



Sigmoid
Engineered Services Inc

Hoover Enterprises



www.sigmoid.com
info@sigmoid.com

110 Riviera Drive Unit 3
Markham Ontario
L3R5M1
T: 1.905.415.9664
F: 1.905.415.9643
Detroit: 1.248.687.8202
Nashville TN: 1.615.530.6014

“Material Handling Specialists”





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Sigmoid is a supplier of material handling / packaging systems.

Sigmoid core services

- Complete packaging design
- Project Management
- Manufacturing
- Customer steel racks
- Cut and sew bags
- Foam Inserts
- Dunnage
- Expendable
- Standard and customer totes or KD's (AIAG Standards)
- Pallet rack and carton flow systems
- Lift tables and manufacturing support equipment
- Rental fleet of standard containers



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Sigmoid Sales & Manufacturing Locations

Markham Ontario
Tillsonburg Ontario
Hoover Plant #1

NA Sales, Engineering & Design Center

Steel Fabrication & Assembly (Weld, plasma, laser, full service)
50,000 Square Feet, 6 Weld Lines, 3 Lasers, 3 Plasma, Break Press
and more...

Tillsonburg Ontario #2
Ancaster Ontario
Aylmer Ontario
Nashville Tennessee
La Honda Mexico

Storage Yard (Rental Fleet & Long term fleet storage)
Dunnage & Foam center (Die cut & water jet)
Cut & Sew (Hanging bags, curtains, pouches etc)
Sales Office
Steel Fabrication, Rack Manufacturing, Dunnage



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Sigmoid Services in detail

Design services

Sigmoid can provide detailed concepts and prototypes in a quick and effective manner. Utilizing CATIA (Translation) Solidworks, Inventor & Acad to develop safe and cost effective packs for your material. This can be accomplished from parts and/or math data.

Project Management

Sigmoid has Packaging Engineers and Mechanical Engineers ready to be onsite to work with your staff through all stages of the project. We will review your process from the basics of line side space and develop fleet quantity recommendations per your manufacturing needs. Sigmoid will manage your program from prototype to final Tier 1 customer delivery.

Manufacturing

Multiple locations in Ontario Canada, central US & Mexico (Partnered companies). Sigmoid can conveniently and cost effectively service your needs



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Sigmoid Services in detail... continued

Custom Steel Racks

Our Tillsonburg facility is a full service metal shop. With 6 weld lines and prototype area we can turn around first offs in as little as 1 day with a potential capacity of 100+ racks per day (depending on the complexity). 3 Lasers / 3 Plasma / Steel corrugating capable / In house material prep and cutting This location also prepares material and assembly for partnered companies to do final assembly if required in the Southern States and Mexico.

Cut & Sew

Located in Aylmer Ontario. This facility manufactures Automotive hanging bags, pouches and covers. Many unique and cost effective materials are utilized such as Vintex, Autoguard, and Tyvek to name a few. If A surface part protection is a priority then we can accommodate customized materials to any pouch or bag.

Dunnage

Water Jet, Die cut, laminating. Foams, Corrugated paper and plastics, sonic welding and much more. We produce various types of dunnage and materials to accommodate our standard containers and custom packs.



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Sigmoid Services in detail... continued

Expendable Packaging Products

Foams – Die Cut & Water Jet – Crosslink / Non Cross Link / XLPE and more...

Paper Corrugated Conversion

RSC Boxes / HSC Boxes / FOL Boxes / Litho Laminate / Boxes / Sleeve Packs / Die cut Trays / Bulk Packs
Custom Design/ Manufactured Products / Pads / Honeycomb / Tubes / 123 Bottoms / Hymes Bottoms /
Foam Packaging
Product Display Units / Wax Corrugated Containers / Moisture Barrier Boards / Moisture Bags

All Corrugated Products Offered In: Single, Double Or Tri-wall A, B, C, E Flutes



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Containerization... Customer examples





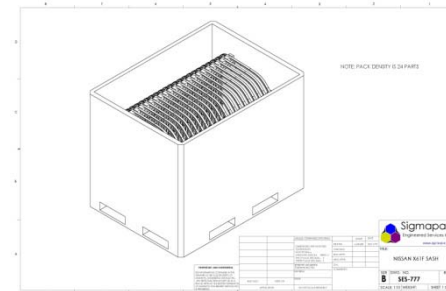
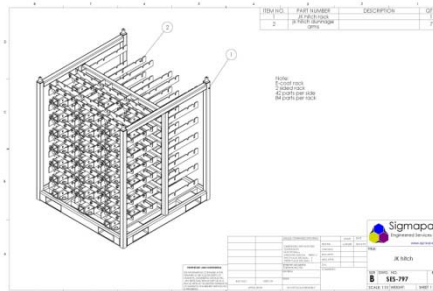
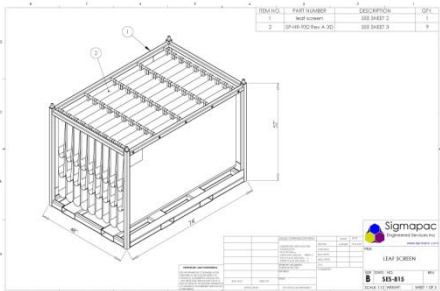
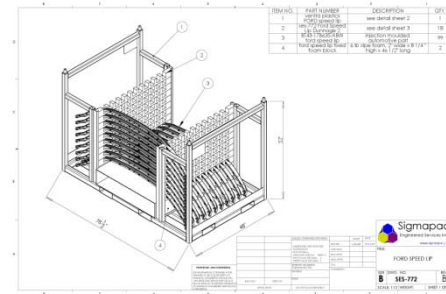
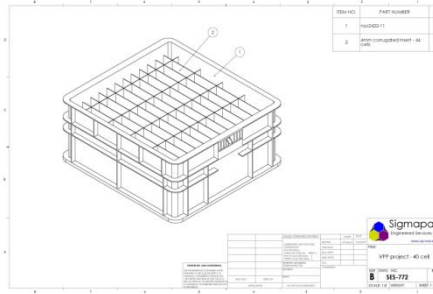
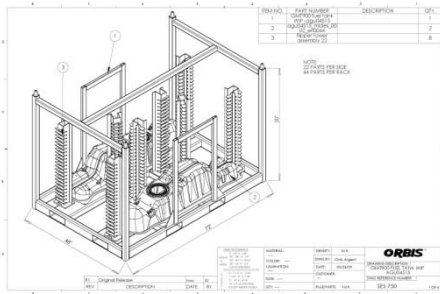
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Drawing... Customer examples





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Sigmoid Services in detail... continued

Standard and customer totes or KD's (AIAG Standards)

Full line of straight wall totes, knock downs and custom manufactured totes in corrugated plastic. We also carry a wide variety of AIAG standard totes and flip pack. Custom dunnage as needed.

Pallet racking and carton flow systems

Sigmoid can design and install all your racking needs anywhere in North America. From steel racking / pallet flows to light weight tube designs.

Lift Tables and manufacturing support equipment

Lift tables, tilt tables dolly and buggy's, quad steer systems and more...

Rental Fleet

Sigmoid offers various sizes of KD's, totes and pallets for rental by the day or month

Popular Sizes

Orbis / Linpac HDKD 48"x 45"x 34"

Orbis / Linpac HDKD 48"x 45"x 42"

Orbis / Linpac HDKD 48"x 64"x 34"

More sizes available

Various tote sizes available as well.

Availability varies





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Containerization... Customer examples

OEM

- Volvo Truck and Bus
- Prevost
- Nova Bus
- Ford
- Chrysler
- General Motors
- Honda
- Toyota
- Nissan
- VW
- CAMI

Tier 1

- Magna Powertrain
- Decoma
- Intier
- AG Simpson
- COSMA
- JCI
- AP Plasman
- Van Rob
- Mitchell
- Ultra
- Ventra / Flexngate
- Many more...

Non Automotive

- Salford
- Canada Post
- Hydro One
- Orbis Corporation

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Sigmoid Project Management & Engineering Support

Sigmoid can support the manufacturing industry from material flow to line side delivery.

- Sub Assembly
- Sequencing
- Kitting
- CMA – Central Materials Area
- Route design
- Containerization and line speed matching
- Manpower calculations and balancing
- Plant layout and space calculations



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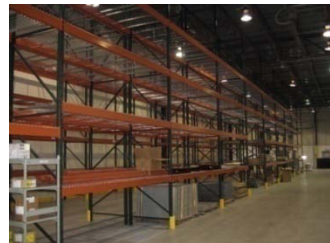
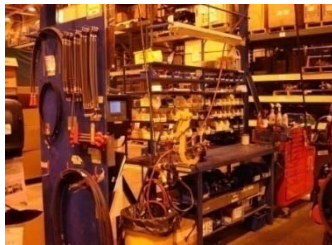
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Sigmoid Project Management & Engineering Support... Continued

Sub Assembly

Sigmoid and its staff have worked extensively with many Tier 1 and Logistics supplier in the design of efficient material routing and the design / build of sub assembly fixtures.





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Sigmoid ... Continued

Sequence Parts Delivery & Kitting

Sigmoid and its staff have worked on various programs over the years directly related to sequence parts delivery and kitting. Working in both engineering support and containerization for many customers ranging from GM, CAMI, FORD, Chrysler, Toyota, Nissan and many Tier 1 suppliers. Sigmoid is experienced identifying a need and determining the solution. Again from the manpower and line side savings to the containerization required.

Kitting Carts & Totes



Sequence Containers





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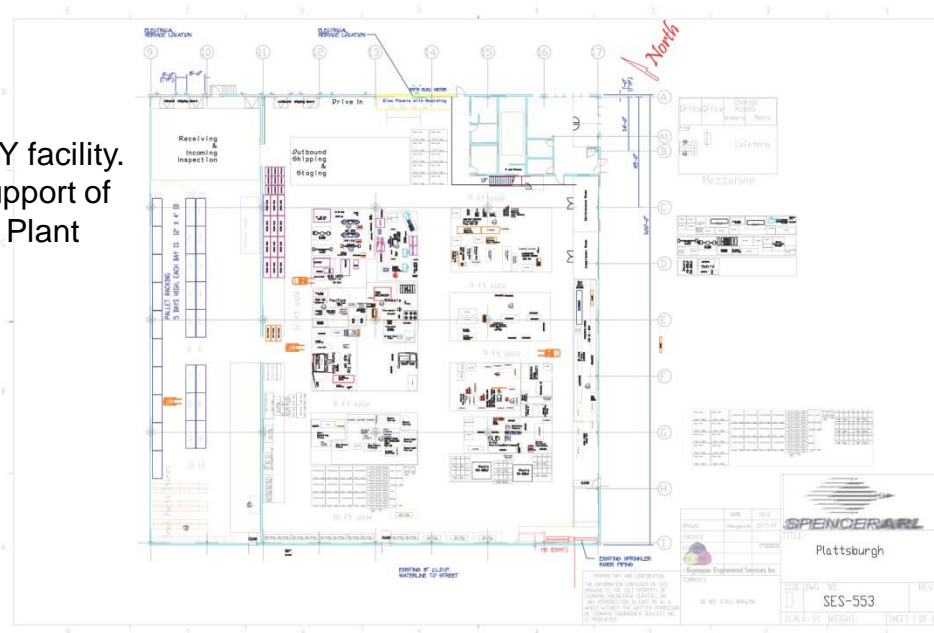
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Sigmoid Project Management & Engineering Support

Sigmoid offers Engineering support as required specializing in plant material flow. Sigmoid can determine your need and work with your staff to determine the best solution.

Spencer ARL Plattsburg NY facility.
Sub Assembly center in support of
Volvo Nova Bus Assembly Plant
Designed by Sigmoid





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Sigmoid Project Management & Engineering Support Volvo 3PL / Nova Bus Plattsburg NY for Spencer ARL

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Current Program:

Sigmoid was contracted in September of 2008 by Spencer ARL / Butcher Group in support of its new award with Volvo Nova Bus. Spencer ARL was contracted to Sub Assemble / Sequence / Kit / Meter in materials to the newly launching Nova Bus Plant in Plattsburgh NY over 21 Commodities and 2000 plus part numbers. Complexity ranged from a ASL (Alternate Storage Location) parts metering to a full engine build. Sigmoid was contracted to review the current work content in Nova Bus St Eustache QC and develop a facility that would effectively produce assemblies and material flow that could surpass current work loads.

Sigmoid Responsibilities

- Plant Design and Layout
- Manpower validation
- Work Station and fixtures – Design and Build
- Inbound and outbound Material Flow
- Plan for every part
- All containerization. Racks, Carts, Kitting Packs
- Work instruction support
- Launch support and ongoing support



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Sigmoid project management packaging support

launches worked on and detail:

1997 GM Arlington
1997 GM Flint
1997 GM Oklahoma
1998 Ford DCP
1998 GM Lake Orion/Hamtramck
1998 Saturn Springhill
1999 PACCAR Laval
2001 GM Arlington
2002 Chrysler Windsor
2003 Ford Chicago
2004 Chrysler Windsor
2005 Chrysler Windsor
2006 – 2008

2008 Ford Chicago
2008 Toyota Woodstock
2008 to Present Prevost

2009 CAMI
2010 Magna Composites

180 Seq & Assembly Commodities
30 Seq & Assembly Commodities
88 Seq & Assembly Commodities
TruMack Assembly DCP
5 Seq & Assembly Commodities
CRFM Assembly
CMA & Containerization
40 Seq & CMA
CMA and Container Sort Center
MSC
Sequence
Sequence
TDS
Chrysler JNAP
Chrysler Warren Truck
10 Sequence & Pass through racks
Various Inbound & Seq Containers
Nova Bus Plattsburg New Facility Launch

Various Inbound & Seq Containers
Packaging Engineering & Production

Containerization & Engineering. Mackie
Full containerization. Penske
Engineering launch team & Full containerization. Mackie
Containerization & Engineering. Mackie / Trumark
Project Manage & Engineering Mackie / DTI
Engineering. Mackie
Containerization & Container Sort Center. TDS
Containerization & Container Sort Center. TDS
Containerization & Container Sort Center. TDS
Bus Development. TDS
Containerization. TDS
Containerization. TDS
Direct contract TDS
Launch TDS
Launch TDS
Containerization per Orbis Corporation
Containerization
Sub Assembly & Sequence center. Engineering, Layout,
Fixture support. Spencer ARL / Butcher Group
Containerization
Containerization



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Contact

Managing Director
Walter Rosati
Direct: +1.248.687.8202
Mobile +1.416.520.8655

Plant Manager / Hoover Plant
Steven Martin
Direct: +1.519.842.2890
Mobile +1.519.280.3730

Design Manager
Chris Argent
Direct: +1.248.687.8201
Mobile +1.905.999.8549

Area Manager / Production Control
Bruce Doherty
Direct: +1.248.687.8200
Mobile +1.905.242.8562



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