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The Modusteel Mandate

1.0 Executive Summary

We're pleased to introduce you to Modusteel, a company that is bringing the construction industry into the 21st Century. Just as reinforced concrete dramatically changed the way buildings were constructed in the 20th Century, so Modusteel is introducing a similar new and exciting trend in construction for the 21st Century.

We're a British Columbia, Canada corporation, comprised of highly experienced and accredited individuals, all with vast proficiency in our various fields of expertise. Our experience ranges through real estate development, law, financing, architecture, engineering, government relations, sales, marketing, construction and general contracting. Combining our efforts we developed a “think tank” of knowledge and experience to introduce and launch a completely new method of construction in Canada. This construction method is set to revolutionize the industry, make nonsense of the ongoing issues regarding affordability and bring 21st Century technology and precision engineering into an industry that has effectively been stuck in the same mode for over 100-years.

We take the hectic construction site into a safe, clean, environmentally friendly manufacturing facility. In this controlled environment, using construction design software, each building is precision engineered. This ensures that every development is manufactured to exactly meet each project's design requirements thereby eliminating on-site human error. This also permits us to consistently and accurately adhere to the required building codes and standards. Once completed the finished building is transported and erected on site. Construction projects are generally notoriously long, whether residential or commercial. However, it's now possible to greatly reduce project completion times and costs through modular structural steel construction.

Now, the time has never been better to bring in a new, modern, exciting, cost and time effective solution to a building methodology that has become both outdated and overpriced. At Modusteel we have that solution and we invite you to enjoy reading this Business Plan and to participate in this exciting venture with us. Welcome to the 21st Century!
2.0 Company Summary

2.1 Start-up Summary

Traditional building today is, as it has always been, relatively chaotic. Years of disruption to traffic and neighborhoods, heavy trucks, contractor parking issues, dust, dirt and waste. For over a century, since the introduction of steel reinforcing bar (rebar), reinforced cast-in-place concrete has been the construction method of choice.

Building with concrete requires a steady stream of trucks, often for a prolonged period. Curing concrete takes time and thus, to bring a concrete high-rise to occupancy is a time consuming and protracted exercise that incurs significant financial carrying costs. Finally, take concrete to the end of its lifespan and recycling the product is a very expensive exercise.

So, let’s shift our attention to wood. As an organic material wood does not have the lifespan of concrete, that said, it’s relatively cheaper than concrete. Wood is certainly a highly adaptable construction material but it has some limitations. The most significant limitation of wood is that, in general, it is capped at 6-storeys in terms of its construction acceptance. This means that a developer has to choose between limiting the development to 6-storeys or increasing the building costs by using cast-in-place concrete to even achieve one more level. In today’s fast paced and cost conscious development environment it’s the bottom line that counts and decisions have to be made accordingly.

What if there was an alternative? A construction material that was cheaper than wood frame yet could reach the height of cast-in-place concrete without any loss of performance. What if that material was highly sustainable, extremely environmentally friendly and easily recycled? Furthermore, what if it was easier and faster to erect than wood or concrete and gave the developer substantial savings on carrying costs and earlier occupancy dates?
That would most certainly change the face of the construction industry overnight and open the door to a myriad of opportunities.

Structural steel is strong, flexible and reusable. Steel was used to create iconic buildings such as the Empire State Building in New York and the Sears Tower in Chicago. It was the material of choice for the Sears Tower because the building’s strength was a priority in its design, it needed to combat the harsh wind gusts coming off Lake Michigan that give rise to Chicago’s nickname “The Windy City”.

Structural steel became outpriced when reinforced concrete arrived on the scene and became the new and more affordable construction material of choice in the early 19th century. Today, given modern technology and engineering, steel is back and has the ability to once again reverse the situation and become the new construction material of choice.

Modusteel has brought the real estate development industry into the 21st century by taking the construction site into an environmentally friendly manufacturing plant. The plant utilizes state-of-the-industry technology and precision engineering to create 21st Century buildings. It’s a merging of assembly line precision with a revolution in structural design that creates safer, less wasteful, more affordable, faster deployable and easier to build homes for our communities. Simply put an assembly line for the fabrication of completed buildings which are then shipped and assembled onsite.

In early 2016 as a means of accelerating their due diligence and discovery process, Robert Dominick, a highly accredited real estate development consultant and David Siebenga, a lawyer and high net worth analyst, incorporated Modusteel to launch this state-of-the-industry technology in North America.
They then engaged with highly skilled alliance partners to commence research and investigation into the manufacturing and production of precision engineered modular steel product. At the same time they started exploring the potential market opportunities within North America, with an initial primary focus on Canada.

To date, on the production side, various potential manufacturers have been put through a rigorous evaluation process by professional Canadian code and CSA compliance parties. It is a critical component of success for Modusteel that all products are Canadian code and CSA approved. This compliance process has been lengthy, expensive and demanding but Modusteel is now confident that all its products and building components will be in compliance with all Canadian code and CSA requirements.

On the market side, significant research has been applied into the market and non-market sectors. This included investigation into the recent National Housing Strategy whereby the Government of Canada, together with provincial and territorial governments, are investing more than $40-billion to expand community housing for vulnerable Canadians. Research and meetings with many provincial government, municipal, First Nations and social sector organizations indicate that Modusteel will be well accepted into the non-market sector in terms of the development of affordable and social housing projects.

Modusteel and its manufacturers are now ready to proceed with Phase 1 of the launch in North America. This phase will involve the creation of a modular steel “showcase” presentation centre to be located in the Metro Vancouver area. Many interested parties have been waiting for Modusteel to produce something tangible, so this proof of concept building will be the conduit through which orders will be taken.

To that end this Business Plan is presented to source the sum of $3-million dollars for Modusteel so that it can design, manufacture and place its presentation centre. Modusteel’s expected operational date, when the doors of the presentation centre open for business, is April 1st, 2019. It is hoped that the formal grand opening will occur on March 29th, 2019.

As the real estate development industry moves into the fast-paced 21st Century, many factors impact the products production and marketability. Just as in the worlds of technology, aerospace, industry, media and transportation, so the construction industry is opening to change. As an example, through a modern buildings integrated control system, a remote operator using a laptop can very easily make a building highly efficient (“smart”) in terms of its lighting, HVAC, utilities and security.
Sustainability is also now considered essential for the future of our environment. Sustainable building practices encompass many aspects of today’s real estate development considerations, whether it’s building design, energy conservation or construction materials, the list and range is extensive.

In 2016, Robert Dominick, an accredited and long-standing developer in British Columbia and David Siebenga, a real estate attorney and high net worth office operator, became aware of a new construction methodology emanating from the UK which was making a tremendous impact.

This 21st Century methodology, which in 2016 had just garnered a £2.5-billion order in the UK, utilizes factory produced, precision engineered modular steel frames and modern composite materials to deliver buildings that are low carbon, highly sustainable and very energy efficient in both their construction and their operation. Dominick and Siebenga decided to explore this exciting concept further.

It quickly became very evident that modular steel manufacturing could make a huge impact in the North American construction arena. It reverts to the material that, before the onset of reinforced concrete construction in the early 20th Century, was the construction material of choice, structural steel. When reinforced concrete arrived it quickly replaced structural steel as it significantly reduced construction costs and a building boom occurred across North America in the early 1900’s. Today, after more than a century of reinforced concrete construction, it’s structural steel’s time to shine once again. Precision engineered modular structural steel offers a reversal of the situation and brings an affordability factor back into construction budgets and, at the same time, makes today’s conventional building methods look archaic.

Concrete is outdated in today’s environmentally conscious world, yet it continues to be used because to-date there have been no real alternatives. Concrete is the world’s third-largest contributor to carbon dioxide emissions after automobiles and coal-fueled power plants. Cement manufacturing alone is responsible for approximately 5% of global CO2 emissions.
Concrete also makes up the largest proportion of construction and demolition waste and represents about a third of all landfill waste. Recycling concrete is expensive and complicated.

2.2 Current Opportunity – The “Showcase” Presentation Centre

Currently, through Stantec in Canada working in conjunction with Modusteel’s manufacturers, an extensive program of Canadian code and Canadian Standards Association (CSA) compliance is underway. Once this compliance program has completed there is total confidence that the Modusteel product will be ready for the Canadian marketplace.

In anticipation of this Modusteel is working towards the creation of a 3-storey modular steel “showcase” presentation centre. This presentation centre will be used to obtain the first orders in Canada. Following its manufacture, the “showcase” building will be transported to Vancouver and is scheduled to become operational by April 1, 2019.

The structure will be of modular steel construction and will have many components designed to feature and demonstrate the construction methodology, the design capabilities and the ranges of finishing. One floor will have a transparent acrylic plastic wall showing the building’s structural steel components. There will be several styles of finishes in full size kitchens, bedrooms, bathrooms and living areas demonstrating high-end, mid-range and affordable and social housing. There will be a seminar area, board rooms and Modusteel will have its offices within the building.

Overall, it will be a tangible “showcase” and proof-of-concept for an entirely new and exciting method of construction that is set to revolutionize the industry. Whether it’s a low-rise, a mid-rise or a high-rise, in the market or non-market sectors, whether it requires high-end, mid-range or affordable finishing, the “showcase” will demonstrate it all and Modusteel’s knowledgeable staff will have answers for all the questions.
3.0 Product

3.1 Product Description

Precision engineered modular structural steel brings an affordability factor back into construction budgets. Establishing the products features and comparative advantages are essential to seeing this product being accepted into the North American marketplace. After evaluation, Modusteel sees the following key advantages:

- A Modusteel building is manufactured in an environmentally controlled facility with precision engineering creating every structural component to each customer's exact specifications.
- All components of the building are certified to be in compliance with Canadian and provincial building codes and CSA standards.
- Each modular floorplate created at the plant contains the majority of the required finishing.
- One truck can carry approximately 2,000 square feet of finished product.
- Approximately 90 trucks can complete a 25-storey high-rise (a 30 times environmental impact reduction).
- Each floor can be erected in 1-day.
- Precision engineered modular steel offers developers greatly accelerated market deployment times which significantly reduces market risk.
- It's an extremely environmentally friendly product that can easily qualify for LEED Gold or Platinum.
- Accelerated completion times eliminates a considerable amount of financing carrying costs.
- Its construction methodology keeps site work, logistics, neighbourhood disturbance, traffic disruption and site waste to a minimum.
- Construction site waste is reduced from some 30% to approximately 1%.
- At the end of its functional lifespan the majority of the building can be disassembled and recycled.

3.2 Supply Sourcing

The Modusteel team spent a great deal of time investigating potential manufacturing partners. They finally settled on one which they felt would best represent the Modusteel brand and mandate to produce large volume, high-quality, precision engineered, steel structures.

Modusteel and its manufacturer share the common goal and vision of opening up the Canadian and North American marketplace to high quality modular steel structures. A construction methodology that both corporations believe will change the face of the industry in North America. It is technology and engineering blended with 21st century design and thinking.

During several months of discussions and communication many facets, applications and advantages of modular steel construction became evident.

In Europe and the UK companies are turning to modular construction to make their timelines and budgets work. As the 21st Century continues, the construction industry will see an increase in modular construction units and companies. Modusteel is proud to be an acclaimed leader in the industry with the creation of the Modusteel brand about to make its mark in North America.

Modusteel can schedule manufacturing and transportation to match each projects timelines and ensure unit delivery and installation go smoothly. All the field crew has to do is assemble the fabricated sections at the site. This reduces the cost of on-site labour and eliminates human error in construction which in turn reduces the need for change orders and other unexpected expenditures.
3.3 Assembly Process

The manufacturing construction methodology employed by Modusteel can be outlined as follows:

- **Material Savings**
  Steel consumption for a 36-storey building is only about 78 kg per sqm. The manufacturing process (excluding the pouring of concrete flooring) results in about 95% of the building being created in a clean, environmentally controlled and precision engineered factory environment. This in turn enables construction sites to be extremely environmentally friendly with virtually no on-site waste (approximately 1% compared to 30%).

- **Factory Fabrication**
  Interior and exterior walls are all precision engineered to a pre-finishing stage in the manufacturing plant. Insulation and embedded mechanical, electrical, and plumbing requirements are all pre-finished to Canadian building code and CSA standards. Again, this means elimination of the majority of on-site waste. Each floorplate can then be shipped to the construction site in a 95% finished condition.

- **Building Qualities**
  Every structural steel building has exceptional seismic reliability and is tested to withstand a 9.0 earthquake. The steel is hot dipped or double cold galvanized. Vermiculite fireproofing and fireproof board affords over 3-hours of fire resistance. Modular steel structures have excellent acoustical and thermal insulation properties.

- **Effective Construction**
  Modular steel on-site construction is far faster than today’s conventional building methods, yet the precision of finished product is much higher than cast-in-place concrete or wood frame. A high-rise can be erected at the rate of one floor per day versus the traditional one floor per week currently in place.

3.4 Competitive Comparison – the Business Case

Construction costs in Canada are escalating quickly, which in turn is impacting the price and affordability of finished product to the consumer. Whether it's wood frame or concrete, the cost of construction is an ongoing issue faced by most developers. Modular steel construction eliminates a lot of that concern as the cost of high-quality finished product remains highly competitive with both of those traditional products.

As a sample guideline, in June 2018, the average construction costs for housing in Metro Vancouver saw cast-in-place reinforced concrete construction at $340 per square foot installed and wood frame at $240 per square foot installed. Modular structural steel would be in the marketplace at $200 per square foot installed.
The above table shows that construction of a building with steel can be accomplished at 59% the cost of a similar concrete building and if able to be constructed by wood, that structure would be 71% the cost of concrete. This is the reason modular steel construction has such great potential in North America.

One of the largest issues currently being faced in many Canadian cities is that of affordable housing. Modusteel's price efficiency can offer a complete solution to the affordability issue through its lower construction costs. Despite lower costs good quality finishing is still maintained and the product is deployed to the marketplace far faster than both wood frame and concrete. Faster implementation also brings considerable budget savings on construction carrying costs and similarly, for market housing, faster construction times result in considerable savings and risk reduction for the private sector developer.

Modular steel is highly adaptable to many aspects of construction. For example, as shown above, construction costs for wood frame transition to concrete prices after 6-storeys adding a further $100 per square foot to the costs. Not so for modular steel. Once the 6-storey level is passed modular steel pricing, at less than the cost of wood frame or concrete, continues for up to 25-storeys.

### 4.0 Market Analysis Summary

#### 4.1 Market Segmentation

In our economies, people either buy or rent housing. With the increasing pressures of urbanization, rental housing is often subsidized by government or not-for-profit agencies and market housing is constructed by developers.

##### 4.1.1 Non-Market (Affordable & Social Housing)

Modusteel has met with the BC Government, BC Housing and the First Nations. Presentations were given to BC Housing and the First Nations regarding the impact that modular steel construction will make on the affordable and social housing sector.

These entities were heartened to see the solution that Modusteel will be offering to help solve the affordable and social housing crisis currently being faced in many municipalities Canada-wide. Many non-market organizations are eagerly awaiting the opening of Modusteel's presentation centre.
4.1.2 Market Housing

Land developers construct market housing. Each development is subject to market and economic conditions that could adjust sale prices and costs. Typically, developers will not start on a project until they have presales and costs secured. Because of the various uncertainties, developers will not proceed on a project unless they can project a 20% per year profit on the development. This generally leaves affordability out of the picture and often produces supply shortages further driving up prices.

Additionally, significant portions of developable urban land can often support more density but, because of cost constraints through having to switch to concrete, are only built up to 6-storeys (the maximum allowable for wood construction).

4.2 Distribution Patterns

4.2.1 Competition and Buying Patterns

As noted above, the urban construction industry is predominantly serviced by concrete and wood frame construction modalities and construction providers. These construction systems are well entrenched, tactile, labour intensive and costly.

4.2.2 Main Competitors

The two competing technologies are:

• Concrete:
  Any structure that required building above 4-storeys, and more recently 6-storeys, has traditionally been constructed with concrete for the past century. Costly, but well entrenched, most developers project their construction using this methodology. It is permit driven and well proven to be code compliant.

  Modulsteel can compete with this traditional mode of construction, however, the process of construction is different. It will require education and the creation of some signature buildings, as proof-of-concept, to show that the methodology is code and time compliant.

  The construction cost and time saving offered by Modusteel will most definitely be an enticement for developers to engage in the new construction methodology and place orders.

  The fastest and simplest route for Modusteel to create proof-of-concept buildings is through the non-market sector. Many organizations, municipalities, government agencies and First Nations have already expressed interest in engaging Modusteel to participate in their building programs. From there it is not a difficult task to transition into the market housing sector.

• Wood Frame:
  Similarly, for any structure of 6-storeys or under, wood frame is a much cheaper and faster method of construction.
It has the additional advantage of a strong home based political lobby in British Columbia as the raw material (timber) is one of the largest suppliers of jobs to British Columbians.

Thus, even though Modusteel is a more cost-effective modality than wood frame, political considerations will come into play for construction of buildings under 6-storeys. However, once again utilizing the non-market sector plays a key role in overcoming this. In this non-market segment it’s not the building material that rules, it’s the cost. Through discussions with many non-market entities over the past year, it is very apparent that, once operational and on a cost of construction basis, Modusteel will be readily accepted into this market segment. It is the affordable solution to a very large problem.

Again, using the non-market sector as a proof-of-concept, developers from the market segment will quickly become attracted to the construction cost and deployment times of Modusteel’s product.

4.2.3 SWOT Analysis

Enclosed is a SWOT analysis for Modusteel:

- **Strengths**
  Greatly reduced cost and time to construct. Very environmentally responsible (green) with little waste. The base material (steel) has been tried, tested and used for a considerable amount of time in the construction industry.

- **Weaknesses**
  A new building technology and methodology that will require market and industry acceptance.

- **Opportunities**
  The construction industry is overwhelmed with business and considerable delays are often experienced. The price points for current construction methods are much higher than modular steel. This gives modular steel a huge advantage when entering the marketplace.

5.0 Strategies and Implementation

5.1 Marketing Strategy

As an entrance strategy, Modusteel will target government and non-market procurement and funding for its initial initiatives.
Any new system of construction requires adoption by the construction industry to gain acceptance. Modusteel's strategy is to engage the government sector and its sovereign finance guarantees will enable it to obtain a volume of contracts. The fact of very cost-effective pricing achieves the current housing need of affordability, a topic of great government concern which has significant government financing. Modusteel has engaged its sales team to pursue government funding and thus profile throughout Canada.

Once a series of affordable housing units are under construction, the construction industry will seek the price competitiveness of Modusteel products which will then engage market housing projects.

5.1.1 Pricing Strategy

With Modusteel being 59% to 71% less costly than its competing construction modalities (wood or steel), the obvious strategy is to present pricing to government and industry at a rate that the competition cannot provide and this way secure contracts for delivery of Modusteel product.

6.0 Organizational Structure

6.1 Corporate Interrelationships

Modusteel is a combination of highly experienced and accredited professionals providing their combined expertise to introduce Modusteel to the North American marketplace.

Exclusive Supply Agreement to Exclusive sales agent
6.2 Personnel Plan

The Modusteel partners are highly skilled and thoroughly accredited professionals within their own fields of expertise. They have all served their chosen professions for many years and have proven track records of success. Their combination of knowledge, experience and accomplishments make them a formidable team in the expansive realm of real estate development.

Robert Dominick
Robert has enjoyed a successful 30-year career in the real estate development. His expansive real estate background, coupled with a thorough understanding and visionary perception of the real estate marketplace, has helped him move forward through many spheres of change during three decades in the business. He has a consistent record of accomplishment and success with many diversified real estate developments.

Robert operates his own real estate development consulting company and one of his engagements is that of Vice President of the WestStone Group, a company currently building over 3.5-million square feet in Surrey city centre. The various developments in Surrey include a 2,500-residence master-planned community, a 53-storey education “mega-centre”, a 550,000 square foot “Community of Care” and two different dedicated rental buildings containing over 750 rental units.

Robert is very politically connected to all levels of government. He has served two terms as President of the Downtown Surrey Business Improvement Association and one term as Chairman. He is also Chairman of the Economic Development Committee and has consistently held this position for the past 10 years. His vast experience in the real estate realm is invaluable to the roll-out of Modusteel in North America.

David Siebenga, B. Comm, LLB
David has a B. Comm degree with awards in marketing, a law degree and has a career specializing in business syndications and development. Operating as the Chair of an international family office with contacts in Seattle Washington, Shanghai China, and Ahmedabad Gujarat India he has handled over one billion dollars per year in trust volume for 14-years and has coordinated over 35 complex multinational transactions to date including international technology assignments.

As a lawyer for some 30 years, David brings with him legal connections and team combined with his pragmatic skills and adeptness of understanding of multicultural systems to empower Modusteel to deal with different legal regimes to harness international systems of manufacturing for the North American environment. He brings his understanding of finance and functioning office operations to Modusteel.

Jiang Zhu, AIBC, MRAIC, LEED AP BD+C
Jiang, a registered senior architect, and principal at Stantec, has a wide spectrum of professional experience including a Master of Architecture (Post Professional)
in Affordable Housing - McGill University and a B.Arch. (Professional Degree) in Architecture - Southeast University.

During his career Jiang has been Vice President of the Canada-China Society of Science and Technology. He has been nominated by the Architectural Institute of British Columbia and appointed by Vancouver city council to be a member of the Chinatown Historic Area Planning Committee.

His international experience in different building construction techniques and modalities, working with the Stantec name, brings strength to compliance for Modusteel’s products.

**Peter Fassbender**

Peter Fassbender has had a distinguished career in both the private and public sectors. He enjoyed a successful career with one of Canada’s largest and most acclaimed marketing and communications firms. However, for the past 17-years he has been in the public sector. First serving as a City Councillor, then three terms as Mayor in a Metro Vancouver City. For the last 4-years Peter has been a member of the Legislative Assembly of the Province of British Columbia. As an MLA Peter was appointed to the Executive Council as Minister of Education and then as Minister of Community, Sport, Cultural Development, and Minister Responsible for TransLink.

Peter’s expansive private and public-sector experience has allowed him to develop an extensive network of contacts and relationships which will serve Modusteel and its partners well. He is adept at building relationships which will help further the overall goals of the company as it deploys in North America. Peter is as comfortable handling Social Housing requirements as he is discussing luxury ocean front condominiums. It is his expertise in the communications and marketing fields that will provide Modusteel with a strong platform for the overall market.

**Myron Grunsky**

Myron is the lead owner and principal of Dawson Wallace Construction Ltd., one of the top 25 General Contractors in Canada. He is very knowledgeable in assembling complex steel structures. Myron is highly experienced in construction management services for commercial retail units, industrial warehousing, light industrial facilities, office and residential buildings, schools, libraries, restaurants, and various other design-build developments. His international expertise includes the completion of projects in the United States and Canada and he has permanent offices in Edmonton, Calgary, Vancouver, and Lethbridge.

Myron’s career spans through technical education, certification as an experienced tradesperson carpenter, General Foreman, Project Superintendent, Estimator, Project Coordinator, and Project Manager. His practical experience combines skill management as a Senior Project Manager, District Project Manager, Vice President and ultimately Principal of Dawson Wallace Construction which empowers him to design and deploy effective construction projects nationally. Even as Principal, Myron remains active in specific Project Management under- takings.

Myron is dedicated and determined to complete projects on schedule, on budget, and to the highest degree of quality. His positive relationships with clients, staff and subcontractors within the industry provide Modulsteel the expertise to construct on time.