Manitoba

Education and Training

Skills Strategy Equipment Enhancement Fund

2016-2017 Application Information

The following information must be addressed when applying for funding:

1. Program Profile	Name of school and a brief description of technical-vocational / industrial arts program for which funding is requested.
2a. Equipment Required	Provide an accurate description of equipment to be purchased/ leased. (Attach manufacturer/supplier information and copies of **three (3) price quotes to budget**. If three [3] price quotes are not provided, indicate reason[s]).
2b. Funding Criteria	Items purchased must be outlined as follows: Category 1: Items purchased over $10,000 Category 2: Items purchased under $10,000 • Please note: Category 1 purchases must be over $10,000 for each equipment item purchased and **not** a cumulative cost.
3. Program Impact(s)	Provide a statement of expected program outcomes/impacts related to equipment request.
4. Demonstrated Educational Need	Evidence of proposed equipment need(s) to support program currency, relevance, enrolment, regional labour market needs. Indicate when equipment delivery/installation is expected and when equipment will be used for instruction.
5. Consultation	Evidence of consultation to determine equipment need (e.g. with industry/ post-secondary institutions). Indicate if the program has a trade advisory committee(s).
6. Partnerships	Description of industry/business and/or post-secondary program partnerships, including High School Apprenticeship Program (HSAP).
7. Coherence	Indicate any relationship between this programming and other on-site or divisional programming or inter-disciplinary activities.
8. Budget	Equipment costs, delivery, installation and set-up costs (congruent with code requirements) are allowed and must be clearly identified on the budget form. Consumable operating costs are not eligible for support.
9. Additional comments	Provide any additional relevant program information.

Manitoba

Education and Training

2016-2017 Application

Skills Strategy Equipment Enhancement Fund

School Division Information

School Division: Pembina Trails School Division

School Division Contact Person: Iain Riffle — Title: Assistant Superintendent

Address: 181 Henlow Bay

City/Town: Winnipeg — Postal Code: R3Y 1M7

Telephone: 204 488 1757 — Fax: 204 488 2095 — Email: iriffle@pembinatrails.ca

School Information (If applying for more than one program, use a separate application for each)

School: Shaftesbury High School

Principal: Stan Weibe

Program Contact: (if different from above): David Gamble — Position: Teacher — Email: dgamble@pembinatrails.ca

Address: 2240 Grant Ave

City/Town: Winnipeg — Postal Code: R3P 0P7

Telephone: 204 888 5898

School Web Site: www.pembintrails.ca/shaftesbury — Email: dplantje@pembinatrails.ca

Other Project Personnel Responsible: Dana Plantje — Email:

Email:

Type of Submission (check all that apply)

Program: Industrial Arts

Upgrade Existing Program	x
Expand Existing Program	x
New/Emerging Program	x

Old Equipment Use (check all that apply)

Equipment will support other programs (e.g. Industrial Arts or Technical Vocational)	☐
Equipment will remain in program	x
Other (specify, e.g. disposal)	☐

Proposed Equipment

CNC Router, Laser engraver, 3d printer

Cost $37303.42 including tax

Program Information

# of courses offered in program		1) Program is Apprenticeship Accredited (* If "NO" attach explanation)	Yes ■
# of teachers in program (FTE)		2) Program is Post-Secondary Articulated: Institution _____ (if "no" go to #3)	■ No*
		3) Reason	

Project Proposal

Attach a concise, typed project proposal that addresses all items (1-9) listed in the ***Application Proposal Information***. Proposal should also consider the proposal characteristics as stated in the funding announcement letter to Superintendents.

INCOMPLETE APPLICATIONS WILL NOT BE CONSIDERED.

Equipment Request Form

Attach completed "Equipment Request Form". Please ensure that a complete and accurate description of each of the goods/services requested is provided, along with quoted costs. Use a new form for separate program or school requests. **Please indicate equipment costs to reflect Category 1 and/or Category 2 in accordance to the 2016-2017 Application Form.**

Additional Comments

I hereby approve the submission of this completed application for consideration by the Technical Vocational Education Unit for the 2016-2017 Skills Strategy Equipment Enhancement Fund.

I hereby grant permission to post approved project proposal/list of equipment/services and images on the department's web-site.

_____ _____

(Superintendent/CEO) (Date)

Skills Strategy Equipment Enhancement Fund 2016-2017 proposal

1. Program Profile

Shaftesbury is a grade nine through twelve high school located near the Canadian Mennonite University with a population of 650 students, 36 teachers, and 20 educational assistants. Shaftesbury provides educational opportunities to students in the Charleswood, Tuxedo, Linden Woods, River Heights and White Ridge catchment areas. Students attending Shaftesbury enjoy standard academic programming but are also able to participate in specialized education opportunities such as honours and AP programming, Hockey Skills Academy, Human Ecology, Fine Arts, as well as Business Ed and Vocational programs at Manitoba Institute for Trades and Technology (MITT). Shaftesbury's course offering have had some type of Industrial Arts programming since the initial construction of the IA facility in 1967.

This has primarily been in the areas of Graphic Arts and Manufacturing in Metalworking. In response to community demand Shaftesbury and Pembina Trails School division will be offering more options for students in Industrial Arts including: 9-12 Electronics , grade 12 Applied Technology, and the expansion of Computer Science to include grades 9-12, as well as Graphic Communication Technology 9-12 and Metal Manufacturing technology 9-12 for the 2016-2017 school year.

Over 50% of the school student population is enrolled in Industrial arts programing and of those 50% are female. Based on student's enrollment, the community sees great value in these programs as enrollment continues to climb and additional programs have been added or expanded. This shows the commitment and value that the community, administration, and division sees in these programs.

Both of our current Industrial Arts areas have strong ties to the vocational programing available at Manitoba institute for trades and technology encouraging students to enroll in both the High School Apprenticeship Program (HSAP) and vocational programing. The consistent trend at Shaftesbury and in Pembina Trails School Division has been for students to take Industrial Arts at the middle years level and continue on through the programs through high school with a growing number of students attending Manitoba Institute for Trades and Technology and High School Apprentice Programs.

2. Equipment

Pembina Trails School division is requesting support for purchase of one CWI 48"x 48" CNC Router from Canadian Wood Worker , one 24"x16" 90 watt C02 laser engraver/cutter from FS Laser and one Pegasus touch SLA 3d printer also from FS LASER. This equipment will be used to upgrade existing programs and help bring new programs to the division. In addition support for this equipment will aid in the support of the High School Apprenticeship Program and the dual credit program being offered through MITT.

3. Program Impact

The implementation of CNC technology and Computer Assisted Drafting (CAD) software would continue to expand and grow in Pembina Trails School Division (PTSD) with plans of implementing this technology across our division from grades 7-12. Student learning, growth and success are at the core of everything that PTSD does. It is the belief of this division that our plan of division wide implementation of Computer Assisted Manufacturing (CAM) and Computer Assisted Design (CAD) software will aid in PTSD's commitment to student learning, growth and success. As learners advance through early, middle and senior years in PTSD they will experience a broader education relevant to their individual needs; enabling them to thrive in an increasingly complex world. These technologies will not only benefit students pursuing a trades based careers, but will also help to develop skills that will be useful in design and engineering based professions. Engineering and Architecture both rely heavily computer based modeling and drafting to help aid in visualizing designs and to be able to complete the process of designing-building-testing and analysis. This approach can be followed at the high school level using the proposed technologies and its accompanying software. Encouraging students to follow the design-build-test cycle will engage and excite students to a much greater extent about design careers and encourage them to seek educational pathways that flow from this engagement and excitement. The advancement and implementation of educational related technology will help our learners to become emotionally invested, actively engaged, and thoughtfully reflective in their learning.

By implementing this equipment and these technologies, it will allow for the formation of an innovation consortium by connecting may innovation hubs housed in industrial arts programs within the division to effectively deliver content by trained specialists. This will ensure the proper delivery, operation, and operator safety. These experiences and exposure through cross curricular activities to produce an engaging product will expose students not only to manufacturing, trades, and design elements but also entrepreneurship. The process will help to focus students on the costs, facilities, and procedures need to create a successful product. After completion of the product a percentage will be sold by students to support the program to explore and reinforce the business skills needed for entrepreneurship.

CNC technology is not only useful in the development of skills and attracting individuals to vocational programs, it also lends itself readily to Education for Sustainable Development (ESD). Industrial Arts programs are often the last school based program that is thought of when we think about Education for Sustainable Development they are often the programs that help to bring new ideas and techniques to light in schools. In reality Industrial Arts programs, like the one in Shaftsbury High School, are often at the forefront of Education for Sustainable Development, Industrial Arts programs are often used to produce everything from compost bins, idle free zone signs, outdoor classrooms, and even community gardens. The addition of CNC technology to Pembina Trails School Division will allow the schools to continue this tradition of Education for Sustainable Development by encouraging habits of sustainable consumption through the use of more sustainable products like plywood instead of old growth forest products and minimize wastage of materials by allowing an accuracy in production often reserved for post-secondary and industrial institutions. Besides the obvious environmental benefits of CNC technology, it will also allow every student to acquire knowledge, skills, attitudes and values to shape a sustainable future through the use of CNC technology and its related software.

Education for Sustainable Development is often mistakenly misinterpreted as just a revamped version of environmentalism. While Education for Sustainable Developments approach does share its base roots with many environmental programs it goes beyond just protecting the environment. It also incorporates the importance of mental and personal wellbeing. This aspect is often forgotten at the school level, the introduction of CNC technology will help to rectify this oversight. CNC technology and its related software allows users to trouble shoot and refine designs long before they become a reality,

empowering individuals to try new things and challenge themselves without creating a product until it is perfected. CNC technology can be used for prototyping and building scale models quickly and accurately reducing wasted materials while also allowing for extreme accuracy in a models development. This technology also allows individuals the opportunity to develop skills and projects that otherwise may not be possible due to physical or mental disability by focusing in on skills that are routed in mental understanding rather than physical stature. CNC technology contributes to the mantra of "Education for Sustainable Development of enough for everyone, forever" because of these reasons.

4. Demonstration of educational need

Manitoba is experiencing a shortage of experienced trades people and skilled laborers. Although efforts are being made to increase access to trades programs it is not keeping up with market demands and increasing retirement rates. The federal and provincial governments have spent millions of dollars to help close this gap and try to meet the ever growing demand for skilled laborers and trades people by both employers and the public. The problem is multiplied by the fact that the trades have changed dramatically over the past two decades. Trades have become increasingly more technical and reliant on post-secondary education as well as highly specialized on the job apprenticeship training. After speaking with local business owners, trades people, Red River College, and Manitoba Institute of Trades and Technology the same deficits were reported repeatedly. In order to be successful, an individual and companies must be able to effectively integrate and maximize the use of the latest technologies. The biggest skill lacking in the trades and skilled labour pool today is the ability to use technology effectively and to be able to implement technology in a way that improves quality of work and productivity. Technology is becoming more prevalent in all sectors and there is an inevitability that students will need to be adaptable and fluent in adopting new forms of technology as they emerge and change their work.

Computer based design and manufacturing technology is used in a variety of industries and by trades people in a variety of applications related to the fabrication and design of products. These technologies include but are not limited to Computer Numeric Controlled (CNC) technology, 2D and 3D Computer Assisted Design (CAD) technology, 2D and 3D machining technology, and 3D Printing technology. These allow for precise repeatable results with minimal wastage of materials and

maximized safety for the operator by allowing mistakes to be identified and corrected long before physical manufacturing occurs. Computer based design and manufacturing is an established and expanding trade area. It is used by small companies like engineering firms or custom cabinetry shops, by large furniture manufactures like Palliser Furniture and by industrial facilities such as Alumicor dealing with commercial curtain walls and frames, and by HVAC firms like Price Industries. The skills required for the design and operation of this machinery is becoming even more in demand as industries require more efficiency and consumers demand better pricing and more exotic designs. The next generation of trade professionals will need to be able to apply these technologies on a daily basis in order to be successful in this competitive market. Computer based design and manufacturing technology will be a great challenge for traditional journeyman carpenters, and other trades who do not have the exposure and experience with this technology. By offering this exposure and experience at the junior and high school levels the students of Pembina Trails School Division will have a great advantage in post-secondary education and future job markets. Opportunities in vocational education and professions which were previously unconsidered by both students and community members will now be a reality.

Red River College often has great difficulty filling industry demand for CNC operators due to low enrollment and exposure of the profession to students at the high school level. Students enrolled in this program are often hired before graduation, according to Bill Noaks, acting Chair of Mechanical Manufacturing and Communications department at Red River College (RRC). This phenomenon is not limited to Red River College. The addition of this technology to Pembina Trails School Division would also help to improve the image of vocational and technical careers by helping to disband the stereotype of a male dominated market that requires more brawn then brains in order to be successful. This Technology relies on skill and understanding above all, and will allow students of both sexes the opportunity to operate and work with this machinery in a safe and educational environment. After speaking with representatives of various post-secondary training facilities it has become abundantly clear that this technology is an expanding industry and needs individuals to help fill positions in this area. These situations and views are shared by not only those at Red River College but also those at Manitoba Institute of Trades and Technology (MITT). After speaking with Grace Leduc MITT's Dean of academic programs many of the same situations that Bill Noaks had explained are happening for the students of MITT.

The addition of the design and manufacturing technologies and the related software to Pembina Trails School Division would give students exposure and an opportunity to gain proficiency with current technology normally reserved for post-secondary institutions and industry. This technology is used in a range of industries from aerospace to cabinet making and no matter the industry or situation the basic skills are the same. Whether a student wants to be an aerospace engineer or a journeyman cabinet maker, they can learn and develop skills useful to them by using this technology in a school setting. Computer based design and manufacturing technology does not only develop skills directly related to the technology, it also helps to develop abstract thinking skills, independent problem solving skills, visual spatial skills, basic and complex math skills, design skills, and complex critical thinking skills all of which are useful and will give an individual advantage in any post-secondary or trade related job market. These benefits will not only help current Industrial Arts and High School Apprenticeship Program students but also will aid in attracting additional students through the use of design and CNC technology to manufacturing and design Careers. Students who may not normally be attracted to trades and skilled labor may be attracted to the use of technology and the creativity allowed through the use of these technologies and see a future in a related field such as architecture and engineering. Trade and vocational education is often viewed as a place for students who do not perform well in a classroom or have no intention of attending post-secondary education to go and get some "easy" credits. This attitude has begun to change with the increasing use of technology and the cross curricular skills required in these programs. Students will be encouraged to develop proficiency in CNC, 2D/3D manufacturing and 3D printing equipment operation as well as trouble shooting and skills required to operate CAD software platforms like AutoCAD, MasterCam and Solid Edge. The implementation of this technology will require students to apply knowledge and skills from a wide variety of subject areas into real life situations. Students would be required to create both two dimensional and three dimensional models using MasterCam and Solid Edge modeling software along with developing proficiency in the CNC router, 2D/3D engraving and 3D printing machine safety and operation.

5/6. Consultation and Partnerships

Representatives of Pembina Trails and Shaftesbury High School have been in many meetings with both post secondary institutions and industry to help align course offerings and content with

those of industry and post secondary institutions. Both were consulted on software and equipment that should be purchased in order to ensure requirements for both trades and design based professions will be met. These partnerships will help support the industrial technology requested. Support letters have been included by the following organizations: Red River College, Manitoba Institute for Trades and Technology, University of Manitoba departments of Architecture and Engineering, Price Industries, Alumicor, and Macanta Builders.

Students at Shaftesbury High School receive CPR and First Aid training and participate in a session with the Workers of Tomorrow Safety Audit and practicums, which involves the participation of community businesses/industry. Increasingly, students are looking at the trades as a viable option and through repeated sessions and presentations to parents and students the image of technical vocational careers is beginning to change for the better. In addition, girls are also discovering and participating in internships and apprenticeships with extremely very positive results.

7. Coherence

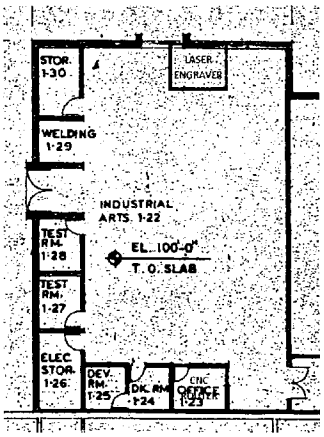
The very nature of CNC technology is cross curricular in a school based setting, meaning that it can be used to enrich a wide variety of subject areas that feed into trades, skilled labour, and various university and college degrees. While in a traditional sense manufacturing is manufacturing, with the use of this technology we can help to infuse engineering and design concepts from physics, math, and science to help create educated students who are able to recognize and solve problems in new and innovative ways. Students will be able to create three dimensional and two dimensional designs for projects from a wide variety of subject areas, incorporating math and scientific concepts that will help to mold and refine the designs. Finally, the CNC and laser machines can be used to bring their creations to life. Similar to H.S.A.P., dual credit, and Industrial Arts courses offered at Shaftesbury High School this technology will help expose and attract additional individuals to the trades, technology, engineering, and design based markets and help to expand Pembina Trails School division course offerings.

CNC technology will help to bring exposure and experiences to students and community members that they would otherwise not have been informed of, such as the careers and opportunities that are available to individuals with skills related to the operation and design for this technology. By offering this exposure and experience at the high school and junior high level the students of Pembina

Trails School Division will have a great advantage in post-secondary education and future job markets. This will open up opportunities in vocational education and design professions previously not considered by both students and community members. The infusion of this technology will enrich existing academic and industrial arts programing present in Pembina Trails School Division by helping to both add creative aspects to topic areas through the use of CNC design software and operation, and implement a variety of Science and Math skills into real skills needed throughout the design and creation process. The implementation on CNC technology in Pembina Trails School Division is a long term plan that has received the full support of all communities, schools, and instructors involved in this project.

9. Additional comments

Our proposed equipment will be placed in the metalworking facility of Shaftesbury with the Laser Engraver going on the far wall of the main shop space so as to utilize the existing ventilation system. The CNC will be setup in the existing office space so that the room can be sealed from the rest of the facility in order to prevent dust from entering other work spaces. This also provides a visual access to the machine during use as the office has two large windows that will be used to view the CNC machine during operation. Please refer to diagram for an illustrated map showing locations for each piece of equipment.



In addition to the programming Shaftesbury will be adding the purchase of a Dustfx 1HP HEPA Extreme Dust Collector will be made using the Industrial Arts budget. As well Pembina Trails has committed to purchase all software related to the use of the proposed equipment and other planned equipment purchases such as AutoCAD and Revit. Future equipment purchase plans to support the proposed equipment includes; vinyl printer cutter, milling machine, as well as investment casting equipment to further students exposure to the design & manufacturing processes.

We have only included two quotes for our proposed laser engraver as the third company that was contacted for pricing information did not reply to us with a quote. The third proposed option for a laser engraver was an Epilog Laser System.

Manitoba

Education and Training

2016-2017 Skills Strategy Equipment Enhancement Fund Budget Form
Category 2-Items under $10,000

School Division: Pembina Trails School Division School: Shaftesbury High School Program: Industrial Arts

Qty.	Accurate and Complete Description of Goods and Services applied for *Note: List complete details of trade-ins below description of goods.* *Attach price quotations. Each items purchased must not exceed $10,000.*	Quoted Unit Price	Quoted Total	Invoice Price
1	PLA SLA 3d Printer by FSLASER	$3524.00 USD	$3524.00 USD	

Requested by School Division	Completed (invoices)			
Secretary-Treasurer	Secretary-Treasurer	Sub Total	$4545.96 CDN	
		PST (8%)	$363.68	
Date	Date	GST (1.6%)	$72.74	
		TOTAL	$4982.38	

Grant Claim Recommended _____ Grant Claim Approved _____

Date _____ Date _____

Manitoba

Education and ~~Advanced Learning~~Training

2016-2017 Skills Strategy Equipment Enhancement Fund Budget Form
Category 1- Items over $10,000

School Division Pembina Trails School Division **School** Shaftesbury High School **Program** Industrial Arts

Qty.	Accurate and Complete Description of Goods and Services applied for *Note: List complete details of trade-ins below description of goods.* *Attach price quotations. Each item must cost over $10,000.*	Quoted Unit Price	Quoted Total	Invoice Price
1	CWI BASIC 48"X48" ROUTER W/HSD ITALIAN SPINDLE	$15499.95 CDN	$15499.95 CDN	
1	Full Spectrum P-Series 24"x16" 90 watt Laser with pass through	$10845.00 USD	$13990.05 CDN	

Requested by School Division	Completed (invoices)			
Secretary-Treasurer	Secretary-Treasurer	Sub Total	$29490.00	
		PST (8%)	$2359.20	
		GST (1.6%)	$471.84	
Date	Date	TOTAL	32321.04	

Grant Claim Recommended _____ **Grant Claim Approved** _____

Date _____ **Date** _____

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SHOP

Listed below are the items in Your Shopping Cart. Review the items and proceed to Checkout

Edit Item	Qty	Item	Status	Total
	1	($15999.95 each) Item #CWI-CNC4848B	In-Stock	$ 15999.95

If you made changes to the quantities above, please click the button below to update your Sub Total. Otherwise, click the 'Checkout' button to proceed.

Sub Total:	$15999.95
Tax:	calculated at checkout
Shipping:	
Current Total:	$15999.95

Continue Checkout

Search:

Description

Submit

Price Quotation # 16-02-11

PH 888-256-0715
FX 866-799-4123
eloise@progressiveinc.ca

Quotation Date: **10-Feb-16**
F.O.B: **Belleville**
Since 1992

From:	**To:**
educational	SHAFTESBURY HIGH SCHOOL
50 Hanna Court	181 Henlow Bay
Belleville, ON K8P 5J2	Winnipeg, MB
Contact Name:	Canada
Eloise Rolland-Carmichael	**Contact**
Western Sales Manager	David Gamble

Part No.		Item Description	Price	QTY	Extended
Floor Models					
78-	SYS60	System 60 50" x 60" cutting area with a 6" Z axis clearance and 10" Z stroke	$ 19,500.00		
Floor Model Options					
78-	CLC	Closed loop controller	$ 1,000.00		
78-	3HP	3Hp TekMotor spindle w/inverter	$ 5,818.18		
78-	7HP	7Hp Colombor spindle w/inverter	$ 8,727.27		
78-	3DP	3d probe	$ 872.73		

TOTAL	$ -
Shipping Estimate *(Actual to be billed):*	$ -
Electrical Inspection by ESA - Estimate *(Actual to be billed):*	$ -
Convenience fee for credit card payments only	$ -
Total	$ -

TERMS:

All actual shipping charges will be invoiced: shipping (transportation, fuel surcharges, etc.) and delivery options (lift gates, guaranteed delivery dates / times). Actual invoice amounts may vary from any estimates.
Minimum order of $75.
Prices Good for 30 days!
A convenience fee of 3.8% will be added to all transactions if paying by credit card.
Net 30 Days O.R.O., F.O.B. Belleville Ontario,
Manufacturers Delivery 90 - 120 Days
Manufacturers guarantee on parts and 1 year on labour.
Taxes NOT included!
Electrical Safety Inspection from ESA NOT included. Actual invoice amounts may vary.
Purchaser shall be deemed to have full knowledge of the terms and conditions as identified on our website under Customer Support

We shall be pleased to supply any further information you may need and trust that you will favour us with an order, which will receive our prompt and careful attention.

ERC

News:

Complete CNC Systems

We've put together several basic ShopBot packages, both PRSalpha and PRSstandard, to illustrate recommended components for a complete CNC system. The PRS alpha and standard systems differ primarily in terms of how effectively they will meet high production demands. More specific recommendations for specialized systems can be found under various headings of the Applications section of our web site.

You can specify your system with either a router or spindle. Spindles will be preferred in most production situations, but a router will work adequately if cost is a consideration. Each PRS includes a table and several accessories (Z-zero Plate and XY Proximity Switches), which are useful for most applications. You provide your own surface for the table [see Tables/Bases].

PRSalpha CNC System:

- PRSalpha 96 x 60 ShopBot
  (#10162) $19,515
  - Includes steel and extruded aluminum table (96x60)
  - Includes ShopBot Control System Software & ShopBot Design Software Suite
  - Includes Z-zero Plate, XY Proximity Switch Kit & Dustskirt
- HSD 2.2 HP 220V Single-Phase Spindle
  (#12573) $2,619
- Starter Bit Kit (8 useful cutters to get you started; for spindle or router)
  (#13699) $195

System Price = $22,329
(price does not include crating/shipping)
[Click here for info on Leasing a ShopBot]

OR

- PRS alpha 96 x 60 ShopBot
  (#10162) $19,515
  - Includes steel and extruded aluminum table (120x60)
  - Includes ShopBot Control System Software & ShopBot Design Software Suite
  - Includes Z-zero Plate, XY Proximity Switch Kit & Dustskirt
- HSD 4 HP 230V 3-Phase Spindle
  (#12572) $3,039
- Starter Bit Kit (8 useful cutters to get you started; for spindle or router)
  (#13699) $195

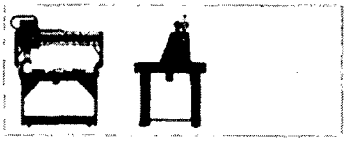
System Price = $22,749
(price does not include crating/shipping)
[Click here for info on Leasing a ShopBot]

Change to (#10168) PRS alpha 120 x 60 with (#12573) 2.2HP spindle and (#13699) Starter bit kit;
System Price =$25,214
Upgrade to (#12572) 4hp Spindle (priced as 230V 3-phase, HSD) add $420

Add a (#147XX) 16.9hp Vacuum Hold-down system
(priced as 230V 3-phase, regenerative blower incl. starter & PVC kit) *call for pricing*

[Click here for a detailed, printable, PDF version of ShopBot's current price list]

PRSalpha BT48/Buddy CNC System:



- PRSalpha BT48
  (#10149) $13,230
  - Includes ShopBot Control System Software & ShopBot Design Software Suite

To purchase a tool or for FREE technical support:

1-888-680-4466

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- Get Notified About Software Updates

- Includes Z-zero Plate, XY Proximity Switches & Dustskirt
- Ships fully assembled

- HSD 2.2 HP 220V Single-Phase Spindle
  (#12573) $2,619
- Starter Bit Kit (8 useful cutters to get you started; for spindle or router)
  (#13699) $195
- Caster Kit (Wheels to make your ShopBot Buddy truly mobile)
  (#15251) $295

System Price = $16,339
(price does not include crating/shipping)
[Click here for info on Leasing a ShopBot]

Add (#004430) Fein Turbo II 8.4 gallon vacuum, add **$450**

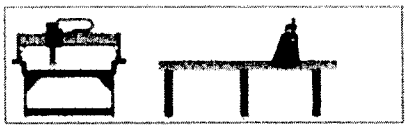
[Click here for a detailed, printable, PDF version of ShopBot's current price list]

Automatic Tool Changer

- PRSalpha 96 x 60 ShopBot
  (#10162) $19,515
  - Includes steel and extruded aluminum table (96x60)
  - Includes ShopBot Control System Software & ShopBot Design Software Suite
  - Includes Z-zero Plate, XY Proximity Switch Kit & Dustskirt
- Automatic Tool Changer including HSD 5 HP 230V 3-Phase Spindle
  (#12540) $14,995
- Becker Vacuum Pump 230V 3-Phase (for material hold down)
  (#14738) $7,500

System Price = $42,010
(price does not include crating/shipping)
[Click here for info on Leasing a ShopBot]

PRSstandard CNC System:



- PRSstandard 96 x 48 ShopBot
  (#10108) $13,335
  - Includes steel and extruded aluminum table (96x48)
  - Includes ShopBot Control System Software & ShopBot Design Software Suite
  - Includes Z-zero Plate, XY Proximity Switch Kit, & Dustskirt
- 3.25hp Porter Cable Router (variable speed)
  (#12016) $385
- Starter Bit Kit (8 useful cutters to get you started; for spindle or router)
  (#13699) $195

System Price = $13,915
(price does not include crating/shipping)
[Click here for info on Leasing a ShopBot]

Substitute (#12577) 2.2hp Spindle (priced as 230V 3-phase); System Price = $15,759
Substitute (#12572) 4hp Spindle (priced as 230V 3-phase, HSD) = $16,179

Add a (#147XX) 16.9hp Vacuum Hold-down system
(priced as 230V 3-phase, regenerative blower; incl. starter & PVC kit) *call for pricing*

[Click here for a detailed, printable, PDF version of ShopBot's current price list]

PRSstandard BT32 Buddy CNC System:

- PRSstandard BT32
  (#10138) $7,980
  - Includes ShopBot Control System Software & ShopBot Design Software Suite
  - Includes Z-zero Plate, XY Proximity Switches, & Dustskirt
  - Ships fully assembled
- 3.25hp Porter Cable Router (variable speed)
  (#12016) $385
- Starter Bit Kit (8 useful cutters to get you started; for spindle or router)
  (#13699) $195
- Caster Kit (Wheels to make your ShopBot Buddy truly mobile)
  (#15251) $295

System Price = $8,855
(price does not include crating/shipping)
[Click here for info on Leasing a ShopBot]

With optional 2.2hp Spindle (priced as 230V single-phase, HSD) = $10,854

[Click here for a detailed, printable, PDF version of ShopBot's current price list]

Educational Packages

ShopBot Desktop

The ShopBot Desktop is at work in classrooms all around the U.S. It offers the power and precision of larger tools in a smaller footprint, and can be easy on the budget. HS teacher Jack Chun has been blogging about using the Desktop in his classes

Learn about the ShopBot Desktop

(#10199) Desktop 24x18	$5145
(#12014) Router Porter Cable 2.25hp	$360
(#13698) Desktop 7 Piece Bit Kit	$195
TOTAL	$5700
with (#12605) Spindle 1 HP	$1595
TOTAL	$6935

(price does not include crating/shipping)

ShopBot Buddy™

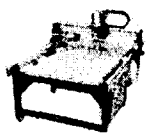
The Buddy® tool has a large cutting area, and optional PowerStick allows you to expand its work area even more. The Buddy delivers power and precision in a space as small as 16 sq. ft. Optional casters allow you to move the tool easily. Read how HS teacher Ed Wall uses the Buddy in his Project Lead the Way program.

Learn about the Buddy™

(#10138) PRSstandard BT32	$7980
(#12016) Router Porter Cable 3.5hp	$385
(#15251) 4 Wheel Caster Kit	$295
(#13699) Router Bit Starter Kit	$195
Crating Fee - Domestic	$275
Liftgate Service (if no loading dock or forklift)	$127
TOTAL	$9257
with Spindle HSD 2.2HP	$2619
TOTAL	$11,491

(price does not include shipping)

ShopBot PRS 96-48-6



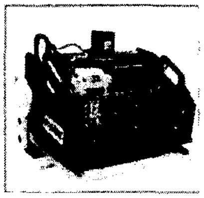
Our full size gantry tool allows you to work with 4 by 8 plywood sheets. It's the same tool being used in countless real-world production settings. Read how HS

(#10108) PRSstandard 96-48-6	$13,335
(#12016) Porter Cable Router 3.25 hp	$385
(#13699) Router Bit Starter Kit	$195
Crating Fee - Domestic	$275

teachers such as vocational/career education teacher Mike Annetts and STEM teacher Eric Andracke have been putting the ShopBot to use.

Liftgate Service (if no loading dock or forklift)	$127
TOTAL	$14,317
with Spindle HSD 2.2HP	$2619
TOTAL	$16,551
(price does not include shipping)	

ShopBot's Handibot®



Our most affordable CNC tool, the Handibot® doesn't skimp on power or precision. The Handibot Smart Power Tool is a portable, hand-held CNC tool. It's great for prototyping as well as production - any application that would benefit from a powerful digital fabrication tool.

For full product description, specifications, and to purchase, visit Handibot.com

(Handibot® is sold exclusively online).

International CE Packages

- Gantry Tool CE Package
  Add $995
  - Available on any of the ShopBot Gantry tools
  - Includes Safety Bars with safety interlock at both ends of tool
  - Ships fully assembled
- Buddy Tool CE Package
  Add $285
  - Available on any of the ShopBot models
  - Includes Safety Bumpers on Power Stick
- Desktop Tool CE Package
  Add $995
  - Only available on Desktop with Spindle
  - Includes Desktop Full Enclosure

- Top of Page -

VCarve Pro ShopBot Edition | AUTODESK FUSION 360

Each new ShopBot tool comes bundled with two powerful software programs to create CNC projects.

ShopBot Blog

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Items	Subtotal
(/CART/?REMOVE=0) **P-SERIES 24"X16" 90W PROFESSIONAL LASER WITH FULL PASSTHROUGH (NEW MODEL) - FREE RETI-NAENGRAVE 3D 100% USA**	$7995.00
- Focus Lens 2.0	$250.00
- Focus Lens 5.0	$250.00
- Focus Lens 1.5	$250.00
- Radiator Water Chiller	$600.00
- Chuck Rotary Attachment	$1000.00
- 120V Connection	No Additional Charge.
- Freight Shipping US48 W/Insurance	$500

Discount Code

Apply

CART SUBTOTAL:
$10,345.00
TAXES (Only In NV):
$0.00
SHIPPING:
$500

TOTAL:
$10,845

START CHECKOUT

Full Spectrum

6216 S Sandhill Rd, Las Vegas, NV 89120
Tel: 702-802-3100 • sales@fslaser.com (mailto:sales@fslaser.com)

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Trotec Laser Canada

Bay 2 - 820 - 26th Street NE
Calgary AB T2A 6K1
1-800-661-1278, Ext 301
www.troteclaser.com

March 14, 2016

Quote Expiry: March 29, 2016

Quote Number: CJ0295

RE: Quotation for Your Purchase of a Trotec Speedy 100 30W Laser

To: David Gamble, Pembina Trails School Div
Address: 181 Henlow Bay
Winnipeg MB R3Y 1M7
Phone: (204) 888 5898 Fax:
Email: dgamble@pembinatrails.ca
Sales Representative: Mel Jacinto

This is a quote regarding Trotec Cutting equipment. Please contact us to answer your questions, modify the list of included accessories, or to place your order.

Terms & Order Details

Trotec Laser Canada requires a 25% Non-Refundable Deposit, a signed Lease Approval or a Government/Corporate P.O. to process any machine order. This deposit can be applied to a credit card, but only to a maximum of $5000. Corporate credit and 3rd Party Lease Companies must be approved in advance in order to waive the deposit.
The balance of the invoice must be paid prior to the equipment shipping from Mississauga. A final invoice will be sent to you once the machine has been shipped. The serial numbers for the machines are normally available at this point. If you require the serial number(s) or an invoice prior to payment, please contact us.

Delivery of non-stock machines are generally 6-8 weeks after receipt of the confirmation and deposit. If quicker delivery is required, please contact us. We can usually accommodate these requests, but additional charges may apply.

Training and Installation

Training is available at our facility at a cost of $675.00 per day. Installation & Training can also be arranged at your location at a cost of $675.00 per day plus all Travel expenses.

Regardless of whether you choose on-site training, training at our facility, or no training at all, we back our customers with support though our Trotec Laser Canada support line, (403) 569-0400.

Shipping Charges

Trotec Laser Canada will negotiate the best possible freight rate to your door. We will prepay the freight and invoice with your machine.

Quote Expiry: March 29, 2016

Trotec Cutting Equipment Quote for Pembina Trails School Div			
Item/Description	**Unit Price CDN$**	**Quantity**	**Total**
Speedy 100 30W	$17,794.75	1	$17,794.75
AD-Logic® - Job Control Software – Advanced Version		Included	
Lens 1.5" including Focus Tool 8003/10	$397.50		
Lens 2.0" including Focus Tool 8003/10	$397.50	Included	
Lens 2.5" including Focus Tool 8003/10	$455.80		
Honey Comb Cutting Table (both rulers)	$477.00	1	$477.00
Rotary Attachment	$1,266.70	1	$1,266.70
8210 Trolley Complete	$477.00		
Quatro Exhaust AX092-16 for Speedy	$2,962.70	1	$2,962.70
Rubber Stamp Upgrade for CSA-426			
Auto focus with sensor	$256.00		
Air assist (incl. Pump) for 115V/230V	$2,067.00		
Educational Discount	$2,500.00	1	-$2,500.00
Remote Software Install & Training		Included	
12 Month Factory Warranty		Included	
12 Month TroCare Warranty	$864.00	Included	
Additional Years of TroCare Warranty (1 years total)	$864.00		
Freight (FOB Mississauga) Estimate			$250.00
Sub Total			$20,251.15
	Quoted prices are based on terms of:		
GST **5.000%**	**25% Deposit with Order, Balance Prior to Shipping (EFT)**		$1,012.56
Grand Total			$21,263.71

We reserve the right to limit the services offered and pricing contained. Although we strive to report accurate information the prices and specifications in this document are subject to change without notice.

Mel Jacinto
Trotec Laser Canada
1-800-661-1278, Ext 301 (Telephone)
mel.jacinto@troteclaser.com
Bay 2 - 820 - 28th Street NE Calgary, AB T2A 6K1
(403) 569-0402 (Fax)
www.troteclaser.com

The Benefits of Leasing with Pemberton Leasing

- Leasing offers 100% Financing
- Regular monthly lease payments make budgeting easy and helps you avoid large cash outlays
- Conserves working capital for other opportunities
- Protects your line of credit, the leased equipment serves as "collateral" for the lease agreement
- Allows purchaser to pinpoint equipment expenses to specific projects
- An excellent alternative to Bank Loans
- Payments may be 100% tax deductible
- Leasing allows you to finance the equipment you need today, with the income it generates
- Avoid Equipment Obsolescence, old equipment can be traded up for "state of the art" technology with a simple adjustment to your monthly payment schedule
- Easier to stay current with today's technology with our Flexible End of Lease Options
- Flexibility in Lease Terms, tailored to fit your needs.

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Pemberton Leasing can provide lease financing on just about anything through its **network of credit partnerships**. Call Don Harrison at Pemberton today to move forward on your equipment acquisition.

Pemberton Leasing Services Ltd
Don Harrison, General Manager
303-197 Forester Street
North Vancouver, BC V7H 0A6
Office 604-681-8441 Ext. 222
Fax 604-980-2642
Email: dharrison@pembertonleasing.com

Estimated Lease Payment* for this package quoted at			**$20,251.15**
24 months	**$933.38**	48 months	**$494.33**
36 months	**$640.54**	60 months	**$407.05**

First and Last payments due upon Lease approval. 10% Buyout at end of term. Taxes will be added to monthly payments.

*On Approved Credit

Speedy 100 Specifications

Maximum Engraving Area:	24" x 12" Active Work Area
Standard Features:	Ferro-Magnetic Work Table with Triple Lead Screw Positioning 2.0" Focal Length Lens with Focusing Tool Red Dot Pointer Electro-optical and Software Auto-Focus Air Assist Pump with Automatic Operation InPack Technology™ - Optics, Electronics & Motion Systems Protection
Available Options:	1.5" lens + focus tool 2.5" lens + focus tool Honeycomb Cutting Table Stand with wheels Rotary attachment
Software:	AD-Logic® - Job Control Software – Advanced Version
Motion Control:	Brushless DC Servo Motor and Self-Lubricating Motion Guide Ways Maximum Engraving Speed of 110"/Second
Laser Source:	Air-Cooled, Sealed, CeramiCore Aluminum tube CO_2 Laser at 10.6µm
Resolution:	User controlled choice from 125 to 1000 dpi
Speed/Power Control:	Computer controlled speed & power in 0.01% increments to 100%. Colour mapping links speed, power & focus settings to 8 RGB colours.
Print Interface:	USB connection Compatible with Windows XP/Vista/7/8
Dimensions:	
Mass:	
Electrical Requirements:	115 Volt / 60 Hertz Electrical Standard
(Optional) Compressor Requirements:	
Ventilation Requirements:	External exhaust is required. Output diameter at 4". It must be at least 282 cfm at 4" of static pressure.
Safety:	CDRH Class 2 with Duplicate Interlock Safety System
Max. Ambient Temperature:	32°C (90°F) Maximum Ambient Room Temperature
Warranty:	12 Month Factory

Specifications are subject to change without notice

Printable Area ends here

Checkout

Customer Details (Log out (/Account/LogOff))

Order for David Gamble (dgamble@pembinatrails.ca, phone: 2048885898) To change contact settings, go to your profile (/Account/Profile).

Shipping Method

Standard Shipping

Shipping insurance +$35 ☑

Address Info

Billing Location

First Name

David

Last Name

Gamble

Country

Canada

City

Winnipeg

State

Manitoba

Address

2240 Grant Ave

Chat? - Offline

Address Line 2

Postal Code

R3P 0P7

Shipping Location

Same as Billing Information ☑

Item	Count	Cost
Pegasus Touch SLA 3D Printer	x 1	$2,999
Pegasus Build Plate	x 1	$150
2 Year Extended Warranty (excluding consumables/shipping)	x 1	$300
Pegasus PDMS Vat	x 1	$75

Shipping: Will Be Quoted Tax: $0 Total: $3,524

Payment

Credit Card

Check / E-Check

Purchase Order #

PayPal

Instructions

Submit Order

Full Spectrum

6216 S Sandhill Rd, Las Vegas, NV 89120
Tel: 702-802-3100 • sales@fslaser.com (mailto:sales@fslaser.com)

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Join us as we take in the sights, people and atmosphere of @makerfaire Bay Area 2016. youtu.be/8iSd3sMemi4 #MFBA16

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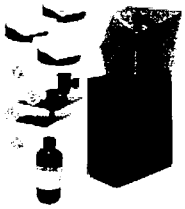
Shipping costs updated.

You Have 1 Item In Your Cart

Product		Price	Quantity	Total	
	Titan 1 Starter Printer Package Select: Diamond Titan 1 Starter Printer Package	$3,388.00	- 1 +	$3,388.00	×

Calculate Shipping

Canada

Manitoba 3P 0P7

UPDATE TOTALS

Cart Totals

Subtotal	$3,388.00
Shipping	Shipping: $300.00
Total	**$3,688.00**

UPDATE CART

PROCEED TO CHECKOUT →

Have A Promotional Code?

Coupon code

APPLY

7020 Koll Center Parkway, Suite 146, Pleasanton, CA 94566, USA.
Tel: +1-925-399-4242
Hsinchu Science Park, Unit1B8, No.1, Lixing 1st Rd., Hsinchu City 30078, Taiwan. Tel: +886-3-579-9963
Please view the website with latest chrome, firefox, IE.

formlabs

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	Product Name	Unit Price	Quantity	Subtotal	
	Form 2 Complete Package with Clear Resin **Includes** Form 2 3D Printer Clear Resin Cartridge (GPCL01) Finish Kit (Form 2)	$3,499.00	1	$3,499.00	✖ (http://formlabs.com/store/us/checkout/cart/delete/id/410956/form_key/tAeK6dw1zHJiFtsP/uer
	Resin Tank (Form 2)	$59.00	1	$59.00	✖ (http://formlabs.com/store/us/checkout/cart/delete/id/410960/form_key/tAeK6dw1zHJiFtsP/uer
	Build Platform (Form 2)	$99.00	1	$99.00	✖ (http://formlabs.com/store/us/checkout/cart/delete/id/410961/form_key/tAeK6dw1zHJiFtsP/uen

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Enter your destination to get a shipping estimate.

*Country

Canada

State/Province

Manitoba

Zip/Postal Code

R2G 1X8

Estimate Shipping & Tax

Shipping Option(s)

○ International Delivery $236.44

Please allow 1-2 business days for processing.

Update Total

DISCOUNT CODES

Enter your coupon code if you have one.

Apply Coupon

Total before shipping

Subtotal	**$3,657.00**
Tax	**$475.41**

Proceed to Checkout

OR

Check out with PayPal (https://formlabs.com/store/us/paypal/express/start/button/1/)

SECURE CHECKOUT

1. Shipping Information

2. Billing Information

Billing Address

Same as shipping

David Gamble
2240 Grant Ave
WINNIPEG, Manitoba R2P 0P7
1 204 888 5898

○ Credit/Debit Card ○ Financing with Affirm

Credit Card

Card Number *

Expiration Date * Security Code *

MM ▼ YYYY ▼

ORDER SUMMARY

Subtotal	$6,499.00
Shipping & Handling	(Freight) $192.54
Tax	$0.00

Grand Total

$6,691.54

Unless otherwise noted, all products ship with a one week lead time.

Save address and card for future purchases

CONTINUE

3. Review and Submit

UNIVERSITY OF MANITOBA | Faculty of Engineering
Office of the Dean

E2-290 Engineering Building
Winnipeg, Manitoba
Canada R3T 5V6
Telephone (204) 474-9809
Fax (204) 275-3779

4 April 2016

David Gamble
Graphics/Computer Science
Shaftsbury High School
Winnipeg

Dear Mr. Gamble:

Re: **Shaftesbury High School Application to Skills Strategy Equipment Enhancement Fund**

Please accept this letter as an indication of my full support for the application from your school for improved equipment so that students can learn more effectively the knowledge and skills associated with contemporary prototyping and fabrication processes.

The equipment and facilities you plan to introduce to your school and incorporate into the curriculum will be helpful for students considering many career paths including those aligned with Engineering, Architecture and other design professions. The proposed equipment will allow students to build their ability to visualize designs and bring their designs into reality. Not only are these important skills, but through this equipment students will be encouraged to expand their learning and horizons to an even greater extent.

The equipment and facilities proposed in your application will allow students to close-the-loop by completing the design, build, test and analyse cycle. I believe that involving students in this design-build-test-analyse cycle will engage and excite them to a much greater extent about design careers and encourage them to seek educational pathways that flow from this engagement and excitement. This is particularly critical in Manitoba as the per capita enrolment in accredited Professional Engineering programs in Manitoba is only about half the Canadian average. It is critical to the future success of the

Province that students are encouraged to pursue education and careers in the engineering and design professions; your proposal will contribute to this future success.

I fully support your application for this funding and wish you every success in this endeavour.

Sincerely,

Jonathan Beddoes, Ph.D., P.Eng.
Dean, Faculty of Engineering
Interim Dean, Faculty of Architecture
University of Manitoba

RED RIVER COLLEGE
OF APPLIED ARTS, SCIENCE AND TECHNOLOGY

February 11, 2016

To: David Gamble
Graphics/Computer Science
Shaftsbury High School

To whom it may concern:

I am writing this letter to support Shaftsbury High School and the Industrial Arts program in their pursuit of a grant to purchase a Computer Numerical Control machine and 3d printer. Having current technologies for the students will increase their awareness of industrial and technical opportunities and allow them to make informed choices for post-secondary education. With Computer Aided Design software, 3D printers and C.N.C. equipment, the students will learn by simulating the process that industry uses from design to manufacture. The part is designed electronically, prototyped on the 3D printer and machined on the CNC machine.

At Red River College (Mechanical, Manufacturing, Communications Department) we have toured instructors from Pembina Trails School Division and these visits foster relationships that are important to the students, secondary school teachers and post-secondary college instructors. The I.A. teachers can see the current technology in place in the shops and labs at Red River College. This may be in a C.A.D. lab utilizing AutoCad design software, on the Stratysis U Print 3 D printers or in a C.N.C. shop that is an authorized C.N.C. training facility. Students will benefit from the technology and training that is shared at these meetings.

I am hoping that this endorsement for the purchase of a C.N.C. machine and 3 D printer is considered in your decision. Having a C.N.C. machine to be used in conjunction with the C.A.D. solid modelling software and 3D printing will further augment the I.A. program.

If you have any further questions feel free to contact me.

Sincerely,

Bill Noakes

Bill Noakes
Chair, (Mechanical, Manufacturing and Communications)
Red River College
204-632-2169

March 13, 2016

Re: Letter of Support for Shaftesbury High School

This letter is to support Pembina Trails School Division's application to the Skills Strategy Equipment Enhance Fund to purchase a 3D printer and a 48x48 CNC spindle. The acquisition of this equipment will provide students at Shaftesbury High School with the opportunity to gain valuable exposure, preparation, and access to technical/vocational skills training that will span a variety of careers and industry sectors.

The inclusion of this technology presents excellent technical skills exposure for students within Pembina Trails and fits well with MITT's role as the vocational provider for the division. This equipment and exposure will be an invaluable asset for students who can then take these skills and apply them directly to relevant programs at MITT should they decide to pursue a vocational career through our institution. MITT is looking into the development of manufacturing programming in addition to our existing CAD Technician program, both of which are areas where we would see a strong connection with the initiatives at Shaftesbury. Overall, increasing awareness and investing in students' technical skills training in the trades bodes well for the Province as it looks for innovative ways to increase the skilled workforce.

Sincerely,

Grace Leduc
Dean, Academic Programs

price

Price Industries Limited 638 Raleigh Street Winnipeg, MB R2K 3Z9 CAN
priceindustries.com Phone: (204) 669 4220 | Fax: (204) 663 2715

March 24, 2016

Shaftesbury High School
Attn: David Gamble, Graphics/Computer Science
2240 Grant Avenue
Winnipeg, Manitoba R3P 0P7

Dear David:

RE: LETTER OF SUPPORT IN REGARDS TO PEMBINA TRAILS SCHOOL DIVISION APPLICATION FOR SKILLS STRATEGY EQUIPMENT FUND GRANT

I have reviewed your working draft for the grant application for a Skills Strategy Equipment Fund Grant from Manitoba Education seeking financial support for the purchase of 48 x 48 CNC spindle, 20 x 12 laser engraver, and a liquid resin based 3D printer. I wholeheartedly support this application and commend you and Pembina Trails for advancing this initiative at your school.

We at Price Industries are always recruiting technology savvy employees, for a multitude of jobs in our production unit, office and laboratory, and are chronically short in filling these vacancies because there is a skill shortage of technology savvy hands-on employees in Winnipeg. As mentioned in your application, "technology is an expanding industry and needs individuals to help fill positions in this area". You are right on the mark! I regret that shops and technology courses that promote such hands-on and technical skills, have virtually disappeared from high schools in Manitoba. We desperately need technology-savvy employees, and your proposed initiative should go a long ways towards filling this gap in the supply of talent that we need to fuel our business.

I wish you every success with this new initiative and wholeheartedly endorse this technology direction you are undertaking. Good luck!

Regards,

Gerry V. Price, Ph. D., P. Eng., FCAE
Chairman and CEO

Alumicor
BUILDING EXCELLENCE

March 11, 2016

Dana Plantje & David Gamble
Industrial Arts Teacher, Shaftesbury High School
2240 Grant Ave.
Winnipeg, MB R3P 0P7

Dear Dana and David,

I have to admit that I was quite blown away but you program. To say it simply, anything that can inspire the youth of today to become interested in manufacturing is a good thing. What you two are doing is creating an exciting endeavor that combines the "techie" part that students are so immersed in, with what can become an exciting and rewarding career.

As I person who has been in the same industry for over 35 years, I can only see good things ahead for my industry and other manufacturing companies because of programs like yours.

Keep it up!

Best Regards,

Ken Rowson
VP of Sales Western Region
Alumicor Limited - Winnipeg

MACANTA
DESIGN BUILD INC

March 22, 2016

To whom it may concern,

On behalf of Macanta Design Build Inc., I strongly support Shaftesbury High School and the Pembina Trails School Division in their plans to apply for the Manitoba Skills Strategy Equipment Enhancement grant. It is my understanding that this grant will allow for Shaftesbury High School and the Pembina Trails School Division to offer a CNC based course in addition to using 3D drafting software and the CNC machine to help enrich and compliment many courses for students in grades 9-12. It is my belief that the addition of CNC technology into this community will help to prepare students and community for future job markets.

After speaking with Mr. Gamble and several of the faculty members at Shaftesbury High School it is my understanding that the addition of a CNC machine with its additional related equipment and software will not only benefit those who are enrolled in the industrial arts program, but almost all students enrolled in the school from grades 9-12. This machine and its related software is used extensively in many trade and professional areas, ranging from prototyping for engineers to building furniture and cabinetry involving intricate designs with minimal waste.

The next generation of construction professionals will need to be able to apply technology like CNC design and construction on a daily basis in order to be successful in this competitive market. This will be a great challenge for traditional journeyman carpenters, and other trades who do not have the exposure and experience with this technology. By offering this exposure and experience at the high school level it is my belief that the students of Shaftesbury High School will have a great advantage in post-secondary education and future job markets.

Sincerely,

Desmond Sweeney

Macanta Design Build Inc.
PO Box 47067, Winnipeg, MB R2H 3G9
p: 204-977-6604 | d: 204-515-0849 | e: desmond@macantadesignbuild.com
www.macantadesignbuild.com