



LEARNING ON THE MOVE

ITINERARY

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LEARNING ON THE MOVE

Land Acknowledgment

We acknowledge that we are located on Treaty 6 territory, a traditional gathering place for diverse Indigenous peoples including the Cree, Blackfoot, Métis, Nakota Sioux, Iroquois, Dene, Ojibway/ Saulteaux/Anishinaabe, Inuit, and many others whose histories, languages, and cultures continue to influence our vibrant communities."





Biography

I have been a K-12 educator and school administrator for twenty-eight years. Within this time period, I have amassed 17 years of CTF and CTS teaching experiences and witnessed the many successes of offering hands-on trade-based learning opportunities. Currently, I serve East Central Alberta Catholic School Division as Deputy Superintendent and Human Resource Director. Over my professional career, I gained extensive knowledge in leading and shaping school communities into being the best they can be. I live in Wainwright, Alberta along with my wife Sheri, and together we have two amazing daughters!

Introductions:

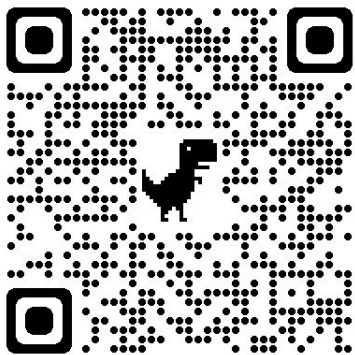
Name

School Division or Department

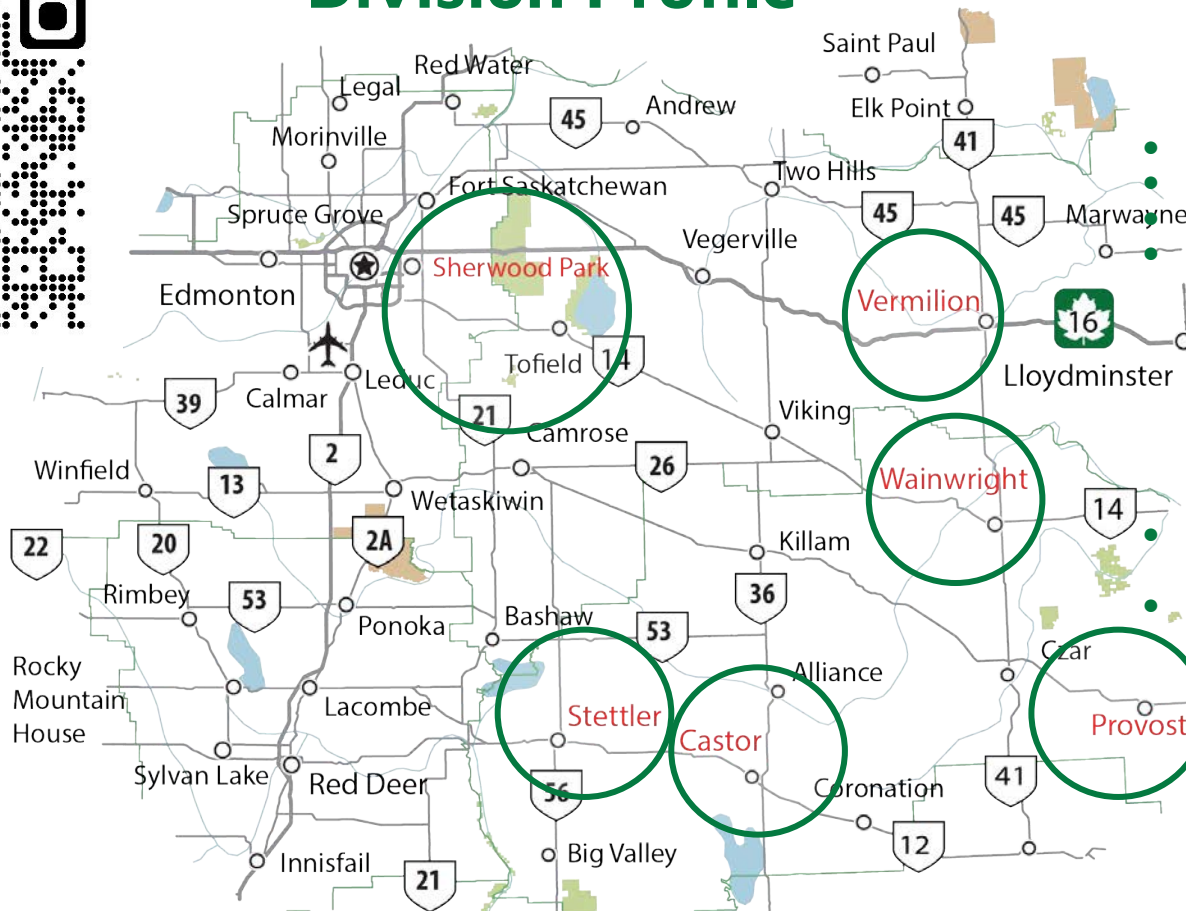
*“What I want to find out
from this presentation?”*



Division Profile



Division Website



● Student Population 2700
 ● Teacher Population 120
 ● Support Staff Population 80
 ● Schools

- St. Jerome's
- Blessed Sacrament
- Blessed Sacrament Outreach School
- St. Thomas Aquinas
- Theresetta
- Christ-King

Central Office

- Wainwright

Home Schooling

- School Of Hope
- Hope Homeschooling
- Vermilion
- Wainwright
- Sherwood Park
- Lethbridge



STATS & FACTS:

- About one in six Canadians work in the skilled trades.
- The top trades five years earlier were earning an **annual income greater than \$68,750**. (Jan 31, 2022)
- Alberta has more than **50 designated trades**, spanning many industries including mechanical, electrical, automotive, manufacturing, building, and service.
- The employment landscape is experiencing a shift, and the demand for individuals skilled in various **trades keeps growing**. The **barrier of entry is lower** compared to positions that require expensive degrees. Plus, many of these positions **can be rather lucrative**, which makes people look for the highest-paying trade jobs more and more.
- **You no longer need to spend years on higher education to have a successful and profitable career**. Moreover, some trade jobs come with all the benefits and salaries that make them stand up against even the most renowned degrees.



Benefits of being in the Trades:

- Gain experience through trade schools, RAP, on the job training.
- You can start earning money while you are learning the trade!
- Skilled trades offer a much better wage-to-cost comparison than 4 year degrees/certificates
- Many choices to choose from. Demand for Trades continues to grow.
- Hands on learning and skill-set based.



Highest Paying Trade Jobs in Current Markets with Projected Growth Rates

- Construction Managers - projected job growth rate of **5%**
- Elevator Mechanic - job growth rate of **1%** meaning around **2,100 new jobs per year until 2032**
- Dental Hygienist - projected growth **7%** meaning **16,400 new openings every year for the next decade.**
- Healthcare technologists - projected growth rate of **10%**
- Electrician - projected growth rate of **6%**
- Plumbers - projected growth rate of **2%**
- Carpenters - projected growth rate of **2%**
- Machinists - projected growth rate of **1%**
- Automotive Service Technicians - projected growth rate of **8%**
- HVAC Technicians - projected growth rate of **6%**
- Solar Photovoltaic Installers - projected growth rate of **22%** - currently one of the most in-demand skilled trade jobs.



List of regulated trades

Regulated trades have an apprenticeship program. The following **links** will take you to an occupational profile, which contains information on duties, educational qualifications, salaries and working conditions.

- Auto Body Technician
- Automotive Service Technician
- Boilermaker
- Crane and Hoisting Equipment Operator
- Electrician
- Elevator Constructor
- Gasfitter
- Hair Stylist
- Heavy Equipment Technician
- Ironworker
- Motorcycle Mechanic
- Plumber
- Recreation Vehicle Service Technician
- Refrigeration and Air Conditioning Mechanic
- Rig Technician
- Sheet Metal Worker
- Steamfitter-Pipefitter
- Welder



Optional certification trades

In some trades, certification is optional. In this case, non-certified workers can work for an employer who is satisfied that they have the skills and knowledge of someone who is certified. Anyone learning one of these trades must still become a registered apprentice. The following is a list of optional certification trades in Alberta: (One Stop High School Career Counsellor)

- Electric Motor Systems Technician
- Floor Covering Installer
- Glazier
- Instrumentation and Control Technician
- Insulator (Heat and Frost)
- Landscape Horticulturist
- Roofer
- Sprinkler System Installer
- Structural Steel and Plate Fitter
- Tile Setter
- Transport Refrigeration Technician
- Water Well Driller
- Lather (Interior Systems Mechanic)

Optional certification trades cont'd:

- **Agricultural Equipment Technician**
- **Baker**
- **Bricklayer**
- **Cabinetmaker**
- **Carpenter**
- **Communication Technician**
- **Concrete Finisher**
- **Cook**
- **Locksmith**
- **Machinist**
- **Industrial Mechanic (Millwright)**
- **Outdoor Power Equipment Technician**
- **Painter and Decorator**
- **Parts Technician**
- **Powerline Technician**
- **Power System Electrician**



<https://tradesecrets.alberta.ca/trades-in-alberta/trade-and-occupation-regulations/>

Table Talk

As a table group discuss the following points. The person with the closest birthday to this date will be asked to share some key points of the table talk.

- What is your school or school division currently doing to offer CTF/CTS courses?
- How are the trades, apprenticeships and vocational education opportunities promoted within your organization?

Using the points below, what are some of the realities of the current CTF/CTS provisions in your school or school division?

- Successes,
- Challenges,
- Opportunities



Where it all Began



Classroom on Wheels

<https://esc13.net/instructional-support/mobile-labs>

Startup Considerations and Processes



- Board Support

TIMELINES

- Request For Proposal posted on Alberta Purchasing Connection in May 2018.
- Purchase order was issued July 2018.
- Invoiced in December 2018, March and June 2019. Last payment was 35% of the total cost (so about 33% of total costs on invoice.)
- CTS Trailer was delivered in July 2019.

Startup Considerations and Processes



- Insurance cost \$1,949.79 for year ending November 1, 2024.
- IMR \$ access for supply purchasing only
- Overall Program Costs
- Power requirements
- Ventilation requirements
- Insured as Heavy Equipment value at \$1.124 million

Startup Considerations and Processes



- 1.2 million dollar investment
- CTF-CTS facility for aging small rural schools - SPACE to host.
- Program diversification
- Total cost of ownership vs building at each site.
- Storage & Transportation
- Local community context
- Safety - staff and parent parking zones, Bus loading zones, and playground areas near trailer access.

**REQUEST FOR PROPOSAL (RFP)
For The Supply and Delivery of a
Career Technologies Studies Mobile Classroom**

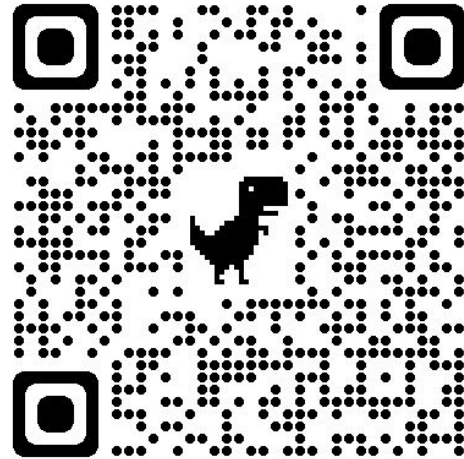
East Central Alberta Catholic School Division # 16

RFP Closing: 11:00 A.M., May 31, 2018

RFP Logistics

- RFP Proposal

<https://tinyurl.com/7vzf>



Mobile Lab Logistics

IB INTERCONTINENTAL
TRUCK BODY

INDUSTRY
SOLUTIONS

MANUFACTURING
CAPABILITIES

PARTS
& SERVICE

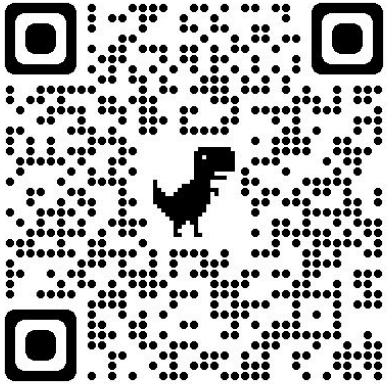
REQUEST CONSULT

MORE 



**BUILT EXACTLY
THE WAY YOU
NEED IT, ON
TIME AND
WITHIN
BUDGET.**

Industry Solutions



Company Link

Mobile Trailer Blueprints

Trailer Weight
(unloaded)
= 24,600 kg

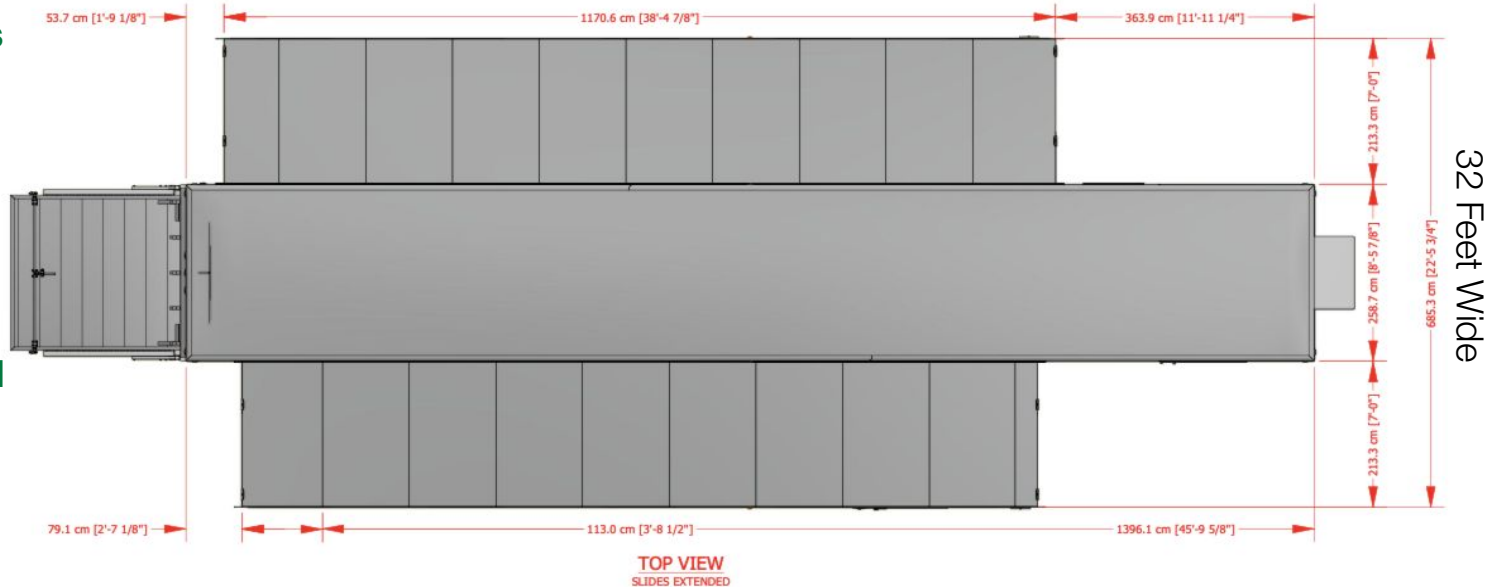
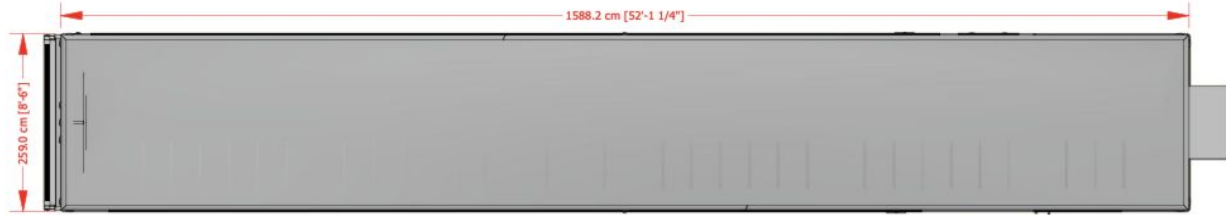
8.6' wide for
transport.

32' Wide with trailer
slide outs in place.

62' long with stairs
attached.

Instructional Space
Square Footage =
1000 square feet

3 Aluminum
Stairwells included



Mobile Trailer Blueprints

DRAWING SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE. THE INFORMATION ON THIS DRAWING IS THE PROPERTY OF INTERCONTINENTAL TRUCK BODY. IT IS NOT TO BE USED DETRIMENTALLY TO OUR INTERESTS.

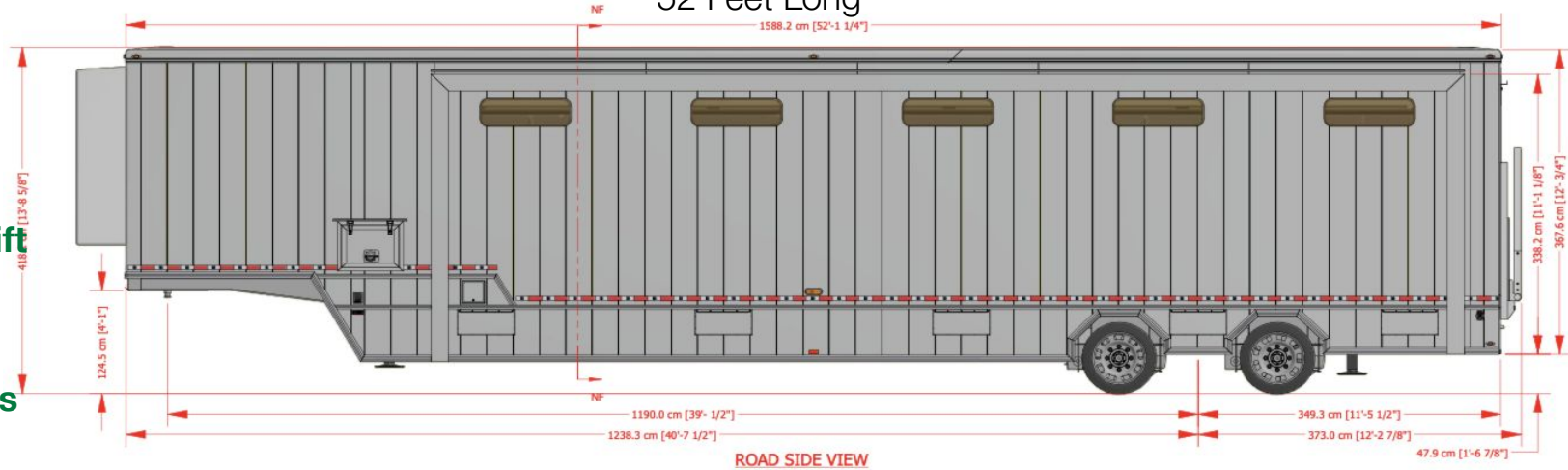
Internal
Furnace
and AC unit

External
Skirting for
perimeter

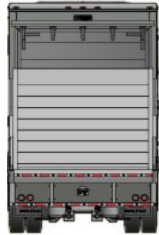
Wheelchair
accessibility lift
installed

Hydraulic
Stabilizer Jacks

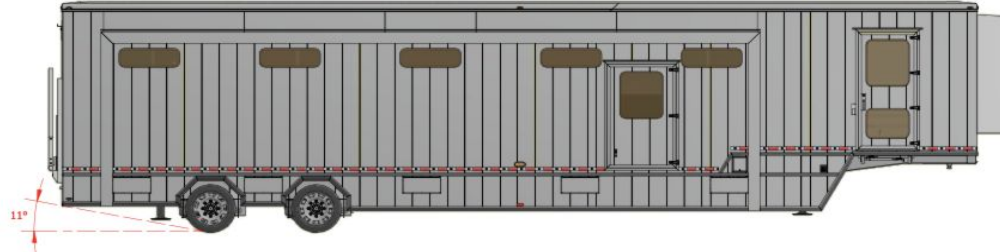
52 Feet Long



Copy of Blueprints



REAR WALL VIEW



CURB SIDE VIEW



FRONT WALL VIEW

258.9 cm [8'-5 7/8"]



Fabricated in Coaldale, Alberta.





Parking pad logistics need to be taken into consideration.

Whether single phase or triple phase power will influence the cost and certification requirements for the trailer.

Additionally, the location of the cable attachments to the trailer are important factors when determining how the trailer will be parked at each school location.





Designed to attach and setup 6 working stations = tables that are secured to the walls of the trailer. Workstation supplies designed for easy organization, safety, and moving details. 10 electrical hook up stations.





INTERCONTINENTAL TRUCK BODY



Matthew Van Dyk
Solution Specialist

Bio & Contact Information

ITB seasoned solution specialist in the field of mobile workspaces, Matt has a wealth of expertise and experience working with all levels of government, utility providers and first responders, bringing problem-solving insight, collaborative designs and a high level of attention to detail at every stage of his projects. Specialization is Matt's specialty and it's important to him that customer experience and caliber of service is as high-quality and tailor-made to their needs as their design. Matt has a conscientious approach with his customers and works hard to earn their business, providing pre-sales and after sales service

Matthew Van Dyk Technical Sales

Office: 403.345.4427 | Cell: 403.634.7962
| Main: 800.661.1030 | Fax: 403.345.6078 | Web: www.itb.ca

East Central
Catholic Schools





Trailer Pad and Parking Logistics



Trailer Pad Logistics

- **Parking pad logistics**
 - Trailer weight
 - Proximity to building
 - Cost & size of pad
- **Easy access involving no vehicle parking near pad and quick snow removal access**
- **Depending on the site preparation (fill and compaction). 100-150 mm of asphalt for a 1100 - 1500 square metre pad will range in price from 50 - 70k.**
- **TH - pavement pad \$70,000**



- **Parking pad logistics**
 - **CK - pavement and pad wiring \$100,000**
- **Wiring hook up costs from the school - trenching and breaker box, \$15,000.**

Trailer Pad Logistics

**TOWN OF STETTLER
NOTICE OF DECISION
DEVELOPMENT PERMIT NO.: 3240-2020**



NAME: N53 Architecture Inc
ADDRESS: #200, 10180 – 105 Street
Edmonton, AB T5J 1C9

DEVELOPMENT: Mobile Education Trailer

LEGAL DESCRIPTION OF SITE: Lot 9-32, Block 65, Plan 3049AT

CIVIC ADDRESS OF DEVELOPMENT SITE: 4704 – 55 Street

DECISION: Approved with conditions;

As described on the application for development, and plans submitted by the applicant(s). It refers only to work outlined above and is subject to the following condition(s) being met to the satisfaction of the Town of Stettler.

1. The placement of the Mobile Educational Trailer will only be permitted on the north side of the building. Placement of the Mobile educational Trailer to the west side of the building will be prohibited;
2. The owner/applicant must submit a revised site plan prior to placement;
3. The Mobile Education Trailer must be parked and contained on a parking pad composed of a gravel or a hard surface top;
4. The Mobile Educational Trailer is only permitted to be parked on the property for a one semester time period. The Mobile Educational Trailer must be removed for a minimum of one semester between placements;
5. The Mobile Educational Trailer is not permitted to be stored on the property while school is not in session during the summer holidays of July and August;
6. The owner/applicant must comply with all the provisions of the Town of Stettler Land Use Bylaw #2060-15;
7. The owner/applicant is responsible for the cost and repair of any damage to public property or works located thereon that may occur as a result of undertaking work regulated by the Alberta Building Code;
8. Compliance with the provisions of Land Use Bylaw #2060-15 does not exempt the applicant from compliance with any provincial, federal, or other municipal legislation.

NOTE: The owner/applicant is required to obtain the applicable permits to confirm compliance with the Safety Codes Act and Provincial Fire, Plumbing, Gas & Electrical Regulations.

- Community Bylaws
 - Stettler





NEW SCHOOL BUILDS

- Placement for 3 phase electrical hook up within the school.
- Architectural design for trailer placement - access for parking.
- Distance from school power supply for trailer electrical.
- Semi access for drop off and pick-up. Pavement access!!

Wiring Logistics

- Single vs Three Phase Power
- Program logistics
 - Welding
- Building logistics
 - Cable distance
 - Trailer parking
- Insurance & Inspection logistics
- School intercom
- School network
- Costs for hook-up and take down (\$300)



Relocation Logistics and Associated Costs

- Trailer Relocation and setup costs.
 - Intercontinental Staff
 - Trucking Service
 - Moving crew with trailer
 - Total costs = \$6000.00
- School scheduling - each school site is scheduled for 13 weeks.
- Number of moves per year
- Time of year - weather
- 2 ½ hour site take down
- 2 hour site setup
- Transporting company must have 2 million dollar insurance.
Important to have qualified staff set up and move trailer each time.



Setup Logistics

1

ECCS Expando Trailer Setup Procedure
REFERENCE ITB UNIT#17760
For Service or Further Information Contact ITB at
1-800-661-1030

DANGER

- DANGER: You COULD be KILLED or SERIOUSLY HURT if you don't follow this guide.

WARNING

- WARNING: You COULD be KILLED or SERIOUSLY HURT if you don't follow this guide.

CAUTION

- CAUTION: You COULD be HURT if you don't follow this guide

Your safety and the safety of others are of the utmost importance when operating an expandable trailer such as this. This user guide alerts you to some of the potential hazards. This trailer should only be operated by trained and competent personnel.

NOTE: This expandable trailer is a heavy duty trailer. A minimum of two people are required to deploy this trailer safely. When extending or retracting a slide out room, a spotter is needed to confirm **sliding room can deploy or retract safely and without interference.**

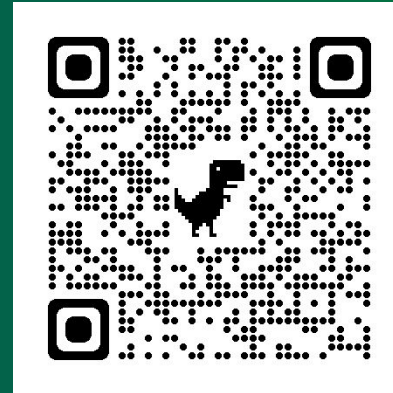
Safety is an important responsibility. Please read these instructions carefully and completely before operating or maintaining this vehicle.

completely before operating or maintaining this vehicle. Safety is an important responsibility. Please read these instructions carefully and without interference.

spotter is needed to confirm sliding room can deploy or retract safely and without interference. NOTE: This expandable trailer is a heavy duty trailer. A minimum of two people are

- Trailer setup manual

<https://tinyl.io/7vzp>



“Hands-On Learning” Research Indicators:

- Increases student **motivation**.
- Builds better connections with **real-world opportunities**.
- Suits many types of student learning styles.
- Actual experience has beneficial effects on **expanding student interests**.
- Learning by doing is often lost due to curriculum timelines in Jr. and Sr. High courses. **All age groups** of students benefit from hands-on learning activities.
- Many beneficial project based opportunities for self assessment, teacher feedback, peer feedback.
- Places **students in the ‘driver’s seat’** of their learning through teamwork, in-class discussions, sharing of resources, planning, fabricating, and designing.
- Research indicates that **students have a preference** for ‘hands-on’ learning and the use of manipulatives rather than using traditional learning methods.
- The hands-on experiences provide an embodied cognitive learning experience, **facilitating retention** of learned material through three-dimensional and tactile representations.
- Hands-on learning experiences **improves academic performance**.



Successes





- **Rural School Sustainability**
- **Staff talents and interests are shared.**
- **Class sizes are reasonable for trailer space.**
- **Scheduling of the trailer is equal for each community served.**
- **Parent Satisfaction rates are good with regards to program offerings.**



- Hands on learning
- Student Interests are explored.
- Dual Credit program opportunities.
- High levels of student engagement.
- Offers opportunities for community involvement.
- Working with local colleges to expand programming.



- **Career exploration**
- **Local community context (adaptable to community needs).**
- **Student and Staff satisfaction levels are high.**
- **Offers additional options to students. Student choice.**
- **Less scheduling conflicts to provide CTF space.**
- **Great advertising/generates interest in the school.**



- **Junior and Senior High Modules of study**
- **Trade Exploration**
- **Divisional and teacher networking/PD opportunities**
- **Post Secondary Credits for CTS.**

CTF Course Offerings

Small engine Mechanics

Leather Working

Sewing

Basic Introduction to Carpentry

Introduction to Robotics

Virtual Welding Labs (in process)

Introduction to New Media

Introduction to Electrical systems

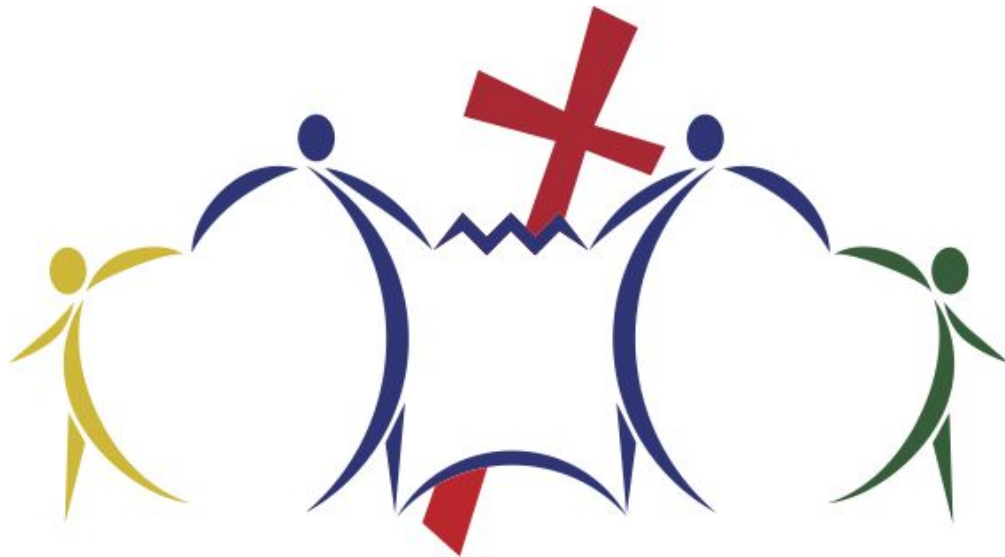
(series + parallel circuits)





Biography

Tara McMillan has been a K-12 educator and administrator for thirteen years. Within this time period, Tara has served as teacher, learning support teacher, and Principal of Christ-King Catholic School in Stettler, Alberta. Tara is a passionate Catholic educator who strives to provide quality teaching and learning opportunities for her school community.



CHRIST-KING CATHOLIC SCHOOL

CK Video







Challenges





- Sustainability
- Rising Costs of consumables
- Staff skills, certification & training.
- Class sizes
- Replacement and maintenance of student equipment.
- Scheduling with school calendars
- Community bylaws
- Winterization - slide out tarps
- Equipment Transportation
- Finding Certified Volunteers



- **Teacher qualifications/interests and abilities.**
- **Not present at each school site all year**
- **Trailer maintenance - battery replacement and hydraulic repairs.**
- **School storage space for consumables.**

Opportunities





- **Trade Recognition and Celebration Days**
- **Special Events and Guest Speakers with trades representatives.**
- **Corporate Sponsorship opportunities.**
- **Community evening classes.**
- **Connections with outside agency usage (4H, CWL, KofC)**
- **Showcase opportunities for expanding local trades.**

What I Know Now:

Table Reflection Dialogue

- #1. What are some new facts I learned from this presentation?**
- #2. What do you see as being the most significant impact on a school or school division with the implementation of a Mobile CTF/CTS Lab?**
- #3. What are one or two concerns that you may have with implementing a Mobile trailer?**
- #4. What more would you like to know about the logistics, successes, opportunities, and challenges of the Mobile Trailer?**





Flexible Learning Environments

Developing knowledge, skills, and attitudes for today's and tomorrow's workforce.

We teach; we share; we learn; we care.



Business Card



Slide Show

**THANK YOU
FOR ATTENDING**

Q&A