked* shall mean that the spray application equipment cannot be operated unless the exhaust ventilation system is operating and functioning as designed and spray application is automatically stopped if the exhaust ventilation system fails. **[33:**4.3.2]

43.1.4.3.3 If spray application operations are conducted within an open-top booth, any electrical wiring or utilization equipment located within the space 3 ft (915 mm) vertically of the top of the booth shall be suitable for Class I, Division 2 or Class II, Division 2 locations, whichever is applicable. In addition, any electrical wiring or utilization equipment located within 3 ft (915 mm) in all directions of openings other than the open top also shall be suitable for Class I, Division 2 or Class II, Division 2 locations, whichever is applicable. [**33:**4.3.3]

43.1.4.3.4 If spray application operations are confined to an enclosed spray booth or room, any electrical wiring or utilization equipment located within 3 ft (915 mm) of any opening shall be suitable for Class I, Division 2 or Class II, Division 2 locations, whichever is applicable, as shown in Figure 43.1.4.3.4. **[33:**4.3.4]

43.1.4.3.5 Where spray application equipment, spray gun cleaners, and supply containers are located in an area that is ventilated at a rate that is sufficient to maintain the concentration of ignitible vapors in the area at or below 25 percent of the lower flammable limit, the area within 3 ft (915 mm) in all directions from any open container or equipment and extending to the floor or grade level shall be classified as Class I, Division 1 or Class II, Division 1, whichever is applicable. The area extending 2 ft (610 mm) beyond the Division 1 location shall be classified as Class I, Division 2 or Class II, Division 2, Di

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Elevation

FIGURE 43.1.4.3.4 Class I (or Class II), Division 2 Locations Adjacent to an Enclosed Spray Booth or Spray Room. [33:Figure 4.3.4]

whichever is applicable. In addition, the area within 10 ft (3050 mm) horizontally of the perimeter of such open container or equipment up to a height of 18 in. (458 mm) above the floor or grade level shall be classified as Class I, Division 2 or Class II, Division 2, whichever is applicable. Electrical wiring and utilization equipment installed in these areas shall be suitable for the location, as shown in Figure 43.1.4.3.5. [33:4.3.5]



Class I, Division 2 or Class II, Division 2

FIGURE 43.1.4.3.5 Electrical Area Classification Around an Open Container. [33:Figure 4.3.5]

43.1.4.4 Light Fixtures.

43.1.4.4.1 Light fixtures that are attached to the walls or ceilings of a spray area, but are outside of any classified area and are separated from the spray area by glass panels that meet the requirements of 43.1.3.3 shall be suitable for use in ordinary hazard (general purpose) locations, as shown in Figure 43.1.4.4.1. Such fixtures shall be serviced from outside the spray area. [33:4.4.1]



FIGURE 43.1.4.4.1 Example of a Light Fixture Mounted Outside of the Spray Area and Serviced from Outside the Spray Area. [33:Figure 4.4.1]

43.1.4.4.2 Light fixtures that are attached to the walls or ceilings of a spray area; are located within the Class I, Division 2 or Class II, Division 2 location; and are separated from the spray area by glass panels that meet the requirements of 43.1.3.3 shall be suitable for use in that location, as shown in Figure 43.1.4.4.1. Such fixtures shall be serviced from outside the spray area. [**33:**4.4.2]

43.1.4.4.3 Light fixtures that are an integral part of the walls or ceiling of a spray area shall be permitted to be separated from the spray area by glass panels that are an integral part of the fixture. Such fixtures shall be listed for use in Class I, Division 2 or Class II, Division 2 locations, whichever is applicable and as shown in Figure 43.1.4.4.3, and also shall be listed for accumulations of deposits of combustible residues. Such fixtures shall be permitted to be serviced from inside the spray area. **[33:**4.4.3]

43.1.4.4. Light fixtures that are located inside the spray area shall meet the requirements of 43.1.4.2 and 43.1.4.5. [**33:**4.4.4]

43.1.4.5* Static Electricity. In order to prevent sparks from the accumulation of static electricity, all persons, all electrically conductive parts of the spray room or spray booth, the exhaust ducts, spray equipment, objects or containers that receive the spray stream, and piping systems that convey flammable or combustible liquids or aerated combustible solids shall be electrically bonded and grounded. **[33:**4.5]

43.1.4.6 Flexible Power Cords. For automated equipment and robotic equipment, flexible power cords shall be permitted to be used in hazardous (classified) locations and shall be permitted to be connected to the fixed part of the electrical circuit, provided they meet all of the following conditions:

(1) They are approved for extra-hard usage.



FIGURE 43.1.4.4.3 Examples of Light Fixtures That Are an Integral Part of the Spray Area and Are Serviced from Inside the Spray Area. [33:Figure 4.4.3]

- (2) They are equipped with a grounding conductor that meets the requirements of Section 400.2 of NFPA 70, National Electrical Code[®].
- (3) They are connected to terminals or conductors in an approved manner.
- (4) They are supported by a positive mechanical clamp in such a manner that permits the cord to be readily replaced and prevents strain at the cord connections within the terminal enclosure.
- (5) They are provided with explosion proof seals where the cord enters junction boxes, fittings, or enclosures.
- (6) They are listed for deposits of combustible residues. [33:4.6]

43.1.4.7 Portable Electric Lights. Portable electric light fixtures shall not be used in any spray area while spray application operations are being conducted.

Exception: Where portable electric light fixtures are required for use in spaces that are not illuminated by fixed light fixtures within the spray area, they shall meet the requirements of 43.1.4.2.2. [33:4.7]

43.1.5 Ventilation.

43.1.5.1 General. Ventilating and exhaust systems shall be designed and installed in accordance with the applicable requirements of NFPA 91, *Standard for Exhaust Systems for Air Con*

veying of Vapors, Gases, Mists, and Noncombustible Particulate Solids, except as amended by the requirements of Chapter 5 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials. [33:5.1]

43.1.5.2* Performance Requirements. Each spray area shall be provided with mechanical ventilation that is capable of confining and removing vapors and mists to a safe location and is capable of confining and controlling combustible residues, dusts, and deposits. The concentration of the vapors and mists in the exhaust stream of the ventilation system shall not exceed 25 percent of the lower flammable limit.

Exception: In confined spaces, where ventilation might not be capable of providing the necessary ventilation, a properly applied inerting procedure shall be permitted to be used. Such procedures shall meet the applicable requirements of NFPA 69, Standard on Explosion Prevention Systems, and shall be acceptable to the AHJ. [33:5.2]

43.1.5.2.1 Spray areas equipped with overspray collection filters shall have visible gauges, audible alarms, or an effective inspection program to ensure that the required air velocity is being maintained. [**33**:5.2.1]

43.1.5.2.2 Powder Coating Systems. Powder coating systems also shall meet the requirements of Section 13.7 of NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials.* **[33**:5.2.2]

43.1.5.2.3 Mechanical ventilation shall be kept in operation at all times while spray operations are being conducted and for a sufficient time thereafter to allow the vapors from drying coated objects or material and residues to be exhausted. Where spray operations are conducted automatically without an attendant constantly on duty, the operating controls of the spray apparatus shall be arranged so that the spray apparatus cannot function unless the exhaust fans are operating. **[33:**5.2.3]

43.1.5.3* Make-Up Air. An adequate supply of clean make-up air shall be provided to compensate for the air exhausted from spray operations. The intake for this make-up air shall be located so that the air exhausted from spray operations is not recirculated. [33:5.3]

43.1.5.4 Routing of Exhaust Ducts. Air exhausted from spray operations shall be conducted by ducts directly to the outside of the building. Exhaust ducts shall follow the most direct route to the point of discharge, but shall not penetrate a fire wall. The exhaust discharge shall be directed away from any fresh air intakes. The exhaust duct discharge point shall be at least 6 ft (1830 mm) from any exterior wall or roof. The exhaust duct shall not discharge in the direction of any combustible construction that is within 25 ft (7625 mm) of the exhaust duct discharge point any noncombustible or limited-combustible construction that is within 25 ft (7625 mm) of the exhaust duct discharge point. [33:5.4]

43.1.5.5 Recirculation of Exhaust.

43.1.5.5.1* Air exhausted from spray areas shall not be recirculated.

Exception: Air exhausted from a spray operation shall be permitted to be recirculated as make-up air for an unmanned spray operation or cascaded to subsequent unmanned spray operations, provided all of the following conditions have been met:

(1) Solid particulates have been removed from the recirculated air.

- (2) The concentration of vapors in the exhaust airstream do not exaed 25 percent of the lower flammable limit.
- (3) Listed equipment is used to monitor the concentration of vapors in all exhaust airstreams.
- (4) An alarm will sound and the spray operation will automatically shut down if the concentration of any vapor in the exhaust airstream exceeds 25 percent of the lower flammable limit.
- (5) Equipment installed to process and remove contaminants from the air exhausted from spray operations is approved by the AHJ. [33:5.5.1]

43.1.5.5.2* The provisions of 43.1.5.5.1 shall not disallow the use of recirculated air to occupied spaces. However, other requirements addressing the toxicity and the permissible exposure limits shall also apply. [**33**:5.5.2]

43.1_5.6* Manifolding of Exhaust Ducts. Individual spray booths shall be separately ducted to the building exterior.

Exception No. 1: Multiple cabinet spray booths whose combined frontal area does not exceed 18 ft^2 (1.7 m^2) shall be permitted to be manifolded, if the sprayed materials used will not react and cause ignition of the residue in the ducts.

Exception No. 2: Where treatment of exhaust is necessary for air pollution control or for energy conservation, ducts shall be permitted to be manifolded if all of the following conditions are met:

- (1) The sprayed materials used will not react and cause ignition of the residue in the ducts.
- (2) No nitrocellulose-based finishing material is used.
- (3) An air-cleaning system is provided to reduce the amount of overspray carried into the duct manifold.
- (4) Automatic sprinkler protection is provided at the junction of each booth exhaust with the manifold, in addition to the protection nquired by Chapter 7 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials.
- (5) The installation is approved by the AHJ. [33:5.6]

43.1.6 Storage, Handling, and Distribution of Flammable and Combustible Liquids.

43.1.6.1* General. Storage, handling, and mixing of flammable and combustible liquids shall meet all the applicable requirements of NFPA 30, *Flammable and Combustible Liquids Code*. Storage, handling, and mixing of flammable and combustible liquids at process areas shall also meet the requirements of 43.1.6. [33:6.1]

43.1.6.2 Storage in Process Areas.

43.1.6.2.1 There shall be not more than three approved flammable liquid storage cabinets in any single process area without the approval of the AHJ. Storage cabinets shall be listed or shall be designed and constructed to meet the requirements of NFPA 30, *Flammable and Combustible Liquids Code.* Any single cabinet shall contain not more than 120 gal (454 L) of Class I, Class II, or Class IIIA liquids, of which not more than 60 gal (227 L) shall be Class I and Class II liquids. **[33:**6.2.1]

43.1.6.2.2 The quantity of liquid located in the vicinity of spraying operations, but outside of a storage cabinet, an inside storage room, a cut-off room or attached building, or other specific process area that is cut off by at least a 2-hour fire-rated separation from the spraying operations, shall not exceed the quantity given in either (1) or (2), whichever is greater:

- (1) A supply for one day
- (2) 25 gal (95 L) of Class IA liquids in containers, plus 120 gal (454 L) of Class IB, IC, II, or III liquids in containers, plus 2 portable tanks each not exceeding 660 gal (2498 L) of Class IB, IC, Class II, or Class IIIA liquids, plus 20 portable tanks each not exceeding 660 gal (2498 L) of Class IIIB liquids. [33:6.2.2]

43.1.6.2.3 The quantity of flammable and combustible liquids located in a spray area or in a mixing room adjacent to a spray area shall meet the requirements of 43.1.6.3. **[33:**6.2.3]

43.1.6.3 Mixing.

43.1.6.3.1 Dispensing or transfer of liquids from containers, mixing of liquids, and filling of containers, including portable mixing tanks and "pressure pots," shall be done only in a mixing room or in a spray area. **[33:6.3.1]**

43.1.6.3.2 Mixing rooms shall meet all of the following requirements:

- (1) The mixing room shall meet the construction requirements of Section 3.1 of NFPA 33, *Standard for Spray Appli*cation Using Flammable or Combustible Materials.
- (2) The mixing room shall not exceed $150 \text{ ft}^2 (14 \text{ m}^2)$.
- (3) The mixing room shall be designed to contain a spill of the contents of the room.
- (4) The mixing room or a spray area used for mixing and dispensing operations shall be provided with continuous mechanical ventilation capable of providing not less than 1 ft³/min of air movement per ft² (0.3 m³/m·m²) of floor area or 150 ft³/min (4 m³/min), whichever is greater. The ventilation system shall be in operation at all times.
- (5) Dispensing and mixing rooms shall be classified, for purposes of electrical area classification, the same as enclosed spray booths, in accordance with 4.3.4 of NFPA 33, Standard for Spray Application Using Flammable or Combustible Materials.
- (6) The mixing room shall be provided with an approved automatic fire protection system that meets all applicable requirements of Chapter 7 of NFPA 33, *Standard for Spray Application Using Flammable or Combustible Materials.*
- (7) The mixing room shall be provided with portable fire extinguishers located in accordance with NFPA 10, Standard for Portable Fire Extinguishers.

Exception: See 43.1.6.3.6. [33:6.3.2]

43.1.6.3.3 The amount of liquid permitted in a single spray area shall not exceed 60 gal (227 L). [33:6.3.3]

43.1.6.3.4 Where a separate mixing room is provided and the mixing room is located within 6 ft (1830 mm) of an adjacent spray area or areas, the combined quantities of liquids located in the spray areas and the mixing room shall not exceed 120 gal (454 L), as shown in Figure 43.1.6.3.4(a) and Figure 43.1.6.3.4(b).

Exception: See 43.1.6.3.6. [33:6.3.4]

43.1.6.3.5 Where a separate mixing room is provided and the mixing room is located 6 ft (1830 mm) or more from an adjacent spray area or areas, the quantity of liquid permitted in the mixing room shall not exceed 2 gal/ft² (80 L/m²), up to a maximum of 300 gal (1135 L), as shown in Figure 43.1.6.3.5.

Exception: See 43.1.6.3.6. [33:6.3.5]

43.1.6.3.6 Where the quantities of liquids required or the floor area necessary to provide a suitable mixing room exceeds the limits specified in 43.1.6.3.2 through 43.1.6.3.5, the mixing room shall meet all applicable requirements of NFPA 30, *Flammable and Combustible Liquids Code.* [**33**:6.3.6]



General Building Permit Application

If you or the property owner owes real estate or personal property taxes or user charges on any property within the City, payment arrangements must be made before permits of any kind are accepted.

Location/Address of Construction: 651	RIVERSIDE ST. PORTLAND,	, ME				
Total Square Footage of Proposed Structure Square Footage of Lot						
1500 EXSISTING ST	RUCTURE					
Tax Assessor's Chart, Block & Lot	Owner: PDL	Telephone:				
Chart# Block# Lot#	655 RIVERSIDE	828 2021				
311 H 0		8/8-2029				
Lessee/Buyer's Name (If Applicable)	Applicant name, address & telephone:	Cost Of				
NORTH STAR WOODWORKING	NORTH STAR WOODWORKING INC	Work: \$ 3000.00				
	651 REVERSIDE					
	POLTLAND, ME.	ree: <u>> 00 /00</u>				
797-6899 C of O Fee: \$						
Current Specific use: WAREHOUSE						
If vacant, what was the previous use? <u>WAR</u>	EHOUSE SPACE					
Proposed Specific use: FINISH FACELITY						
Project description:	Socie Bouth - 20×19					
Froject description 1900, From 07 Spring 15001.						
ECTION						
INSPE ME						
ON TANK						
Contractor's name, address & telephone:						
Who should we contact when the permit is ready: SCOTT REAVESSEPT CITY 1						
Mailing address: Phone: 797-6899						

Please submit all of the information outlined in the Commercial Application Checklist. Failure to do so will result in the automatic denial of your permit.

In order to be sure the City fully understands the full scope of the project, the Planning and Development Department may request additional information prior to the issuance of a permit. For further information visit us on-line at <u>www.portlandmaine.gov</u>, stop by the Building Inspections office, room 315 City Hall or call 874-8703.

I hereby certify that I am the Owner of record of the named property, or that the owner of record authorizes the proposed work and that I have been authorized by the owner to make this application as his/her authorized agent. I agree to conform to all applicable laws of this jurisdiction. In addition, if a permit for work described in this application is issued, I certify that the Code Official's authorized representative shall have the authority to enter all areas covered by this permit at any reasonable hour to enforce the provisions of the codes applicable to this permit.

Signature of applicant:	Date:	10-13-06

This is not a permit; you may not commence ANY work until the permit is issued.

NORTH STAR WOODWORKING, INC.

651 Riverside Street Portland, Maine 04103 Tel: 207-797-6899, Fax: 207-797-7802

October 5, 2006

Portland City Hall

Dear Sir or Madam:

North Star Woodworking, Inc. (NSW) has recently entered into a lease agreement with PDL, Inc. for the usage of approximately 1500 square feet of existing warehouse space located at 651 Riverside Street in Portland, Maine. NSW currently leases an abutting space from PDL, Inc and is expanding the woodworking shop.

NSW intends to connect an existing space to the new space via a fireproof door. The new space will act as a finish facility for the cabinet shop. A professional spray booth with integrated dry chemical fire suppression system has been designed by Norris Wiener, Inc. specifically for this space. The designed spray booth will be professionally installed and will include all safety features required by NFPA33

I have included two copies of the following items for your records. One copy is for the City fire inspector.

- 1. Plan of space at 651 Riverside Street for proposed change of use
- 2. Designs for the specified spray booth

Sincerely,

Scott A. Reaves President



822 PSCAT HG 040 HD B - 109-1409-20-61-01 SCALE 1:1 WEDANT SHEET 1 OF 3





NORRIS⇔WIENER≝ BAY STATE SPRAY EQUIPMENT

WWW.NORRISWIENER.COM

NorthStar Woodworking

February 1, 2006

Revision 2

651 Riverside Street

Portland, ME 04103

Attn: Scott A. Reaves

In accordance with your request Norris-Wiener/Bay State Spray Equipment is pleased to offer you the following quotation for your review.

1 – ECC-18-SB SB COL-MET CROSSDRAFT SPRAYBOOTH

MEASUREMENTS: 14'0"W x 9'0"H x 18'0"D, Inside Dimensions

14'4" W x 10'10"H x 18'4"D, Outside Dimensions

FAN: High Efficiency, vapor sealed, non-sparking 30" tubeaxial exhaust fan.

MOTOR: 3 HP / 3 Phase TEFC Motor 230/460/3phase

Lighting: (8) 48" - 4 tube Nonshadow Vapor Proof Fluorescent Light Fixtures mounted in the side walls and ceiling panels behind clear tempered safety glass and sealed with a gasket. Class I Division II, 120 V (less Bulbs)

Filters: (16) <u>Exhaust Filter</u>: Filter Media (fastest change-out time). PAINT POCKET FILTER MEDIA. (20) <u>Intake Filter</u>. UL Approved. Complies with OSHA and NFPA requirement.

MISCELLANEOUS: Draft Gauge & all necessary hardware

New England Leader For Spray Equipment • Industrial Fluid Handling Products • Finishing Systems Industrial and Automotive Spray Booth Products • Installation and Service Your Complete Source For Meeting Or Exceeding Stringent Environmental Codes

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Restore 2 hr. File Vated assembly after transity door Ferrare infil framing and vertrame w/ 189. E"CST metal 54 vals for 612 hr. metal for Door Existing Steel Bearn for Previous overhead door General Notes opening. West Elevation Owner: PDL Inc.

Project : 651 Riverside Street Location : 651 Riverside Street Postland Maine 04103