BioSource Nutrients Illinois, LLC
Midwest Bagging and Blending Facility
Construction and Business Plan

Clarus

Prepared November 18th, 2020

Prepared By:
Bart T. Lynam
Bartholomew R. Lynam
November 18th, 2020

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Project Overview

Mr. Kenneth Rubin, August 2020

INTRODUCTION: Nutrients Plus Midwest Partnership

Nutrients Plus is a manufacturer of custom blended enhanced biosolids based fertilizers serving a multitude of non-farm customers with applications at golf courses, residential landscapes, and corporate parks. One recent customer for the company's product was the National Park Service for the 2014 rejuvenation of the National Mall in Washington, DC. where results led to expanded use and today, includes all the monuments and museums throughout the District.

The company currently employs subcontractors with blending and bagging facilities at 7-plants in North America. There, biosolids, primarily from wastewater treatment plants produce a 95% dried, granular material that is combined with other organic and inorganic ingredients to create Clarus proprietary blends. Clarus with trademark formulations like Screaming' Green has been applied to well over a million acres and upcycled a quarter-million tons of organic waste.

The company annually supplies more than 5000 tons of bagged material to major retail distributors serving markets in the Eastern and Western United States. Its patented Clarus brand of biosolids-based product is enhanced with Urea, Ammonium Sulfate of Potash, and other traditional N, P, K inputs (nitrogen, phosphorous, and potassium). Chemicals the fertilizer promotes demonstrable, vigorous plant growth while minimizing runoff harmful to aquatic environments. The benefits of applying the Clarus product have been the subject of long-term university trials at Virginia Tech, and Old Dominion University carefully-monitored and demonstrations in the field are complemented with success at a specialized R&D laboratory in Petersburg VA; here patented technologies were also proven and is where some of the company's scientific Staff were trained.

The company has three objectives in seeking to establish a partnership in the Chicagoland area:

To access a significant source of Class A biosolids (almost 50% of its feedstock) with long-term contractual arrangements for a steady supply of this critical material

To expand its fertilizer production for Midwestern US markets through a blending and packaging plant to be owned and managed by the Partnership

To access a source of patient capital to underpin the venture while not detracting from the capital needs of other company operations The company prefers an investor with operations in Illinois to gain access to its business reputation in the Midwest as well as logistical and management support for what will become an operation remote from the company's home base.

The biosolids, which are currently heat-dried, granulated, screened, and processed as pathogen and virus-free, are supplied by one of the world's largest wastewater treatment plants, operated by the Metropolitan Water Reclamation District of Greater Chicago and located in Stickney, Illinois. One-hundred dry tons per day of dried biosolids from centrifuges to be dried will be delivered to Nutrients Plus who will operate its fertilizer plant at a location whose proximity is close to the source of the biosolids to reduce the cost of trucking.

The conversion to low moisture, pathogen-free pellets is carried out by a subsidiary of Veolia North America under a long-term contract with the District. In turn, the output of the Veolia drying plant is marketed to a limited number of large agricultural operations in Indiana and Ohio by a small Ohio company known as OT&T under a (remaining) ten-year contract between Veolia and OT&T that was executed July 1, 2020. It will continue through July 1, 2030. The Nutrients Plus Partnership will leverage the Clarus platform licensed in 44 states, including Canada and Mexico, and seeks to acquire OT&T or to purchase an assignment of its Veolia contract. The Partnership will then construct and operate the blending and bagging facility and distribute the product through its existing chain of retail outlets and new retail sources of distribution.

Until the new blending facility is fully operational, the Partnership would continue the practice of selling unblended biosolids in bulk to agricultural producers. At the same time, it ramps up its manufacturing and distribution capabilities in the Midwest. The bagged Clarus product will be produced and sold within less than 18 months of the inception of the investment and deployment of its capital.

The attached materials outline the economic proforma for the business, a summary of the Nutrients Plus principles, and a complete description of the Clarus product and its patented chemical characteristics.

Partners and Key Personnel

Upwell - Tamin Pechet - CEO

Tamin has helped launch multiple industry-leading companies in finance and technology. He serves as CEO of Upwell, which co-founded and invested in Kilonova Capital, Upwell Water, and Hawk Hill Group. He also founded and led Imagine H2O, the largest global water technology accelerator, and Banyan Water, a private equity backed software and analytics business remotely operating water systems across the country. He was previously a principal investor at Goldman Sachs in the Special Situations Investing group, where he helped launch two wholly owned subsidiaries of the firm. He serves on a number of private-equity backed technology company boards.

American Infrastructure Holdings LLC.

Dr. Kennith Rubin - AIH co-founder and head of advisory services.

Ken Rubin – AIH co-founder and head of advisory services. He previously co-founded Rubin Mallows Worldwide Inc., a transatlantic infrastructure management consulting, planning, and design firm. Dr. Rubin is a water and wastewater sector expert, where he supports utilities on matters of investment, finance, strategy, management, and operations; governments and legislatures at all levels on matters of resources and transport economics, foreign direct investment, and infrastructure finance; technology companies on matters of corporate strategy, M&A, and market entry/expansion; and investment banks on matters of asset valuation and technical due diligence. Between 1986 and 2010, he served as President and CEO of three infrastructure advisory companies in the US and the UK where he was responsible for infrastructure restructurings, acquisitions, divestitures, and financings. Dr. Rubin has delivered successful infrastructure projects on every continent. He holds a PhD and SM in Water Resources Systems Engineering from Harvard University, an MSPH in Environmental Engineering from the UNC Chapel Hill, and a BS in Civil and Environmental Engineering from Cornell University.

Jay Tannon - AIH co-founder, head of strategic development

Jay Tannon - AIH co-founder, head of strategic development, investor relations and alliances. Oversees legal matters. Co-founded Novus Energy Partners, a transatlantic energy technology investment firm and its affiliate, Novus Special Situations. Former partner and transactional attorney at major law firms, now Senior Counsel to DLA Piper LLP. Mr. Tannon has structured and closed scores of business acquisitions, joint ventures, and infrastructure projects, with a focus on energy, transportation, and communications. He previously served as Co-Chair of Private Equity at DLA Piper and participated on its Energy Steering Committee. Mr. Tannon has represented the interests of such enterprises as Onex, UPS, Isolux, Cogeco, Cox Communications, Ontario Teachers, AMP Capital, Virginia Port Authority, Hutchison Port Holdings, American Commercial Lines, Pan American Capital, and First Reserve Energy Infrastructure Fund. Mr. Tannon completed his BA with highest honors at the University of North Carolina at Chapel Hill and earned his law degree from the University of Virginia.

Nutrients PLUS, LLC

John J. Moriarty – President

John has over 30 years of experience in the Green Industry and received degrees in agronomy from Virginia Tech and forestry from Paul Smith's College of Arts and Sciences. He has led the company, now approaching its 15th anniversary, relying upon a broad range of experiences in ownership, executive management and senior sales positions throughout the Green Industry. Prior to Nutrients PLUS he was a Vice President at Harmony Products-Chesapeake VA. John presents at national conferences such as The Fertilizer Institute's Outlook & Technology Conference, Canadian International Turfgrass Conference and Annual International Congress of Algae in Hangzhou, China.

Nutrients PLUS, based in Virginia Beach, VA, is unique to the fertilizer industry.
Since inception, Nutrients PLUS has led the fertilizer industry. It developed the NP Pathway to Solutions system making it the largest recycler of natural ingredients possessing valuable organic matter in blends with traditional fertilizers.

Bart T. Lynam and Associated

Bart T. Lynam, President

Mr. Lynam has extensive experience in engineering research, operations, and senior management in the field of wastewater treatment. In addition, he has managerial experience in the construction industry. Mr. Lynam is a member of a number of professional organizations, has published extensively, and has presented technical papers at numerous international conferences. Mr. Lynam has several patents relating to the heat drying of biosolids. He has testified in court as an expert in the field of wastewater treatment. Mr. Lynam is Board Certified by the American Academy of Environmental Engineers. Mr. Lynam is a Fellow in the American Society of Civil Engineers.

Bartholomew R. Lynam, Vice President Design and Management Planning

Bartholomew possesses a wide variety of construction management experience including Industrial, hospitality, hospitals, and multi-use mid-rise to high-rise buildings as well. Bart's early years were spent with two major ENR Top 50 firms which afforded him with a solid foundation for the building industry. Subsequent, Bart headed his own General Contracting Firm for nearly twenty years prior to joining Midway Enterprises, Inc. whereas he completely understands the fundamentals of running the contracting business operations.
Bartholomew also develops and executes conceptual planning, business, marketing and sales planning, policies and procedural planning. Develop, implement, and monitor day-to-day management plans, operational systems, policies, and processes

Management Methodologies

- Construction Methodology – Industry Standards for Professional Construction Project Management
- The Project Management (PMI) methodology as outlined in the PYMBOK
- Value Improvement Practices - Value Methodology is a rigorous examination of what is needed (functional requirements) to meet the business objective of a project at the least cost and the elimination of non-adding investment.

Project Construction Management Plan

Introduction

The BioSource Nutrients Illinois LLC Blending and Bagging Facility will be located within the Greater Metropolitan Chicago area close to the source of the main fertilizer ingredient from an existing biosolids drying plant located in Stickney, Illinois, operated by Veolia North America under a contract with the Metropolitan Water Reclamation District of Greater Chicago which extends to July 1, 2030. The Facility consists of three main elements: Blending, Bagging, and Warehousing. The blending consists of receiving the fertilizer ingredients delivered by truck and then blended into a uniform fertilizer product that is conveyed to a feed silo for bagging. The bagging will use a conventional high-speed bagging unit that will produce a sealed bag product, which will be robotically palletized onto a pallet that is stretched-wrapped and ready to be moved to the warehouse. The warehouse will store the finished pallets. Due to seasonal demands, the warehousing will be supplemented by acquiring additional seasonal warehouse space. The fertilizer product will then be marketed throughout the Midwest region and possibly nationally. An industrial realty company will conduct a survey to determine potential project sites that will meet the space requirements, trucking requirements, and the combined trucking and lease costs, offering the best value.

Summary of Project Management plan

This Project Management Plan will serve as the guideline for the design, permitting, and construction of the BioSource Nutrients Illinois LLC Blending and Bagging Facility which will seek the approval of this Management Plan from the Partnership and the Investor Upwell LLC. All steps taken for the management and implementation of the Project, including information on personnel, tasks, and schedules must be appropriately disseminated to all key participants and the Investor.

This Project Management Plan outlines the Project from design and permitting through completion of construction with a smooth transition to commercial operation and marketing. An essential objective of this Plan is to develop and maintain a unified Team working environment. The size and scope of this Blending and Bagging Project do not warrant contracting to an outside Construction Manager, General Contractor, or Design-Build Contractor.

Project Team Roles and Responsibilities

The Project will consist of personnel from BioSource Nutrients Illinois LLC who will seek approval from the Partnership and the Investor to develop the methods, policies, and procedures required for the successful construction with the completion of the Project to commercial operations. (Personnel Resumes are attached)

Executive Project Director

Bart T. Lynam will be the Executive Project Director. He will have responsibility for ensuring that the Project is executed and managed in a professional, timely, and cost-effective manner.

A Partial list of Bart T. Lynam's responsibilities:

- To ensure that the facility location is the least cost relative to the source of the biosolids, taking into consideration permit requirements with an additional potential site for the warehousing of pallets for seasonal storage.
- To prepare the preliminary design of the Facility to meet local, state, and federal requirements.
- To seek and engage a design firm qualified to meet all the design constraints of the Project and to prepare all the design documents necessary for final budgets, permitting, and execution of the construction.
- To obtain the required permits by engaging the appropriate environmental firm.
- To initiate the process of procurement for the major Blending and Bagging equipment and to make the selection of subcontractors, i.e., mechanical installation, electrical, and utilities.
- To maximize the automation of the individual components to minimize operating labor costs.
- To develop a detailed preliminary construction schedule to maximize the output of the fertilizer product.
- To implement a cost management plan.
- To decide whether the Project is to be union or non-union and to manage labor relations.
- To seek approval from the Partnership and the Investor of the above.

Project Construction Manager

Bartholomew R. Lynam will be the Project's Construction Manager ensuring professional project construction management from project inception through project close-out.

A Partial list of Bart R. Lynam's responsibilities:

- To ensure that the Project's modifications to the existing building comply with the design and permit requirements.
- To prepare, monitor, and control a detailed construction budget in accordance with the objectives and scope of the Project to be approved by the Partnership and the Investor.
- To prepare, monitor, and control the final construction schedule.
- To present the Partnership and the Investor with an approved list of appropriate subcontractors and their work scope, ensuring that the subcontractors are consistent with the Project scheduling needs and budget allocations.
- To monitor, control, and present monthly reports to the Partnership and the Investor on the Project's cost and schedule performance.
- To prepare monthly invoices for approval from the Partnership and the Investor relating to personnel, procurement of Equipment, installation, and revisions to the building in conformity with the Budget line items.
- To coordinate meetings and prepare minutes, as required, relating to the progress of the construction.
- To ensure facility compliance with all of the design and operating specifications for start-up.

Project Site, Design, and Construction Development

Project Goals:

- Design and Construct a fertilizer processing facility in Metro Chicago
- Support and Manage the Transportation of Biosolids & Material Components Required to Achieve Bagged and Labeled Balanced Fertilizer for Sale to the General Public Nationally
- Procure, Install, Manage and Operate Material Handling, Blending, Bagging,
- Manage onsite Inventory Storage,
- Develop, Manage, and Execute the Marketing and Sales Plan necessary to ensure the Salability of Fertilizer Products produced at Full Capacity.
- Manage the Logistics and Distribution of Nutrients Plus fertilizer Products Nationally
- Hire and Manage Staff required to facilitate all operations 24/7
- Manage day-to-day general business activities of the Regional Office.

Select the Facilities Physical Location,

- **We diligently analyzed the industrial real marketplace utilizing a Nationally recognized real consultant.**
- The selected property will house the most efficient Layout of the Process Equipment and Raw Material Storage needs.
- Support total process output, market needs, seasonal trends, and storage needs.
- Minimize the properties distance from our primary input material source – Veolia's Stickney Biosolids Drying Plant
- Analysis of the biosolids material transport costs including transportation Labor, Truck Fuel Costs, Truck Equipment Costs
- Property net lease rate, real estate taxes, CAM Costs, footprint size, ceiling height, utilities
- Efficient placement of our out-building for our bulk materials deliveries relative to our processing lines and truck access with the required turning radius's

Designing the Plant Layout:

- **Utilizing agile design**, we cycled through many iterations of the plant layouts, arriving at the most efficient process design while maximizing support offices and storage capabilities.

Equipment Selection

- **We selected international world-class Equipment manufacturers** with a long-established history of high-quality machinery. Each major piece of Equipment is described later in this presentation.

Integrated Controls

We have engineered a reliable integrated process controls system accounting for process efficiency, safety, endpoint monitoring, IT needs, security, alarms, and other objectives as described

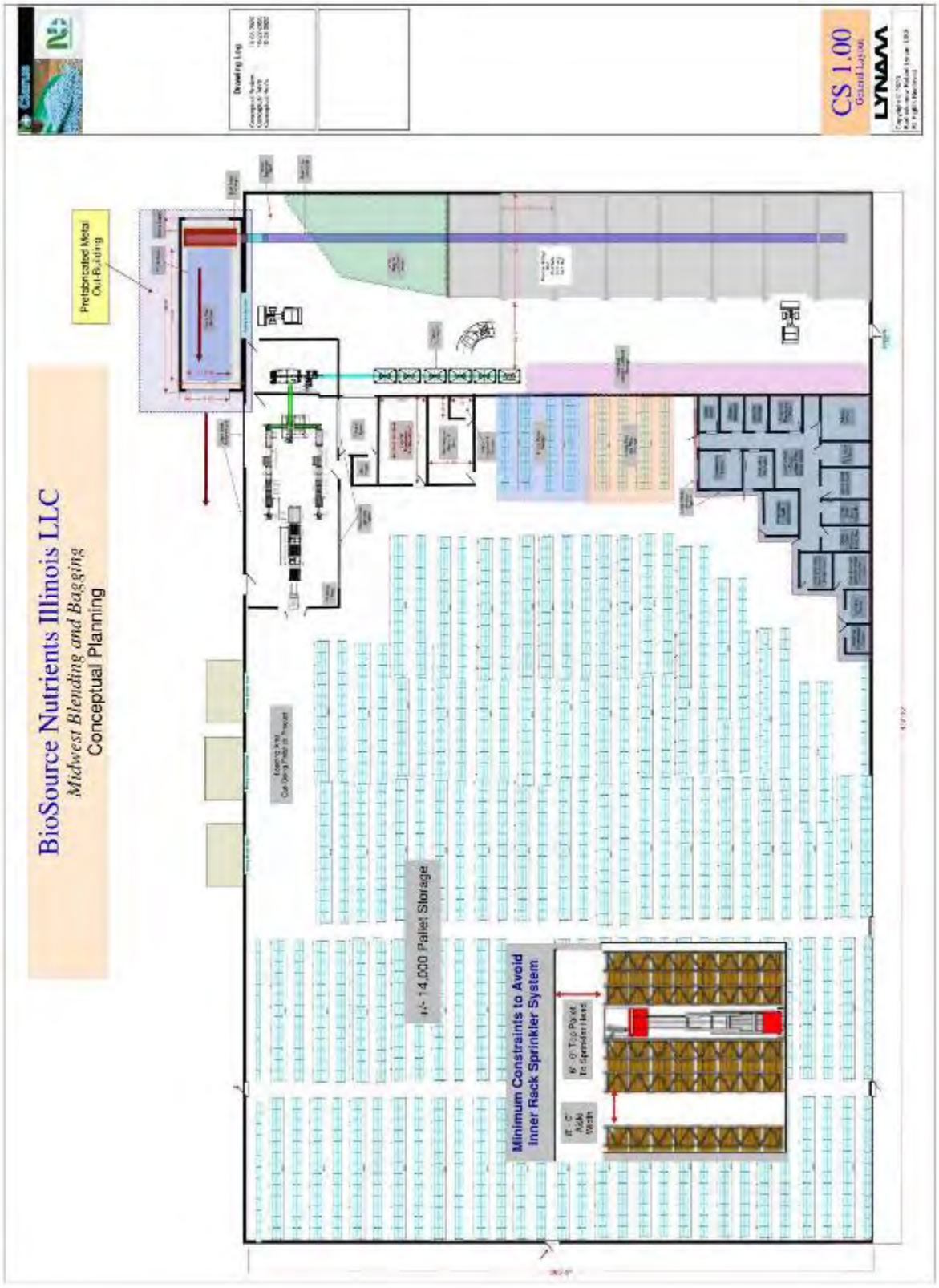
Cap-X

We have designed the FF&E equipment to suite the project needs. To reduce the impact of the expense at project commencement , we are suggesting a staggered purchase of the FF&E and mobile equipment.
Click here to go to the Cap-X analysis

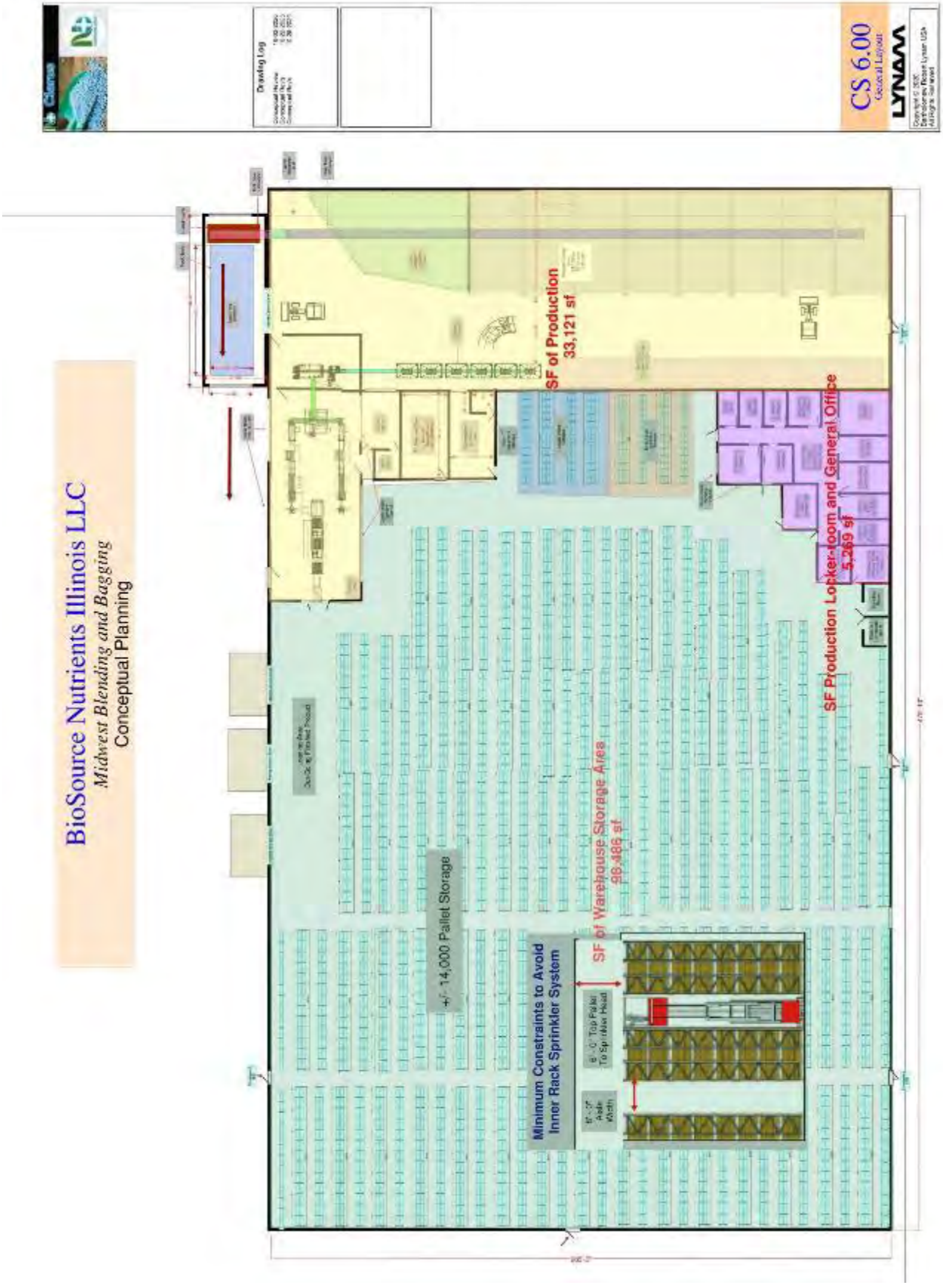
Conceptual Design Drawings

CS 1.0 - Floor Plan

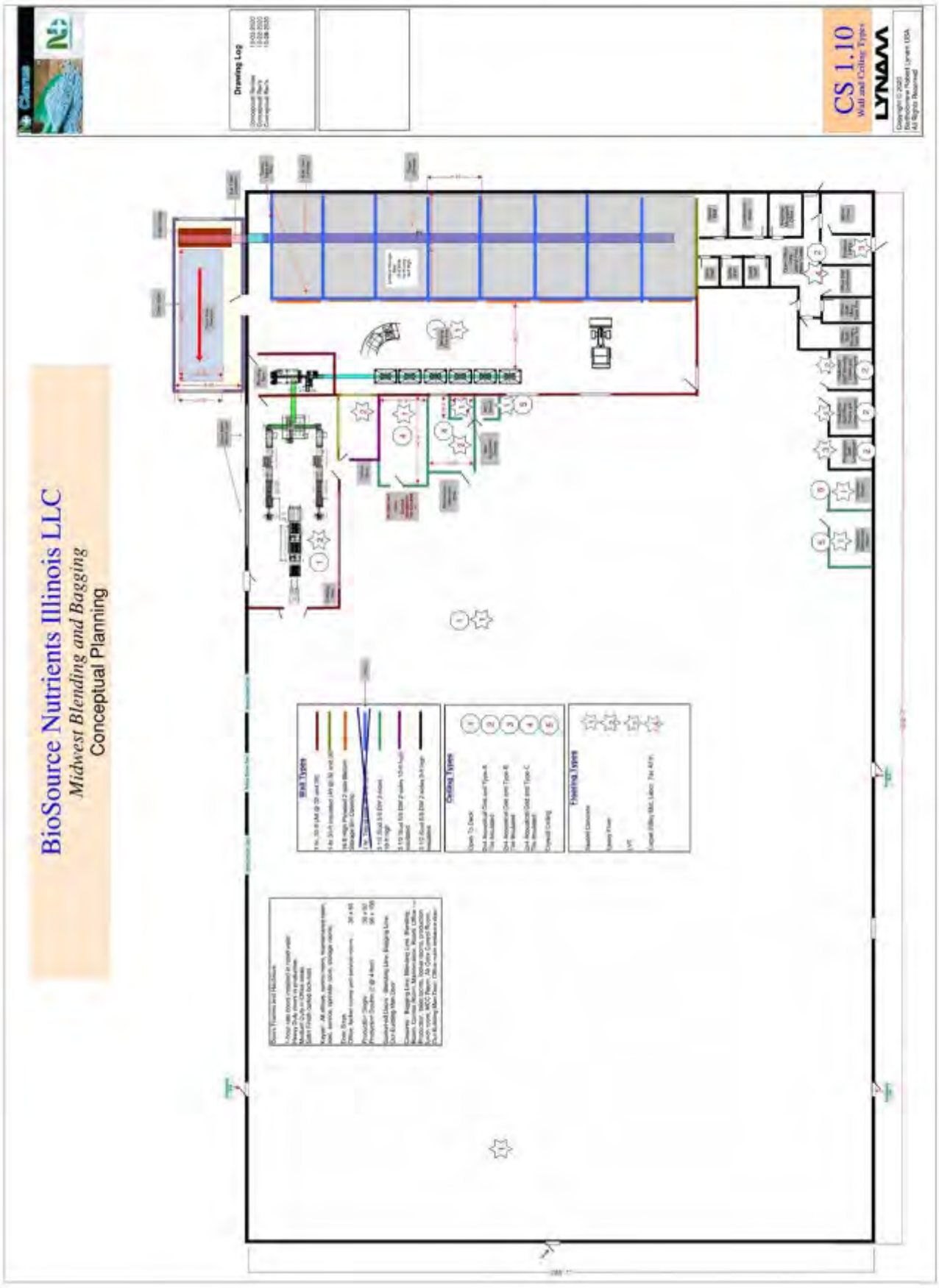
Ctrl + Enter Will Open a Web Page with Drawings



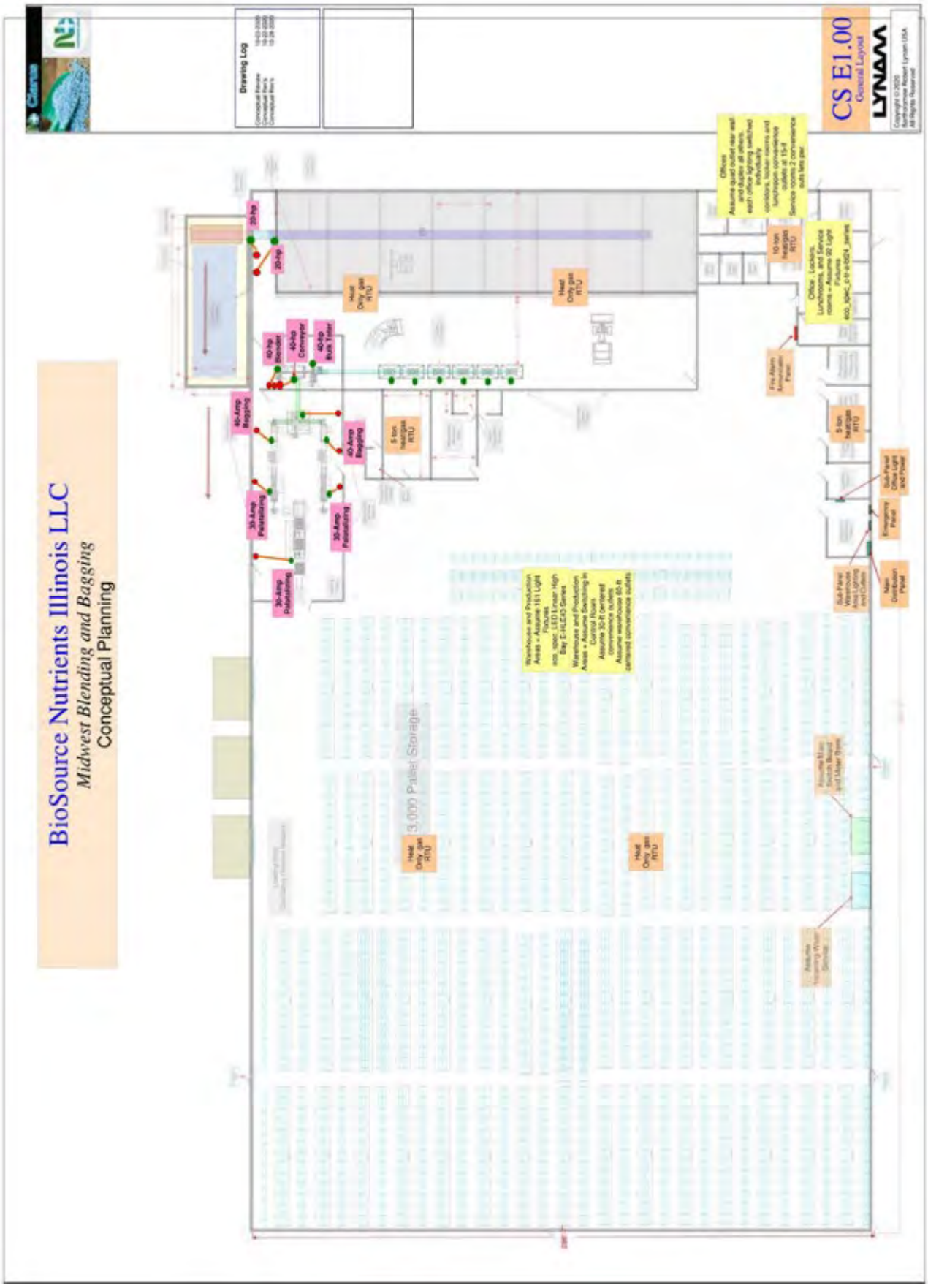
6.0 - Floor Plan Sq. Ft



CS 1.1 - Floor Plan Wall Types



CS E1.0 - Elec Floor Plan



BioSource Nutrients Illinois LLC

Midwest Blending and Bagging

Conceptual Planning

Considerations for Conceptual Dust Control Criteria

LEL for sawdust has been determined to be between 40 and 50 grams/m3

Sources of Ignition

Electrostatic discharge - improperly installed conveyor belt, which can act like a Van De Graff generator

Friction -

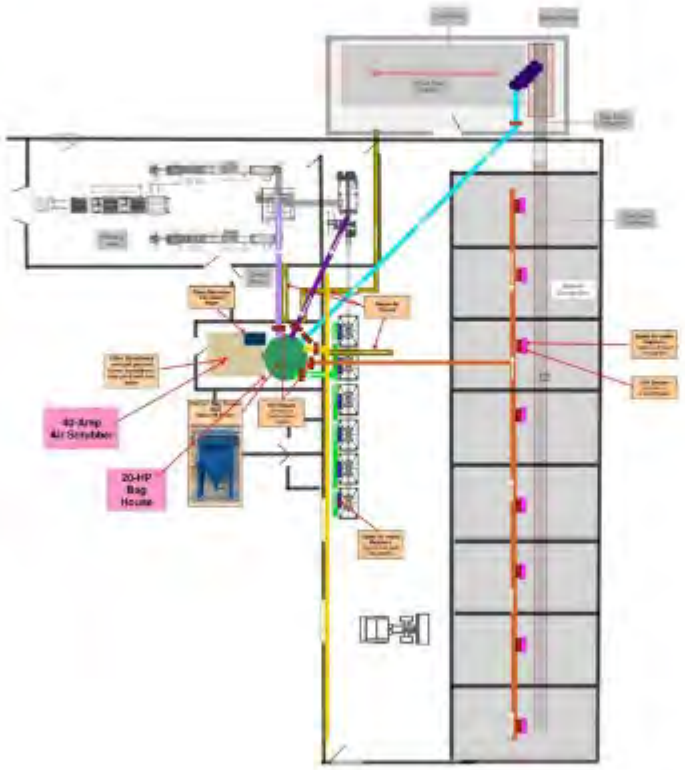
Electrical arcing from misalignment of other equipment like surfaces (e.g. overheated bearings)

Fire

Self-ignition

Six-Zone Air Quality and Odor Control

- Zone-1 Material Storage Hopper Area
- Zone-2 Dust Scale Hoppers
- Zone-3 Floor Level Scale Hoppers
- Zone-4 Materials Receiving Garage
- Zone-5 Blending Area
- Zone-6 Bagging Area
- Return Air
- VAV Control Per Zone and Storage Hopper
- Odor Scrubbers - vertical packed tower scrubbers, one acid and one base
- Bag House Dust Collection



Drawing Log

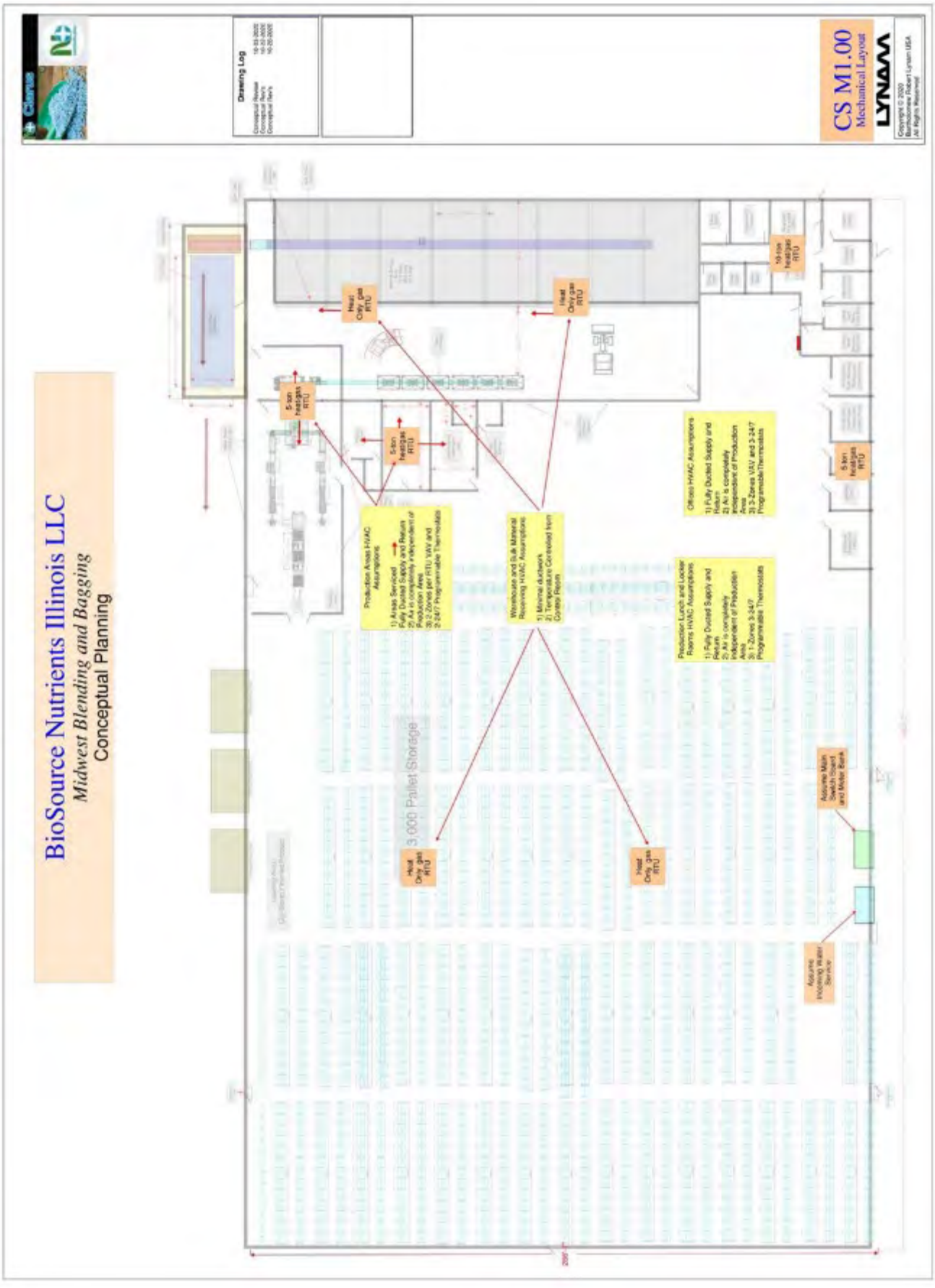
Conceptual Review	10-31-2020
Conceptual Rev's	10-31-2020
Conceptual Rev's	10-09-2020

CS E2.00

General Layout

LYNAAA

CS M1.0 - HVAC Floor Plan



BioSource Nutrients Illinois LLC

Midwest Blending and Bagging

Conceptual Planning

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LEL for sawdust has been determined to be between 40 and 50 grams/m3

Sources of Ignition

Electrostatic discharge - Improperly installed conveyor belt, which can act like a Van De Graff generator

Friction

Electrical arcing from machinery or other equipment hot surfaces (e.g. overheated bearings)

Fire

Self-Ignition

Six-Zone Air Quality and Odor Control Total CFM=900 CFM

Zone-1 Material Storage Hopper Area 150 CFM

Zone-2 Dust Scale Hoppers 75 CFM

Zone-3 Floor Level Scale Hoppers 175 CFM

Zone-4 Material Receiving Garage 150 CFM

Zone-5 Blending Area 300 CFM

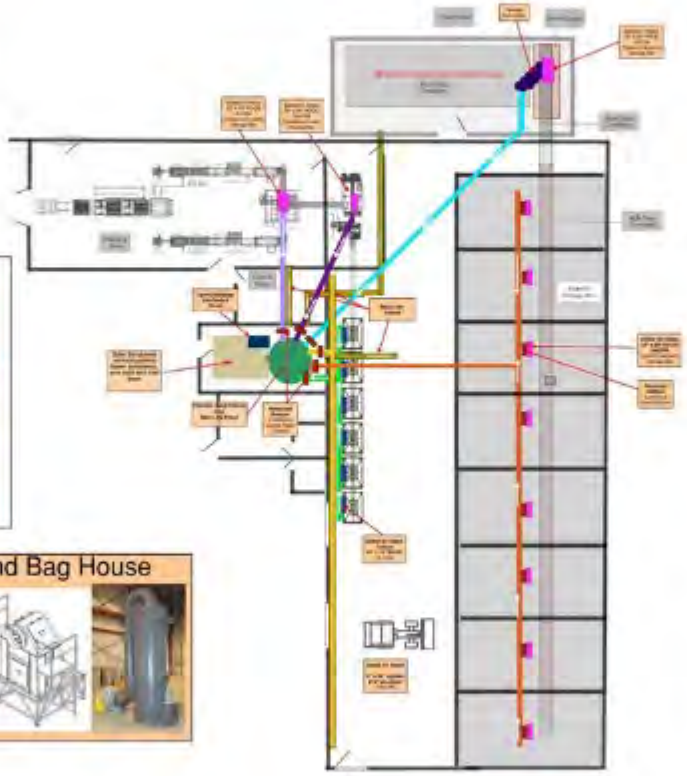
Zone-6 Bagging Area 80 CFM

Return Air

VAV Control For Zone and Storage Hopper

Odor Scrubbers - vertical packed tower scrubbers, one acid and one base

Bag House Dust Collector



Conceptual Air Scrubbers And Bag House

Drawing Log

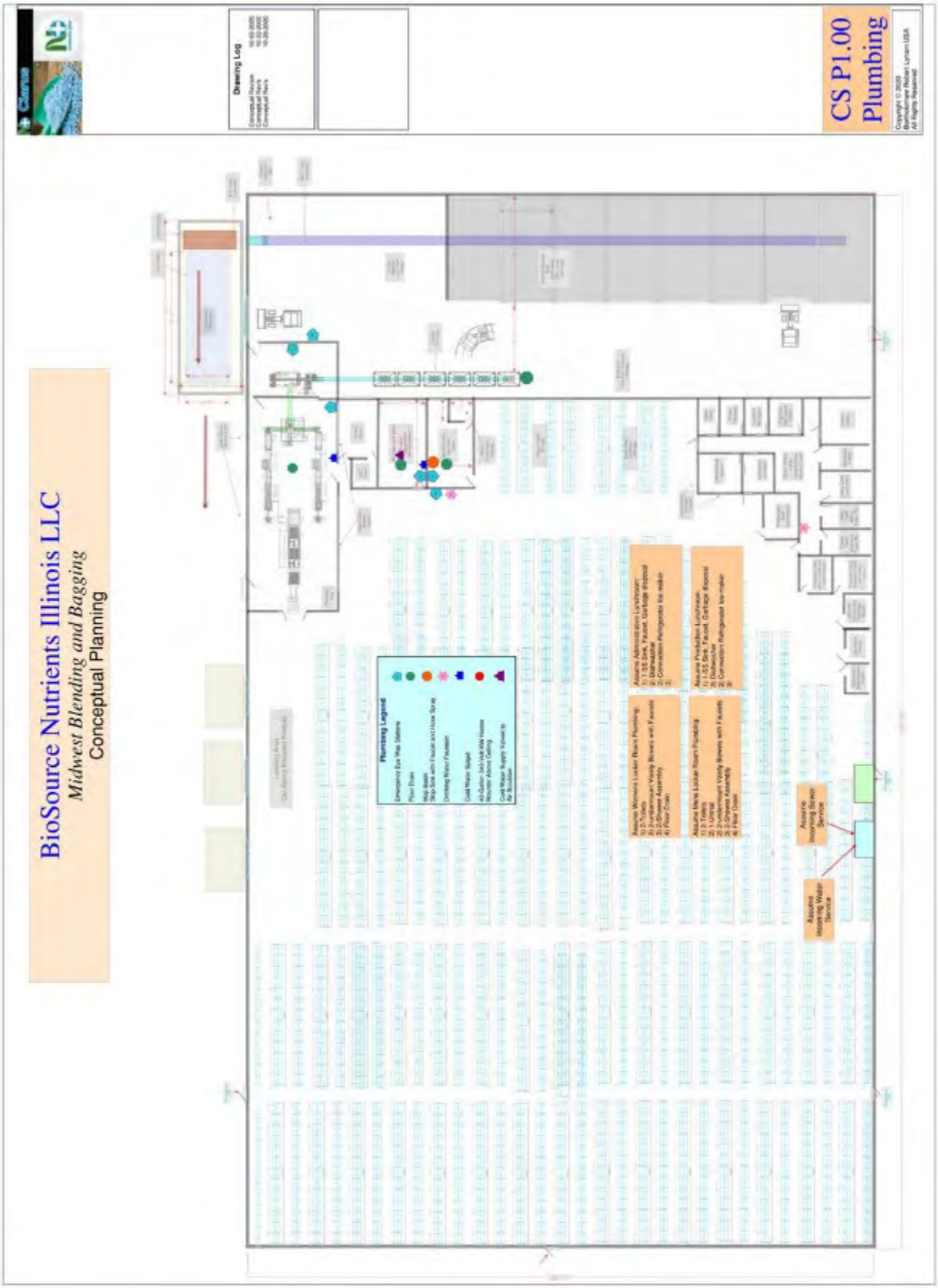
Conceptual Review	10-00-0000
Conceptual Review	10-00-0000
Conceptual Review	10-00-0000
Conceptual Review	11-00-0000

CS M2.00

Ductwork Dust and Odor Control

LYNAAA

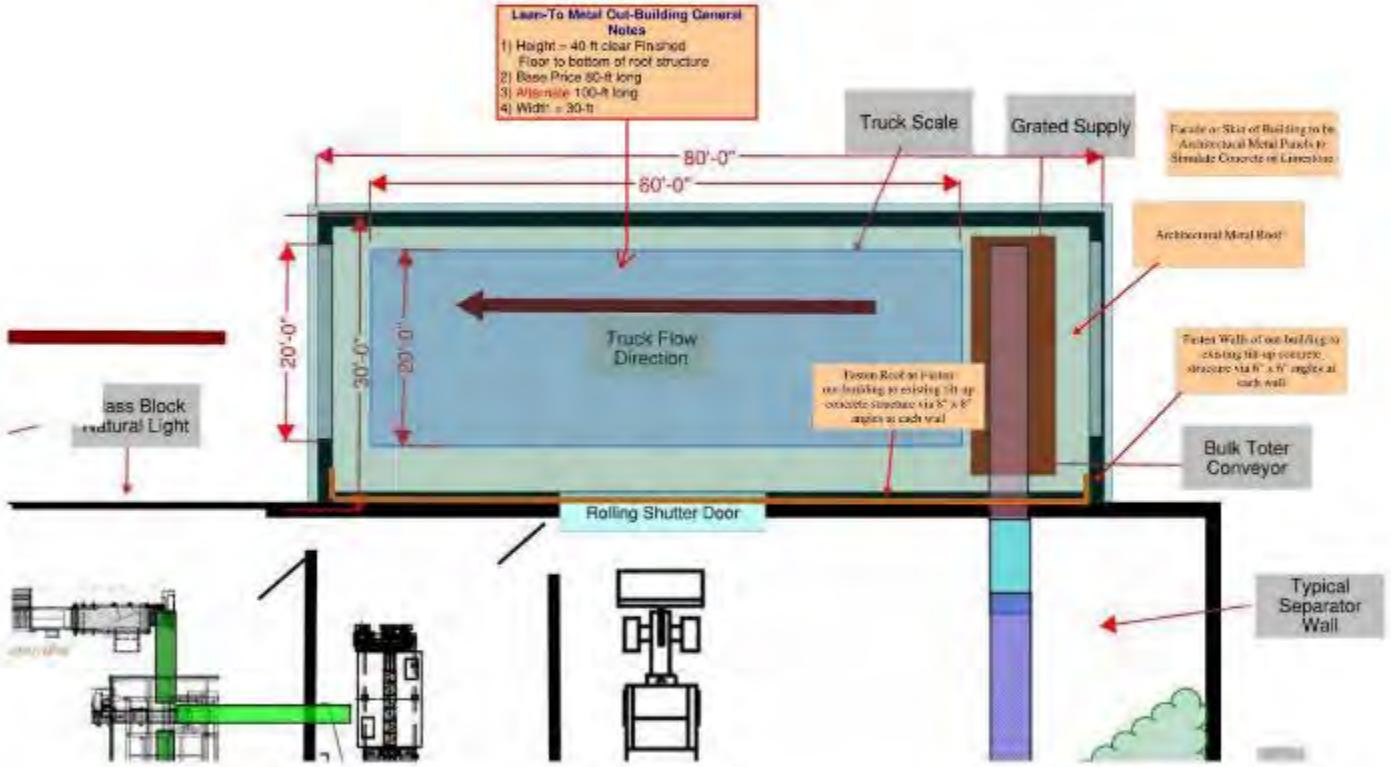
CS P1.0 - Plumb Floor Plan



BioSource Nutrients Illinois LLC

Midwest Blending and Bagging

Conceptual Planning



DRAWING LOG

CS 5.00

Enlarged Out-Building

LYNAAA

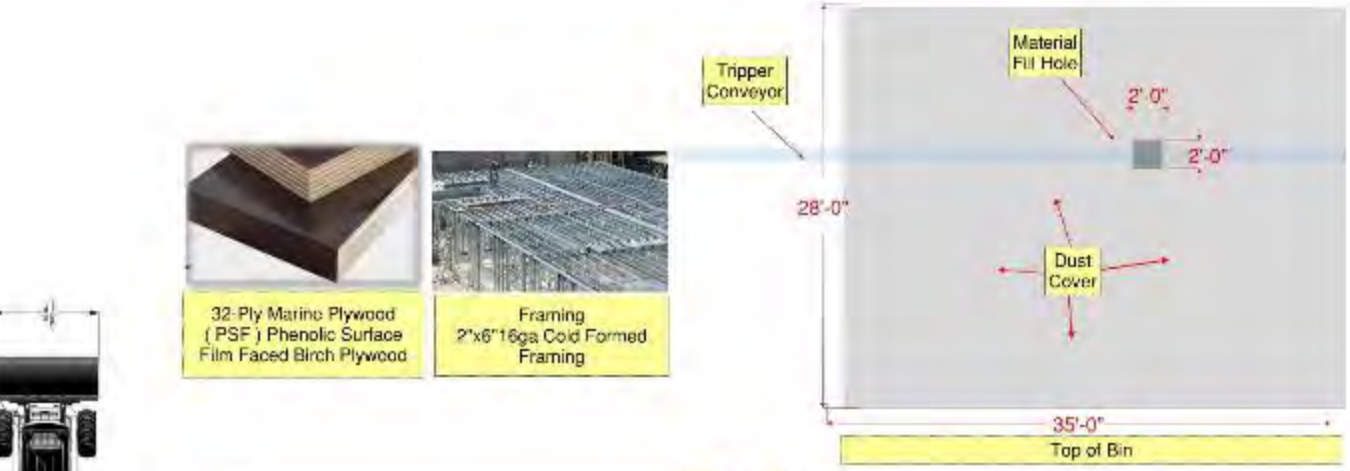
BioSource Nutrients Illinois LLC

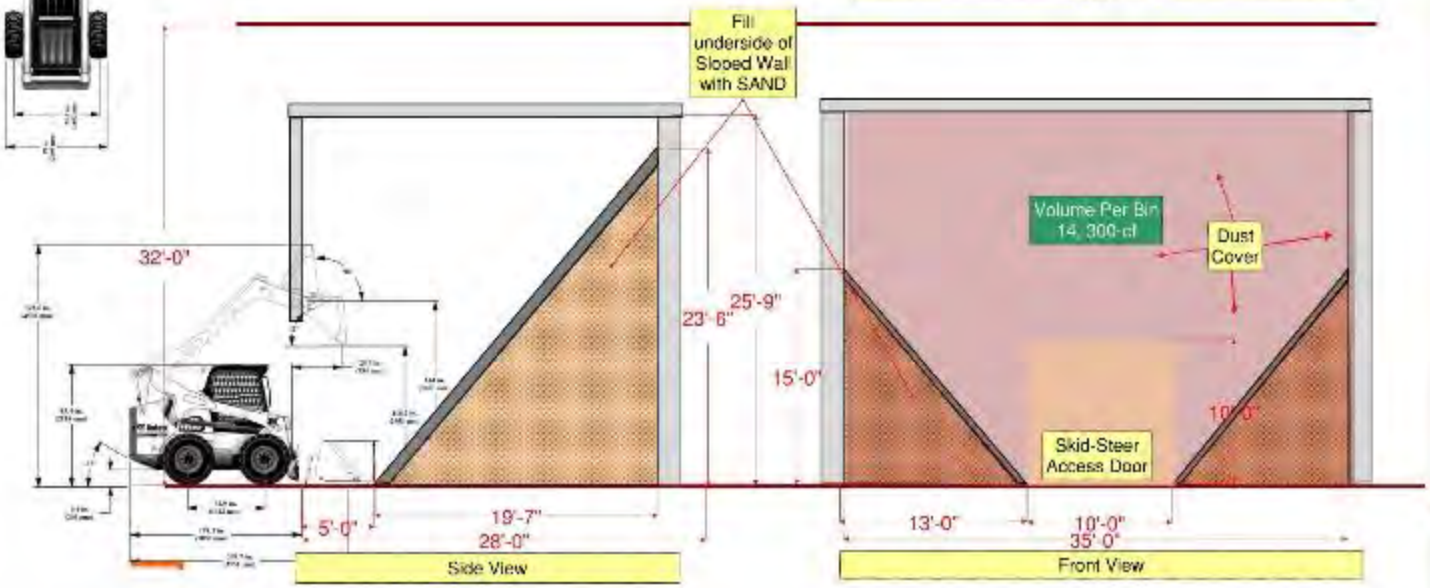
Midwest Blending and Bagging

Conceptual Planning

32-Ply Marine Plywood (PSF) Phenolic Surface Film Faced Birch Plywood

Framing 2"x6"16ga Cold Formed Framing





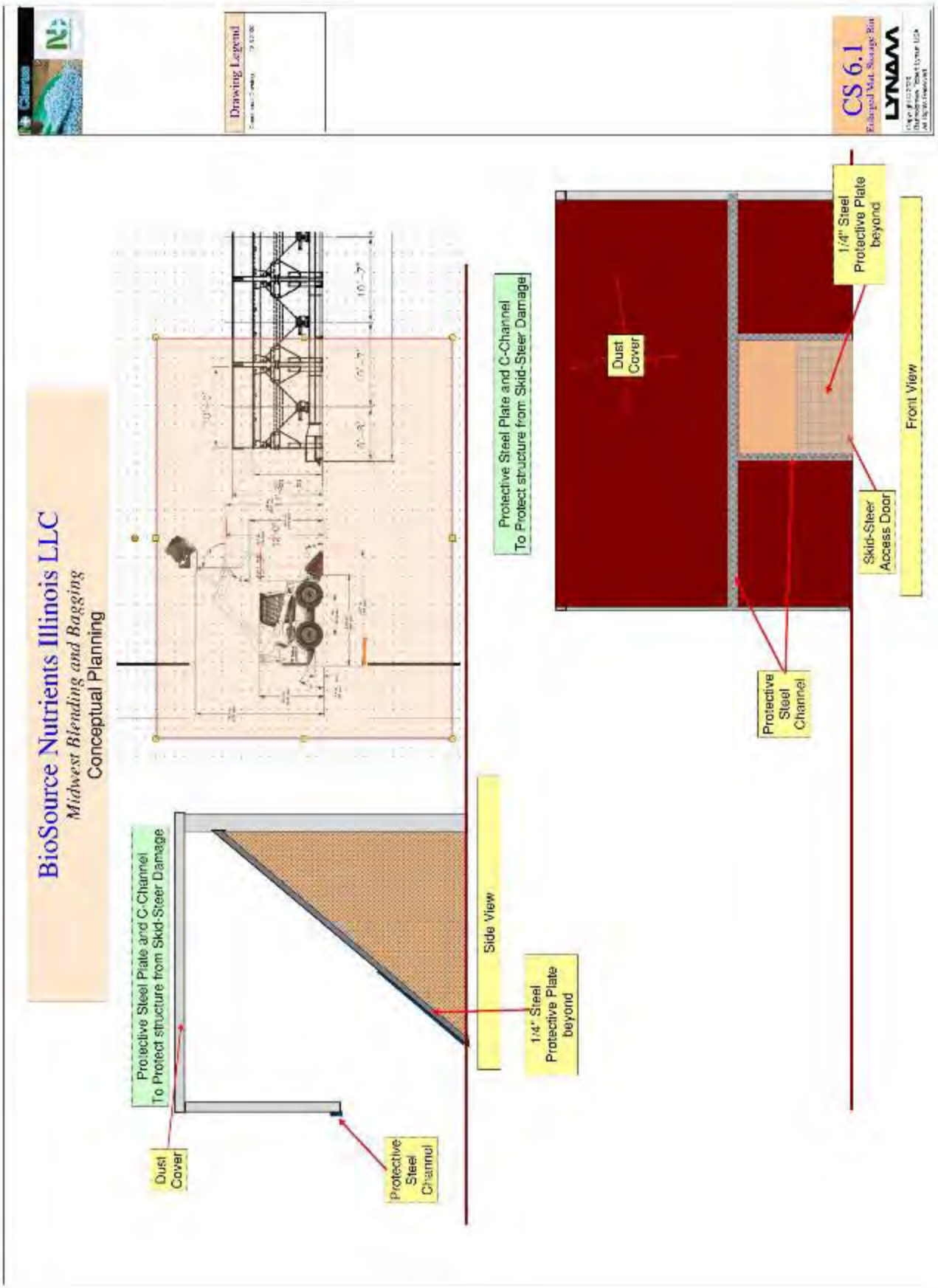
Drawing Legend

CS 6.0

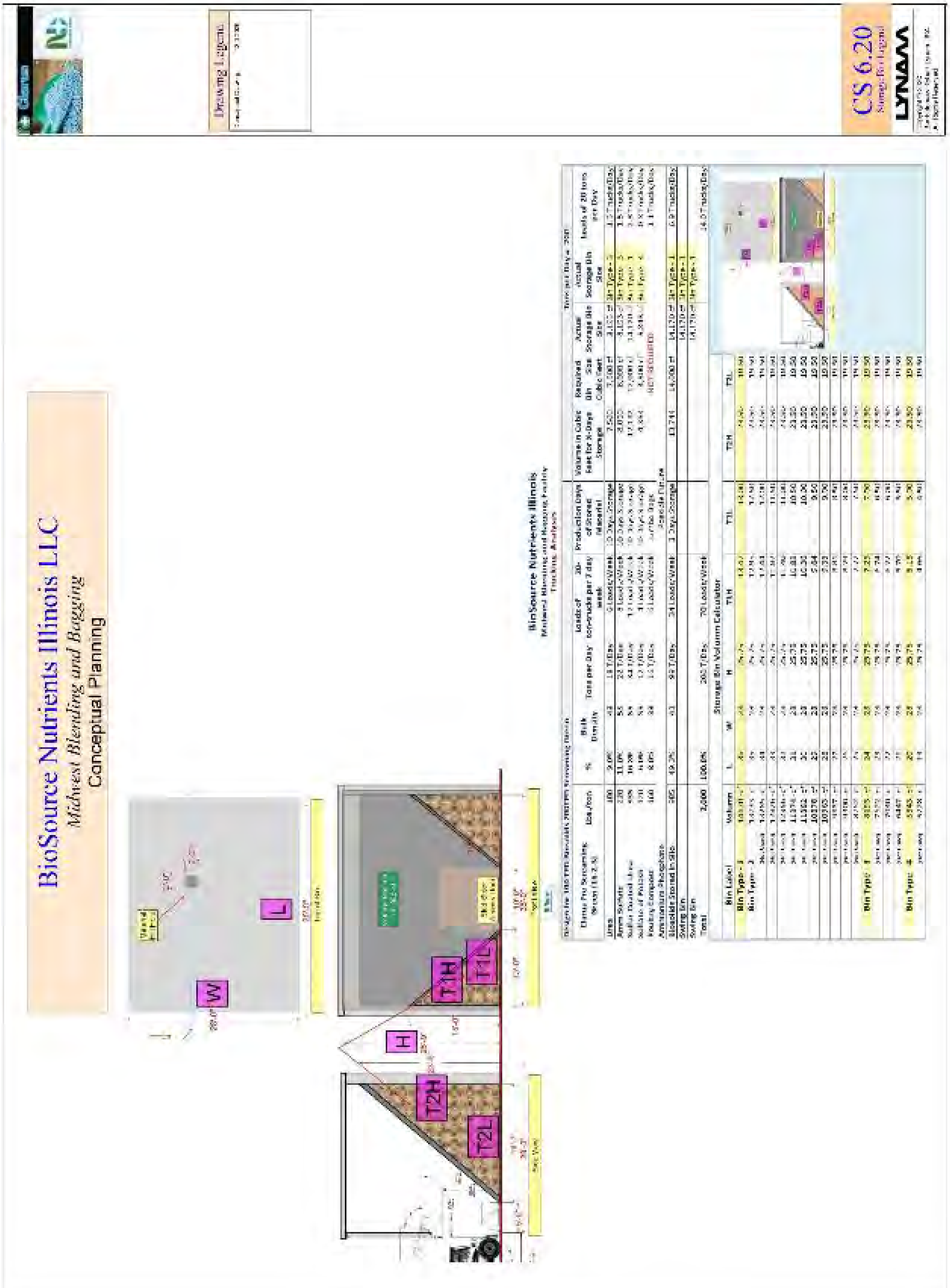
Typical Mid. Storage Bin

LYNAA

CS-6.1 Mass Storage Bins - Details



CS-6.2 Weighted Hoppers and Skid Steer Details



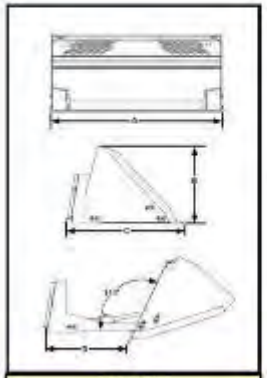
BioSource Nutrients Illinois LLC

Midwest Blending and Bagging

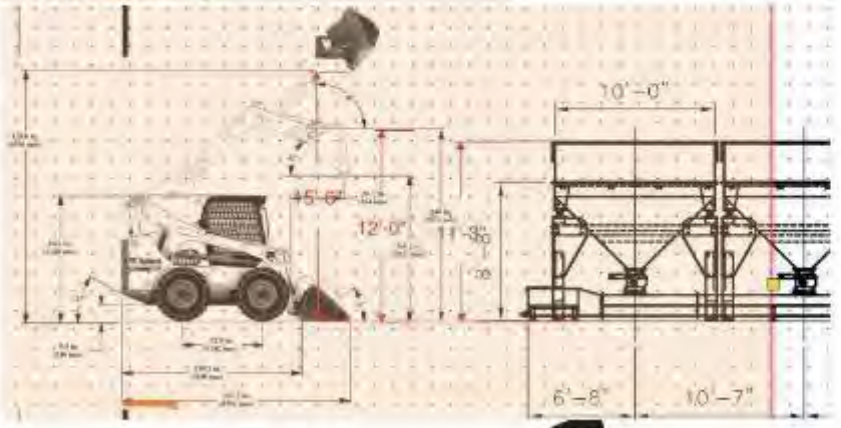
Conceptual Planning

BRADCO®
HIGH-DUMP BUCKET

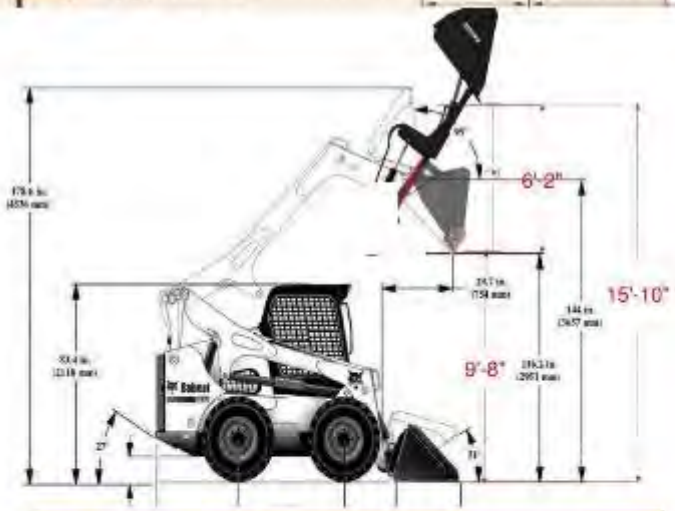
	60"	72"	84"	96"
Bucket Number	61HD	61HD	61HD	61HD
Weight (lbs)	595	705	740	780
Capacity (cu yd)	1.00	1.25	1.50	1.75
A - Width (in)	60.00	72.00	84.00	96.00
B - Height (in)	37.50	37.50	37.50	37.50
C - Depth (in)	30.00	30.00	30.00	30.00
D - Height (in)	24	24	24	24
E - Dump (in)	12.5	12.5	12.5	12.5
Cylinders Bore (in)	3.5	3.5	3.5	3.5
Cylinder Rod Diameter (in)	1.5	1.5	1.5	1.5



BRADCO®
HIGH-DUMP BUCKET
Details



Bobcat S70 skid-steer

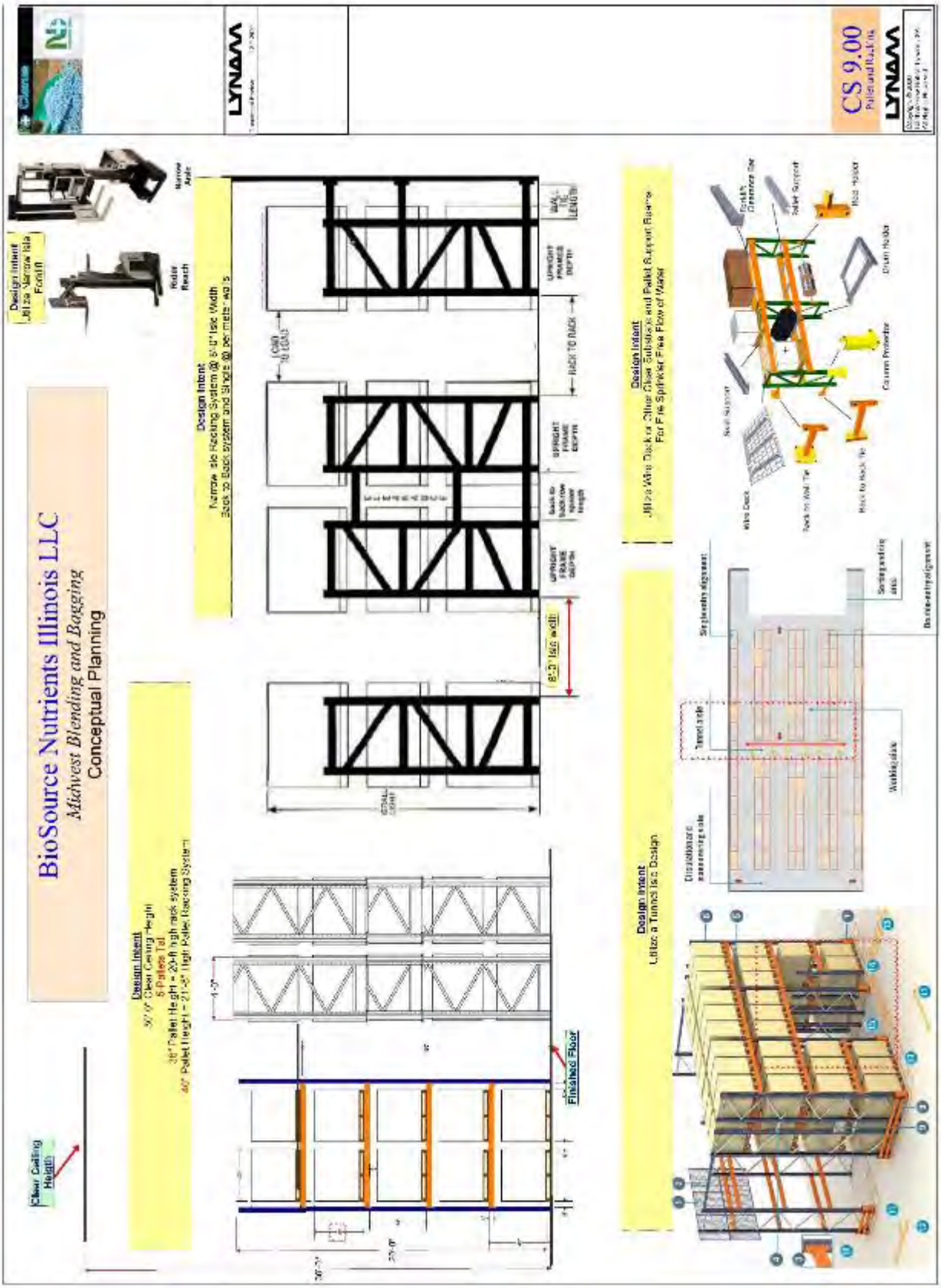


Bobcat S850 skid-steer

CS 8.0
Enhanced Mat. Storage Bin

LYNAM

CS 9.0 Racking Design



BioSource Nutrients Illinois LLC

Midwest Blending and Bagging

Conceptual Planning

Design Intent

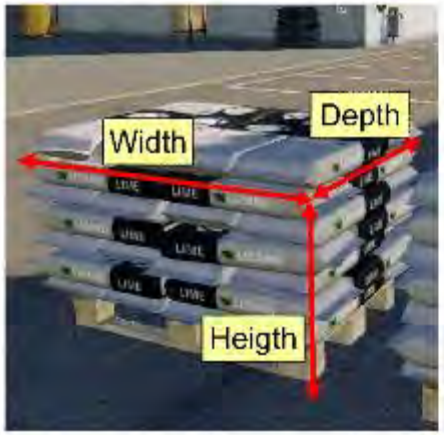
40-Bags per skid and **50-Pounds per bag = 2000-pounds per skid**

A Pallet: s 40" Wide x 48" Deep x 40" High

Width

Depth _____

Height

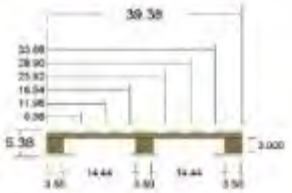


Design Intent

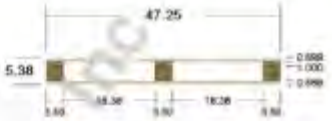
2-way Pallet design and Components

Pallet Dimension 40" x 48" x 5.38"

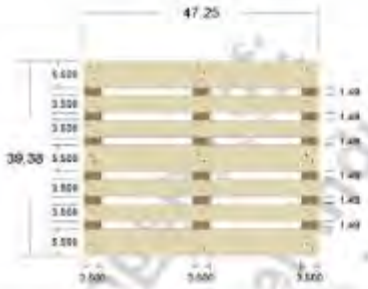
Side View



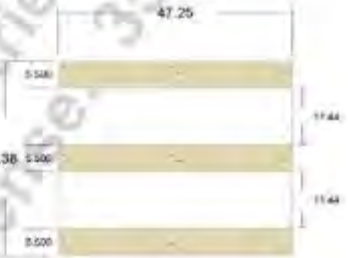
End View

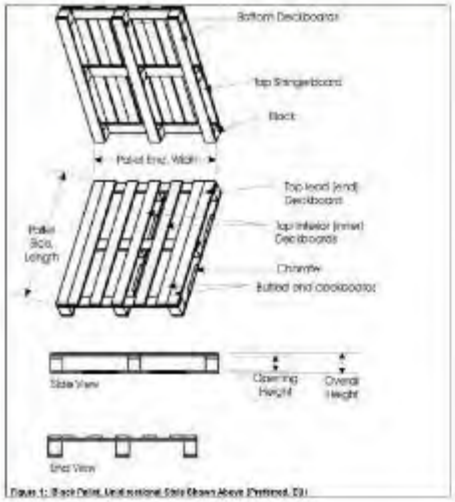


Top View



Bottom View





CS 9.00
Pallet and Racking

Midwest Bagging and Blending Facility
Project Directory

Work Description		COMPANY	ADDRESS	CONTACT INFO	TITLE	NOTES
		AIH American Holding ken.rubin@renufuel.com	1050 30th Street NW Washington, DC 20007	Kenneth Rubin D: (202) 753-5549 C:	Cofounder	Project Coordinator
		AIH American Holding jay.tannon@infraholdings.com	1050 30th Street NW Washington, DC 20007	Jay Tannon D: (202) 753-5549 C:	Co-Managing Partner	Project Coordinator
		Upwell tamin@upwell.co	1160 Gorgas Ave. San Francisco, CA 94129	Tamin Pochet D(630) 992-0239 C:	CEO	Lender
		Upwell rishi@upwell.co	1160 Gorgas Ave. San Francisco, CA 94129	Rishi Patel D(630) 992-0239	Principal	Lender
		John Moriarty jmoriarty@claruschoice.com	2133 Upton Drive Suite 126-509 Virginia Beach VA 23454	John Moriarty D: 888 675 -7515 C: 757 573 -8741	President	Agronomy Expert
		B T Lynam and Associates BTLynam@comcast.net	9606 Warf St. Edmonds WA	Bart T. Lynam D: C: 206-612-5392	Executive Project Director	Project Manager
		LYNAM Inc bart@lynam.com	1113 Halliday Dr Batavia IL 60510	Bart R. Lynam D: C: 630-841-7755	Construction Manager	Project Manager
		OT&T Inc. glenn@nutri-pel.com	6430 Poling Rd Elida, OH 45807	Glenn Troyer D: 800-848-4603 C: 419-233-0850	President	Holds Title for biosolids and trucking using "Joe Davis"
EPC Design Firm and Architects						
Air Permit		Weaver Consultants Group aperdue@wcgrp.com	35 E. Wacker Dr., Suite 1250 Chicago, IL 60601	Project Director O: 312-922-1030 | F: 312-922-0201 | M: 312-342-	Andy Perdue	
Contract Design and Specifications		Project Integration, Inc. jjs@pintegration.com	116 Hidden Hill Road Spartanburg, SC 29301	John J Sudnick D: (864) 334-5085 C: (864) 420-5060	President	EPC Design Engineer
EXPERT CONSULTANTS						
		Envirometrics, Inc. mruby@envirometrics.com	4128 Burke Ave N Seattle, WA 98103-8320	Mike Ruby D:(206) 633-4456 C:	President	Air Quality and Dust Control
		National Assoc. of Clean Water Agencies akrantz@nacwa.org	1130 CONNECTICUT AVE NW, Suite 1050 Washington, DC 20036	Adam Krantz D: (202) 833-4651	Chief Executive Officer	
		BNSF Railway Suganth.Baskaran@BNSF.com		Suganth Baskaran D: (909) 486-0388	Intermodal Solutions Sales Manager	Rail Shipping Expert
DIVISION # 0 EQUIPMENT SUPPLIERS						

Midwest Bagging and Blending Facility
Project Directory

Work Description		COMPANY	ADDRESS	CONTACT INFO	TITLE	NOTES
		Sackett Waconia johnm@sackettwaconia.com	1701 S. Highland Ave Baltimore, MD 21224	John Mitchell D: (410) 276-4466 x206 C: (410) 977-6441		Blending Equipment
		Inpak Systems - Hamer-Fischbein tom@inpaksystems.com	540 Tasman St Madison, WI 53714	Tom McDonnell D: (608) 221-8180 x22		Bagging Equipment
DIVISION # 0 REAL ESTATE CONSULTANTS						
		Newmark Knight Frank amarshall@ngkf.com	8750 West Bryn Mawr Ave Suite 350 Chicago, IL 60602	Adam Marshall D: 773.957.1428 C: (773) 383-0109		
		Colliers International Mike.Senner@colliers.com	6250 North River Road Suite 11-100 Rosemont, IL 60018	Michael Senner D: (847) 698-8234 C: (312) 315-4228		
		Colliers International thomasavolini@gmail.com	71 South Wacker Drive, Suite 3700 Chicago, IL 60606	Thomas I. Volini D: (312) 612-5949 C: (312) 612-5949		
DIVISION # 1 PERMITS AND EXPEDITOR'S						
		Menotti & Co., Inc. loretta@cityofchicagopermits.com	77 W. Washington St., Suite 1307 Chicago, IL 60602	Loretta Rossini D: 312-372-2450 C: 312-480-1005		

Physical Property Selection

Colliers International

Colliers International Real Estate Consultant.

Our Colliers representative Mr. Mike Senner, Executive Vice President, guided us thru the local markets and many properties.

To select our facilities physical location, we diligently analyzed the industrial real marketplace accounting for:

- The properties distance for our primary input material source – Veolia's Stickney Biosolids Drying Plant
- Transportation Labor, Truck Fuel Costs, Truck Equipment Costs
- Property net lease rate, real estate taxes, CAM Costs, footprint size, ceiling height, utilities
- Local code and the strategic placement of our out-building for our bulk materials deliveries
- This out-buildings placement is critical relative to our processing lines and truck access with the required turning radius's.
- Mike Senner, Executive Vice President,

Originally established in Australia, Colliers expanded its presence to the U.S. in 1978 where we grew into a household name in just four short decades. Today, we are one of the leading commercial real estate firms in the country, with more than 150 offices and 6,000 professionals who are committed to providing expert advice across a fully integrated suite of services. Of the 68 countries that Colliers operates in, the U.S. is the biggest contributor to our business. From gateway cities like New York and Los Angeles to emerging tech hubs, we are where you are, and where you want to be.

Our Tenant Representation services experts will provide you with a range of services, including lease negotiation and renewal, in-depth location analysis and workplace design.

If your needs include multi-market real estate matters, ongoing outsourced services or other complexities, you might be interested in exploring our other services and specializations, such as Occupier Advisors, Corporate Solutions services or Project Management services.

BioSource Nutrients Illinois

Midwest Blending and Bagging Facility

Property Selection Analysis - Trucking and Property Lease Costs

Executive Summary

Item #	Property Address	Total Trucking Costs - Biosolids from Stickney to BnB Plant over 10-Yr Contract	Lease Costs - BnB Facility over 10-Yr Contract	Total sf leased	Rentpr Storage Costs over 10-Yr Contract	SF- Existing usable Office or Plug Number to Build-out	Ceiling Height	Power Voltage/Power Amps	Total Combined Costs over 10-nyear contract	Minium Tot-$ $18,959,850		Notes and Clarifications
	075 West Taylor Road, Romeoville, IL 60446											
	145 S. Pinnacle Drive, Romeoville, IL 60446											
	716 Theodore Court, Romeoville, IL 60446											
1	340 Crossroads Bolingbrook IL Suite A	$10,603,652	$9,329,558	166,799 sf	$0.00	5,808 sf Office	30 Ft. Clear Clg Hgth		$19,939,022.68	$979,172		
2	340 Crossroads Bolingbrook IL Suite B	$10,603,652	$8,049,753	138,741 sf	$0.00	5,478 sf Office	30 Ft. Clear Clg Hgth		$18,660,287.52	[illegible]		
3	1501 REMINGTON Blvd., BOLINGBROOK , IL	$11,608,815	$9,598,820	174,524 sf	$0.00	0 sf Office	30 Ft. Clear Clg Hgth		$21,207,635.40	$2,247,785		
4	5625 W. 115TH STREET ALSIP, I L L I N O I S	$10,643,620	$8,316,230	127,942 sf	$0.00	0 sf Office	28 Ft. Clear Clg Hgth		$18,959,850.20	$0	791666.6667	
5	5025 W. 73rd Street, Chicago, IL 60638	$8,921,322	$13,485,200	134,852 sf	$0.00	0 sf Office	32 Ft. Clear Clg Hgth		$22,406,521.50	$3,446,671		
6	6856 W 65th St, Bedford Park, IL 60638	$8,681,120	$16,000,000	160,000 sf	$0.00	0 sf Office	32 Ft. Clear Clg Hgth		$24,681,119.72	$5,721,269		
7	3535 S Ashland Ave, Chicago, IL	$9,088,219	$16,000,000	160,000 sf	$0.00	0 sf Office	32 Ft. Clear Clg Hgth		$25,088,219.14	$6,128,469		
8	**7225 Santa Fe Dr, Hodgkin's, IL 60525**	**$10,036,590**	**$9,653,688**	**141,966 sf**	**$0.00**	0 sf Office	**32 Ft. Clear Clg Hgth**		$19,690,278.20	$730,428		
9	1150 W 135th St, Bolingbrook, IL 60490	$12,207,128	$10,880,000	160,000 sf	$0.00	0 sf Office	32 Ft. Clear Clg Hgth		$23,147,127.60	$4,187,277		
10	**2075 W 43rd St, Chicago, IL 60609**	**$8,787,457**	**$10,880,000**	**160,000 sf**	**$0.00**	0 sf Office	**25 Ft. Clear Clg Hgth**		$19,667,456.86	$707,607		
11	1200 N SCHMIDT RD, Romeoville, IL 60446	$11,427,134	$9,685,326	152,285 sf	$0.00	0 sf Office	32 Ft. Clear Clg Hgth		$21,112,459.90	$2,152,610		
12	13400 S. Keeler Ave - Robbins IL 60472	$11,465,672	$7,700,000	140,000 sf	$0	7,000 sf Office	45 Ft. Clear Clg Hgth					
13	2416 South Archer Ave Chicago	$7,678,001	$13,688,800	136,888 sf	$0	0 sf Office	32 Ft. Clear Clg Hgth		$21,366,801.24	$2,406,951		
14	3711 South Ashland Ave Chicago	$7,412,005	$4,927,230	54,747 sf	$14,286,393	0 sf Office	32 Ft. Clear Clg Hgth	480/1200	$26,625,627.46	$7,665,777		
15	3348 South Pulaski Ave. Chicago	$6,779,183	$5,227,760	65,347 sf	$14,286,393	10,570 sf Office	30 Ft. Clear Clg Hgth		$26,301,902.54	$7,344,052		
16	6755 West 65th Street – Suite 200 Bedford Park	$8,035,553	$22,071,840	275,898 sf	$0	3,108 sf Office	30 Ft. Clear Clg Hgth	480-277/480	$30,110,409.16	$11,150,649		
17	6755 West 65th Street – Suite 200 Bedford Park	$8,035,553	$4,880,000	60,000 sf	$14,286,393	25000 sf Office	35 Ft. Clear Clg Hgth		$27,141,344.02	$8,182,084		
18	3900 W. 74th Street Chicago	$9,181,813	$4,861,200	60,765 sf	$14,286,393	7,000 sf Office	40 Ft. Clear Clg Hgth		$28,336,405.50	$9,376,555		
19	900 East 103rd Street Chicago	$10,676,961	$4,987,440	62,468 sf	$14,286,393	7,000 sf Office	40 Ft. Clear Clg Hgth		$29,567,793.70	$11,007,943		
20	900 East 103rd Street Chicago	$10,676,961	$3,000,000	50,000 sf	$14,286,393	0 sf Office	35 Ft. Clear Clg Hgth		$27,961,353.70	$9,093,503		
21	425 Crossing Drive University Park	$13,437,759	$4,558,860	76,000 sf	$14,286,393	0 sf Office	35 Ft. Clear Clg Hgth		$32,283,011.74	$13,323,161		
22	345 Salmon Drive Portage IN	$16,427,440	$6,136,466	93,000 sf	Not Viable							
23	6750 West Daniel Burnham Portage, IN	$16,216,498	$4,800,000	80,000 sf	Not Viable							
24	2200 Memorial Parkway Valparaiso, IN	$17,133,877	$0	0 sf	Not Viable							

BioSource Nutrients Illinois

Midwest Blending and Bagging Facility

Property Selection Analysis - Trucking and Property Lease Costs

Round Trip Trucking Costs

Item #		Address	Truck Driver - Wage Costs per hour	Equipment Costs per Hour - Truck and Trailer	Fuels Costs Per Mile Loaded - Assume $5.50/Gal Ave over next 10-Yr and 4-m/gal	Fuels Costs Per Mile Empty - Assume $5.50/Gal Ave over next 10-Yr and 7-m/gal	Costs - Load Time for Stickney of 50-Minutes	Costs Off-Load Time for Facility Time of 30-Minutes	Miles Stickney to Property	Google Map Sunday Travel Time	Round Trip hours Stickney to Property (Use Google Map Sunday Travel Time x 1.33)	Fuel Costs ROUND-TRIP Stickney to Property	Truck Costs ROUND-TRIP Stickney to Property	Costs for travel Wages ROUND-TRIP Stickney to Property	Total Costs round Trip
1		140 Crossroads Bolingbrook IL Suite-A	63	75	1.375	0.786	115	69	22.50 miles	30.00 minutes	1.33 hours	$49	$100	$84	$416
1		140 Crossroads Bolingbrook IL Suite-B	63	75	1.375	0.786	115	69	22.50 miles	30.00 minutes	1.33 hours	$49	$100	$84	$416
3		1301 REMINGTON Blvd. BOLINGBROOK , IL	63	75	1.375	0.786	115	69	26.60 miles	35.00 minutes	1.55 hours	$57	$116	$98	$456
4		1625 W. 115TH STREET, ALSIP, ILLINOIS	63	75	1.375	0.786	115	69	11.90 miles	34.00 minutes	1.51 hours	$26	$113	$95	$418
5		5035 W. 73rd Street, Chicago, IL 60638	63	75	1.375	0.786	115	69	6.10 miles	25.00 minutes	1.11 hours	$13	$83	$70	$350
6		6855 W 65th St, Bedford Park, IL 60638	63	75	1.375	0.786	115	69	7.40 miles	23.00 minutes	1.02 hours	$16	$76	$64	$341
7		3535 S Ashland Ave., Chicago, IL	63	75	1.375	0.786	115	69	6.30 miles	26.00 minutes	1.15 hours	$14	$86	$73	$357
8		7225 Santa Fe Dr, Hodgkin's, IL 60525	63	75	1.375	0.786	115	69	12.20 miles	30.00 minutes	1.33 hours	$26	$100	$84	$394
9		1150 W 115th St, Bolingbrook, IL 60490	63	75	1.375	0.786	115	69	24.40 miles	40.00 minutes	1.77 hours	$53	$133	$112	$481
10		1075 W 43rd St, Chicago, IL 60609	63	75	1.375	0.786	115	69	6.50 miles	24.00 minutes	1.06 hours	$14	$80	$67	$345
11		1200 N SCHMIDT RD, Romeoville, IL 60446	63	75	1.375	0.786	115	69	23.30 miles	35.00 minutes	1.55 hours	$50	$116	$98	$448
12		13400 S. Kedzie Ave., Robbins IL 60472	63	75	1.375	0.786	115	69	24.00 miles	35.00 minutes	1.55 hours	$52	$116	$98	$450
13		2416 South Archer Ave. Chicago	63	75	1.375	0.786	115	69	9.00 miles	16.00 minutes	0.71 hours	$19	$53	$45	$301
14		1711 South Ashland Ave Chicago	63	75	1.375	0.786	115	69	7.00 miles	15.00 minutes	0.67 hours	$15	$50	$42	$291
15		1348 South Pulaski Ave. Chicago	63	75	1.375	0.786	115	69	4.00 miles	12.00 minutes	0.53 hours	$9	$40	$34	$266
16		6755 West 65th Street – Suite 200 Bedford Park	63	75	1.375	0.786	115	69	7.00 miles	19.00 minutes	0.84 hours	$15	$63	$53	$315
17		6755 West 65th Street – Suite 200 Bedford Park	63	75	1.375	0.786	115	69	7.00 miles	19.00 minutes	0.84 hours	$15	$63	$53	$315
18		3900 W. 74th Street Chicago	63	75	1.375	0.786	115	69	8.00 miles	26.00 minutes	1.15 hours	$17	$86	$73	$360
19		900 East 103rd Street Chicago	63	75	1.375	0.786	115	69	21.00 miles	31.00 minutes	1.37 hours	$45	$103	$87	$439
20		900 East 103rd Street Chicago	63	75	1.375	0.786	115	69	21.00 miles	31.00 minutes	1.37 hours	$45	$103	$87	$439
21		425 Crossing Drive University Park	63	75	1.375	0.786	115	69	40.00 miles	42.00 minutes	1.86 hours	$86	$140	$117	$527
22		345 Salmon Drive Portage IN	63	75	1.375	0.786	115	69	49.00 miles	58.00 minutes	2.57 hours	$106	$193	$162	$645
23		6750 West Daniel Burnham Portage, IN	63	75	1.375	0.786	115	69	48.00 miles	57.00 minutes	2.53 hours	$104	$190	$159	$636
24		2200 Memorial Parkway Valparaiso, IN	63	75	1.375	0.786	115	69	59.00 miles	59.00 minutes	2.62 hours	$127	$196	$165	$672

Assumptions

Assumption # 1	Basis on Normal Working Hours, 1st shift and 8:00 to 4:30
Assumption # 2	Union Labor Truck Driver $75K per year; Burdens @ 45% = $109K/yr. ; 20% Markup = $131K Gross Pay with Burdens and Markup; At 2080 hrs./yr. = $63/Hr. Chargeable
Assumption # 3	Fuel Costs per mile Full = $/MPG and a fuel cost $5.50/Gal = $0.88/mile
Assumption # 4	Fuel Costs per mile Full = $/MPG and a fuel cost $5.50/Gal = $0.58/mile
Assumption # 5	Round Trip hours Stickney to Property (Use Google Map Sunday Travel Time x 1.33)

BioSource Nutrients Illinois

Midwest Blending and Bagging Facility

Property Selection Analysis - Trucking and Property Lease Costs

Total Trucking Costs - Over 10-Year Lease

Item #		Address	Total Round Trip Costs	# of Trucks Assume 16-Ton Tractor with Tandem Axil Trailer	Transportation Cost per day	Costs per 7-Day work week	Annual Costs per52-Week Year	Costs 10-Year Contract Period		
1		340 Crossroads Bolingbrook IL Suite-A	$416.16	7	2,913	20,392	1,060,366	10,603,657		
2		340 Crossroads Bolingbrook IL Suite-B	$416.16	7	2,913	20,392	1,060,366	10,603,657		
3		1501 REMINGTON Blvd., BOLINGBROOK, IL	$455.81	7	3,189	22,325	1,160,882	11,608,815		
4		5625 W. 115TH STREET, ALSIP, ILLINOIS	$417.72	7	2,924	20,469	1,064,362	10,643,626		
5		5025 W. 73rd Street, Chicago, IL 60638	$350.13	7	2,451	17,156	892,132	8,921,322		
6		6855 W 65th St, Bedford Park, IL 60638	$340.70	7	2,385	16,694	868,112	8,681,120		
7		3535 S Ashland Ave., Chicago, IL	$356.68	7	2,497	17,477	908,822	9,088,219		
8		7225 Santa Fe Dr, Hodgkin's, IL 60525	$393.90	7	2,757	19,301	1,003,659	10,036,590		10083722.699
9		1150 W 115th St, Bolingbrook, IL 60490	$481.44	7	3,370	23,591	1,226,713	12,267,128		
10		2075 W 83rd St, Chicago, IL 60609	$344.88	7	2,414	16,899	878,746	8,787,457		
11		1200 N SCHMIDT RD, Romeoville, IL 60446	$448.47	7	3,139	21,975	1,142,713	11,427,134		
12		13400 S. Kedzie Ave., Robbins IL 60472	$450	7	3,150	22,049	1,146,567	11,465,673		
13		2416 South Archer Ave	$301	7	2,109	14,765	767,800	7,678,001		
14		3711 South Ashland Ave Chicago	$291	7	2,036	14,254	741,200	7,412,005		
15		3348 South Pulaski Ave Chicago	$266	7	1,862	13,037	677,918	6,779,180		
16		6715 West 65th Street – Suite 200 Bedford Park	$315	7	2,208	15,453	803,565	8,035,551		
17		6755 West 65th Street – Suite 200 Bedford Park	$315	7	2,208	15,453	803,555	8,035,551		
18		3900 W. 74th Street Chicago	$360	7	2,522	17,657	918,181	9,181,813		
19		900 East 103rd Street Chicago	$419	7	2,933	20,533	1,067,696	10,676,961		
20		900 East 103rd Street Chicago	$419	7	2,933	20,533	1,067,696	10,676,961		
21		425 Crossing Drive University Park	$527	7	3,692	25,842	1,343,776	13,437,759		
22		345 Salmon Drive Portage IN	$645	7	4,513	31,591	1,642,744	16,427,440		
23		6750 West Daniel Burnham Portage, IN	$636	7	4,455	31,186	1,621,650	16,216,498		
24		2200 Memorial Parkway Valparaiso, IN	$672	7	4,707	32,950	1,713,388	17,133,877		

Assumptions

Assumption # 1	Assume 7-Loads per day = 100 Tons per day utilizing 16-Ton Tractor and Tandem Axil Trailer
Assumption # 2	Union Labor Truck Driver $75K per year; Burden's @ 45% = $109K/yr. ; 20% Markup = $131K Gross Pay with Burdens and Markup; At 2080 hrs./yr. = $63/Hr. Chargeable
Assumption # 3	Fuel Costs per mile Full = 4/MPG and a fuel cost $3.50/Gal = $0.88/mile
Assumption # 4	Fuel Costs per mile Full = 6/MPG and a fuel cost $3.50/Gal = $0.58/mile
Assumption # 5	Round Trip hours Stickney to Property (Use Google Map Sunday Travel Time x 1.33)

BioSource Nutrients Illinois

Midwest Blending and Bagging Facility

Property Selection Analysis - Trucking and Property Lease Costs

10-Year Total Lease Costs

Item #		Address	Total Available	Required SF-Industrial	SF- Office	Ceiling Height	Net Rental Rate - $/sf	Double Net Rental Rate - $/sf	Gross NNN Rental Rate - $/sf	Annual Costs	Costs Over 10-Years		Power Volts/Power Amps		
1		340 Crossroads Bolingbrook IL Suite A	160799	160799	5808	30			$5.80	$932,956	$9,329,558				
1		340 Crossroads Bolingbrook IL Suite B	138741	138741	6878	30			$5.80	$804,975	$8,049,753				
2		1901 REMINGTON Blvd., BOLINGBROOK , IL	174524	174524		30			$5.50	$959,882	$9,598,820				
3		5625 W. 115TH STREET, ALSIP, ILLINOIS	127942	127942		28			$6.50	$831,623	$8,316,230		480/1000		
4		5025 W. 73rd Street, Chicago, IL 60638	134852	134852		32			$10.00	$1,348,520	$13,485,200		480/1000		
5		6855 W 65th St. Bedford Park, IL 60638	219267	160000		32			$10.00	$1,600,000	$16,000,000				
6		3535 S Ashland Ave., Chicago, IL	259862	160000		32			$10.00	$1,600,000	$16,000,000				
7		7225 Santa Fe Dr, Hodgkin's, IL 60525	282933	141966		32			$6.80	$965,309	$9,653,088				
8		1150 W 115th St, Bolingbrook, IL 60490	453000	160000		32			$6.80	$1,088,000	$10,880,000				
9		2075 W 43rd St, Chicago, IL 60609	301648	160000		25			$6.80	$1,088,000	$10,880,000		480/1600		
10		1200 N SCHMIDT RD, Romeoville, IL 60446	271803	152285		32			$6.36	$968,533	$9,685,326				
11		Robins IL	140000	140000	7000	45			$5.50	$770,000	$7,700,000				
12		3711 South Ashland Ave Chicago	136888	136888		32			$10.00	$1,368,880	$13,688,800				
13		3348 South Pulaski Ave. Chicago	54747	54747	0	32			$9.00	$492,723	$4,927,230		480/1200		
14		6755 West 65th Street – Suite 200 Bedford Park	65347	65347	10570	30			$8.00	$522,776	$5,227,760				
15		6755 West 65th Street – Suite 200 Bedford Park	275898	275898	3308	30			$8.00	$2,207,184	$22,071,840		480-277/400		
16		3900 W. 74th Street Chicago	60000	60000	20000	33			$8.00	$480,000	$4,800,000				
17		900 East 103rd Street Chicago	60750	60765	7000	40			$8.00	$486,120	$4,861,200				
18		900 East 103rd Street Chicago	62468	62468	7000	40			$8.00	$499,744	$4,997,440				
19		425 Crossing Drive University Park	50000	50000	0	35			$6.00	$300,000	$3,000,000				
20		345 Salmon Drive Portage IN	76000	76000	0	35			$6.00	$455,886	$4,558,860				
21		6750 West Daniel Burnham Portage, IN	93000	93000	6400	30			$6.60	$613,647	$6,136,466				
22		2200 Memorial Parkway Valparaiso, IN	80000	80000	0	32			$6.00	$480,000	$4,800,000				

Assumptions

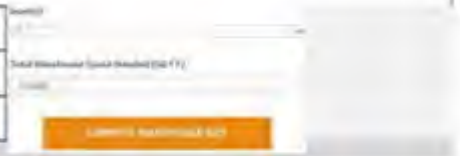
Assumption # 1	160,000 sf Total = 103,500 pallet storage, 30,000 sf Production, 6,500 sf office, locker rooms, lunch rooms, office. Warehouse sf calculator https://abcsystems.net/racking-estimate/
Assumption # 5	Gross Lease: The tenant pays a set sum or "gross" amount for rent and the landlord pays all real estate expenses
Assumption # 6	N Net Lease: Generally a lease in which the tenant pays for utilities, and property taxes in addition to rent or insurance. The landlord pays for maintenance, repairs, and the property taxes or insurance not paid by the tenant. Also referred to as a single net lease or modified gross lease.
Assumption # 7	NN (Net Lease): Generally a lease in which the tenant pays for utilities, property taxes, and insurance in addition to the rent, and the landlord pays for maintenance and repairs. Also referred to as a double net lease, NN and modified gross lease.
Assumption # 8	NNN (Net Lease): A net lease under which the lessee assumes all expenses of operating a property, including both fixed and variable expenses and any common area maintenance that might apply. However,

BioSource Nutrients Illinois

Midwest Blending and Bagging Facility

Property Selection Analysis - Trucking and Property Lease Costs

Assumption # 9	Absolute NNN/Blended Lease: No landlord responsibilities. Tenant is responsible for taxes, insurance, maintenance (including roof & structure)
Assumption # 10	Absolute Net Lease: A lease in which the tenant pays all expenses including structural maintenance repairs; usually a long-term lease to a credit tenant.
Assumption # 11	Absolute Net Bond Lease: Tenant is responsible for all expenses, including casualty and condemnation



Remote Storage Analysis

Transportation Costs - Remote Storage

Item #	Property	Warehouse Associate Costs assuming $40 per hour and 1.2 hours to load and 1.2 hours to off-load	Truck Driver - Wage Costs per hour	Equipment Costs per Hour - Truck and Trailer	Fuels Costs Per Mile Loaded - Assume $5.50/Gal Ave over next 10-Yr and 8-m/gal	Fuels Costs Per Mile Empty - Assume $5.50/Gal Ave over next 10-Yr and 7-m/gal	Costs - Load Time at production facility, including tie-down and tarping = 60-Minutes	Costs Off-Load Time for at storage facility = 60-minutes	Miles Production to storage	Google Map Sunday Travel Time	Round Trip hours production to storage plus 2-hours load and off-load (Use Google Map Sunday Travel	Fuel Costs ROUND-TRIP Stickney to Property	Truck Costs ROUND-TRIP Stickney to Property	Costs for travel Wages ROUND-TRIP Stickney to Property	Total Costs round Trip
	Assumed Remote Storage	96	63	75	1.375	0.786	138	138	30.00 miles	45.00 minutes	3.50 hours	565	$263	$221	$920

Item #	Property	Round Trip Costs	# of trips October thru January over 10-years - Assume 7-trips per day, 5-days per week	# of trips February thru September over 10-years - Assume 1.5-trips per day, 5-days per week	Trucking Costs over 10-yrs
	Assumed Remote Storage	$920	6300	2700	$8,278,392.86

Lease Costs - Remote Storage

Item #	Property	Address	Total Available	Required SF-Industrial	SF- Office	Ceiling Height	Net Rental Rate - $/sf	Double Net Rental Rate - $/sf	Gross NNN Rental Rate - $/sf	Annual Costs	Costs Over 10-Years		Power Volts	Power Amps	
		Assumed Remote Storage	100000	100000	0	30.000			$ 00 $/sf	$500,000	$5,000,000				

Total Costs - Remote Storage

Item #	Property		Lease Costs over 10-yrs	Trucking costs over 10-yrs	Utility Costs	Security Costs - Monitored System	Costs 1-Warehouse person over 10-yrs		Total Costs of Remote Storage						
	Assumed Remote Storage		$5,000,000	$8,278,392.86	66000	6000.000	936000		$14,286,393						

Assumptions

1	Basis on Normal Working Hours, 1st shift and 8:00 to 4:30
2	Union Labor Truck Driver $75K per year; Burdens @ 45% = $109K/yr. ; 20% Markup = $131K Gross Pay with Burdens and Markup; At 2080 hrs./yr. = $63/Hr. Chargeable
3	Warehouse Labor including all burdens $40/hr.
4	Fuel Costs per mile Full = 4/MPG and a fuel cost $5.50/Gal = $1.3/mile
5	Fuel Costs per mile Full = 7/MPG and a fuel cost $5.50/Gal = $0.78/mile
6	Round Trip hours Stickney to Property (Use Google Map Sunday Travel Time x 1.33)

Analysis of Costs
Budget Cost Breakdown

Clarus

Bagging

Midwest Blending & Bagging

Address To Be Determined
Owner: BioSource Nutrients Illinois, LLC
Architect: Internal Design Team

Project Number: MBB-1001
Attn: Project Sponsors
Plans Date Current
Pricing Submission Date 11/15/2020

Assumed Project square Footage 135,000

Executive Cost Summary

Item #	Breakdown	Current Budget			Midway		Weitz
1	Total Costs All Areas		$2,323,460		$2,497,719		$2,602,275
2	Trade Requirements						$67,271
3	Safety						$54,947
4	Equipment		$2,831,791		$2,831,791		$2,831,791
5	**Add 2nd Blend Line**		**$750,000**		$825,000		$825,000
6	General Conditions		$359,950	10%	$375,000	LS	$1,695,313
6	Design – Arch, MEP, Interior		$350,000	LS	$350,000	LS	$350,000
7	Design - Equipment Process Integration		$125,000	LS	$125,000	LS	$125,000
8	GC Ins			0.90%	$22,479	1.25%	$414,963
9	Contingency	8%	$505,515	4%	$281,080	4%	$358,662
10	GC FEE			8%	$584,646	8%	$746,018
	Sub-Total Design Build Company Costs		$7,245,716				
11	Building and Air Permits		$90,500				
12	Total Conceptual Construction Costs		$7,336,216				

Analysis and Breakdown of Costs by Area

Permits and Permit Drawings

CSI Code	Description	Base Cost	Allowances	Alternates NOT Included in Pricing	S/sf	Notes
1,000	Estimated Local Building Permit			40,000	$0.30	Keep the equipment costs out of the construction costs
1,010	Estimated Local Building Permit Procurement			3,500	$0.03	
1,020	EPA Permit			10,000	$0.07	
1,030	Air Quality Permit			12,000	$0.09	
1,040	EPA and Air Permit Expediting and Procurement			25,000	$0.19	
	Permit Total		$ -	$ 90,500.00		

Equipment

CSI Code	Description	Base Cost	Allowances	Alternates NOT Included in Pricing	S/sf	Notes
11000	Truck Scale	75,000			$0.56	
10	Air Scrubber Odor Control	175,000			$1.30	
11010	Bag House Dust Control	175,000			$1.30	
11010	Install Bag House and Scrubber	50,000			$0.37	50000 cfm
20	Install Air/Duct Equip + Fil Ducts Sys	175,000			$1.30	
11020	Fans	75,000			$0.56	50000 cfm
11030	Sackett Waconia Blending Equipment Total	872,000			$6.46	
11040	Tax Sackett Equip	68,452				
11050	Sackett Equipment Installation	140,000			$1.04	8-required @ $50,000 per unit
11060	Misc Metal Supports NIC in Sackett	40,000			$0.30	8-required @ $50,000 per unit
11070	Cast Covers/Angles/Grates NIC in Sackett	15,000			$0.11	
11080	Fischbein Inglett Bagging Equipment	620,620			$4.60	Phone Quote 1-line Only
11080	Startup Services	62,000			$0.46	
11090	Sales Tax -Fischbein	48,719			$0.36	
11100	Fischbein Equipment Installation	40,000			$0.30	
11100	PLC - Technician				$0.00	Included in Project Integration Scope
11110	Commissioning	200,000			$1.48	
	Subtotal Equipment	$ 2,831,790.67	$ -	$ -		Weitz @ $2,525,298

10800	Toilet Accessories	3,200			$0.02	
10800	Shower Doors	1,800			$0.01	
15400	Plumbing	125,000			$0.93	
15500	Fire Sprinkler System	300,000			$2.22	
15700	Mechanical Systems - Inc. Controls	450,000			$3.33	
16000	Interior Electrical	475,000			$3.52	
16000	Fire Alarm	150,000			$1.11	
	Subtotal Public Space	$ 2,323,459.80	$ -	$ 135,000.00		

In-House Construction General Conditions

CSI Code	Description	Base Cost	Allowances	Alternates - To become CapEx and Remain	S/sf	Notes
	In-House Construction Project Management					
1,050	Project Manager	150,000			$0.00	
1,060	Superintendent	90,000			$0.00	
1,070	Site Secretary	60,000			$0.00	
1,080	Project Accountant	0			$0.00	
1,090	Payroll Service	4,050			$0.00	
	Sub-Total Inhouse Project Management Team	$ 304,050.00	$ -	$ -		
	Temporary Provisions					
1000	Site Security	0.00		25,000.00	$0.00	To become permanent FF and E
1005	Field Office / Set Up	1,500.00			$0.01	
1010	Field Office Equipment & Supplies	800.00			$0.01	
1015	11 x 17 inch Laser Printer	0.00		1,900.00	$0.00	To become permanent FF and E
1020	Xerox Rental	0.00			$0.00	Utilize 11x17 Printer
1025	Postage/Fed Ex/Messenger	750.00			$0.01	
1030	Blue Prints	1,100.00			$0.01	
1035	Attorney Fees	0.00			$0.00	Exclude from project - Inhouse
1040	Office Water	600.00			$0.00	
1045	Computers, Software, IT Support	0.00		6,500.00	$0.00	To become permanent FF and E
1050	WIFI	1,800.00			$0.01	
1055	Cell Phones (5)	1,800.00			$0.01	2-cell phone $100 Per # 9-months
1060	Equipment / Small Tools			1,500.00	$0.00	To become permanent FF and E
1065	Equipment Rentals	3,500.00			$0.03	
1070	Dumpsters Regular Const	4,250.00			$0.03	
1075	Final Cleaning	1,200.00			$0.01	
1080	Temp Gas, Water, Electric	0.00			$0.00	
1085	Port - O - Lets	1,400.00			$0.01	
1090	Temp Fence	0.00			$0.00	
1095	Photos	0.00			$0.00	Professional Photos by The Partnership
1100	Storage Containers	1,500.00			$0.01	
1105	Project Signs / Directional	300.00			$0.00	
1110	Temp Barricades / Protection	0.00			$0.00	
1115	Owner Meeting	0.00			$0.00	
1120	Safety First Aid Kits	500.00			$0.00	
	Sub-Total In House Temporary Provisions	$21,000.00	$0.00	$34,900.00		
	Total In-House General Conditions	$325,050.00		$34,900.00		

Cap-X Not Included in Construction Costs

CSI Code	Description	Base Cost	Allowances	Alternates NOT Included in Pricing	S/sf	Notes
11045	Pallet Rack Storage Systems	515,000			$3.81	
11070	Counter Weight Forklift-1	65,000			$0.48	
11095	Narrow Aisle Forklift-1	50,000			$0.37	
11120	Counter Weight Forklift-2	65,000			$0.48	

Clarus Bagging

Midwest Blending & Bagging

Address To Be Determined
Owner: BioSource Nutrients Illinois, LLC
Architect: Internal Design Team

Project Number: MBB-1001
Attn: Project Sponsors
Plans Date Current
Pricing Submission Date 11/15/2020

Interior Work

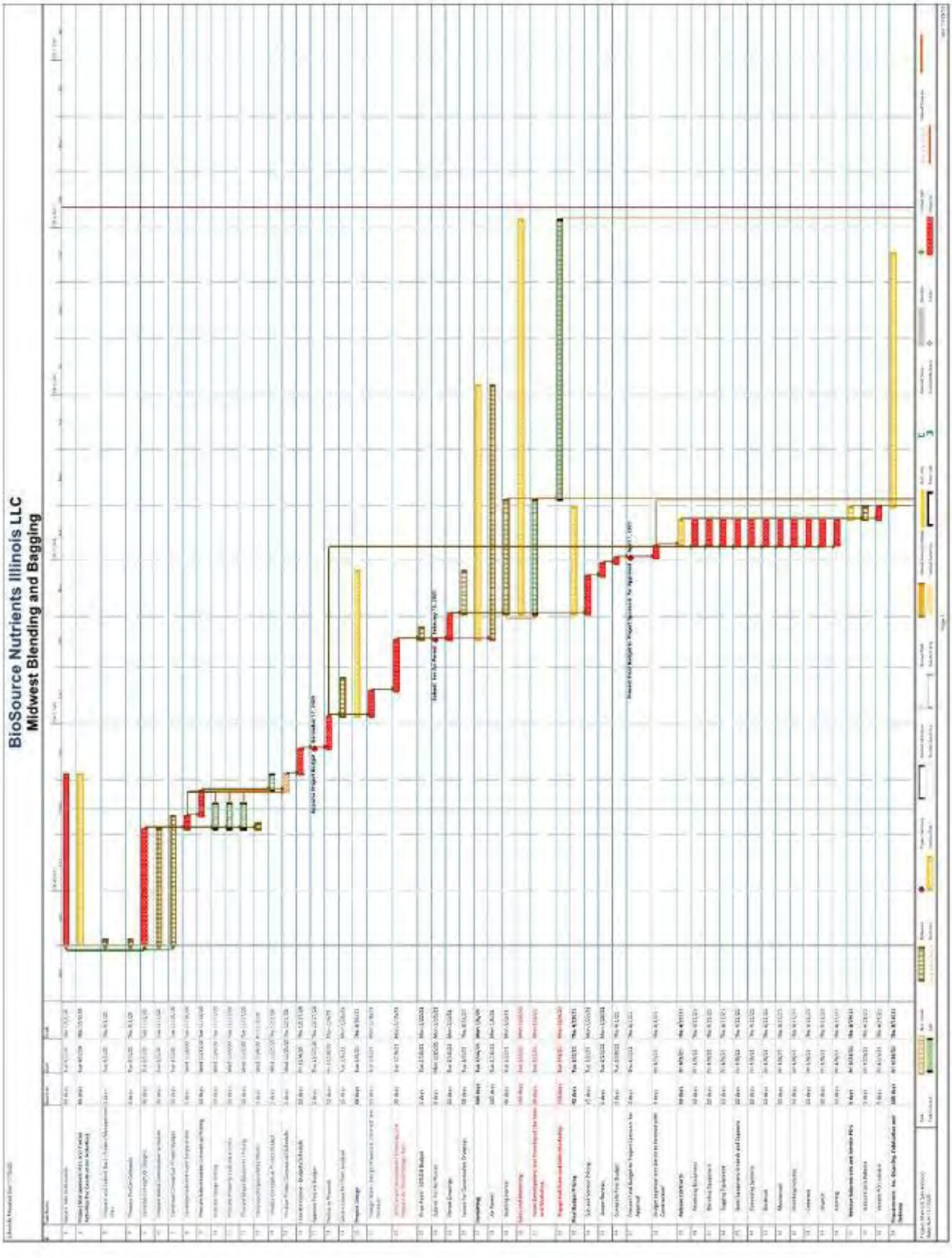
CSI Code	Description	Base Cost	Allowances	Alternates NOT Included in Pricing	S/sf	Notes
02400	Security - Construction and Permanent			10,000	$0.07	
02400	Temp Power and Temp Lighting	1,200			$0.01	
02450	Demolition	3,500			$0.03	Unknown
02450	Concrete Cut	2,500			$0.02	
3000	Custom Foundations and Footings @ Out-Building	50,000			$0.37	
3025	Custom Pit @ Receiving Hopper	75,000			$0.56	
3050	Custom Concrete Major Supply Bins	160,000			$1.19	8-required @ $20,000 per unit
3072	Concrete Patch	2,500			$0.02	
3093	Concrete Leveling and Floor Patch	1,000			$0.01	
05500	Misc. Metal Supports @ RTU's	12,000			$0.09	
05500	Metal Outbuilding	120,000			$0.89	
06150	Rough Carpentry	1,000			$0.01	
06200	Finish Carpentry	1,500			$0.01	
06400	Lunchroom Cabinetry - Production	4,500			$0.03	Counter, Upper and Lower Cabinets @ $225/LF - Figure 20lf
06400	Millwork - Lunchroom Admin Staff	5,000			$0.04	Counter, Upper and Lower Cabinets @ $200/LF - Figure 20lf
06405	Toilet room Vanity Tops	1,500			$0.01	
06410	Shelving - Coat Shelf and Rod	450			$0.00	
07200	Wall Insulation - 9-ft	2,500			$0.02	
07200	Wall Insulation - 32-ft	9,485			$0.07	
07500	Cut Roof/Deck and Patch for RTU's	9,500			$0.07	
07810	Fire Stopping	5,500			$0.04	
08050	Large Rolling Shutter Doors			50,000	$0.00	
08050	Small Rolling Shutter Doors	10000			$0.07	
08050	Production Interior - H.M. Double Doors & Frames & Hrdw	12,800			$0.09	
08050	Production Interior - Single H.M. Doors & Frames & Hrdw	2,500			$0.02	
08050	Exterior and Emergency - H.M. Doors & Frames & Hrdw	22800			$0.17	
08050	Admin H.M. Wood Doors & Frames & Hrdw	28,500			$0.21	
08400	Windows - Interior Observation	25,000			$0.19	
08400	Windows - Exterior	15000			$0.11	
08400	Entrance Storefronts	7500			$0.06	
09200	1,050-lf 32-ft high Metal Studs & DW	115,500			$0.86	935-lf @ $935*110/lf
09200	1,050-lf 9-ft high Mesal Studs & DW	25,200			$0.19	560-lf @ $45/lf
09255	Access Panels	750			$0.01	
09650	Seal Warehouse Floors	0		75000	$0.00	117,400sf @ $3.5/sf
09650	Production Lunchroom, toilet/locker rooms - Epoxy Painted Flooring System	14,400			$0.11	18000sf at $8/sf
09650	Ceramic Tile - Admin Toilet Rooms	12,000			$0.09	Toilet Rm Floors, 4'AFF wall tile
09650	Ceramic Tile - Production Shower walls	7,500			$0.06	Toilet Rm Floors, 4'AFF wall tile
09650	VCT base - Production Toilet Rooms and Locker Areas	1,800			$0.01	Floors are Epoxy
09650	Resilient Base Production Lunch, Toilet/locker Rooms	1,500			$0.01	
09650	Resilient Base Admin Areas	3,200			$0.02	
09680	Carpet - Admin Office Area = 3,600-sf; 400-sy	7,200			$0.05	400sy @ $18/sy
09800	Acoustical Ceilings Production Lunch Rm Locker/Toilet	5,400			$0.04	2300-sf @ $3.00/sf
09800	Acoustical Ceilings Admin Office	13,875			$0.10	4,300-sf @ $4.75/sf
09900	Paint Interior	7,500			$0.06	
09900	Paint Exterior	0			$0.00	
10200	Toilet Partitions	3,500			$0.03	
10260	Corner Guards	1,100			$0.01	
10520	Fire Extinguishers & Cabinets	5,500			$0.04	

Responsibility Matrix

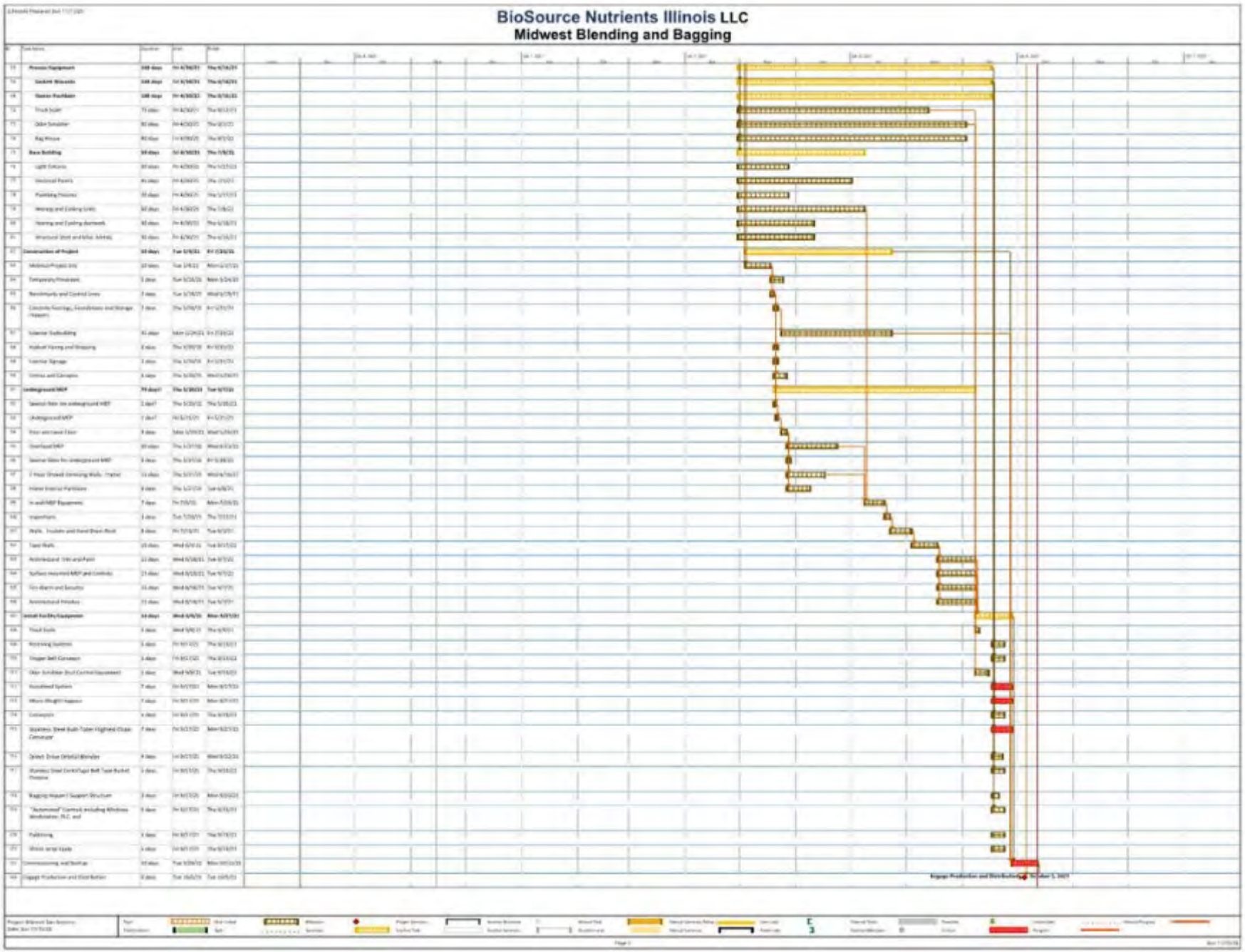
Biosource Nutrients - chicago Blending and Bagging Facility
Responsibility Matrix for Construction
Updated 11-15-20

Item Description	Design/Select	Furnished By:	Paid By	Installed By:	Notes
PERMITS, LICENSES and FEES					
Building permits	Local Architect	Architect	Owner	NA	
Contractor Licenses & Trade Permits	Const. Mngr.	Const. Mngr.	Contractors	NA	
DESIGN & ENGINEERING					
Equipment - Selection	Project Integration, Inc.	NA	Owner	NA	
Design Equipment Integration	Project Integration, Inc.	NA	Owner	NA	
Air Quality	Project Integration, Inc.	NA	Owner	NA	
Architectural design	Local Architect	NA	Owner	NA	
Mechanical, Electrical, Plumbing, Fire Prot & Life Safety	Local Architect	NA	Owner	NA	
CONSTRUCTION					
EXTERIOR					
Building-mounted signs	Owner	Owner		Owner	
Ground-mounted signs	Owner	Owner		Owner	
Generator	Local Architect	Const. Mngr.		Const. Mngr.	
INTERIOR FINISHES					
Carpet	Local Architect	Contractor	Contractor	Contractor	
LVT	Local Architect	Contractor	Contractor	Contractor	
Ceramic and flooring	Local Architect	Contractor	Contractor	Contractor	
Wall, base, floor and ceiling finishes (not carpet, VWC)	Local Architect	Contractor	Contractor	Contractor	
Paint / Prep at vinyl wall covering	Local Architect	Contractor	Contractor	Contractor	
Doors, frames, and hardware	Local Architect	Contractor	Contractor	Contractor	
countertops	Local Architect	Contractor	Contractor	Contractor	
Lunch room upper/lower cabinets & counter tops - Toilet room vanities & Tops	Local Architect	Contractor	Contractor	Contractor	
Toilet room fixtures / trim / accessories	Local Architect	Contractor	Contractor	Contractor	
Window treatments: TVs, artwork	Local Architect	Contractor	Contractor	Contractor	
Fire Extinguisher/Boxes and Fire Extinguishers	Local Architect	Contractor	Contractor	Contractor	
Lighting	Local Architect	Contractor	Contractor	Contractor	
Blending Equip	Project Integration, Inc.				
Tripper Belt Conveyor	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Winch	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Accutrend System	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Micro-Weight hoppers	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Conveyors	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Stainless Steel Bulk-Tote Flighted Chain Conveyor	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Direct Drive Orbital Blender	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Stainless Steel Centrifugal Belt Type Bucket Elevator	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Direct Drive Orbital Blender	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Millwright - Rigger	
Lot of "Automated" Controls including Computer	Project Integration, Inc.	Sackett Waconia	Direct - Owner	Elec Contractor	
Blending Equip - By Const. Mngr.					
Bagging Hopper Support Structure	Project Integration, Inc.				
Catwalks and major supports @ support the hopper slub legs	Project Integration, Inc.	Steel Contractor	Steel Contractor	Steel Contractor	
Air Quality Control					
Odor Scrubber	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Mechanical Cont.	
Bag House	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Mechanical Cont.	
Air Quality Ductwork System	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Mechanical Cont.	
Other Process Equipment					
Bagging Equipment	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Millwright - Rigger	
Palletizer	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Millwright - Rigger	
Stretch Wrap Equipment	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Millwright - Rigger	
Truck Scale	Project Integration, Inc.	Hamer-Fischbein	Direct - Owner	Millwright - Rigger	
MEP Equip and Fixtures	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Light Fixtures	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Electrical Panels	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Plumbing Fixtures	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Heating and Cooling Units	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Heating and Cooling ductwork	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Metal Bld Building	Project Integration, Inc.	Sub-Contractor	Sub-Contractor	Sub-Contractor	
Low Voltage SYSTEMS					
IT - Cabling	Local Architect	Elec Contractor	Elec Contractor	Elec Contractor	
Security System and Card Readers	Local Architect	Elec Contractor	Elec Contractor	Elec Contractor	
Fire Alarms	Local Architect	Elec Contractor	Elec Contractor	Elec Contractor	
Heat Sensor Alarms	Local Architect	Elec Contractor	Elec Contractor	Elec Contractor	
FURNITURE, FIXTURES, AND EQUIPMENT					
Vehicles: vans, etc.	Owner	Owner	Owner	Owner	
Housekeeping equipment - Mops carts, vacuums, etc.	Owner	Owner	Owner	Owner	
Kitchen supplies	Owner	Owner	Owner	Owner	
Office furniture, equipment, supplies: chairs, tables, file cabinets, etc.	Owner	Owner	Owner	Owner	
Computers, Screens, Router, Cables	Owner	Owner	Owner	Owner	
Exterior trash Containers	Owner	Owner	Owner	Owner	
Entry mats	Owner	Owner	Owner	Owner	
Dumpster (for daily operations)	Owner	Owner	Owner	Owner	
Furniture	Owner	Owner	Owner	Owner	
Floor and table lamps	Owner	Owner	Owner	Owner	
Artwork, artifacts and interior graphics	Owner	Owner	Owner	Owner	
Window treatment and hardware	Owner	Owner	Owner	Owner	
Projectors and Projection Screens	Owner	Owner	Owner	Owner	
Graphics and signage	Owner	Owner	Owner	Owner	
Graphics and signage (ADA code required)	Owner	Owner	Owner	Owner	
Lunchroom Refrigerator	Owner	Owner	Owner	Owner	
Lunchroom Coffe Station	Owner	Owner	Owner	Owner	
Equipment Maintenance equipment & supplies	Owner	Owner	Owner	Owner	

Project Schedule



BioSource Nutrients Illinois LLC
Midwest Blending and Bagging



The Project Design
Project Integration, LLC

Process Engineering
Controls and Interface
Structural Design
Major Electrical

OUR COMPANY PROFILE

Project Integration provides exemplary, proven project engineering, and project management solutions to the industrial marketplace. What sets us apart is smart, dedicated professionals coupled with time-tested strategic technical alliances. Together, we offer our clients:

Environmental Consulting
PSM Program Development (Including PHAs)
Safety Compliance & Training (Including Arc Flash Studies)
Process Engineering
Mechanical Engineering
Electrical and Controls Engineering
Structural Engineering
In addition to our general services, clients choose Project Integration for a number of specialty services:

Air Pollution Control Design
Combustion Systems Engineering
Computational Fluid Dynamic (CFD) Modeling
Piping Design and Stress Analysis
Stack Design
Pipe Skid Design
Arc Flash analysis, safety training, and circuit design

OUR START

The Project Integration story began in 2005. John Sudnick, with more than 25 years of experience, wanted to serve clients in a way that helped them in a more substantial way. David Kirby had worked with John in the past, and interestingly enough, he saw things about the same way.
Together, John and David did something that most people just couldn't do. They quit their respective jobs and started Project Integration. Their goal at the time was simple: provide environmental and engineering consulting services, but to do it with a better approach.
From its home in Spartanburg, SC, Project Integration continues to make its mark. The team has grown to 29 professionals serving clients across the US. Project Integration has added a number of new services to the mix.

OUR CUSTOMERS

Companies across the US choose Project Integration. Our Vision is to have the best reputation in our industry by integrating the customer's input with problem-solving logic to produce meaningful results. Our customers don't just choose Project Integration once. We deliver and they keep coming back.

So, what companies have trusted us with their engineering and environmental challenges?

Project Integration, Inc.

November 14, 2020

Bart R. Lynam
President
Lynam, Inc.
1113 Halladay Drive
Batavia IL 60510

Subject: Proposal for Process Engineering and I
Bagging and Blending Facility.

Reference: Project Integration, Inc. Proposal No. 201109C1

Dear Mr. Lynam :

This document presents Project Integration, Inc.'s (PI's) proposal to provide engineering services for the proposed Midwest Blending and Bagging (BB&G) Facility to be located in Bolingbrook, Illinois. This proposal has been developed in response to your request for proposal dated November 9, 2020 and its attachments.

Background

Lynam Incorporated is leading the effort to construct a fertilizer blending and bagging facility in Bolingbrook, Illinois. The facility will blend biosolids and other fertilizer ingredients, which will be bagged and sold to various agricultural markets.

The BB&G Facility will consist of four main elements:

1. Receiving the fertilizer ingredients by truck
2. Blending the fertilizer ingredients into low moisture, pathogen free, granular pellets
3. Bagging the granular fertilizer pellets, and
4. Warehousing the product in accordance with seasonal demands

The Weaver Consultants Group (Weaver) is working with Lyman Incorporated to provide the architectural services and the mechanical, electrical, and plumbing engineering for the building. Lyman Incorporated has requested a proposal from PI to

1. Generate the technical process information necessary for Weaver to prepare the air permit application and.
2. Provide the engineering and documents for integrating the plant's equipment/controls into Weaver's construction documents.

Mr. Bart R. Lynam
Lynam, Inc.
November 14, 2020

Project Objectives

PI's proposal has been developed to accomplish the following Lynam Incorporated's objectives:

- Expedite the submission of the air permit application for the facility to minimize permit impacts on the schedule
- Integrate the unit operations of the process to allow for seamless, efficient, and flexible operation.

Considerations and Approach

PI has identified two project considerations and offers approaches to these considerations for Lynam Incorporated's review.

Consideration 1. Communications

This project may appear to be simple but there are many interfacing considerations that need to be thought out in a systematic manner

Approach

PI suggests a phased approach to the project. The first phase would be systematic gathering of information and needs from process equipment suppliers, raw material suppliers, transportation suppliers and operations.

Consideration 2. Holistic Design

Approach

Consider the information gathered in the fist phase of the project in light of all the project requirements including safety, environmental compliance, logistics, operational flexibility, bottle necks, and project life.

Scope of Services

As stated above, PI will perform the project in two phases. Phase 1 will perform the following tasks:

Phase 1 Preliminary Process Engineering

Task 1. Meeting with Sackett-Waconia

PI's engineers will meet with Sackett-Waconia engineers to discuss the equipment in their Proposal No. P20-00195 dated august 14, 2020. The purpose of this meeting will be to gather specific information on the proposed system including but not limited to:

- Equipment design
- Equipment physical size and geometry
- Equipment capacity
- Equipment integration and layout
- Equipment limitations
- Equipment control and programming

PI engineers would also obtain equipment general arrangement drawings and cut sheets.

Task 2. Interaction with Nutrients Plus

PI engineers would engage the appropriate personnel at Nutrients Plus to obtain the necessary safety data sheets (SDS) or the necessary information to generate SDS if required.

Task 3. Generation of Deliverables

PI would use the information gathered in Task 1 & 2 to generate the deliverables outlined below. The deliverables would be sent to Lynam Incorporated for review

Task 4. Review Meeting

PI would meet with Lynam Incorporated and their project associates to discuss and comments and or additional needs.

Deliverables

PI will provide Lynam Incorporated with the following deliverables:

- A process flow diagram for each of the processes and master process flow diagram incorporating all of the processes. The process flow diagrams will also include mass balances for the unit operations
- A detailed process narrative for each of the unit operations and their interaction (if any) with other unit operations.
- Maximum and rated capacities for each unit operation and the entire process
- Determination of all air emission points from each unit operation and the process as a whole.
- Selection and sizing of air pollution equipment for those emission points requiring control
- Preliminary design of an industrial ventilation system for capture of the emissions
- Selection of indoor and outdoor odor control system

Mr. Bart R. Lynam
Lynam, Inc.
November 14, 2020

Phase 1 Proposed Fee

PI proposes to perform the services for a fixed fee of $_____ or time and materials.

Phase 2 Preparation of Engineering Documents and Other

PI feels that the scope of Phase 2 would be determined by a kick off meeting either during the execution or after the delivery of Phase 1 deliverables.g

Management of Change

Requests for changes to the Scope of Work outlined above will be managed as follows:

1. Lynam Incorporated will submit the requested for change of scope in writing to the PI Project Manager
2. PI will review the request and may request clarification.
3. Once the change definition is agreed, PI will prepare a change order for the scope change outlining the effect the change will have on budget and schedule.
4. Depending on the change request, work on the project may be paused until PI has completed determination of the cost and schedule impact of the change on the project.
5. PI will present the cost and schedule impact to Lynam Incorporated for review.
6. If Lynam Incorporated rejects the adjustment in cost and schedule, PI will resume work on the originally agreed upon scope. Time for the change evaluation will be added to the schedule.
7. If Lynam Incorporated accepts the adjustment to the cost and schedule, PI will issue a change order for the scope change and adjust the project schedule accordingly.

Payment Schedule

Award of Contract 35%

Issuance of Deliverables.....55%

Review of Deliverables.....5%

All invoices will be submitted at the completion of the milestone listed above. Payment shall be required within thirty (30) days of the invoiced date.

Assumptions and Clarifications

This Proposal is based on the following assumptions and clarifications:

- Duration of the project shall last no longer than XXXX months. If project exceeds XXX months, then PI will provide a change request to cover the additional time and effort…
- If the number of drawings, P&IDS, data sheets exceeds the amount listed in the deliverables section, then then PI will provide a change request to cover the additional time and effort…

Terms of Contract

PI proposes to perform the services under the terms of the enclosed Terms and Conditions). To accept this proposal, please forward a purchase order) to accounting@pintegration.com.

Schedule

PI can begin work on the project immediately after receiving your notice to proceed. A schedule will be discussed based on date of award of Purchase Order.

Health & Safety Considerations

PI subscribes to Occupational Safety and Health Administration (OSHA) – and United States Environmental Protection Agency (USEPA) – mandated Health and Safety standards. Because of the wide range of potential exposures for our employees, PI must make conservative judgments as to potential health risks. The services outlined in this proposal are offered on the basis of providing Level D health and safety protection (coveralls, safety shoes, hard hats, and eye protection only). If additional protection is required for PI employees to perform these services, then PI will advise Lynam Incorporated of the needed protection and any associated increase in compensation before proceeding with the work.

We are pleased to offer this proposal to Lynam Incorporated. Please feel free to call me to discuss any questions you may have.

Sincerely,

Project Integration, Inc.

John J. Sudnick
Director of Engineering

Attachments: Terms and Conditions

cc: **PI Files**

Weaver Consulting Group

Procurement – Illinois EPA Air Permit

A little about Weaver Consultants Group

From its inception in 1991, Weaver Consultants Group has been founded upon the tenets of attentive and responsive customer service, strong project management, and solid internal financial controls. The quality of our people, our focus on understanding and responding to our clients' needs, and our application of good business management practices have resulted in most new projects originating from our existing customer base.

Air Compliance

Weaver Consultants Group specializes in air permitting services for a variety of industries. We assist our clients with federal and state environmental permitting and compliance reporting as well as applicability determinations.

Our energy team understands the foundation for compliance starts with a straightforward air/operating permit that accurately represents the needs of our client's facilities while providing operating flexibility. We approach each Project with a strategy that results in a permit satisfying today's needs with the flexibility to anticipate future operational demands.

Permitting Services	Compliance Services
Current permit review and evaluations	Annual emission inventories
Permit application preparation and submittal	Emissions fee determinations
Planning and strategy	Emissions trading
Regulatory requirement determinations	Greenhouse gas emissions calculations and reporting
RACT/BACT/MACT/LAER	Monitoring, recordkeeping, and reporting
New Source Performance Standards (NSPS)	Deviation and compliance reporting
National Emission Standards for Hazardous Air Pollutants (NESHAPs)	Compliance reviews and audits
New Source Review (NSR) and Prevention of Significant Deterioration (PSD) permitting	Vapor Combustion/Flare/Vapor Recovery Stack Testing Assistance
Alternative operating scenario development	Opacity Readings
Offset determinations and increment analysis	Regulatory agency liaison and negotiation
Dispersion modeling	Regulation development and tracking (Environmental Policy)
State construction and operating permits	Public meeting representation and presentations
Title V operating permits	Site inspection assistance
Acid rain permitting	Notice of Violation support
Permit modifications (minor and major)	Odor and Noise studies
Compliance Certification Assistance	Compliance Plan Preparation:
Demonstrating and maintaining continued compliance with the myriad of air quality rules and regulations can be complex and overwhelming. With our experience, we can guide and assist our clients with all aspects of air compliance.	Start-up, Shutdown, and Malfunction (SSM) Plans and Reporting
	Fugitive Dust Programs
	Housekeeping Plans
	Episode Action Plans
	Preventative Maintenance Plans
	Risk Management Plans (RMP)
	Industries Served

FUTURE – Insert Weaver Proposal, Cat Cuts, and Images

Ware Malcomb

WARE MALCOMB *Base Building Architectural,*
Life Safety
Security Alarms

In 1972, Ware Malcomb was founded by Bill Ware and Bill Malcomb. Their philosophy of great design, excellent client service and relationship-focused business still rings true today. The firm has a long history of leading design for commercial and corporate real estate.

In 1992, ownership of the firm transitioned to former CEO Lawrence R. Armstrong and retired President Jim Williams. Under their leadership, Ware Malcomb focused on the diversification of services, project types and geography. Upon Jim Williams' retirement in 2006, Ware Malcomb had grown from a regional firm and established a national presence with offices across the United States.

Ware Malcomb continued to grow during the 2000s, adding Branding and Civil Engineering services and opening 6 new offices, including the first offices outside of the United States.

During the 2010s, the firm continued to expand its services offerings to include Building Measurement, Workplace Strategy, and Land Surveying. 13 new offices were established across the United States, Mexico and Canada signifying a period of rapid growth and success.

In 2020, Lawrence R. Armstrong transitioned to the role of Chairman after 28 years of serving as CEO.

Today, Ware Malcomb is led by current CEO Ken Wink, President Jay Todisco, Executive Vice President Matt Brady and EVP/CFO Tobin Sloane, along with a team of talented design and business leaders.

An international, award winning firm, Ware Malcomb offers integrated design services including architecture, planning, interior design, civil engineering, branding, and building measurement to diverse clients in both the private and public sectors. We have offices located throughout North America.

ARCHITECTURE

Our priority is to design great buildings that meet the needs and objectives of our clients. Having expertise in commercial real estate brings each building we design long term real estate value.

Our corporate real estate knowledge provides us with the user's perspective as we design structures. We focus on achieving our clients' goals, while balancing aesthetics and functionality within budget and schedule parameters.

Part of our role as designers is to educate our clients on the value of future-proofing. By considering innovations coming to fruition today and planning for future technological disruptions, our holistic design approach helps maximize real estate value by building in flexibility and adaptability.

Our team incorporates Virtual and Augmented Reality (VR/AR) into the project delivery process. Our clients benefit from seamless design intent across all phases, quick access to rendered visuals, and quicker decision making.

Our expertise and leadership in architecture is evidenced through our national award recognition.

FUTURE – Insert , Ware Malcomb Proposal, Cat Cuts, and Images

Major Subcontractors

Electrical Contractor - CM Electric, Inc.

When it is time to optimize your enterprise, count on CM Electric Inc. We are a well-rounded team dedicated to delivering industrial electrical services in Glenview, IL. Thanks to our extensive training and more than 10 years of experience, we have developed a multifaceted skill set that can meet your needs. Count on us to deliver effective solutions that will help your Facility stay on top of things.

Your industrial worksite is a key component to your operations. When it performs well, it is easier for your crews to remain productive and extend your bottom line. As machinery and technology become more complex, it is important to consider the ever-changing needs of your Facility's electrical system.

Is your Facility equipped to handle new Equipment and additions? When it's time to consider adjustments and upgrades, let our industrial electrical contractor lead the charge. We have the training, experience, and expertise to ensure your Facility is performing at optimum efficiency.

A Versatile Team at Your Disposal
Save time, energy, and money and let our electricians handle the hard work. We are thoroughly trained and knowledgeable in industrial electrical systems. From lighting to wiring, we handle every aspect of electrical installation, repair, and maintenance.
Count on us for:

Your business is unique. Therefore, you deserve to work with industrial electricians who understand the needs of your Facility. We facilitate an adaptive and collaborative approach service. Our electricians will learn about your needs and assess your property. Then, we will design and implement a service that resolves your electrical issues. This thorough process ensures you get the right results--ensuring a safer, energy-efficient electrical system that you may count on.

FUTURE – Insert Proposal, Cat Cuts, and Images

Westside Mechanical Group

Founded in 1970, Westside Mechanical Group is a recognized leader in mechanical services in the Chicago area, employing over 350 professionals at annual revenues of $100 million. We are a full-service mechanical contractor, and our abilities span a wide range of markets, industries, and mechanical systems.

Westside Mechanical Construction offers design/build construction services, innovative engineering, with Building Information Modeling (BIM) and 3D capabilities, LEED building sustainability and energy conservation, pipe and sheet metal prefabrication, and installations performed by our own sheet metal workers and pipe fitters.

Westside Mechanical Service, one of the largest service companies in the Chicago area, offers 24/7/365 emergency services, and excellent preventative and full-service maintenance programs customized to meet our clients' needs. Our service coordination utilizes state of the art technology to help manage and run over 30 service technicians on the streets everyday servicing our customers. We offer 24-hour service, navigation on our trucks, with our service technicians working paperless, utilizing iPads for all work orders, service calls and maintenance inspections.

The Mission at Westside is simple: Hire the absolute best people, provide them with unparalleled training, encouragement and support, and together deliver the best possible product and service to our customers, always striving to exceed their expectations.

Previous Projects

Midwest Mechanical FUTURE – Insert Proposal, Cat Cuts, and Images

WW Group, Inc – Plumbing Systems

FUTURE – Insert Proposal, Cat Cuts, and Images

Integrated Control Technologies, LLC

Integrated Control Technologies, LLC (ICT) is a leading building automation contractor for Northern Illinois. As a Tridium / Vykon, Honeywell and an American Auto-Matrix dealer, ICT can meet all your integration and automation needs.

ICT provides quality products, professional experience and outstanding customer service while crafting creative and cost-effective solutions. We are factory distributors of several quality products such as Tridium / Vykon, Honeywell WEBS, American Auto-Matrix and multiple HVAC control accessory goods including Variable Frequency Drives. Our Staff is always ready to draw on their experience and apply our record of first-rate control products and services to meet any challenge that may arrive.

Our Mission Statement:

Integrated Control Technologies, LLC is dedicated to providing superior technical expertise, unsurpassed installation quality, and cost competitive services relating to all aspects of building automation, thereby allowing customers to continuously focus on the specific demands of their business.

FUTURE – Insert Proposal, Cat Cuts, and Images

Millwrights and Erectors

Millwright Local 1693 Lisle Campus Center

4979 Indiana Avenue, Suite 211, Lisle, IL 60532, 630.325.6036 ph. 630.325.6052 fax
Office Hours: 8:30 a.m. - 5:00 p.m.
Jeff R. Bort, Business Representative
John P. Dunn III, Business Representative
Nathan Hodgson, Business Representative

A millwright is a high-precision craftsman or skilled tradesman who installs, dismantles, maintains, repairs, reassembles, and moves machinery in factories, power plants, and construction sites. Basic millwright skills include installation, maintenance, and repair of industrial machinery and Equipment. Using specialized tools, such as welders or hydraulic bolters, they align and replace a machine's individual parts. They also move and relocate machinery on- and off-site.

Millwrights install, maintain, diagnose, and repair equipment such as compressors, pumps, conveyors, gas and steam turbines, monorails, and extruders. They can be found performing mission-critical work at coal, gas, nuclear, and alternative-energy power plants. Their skills are also vital in industries as diverse as automotive, aerospace, food processing, and pharmaceuticals.

Precision is a critical skill for millwrights, who sometimes work with specifications requiring tolerances to a thousandth of an inch. Ongoing UBC training and skill-enhancement classes ensure members are experts in the use of tools and instruments. Led by a national labor-management committee, the UBC's millwright program actively seeks additional industry partners to ensure UBC millwrights continue to meet and exceed customer expectations.

XYZ – Millwright Company Here

Insert Future Millwright Subcontractor Bio, and Images

Major Equipment

Blending Line - Sackett Waconia

Sackett Waconia is providing the engineering and Equipment for our Precision Horizontal Blending Systems.

To meet the needs of markets that require precise blends but have low overhead space, Sackett-Waconia developed the Precision Horizontal Blending System as an excellent option for existing warehouses. Combining our Declining Weight technology with the blend quality of our HIM Mixer or Orbital Blender yields a highly effective floor-based blending system. As with our DW Systems, precision horizontal blending systems can include additional hoppers for granular and powder micronutrients and can include bagging options upon request.

Sackett Waconia's Legacy

For over 120-years Sackett-Waconia has been on the leading edge of the Fertilizer Industry. Since in 1897, the company has been a leader in technology and innovation. With over 200 patents, Equipment on 6 continents and in over 60 countries, 4-manufacturing plants, and joint ventures in Brazil and South Africa, we continue to provide industry-leading technology and support in the US and throughout the world.

Engineering & Design

Listening to and understanding our customers' needs is a basic operation at Sackett-Waconia. No matter the size of the Project, we strive to:

- Take the time to assess every customer's needs
- Make sure we design the system that is the best fit for them
- Ensure the systems will meet their needs over a most extended service life

We understand that each business is an individual and will take the time to engineer the best solution for your needs. Our experience was built over a long history and comes from the smallest retail plant as well as the largest hub plants.

BUDGET PROPOSAL

NUTRIENTS PLUS

Chicago, Il

Organic Fertilizer Blending Plant

QUOTE DATE	QUOTE NUMBER	DRAWING REFERENCE	SALESPERSON
11/17/20	BP20-00195-RB	L20-00195-RB	John Lamneck/John Mitchell

1701 South Highland Avenue • Baltimore, MD 21224 • (410) 276-4466
33 East 8th Street • Waconia, MN 55387 • (952) 442-4450
680 Tacoma Boulevard • Norwood-Young America, MN 55386 • (952) 442-4450
1719 Baldree Road • Wilson, NC 27893 • (410) 276-4466

RECEIVING AND BLENDING SYSTEM

ALL CAPACITIES BASED ON AVERAGE 60 PCF DRY, FREE FLOWING GRANULAR NPK FERTILIZERS. HORSEPOWER CALCULATIONS BASED ON 80 PCF MATERIAL.

PART I: RECEIVING SYSTEM - APPROX 200 TPH

A. 1 **Sackett-Waconia Model BT250, Stainless Steel Bulk-Toter Flighted Chain Conveyor,** consisting of the following:

- 33'-6" Overall Length
- 140 Feet per minute chain speed
- 15 HP Totally enclosed, fan cooled motor with Industrial Grade Reducer, necessary power transmission components, and stainless steel drive guard
- Fully enclosed, type 304 stainless steel, weather resistant casing
- Take-up Section consisting of:
  - Removable maintenance door
  - Self-aligning, stainless steel, take-up rod and carbon steel frame
- "Flood Feed" inlet for truck, with 5'-0" x 10'-0" intake, and heavy duty drive over grate – **pit, pit design, sump, and additional coverage by others**
- 45 Degree Curve section with large radius and stainless steel 10 gauge separator plate
- Head section with drive base, maintenance and inspection door, and bolt-in stainless steel 10 Gauge separator plate
- Heat-treated carbon steel 102B chain with heat-treated stainless steel pins, UHMW conveying flights, one set of steel cleaning flights, and zinc plated flight attachment hardware
- Stainless steel stub leg supports for horizontal section, and (x) carbon steel "A" frame support stands
- Stainless steel discharge transition

B. 1 **Sackett-Waconia Model BE250 Stainless Steel Centrifugal Belt Type Bucket Elevator,** consisting of the following:

- 450 Feet per minute belt speed
- 40 HP Totally enclosed, fan cooled motor with Industrial Grade Reducer, necessary power transmission components, integral backstop, and stainless steel drive guard
- 25'-1" Discharge height
- All casings, head, and boot sections Type 304 stainless steel
- 10 Gauge Boot section with:
  - 30" Diameter x 18" face, self-cleaning wing type boot pulley and shaft supported by Dodge bearings
  - Grease packed, stainless steel, enclosed screw type take-ups
- 10 Gauge boot hopper
- 20" x 52" Type 304 stainless steel 12 Gauge casing with angle flanges

- 16" Wide rubber belt, 2ply, 220 P.I.W. rating with 1/16" x 1/16" covers and mechanical splice
- 14" x 7" style "CCHD", polyethylene buckets on 7" centers w/ stainless hrdwr
- 10 Gauge Head section with:
  - 30" Diameter x 18" face, rubber lagged, drum type head pulley and shaft supported by Dodge bearings
  - 14 Gauge Split Bonnet
- Zero speed switch
- Stainless steel discharge transition
- Ladder and safety cage - carbon steel
- Service/head platform, and (1) step off platforms - carbon steel with FRP decking

C. 1 **Tripper Conveyor Tail Platform**, consisting of the following:

- Carbon steel construction with bolted connections
- Access deck with handrails, kick-plate, and FRP decking
- Gate at entrance from ladder step-over
- Supports and provides access to tripper tail section
- **Platform to be supported / knee braced off of building – SW to provide interface details and equipment loadings**

D. 1 **Sackett-Waconia 24" Wide, Stainless Steel Fixed Frame Tripper Belt Conveyor**, consisting of the following:

- 289'-3" Long
- 350 Feet per minute belt speed
- 20 HP Totally enclosed, fan cooled motor with Industrial Grade Reducer, necessary power transmission components, integral backstop, and carbon steel drive guard
- Type 304 stainless steel formed channel frame construction with integral tripper rails
- Tail section consisting of:
  - 14" Diameter x 26" face, rubber lagged drum type tail pulley and shaft supported by Dodge bearings
  - Stainless steel, enclosed, manual screw type take-ups
  - Stainless steel feed chute with rubber skirt
  - Stainless steel pulley guard and tail cover
- CEMA "C" 5" diameter, 35 degree **HDPE** Troughing Idlers spaced on 4'-0" centers
- "Shoe type" Training Troughing Idlers
- CEMA "C" 5" diameter, Rubber Disc Return Idlers spaced on 10'-0" centers
- CEMA "C" 5" diameter, Rubber Disc Training Return Idlers
- 24" Wide rubber belt, 2 Ply, 220 P.I.W.-to be field vulcanized by others

- Head section consisting of:
  - 16" Diameter x 26" face, rubber lagged drum type head/drive pulley and shaft supported by Dodge bearings
  - Stainless steel discharge hood/pulley guard
- Safety stops, zero speed switch, and limit switches for range of motion
- Stainless steel Gravity Tripper per the following:
  - Lead-in troughing idlers, crowned drum pulley with shaft and Dodge bearings, self-cleaning wing type pulley with shaft and Dodge bearings, (4) flanged track wheels with sealed bearings, and single sided discharge spout constructed of stainless steel, with integrated belt scraper
- Stainless steel stub legs every 20'
- **Catwalk and beams to support stub legs by building contractor**

E. 1 **Electric Winch Base,** consisting of the following:

- 3 HP Totally enclosed, fan cooled motor with reducer
- Stainless steel base and guard – *mounts to conveyor frame*
- Sheave blocks, cable clamps, turn buckles
- Lot of stainless steel cable – *cable run is contained in conveyor*

F. 1 **Lot of Controls including Manual Control Panel with start/stop pushbuttons and ruin lights, and Custom MCC with motor starters and interlocks**

PART II: "ACCUBLEND" SYSTEM – APPROX 60 TPH

G. 1 **Sackett-Waconia Accublend System**, including:

6 **Major Weigh Hoppers,** consisting of the following:

- Weigh Hopper:
  - **10 Ton** Capacity – *please review inlet details vs reach of existing loader*
  - Type 304 stainless steel with flanged outlet
  - Stainless hopper support stand
  - Removable screens, FRP
  - Low level light
  - (4) IP68 Stainless steel hermetically sealed load cells with tool steel mounts, Stainless steel hardware, and junction box – NTEP certified – *hopper not to be refilled while discharging*
- Salem Valve, stainless steel, 12" square, air operated with canvas connection to take-away unit
- Stainless steel support base with bolted connections
- (1) Heated solenoid enclosure for all valve solenoids, including bypass diverter at mixer – **mounting by others**

H. 1 Sackett-Waconia Model BT250, Stainless Steel Bulk-Toter Flighted Chain Conveyor, consisting of the following:

- 91'-8" +/- Overall Length
- 180 Feet per minute chain speed
- 40 HP Totally enclosed, fan cooled motor with Industrial Grade Reducer, necessary power transmission components, and stainless steel drive guard – ***soft start starter required***
- Fully enclosed, type 304 stainless steel, weather resistant casing
- Take-up Section consisting of:
  - Removable maintenance door
  - Self-aligning, stainless steel, take-up rod and carbon steel frame
- (6) Flanged "Control Feed" inlets
- 13 Degree Curve section with large radius and stainless steel 10 gauge separator plate
- Head section with drive base, maintenance and inspection door, and bolt-in stainless steel 10 Gauge separator plate
- Heat-treated carbon steel 102B chain with heat-treated stainless steel pins, UHMW conveying flights, one set of steel cleaning flights, and zinc plated flight attachment hardware
- Zero speed switch
- Stainless steel stub leg supports for horizontal section
- Stainless steel discharge transition

I. 1 Sackett-Waconia Direct Drive Orbital Blender, consisting of the following:

- 8 Ton capacity - *high quality blends, gentle handling, short blend time*
- Drum Drive – 30 HP Totally enclosed, fan cooled motor with industrial grade reducer
- Screw Drive - 20 HP Totally enclosed, fan cooled motor with industrial grade reducer – **"reversing starter required"**
- 10 Gauge type 304 stainless steel inlet and outlet
- ¼" Stainless steel plate drum, consisting of the following:
  - Stainless steel internal mixing flights
  - (4) Inspection doors
  - (4) Heavy duty carbon steel cam rollers with mounts to support / turn drum
  - Seals to provide dust tight operation
- 18" Feed/Discharge screw, consisting of the following:
  - Carbon steel screw flights
  - Hardened end shafts of 1045 carbon steel
  - Stainless steel screw trough
- ¼" Stainless steel rectangular tubing frame with capped ends and mounts
- Impregnation spray bar, stainless steel, ¾" pipe- **liquid system and piping to spray bar quoted as option below**

J. 1 **Sackett-Waconia Model BE250 Stainless Steel Centrifugal Belt Type Bucket Elevator,** consisting of the following:

- 465 Feet per minute belt speed
- 25 HP Totally enclosed, fan cooled motor with Industrial Grade Reducer, necessary power transmission components, integral backstop, and stainless steel drive guard
- 33'-0" Discharge height
- All casings, head, and boot sections Type 304 stainless steel
- 10 Gauge Boot section with:
  - 30" Diameter x 18" face, self-cleaning wing type boot pulley and shaft supported by Dodge bearings
  - Grease packed, stainless steel, enclosed screw type take-ups
- 10 Gauge boot hopper
- 20" x 52" Type 304 stainless steel 12 Gauge casing with angle iron flanges
- 16" Wide rubber belt, 2ply, 220 P.I.W. rating with 1/16" x 1/16" covers and mechanical splice
- 14" x 7" style "CCHD", polyethylene buckets on 8" centers with stainless steel hardware
- 10 Gauge Head section with:
  - 30" Diameter x 18" face, rubber lagged, drum type head pulley and shaft supported by Dodge bearings
  - 14 Gauge Split Bonnet
- Zero speed switch
- Stainless steel discharge transition
- Ladder and safety cage - carbon steel
- Service/head platform, and (1) step off platform - carbon steel with FRP decking

K. 1 **Lot of spouting to feed bagging hoppers, stainless steel**

L. 1 **Bagging hoppers and bagging equipment <u>by others</u> – SW blending system will need feedback from level switches in these hoppers - options TBD**

M. 1 **Lot of "Automated" Controls including Windows Workstation, PLC, and Custom MCC with motor starters and interlocks**

N. 1 **Lot of Commissioning / Start Up / Training / On Site**

TOTAL BUDGET PRICE FOR ALL OF THE ABOVE ..... $ 840,800.00 +/-
(Ex-Works, Point of manufacture)

***Dust collection, Bagging Equipment, Freight, and installation not included**

"BUDGET" OPTIONS -

a. Freight budget ..... $ 35,000.00 +/-

b. Critical Spares budget..... $ 20,000.00 +/-

c. Liquid Impregnation System ..... $ 9,500.00 +/- (each)

d. Micro Hopper – fed by big bags..... $ 17,500.00 +/- (each)

e. Bagging hopper with structure and level switches.....$ 22,000.00 +/- (each)

GENERAL NOTES/ PAINT SPECIFICATIONS

1. **All carbon steel components painted with a corrosion resistant primer and machinery enamel topcoat Sackett-Waconia Blue unless otherwise specified.**

ADDITIONAL ITEMS INCLUDED IN SCOPE

-Anchor Bolt Plan w/ loadings
-Complete motor list with recommended starters

RECOMMENDED/ CRITICAL SPARE PARTS

SW will prepare a "project specific" quotation on recommended/critical spare parts for start-up and/or stocking. This will be generated after approval drawings have been returned and all equipment designs have been finalized. Additionally, SW offers a 10% discount on these parts if they are ordered with the equipment. This will also save on additional freight costs that would be associated with a separate shipment.

ELECTRICAL CHARACTERISTICS

Primary Voltage - 230/460 Volts, 3 Phase, 60 Hertz
Control Voltage - 24 Volts DC

Note: Please verify voltage at time of order – if different than specified, some price adjustment will be required

INSTALLATION DRAWINGS AND MANUALS

- Included with the shipment:
  - One (1) electronic copy of the installation, operation, and maintenance manuals, with assembly drawings and bills of material.
  - One (1) paper copy of all assembly drawings, manuals, and bills of material.

ENCLOSURES

- Sackett-Waconia NOT FOR CONSTRUCTION Layout Drawing: L20-00195-RB

PAYMENT TERMS & SHIPPING

A. The above prices are Ex-Works, point of manufacturer. Further, it does not include any Federal, State, Municipal or other Excise Taxes, Sales, Use, or Similar Taxes, which may be in effect at time of shipment.
B. Any changes made to proposal after receipt of purchase order are subject to price and delivery adjustments.
C. Equipment specifications and prices are subject to change with final lay-out drawing.
D. Sackett-Waconia can offer an "on site" representative for a per diem rate (per person/per day) of $850.00, plus any associated expenses for travel (mileage or airfare), lodging, and meals.
E. Items **NOT** included in above:
    a. Freight
    b. Unloading of equipment
    c. Sales tax or Permitting
        i. If tax-exempt, please provide Sackett-Waconia with a tax-exempt certificate at time of proposal acceptance. If this is not obtained, customer will be billed at applicable tax rates.
    d. Machinery installation
    e. Support for conveyors, legs, and spouting – unless otherwise noted
    f. High voltage wiring, starters, and start-stop controls – unless otherwise noted
    g. Scale calibration and digital indicator (if required)
    h. Soil exploration test
    i. Concrete trenches, pit covers (except for grate over inlet) and concrete tower footings
    j. Sheathing and purlins to enclose tower and door through tower to access leg

PAYMENT SCHEDULE

- 25% Due Upon Receipt of Purchase Order
- 25% Due at 50% of quoted schedule completion
- 25% Due at 75% of quoted schedule completion
- 25% (Balance) Due 15 Days from Shipping

SCHEDULE OF DELIVERABLES – *(as of the date of this Proposal)*

APPROVAL DRAWINGS:
Approximately *6 weeks after receipt of signed proposal

SHIPMENT OF EQUIPMENT:
Approximately *7 – 8 +/- months after receipt of Approved Drawings

*** To be confirmed at time of order**
*** Time frames listed are typical of similar sized projects, based on todays workload. Time frame is intended to be a guide only.**

Standard Terms of Sale

RISK OF LOSS:
Title to and risk of loss for the equipment and parts shall pass to Purchaser upon shipping from Seller's facility or other shipping point; provided, however, the Purchaser grants to Seller a present and continuing security interest in the equipment and parts until Seller has been paid in full to the terms hereof. Purchaser shall promptly execute and deliver such documentation as may be requested by Seller to perfect Seller's security interest. Purchaser will not cause or permit any other security interest, lien, encumbrance or claim to attach to the equipment and parts which shall have priority over, or be ahead of, Seller's security interest, as described herein; and Purchaser authorizes Seller to make any public filings necessary to perfect or maintain its security interest.

INSTALLATION:
No installation service is included in the price quoted herein. Seller is not responsible for installing the equipment or the means and methods employed by the installer of the equipment. Purchaser has contracted with others to install the equipment. Purchaser agrees that prior to delivery of the equipment and parts, Purchaser will perform or cause to be performed all actions necessary to prepare the site for installation at its sole cost and expense.

FREIGHT:
All equipment and parts will be Ex-Works, Point of Manufacture, and Purchaser is responsible for all freight costs.

UNLOADING EQUIPMENT:
Purchaser shall bear the cost and risk of unloading all equipment delivered to Purchaser's plant site or other site.

OSHA
Seller will endeavor to design its equipment to meet technical requirements of OSHA. However, sole authority to determine compliance rests with the Purchaser and responsibility for field changes of equipment to meet different interpretations are the users.

SAFETY:
Sackett-Waconia equipment and equipment systems are not designed to handle materials which are combustible and/or which release combustible dust during transportation. Use of such materials can cause an explosion or fire resulting in property damage, serious injury or death. If you choose to use combustible materials, consult qualified design experts to help minimize this risk.

CHANGES AND ALTERATIONS:
Changes and alterations to the equipment requested by the Purchaser after this proposal becomes a contract will require re-negotiations for possible changes in the contract price. Changes required due to improper location of adjoining equipment or building openings from improper information provided on drawings furnished to the Seller by the Purchaser for layout purposes shall be paid by the Purchaser.

DRAWINGS:
Unless otherwise specified, all drawings, illustrations or samples prepared by Seller applicable to this Agreement are to be considered as property of Seller and shall be returned on demand. These drawings or samples shall be considered as confidential and shall be used in no way which is detrimental to the best interest of Seller. Where drawings are prepared by the Seller, the Purchaser shall evidence its approval, upon request, by signing such drawings.

CANCELLATION:
Cancellation of this Agreement without liability, after acceptance by the Purchaser, can be made only with Seller agreeing in writing. In the event of cancellation or suspension of manufacture of the equipment or parts at the Purchaser's request, Seller will have available to it all remedies allowed to Seller as set forth in Article 2 of the Uniform Commercial Code.

WARRANTY:
The equipment and parts manufactured by the Seller specified herein are guaranteed for a period of one year from the date of shipping against defects in material and workmanship. If, at any time during this period, any equipment or part becomes defective and the Purchaser notifies the Seller in writing

of such defect, the Seller agrees to repair or replace such equipment or part at its cost. All components not manufactured by the Seller are limited in warranty to that offered by the manufacturer. No other express warranty is given and no affirmation by the Seller or action shall constitute a warranty. Seller's warranty does not apply to equipment that requires service or replacement due to the following causes: user error, failure to properly perform required periodic maintenance, misapplication, misuse, casualty loss, abuse, vandalism, alteration, unauthorized attachment or modification, unauthorized repair, or other similar causes.

THE WARRANTY STATED ABOVE IS IN LIEU OF ALL OTHER WARRANTIES EXPRESS OR IMPLIED, AND SELLER SPECIFICALLY DISCLAIMS ALL OTHER SUCH EXPRESS OR IMPLIED WARRANTIES INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. SELLER SHALL NOT BE LIABLE TO PURCHASER OR ITS AFFILIATES FOR ANY DAMAGES IN CONNECTION WITH THE SALE OF THE EQUIPMENT AND PARTS OR THE PERFORMANCE OF OTHER SERVICES HEREUNDER, WHETHER ARISING IN CONTRACT, TORT, STRICT LIABILITY OR OTHERWISE, IN EXCESS OF THE PURCHASE PRICE FOR THE EQUIPMENT AND PARTS AND ANY FEES PAID FOR SUCH SERVICES.

LIABILITY:
Anything in this Agreement to the contrary notwithstanding, it is agreed between Purchaser and Seller that, whether by breech or warranty, or otherwise, Seller's liability is exclusively limited to the repair or replacing, at its option, of defective or non-conforming equipment or parts thereof. In no event shall the Seller be liable to the Purchaser for any incidental or consequential damages.

ELECTRICAL WIRING AND PIPING:
Electrical wiring, conduit and necessary cutoff switches from the Purchaser's building circuits to the equipment purchased are not a portion of this Agreement and are to be provided by others at no cost to Seller.

TAXES, DUTIES AND PERMITS:
Sales tax, use, excise, occupational tax or any other federal, state or municipal tax, duty or permit fees have not been included in this Agreement, and the Purchaser hereby assumes and agrees to pay for any of the above taxes, assessments or fees arising out of this transaction. Seller and all of its subcontractors will sign all documents reasonably required by Purchaser in connection with Purchaser applying for and receiving sales/use tax refunds related to the equipment and parts subject to this Agreement.

CONTRACT:
This Agreement shall become effective as a contract when accepted by the Purchaser and shall not thereafter be modified except in writing similarly executed and approved. All terms of this Agreement are deemed to be fully set forth herein and no agent, sales representative or other party is authorized to bind the Seller by agreement or warranty not herein expressed.

INTEREST:
All sums hereunder not paid when due shall accrue interest from the due date until the date paid at the highest legal rate permitted by Minnesota law.

INSURANCE:
Seller does not include insurance coverage for materials or machinery purchased from others and shipped to Seller's plant for installation or assembly.

CHOICE OF LAW/ SEVERABILITY:
This Agreement has been made and its validity, performance and effect shall be determined in accordance with the laws of the State of Minnesota, choice of law provisions notwithstanding. If any provision of this Agreement is invalid or unenforceable under applicable law, the provision shall be ineffective only to the extent of such invalidity or un-enforceability without in any way affecting the remaining parts of the provision or of this Agreement.

FORCE MAJEURE:
Neither party shall be liable to the other or deemed to be in breach of this Agreement by reason of any delay or omission solely due to fire, flood, or other act of God, labor or transportation strike or stoppage, act of war, precedent or priority granted at the request of, or for the direct or indirect

benefit of any governmental authority, import or export restriction, or other like action, event or condition; provided, however, that prompt notice of the delay or omission and its cause shall be given to the other party. If, however, force majeure circumstances which the Seller could not foresee in the determination of completion dates, result in the delay of delivery or performance, Seller is obliged to notify Purchaser's project manager of this fact in writing without delay. If the Seller fails to comply with this obligation, it cannot invoke the force majeure circumstances as an excuse for delay in delivery or performance. Upon receipt of such notice, the dates for performance shall be postponed to the extent required to take account of the effects of the matter causing the delay on a case-by-case basis to be agreed between Purchaser and Seller.

VENUE AND WAIVER OF TRIAL BY JURY:

The parties agree that the proper venue for any litigation to resolve any dispute regarding this Agreement shall be in the United States District Court for the District of Minnesota, or any state District Court of proper jurisdiction in the State of Minnesota. The parties hereby expressly waive any right to trial by jury in any litigation between the parties regarding this Agreement and agree that all legal and factual questions involved in any dispute litigated between the parties shall be submitted to the Judge of the Court in which the case is filed for determination.

AMENDMENT:

This Agreement may only be modified or amended by written documents signed by authorized officers or representatives of Seller and Purchaser.

ENTIRE AGREEMENT:

This Agreement represents the entire and integrated agreement between Seller and Purchaser and supersedes all prior negotiations, offers, counteroffers, representations or agreements, either written or oral.

EXECUTION:

Signing this document by both Purchaser and Seller constitutes a binding contract enforceable in accordance with its terms.

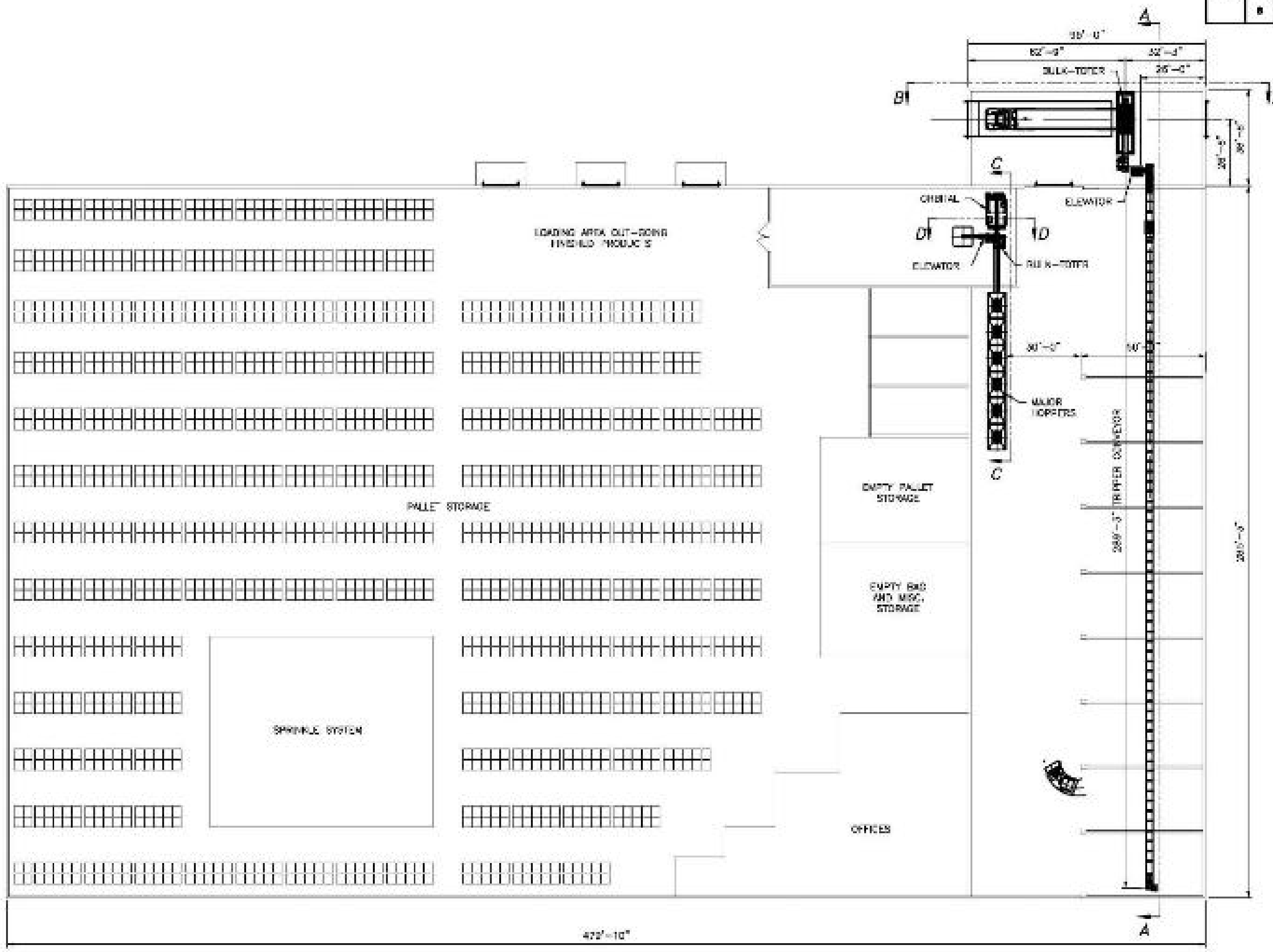
BUDGET PROPOSAL SIGNATURE

This budget proposal has been offered by the A.J. Sackett & Sons Company and Waconia MFG, Inc. on this 17th day of November 2020.

John Mitchell, Manager, Inside Sales and Application Engineering
Sackett-Waconia Authorized Signature

JMM: mak

ZONE	REV	DESCRIPTION	DATE	MADE BY
	B	GENERAL LAYOUT REVISION	11/16/20	MAK



PLAN VIEW

CONFIDENTIAL

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SACKETT-WACONIA

20-00195

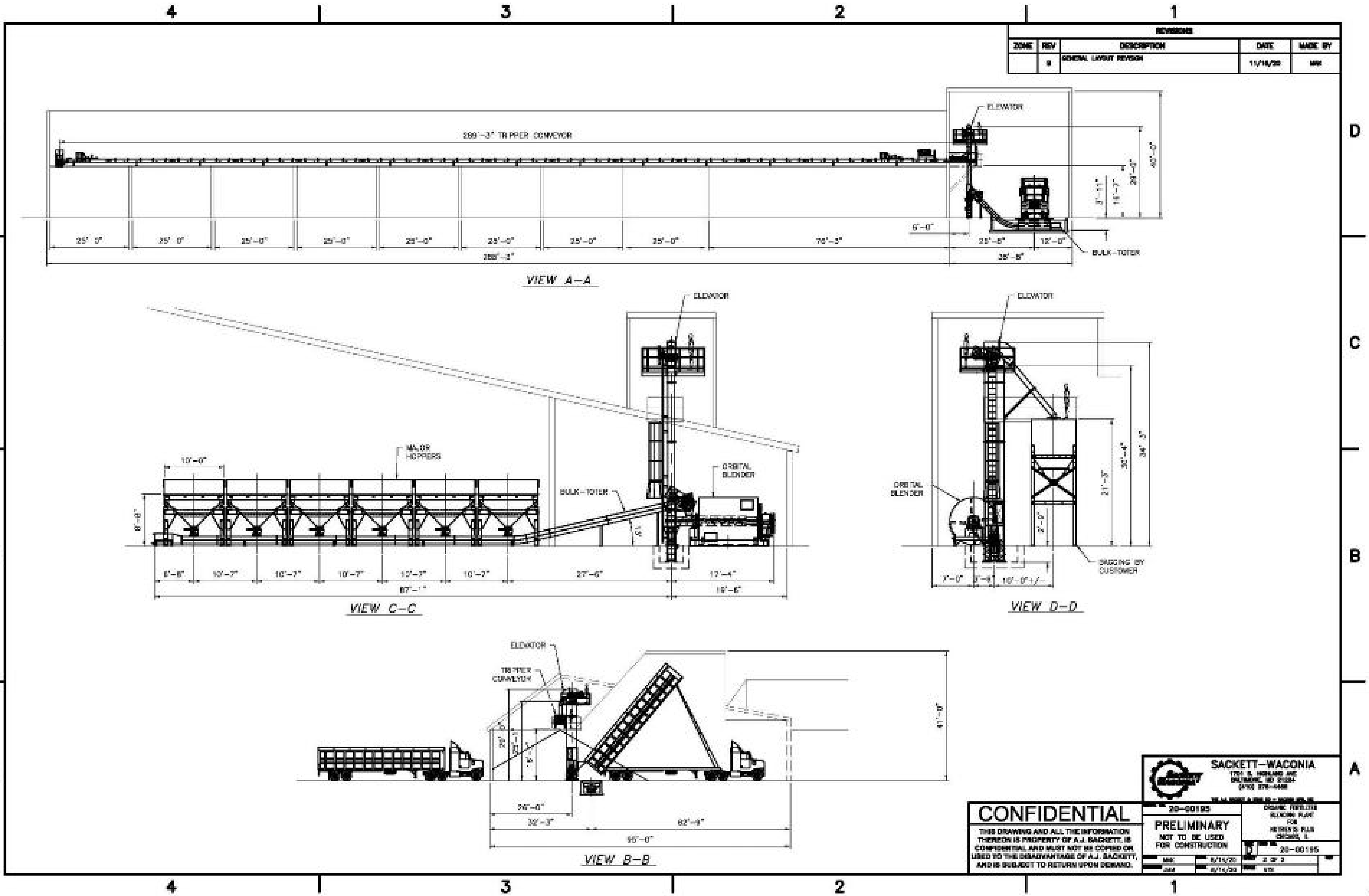
PRELIMINARY
NOT TO BE USED FOR CONSTRUCTION

ORGANIC FERTILIZER BLENDING PLANT FOR NUTRIENTS PLUS CHICAGO, IL

20-00195

1 OF 2

B


REVISIONS
ZONE | REV | DESCRIPTION | DATE | MADE BY
GENERAL LAYOUT REVISION
11/16/20
289'-3" TRIPPER CONVEYOR
ELEVATOR
BULK-TOTER
VIEW A-A
25'-0"
76'-3"
289'-3"
6'-0"
25'-8"
12'-0"
35'-8"
40'-0"
29'-0"
16'-7"
ELEVATOR
MAJOR HOPPERS
10'-0"
8'-8"
BULK-TOTER
ORBITAL BLENDER
6'-8"
10'-7"
27'-6"
17'-4"
87'-1"
19'-6"
VIEW C-C
ELEVATOR
ORBITAL BLENDER
BAGGING BY CUSTOMER
34'-3"
30'-4"
21'-3"
7'-0"
10'-0"+/-
VIEW D-D
ELEVATOR
TRIPPER CONVEYOR
41'-0"
26'-0"
32'-3"
62'-9"
95'-0"
VIEW B-B
SACKETT-WACONIA
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20-00195

Bagging/Palletizing/Shrink-wrap Line - Hamer-Fischbein

Two Companies with Similar Beginnings
In the early 1900s two packaging companies emerged upon the Minneapolis packaging supplier industry - Hamer and Fischbein. Both companies developed their own solutions to closing industrial product bags that were prevalent during this time. Some of these products include flour, potatoes, and packaged ice. In these early years, Fischbein developed and perfected its bag sewing technology; and Hamer its practical Ring bag closer.

One hundred years later, brought together under the Duravant family of operating companies, the two businesses merged to form one vibrant company - Hamer-Fischbein. This new dynamic company offers a full line of bag filling, closing, automated bagging and palletizing Equipment targeted to industrial bagging customers.

Hamer-Fischbein Plymouth Plant
Hamer-Fischbein Today
Hamer-Fischbein designs and manufactures bagging equipment and packaging solutions under the Hamer and Fischbein brands. These trusted brands combine almost 200 years of industrial bag closing and automated packaging experience to improve packaging line efficiency and profitability.

Hamer-Fischbein is the worldwide leader in Bagging Automation, Bag Filling, Bag Top Closing equipment and turnkey bagging automation systems. The portfolio includes the widest product range of weighing, filling and bag closing technologies; manual, semi- and fully automatic bagging systems; form fill seal bagging automation; conveyors; and robotic bag palletizers. Hamer-Fischbein serves diverse end markets including agriculture, animal feed, seed, pet food, chemical, mineral, milling, food, building material, medical and pharmaceutical, lawn & garden and packaged ice with sales and service in over 160 countries. The company operates manufacturing facilities in Plymouth, MN and Statesville, **r Mission** is to consistently deliver unrivaled

performance to our customers and partners through leading product design, project delivery, and exemplary technical service.

Bart Lynam

From: Paul Solberg <paul.solberg@hamer-fischbein.com>
Sent: Friday, November 13, 2020 1:22 PM
To: Bart Lynam
Subject: RE: Hamer-Fischbein - Chicago Blending and Bagging Facility
Attachments: 20_11_6098 Nutrients Plus - Chicago, IL.pdf; Plant Setup 15.pdf; Model 600NW-200NW-brochure-9-16.pdf; Model 2090 4.19.pdf; HF-Palletizer_broch-8.19.pdf; Wulftec WCRT-200.pdf

Hi Bart,

Thank you again for the time you spent with me on the phone helping me understand your business and future packaging needs. I've attached a budgetary quote and spec drawing for an automated packaging system for your product in poly bags. After reviewing please let me know what questions/concerns I can address for you.

We discussed the possibility of purchasing two line...if you were to purchase 2 lines the single stretch wrapping system would be able to handle full pallets from both lines so a second wrapper would not need to be added. We would also be able to offer a 2% discount on the purchase of 2 systems at the same time.

Model 2090 Video Link: https://vimeo.com/288316319
Robotic Palletizing Video Link: https://vimeo.com/240639426

Regards,

Paul Solberg
Regional Sales Manager – Great Lakes

HAMER FISCHBEIN
A DURAVANT COMPANY

HAMER-FISCHBEIN
14650 28th Avenue North
Plymouth, MN 55447
Direct 763.277.8705
Mobile 612.799.0053
Fax 763.231.0101
paul.solberg@hamer-fischbein.com

From: Bart Lynam <b.lynam@midwayenterprises.com>
Sent: Tuesday, November 10, 2020 3:55 PM
To: Buffy Hagerman <Buffy.Hagerman@hamer-fischbein.com>

Cc: John Moriarty (jmoriarty@claruschoice.com) <jmoriarty@claruschoice.com>; Bart T Lynam <btlynam@comcast.net>
Subject: Hamer-Fischbein - Chicago Blending and Bagging Facility

Buffy,

1. We are looking for a fully automated bagging, palletizing, and shrink-wrap line
2. See the attached worksheet - the team is reviewing, and I will send you any corrections.
3. I also attached our conceptual floor plan for the facility.
4. See the attached area map for our prospective property location

We will price 1-line and a 2nd as an alternate (hopefully, our budget will allow for 1-lines.)
Are there any savings when we purchase 2-lines?

Regards,

Bart R. Lynam
LYNAM

Phone: 630-841-7755
Email: bart@lynam.com
Web page: https://www.lynam.com/
LinkedIn www.linkedin.com/in/bart-lynam

HAMER FISCHBEIN
A DURAVANT COMPANY

14650 28th Ave. N., Plymouth, MN 55447-4821
Phone 800-927-4674 Fax 763-231-0101

November 13, 2020 Quote # 20_11_6098

Mr. Bart Lynam
Nutrients Plus
Chicago, IL

PH: 630-841-7755
Email: bart@lynam.com

Budgetary Quotation for Automatic Bagging and Robotic Palletizing System

Project Description: The proposed system is designed for bagging and palletizing of free flowing NPK fertilizers. The automatic bagging system includes bulk hopper/scale support structure, net weigh scale and form/fill/seal machine. Filled and sealed bags will be conveyed to the robotic palletizing system for stacking. The robotic palletizing system a pallet & slip sheet dispenser. After stacking full pallets will be automatically transferred to a Wulftec automatic stretch wrapping system.

The proposed system is designed to operate at 12-14 BPM and has the capacity to stage 3 finished/wrapped pallets while a 4th is being wrapped. System speeds and finished pallet staging capacity can be increased if desired, please advise and I will provide a revised proposal.

Hamer proprietary Easy Pic ™ operator HMI software simplifies operation of your robot palletizer and makes operator training quick and easy. With Easy Pic ™ your operator uses a simple touch screen to adjust pallet patterns, or create new patterns. No more working with complex robot control pendants and hours of training for every operator.

All Hamer Robot Palletizers are assembled and pre-wired with conduit/j-boxes prior to testing at Hamer's manufacturing facility in Plymouth, MN. Equipment is disassembled for shipment and easily assembled at your production facility.

HAMER FISCHBEIN

14650 28th Ave. N., Plymouth, MN 55447-4821
Phone 800-927-4674 Fax 763-231-0101

Specifications and Unit Pricing

Bag Size (Full):	Customer to Provide
Bag Weight:	35# and 50#
Pallet Pattern (s):	Customer to Provide
Number of Layers:	Customer to Provide
Max Pallet Height:	Customer to Provide
Max Pallet Weight:	Customer to Provide
Pallet Type:	Standard 40x48
Bag Rate:	12-14 BPM Pallet Height/configuration dependent
Electrical:	460V, 3 PH, 60 Hz
Air:	Clean/Dry Air Required
Pass Height:	Automated systems use a standard 18" CDLR Top of Roller pass height.
CDLR Speeds:	All Automated systems CDLR conveyors operate At 60 FPM standard speed.
Environment	40F to 104F Non-condensing Humidity

<u>Customer Note on Bag and Pallet information:</u> *It is important Hamer receive above bag and pallet information as early in the design and project development process as possible. Palletizing systems are designed to support the specifics of <u>your application</u>.*

Receiving bag and pallet information late in the design or purchase process may impact system footprint and cost. We try our best to ensure our customers get accurate and detailed pricing on all projects as early as possible. Late arrival of bag/pallet information could impact your system pricing.

HAMER FISCHBEIN
14650 28th Ave. N., Plymouth, MN 55447-4821
Phone 800-927-4674 Fax 763-231-0101

1) Heavy Duty Scale Support Structure w/100 cu ft Surge Hopper
Gravity Feed DUPLEX:
Used with gravity feed, servo gravity feed or gravity/vibratory feed scales only. Structural Steel scale support structure incorporating a 100 cubic foot capacity product hopper, ladder and mezzanine for ease of scale access. Hopper unit consists of three (3) Sections. Upper section is the product hopper, center section supports the weighing system and access platform, lower section consists of 4 legs separately mounted to center section. Steel I Beam Construction. Designed to OSHA safety requirements

Base Price Scale Support, Duplex	$	27,950.00
Options:		
304 Stainless 100 cu ft Steel Hopper (Hopper only, supports mild steel)	$	7,970.00
Capacitance Level Sensor 1 ¼" NPT hopper fitting, stainless steel, 115 VAC, 1 each for high/low (2 total).	$	1,275.00
Scale Support	$	37,195.00

2) Hamer Model 600NW+ SS -GG
Stainless Steel, High Speed Net Weight Dosing System, Gravity Feed, Simplex:
Enhanced High Speed, High Accuracy net weigh scale. Simplex rates of 30 BPM on free-flowing products with consistent repeatability and fill accuracy. Heavy duty simplex net weigh bagging scale with gravity gate feeders. Assembly is constructed of 304 stainless steel for corrosion resistance. Main scale assembly is built from 2 x 2 tubular 304 stainless steel. Weigh hopper is heavy gage and air operated double doors are re-enforced 304 stainless steel, direct mount load cell increases accuracy and speed, digital readout operator station using Rice Lake 920i digital weight indicator.

- Accuracy: Up to +/- 0.5 oz @ 2 Sigma
- Speed 30 BPM (material flow dependent)
- Weighment range approx. 10 lb. to 110 lb. (5 kg. to 50 kg.)
- Dual load cell design maximizes signal strength and stabilization for increased accuracy and weighment speed
- Rugged weigh hopper doors increase operational life
- 4" Dust collection port
- Steep weigh hopper doors ensure fast product discharge, no residue
- Fully enclosed casing with easily detachable side panels for easy access
- Extra Fine Product Seal
- Programmable scale control displays scale weights, target tolerances,

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surge bin fill status
- Controller stores up to 100 pre-set formulas
- NEMA 4X 304SS controller enclosure
- RS-232/485 Communications output to printers, other devices
- Controller is UL, CUL, OIML and NTEP approved

Electrical Requirements: **110 VAC 60Hz single phase 5 amp**
Air Requirements: **10 CFM@ 80 PSI Clean/Dry Air**

Base Price Model 600 NW+SS, Simplex	**$**	**33,450.00**
Application Requirements:		
304 SS Simplex Collating Chute Std. 38" Long or 12, 14, 16, 20, 24, and 29" Lengths	**$**	**1,320.00**
304SS Hermetically Sealed Load Cell Upgrade (Simplex) Replaces standard aluminum load cells.	**$**	**1,275.00**
600NW+ Servo-Control Gravity Scale Upgrade (Simplex) Complete servo control of gravity gate. Servo setup and operation from scale **Instrument Electrical: 230V, 1 Phase, 60 Hz**	**$**	**9,200.00**
Model 600 NW+ SS Total	**$**	**45,245.00**

3) Model 2090 Heavy Duty Form, Fill and Seal Packaging Machine

The Model 2090 automated bagging machine combines decades of innovation into a single high powered industrial packaging machine. It features a 4" structural steel frame, structural steel zinc dichromate plated sub assemblies, 4" plated hardened steel pulleys with sealed bearings, B series belts, and SEW Euro-drive motors. Variable speed AC motor on hot air sealer allows for smoother bag start/stop and easy matching of timing to bag conveyors. Hot air sealer features an automatic pneumatic separator control that separates the two sides of the sealer when a bag is not present, reducing heat sealer belt, bearing and pulley wear.

The Model 2090 frame is powder coated to withstand corrosives. All operational components are top mounted. The industrial hot knife assembly has a steel backing plate for stability as it cuts a bag side and welds seams simultaneously. Teflon knife backing keeps bag seams clean. All adjustment controls are scaled for easy, trouble free bag size changes. The 2090 forms a bag from a preprinted roll of centerfold low density polyethylene film, 2 mil to 8 mil and sizes from 10 3/4" to 26" wide, and lengths up to 42" long. After forming and filling the bag is sealed with an integral hot air sealer. Machine will support 2 vertical roll holders in various locations on frame. Bag rates up to 34 BPM.

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Air removal is supported by a pneumatically actuated bag perforator providing up to twelve holes (vertically) along the side edge of the bag. Perforators are mounted to the hot knife feature, improving perforation performance and reducing wear parts in the perforator assembly. Individual hole perforators are removable and range in size from pin hole up to 7/16" diameter in increments of 1/32". Perforations facilitate air removal for effective bag palletizing.

2090 Standard Features include:

- 24VDC solid state controls
- Simplified operator touch panel
- Bag counting, Operational alarms & diagnostics
- Wire Mesh Safety Enclosure with door interlocks
- UL Listed NEMA 12 control panels
- Hand held remote operator control
- SEW Euro-drive motors
- Five color spectrum photo eye with learn
- Top frame mounted internal components
- Automatic bag top heat sealer with auto-open
- 304 Stainless steel product contact points
- Single cylinder jaw assembly w/easy change features
- Proprietary heavy duty hardened self cleaning dual sealed pulleys
- Pre-Fill, Post-Fill bag staging for added seal integrity
- Variable speed AC motors on heat sealer
- Double heat seal with knurl for seal integrity
- 20" Integrated bag top seal cooling plenum
- Heavy duty powder coated 4" structural steel frame
- Zinc Dichromate plated internal components

Electrical: (1) 230V, 3 phase 60Hz, 60 amp
Air: (1) 45 cfm @ 80 psi. ¾" line minimum - Clean/Dry Air, Note some options increase air req

Model 2090 Base Price	$	107,550.00

Application Requirements:

MaxFill ™ Product in feed Chute – Scale: 304 stainless steel product chute connects net weigh scales to FFS machine Maxfill ™ provides up to 30% greater chute volume for faster bag filling	$	810.00
Additional Fill Opening Assembly Jaw components required to support additional fill openings/chute sizes. 1 assembly required with each additional chute size.	$	725.00

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JamControl™ Bag Jam Sensor Photo eye and lever control for hot air sealer. Automatically opens hot air sealer when a "too full" bag is presented, eliminating bag jams. Bag drops from sealer for easy cleaning.	$	400.00
Bag Top Seal Air Scrubber: De-duster removes dust from top seal area prior to sealing. Ensures bag top seal integrity	$	925.00
Jaw Spares Kit: Additional jaw liners for jaw assembly (wear part). Set of 5 Selected to match your jaw/chute sizes at order.	$	475.00
Spare Parts Kit: Preventative maintenance parts kit simplifies routine maintenance. Includes film feed belts, heat element, pulleys, Teflon cloth and seal pad rubber.	$	1,990.00
Vertical Film Lift Device: Core chuck for use with swing arm or overhead crane. Improves film handling and speeds film change times.	$	995.00
460 Volt, 3 Phase Power, NEMA 4X Stainless Steel Includes a 10KVA step down transformer, wiring and mounting to HFFS Frame. NEMA 4X 304 SS enclosure for corrosive environments	$	2,950.00
Fill Conveyor Bag Guides Used with fine or high bulk density products to ensure bag remains properly positioned as it transfers through the FFS machine	$	600.00
NEMA 4X Corrosion Resistant Control Panel with Junction Boxes: NEMA 4X 304 Stainless steel control panel/enclosure provides the maximum in corrosion protection for high corrosives applications.	$	6,150.00
FFS Corrosion Protection Package: Painted conveyor beds and heat sealer, 304 stainless steel hardware, machine adjustments, lift chains, fill opening racking, and other critical adjustment components	$	9,700.00
Model 2090 Total	$	133,270.00

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4) Model 4200-36 Knockdown/turning conveyor:
8' long, 36" wide conveyor, 120 # high slip smooth top belt. 10 gage formed mild steel conveyor frame. Crowned take up and drive pulleys. Adjustable knockdown bar has UHMW paddle, positioned at the conveyor entrance where the bag is pushed over. Adjustable position turning wheel rotates the bag butt first. Wheel rotates or can be locked down. Stainless steel bag guides for high slip for bag positioning. Quick adjust handles for wheel. Leg stands provided. 1 HP, 3 Ph TEFC motor. 105 FPM
Electrical: 230/460 VAC, 3 PH, 60 Hz

Model 4200 Conveyor- 8 ft	$	**8,375.00**
Application Requirements:		
Manual Height Adjustment - single (one side)	$	**1,950.00**
Bag Tracking Photoeye Photoeye, mounting, cabling, logic for tracking bags on automated systems	$	**875.00**
Model 4200-36 total	$	**11,200.00**

5) 8' Belt Over Square Roller Conditioning conveyor: $ **12,300.00**
8' long 24" wide heavy-duty belt over square roller style conveyor.12" x 7 ga steel side frame,. 2.5" x 2.5" Square 7ga chain driven steel bed rollers on 12" centers 4" drive/tail pulley, 1.9" return rollers. 100 FPM belt speed. 3/4 HP TEFC motor includes bag guides. Powder coated.

6) 3' Pacing Conveyor: (qty. 2) $ **11,700.00**
36" long 24" wide heavy-duty slide belt with V-belt tracking conveyor. 10 gage 6" formed channel side frame,120 FPM belt speed. 3/4 HP TEFC motor includes bag guides. Powder coated. $5,850.00 ea.

7) 3' Picking Conveyor: $ **6,200.00**
36" with cut outs to allow the end effector to pick the bags up from underneath. 24" roller conveyor 1.9" rollers with urethane sleeves for positive bag grip on 3"centers, 10 gage 6" formed channel side frame.3/4 HP TEFC motor. Chain driven. Includes fixed bag stop. Powder coated.

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8) Hamer Model RPM Robot Palletizing Cell- Heavy Capacity:

Yaskawa MPL 160 II Palletizing Robot Arm - 4 Axis - 160KG (352 lb) payload. Exclusive internally routed air lines and wiring between base of robot and end of arm too. Hallow wrist provides wide range of wrist motion and maximum cable life. Supports up to 4 in-feed lines and multiple pallet build locations.

System Includes:

MPL 160II, 4 axis servo driven, 160KG robot arm:
200 lb available lift capacity (100 lb tool capacity)

Robot Mounting Base Plate/Riser:
Heavy duty steel base-plate designed to bolt to the customer's floor
(at least 8 inch thick concrete required). Robot riser constructed to meet specific requirements of each palletizing system. Heavy duty steel construction. Std. 18" riser included in base system.

Primary Servo Cooling Fan:

Robot Teach Pendent:
Windows ® CE programming pendent with touch screen and USB interface

Hamer Heavy Duty Industrial End of Arm Tool:
50 FX End of arm tooling for bag palletizing. Stainless steel gripper fingers 5/8 inch diameter, high flow pneumatic valves. Fixed bag width end effector is standard. 110 lb payload. Used on bags 6.7" to 19.6" wide, 2" to 5.5" thick. Other options available.

DX200 Robot Controller:
Yaskawa standard operational pendant used for entering of panel parameters as well as starting and stopping of the program. Includes:

- Extensive I/O suite includes integral PLC
- Supports all major fieldbus networks including: EtherNet/IP, DeviceNet, Profibus-DP and others
- Compliant to ANSI/RA 15.06-1999 and other relevant ISO safety standards.
- 7 Meter Robot Master Control Cable

Temperature range:	**40 F to 110 F, 90% humidity, non-condensing**
Electrical:	**480 VAC, 3 PH, 60Hz, 20 FLA**
Air:	**2 CFM @ 80 PSI**

RPM Heavy Capacity Robotic Palletizing Arm: **$ 127,250.00**

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Robot Application Configurations:

Ethernet Connectivity for remote troubleshooting: Requires customer connection at plant site	$	**1,250.00**
Yaskawa DX200 Chiller for High Temperature Installations Mounts to DX200 controller door, 2080 BTU integrated air cooling system for servo control boards, robot system controls	$	**7,950.00**
50 AG Easy Bag Width Adjust Adder Includes mechanical handle/screw bag width adjustment with bellows/covers for improved operation in dirty plant environments. 6.7" to 19.6" adjustment	$	**2,300.00**
42" Robot Mounting Riser Adder	$	**2,050.00**
RPM Robotic Palletizing Arm w/Options:	$	**140,800.00**
9) Corrosive Environment Package: Robot Arm Robot suit NEMA 4X Stainless Steel Control Panel/J-Boxes	$	**16,100.00**
10) Fully Automatic Palletizing System Enhanced Control Package: Sensors, I/O, Motor Starters, Allen Bradley PLC, includes controls for Pallet dispenser, slip sheet dispenser and full pallet transfer CDLR conveyors. Operator touch screen for multiple pallet stack selection, controls for pallet/slip sheet dispenser and full pallet conveyors. Includes Hamer proprietary EasyPic ™ Operator HMI. Hamer proprietary AB software package allows touchscreen programming of pallet stack changes and new pallet stack configurations via intuitive operator control simplifies programming and eliminates need to learn Robot specific control software. 4-6 pallet configurations standard. Additional configuration available at additional cost. Ethernet IP hardware included.	$	**21,650.00**
11) Fully Automated Robot Cell Safety Guarding: Safety guarding consists of wire-mesh safety fence with single operator access door with safety interlocks for robot shut down when opened. Safety light curtain at full pallet exit.	$	**12,700.00**
12) Automatic Pallet Dispenser with Pallet Magazine: 4" structural steel tube frame with heavy duty ¼" structural steel cross members. Individually adjusted ¼" structural steel side guides support a range of pallet	$	**27,000.00**

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sizes and assist managing pallet stack as they discharge, Pneumatically controlled pallet capture positively grips side of pallet. 1.5 HP lift drive, photo eyes for pallet status, fork truck loaded, capacity for up to 15 pallets. 4 way and 2 way pallets and CHEP pallets. Supports sizes from 30" X 30" to 48" x 48"

13) 13' Empty Pallet Transfer Conveyor: $ 8,300.00
13'0" long, 52" wide 4 x 5.4 steel channel supports, 2 ½ x 11 ga Rollers on 6" centers, 5" Steel Channel supports, ½ HP motor, powder Coated. 18" TOC load height. 30 FPM

14) Automatic Slip-sheet Dispenser: $ 15,000.00
Dispenser capacity of a 30" stack of slip-sheets with a low slip-sheet level indicator; limit switches and valves mounted for easy maintenance. ¼" tube steel construction. Motor controlled pick/place arm uses timing belt slip sheet placement. A low maintenance, high reliability solution

15) 5' CDLR Full Pallet Transfer Conveyor with Pallet Squaring Device and Pallet Stops $ 8,500.00
3000 lb capacity CDLR, 52" effective width, 11 gauge 2.5" rollers on 4 1/16" centers, C6 x 8.2# drive channel, C5 x 5.4# idler channel and inclusive of motor and gear reducer. 60 FPM. Pallet squaring device using pneumatic blade stops and adjustable mechanical pallet guide. ¾ HP motor.

16) 7'2" CDLR Full Pallet Transfer Conveyor: $ 7,200.00
3000 lb capacity CDLR, 52" effective width, 11 gauge 2.5" rollers on 4 1/16" centers, C6 x 8.2# drive channel, C5 x 5.4# idler channel and inclusive of motor and gear reducer. 60 FPM. ¾ HP motor.

17) 5' Powered Roller Conveyor Section Wrapper Infeed Pallet Loading for Rewrap $ Included with wrapper
52" BFR, 18" pass height, 60 FPM, 4000 lbs capacity

18) Wufitec WCRT-200 Rotary Tower Style Pallet Stretch Wrapper
The WCRT-200 is a tower style wrapper with a rotating arm holding the stretch film dispenser that rotates around a properly positioned pallet.

The proposed model incorporates many standard features including:

- Up to 100 loads per hour

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- 100% Heavy duty structural steel construction – No plastic
- 25" ring gear bearing w/ pinion gear drive and Automated remote lube station for the ring gear bearing
- 17 RPM variable speed rotary arm
- 1 HP 460VAC Motor & PowerFlex AC variable frequency drive programming features including Film consumption data monitoring
- Allen Bradley Color Touch Screen – We have refined our HMI over the last 15 years and continue to add new features to further enhance operator and maintenance experience.
- Superior Electrical/Control design including Allen Bradley CompactLogix PLC with Ethernet capability
- Wulftec's exclusive 20" NO-THREAD® Powered Pre-Stretch Carriage (30" optional)
- Heavy duty Metal cover protection on film carriage enclosing pre-stretch components and critical sensors.
- UL/CUL approvals
- 5,000 lbs load weight capacity (optional 6000 lbs)
- 5' in-feed/ 5' out-feed contoured powered conveyor with smooth transfer
- 11'6" wrap process contoured power conveyor with smooth transfer
- Standard pass height 18"
- 2-½" diameter rollers on 3 3/4" centers, 52" standard infeed/outfeed conveyor width
- Auto film clamping device / Tilted clamp for clean release
- Standard heavy-duty safety fencing. The overall height of the fencing is 80" from the floor, with a 5.5" sweep space under the panels. Includes one interlocked access door with a tongue-operated guard-locking interlock switch to lock the door during operation and keeping it locked until the machine has come to a complete stop.

Power: 460VAC, 3 PH, Air: 3CFM@80 PSI

Wulftec WCRT- 200 Stretch Wrapper Base Price:	$	**69,700.00**
Configured for your application:		
30" NO-THREAD Powered Pre-Stretch Carriage	$	**900.00**
In Cycle Top Sheet Dispenser With auto height sensing device, bottom film loading, double chain driven horizontal and vertical motions and lack of top sheet alarm. Also includes: 60" to 72" wide top sheet roll capacity Includes a 30" extension on the conveyor for the Top Sheet boom path.	$	**22,900.00**
Background Suppression Photoeye For dark or shiny loads autoheight detection.	$	**785.00**
Side Loading Capability on Infeed Conveyor Section Conveyor driving chains are situated on one side of the conveyor only.	$	**750.00**

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This allows easy loading from the side of the conveyor in order to avoid double picking. **Extend Infeed Conveyor 1' for Side Loading**	$	795.00
Main Control Panel Cooling Fan Addition of a 117 CFM cooling fan with filtered exhaust port on the main control panel for use in warm environments where ambient temperature is between 85" and 98"F	$	385.00
Forklift Detection Photoeye To disable conveyor while forklift is loading/unloading.	$	1,800.00
Wulftec WCRT-200 Stretch Wrapper w/options:	$	98,015.00
19) 5' Powered Roller Conveyor Section – Wrapper Outfeed 52" BFR, 18" pass height, 60 FPM, 4000 lbs capacity	$	Included with wrapper
20) 5' Powered Roller Conveyor Section 52" BFR, 18" pass height, 60 FPM, 4000 lbs capacity	$	5,520.00
21) 5' Gravity Roller Conveyor Section for Finished Pallet Pick 52" BFR, 18" pass height, 5000 lbs capacity and 2.5" dia. rollers on 1" shafts at 3" centers	$	2,725.00
Complete System Budget Price:	$	620,620.00
Estimated Bagging System Startup Services *Hamer-Fischbein Technician, 1 Week (M-F), All Expenses Included,* *Customer will be billed at actual cost/expenses*	$	*10,000.00*
Estimated Robotic Palletizing System Startup Services *Hamer-Fischbein Technician, 1 Week (M-F), All Expenses Included,* *Customer will be billed at actual cost/expenses*	$	*12,000.00*
Estimated Wulftec Stretch Wrapper Startup Services *Provided by Wulftec Distribution Service Team.* *Customer will be billed at actual cost/expense*	$	*4,000.00*

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Startup and training:
Start up services includes wiring inspection, air hook-up inspection, machine start up and operator training.

For bagging systems that include resale items such as:

- Thermal transfer or Ink jet printers
- Print and apply systems
- Check weighing systems
- Metal detection systems
- Or like purchased and integrated system components

Product training, technical support and on-going service support is provided by the original equipment manufacturer. Hamer will provide original equipment manufacturer manuals and contact information with system documentation.

Successful start up requires close coordination between the manufacturer and the customer. Attention to installation details and communication between both parties is essential.

Hamer technicians and/or Hamer contract technicians arrive fully prepared to start up and train your employees on your purchased equipment/system. For them to be effective in this important function, the following items must be completed by the customer prior to technician arrival:

- Machine installation by company millwright or contract riggers. Machine installation includes placement of Bagging machine, Scale or Volumetric Filler, Conveyors, Controllers, Palletizers, Wrappers and any required Support Structure assemblies.
- Installation of properly sized electrical service and compressed air lines with sufficient supply of clean dry air to meet specified machine air requirements.

A Hamer startup form, system drawings and supporting documentation will be provided at time of purchase.

Hamer-Fischbein Support Pro ™ Start up, Training and Field Service Hourly Rate(s):

All travel expenses will be billed at cost. These expenses include; airfare, ground transportation charges, lodging and meals. Copies of receipts are available upon request. Car travel, other than rental where applicable, is billed at $ 0.58/mile.

Field Service Rates	Technician	Palletizer/Field Engineer
Labor - weekdays	$140/hour	$155/hour
Labor - weekday overtime, weekends, holidays	$185/hour	$195/hour

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Travel Time - weekdays	$100/hour	$110/hour
Travel Time - weekends, holidays	$130/hour	$150/hour

If there are reasons beyond our control, where the system start up is not able to occur (plant start up delays, training conflicts, power or air supply problems, film shortage or (other issues) and our technician is prevented or prohibited from performing their start up duties, the Customer will be charged our normal rates for the idle hours.

Terms:
40% down, 40% @ 60 days and balance 10 days before ship date.
All prices quoted in US Dollars; prices do not include misc. charges, freight, sales taxes.
Prices valid for 30 days

Delivery:
20-22 weeks from receipt of down payment.

Freight:
FOB Plymouth, MN ship via van lines
Crating charges may apply

Material/Product Testing:
Should a customer test be requested, test materials (product and film) will be provided at no cost to Hamer. This includes all associated freight to and from the test site.

Quotation preparation by:

Paul Solberg
Regional Sales Manager – Great Lakes

Direct 763.277.8709
Mobile 612.799.0053
paul.solberg@hamer-fischbein.com

HAMER FISCHBEIN®

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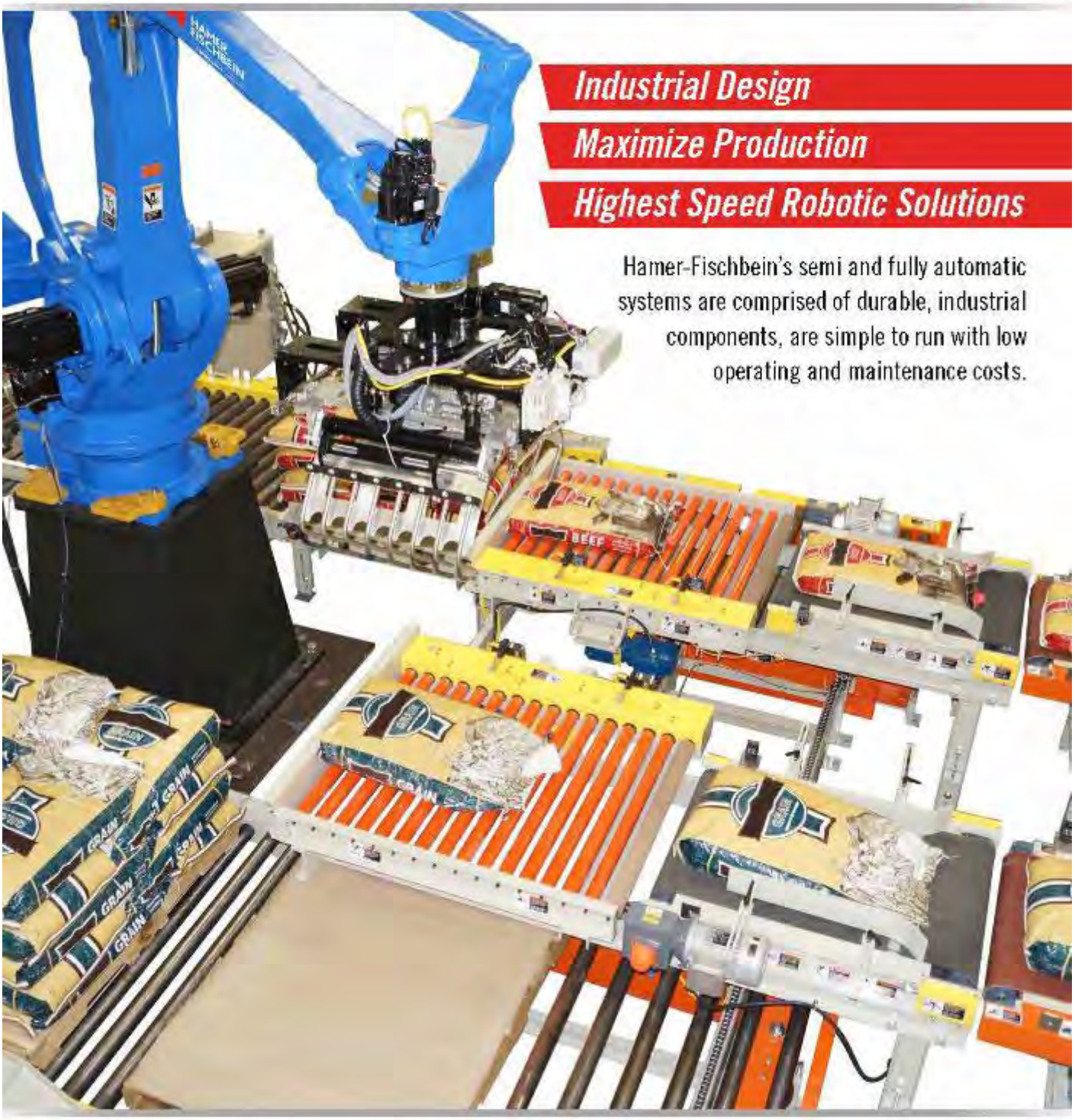
Model RPM™

Robotic Palletizer Module



Industrial Design

Maximize Production

Highest Speed Robotic Solutions

Hamer-Fischbein's semi and fully automatic systems are comprised of durable, industrial components, are simple to run with low operating and maintenance costs.

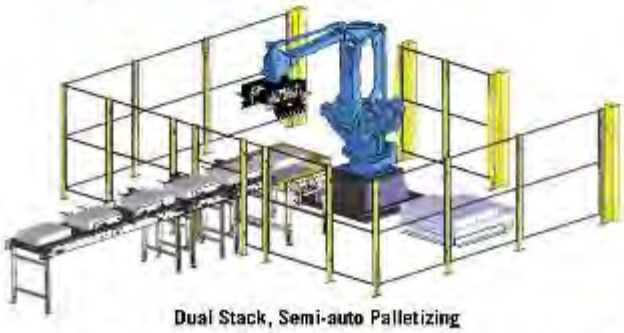
Hamer-Fischbein Robotic palletizing sys

The Hamer-Fischbein Robotic Palletizing Module (RPM)™

Hamer-Fischbein robotic palletizers are completely assembled, wired and tested in our Minnesota manufacturing facility. Systems are wired with conduit and j-boxes to make system re-assembly and install in your facility fast and easy. All palletizers are programmed and tested on the specific products they will be running to ensure stack quality and speeds before they leave our factory.

Semi-automatic single or dual stack systems

- Small footprint
- Low cost, high productivity
- Single or dual cell configurations



Dual Stack, Semi-auto Palletizing

Hamer-Fischbein semi-automatic palletizers are an efficient palletizing solution, providing 80% of palletizing automation at a significantly lower cost than fully automatic systems. Safety light curtains and controls ensure the robot is not active in a stacking cell when fork trucks are present. Semi-automatic palletizers can be configured in dual stacking cell (shown) or single stacking cell configuration.

Bag palletizing

Fully automatic palletizing systems

- Automate from bagging line to stretch wrapper
- 100% of palletizing labor is eliminated
- Highest production rates

Fully Automatic Palletizing

To maximize impact of automated palletizing, the addition of a Pallet Dispenser, Slip Sheet Dispenser and fully automatic Full Pallet Transfer Conveyors provide a completely automated palletizing system. This system feeds empty pallets with or without slip-sheets automatically to the stacking area. Products are then picked and stacked on the pallet. When complete, the full pallet is transferred to in-line stretch wrapping or stretch hooding equipment.

Pallet Dispenser

Slip Sheet Dispenser

HAMER FISCHBEIN

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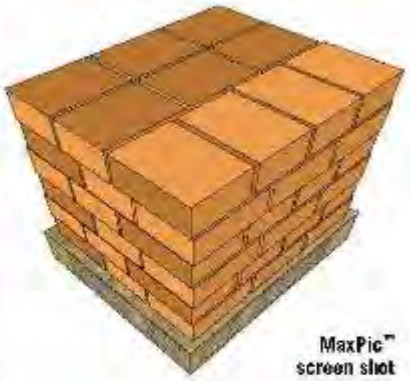
tems–from simple to sophisticated

Exclusive EasyPic™ operator HMI MaxPic™ operating system

EasyPic™ allows for fast and easy adjustment to pallet stack, uploading stored pallet configurations or creating new pallet designs.

MaxPic™ incorporates Yaskawa Pallet Solver™ and EasyPic™ into one powerful programming, operational and multi-plant data share tool. With MaxPic,™ pallet configurations designed on one line or at a single location can be transmitted and shared with all MaxPic™ configured Hamer-Fischbein Robotic Palletizers. Manage up to 40 SKU's with different pallet configurations at several locations. Program/set up at one location and file share between plants for automatic upload into any Hamer-Fischbein MaxPic™ system.



MaxPic™ screen shot

End Of Arm Tooling – EOAT

Hamer-Fischbein offers a wide variety of End of Arm Tools to meet any palletizer application. All EOAT solutions are solidly built, easy to maintain and deliver maximum performance. Single pick, multi-pick, gripper or vacuum are proven performers.

Case palletizing

Industrial, Heavy Duty Conveyors

Our palletizing system conveyors are designed for long life in virtually any plant environment. Roller to roller chain drive pick conveyors, direct drive pace and in-feed conveyors, all with 10 ga formed channel sides, powder coat finish, heavy-duty bearings and industrial grade belting and rollers. Our CDLR, chain driven live roller full pallet conveyors come in 3,000 lb. or 5,000 lb. and are built using 6" structural steel channel with powder coat finish.

Hamer-Fischbein™ Robotic Palletizing Systems

STANDARD FEATURES

- Fastest palletizing rates
- Bag, case, pail/bucket palletizing
- Small footprint systems
- Programmable/selectable pallet patterns
- Yaskawa/Motoman industrial robotic arm
- Allen Bradley® PLC with Touchscreen
- 160KG/320 lb capacity robot arm
- DX 200 robot control panel
- Robot mounting base
- Robot teach pendant
- Industry standard wire mesh safety guarding with interlock access door
- Safety compliant to ANSI/RIA Safety requirements

OPTIONS

- EasyPic™ Operator HMI
- MaxPic™ operating system
- Fully automatic or semi-automatic systems
- Multiple robot arm models
- NEMA 4X controls and robot protection packages for corrosive environments
- Access to full line of Yaskawa/Motoman robots for custom solutions
- Corrosion resistant packages for conveyors
- Various power options
- Servo chiller for high temp
- End Of Arm Tooling:
  - Bag Clamp, single or multiple pick
  - Bag Clamp, fixed size, manually adjustable or, servo/automatically adjustable
  - Case Grip, single or multiple pick
  - Fork Style, multiple pick
  - Vacuum, single or multiple pick
- Multi-function end of arm tooling:
  - Pallet pick/place
  - Slip-sheet pick/place
  - Auto tool change
  - Auto height sensor
- Multiple pick points
- Multiple stack points
- Custom conveying for bag, case, bucket/pails conditioning, in-feed, pacing, picking, power curves, accumulating
- Automatic Pallet Dispenser
- Automatic Slip Sheet Dispenser
- CDLR full pallet conveyors
- 90 degree full pallet transfer
- Quad muting light curtains for continuous operation (semi automatic)
- Integrated automatic stretch wrapper or stretch hooder
- Automated, semi-automated or manual bagging systems

SPECIFICATIONS

Palletizing rates:

- Semi-auto, up to 22 per minute
- Single pick, fully automatic, up to 28 per minute
- Multiple pick, fully automatic, 40+ per minute

(rates are pallet design/case/bag size dependent)

Power: 460V, 3 Ph, 60 Hz
Air: 2-10 CFM @ 80 PSI (design dependent)
Controls: NEMA 12 enclosure, UL/cUL
Safety: Design/Controls are compliant to ANSI/RIA requirements

800-927-4674

Your authorized Hamer-Fischbein representative:

HAMER FISCHBEIN
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MADE IN THE USA

16650 28th Ave. N., Plymouth, MN 55447 • 763-551-0100 • packaging@hamer-fischbein.com • www.hamer-fischbein.com

Hamer™

Model 600NW+
Model 200NW+
Net Weigh Scales

High Speed

High Accuracy

High Repeatability

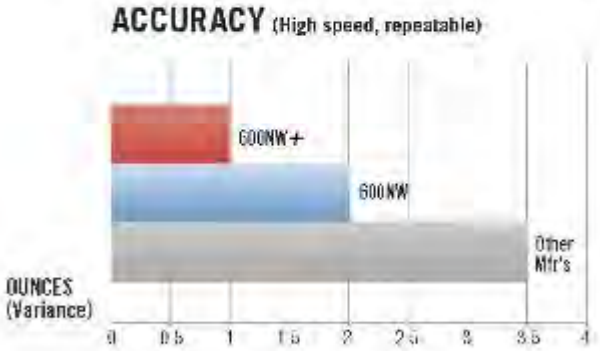
The Hamer Models 600NW+ and 200NW+ are the only net weigh fillers available that offer combined high speed and high accuracy performance. These enhanced technology scales set a new standard for net weigh filling.

EVERYTHING IN BAGGING EQUIPMENT™

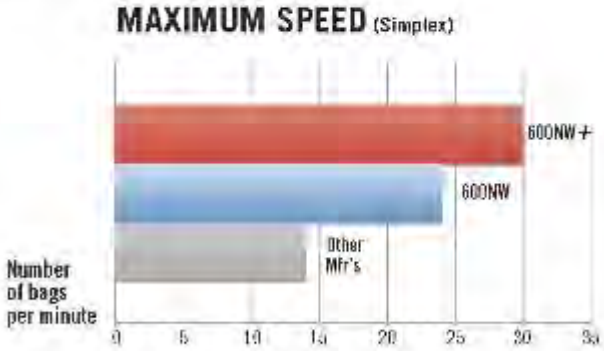
MADE IN THE USA

Faster Return on Investment

After years of research and hundreds of net weigh installations, Hamer-Fischbein engineering developed our new enhanced technology signal processing system. This new technology improves repeatable filling speeds by 20% and repeatable accuracy by 30%, taking net weigh performance into unheard of processing speeds and fill accuracy. When comparing Hamer 600NW+ and 200NW+ performance to other manufacturers' products, the results are startling.



50 lb Fill, 50 lb Bulk Density, Gravity Feed



50 lb Fill, 50 lb Bulk Density, Gravity Feed

New 200NW+ Small Weighment

Based on the same robust design as the Model 600NW+, but in a much smaller format, the Model 200NW+ offers heavy-duty industrial quality dosing of small weighments. The all structural steel or optional stainless steel construction mirrors the Model 600NW+ design. Able to reliably process weighments of .5 lb to 30 lb, it processes at speeds of 30, 60, 80+ weighments per minute in Simplex, Duplex, Triplex or Quad configurations. Offered in pneumatic or servo controlled gravity feed configurations only.

Simplex, Gravity

Duplex, Gravity

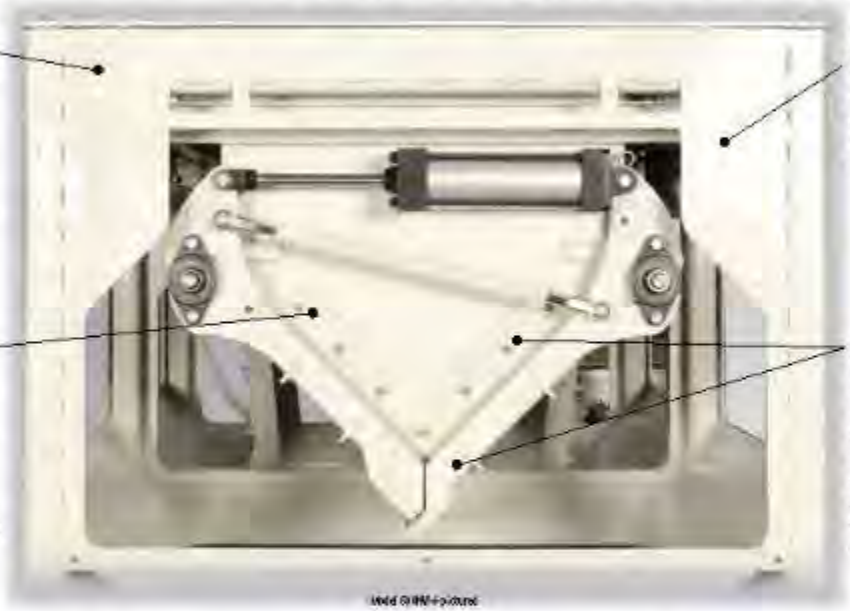
Hamer

Models 600NW+ and 200NW+

Fast, Accurate, Durable, Reliable

Increased accuracy reduces product give away. Direct mounted load cells featuring our exclusive Trueweigh™ dampening system are faster responding and more accurate than traditional scale designs using transfer rods, flexures and suspended weigh hoppers.

Fast processing time. Precision load cells, cutting edge high speed electronics, and an aggressive weigh hopper design with steep door angles and expanded length/width dimensions speed material dispensing. No design is faster.

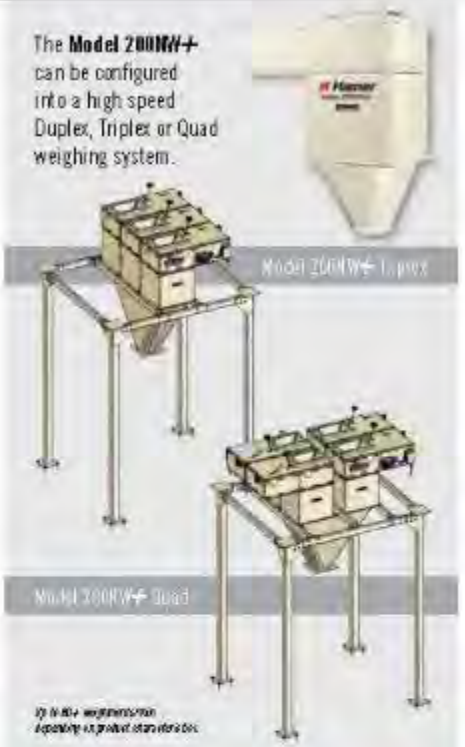


Model 600NW+ pictured

Easy to maintain. Removable access doors on scale and feeder for product clean out. Simple design with few moving parts.

Steel Where You Need It.™ Heavy gauge steel is used throughout the design, especially in the weigh bucket assembly. Hamer scales have almost twice the steel of competitive designs.

The **Model 200NW+** can be configured into a high speed Duplex, Triplex or Quad weighing system.



Up to 600+ weighments/min depending on product characteristics

GRAVITY
- Products: Free Flowing, Granular
- Heavy duty two position pneumatic control
- Easy adjust bulk/dribble

SERVO GRAVITY
- Products: Free Flowing, Granular
- Digitally controlled servo motor
- Precise control for bulk/dribble
- Extremely high speed

BELT
- Products: Semi-free flowing
- Two Speed VFD Controlled
- Exclusive side slide out
- Lag drive/swing take up pulley
- Cut off gate

AUGER
- Products: Non-free flowing, Powders
- Two Speed VFD Controlled
- Dual Auger Design
- Pneumatic slide cut off gate
- Augers easily removed for cleaning

	600NW+ Simplex				200NW+ Simplex	
Feeder	Gravity	Servo Gravity	Belt	Auger	Gravity	Servo Gravity
Accuracy	Up to ± 0.5 oz. (15 g) @ 2 Sigma	Up to ± 0.5 oz. (15 g) @ 2 Sigma	Up to ± 1.4 oz. (40 g) @ 2 Sigma	Up to ± 4 oz. (114 g) @ 2 Sigma	Up to ± 0.5 oz. (15 g) @ 2 Sigma	Up to ± 0.5 oz. (15 g) @ 2 Sigma
Speed	Up to 26	Up to 30	Up to 18	Up to 10	Up to 26	Up to 30
Weight Range	10 lb to 110 lb (5 kg to 50 kg)				.25 to 30 lb (.23 kg to 13 kg)	
Weigh Hopper Capacity	3.5 cu ft (.10 cu m)				.8 cu ft (.02 cu m)	

Stated speeds are dependent upon product flow characteristics, material size and weighment size. Duplex, Triplex and Quad configurations provide higher speeds.

Corrosion Resistant Solutions

Bagging chemicals such as fertilizer, salt, calcium chloride, ice melt, and metal oxides with high corrosive properties can cause excessive wear and tear on your net weigh scale. The Hamer Model 600NW+ and 200NW+ are available in 304 stainless steel construction on the main scale assembly, and 304 or 316 stainless steel on contact points, gravity gate and weigh bucket.

Stainless steel gravity gate and weigh bucket, with replaceable hinge

Selecting the right material feeder

Product Characteristics

One of the most important aspects in defining the application of the proper scale is confirming your specific product characteristics. Product characteristics can include:

- Powder
- Granular
- Free Flowing
- Large Non-standard Pieces
- Abrasive
- Non-Free Flowing
- Compaction
- Aerated
- High Moisture Content
- Dust Content
- Fines Content
- Corrosive
- Sticky
- Hygroscopic

Mesh Size

Not all fine products are powders. When defining your product, confirm its mesh size. Mesh is determined by how many openings are required in a 1" square of screen to allow your material to flow. Consult a U.S. Mesh size chart to confirm your product's Mesh size. Typically products that are 200 Mesh or higher are considered fine powders.

Bulk Density

Bulk Density is typically provided in Pounds per Cubic Foot. For example many chemical fertilizer products range in the 50-65 lb per cubic foot bulk density. The higher the bulk density, typically the better (faster) the product will flow and the more weighments per minute you will achieve.

Flow Characteristics	Angle of Repose	Net Weigh Feeder Type
Very Free Flowing	Flows well at angles of 30 degrees and less	Gravity/Servo Gravity
Free Flowing	Flows well at angles of 30-45 degrees	Gravity/Servo Gravity
Sluggish	Flows well at angles greater than 45 degrees	Belt/Auger
Non-Free Flowing	Requires assistance to flow	Belt/Auger

Hamer™ Model 600NW+ and Model 200NW+

STANDARD FEATURES:

- High accuracy weighing
- High speed operation
- Heavy gauge steel weigh hopper
- Reinforced steel weigh hopper doors
- 4" (10.2 cm) dust collection port(s)
- Truweigh™ mechanical load damping
- Rugged platform style single point load cells
- Industrial air cylinders, valves and pneumatics
- Easy access removable scale side panels
- Easy access removable panels for feeder options
- UL Listed Controls
- Model 600NW+ Multiple Feeder designs include:
  - Gravity
  - Two Speed VFD Belt
  - Vibratory
  - Servo Gravity
  - Gravity/Vibratory
  - Dual Auger
- Model 200NW+ Feeder Designs
  - Gravity
  - Servo Gravity
- High resolution electronic scale indicator with:
  - Programmable Checkweigh
  - Scale status indicators
  - Surge hopper/silo fill level status
  - Simple programming screens
  - 100 product storage
  - Learn Pre-act

OPTIONS

- Hand Bagging Spouts: Center Grip, Dust Tight, Clamshell
- 304 Stainless steel construction
- 304/316 Stainless steel product contact
- Collating chutes for hand or automated bagging
- Linear actuator control on belt feed product gate
- Ethernet Connectivity
- Scale Support Structures
- Full bag conveyors, bag top closers
- Automated bagging systems

SPECIFICATIONS

- Two part epoxy paint
- Operating Temperature 40˚F (4.4˚C) to 110˚F (43.3˚C)
- Air: 8 cfm @ 80 PSI
- Power:
  - Gravity: 110 VAC, 1 PH, 60/50 Hz
  - Belt Feed: 230 VAC, 3 PH, 60/50 Hz,
  - Vibratory Feed: 230 VAC, 3 PH, 60/50 Hz
  - Controller: 110 VAC, 1 PH, 60 Hz, NEMA 6
- Scale Dimensions (approx):
  Model 600NW+ L 52" (132 cm), W 29" (74 cm), H 47" (119 cm)
  Model 200NW+ L 44" (112 cm), W 20" (51 cm), H 32" (81 cm)
- Weigh hopper sizes
  Model 600NW+ 3.5 cu ft (.10 cu m)
  Model 200NW+ .8 cu ft (.02 cu m)

800-927-4674

Your authorized Hamer-Fischbein representative:

HAMER FISCHBEIN®

A DURAVANT COMPANY

MADE IN THE USA

14650 28th Ave. N • Plymouth, MN 55447-1821 • Tel: 763.231.0100 • Fax: 763.231.0101 • E-mail: packaging@hamer-fischbein.com

HAMER FISCHBEIN

A DURAVANT COMPANY

Model 2090FFS™

Product cost reduction

Increased production

PROFIT...in the Bag™

Practical Innovation.

The 2090FFS reduces labor costs, improves production output while being easy to use, maintain & repair.

EVERYTHING IN BAGGING EQUIPMENT™

MADE IN THE USA

Next-generation engineering for greater speed, increas and expanded packaging versatility.

Durable

From the ground up the Hamer Model 2090 has been designed to improve uptime and production throughput. From the new main belt path to bag size changes, operator interaction has been significantly reduced. Our exclusive double sealed, self-cleaning pulley design requires no adjustment and keeps contaminants away from the belt path bearings. Combining these next-generation design enhancements with a 50% reduction in wear parts, heavy duty air cylinders and an all new fill opening design, the Model 2090 brings industrial plant bagging automation into the 21st century.

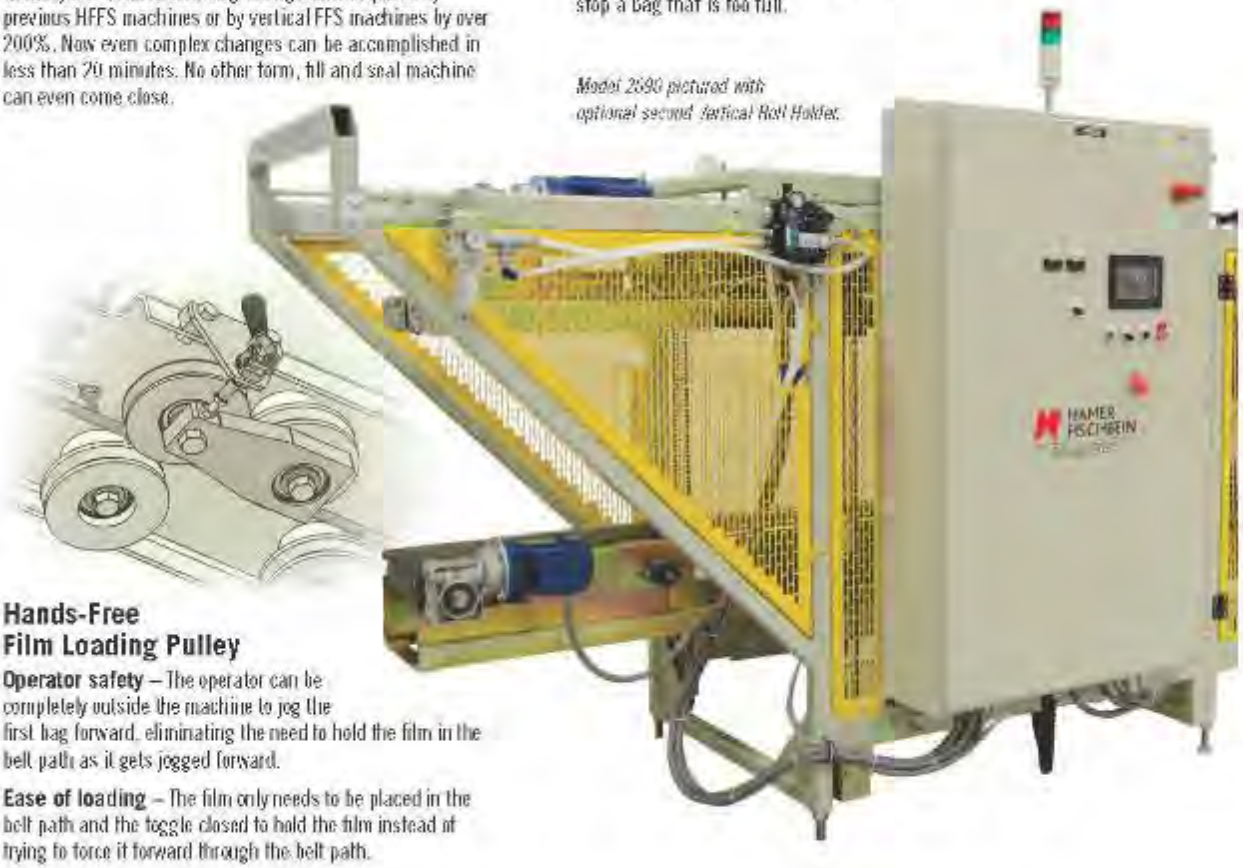
Double sealed pulleys

Specifically designed to support a wide variety of bag sizes with minimal hardware changes, the Model 2090 with QuikAdjust™ reduces the bag change time required by previous HFFS machines or by vertical FFS machines by over 200%. Now even complex changes can be accomplished in less than 20 minutes. No other form, fill and seal machine can even come close.

Hot air sealing of bag tops has many benefits in industrial bagging. Fewer wear parts and efficient sealing (even with high dust products) are just a few. The new heat sealer design in the Model 2090 incorporates all we've learned in over 25 years of HFFS design. Double sealed bearings, reduced wear parts and a self opening feature opens the heat sealer when no bag is present. It automatically closes and is ready to seal the moment a bag is presented. By opening the sealer, pressure is removed from belts, pulleys and bearings, significantly increasing component life and reducing down time for maintenance. An optional bag jam detector can be added to stop a bag that is too full.

Model 2090 bag top sealer

Model 2090 pictured with optional second Vertical Roll Holder.



Hands-Free Film Loading Pulley

Operator safety – The operator can be completely outside the machine to jog the first bag forward, eliminating the need to hold the film in the belt path as it gets jogged forward.

Ease of loading – The film only needs to be placed in the belt path and the toggle closed to hold the film instead of trying to force it forward through the belt path.

ased throughput

Versatile

Built with a modular frame, the 2090 is the most flexible large bag packaging machine available today. A wide range of bag and machine options can be added during initial machine build or after installation as field add-ons. From date coding to on-demand printing or reclosable zippers to bag handles, now you can get custom bag features and the cost saving benefits provided by bagging automation.

On-demand thermal transfer printing

Easy to operate

For automation to be successful in your plant, your operators need to be able to use the machine effectively. All Hamer equipment operates under the same basic design principle... keep it simple. The Model 2090 features improved operational software and a significant reduction in operator adjustments. These next generation improvements speed training and improve production efficiencies. With the 2090, your operators can set it and forget it.

Fast

We call it Maxfill. The all new chute and jaw design featured on the Model 2090 provides more product volume than any other design. Maxfill gets more product into the bag, faster.

State of the art electronics and an all new belt path and jaw design complete the package. It's the fastest Horizontal Form, Fill and Seal available.

BAG TYPES, CLOSURES AND HANDLE OPTIONS

Bottom Gusset

Three to six inch bottom bag gusset.

Miter Corner

45° seal across corner improves pallet wrapping, reduces corner damage

Top Trimmed

Top two inches of bag removed.

Handle

A variety of bag handle styles are available.

ROLL HOLDER OPTIONS

PowerLift™ Roll Holder option

EZ Load II™ Horizontal Roll Holder option

HAMER FISCHBEIN
A DURAVANT COMPANY

Model 2090 Industrial Horizontal Form, Fill and Seal

STANDARD FEATURES:

- 24VDC solid state controls
- Simplified operator touch panel
- Bag counting, Operational alarms & diagnostics
- Punched Metal Safety Enclosure with door interlocks
- UL Listed NEMA 12 control panels
- Hand held remote operator control
- SEW Euro-drive motors
- Five color spectrum photo eye with learn
- Top frame mounted internal components
- Automatic bag top heat sealer with auto-open
- 304 Stainless steel product contact points
- Single cylinder jaw assembly w/easy change features
- Proprietary heavy duty hardened self cleaning dual sealed pulleys
- Pre-Fill, Post-Fill bag staging for added seal integrity
- Variable speed AC motors on heat sealer
- Double heat seal with knurl for seal integrity
- 20" Integrated bag top seal cooling plenum
- Heavy duty powder coated 4" structural steel frame
- Zinc Dichromate plated internal components

OPTIONS:

- Second Vertical Roll Holder
- EZ Load II™ Horizontal Roll Holder
- JamControl™ overfilled bag detection
- Side of bag settler
- Bag settling conveyor
- Bag Handles:
  - Handle punch
  - Patch handle
  - Header/patch handle
- Bag coding
- Air removal devices
- On-demand thermal transfer printing
- Easy-open bag perforator
- Rotary bag top trimmer w/trim removal
- Mitered corner sealer (45° bag corners)
- Bottom gusset former, 3" to 6"
- Remote communications:
  - Ethernet, Web based, Modem
- 400W, 3 Phase, 50Hz
- Volumetric or net weigh dosing
- Full bag handling conveyors
- Fully automated palletizing and pallet wrapping
- Machine exposure door/panels in Lexan

Second Vertical Roll Holder option

EZ Load II™ Horizontal Roll Holder option

SPECIFICATIONS:

Controls: NEMA 12 enclosure, Ⓤ listed
Bag sizes range:
10¾" to 25" wide, up to 42" long
2 mil to 8 mil poly thickness
Film type: C-fold rollstock
Approximate machine size:
L 21' W 4' H 5'7"
Fill height 5'7"
Electrical: 240V, 3 Phase, 60 Hz, 40 FLA
Air: 35 CFM @ 80 PSI

Your authorized Hamer representative:

800-927-4674

HAMER FISCHBEIN®
A DURAVANT COMPANY

MADE IN THE USA

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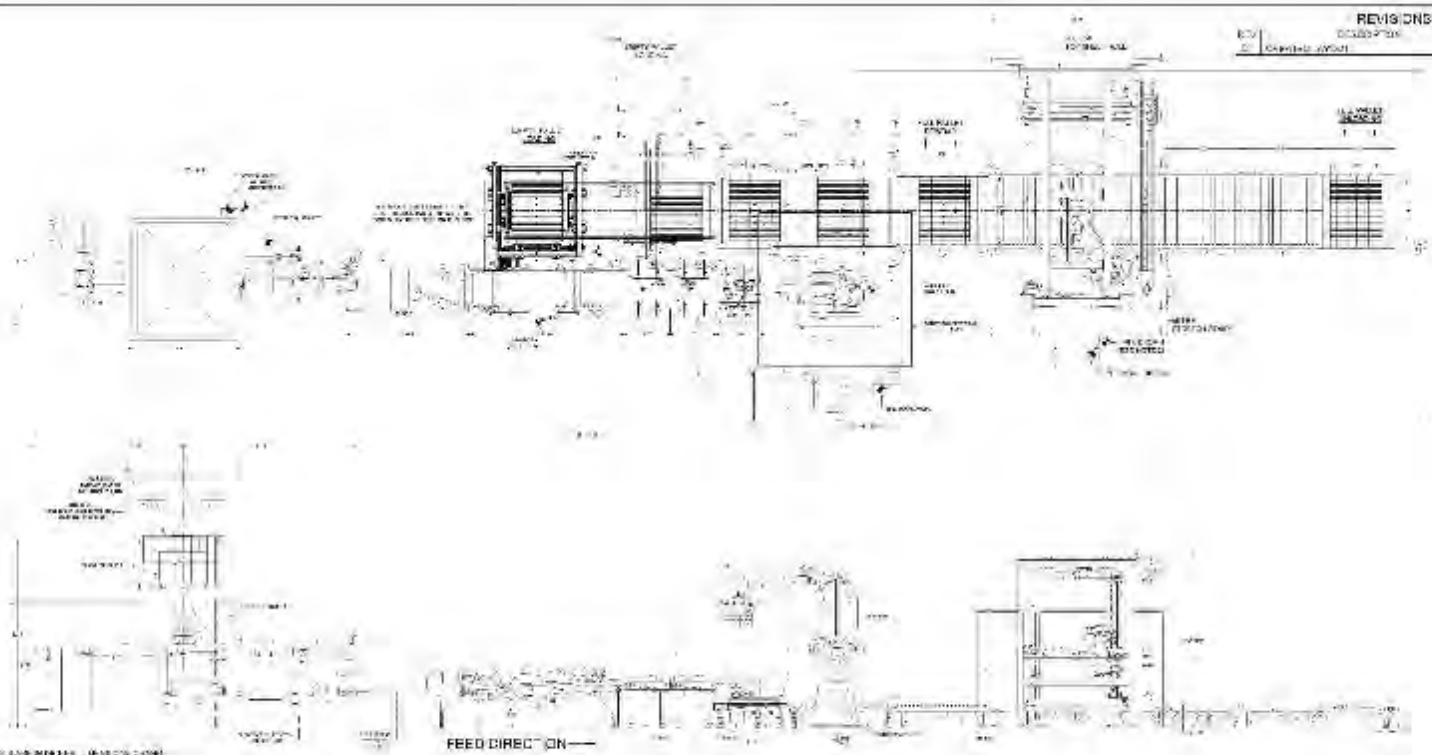

REVISIONS

SPEC DRAWING

HAMER LLC
MINNEAPOLIS, MINNESOTA
208CFORM FILL AND SEAL
HAMER ROBOTIC PALLETIZER
PLANT SETUP 1.5

WULFTEC

A DURAVANT COMPANY

CONVEYORIZED
WCRT-175 WCRT-200

NON-CONVEYORIZED
WRTA-100 WRTA-150 WRTA-175 WRTA-200

WE ARE GREEN

Machine Builder Partner

NON PROPRIETARY PARTS

APPROVED

WULFTEC® STRETCH WRAPPERS
Automatic Rotary Arms

WWW.WULFTEC.COM

WE FEAR NO PACKAGING CHALLENGE

Conveyorized

WCRT-175
Self-supporting three-legged model

WCRT Series

WCRT-200
Self-supporting four-legged model

Non-Conveyorized

WRTA-100
Column-mounted model

WRTA-150
Floor-mounted model

WRTA Series

WRTA-175
Self-supporting three-legged model

WRTA-200
Self-supporting four-legged model

4 YEAR WARRANTY

2 WRTA-175 SYNCHRONIZED

WCRT-200 WITH IN-CYCLE TOP SEAL

We'll Keep You Running at Peak Speed!

Why Choose Wulftec?

Why Go Automatic?

Benefits of a Rotary Arm

The Wulftec Advantage

Wulftec Warranty:

Features

WULFTEC WE FEAR NO PACKAGING CHALLENGE

WWW.WULFTEC.COM

Technical Specifications

	CONVEYORIZED WCRT-175	WCRT-200	NON-CONVEYORIZED WRTA-100	WRTA-150	WRTA-175	WRTA-200
Production Rate[1]	Up to 50 loads per hour	Up to 120 loads per hour	Up to 50 loads per hour	Up to 50 loads per hour	Up to 50 loads per hour	Up to 50 loads per hour
Max Load Weight	5,000 lbs (6,000 lbs optional)	5,000 lbs (6,000 lbs optional)	Unlimited	Unlimited	Unlimited	Unlimited
Max Load Size	48"L x 48"W x 80"H	48"L x 48"W x 80"H	54"L x 54"W x 80"H	54"L x 54"W x 80"H	54"L x 54"W x 80"H	54"L x 54"W x 80"H
Machine Dimensions[2]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
Approx. Shipping Weight	[illegible] lbs	[illegible] lbs	[illegible] lbs	[illegible] lbs	[illegible] lbs	[illegible] lbs
Electrical Requirements	230V/3/60	230V/3/60	[illegible]/1/60 15A	120V/1/60 15A	120V/1/60 15A	[illegible]/1/60 15A
Pneumatic Requirements	3 CFM @ 80 PSI, comes with Filter/Regulator		3 CFM @ 80 PSI, comes with Filter/Regulator			
Controls	- NEMA 4/12 control cabinet with quick disconnect - Touch screen operated controls - [illegible]		- NEMA 4/12 control cabinet with quick disconnect - Separate up and down carriage speeds - Separate top and bottom wrap selectors			
Film Delivery System	- 20" NO-THREAD® powered pre-stretch carriage with revolutionary spring loaded carriage gate - 1 HP AC motor with variable frequency drive - 50-300% pre-stretch - 30" carriage available		- 20" NO-THREAD® powered pre-stretch carriage with revolutionary spring loaded carriage gate - 1 HP AC motor with variable frequency drive - 50-300% pre-stretch - 30" carriage available			
Film Tail Treatment	- Automatic film clamping - Pulse controlled cutter - Film alignment arm and brush treatment		- Automatic film clamping - Pulse controlled cutter - Film alignment arm and brush treatment			
Rotary Arm Drive	- 25" ring GEAR bearing with pinion GEAR drive - 1 HP AC motor with variable frequency drive - 15 RPM variable speed ([illegible] RPM up to 35 RPM on WCRT-200)		- 25" ring GEAR bearing with pinion GEAR drive - 1 HP AC motor with variable frequency drive - 12 RPM variable speed			
Conveyors	- Powered process conveyor [illegible] long - Heavy duty cast iron flange mounted bearings - 2½" diameter rollers on 3" centers - 52" BFR (between frame rails)		N/A			
Structure	Heavy duty structural steel construction		Heavy duty structural steel construction			
Warranty	- 3 year unlimited cycle warranty - 10 year warranty on steel structure - 10 year warranty on 25" ring gear bearing - Lifetime warranty on pre-stretch rollers' blue compound		- [illegible] year unlimited cycle warranty - 10 year warranty on steel structure - 10 year warranty on 25" ring gear bearing - Lifetime warranty on pre-stretch rollers' blue compound			

Reduced energy usage by throughput anticipation: Conveyorized automatic machines will operate at a lower speed when the throughput from the line is slower and speed up to allow production bursts. For an average production line[3], the energy savings would equal 10 x 40 watt lamps lit for 6 hours!

Reduced film waste by optimized resolution: We use a higher resolution positioning system to deliver the film in a more accurate quantity. This means an average film reduction of 4 feet of film per pallet when compared to other control systems! That's 60 miles[3] of unstretched film per year!

Reduced general waste by better product protection for handling and transport: With very low wrap capability, the product is properly secured to the pallet, resulting in a pallet that is more stable for transport and therefore less damage!

Reduced electricity consumption: By using variable frequency drives on all its motors, Wulftec ensures that only the power required by the load is used, regardless of the HP of the motor. By this, we have standardized our motor sizes, allowing for less parts in inventory for us and our customers. This translates into greener operations at our end and at your end.

1. Production rate based on load size and configuration
2. Overall dimensions of the machine in operation
3. Based on a production rate of 60 pallets per hour, 2 shifts, [illegible]

All machine specifications are subject to change without [illegible]

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Email: wulftec@wulftec.com

WULFTEC
A DURAVANT COMPANY

Printed in Canada, June 2019

Air Quality Control - Odor and Dust Control

Two equally essential considerations were addressed with our “Odor and Dust Control” design.

1. Follow all the appropriate legal and ethical standards respecting the environment and local EPA Air Quality Standards for a Metro Processing Facility.
2. We are protecting our employees from any health implications due to particulate dust inhalation. Notwithstanding the value of trained associates, maximizing employee retention - minimizing costly employees, our design minimizes chemical dust-related health and litigation issues.
3. The minimal odors associated with our process may have no legal or associated health issues. Odor complaints from the neighborhood would bring about nuisance investigations and place our operation forever under the public microscope. We believe it to vitally essential to avoid any such issues and design our plant as laid out in the current plans and specifications.

Baghouse

Our design includes a baghouse, also known as a baghouse filter, bag filter, or fabric filter is an air pollution control device and dust collector that removes particulates or gas released from commercial processes out of the air.
Basic millwright skills include installation, maintenance, and repair of industrial machinery and Equipment. Using specialized tools, such as welders or hydraulic bolters, they align and replace a machine’s individual parts. They also move and relocate machinery on- and off-site.

Insert Future Bag Supplier, Quote, House manufacturer, Specifications, and Images

Air Scrubber

Our design includes an air scrubber is a device that attaches directly to the ductwork of your HVAC system. It removes air pollution, VOCs, surface contaminants, pet dander, odors, and dust.

Insert Future Air Scrubber, Quote, House manufacturer, Specifications, and Images

Process Controls

Relevant acronyms and terminology:

Industrial Automation and Control Systems **(IACS)**
Operational Technology **(OT)**
cyber-physical systems **(CPS).**
Industrial internet of things **(IIoT)**
Internet of Things **(IoT)**
Cyber-Physical Systems **(CPS)**
Industrial Control Systems **(ICS)**
Supervisory Control and Data Acquisition **(SCADA)**

Process controls integrations are essential to a smooth manufacturing process.
We are designing an automation and control system engineering framework ensuring smooth operations.

We are designing for multiple situation scenarios to not only achieve efficient start-up and shut-down of the systems but to protect persons and Equipment in the event of outside failures.
Considerations:

- Power Failures
- IT crashes
- Personelle Injuries anywhere along the process lines
- Equipment failure anywhere in the various process lines
- Fire Alarms
- Material Contamination Issues

We implemented Maintenance Monitoring into the control modules systems logic similar to the “Change Oil Light “indicator light in your car. Maintenance platforms predict failures and indicate routine parts replacement avoiding untimely breakdown or equipment damage.

Insert Future Controls, Quote, House manufacturer, Specifications, and Images

Pallet Racking Systems and Pallet Trucks

Pallet Racking Systems

It is essential to utilize a safe, secure pallet racking system for the short-term storage of product during the seasonal variations in sales.

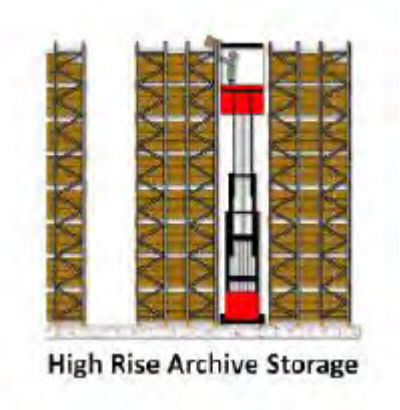
For 2-reasons, it is impractical to stack pallets.

- Safety – stacked pallets are unstable and may shift and fall, injuring Staff.
- Quality Assurance – Stacked pallets increase the risk of damaging product
-

The Narrow Isle Pallet System

To minimize the square footage and long term lease exposure, we have engineered a “Narrow Isle Racking” system.
A Narrow Isle Racking” system requires the use of a narrow isle pallet truck.

Below are infographics for Narrow Isle Racking and a Narrow Isle Pallet Lift Truck



Pallet Racking - Fire Sprinkler Considerations

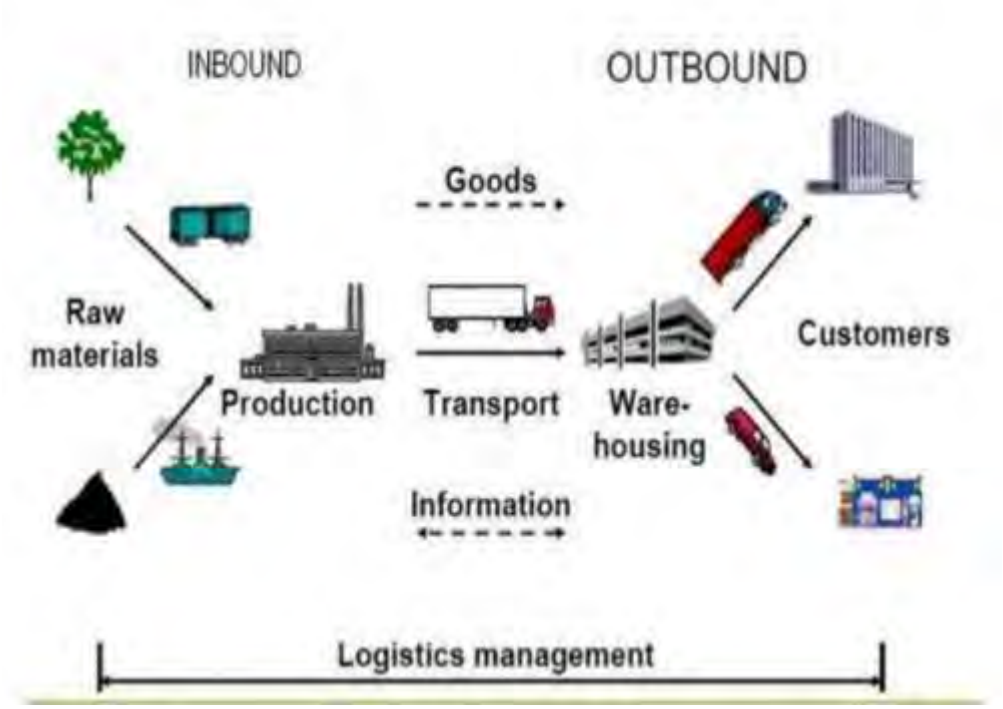
We have discussed Pallet Sprinkler considerations with the local fire marshal for Bolingbrook, IL.

The Fire Marshal informed us that there are not typically any sprinkler issues with o[pen bottom Pallet Racking Systems.

Logistics

Direct in-House Logistics

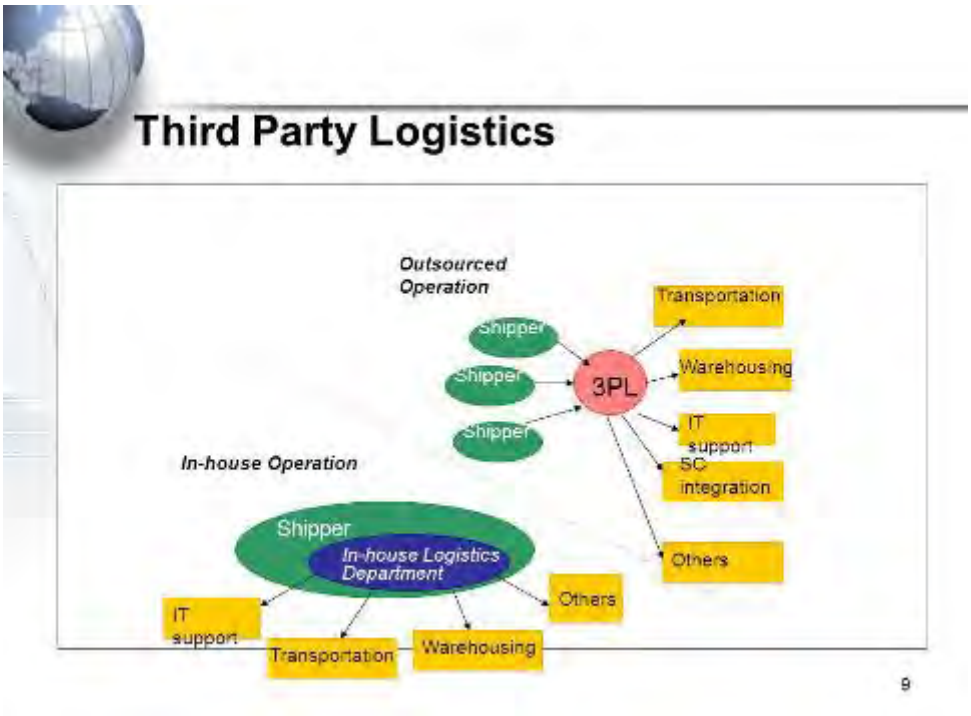
The current model under consideration is the 2-PL or 2nd Party Logistics.
2-PL is where we contract with a carrier pick up the finished product from our facility and deliver directly to our customers. See below for an infographic describing this process.

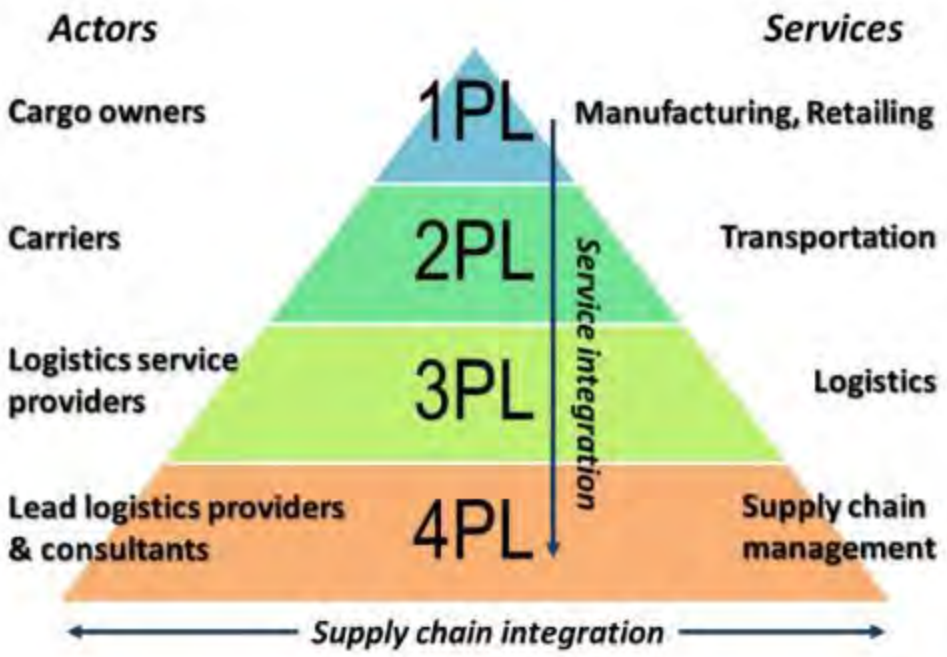


Outsourced 3rd and 4th Party Logistics (3-PL & 4-PL), The case for 3-PL and 4-PL 3rd and 4th party Logistics

To reduce the risk of long-term leases on large warehouse footprints and the extensive costs of large pallet racking systems, 3rd and 4th Party Logistics partners should be considered.

See below:




Actors
Services
Cargo owners
1PL
Manufacturing, Retailing
Carriers
2PL
Transportation
Logistics service providers
3PL
Logistics
Lead logistics providers & consultants
4PL
Supply chain management
Service integration
Supply chain integration

Warehouse and Logistics Management

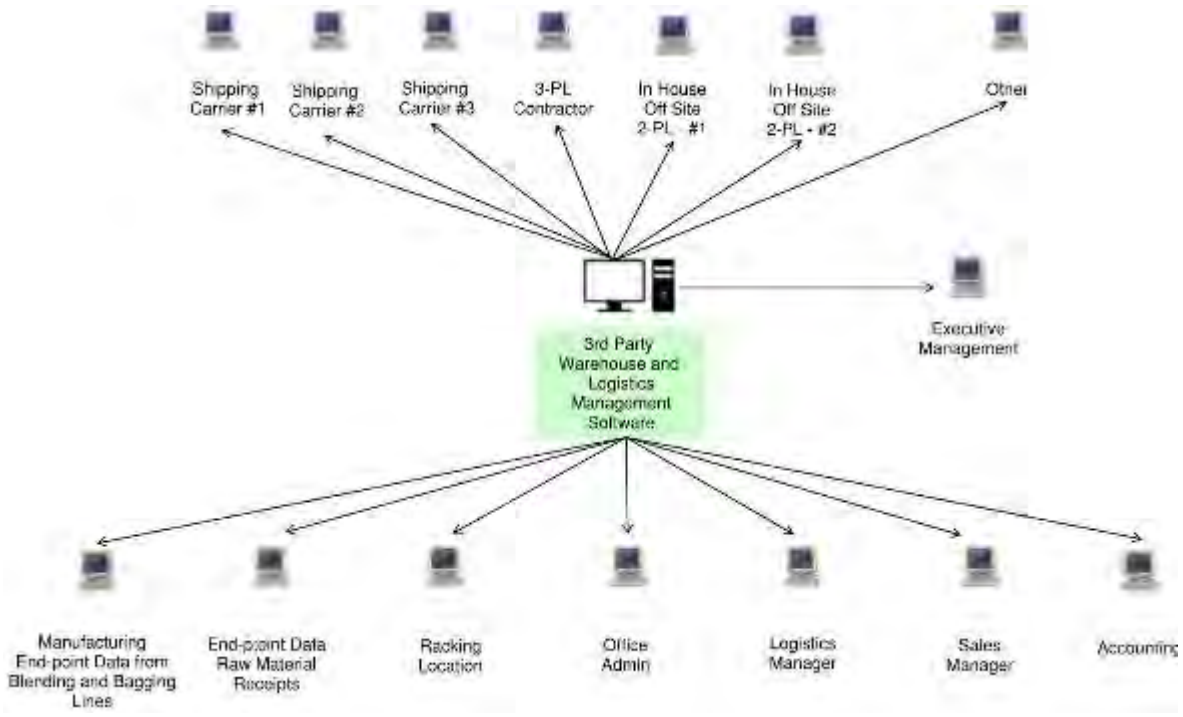
A warehouse management system IT is a software application designed to support and optimize warehouse functionality and distribution center management.

Warehouse and Logistics Management is typically a 3rd party software system designed for impute from Endpoint manufacturing data, inventory control, labeling, 2nd party carriers, thru receipt of the end user.

A Master Production Monitoring System and Endpoint data collection

Our design includes a homogenous platform solution with an automation master plan that each production facility could follow throughput for each work-shift and each national plant location. The Plan needed to define the system migration process from local analysis to cloud-based and the standards for hardware, software, IT infrastructure, panels, security, instrumentation, and wiring.

Endpoint Security Strategies - Our Endpoint data is a high-value asset, and we have integrated cybersecurity measures to protect against
a botnet, DoS attack, and other cyber issues.



Project Security Systems

Project Security System to become Permanent Cap-X

Our design intent is to install a basic

Insert Security System Subcontractor, Quote, House manufacturer, Specifications, and Images

Project IT and Communications Systems

We are designing an integrated process and office IT system. Included is a standard office IT and communication systems, including WIFI, routers, hubs, cabling, phones, printers, and workstations. We are designing industry standard IT security and internal security to ensure uninterrupted smooth communications.

The production facility, the production office, and remote offices will communicate

Insert Security System Subcontractor, Quote, House manufacturer, Specifications, and Images

Commissioning

Insert Commissioning Plan, Documentation, As-Built Drawing, Warranties, and other Close-out Documents

CapEx

Pallet Racking Systems

We have based the property selection and warehouse needs using a “Narrow Isle Pallet Rack System”

Narrow Aisle Pallet Racking offers the following features and benefits as standard:

- Total and unrestricted accessibility to individual pallets
- Optimum configuration for maximum storage, density, and efficiency
- Any additional costs offset by added value of improved space

See Attachement E for Details

End-loaders

Forklifts

Corporate Vehicle – Chevy Suburban

We analyzed the cost of new 2021 Chevy Suburban and Used 2020 Suburban
See Attachment-D for Details

Safety

Safety – Design and Construction

See Attachment “E” – our Construction Safety Manual

Some General Good Practice Guidelines

- Follow OSHA Construction Practices
- Superintendent must be OSHA-30 certified\
- Engage in weekly team Safety meeting with the foreman from each subcontractor present\
- Safety Manual attached appendix “S1”

Safety - During Normal Operations

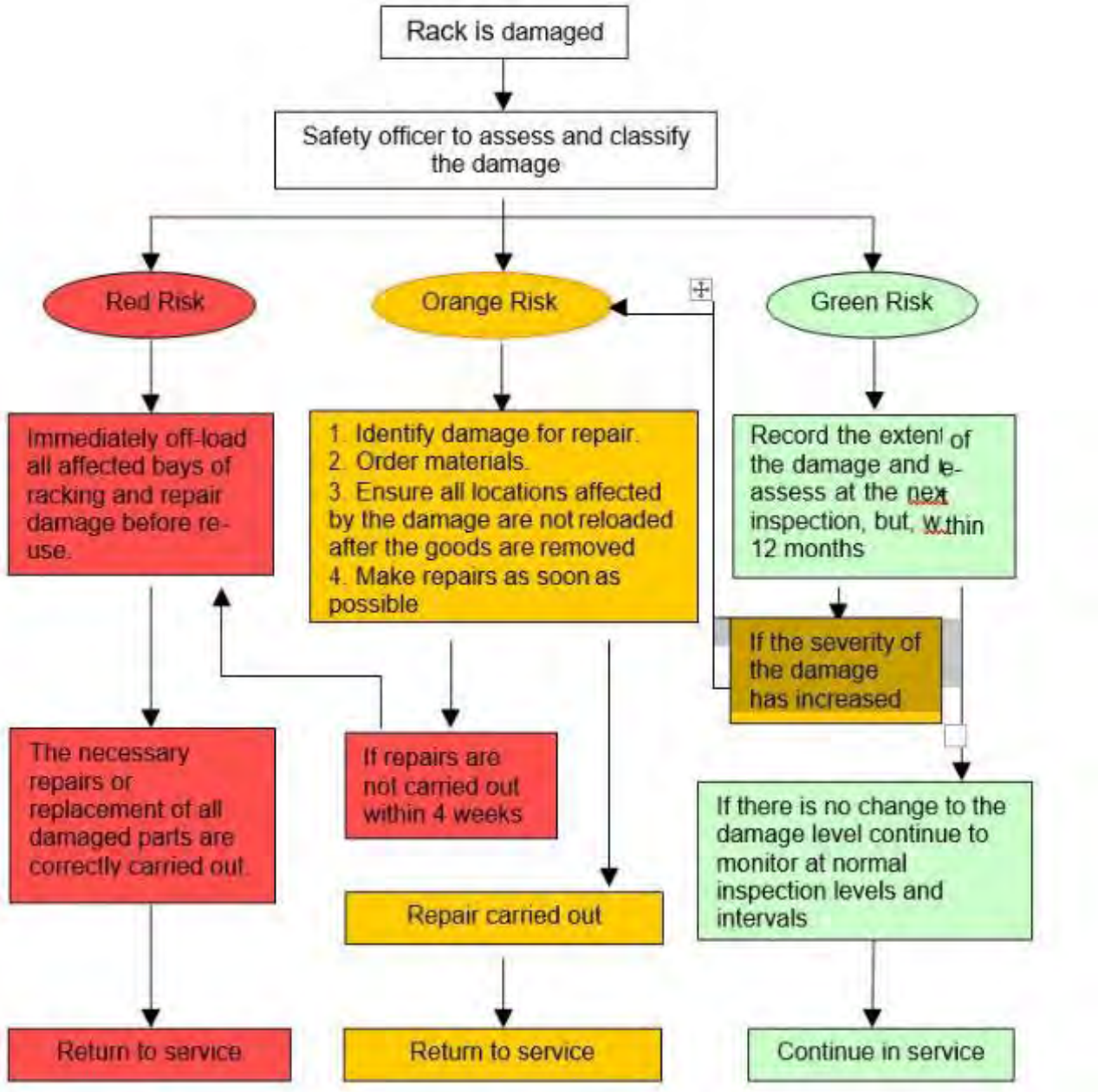
A general of our intentions:

- Purchase a Warehouse Safety Guide can be purchased for between $100 and #250
- Each Production Shift to have an “Assistant Production Manager” on staff to manage the shift.
- The production staff and associated managers to engage and document weekly safety meeting

Skid Steer - Safety

Forklifts, Pallet Lifts - Safety

Pallet Racking, Equipment, - Damaged Racking - Safety



Documentation and Records Keeping

Design and Construction – Documentation and Records Keeping

Insert Future

During Normal Operations - Documentation and Records Keeping

Insert Future

Quality Control

Design and Construction - Quality Control

Insert Future

During Normal Operations - During Normal Operations

Insert Future

Sales and Market Plan

We have developed an immediate sales Plan as well as a long-term sale stagey.

Our concept assumes a fast-tracked construction schedule along with an accelerated ramp-up of sales to meet the new production capacity.
Sales is not an exact art, but performance is based on teamwork and continuous and diligent aggressive sales efforts.

It is our goal to minimize the duration required to achieve sales of all our products at full capacity.
See below:

BioSource Nutrients Illinois LLC
Midwest Blending and Bagging
Sales Management Plan

Sales Summary

1. *We are* nutrients plus+
2. *Selling a* Clarus *product*
3. *Our product line is* CLARUS PRO SCREAMIN' GREEN
4. *We Pride Our Quality* CLARUS Q QUALITY Beyond Exceptional Quality (EQ)
5. *Selling Consumer Packing and Bulk*

Accelerated Construction and Sales Ramp-Up

Original Construction and Sales Program

Accelerated Construction and Sales Ramp-Up

Accelerated Construction and Sales Ramp-Up

1. *This Project is Only 10-Years*
2. *An Accelerated Construction and Sales Ramp-UP*
   - *Accelerates the Investor Payoff and Payout to the Partnership*
   - *The Partnership can receive revenues in 2022 vs. 2024*
3. *Increases net Revenue of the 10-Year Life Span by $27,684,000*

Summary Original Construction and Sales Projection

	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	
% of Full operating and Sales Capacity Original	7%	13%	43%	68%	100%	100%	100%	100%	100%	100%	
% of Full operating and Sales Capacity Accelerated Construction and Sales	15%	0%	90%	100%	100%	100%	100%	100%	100%	100%	Net Gain in Revenue
Orig Net Cash Flow	-$5,288,420	-$5,559,929	$3,307,719	$6,495,607	$10,437,439	$10,437,439	$10,437,439	$10,437,439	$10,437,439	$10,437,439	
Accelerated Net Cash Flow	-$5,623,776	$9,910,772	$10,116,840	$10,830,697	$10,437,439	$10,437,439	$10,437,439	$10,437,439	$10,437,439	$10,437,439	
Delta in Cash Flow	$139,644	$10,470,701	$6,719,121	$4,335,090	$0	$0	$0	$0	$0	$0	$27,684,556
Cumulative Original Cash Flow	-$6,288,420	-$5,559,929	$3,163,211	$1,858,275							
Accelerated Cumulative Cash Flow	-$6,123,776	$1,806,842	$7,881,788								

Timing and Goals of Our Sales Blitz

1. *Immediately Maximize Sales Revenues the Day we Commission the Facility and Shorten the Pay-Off Period*
2. *Take Full Advantage of the Fall 2021 Sales Season!*
3. *Reach our Maximum Production Capacity in the Shortest Possible Time.*
4. *Assume a Sales and Marketing lead time to Our Vendors of 5-Months and an Operational Plant as of 8/14/2021*
5. *Assume developing the Sales and Marketing Plan Takes 2-Months.*
6. *Thus, the Sales and Marketing Plans must be fully engaged as of January 14th, 2021*

Timing and Goals of Our Sales Blitz

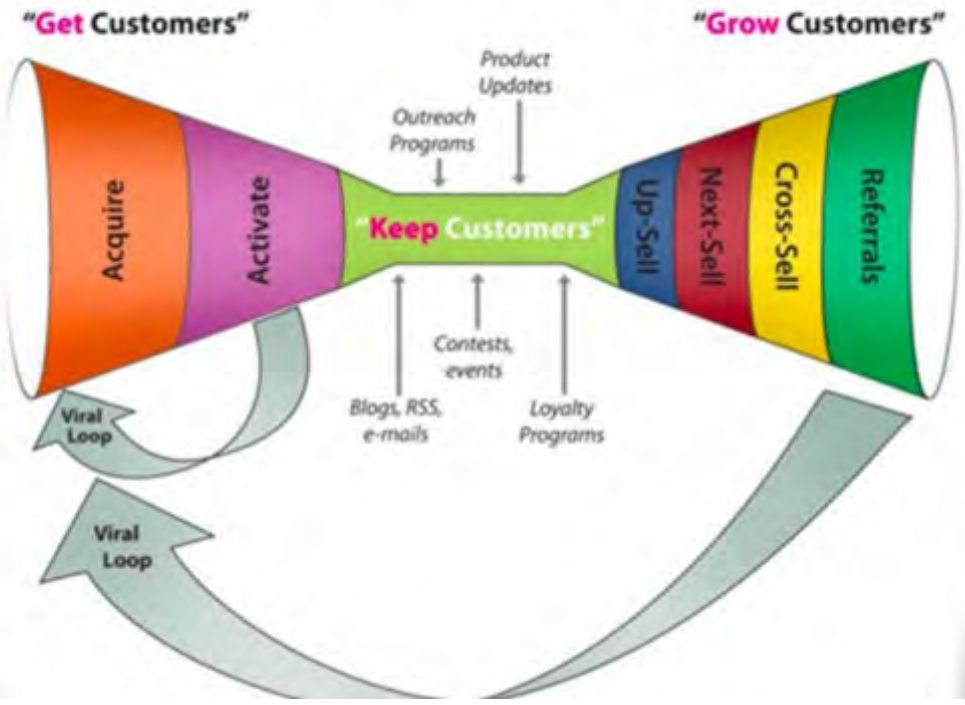
Pay Attention To Seasonal Needs

We need to Ensure there is Adequate Shelved Stock to meet Seasonal Demands.

Balancing Two Opposing Risks

- *Overselling Production = Positive Risk*
  - *A Shorted Delivery Commitment = Long Term Damage to a Sales Point*
- *Underselling the Pro Forma = Negative Risk*
  - *Not Meeting the Pro Forma Needs = Investor and Partner Issues*

The Full Funnel Requires A Committed Sales TEAM



Going Forward to Absorb New Production

1. *Service and Enhance Relationship with Existing Vendors*
2. *Secure new Sales level with Existing Vendors*
3. *Aggressive Sales to New Vendors*
4. *Cable TV Mini-Ads*
5. *New Sales Training and Approaches*
6. *Do we want to consider International Sa – Canada, Mexico, Europe*

Sales Points

1. SiteOne Landscape Supply
2. Ewing Irrigation & Landscape Supply
3. Rural King Supply
4. Tractor Supply
5. Menard 350 locations
6. Home Depot 2285 locations
7. Ace Hardware 5000 locations
8. Mid-States Distributing small and medium rural farm stores - +/- 700 Locations
9. A.G. Processing #5 Farm co-op in the U.S.
10. Amazon Web Sales

Third-Party Logistics (3PL)

Third-party logistics (or 3PL) is a fulfillment service that manages logistical operations for a company. Companies providing 3PL services are responsible for some or all of the supply chain management functions, such as:

Storage

Inventory Management

Packing

Transportation

Kitting and Assembly

3PL is a popular solution for eCommerce companies, and its providers act as the bridge between the online company and the customer by expediting order fulfillment. Ecommerce companies using 3PL services have their inventory stored at special warehouses known as fulfillment centers. When a customer makes an online order, the product is pulled, prepped, and shipped directly from the fulfillment center to the customer's doorstep. Fulfillment centers can also process business-to-business (B2B) orders, including high-volume merchandise delivered to big-box retailers like Target and Walmart.

EWING Irrigation & Landscape Supply

Ewing Irrigation & Landscape Supply is the largest family-owned supplier of landscape and irrigation products in the country. Ewing supplies professional contractors with irrigation supplies, water efficient and sustainable solutions, landscape and turf products, agronomics and growing, hardscape and outdoor living, landscape lighting, water features, erosion control and more.

Ewing also offers industry-leading training classes and events for professionals in the landscaping, sports field, golf and grower industries.

SiteOne Landscape Supply

With unmatched product breadth, and locations within reach of virtually any job, SiteOne is the nation's largest supplier of wholesale goods for green industry professionals in the United States and Canada. But we share the same backyard. Our local experts know your community, and what it takes to succeed there, because it's their hometown, too. We can help you find, bid and win jobs through programs like Project Services. And, with the highest efficiency, we can even direct ship or deliver your products right to your work site. Order Online or stop into the branch nearest you today.

Alabama (0)	Illinois (14)	Montana (0)	Puerto Rico (0)
Alaska (0)	Indiana (0)	Nebraska (0)	Rhode Island (1)
Arizona (7)	Iowa (3)	Nevada (3)	South Carolina (17)
Arkansas (1)	Kansas (0)	New Hampshire (2)	South Dakota (1)
California (98)	Kentucky (3)	New Jersey (17)	Tennessee (11)
Colorado (6)	Louisiana (2)	New Mexico (1)	Texas (39)
Connecticut (14)	Maine (1)	New York (18)	Utah (3)
Delaware (2)	Maryland (10)	North Carolina (26)	Vermont (0)
District of Columbia (0)	Massachusetts (21)	North Dakota (1)	Virginia (15)
Florida (47)	Michigan (20)	Ohio (14)	Washington (10)
Georgia (16)	Minnesota (6)	Oklahoma (5)	West Virginia (0)
Hawaii (1)	Mississippi (1)	Oregon (4)	Wisconsin (3)
Idaho (5)	Missouri (8)	Pennsylvania (11)	Wyoming (0)

Tractor Supply

Introduction to Tractor Supply

The first Tractor Supply store opened in 1938 in Minot, North Dakota. Today, there are 1,881Tractor Supply stores in 49 states and 180 Pet sense stores in 25 states. To find the Tractor Supply store nearest you, visit our Store Locator.

Headquarter
5401 Virginia Way
Brentwood
TN 37027
877-718-6750
https://www.tractorsupply.com/tsc/store_Fortgratiot-MI-48059_177

Rural King Supply

Rural King Supply Locations - Continued

America's farm and home store, Rural King, truly has everything. You'll find just what you need for your car. Fix up your home with home improvement items from nuts to nails and hammers and drills. Get ready for a big picnic or backyard barbecue with the best outdoor supplies. And that's not all. There are housewares, sporting goods, footwear, clothing, toys, and more. Why drive all over the country when you can drive to Rural King to get all the supplies you need for life?
LOCATIONS BY STATE-Alabama-1, Florida-8, Illinois-19, Indiana-5, Kentucky-11, Michigan-2, Missouri-2, North Carolina-1, Ohio-24, Pennsylvania-4, Tennessee-6, Virginia-3, West Virginia-4

Headquarter
Mattoon, IL, United States, 61938.
https://www.ruralking.com

Rural King Supply

Rural King Supply Locations

BROWSE BY TOP CITIES

Angola Ashland Bedford Benton Bloomington Bluefield Bonita Springs Butler Carbondale Champaign Charleston Circleville Clarksville Clearfield Collinsville Columbus Connellsville Coshocton Cross Lanes Crystal River Decatur Effingham Elizabethtown Elyria Evansville Farmington Fort Wayne Frankfort Fremont Front Royal Gainesville Gallipolis Greensburg Greenville Greenwood Hamilton Harrisburg Hartland Heath Henderson Huber Heights Jasper Jeffersonville Kendallville Knoxville Kokomo Lafayette Lake Wales Lebanon Leesburg Litchfield Logansport Madisonville Marion Marion Martin Martinsville Marysville Maryville Mattoon Maysville Monaca Monticello Morganton Morristown Mount Hope Muncie Murphysboro Muscle Shoals New Boston New Castle New Philadelphia Niles Norwalk Ocala Owensboro Paducah Paris Parkersburg Peru Pikeville Plano Powderly Princeton Radford Rantoul Saint Clairsville Shelbyville Shelbyville Spring Hill Springfield Steubenville Sweetwater Terre Haute Tiffin Van Wert Vandalia Vincennes Waterloo Waverly Wentzville Winchester Wooster Wytheville Xenia Zanesville Zephyrhills

Rural King Supply

Rural King Supply is a farm supply store based in Mattoon, Illinois, United States. Founded in 1960, it now has 116 stores in the U.S

Rural King, also known as R.K. Holdings, L.L.P., is America's Farm and Home Store, a General Merchandise Store, providing essentials to the communities we serve. More specifically, we provide a broad range of necessities, essential goods, food, feed, seed, and other farm and home products. Rural King planted its roots in Mattoon, Illinois, in 1960. Since that time, Rural King has added over 100 stores in a thirteen-state area (Alabama, Illinois, Indiana, Kentucky, Tennessee, Ohio, Michigan, Missouri, Pennsylvania, Florida, North Carolina, West Virginia, and Virginia). The heart of Rural King is the corporate office, distribution center, and flagship store, located in its city of origin, Mattoon, IL.

In 1979, Gary Melvin, nephew of Kermit Speer, purchased an interest in Rural King. Gary began his career working in the store, learning the products and serving customers. Today he is C.E.O. and co-owner of the 46 Rural King stores and trucking company.

Headquarter

216 DeWitt Avenue

Mattoon, IL, United States, 61938.

https://www.ruralking.com

Menard -350 locations

A family-owned company started in 1958, Menards® is headquartered in Eau Claire, Wisconsin and has more than 300 home improvement stores located in Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, Wisconsin, and Wyoming.

John Robert Menard Jr. (born January 22, 1940) is an American billionaire businessman, philanthropist, and the founder and owner of Menards, a Midwestern chain of home improvement stores. He is a former INDYCAR racing team owner, and the father of former NASCAR Cup Series driver Paul Menard.

Home Depot 2285 locations

Headquarter:
2455 Paces Ferry Road
Atlanta, GA 30339 United States
1-770-433-8211.
https://hdapps.homedepot.com/ItemSub_UI/EnterItem.html

Ace Hardware 5000 locations

Ace retailers are the owners of the corporation and can customize offerings based on customer needs. Owners reap the benefits of a global brand with collective buying power with independent ownership. Retailers pay no royalty fees, and a portion of the profits get distributed back to them each year.
Ace is the largest retailer-owned hardware cooperative globally with more than 5,200 locally owned and operated hardware stores in approximately 70 countries. Headquartered in Oak Brook, Ill., Ace and its subsidiaries operate an expansive network of distribution centers in the U.S. and have distribution capabilities in Ningbo, China; Colon, Panama; and Dubai, United Arab Emirates. Since 1924, Ace has become a part of local communities worldwide and known as the place with the helpful hardware folks. For more information, visit acehardware.com or newsroom.acehardware.com
http://www.acehardware-vendors.com/
http://www.acehardware-vendors.com/locations/become_an_ace_supplier/vendor_manual/pdfs/vendor-manual.pdf
Ace Hardware Corporate Headquarters
2200 Kensington Ct,
Oak Brook, IL 60523
(630) 990-6600

A.G. Processing #5 Farm co-op in the U.S.

Contacts to Large Soy Bean Farm Co-Ops Nationally

Ag Processing Inc (AGP®) is a leading agribusiness engaged in procuring, processing, marketing, and transporting oilseeds, grains, and related products. Since its creation in 1983, A.G.P. has grown in size, scope, and reputation – both in the U.S. and internationally. Today, our owners include 145 local and regional cooperatives representing more than 250,000 farmers throughout the U.S. and Canada. The company's businesses include soybean processing, vegetable oil refining, renewable fuels, ag products/grain, and international operations.

A.G.P. is the largest cooperative soybean processing company globally and a leading supplier of soybean meal and refined vegetable oils. We operate ten soybean processing plants in Iowa, Minnesota, Missouri, Nebraska, and South Dakota, as well as four soybean oil refineries and three biodiesel production facilities. In addition to our commodity-based products, A.G.P.'s branded products include SoyGold® (biodiesel) and AminoPlus® (bypass protein).

A.G.P.'s primary mission is to serve cooperatives and agricultural producers by procuring, processing, and marketing agricultural products, both domestically and globally. "Partners in Food Production" illustrates A.G.P.'s longtime commitment to working in collaboration with stockholders and stakeholders including our loyal employees. Together, we help producers earn more as we successfully manage our owners' investments. Our export programs link farmers to markets around the world.

At A.G.P., our company's culture reflects the agricultural values and hard work that our owners put forth every day.

Headquarters

12700 West Dodge Rd.
Omaha, NE 68154
Phone: 402-496-7809

Mid-States Distributing small and medium rural farm stores - +/- 700 Locations

Founded in 1954, Mid-States Distributing Company has become one of the nation's largest retailers in the farm store channel. Mid-States currently has 36 members, employing over 30,000 associates, with approximately 700 store locations in 33 states and 5 Canadian provinces with annual sales in excess of 6.5 billion dollars.

Markets

Farm retail markets differ from county to county and state to state.

Our member-owners work with many markets, including:

COUNTRY D.I.Y.
FARMERS & RANCHERS
HORSE-WOMAN
OUTDOORSMAN
PET/ANIMAL OWNER
RECREATIONAL FARMERS
RURAL HOMEOWNERS

Headquarters

Mid-States Distributing, LLC
2800 Meacham Blvd,
Fort Worth, TX 76137

Amazon Sales Approach

Clarus

Amazon Fundamentals

1. Once we engage, we stay fully engaged!
2. Determine our Price Point
3. Define our Amazon Ad Approach
4. Define our "Keywords"
5. LAUNCH our Amazon Sale
6. NEVER EVER Dip below Amazon's Product Stock Requirements
7. Daily Monitor and Control our Position Relative to our competition!

Amazon Ads and CPC's Cost Money

Failure to Project Stock while Daily Monitoring and Controlling our Position

1. A crash in Ranking
2. Ad Positioning
3. Diminished Search Results

Clarus

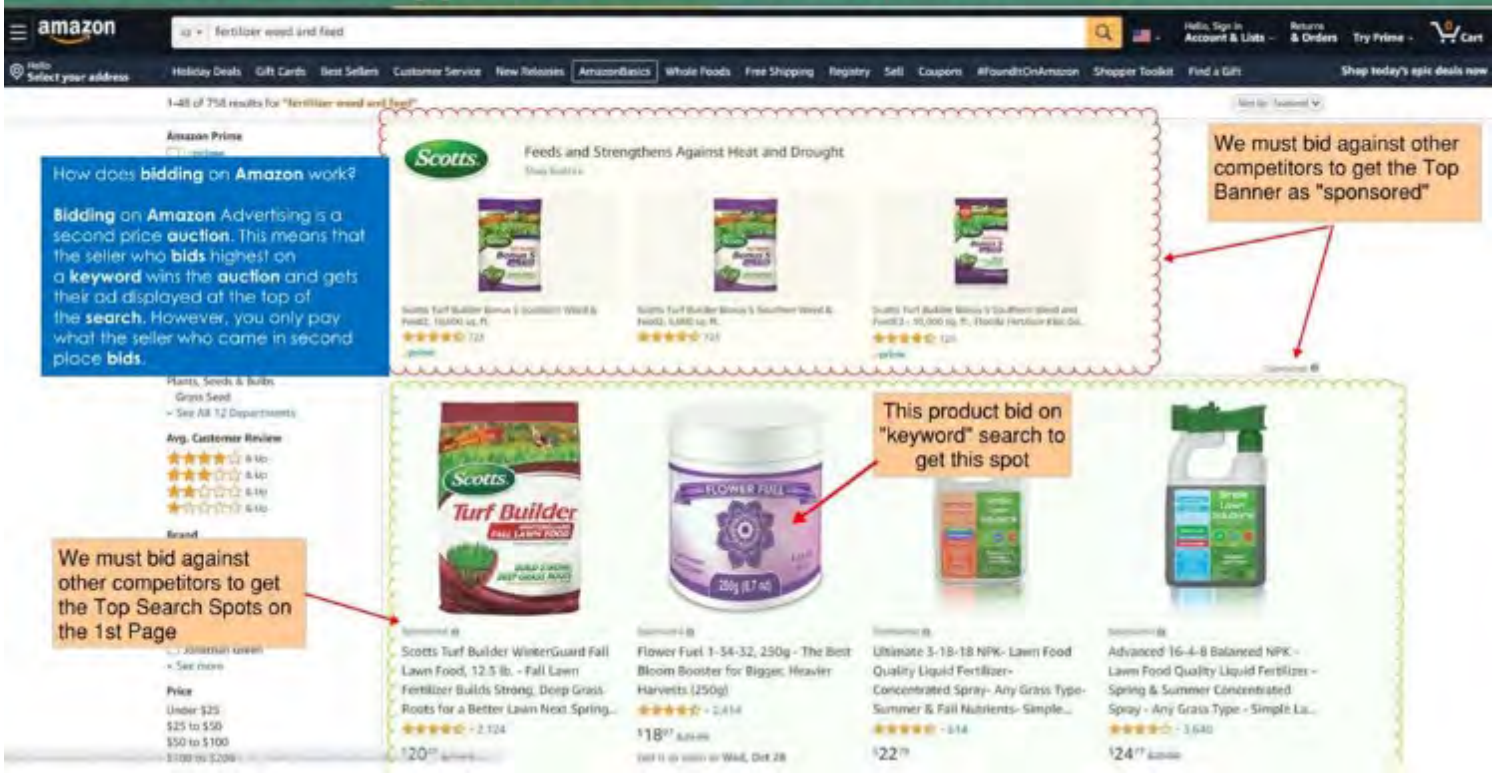
AMAZON AD SPEND VS. REVENUE

To stay on top @ Amazon we must engage in "Ad Spend" and get to the top spot on the 1st search page

nutrients plus

Clarus

Let's look at a Typical Search for Fertilizer



How does **bidding** on **Amazon** work?

Bidding on **Amazon** Advertising is a second price **auction**. This means that the seller who **bids** highest on a **keyword** wins the **auction** and gets their ad displayed at the top of the **search**. However, you only pay what the seller who came in second place **bids**.

We must bid against other competitors to get the Top Banner as "sponsored"

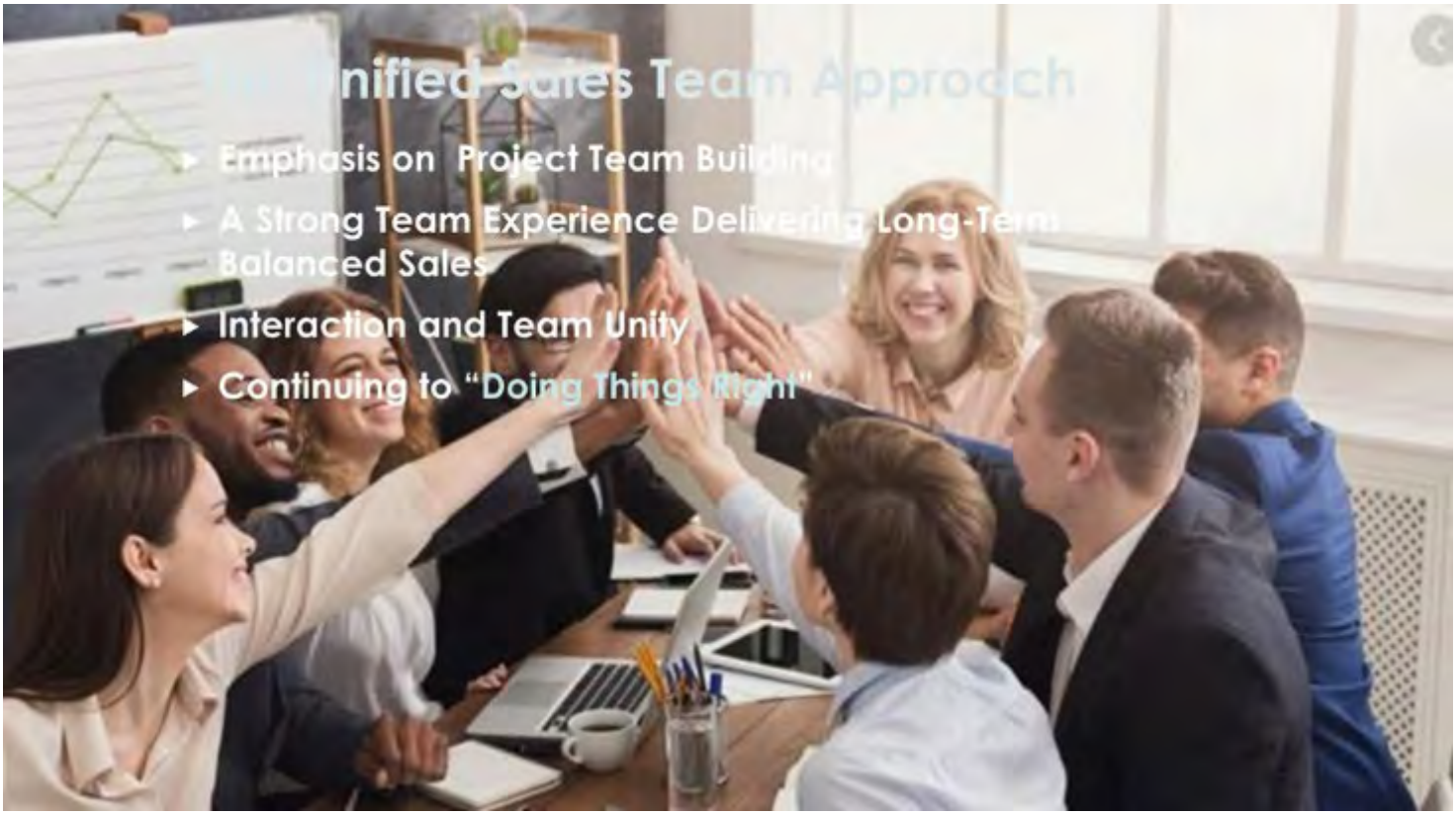
This product bid on "keyword" search to get this spot

We must bid against other competitors to get the Top Search Spots on the 1st Page

Let's look at the Cost Calculator:

Lets look at Package Size and Weight vs Fulfillment Costs


Amazon – Steps and Action's
Commit to a Long-Term Amazon Engagement and Relationship
Determine our Ad Approach and Ad Cost Thresholds
Launch our Amazon Campaign
Determine Product Size and Weight Combination that results in the lowest Amazon Fulfillment Fee
Determine the "Keywords" we will bid on.
Diligently Monitor and Control our Amazon Position changing our Ad Strategy as needed


nified Sales Team Approach
Emphasis on Project Team Building
A Strong Team Experience Delivering Long-Term Balanced Sales
Interaction and Team Unity
Continuing to "Doing Things Right"

End of Presentation

Attachment -C – Pallet Lift Costs and Specs

We need to contact a dealer to acquire new pricing.

New Pallet Truck Pricing

Approximate Cost New Example-1

Future insert new pricing

Used Pallet Truck Pricing

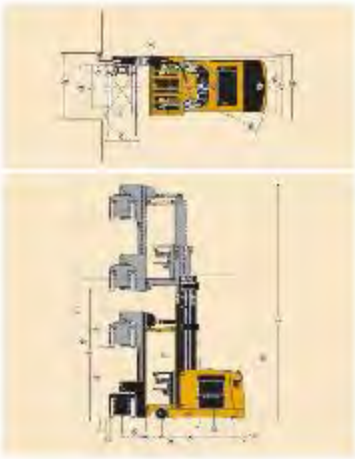
Approximate Cost Used Example-1

Technical specs - NTA030SB Yale

Notice: Every data listed is verified by LECTURA Specs team experts. However, incomplete data and mistakes might occur. Contact our team with any change suggestion.

Nominal load at COG	**1.36 t**
Wheel base	**2.063 m**
Standard tyres	**13.78x5.5 / 16x7**
Transport length	**3.894 m**
Transport width	**1.775 m**
Transport height	**4.74 m**
Lifting height	**13.4 m**
Centre of gravity	**610 mm**
Weight	**7.034 t**
Battery weight	**1.26 t**
Traction motor	**7.5 kW**
Hoist motor	**2x12 kW**
Battery capacity	**48/1240 V/Ah**
Travel speed with / without load	**10.46 / 10.46 km/h**
Hoisting with / without load	**0.33 / 0.42 m/s**
Lowering with load	**0.48 m/s**
Turning radius	**2.37 m**

Approximate Cost Used Example-1



2007 YALE NTA030SB
Swing Reach F
For Sale Price: USD $28,900

https://www.machinerytrader.com/listings/construction-equipment/for-sale/list/manufacturer/yale/model/nta030sb

Purchase today for USD $485.67/monthly*
Drive: 2 WD
ROPS: Enclosed
Load Capacity: 3,000 lb
Condition: Used
322" Mast, Narrow Aisle Turret Truck - Freezer Package!! Enclosed Cab, Clean!! Not your typical freezer type truck!! Battery is a 2015!!! 48 Volt, Serviced & Delivered

Attachment D – Project Vehicle

The main **difference between** the **Suburban LT and LTZ** trim levels is that you get more luxurious features with the **LTZ**. ... **Suburban LT**: At mid-range **in the Suburban** lineup, the **Suburban LT** provides standard features like a nine-speaker Bose® audio system, a convenient power liftgate, and several upgrade package options.
The **Premier** includes all of the features included **in the** Luxury Package for the **LT**. The **Premier** also adds some nifty features not available **in the LT** trim. The **Premier** features an exclusive Mahogany leather interior for an extra fee. The front seats are both heated and ventilated, and the second row of seats is heated.

Specifications – 2021 Chevy Suburban Premier

2021 Chevrolet Suburban Premier

Sport utility vehicle

7.9/10 · US News & World Report

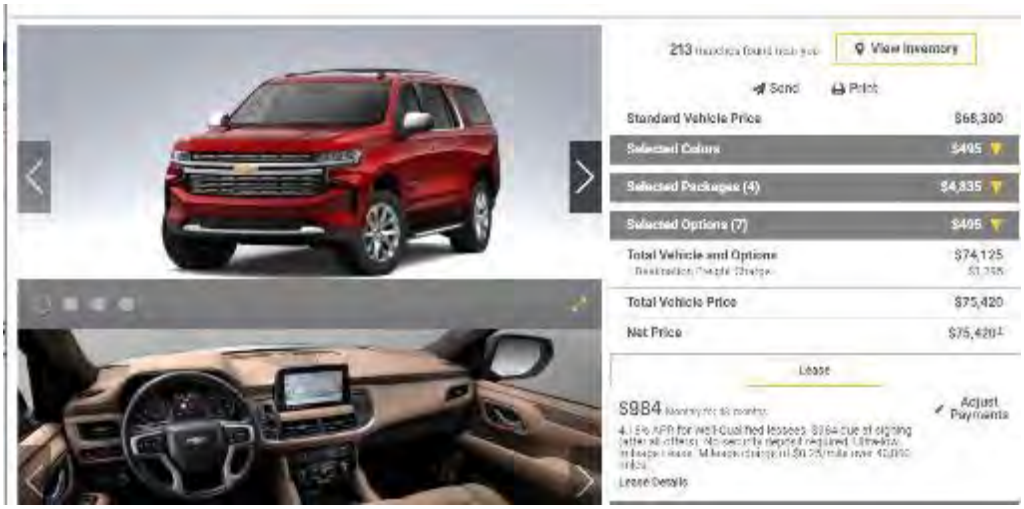
Model: 2021 Chevrolet Suburban
MSRP: From $65,300
Towing capacity: 7,600 to 7,800 lbs
Horsepower: 277 to 355 hp
Payload: 1,876 to 1,884 lbs
Tire size: P275/65R20
Engine: 3.0 L 6-cylinder diesel, 5.3 L V8

Configurations

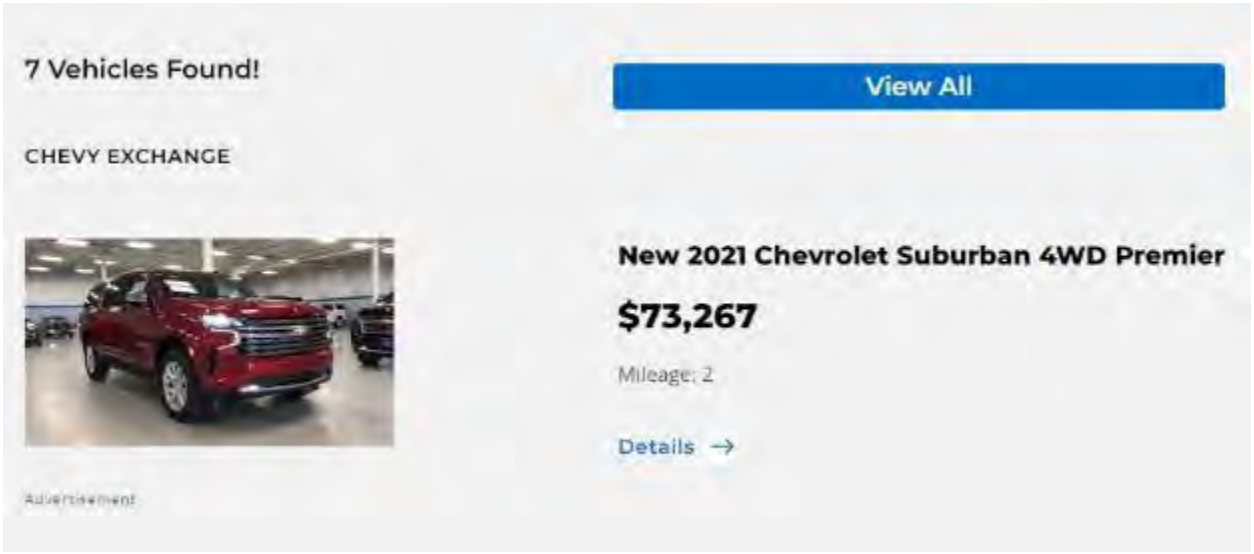
Premier 3.0L Diesel SUV	$65,300
Premier 5.3L V8 SUV	$65,300
Premier 5.3L V8 4WD SUV	$68,300

New Vehicle Approximate Costs

2020 New Vehicle New Exemple-1 - Approximate Advertized Costs



2020 New Vehicle NewExemple-1 - Approximate Advertized Costs



Used Vehicle Approximate Costs

Approximate Cost Used Example-1

Approximate Cost Used Example-2

Attachment E – Safety

Safety – Design and Construction

Safety Manual

Insert Construction Safety Manual

Herein is an example of a Warehouse safety manual

APPENDIX E

MANUAL FOR OCCUPATIONAL HEALTH AND SAFETY

Table of Contents

Safety and Health Policy Statement ***2***

Safety Education and Training Program ***3***

Employee Safety Training Checklist ***4***

Safety Meeting Record ***5***

Safety and Health Communication ***6***

Safety Committee ***7***

Hazard Identification and Communication ***9***

MSDS Responsibility ***13***

Safety Inspection Checklist ***16***

Employee Safety Handbook ***20***

Employee Safety Handbook ***23***

Personal Protective Equipment ***30***

Machinery Tag Out Program ***31***

Hazard Prevention and Control ***35***

Property Maintenance ***36***

Liability Report Form ***37***

Emergency Action Plan ***38***

OSHA Inspection ***44***

Questions an OSHA Compliance Officer Might Ask ***50***

OSHA Record keeping and Posting Requirements ***53***

Common OSHA Violations ***54***

Blood Borne Pathogens ***55***

Hazardous Material Spill Response ***59***

Safety and Health Program Manual
Review & Updates

DATE:

DESCRIPTION: Manual review SIGNATURE:

DATE:

DESCRIPTION:

SIGNATURE:

DATE:

DESCRIPTION:

SIGNATURE:

DATE:

DESCRIPTION:

SIGNATURE:

DATE:

DESCRIPTION:

SIGNATURE:

DATE:

DESCRIPTION:

UT/IJP

Safety and Health Policy Statement

We are dedicated to providing a safe and healthy environment for employees and customers, protecting the public and preserving UT/IJP's assets and property.

At UT/IJP our most valuable resources are the people who work for us. Injuries can be prevented. To achieve this objective, UT/IJP will make all reasonable efforts to comply with all government regulations pertaining to safety and health issues. An effective Safety and Health Program will be carried out throughout our organization.

The Safety and Health Program will assist management and non-supervisory employees in controlling hazards and risks which will minimize employee and customer injuries, damage to customer's property and damage or destruction of UT/IJP property.

All employees will follow this program. This program is designed to encourage all employees to promote the safety of their fellow employees and customers. To accomplish our safety and health goals, all members of management are responsible and accountable for implementing this policy, and to insure it is followed.

UT/IJP is sincerely interested in the employee's safety. The policy of UT/IJP is to provide safe equipment, adequate tools and training, and the necessary protective equipment. It is the employee's responsibility to follow the rules of safety as established for their protection and the protection of others, and to use the protective devices, which UT/IJP provides.

Safety Education and Training Program

UT/IJP is committed to instructing all employees in safe and healthy work practices. UT/IJP will provide training to each employee with regard to general and acceptable safety procedures and to any hazards or safety procedures that are specific to that employee's work situation.

PURPOSE OF A HAZARD COMMUNICATION PROGRAM:

To provide employees with the knowledge and training necessary to understand and protect themselves and others from the chemicals they use. Also, to comply with OSHA Hazard Communication Standard (1910.1200).

Training Will Occur:

- Upon Hiring
- When UT/IJP believes additional training is warranted
- When an employee is given a new job assignment
- When new substances, equipment, or new procedures are introduced which represent a new hazard
- When UT/IJP is made aware of a new hazard

Training Areas:

Employee training will consist of new employee orientation, periodic group meetings, and one- on-one training. The Safety and Health training provided to employees will include:

- Employee Safety Handbook
- First Aid
- UT/IJP Safety and Health Policy
- UT/IJP Safety and Health Program
- Incident Reporting
- Hazard Communication
- Hazardous Material Spill Response
- Personal Protective Equipment requirements
- Emergency Procedures
- Housekeeping
- Job Specific Hazards

Training Documentation:

Employee Training will be documented using the forms on the next two pages.

EMPLOYEE SAFETY TRAINING CHECKLIST

Employee Name:_____ Hire Date: _____

Position:_____ Trainer: _____

I acknowledge that I have been trained in the SAFETY AND HEALTH areas checked below, and agree to follow all UT/IJP Safety and Health Rules, Policies and Procedures.

_____ Safety and Health Program

- My right to ask questions, or report any safety hazards, either directly or anonymously without any fear of reprisal.
- The location of UT/IJP safety bulletins and required safety postings (i.e., summary of occupational injuries and illnesses, and Safety and Health Protection Poster).
- Disciplinary procedures that may be used to ensure compliance with safe work practices.
- Reporting safety concerns.
- Accessing the department safety committee.

_____ Incident Reporting and Reporting Occupational Injuries and Illnesses.

_____ Hazard Communication

- The potential occupational hazards in the work area associated with my job assignment.
- The safe work practices and personal protective equipment required for my job title.
- The location and availability of MSDS's.
- The hazards of any chemicals to which I may be exposed, and my right to the information contained on Material Safety Data Sheets (MSDS's) for those Chemicals.

_____ Hazardous Material Spill Response

_____ Blood borne Pathogen Response

_____ Personal Protective Equipment

_____ Employee Safety Manual

_____ Machinery Tag Out Program

_____ Emergency Procedures

_____ *Other:* _____

I understand the above items and agree to comply with safe work practices in my work area.

_____

_____

Employee Signature Date

I have trained the above employee in the categories indicated on this form.

_____ _____

Trainers Signature Date

Safety Meeting Record

Job: _____

Department or Crew: _____ Date: _____

OUTLINE

Safety Title: _____

Key Points:

_____

_____

_____

Applications to Project:

_____

_____

_____

Safety Reminders:

_____

_____

Employee Safety Recommendations:

_____

_____

_____

Meeting Attended By:

_____

_____

SAFETY AND HEALTH COMMUNICATION

Communicating With Employees on Safety and Health Issues

Communicating with employees regarding health and safety issues must be a two way street. It must consist of both employer-to-employee **and** employee-to-employer communications. Employees will be trained through the formal Safety and Health Program, new employee orientation, and training specific to new or current job assignments and/or hazards job assignments.

REPORTING OF SAFETY AND HEALTH HAZARDS:

UT/IJP has a system for the employee to report a hazard or unsafe condition. The form on the next page will be used for reporting and documenting such hazards. The employee should also notify his/her immediate supervisor verbally of such hazard or condition. The "Safety Suggestion Form" will be sent to the employee's supervisor or designated Safety Manager. A prompt and thorough investigation of the situation will be conducted.

POSTINGS:

As a routine part of the Safety and Health Program, postings required by state and federal law will be prominently displayed in employee areas. For example, Safety and Health protection on the Job, state OSHA citations and responses, etc.

TRAINING:

UT/IJP has training requirements designed to instruct each employee on general safety procedures as well as safety procedures specific to the employee's job. These training requirements are described in greater detail in the section entitled SAFETY AND HEALTH TRAINING.

EMPLOYEE SAFETY HANDBOOK:

All employees will be provided with an Employee Safety Handbook before they are to begin work and at the time of orientation. (Management will photocopy pages 20 through 32 of this manual, staple the pages together, and give it to the every new hire). They are to read the handbook and acknowledge its receipt by filling out the second page of the handbook. This page will be removed from the handbook and placed in their personnel record.

SAFETY COMMITTEE

The Safety Committee will be composed of rank and file employees. The President will appoint the Safety Committee Chairperson. The Safety Committee will function as an advisory body to develop and recommend to UT/IJP Management matters of policy and procedure affecting administration of UT/IJP Safety and Health Program.

The Committee will meet at a mutually convenient time, at the request of a member of the Committee no less than once every two months. The Committee is responsible for:

- Reviewing statistical data, records, and reports of safety matters to determine the effectiveness of overall accident and loss prevention efforts and to develop recommendations for improvement.

- Reviewing and analyzing accident and property loss investigation reports for:
  - Accuracy and completeness (recommending follow-up investigation if necessary).
  - Provide recommendations for corrective action and provide consistency throughout UT/IJP operations.
  - Identification of accident problem or trend and determination of what order they should be given attention.

- Reviewing safety and property inspection reports, job safety analyses, supervisor's safety observation reports, and employees' suggestions for:
  - Possible changes in work practices or procedures.
  - Need for safety procedures.
  - Need for protective device or equipment.
  - Need for training.

- Developing practical safety and property inspection procedures, and assisting in making inspections when requested by the Safety and Health Manager.

- Keeping Managers informed of the progress of the Safety Program and informed as to the safety records of employees or other segments of UT/IJP.

- Assisting in developing the records and statistical data necessary to provide an accurate picture of UT/IJP safety problems.

- Identify unsafe work practices and conditions and suggest appropriate remedies. Ensure that employees and others (visitors, contractors, etc.) are informed about safety policies, training programs, injury risks and causation, and other health and safety-related matters.

- Maintain an open channel of communication between employees and management concerning occupational and environmental health and safety matters.

- Provide a means by which employees can utilize their knowledge of workplace operations to advise management on policy, condition, and practice improvements.

SAFETY SUGGESTION FORM

NAME: _____ DATE: _____
(OPTIONAL)

DESCRIPTION OF UNSAFE CONDITION OR PRACTICE:

_____
_____
_____
_____

CAUSE OR CONTRIBUTING FACTORS:

_____
_____

SUGGESTION FOR IMPROVING SAFETY:

_____
_____

Draw a picture to describe situation:

Hazard Identification and Communication

The purpose of this notice is to inform you that UT/IJP is complying with the OSHA HAZARD COMMUNICATION STANDARD, TITLE 29 CODE OF FEDERAL REGULATIONS 1910.1200, by
using MSDS's, by compiling a Hazards Chemicals List, by insuring that containers are labeled, and by providing each employee with training.

This program applies to all work operations in UT/IJP where the employee may be exposed to hazardous substances under normal working conditions or during emergency situations.

The Safety and Health Manager is the program coordinator, acting as the representative of UT/IJP, who has overall responsibility for the program. The Safety and Health Manager will review and update the program as necessary. Copies of the written program may be obtained from the Safety and Health Manager.

Under this program, each employee will be informed of the contents of the Hazard Communication Standard, the hazardous properties of chemicals which they will use, safe handling procedures, and measures to be taken to protect themselves from these chemicals. Employees will also be informed of the hazards associated with chemicals in unlabeled pipes.

List of Hazardous Chemicals

The Safety and Health Manager will make a list of all hazardous chemicals and related work practices used in UT/IJP and will update the list as necessary. This list of chemicals will be found at all locations UT/IJP conducts business. This list also identifies the corresponding Material Safety Data Sheet (MSDS) for each chemical. Any new hazardous chemicals received by UT/IJP will have an MSDS document available for inspection before any employee uses the chemical. A master list of these chemicals will be maintained by, and is available from the Safety and Health Manager.

Material Safety Data Sheets (MSDS's)

MSDS's provide each employee with specific information on the chemicals used. The Safety and Health Manager will maintain a binder with an MSDS on every substance on the list of hazardous chemicals. The MSDS will be a fully completed OSHA Form 174 or equivalent. UT/IJP representative, the Safety and Health Manager, will insure that each site maintains an MSDS for hazardous materials in that area and will be made readily available to any employee at every work site.

Material Safety Data Sheet
May be used to comply with OSHA's Hazard Communication Standard 29 CFR 1910.1200. Standard must be consulted for specific requirements

U.S. Department of Labor
Occupational Safety and Health Administration
(Non-mandatory Form)
Form Approved OMB No. 1218-0072

Manufacturer's Name	Emergency Telephone Number
Address *(Number, Street, City, State, and ZIP Code)*	Telephone Number for Information
	Date Prepared
	Signature of Preparer *(optional)*

Section II – Hazardous Ingredients/Identity Information

Hazardous Components (Specific Chemical Identity; Common Name(s)) OSHA PEL ACGIH TLV Other Limits Recommended % (optional)

_____
_____
_____
_____
_____
_____

Section III –Physical/Chemical Characteristics

Boiling Point		Specific Gravity (H_2O = 1)	
Vapor Pressure (mm Hg.)		Melting Point	
Vapor Density (AIR = 1)		Evaporation Rate (Butyl Acetate = 1)	
Solubility in Water			
Appearance and Odor			

Section IV - Fire and Explosion Hazard Data

Flash Point (Method Used)	Flammable Limits	LEL	UEL

Extinguish Media
Special Fire Fighting Procedures
Unusual Fire Fighting Procedures

Section V - Reactivity Data

Stability	Unstable		Conditions to Avoid
	Stable		
Incompatibility *(Materials to Avoid)*			
Hazardous Decomposition or Byproducts			
Hazardous Polymerization	May Occur		Conditions to Avoid
	Will not Occur		

Section VI – Health Hazard Data

Route(s) of Entry: Injection?	Inhalation?	Skin?	
Health Hazards (Acute and Chronic)			
Carcinogenicity: Regulated?	NTP?	IARC Monographs?	OSHA
Signs and Symptoms of Exposure			
Medical Conditions- Generally Aggravated by Exposure			
Emergency and First Aid Procedures			

Section VII - Precautions for Safe Handling and Use

Steps to Be Taken in Case Material is Released or Spilled

Waste Disposal Method
Precautions to Be taken in Handling and Storing
Other Precautions

Section VIII – Control Measures

Respiratory Protection *(Specify Type)*		
Ventilation	Local Exhaust	Special
	Mechanical *(General)*	Other
Protective Gloves	Eye Protection	
Other Protective Clothing or Equipment		
Work/Hygienic Practices		

MSDS Master List			
Hazardous Chemical	Where on Site	Date on Site	Date off Site

MSDS Responsibility

The Safety and Health Manager is responsible for acquiring and updating MSDS's. The Safety and Health Manager will contact the chemical manufacturer or vendor if additional research is necessary or if an MSDS has not been supplied with an initial shipment. The form on page 15 will be used to request hazard information.

Labels and Other Forms of Warning

The Safety and Health Manager will insure that all hazardous chemicals in the work place are properly labeled and updated as necessary. Labels should list at least the chemical's identity, appropriate hazard warnings, and the name, and address of the manufacturer, importer, or other responsible party. The Safety and Health Manager will refer to the corresponding MSDS to assist each employee in verifying label information. Labels are required on portable containers.

Non-Routine Tasks

When employees are required to perform hazardous, non-routine tasks (e.g., cleaning tanks, entering confined spaces, etc.), a special training session will be conducted to inform them of any hazards they may encounter and the precautions to take to reduce and avoid exposure or danger.

Training

Everyone who works with or is potentially exposed to hazardous chemicals will receive initial training on the Hazardous Communication Standard and the safe use of those hazardous chemicals by the Safety and Health Manager. Whenever a new chemical or hazard is introduced, additional training will be conducted to address the new hazard and protective measures to be taken.

The training plan will emphasize these components:

- Summary of the standard and this written program.
- Chemical and physical properties of hazardous materials (e.g., flash point, reactivity, etc.) and methods that can be used to detect the presence or release of chemicals (including chemicals in unlabeled pipes).
- Physical hazards of chemicals (e.g., potential for fire, explosion, etc.), health hazards, including signs and symptoms of exposure, associated with exposure to chemicals and any medical condition known to be aggravated by exposure to the chemical.

The training plan will emphasize these components (continued):

- Procedures to protect against hazards (e.g. personal protective equipment required, proper use and maintenance, work practices, methods to assure the proper use and handling techniques, and procedures for emergency response).
- Work procedures to follow to assure protection when cleaning hazardous chemical spills and leaks.

- Where MSDS's are located, how to read and interpret information on both labels and MSDS's and how employees may obtain additional hazard information.

Contractor Employees

The Safety and Health Manager will advise outside contractors in person of any chemical hazards that may be encountered in the normal course of their work on UT/IJP premises, the labeling system in use, the protective measures to be taken, and the safe handling procedures to be used. In addition, these individuals will be notified of the location of all MSDS's. Each contractor that brings chemicals onto UT/IJP premises must provide UT/IJP with the appropriate hazard information on these substances, including the labels used and the precautionary measures to be taken in working with these chemicals.

Identification of Workplace Hazards:

Periodic, scheduled inspections will occur as a routine part of UT/IJP business. The Safety and Health Manager will insure these inspections occur. The Safety Inspection Checklist will be used for that purpose.

Employees who wish to remain anonymous may report unsafe conditions or hazards by submitting a Safety Suggestion Form to the Safety and Health Manager, or their immediate supervisor, <u>without</u> identifying themselves.

Employees must immediately report any unsafe condition or unsafe practice. No employee will be disciplined or discharged for reporting any workplace hazard or unsafe condition. Failure to report any obvious unsafe situation may result in disciplinary action, up to and including termination.

The Safety and Health Manager will insure that Material Safety Data Sheets (MSDSs) are present, up to date, and accessible at the appropriate locations. In addition, the Safety and Health Manager will assure that employees are trained in the Hazard Communication Program before beginning work or changing job functions, and will continuously monitor the work site to assure employees follow safe work practices.

Material Safety Data Sheet Request Form

Please Print!

Company Name: _____

Date of Request: _____ Phone: _____

Street Address: _____ FAX: _____

City/ State / Zip: _____

Requestor's Name: _____

Product Description:

Full Label Name: _____

Manufacturer: _____

Vendor (if known): _____

Address: _____
_____
_____.

Telephone Number: _____

Container Size: _____

Other: _____

Safety Inspection Checklist

Inspected By:_____Date: _____

WORK SITE INFORMATION:

_____

Posting OSHA and other work site warning posters _____*Are Safety Meetings conducted periodically? When was the last meeting?*

First aid equipment properly stocked _____

Are work site injury records being kept? _____

Are emergency telephone numbers conspicuously posted _____

Is the EMERGENCY INFORMATION form posted? (Page 8) _____

Describe Violation – Location – Remedy Taken

_____

_____

_____

2. HOUSEKEEPING AND SANITATION :

a. Are emergency lights fully operational? _____
b. General neatness of working areas _____
c. Regular disposal of waste and trash _____
d. Passageways and walkways clear _____
e. Waste containers provided and used _____
f. Sanitary facilities adequate and clean _____
g. Adequate supply of water _____

a. h. Adequate lighting _____
b. Are handrails and stair treads in good repair? _____
c. Is smoking restricted to certain locations? _____
d. Are electrical cords and plugs in good condition? _____
e. is there a 3’ clearance around hot water heaters,
f. electric breaker panels, heating units, and fire sprinkler riser? _____
g. Are electric circuit breakers free of obstructions? _____
h. Describe Violation – Location – Remedy Taken

_____

_____

_____

_____

FIRE PREVENTION:

Fire instruction to personnel _____
Fire extinguishers identified, accessible, and fully charged _____
"No Smoking" signs posted and enforced where needed _____
Good housekeeping _____
Storage, use and handling of flammable liquids properly done _____
Fire hazards checked _____
Is gasoline contained only in UL listed containers? _____

Describe Violation – Location – Remedy Taken

_____
_____
_____

_____.

HANDLING AND STORAGE OF MATERIALS:

Are materials properly stored and stacked? _____
Are passageways clear? _____
Shelves in stockrooms in good repair and properly anchored _____
Stacks on firm footing, not too high _____
Are employees lifting loads correctly? _____
Are materials protected from weather conditions? _____
Flammable liquids not stored in areas used for exits or stairways__

Describe Violation – Location – Remedy Taken

_____
_____
_____
_____

HAND TOOLS:

Proper tool being used for each job _____
Neat storage, safe carrying _____
Inspection and maintenance _____
Electric tools are grounded _____

Describe Violation – Location – Remedy Taken

_____
_____
_____
_____.

PERSONAL PROTECTIVE EQUIPMENT:

Eye protection _____
Respirators and masks _____
Helmets, hoods, head protection _____
Gloves, aprons, sleeves _____
Hearing protection _____
Safety harnesses and lifelines _____
Shirts are to be worn _____
Back support belts _____

Describe Violation – Location – Remedy Taken

_____
_____
_____
_____.

HAZARDOUS MATERIALS:

Is a binder containing MSDS for supplies containing hazardous chemicals available to employees before using? _____

Are "Material Safety Data Sheets are Available on Request" signs posted in conspicuous locations? _____
Is the hazardous waste inventory log maintained? _____
Are hazardous waste storage areas inspected weekly? _____
Is the hazardous material disposal log maintained? _____
All containers clearly identified _____
Proper storage practices observed _____
Proper storage temperatures and protection _____
Proper type and number of extinguishers nearby _____

Describe Violation – Location – Remedy Taken

_____
_____
_____
_____.

Unsafe acts and/or practices observed

_____
_____
_____
_____

EMERGENCY INFORMATION

(To Be Posted)

FIRE:

Telephone, Fire Department: _____

Nearest Alarm Box: _____

Crime:

Telephone, Police: _____

Injury/Illness:

Avoid infection of minor injuries; always get medical attention or skilled first aid

Employees who are First Aid and/or CPR Certified

_____ _____

_____ _____

Doctor _____

Office _____ Phone _____

Residence _____ Phone _____

Hospital _____

Address _____ Phone _____

Ambulance _____

Address _____ Phone _____

In all cases of Fire, Crime, Accident, or Sickness, promptly notify:

1. Name _____ Office Phone _____
   Home Phone _____

2. Name _____ Office Phone _____
   Home Phone _____

Additional Numbers: _____ _____
(Alarm Company, Office Phone, etc.)

_____ _____

Employee Safety Handbook

Safety Handbook Acknowledgement

Name

Date of Hire

Signature Date

(Remove and retain this sheet in the Employee’s Personnel File)

Table of Contents

- UT/IJP Safety Policy
- Safety and Health Requirements Safety Hazard Citation
- Accident and Incident Reporting First Aid and Medical Treatment Workers' Compensation
- Your Safety Rights
- Your Safety Responsibilities Employee Safety Rules General Safety Rules
- Fire Safety
- Hand Tool Safety Protective Equipment
- Material Handling Safety Rules Housekeeping

Employee Safety Handbook

At UT/IJP, our most valued resources are our employees, our customers, and the communities we serve. We are dedicated to providing a safe and healthful environment for employees and customers, protecting the public, and preserving UT/IJP properties and assets. Injuries can be prevented. In order to achieve an accident free workplace, an organized and effective Safety Program must be carried out company-wide to make this policy work.

The Safety and Health Program will assist management and employees in controlling hazards which will minimize employee and customer injuries, damage to customer's property and damage to UT/IJP property.

All employees will follow this program

Please take the time to study and understand these safety policies and procedures. It is your responsibility (and ours) to make this program work. You are a valued member of the team, and we care about your safety.

Safety and Health Requirements

All employees will comply with the provisions of the OSHA Health Act of 1970. Therefore, any employee who, knowingly commits an unsafe act or creates an unsafe condition, disregards the safety policy, or is a repeated safety or health offender, will be discharged. Grounds for immediate discharge are:

1) Drinking alcohol, and/or drug abuse prior to or during working hours
2) Fighting
3) Theft
4) Willful damage to property
5) Failure to wear eye protection, hearing protection, safety helmets, etc.
6) Not using safety harness and lanyards when there is a potential for falling
7) Removing and/or making inoperative safety guards on tools and equipment
8) Removing barriers and/or guardrails and not replacing them
9) Failure to follow recognized industry practices
10) Engaging in dangerous horseplay
11) Failure to notify UT/IJP of a hazardous situation

The following safety and accident activities will be adhered to:

1) Report all injuries immediately to your supervisor
2) Notify your supervisor should you become ill while on the job
3) Inform you supervisor if you have a disability or physical handicap
4) Never move an injured or ill person, unless to prevent further injury

Minor safety violations will be documented and a copy of the below form will become part of the employee's personnel record:

Safety Hazard Citation Date: _____

Name of Violator: _____

Location of Violation: _____

Type of Violation: _____

_____

_____

Violator's Signature: _____

Accident and Incident Reporting

It is important that you report all accidents and incidents that result in injury, illness, or damage (however slight), to your supervisor immediately. UT/IJP can learn how to prevent them from occurring in the future. It is UT/IJP responsibility to investigate each incident, and your responsibility to report them when they occur.

First Aid and Medical Treatment

UT/IJP provides a First Aid Kit on the premises. It is there for your use in the treatment of minor scratches, burns, headaches, nausea, etc. Ask your supervisor to show you its location. Let your supervisor know if you need to use the First Aid Kit.

If you have a work related injury or illness that requires professional medical assistance notify your supervisor and let him/her know before you receive this assistance. If you fail to notify your supervisor, you may be ineligible for Worker's Compensation, benefits to pay for doctor's bills, and/or lost wages.

FIRST AID PROCEDURES AND INSTRUCTIONS

In all cases requiring emergency medical treatment, immediately call, or have a co-worker call, to request emergency medical assistance.

EMERGENCY PHONE NUMBERS

Safety and Health Manager:_____ Poison Control: _____ First Aid:____
Fire Department: _____ Ambulance:_____ Police:_____ Medical Clinic: _____
_____ Clinic Address: _____

Minor First Aid Treatment

First aid kits are stored in the_____. If you sustain an injury or are involved in an accident requiring minor first aid treatment:

- Inform your supervisor.
- Administer first aid treatment to the injury or wound.
- If a first aid kit is used, indicate usage on the accident investigation report.
- Access to a first aid kit is not intended to be a substitute for medical attention.
- Provide details for the completion of the accident investigation report.

Non-Emergency Medical Treatment

For non-emergency work-related injuries requiring professional medical assistance, management must first authorize treatment. If you sustain an injury requiring treatment other than first aid:

- Inform your supervisor.
- Proceed to the posted medical facility. Your supervisor will assist with transportation, if necessary.
- Provide details for the completion of the accident investigation report.

Emergency Medical Treatment

If you sustain a severe injury requiring emergency treatment:

- Call for help and seek assistance from a co-worker.
- Use the emergency telephone numbers and instructions posted next to the telephone in your work area to request assistance and transportation to the local hospital emergency room.
- Provide details for the completion of the accident investigation report.

First Aid Training

Each employee will receive training and instructions from his or her supervisor on our first aid procedures.

WOUNDS:

Minor: Cuts, lacerations, abrasions, or punctures-

- Wash the wound using soap and water; rinse it well.
- Cover the wound using clean dressing.

Major: Large, deep and bleeding

- Stop the bleeding by pressing directly on the wound, using a bandage or cloth.
- Keep pressure on the wound until medical help arrives.

BROKEN BONES:

- Do not move the victim unless it is absolutely necessary.
- If the victim must be moved, "splint" the injured area. Use a board, cardboard, or rolled newspaper as a splint.

BURNS:

Thermal (Heat)

Rinse the burned area, without scrubbing it, and immerse it in cold water; do not use ice water.

Blot the area dry and cover it using sterile gauze or a clean cloth.

Chemical

Flush the exposed area with cool water immediately for 15 to 20 minutes.

EYE INJURY:

Small particles

Do not rub your eyes.

Use the corner of a soft clean cloth to draw particles out, or hold the eyelids open and flush the eyes continuously with water.

Large or stuck particles

If a particle is stuck in the eye, do not attempt to remove it.

Cover both eyes with bandage.

Chemical

Immediately flush the eyes and under the eyelids, with water, for 30 minutes.

NECK AND SPINE INJURY:

If the victim appears to have injured his or her neck or spine, or is unable to move his or her arm or leg, do not attempt to move the victim unless it is absolutely necessary.

HEAT EXHAUSTION:

Loosen the victim's tight clothing.

Give the victim "sips" of cool water.

Make the victim lie down in a cooler place with the feet raised.

Workers' Compensation

Every state has a Workers' Compensation Law to provide benefits to employees for lost wages and medical bills resulting from a work related injury or illness. You are covered under Workers' Compensation. You may request Workers' Compensation benefits from your supervisor. Qualification for benefits is determined by the state, not UT/IJP. Your responsibilities are to keep appointments, follow all doctors' instructions on and off the job, maintain good communication with your supervisor, and to fully cooperate with all instructions you are given.

Workers' Compensation provides wages at a lower pay scale than what you may earn by working

Doesn't it make sense to be safe so that you don't have to be out on Workers' Compensation?

Your Safety Rights

You have several important rights concerning safety, which are protected by federal, state and local laws that you should be aware of. They are:

- The right to a safe work-place free from recognized hazards
- The right to request information on safety and health hazards in the workplace, precautions that may be taken, and procedures to be followed if an employee is injured or exposed to toxic substances.
- The right to know about the hazards associated with the chemicals you work with, and the safety procedures you need to follow to protect yourself from those hazards.
- The right to question any instruction which requires you to disobey a safety rule, which puts you or someone else in unnecessary danger of serious injury, or requires you to perform a task that you have not been safely trained to perform.
- The right of freedom from retaliation for demanding your safety rights.

Your Safety Responsibilities

You also have some important responsibilities concerning safety. These are:

- The responsibility of reporting all injuries and illnesses to your supervisor, no matter how small.
- The responsibility of always following the safety rules for every task you perform,
- The responsibility of reporting any hazards you see.
- The responsibility of helping your co-workers to recognize unsafe actions or conditions they cause.
- The responsibility of asking about the safety rules of which you are unsure.

Employee Safety Rules

It is impossible to list or include all safety rules for all the possible tasks you may have to do. But the following rules have been prepared to help you avoid hazards, which may cause injury while doing some of the more common tasks you may be asked to do. You should study and follow the rules provided in this booklet, and to ask your supervisor for additional rules when asked to do a task you are not familiar with, and this booklet does not cover. Failure to follow safety rules and /or safe practices will result in disciplinary action, up to and including termination.

GENERAL SAFETY RULES:

- Read and follow the safety notices and other information that is posted.
- Observe and follow all safety instructions, signs, and operation procedures.
- Help your fellow employees when they ask for assistance or when needed for their safety.
- Never participate in “horseplay”. Horseplay that results in injury is often not covered by Workers’ Compensation.
- Clean up spills immediately.
- Report all unsafe conditions, hazards, or equipment immediately. Make sure other people are warned of the problem so that they may avoid it.
- Wear personal protective equipment as required to reduce injury potential. Use gloves, safety glasses, back support belts, etc., as necessary.
- Never stand on chairs, furniture, or anything other than an approved ladder or step stool.
- Never use intoxicating beverages or controlled drugs before or during work. Prescription medication should only be used at work with your Doctor’s approval.

FIRE SAFETY:

- Report all fire hazards to your supervisor immediately.
- Fire fighting equipment shall be used only for fire fighting purposes.
- Smoking is not permitted at any time in the areas where “No Smoking” signs are posted.
- Do not block off access to fire fighting equipment.
- Keep doors, aisles, fire escapes and stairways completely unobstructed at all times.
- In the case of a fire, your first consideration must be the safety of all persons, and then attention should be directed to the protection of property.
- Change clothes immediately if they are soaked with oil, gasoline, paint thinner or any other flammable liquid.
- Know how to report a fire and how to turn on a fire alarm.
- Know the location of all fire extinguishers, and how to use them.
- Know the fire exits to be used in an emergency.

HAND TOOL SAFETY:

- Wear protective equipment necessary for the job you are performing. Discuss any required safety equipment with your supervisor as changes occur.
- Defective tools must not be used.
- Do not carry sharp hand tools in clothing.
- Check all wiring on electric hand tools for proper insulation and 3-prong plug grounding.

- **Hammers:** Use eye protection at all times!
- **Screwdrivers:** Use the right size and type of screwdriver for the job. Do not use a screwdriver as a chisel.
- **Wrenches:** In using any wrench, it is better to pull than to push. If you have to push, use your open palm. Use the proper wrench for the job.
- **Handsaws:** Saws that are sharp and rust free are less likely to bind or jump. Insure the object being cut is secured tightly to a flat surface.

PROTECTIVE EQUIPMENT:

- Approved eye protection (safety glasses with side shields, goggles, etc.) must be worn at all times when assigned any certain job classifications. It is important to check with your supervisor to assure compliance.
- Moccasins and shoes with open toes or high heels are not permitted.
- Wear protective clothing and equipment as required by your job classification to protect against hazards at hand. These include, but are not limited to, hard hats, steel toed shoes, gloves, fall safety harnesses, ear plugs, etc.

MATERIAL HANDLING SAFETY RULES:

- When lifting, lift properly. Keep the back straight, stand close to the load, and use your leg muscles to do the lifting, keeping the load close to the body. Never twist your upper body while carrying a load.
- When lifting heavy objects, utilize a two-wheeled dolly, or, ask for assistance from another employee.
- Inspect the object you are going to lift for sharp corners, nails, black widow spiders, or other things that may cause injury.
- Use gloves when handling rough or sharp materials.

HOUSEKEEPING:

- Do not place materials in aisles, stairways, or any designated path of travel.
- Stack material at a safe height so that material will not fall if bumped. Ensure heavy loads have proper support, and make sure there is no overhanging or irregular stacking of material.
- Place all trash or scrap in places provided. Clean up all spills immediately.
- Report worn or broken flooring, stair treads, handrails, furniture, or other office equipment.
    - Smoking is permitted only in designated areas. Use ashtrays for disposing of butts. Do not throw butts on the floor.

Personal Protective Equipment

Purpose:

Establish the policy for employees to wear Personal Protective Equipment.

Policy:

UT/IJP is dedicated to providing a safe and healthy workplace. All employees are expected to do their part to achieve this goal. Employees can do their part by using the proper Personal Protective Equipment (PPE) provided them.

Personal Protective Equipment will be provided, used and maintained in a sanitary and reliable condition wherever it is necessary to prevent injury. Personal Protective Equipment requirements include, but are not necessarily limited to the items below:

Protective Headwear:

Where there is the exposure of overhead danger from falling objects or from electric shock or burns, protective headwear must be worn. Protective headwear is an approved hard hat that meets the requirements of the American National Standards Institute (ANSI Z889.1-1969).

Protective headwear will be issued to the required employees. Employees are responsible for using their hard hats while working. Also, employees must notify their supervisor about a damaged or lost hardhat immediately.

Protective Eyewear:

When there is an exposure to the eyes from flying objects, glare or liquids, protective eyewear is required. Protective eyewear is an approved safety eye protector or safety goggle, which meets the standards of the American National Standards Institute (ANSI Z87.1-1968).

Protective eyewear will be issued to the required employees.

Disposable Dust Masks:

When there is the potential of exposure to airborne dust or particles, disposable dust masks are required.

Protective Gloves:

- When the hands are exposed to a hazard, protective gloves are required. Protective gloves are construction type work gloves and chemical resistive gloves.
- Construction type work gloves are required for, but not limited to, employees that may cut, pinch, hit or burn their hands.
- Chemical resistive gloves are required for, but not limited to, employees that may spill hazardous chemicals or corrosive material onto their hands.

Back Supports:

When employees are exposed to heavy lifting or repetitive lifting, back support devices are required.
achinery Tag Out Program

Purpose:

This policy and procedure establishes the minimum requirements for UT/IJP Machinery Tag Out Program. It governs lock out and/or tag out procedures to be used to verify that equipment or machines are isolated from all potentially hazardous energy. Machinery is to be locked out or tagged out before employees perform any servicing or maintenance activities where the unexpected start up or release of stored energy could cause injury.

Policy:

Procedures described apply to all electrical equipment and machinery connected to an energy source by either hard wire or other permanent connection (hydraulic lines, electrical, etc.) that is repaired, serviced, or maintained by UT/IJP personnel. The Machinery Tag Out Program applies to all equipment or machinery operated by mechanical, hydraulic, pneumatic, chemical, thermal, or other energy resources where the unexpected energizing could cause injury to employees or customers.

Circuit breakers disconnect switches, and other energy isolating devices used to control the flow of energy to the machine/equipment must be operated in such a manner as to shut off or "isolate" all energy to the machine.

Definitions:

Energy Source- Any source of electrical, mechanical, hydraulic, chemical, thermal, or other energy.

Energized- Connected to an energy source or containing residual or stored energy.

Energy Isolating Device- A mechanical device that physically prevents the transmission or release of energy (for example, circuit breaker, disconnect switch, slide gate, line valve, etc.)

Lock out- Placing a lock out device on an energy isolating device to shut down it's flow of energy.

Lock out device- A device such as a lock, either combination or key type, to hold an energy isolating device in the "safe" position and prevent energizing of a machine or equipment.

Tag out- Placing a tag or sign on an energy isolating device indicating that the equipment shall not be operated until the tag out sign is removed.

Tag out device- A prominent warning device or sign that can be attached to the energy isolating device. Tags will state the following:

DANGER-DO NOT OPERATE

Initial Training:

Employees involved in the use of this Machinery Tag Out Program must receive training in the requirements of this program upon initial assignment. The Safety and Health Manager is responsible for verifying that training is completed as required by this program.

Authorized employees will be trained in the recognition of hazardous energy sources present at the location they work, the type and magnitude of the energy available in the workplace, and the methods/means needed for energy isolation and control.

Employees must be trained to recognize when the Machinery Tag Out Program is being implemented and understand the purpose of the procedure and the importance of not attempting to start up or use machinery or equipment that has been locked or tagged out.

When tags are used, employees must be specifically instructed in the following limitations of tags:

- Tags are warning devices: they do not provide physical restraint that a lock out does.
- When a tag or lock is attached, it is not to be removed by anyone without authorization from the employee who placed it on the machine or equipment. They are never to be bypassed, ignored, or defaced.
- Tags must be legible and understandable to be effective.
- Tags and locks, and their means of attachment must be made of material that will withstand the working environment where the tags will be used.
- Tags and locks must be attached securely so they cannot inadvertently be detached during use.
- Tags evoke a false sense of security. They are only part of the entire Machinery Tag out Program.

Machinery Tag Out Program Inspection Form

This form will be used when inspecting the Tag Out/ Lock Out Procedure

Inspector's Name_____ Date _____

MACHINERY / EQUIPMENT INSPECTED	COMMENTS
1._____	_____.
2._____	_____.
3._____	_____.
4._____	_____.
5._____	_____.
6._____	_____.
7._____	_____.
8._____	_____.
9._____	_____.
10._____	_____.

I hereby certify that I have inspected the Lock Out/Tag Out procedure for the above listed equipment, have interviewed operators of such equipment and determined that compliance with UT/IJP Lock Out/Tag Out procedure is satisfactory.

Inspectors Signature Date

Lock and Tag Check Out / Check In Log

Date	Lock # or Tag #	Employee	Equipment to be Locked	Lock/Tag reason	Cleared date

Hazard Prevention and Control

UT/IJP shall undertake efforts as outlined in this section to correct or control potential hazards in a timely manner.

UT/IJP will implement methods to eliminate the hazard, and will implement procedures for safe work. Safe work will be done through training, correction of unsafe performance, and compliance through the disciplinary system.

Identified Safety and Health Concerns:

All identified potential workplace safety and health hazards should be reported to the Safety and Health Manager, or a member of management. Situations that are unsafe, or posing a safety and health hazard, will be reviewed and reported to management for corrective action.

Newly Identified Safety and Health Concerns:

Anytime a new substance, procedure, equipment, or process is introduced into the workplace, which creates or is reported to create an unsafe condition or situation, the Safety and Health Manager will evaluate the substance, procedure, equipment, or process. Employees will have an opportunity to submit their recommendations and suggestions regarding new workplace hazards at any time.

Hazards Which Create a Risk of Imminent Harm:

When a hazard exists which UT/IJP cannot control or abate immediately without endangering employees and /or property, all exposed personnel will be removed from the immediate area of potential exposure, except those employees that are necessary to correct the hazardous condition. All employees involved in correcting the hazardous situation will receive appropriate training and/or instruction in how to do so. They will also be provided with the appropriate personal protective equipment.

Hazards Which Do Not Create a Risk of Imminent Harm:

Unless there are factors beyond UT/IJP reasonable control, such hazards are to be abated within 5 days or less.

Housekeeping:

Good housekeeping is an integral part of any effective safety program. Keeping work areas neat and clean reduces the potential for accidents and injuries. Each employee is responsible for keeping his or her work area neat, orderly, and free of any hazardous condition.

Purpose:

Establish the policy for property maintenance.

Policy:

UT/IJP's goal is to provide its customers and employees with a safe facility. The following guidelines will help management determine if needed repairs are necessary.

Guidelines for Property Maintenance and Repair:

Property maintenance and repair will be performed to meet the standards of:

- Safety
- Any applicable codes, including
  - Occupational Safety and Health Administration (OSHA)
  - National Fire Protection Association (NFPA) which include
    - National Electric Code
    - Flammable Liquids Code
    - Life Safety Code
    - National Fuel Gas Code
  - Uniform Fire Code (UFC)
  - Building Officials and Code Administrators International Building Code (BOCA)
  - Americans With Disabilities Act (ADA)
- Continued operation of the business

Management must promptly, as appropriate, fix, repair, train employees, and/or give warnings of safety hazards. Management must promptly fix or repair any item necessary for the continued operation of the business. In the event an accident occurs, the Safety and Health Manager will fill out the **Liability Report Form** on the next page, and maintain a record thereof.

Liability Report Form

Date: _____

Claimant's Name:_____Age:_____Phone: _____

Address: _____

Description of Occurrence: _____
_____.
_____.
_____.
_____.

Injuries:_____Medical Care? YES NO

Ambulance? YES NO Hospital or Doctor: _____

Property Damage? YES NO If yes, describe: _____

Is a Product Involved? YES NO Name and Size: _____

Name and Address of Manufacturer: _____

Did Claimant Slip, fall, or Trip?_____Was Area Inspected? YES NO

Foreign Matter or Debris Found on Floor? YES NO Describe: _____

.

Witnesses: Name: _____ Phone: _____

Address: _____

Name:_____ Phone: _____

Address: _____

Photos Taken? YES NO Additional Remarks: _____

Report Prepared By: _____

Emergency Action Plan

Purpose:

Establish the policy and procedures regarding management's and employee's response to various emergency situations. Examples of an emergency are fire, tornado, earthquake, and bomb threat.

Overview:

The procedures cover the following topics:

1. Fire Reporting and Response

2. Evacuation

3. Bomb Threat

4. First Aid

5. Hazardous Material Spill

6. Earthquake

7. Robbery

Policy:

UT/IJP has developed plans that address emergency situations that may arise in UT/IJP locations and which may threaten human health and safety, and damages UT/IJP assets. Management is responsible for implementing the Emergency Action Plans. These Emergency Action Plans will meet the following objectives:

1. Provide a means of notifying employees, customers and local authorities of an emergency situation.
2. Provide for a safe and orderly method of evacuation of employees and customers from UT/IJP premises.
3. Account for all employees who occupied UT/IJP premises at the time of evacuation, should one occur.

Emergency Action Plans will:

4. Provide emergency first aid treatment or summon emergency medical assistance for injured individuals.
5. Provide training and needed information to those employees responsible for taking action in the event of an emergency.

Signs as required by ordinance, regulation, or law will identify emergency exits. Employees are required to be familiar with the location(s) of alarm pull stations and emergency exits.

Training on Emergency Action Plans will take place during new employee orientation, when changes occur in the action plans, and periodically as coordinated by the Safety and Health Manager.

Smoking is never allowed anywhere on UT/IJP premises during an emergency

If hazardous materials are involved, disposal must be done in compliance with federal, state, and local environmental laws.

Procedure:

I. Fire Reporting and Procedure:

If a fire alarm or alert is sounded or a fire is reported by an employee, regardless of the reason for the alarm or the severity of the fire, the following action must be taken immediately:

Senior Management

1. Immediately notifies the Fire Department by dialing 911 (where applicable) or the local fire emergency number:_____.
2. Gives UT/IJP name, address, and area where the fire is located.
3. Assigns an employee to wait for the fire department outside UT/IJP and direct them to the fire's location.
4. Announces evacuation instructions over the public address system. "Ladies and Gentlemen. UT/IJP is being temporarily closed. We request that you leave by the nearest exit immediately. Thank you."
5. Once outside UT/IJP, takes a head count of employees to insure all were safely evacuated. Double checks that all individuals are out of UT/IJP premises.

Note: When one or more employees are unaccounted for, employees are not to re-enter the building to conduct a search. Notify the ranking fire or other emergency response official on the scene and their approximate location.

Immediately after the fire, notify the President of UT/IJP and all other management individuals. Coordinate any salvage and repair operations.

Employee

1. If trained in the use of fire extinguishers, may attempt to suppress a small fire, until relieved by the Fire Department or until it becomes apparent that the fire cannot be controlled by fire extinguishers.

Note: Employees should never attempt to control a fire, which endangers their health. They must immediately evacuate the area when it becomes apparent that the fire cannot be controlled or when conditions become more hazardous.

II. Evacuation:

Senior Management

1. Telephones the local emergency agency (for example, fire, police, hazardous materials team, etc.).

2. Makes the following announcement on the public address system, "Ladies and Gentlemen. UT/IJP is being temporarily closed. Please leave by the nearest exit immediately. Thank you." Make this announcement twice, and repeats it every minute or more frequently if needed.

3. Checks all areas of their respective departments, restrooms, and public areas to verify that employees and individuals are evacuated.

Senior Management

4. Secures all cash, checks, and charge documents in the safe if time permits.

5. Designates a safe area outside UT/IJP as a gathering point for all employees. Takes a head count of employees to insure all were safely evacuated.

Note: Employees are not to re-enter the building. Management will notify the ranking fire or other emergency response official on the scene of a potentially trapped person and their approximate whereabouts.

6. Dismisses all non-essential employees.

7.Telephones the President of UT/IJP and all other management personnel.

II. Bomb Threat:

When someone calls and says there is a bomb in the building, the following steps will be performed:

Employee
(Receiving Threat)

1. Keeps the caller on the line as long as possible. Asks them to repeat the message. Tries to write down every word spoken by the caller.

2. Asks the caller where the bomb is located and when it will go off.

3. Tells the caller that the building is occupied and detonation of a bomb could result in the death and injury to innocent people.

4. Pays particular attention to background noises, such as music playing, engine noises, etc.

5. Listens to the voice, male, female, voice quality, accent, and speech impediments.

6. When the caller hangs up, **do not hang up the phone!** Sometimes, phones can be traced back to the source. Immediately notify management and describe the threat.

Senior Management

7. Calls the local Police or Fire Department to report the Incident. Follows all recommendations and instructions provided by either department.

5. If the Police or Fire Department declines to give instructions to evacuate the building, search the premises (if time permits) for any suspicious looking device or package. If one is found, follow the Evacuation Plan.

Do not touch any suspicious device or package.

III. First Aid:

If an employee / individual is injured, the initial responsibility of management is to provide the needed first aid or arrange for emergency medical response or professional medical care.

Senior Management

1. Treats the injured individual using the supplies from UT/IJP first aid kit.

2. In the event an employee is seriously injured and requires professional medical care, drive the employee to a medical provider. If any individual is not mobile or has a life threatening injury or illness, arrange for emergency care and transportation.

IV. Hazardous Material Spill:

Management will respond to incidental releases of hazardous substances when the substance can be absorbed, neutralized, or otherwise controlled at the time of release by employees in the immediate area or by maintenance personnel. If a large spill or fire occurs that is not controllable, Management will contact the appropriate local authorities, such as the Fire Department.

V. Earthquake:

All employees must be aware of the potential for earthquakes and the resulting damage to buildings and facilities.

A. During an Earthquake:

Employee

1. If indoors, stay indoors; if outdoors, stay outdoors. In earthquakes, most injuries occur as people are entering or leaving buildings.

1.a. If indoors:

1) Take cover beneath a desk, table, bench or in doorways, halls or against an interior wall.

2) Stay away from glass windows and glass doors, and away from containers with hazardous materials.

1.b. If outdoors:

1) Move away from buildings and all structures, and all overhead electrical wires.

2) If operating a vehicle, stop as soon as possible, but stay inside the vehicle.

B. After an Earthquake:

Senior Management

1. Coordinates first aid efforts.
2. Turns on the radio to get emergency information from local authorities.
3. Check natural gas lines for leaks. If a leak is detected, shuts down the system, and notifies the local gas service company.
4. Shuts off the electrical current at the main breaker box if power has been interrupted.
4. Directs employees and individuals to a safe assembly area outside the building.
5. Takes a head count to insure all employees were safely evacuated.
6. Does not permit individuals to enter the building again until cleared by authorities.
7. Assigns duties to clean up damage and resume business as soon as possible.

VI. Robbery:

In the event of a robbery, the main objective is to reduce the risk of injury to employees and individuals and to get the robber out of the building as soon as possible.

Employee

1. Be attentive and calm. Listen to the robber and do exactly

what he/she asks you to do.

2. Do give up money as demanded.
3. Remain alert. Try to remember details of the robber's appearance, clothing, speech, etc.
4. If possible, watch the robber's method and direction of escape.
5. Expect foul/strong language. Expect to lie on the floor.
6. Do not make any sudden movements.
7. Don't overreact. Do not grab for the weapon or call for help.
8. Do not argue.
9. After the robbery, write everything down.

Senior Management

10. Call the Police
11. Call the President of UT/IJP
12. Have all witnesses write everything they can recall.

OSHA Inspection

Purpose:

To establish the policy for all managers to follow if an OSHA Compliance inspection will be conducted.

Overview:

The Occupational Safety and Health Administration (OSHA) is authorized to conduct workplace inspections to determine whether employees are complying with standards issued by the agency for safe and healthful workplaces. Many States have their own occupational safety and health programs, and regularly inspect workplaces. Inspections are usually conducted without advance notice and can be conducted for one or more of the following reasons:

- Imminent Danger Situations – Any condition where there is reasonable danger that a situation exists that can be expected to immediately cause death or serious harm.
- Catastrophes and Fatal Accidents – Investigation of fatalities and accidents resulting in the hospitalization of 3 or more employees. Such catastrophes must be reported to OSHA within 8 hours.
- Employee Complaints
- Programmed Inspections – Based on injury rates, previous citation history, and employee exposure to toxic substances or random computerized selection.

This policy details the phases of an OSHA compliance inspection, the response and attitude of management to an inspection and steps to insure completion of the appropriate follow-up corrective action.

Policy:

UT/IJP policy is to demonstrate "**good faith**" effort to comply with all OSHA standards and any health and safety issues raised in an OSHA compliance inspection.

Management is responsible for implementing this policy and correcting all health and safety deficiencies revealed during compliance inspections. The Safety and Health Manager will provide technical assistance and

coordination of corrective action, as required.

Admitting an OSHA Compliance Officer:

If an OSHA compliance inspector requests to conduct an inspection, the senior management member is to ask to see the officer's credentials. An OSHA inspector carries either U.S. or the state's Department of Labor credentials bearing their photograph and a serial number. In every case, verify the authenticity of the compliance inspector's identification by calling the nearest OSHA office.

Note: DO NOT REFUSE THE COMPLIANCE OFFICER ADMITTANCE.

The senior management member is to contact the Safety and Health Manager immediately.

If UT/IJP requires a Search Warrant, inform the OSHA compliance officer before the opening conference begins. UT/IJP rights to challenge a warrant may be lost if it permits the inspection to proceed.

OSHA Facts:

An OSHA Inspection is divided into three parts:

1. The Opening Conference
2. The Walk Around Inspection
3. The Closing Conference

There are no time limits specifying how long an inspector may remain on the premises.

Violations are considered to be "alleged violations" until they become a final order of the Occupational Safety and Health Review Commission.

1. UT/IJP may contest (appeal), in writing any part of the citation within 15 working days after it has received it.

2. The citation must be posted in the work place for three days following its receipt or until the condition creating the alleged violation is corrected.

3. Management will ask for clarification about any point(s) an inspector raises that they don't understand.

4. Management and employees will not admit to violating any safety standard.

If UT/IJP contests (appeals) an alleged violation, copies of the appeal will be posted at the work site.

Opening Conference:

Before inspecting the premises, the OSHA compliance officer will conduct an opening conference at which they will explain:

- The reason for the inspection (for example. employee or individual complaint)
- Purpose of the visit
- Scope of the inspection
- OSHA Standards that apply

The below are listings of all OSHA Standards

OSHA Standards

- 1904, Recording and Reporting Occupational Injuries and Illnesses
    - 1904 Table of Contents/Authority for 1904
    - 1904.1, Purpose and scope.
    - 1904.2, Log and summary of occupational injuries and illnesses.
    - 1904.3, Period covered.
    - 1904.4, Supplementary record.
    - 1904.5, Annual summary.
    - 1904.6, Retention of records.
    - 1904.7, Access to records.
    - 1904.8, Reporting of fatality or multiple hospitalization incidents.
    - 1904.9, Falsification, or failure to keep records or reports.
    - 1904.10, Recordkeeping under approved State plans.
    - 1904.11, Change of ownership.
    - 1904.12, Definitions.
    - 1904.13, Petitions for record keeping exceptions.
    - 1904.14, Employees not in fixed establishments.
    - 1904.15, Small employers.
    - 1904.16, Establishments classified in Standard Industrial Classification Codes (SIC) 52-89, (except 52-54, 70, 75, 76, 79 and 80).
    - 1904.17, Annual OSHA Injury and Illness Survey of Ten or More Employers.
    - 1904.20, Description of statistical program.
    - 1904.21, Duties of employers.
    - 1904.22, Effect of State plans.
    - 1904.30, OMB control numbers under the Paperwork Reduction Act.

- **Other OSHA Standards with Recordkeeping Requirements**
    - 1910.95, Occupational noise exposure
    - 1910.120, Hazardous waste operations and emergency response
    - 1910.440, Recordkeeping requirements
    - 1910.1000, Toxic & Hazardous Substances
        - 1910.1001, Asbestos
        - 1910.1018, Inorganic arsenic
        - 1910.1025, Lead
        - 1910.1027, Cadmium
        - 1910.1028, Benzene
        - 1910.1029, Coke oven emissions
        - 1910.1030, Blood borne pathogens
        - 1910.1043, Cotton dust
        - 1910.1044, 1,2-dibromo-3-chloropropane
        - 1910.1045, Acrylonitrile
        - 1910.1047, Ethylene oxide
        - 1910.1048, Formaldehyde
        - 1910.1050, Methylenedianiline
        - 1910.1051, 1.3-Butadiene
        - 1910.1052, Methylene Chloride
        - 1910.1450, Occupational exposure to hazardous chemicals in laboratories

- 1913.10, Rules of agency practice and procedure concerning OSHA access to employee medical records
- 1915.7, Competent person
- 1915.1001, Asbestos
- 1919.11, Recordkeeping and related procedures concerning records in custody of accredited persons
- 1919.12, Recordkeeping and related procedures concerning records in custody of the vessel.
- 1925.3, Records
- 1926.60, Methylenedianiline
- 1926.62, Lead
- 1926.65, Hazardous waste operations and emergency response
- 1926.800, Underground Construction
- 1926.1091, Recordkeeping requirements
- 1926.1101, Asbestos
- 1926.1127, Cadmium
- 1960, Federal employees
    - 1960.66, Purpose, scope and general provisions
    - 1960.67, Log of occupational injuries and illnesses
    - 1960.68, Supplementary record of occupational injuries and illnesses
    - 1960.70, Reporting of serious accidents
    - 1960.71, Locations and utilization of records and reports
    - 1960.72, Access to records by Secretary
    - 1960.73, Retention of records
    - 1960.74, Agency annual reports

- **Preambles to OSHA Standards**
    - Reporting of Fatality or Multiple Hospitalization Incidents.

- **OSHA Directives**
    - CPL 2.80, Handling of Cases To Be Proposed for Violation-By-Violation Penalties, (1990, October 21), 15 pages. Includes procedures for record keeping violations.
    - CPL 2.91, Enhanced Verification of Records, (1990, May 13), 6 pages.
    - CPL 2-2.46, 29 CFR 1913.10(b)(6), Authorization and Procedures for Reviewing Medical Records, (1989, January 5), 5 pages.
    - CPL 2-2.33, 29 CFR 1913.10, Rules of Agency Practice and Procedure Concerning OSHA Access to Employee Medical Records - Procedures Governing Enforcement Activities, (1982, February 8), 12 pages.
    - CPL 2-2.32, 29 CFR 1913.10(b)(6), Authorization of Review of Specific Medical Information, (1981, January 19), 5 pages.
    - CPL 2-2.30, 29 CFR 1913.10(b)(6), Authorization of Review of Medical Opinions, (1980, November 14), 2 pages.
    - CPL 2.113, Fatality Inspection Procedures, (1996, April 1), 5 pages.

- **Review Commission Decisions**
- 81-2135, (1985, April 17), 5 pages. Failure to make records available during an inspection.
- 82-630, (1991, February 15), 9 pages. Making medical records available when a Workers Compensation claim is pending.
- 82-1016, (1987, March 18), 7 pages. Privacy of OSHA 200 and related records.
- 89-2614, (1993, February 3), 8 pages. Recording of elevated blood lead levels on the OSHA 200.
- 90-552, (1992, February 21), 2 pages. OSHA 200 must be maintained at each location.
- 89-433, (1993, April 27), 9 pages.
- 90-2179, (1993, April 1), 3 pages. Assessing separate penalties for multiple errors on the OSHA 200
- 87-0922, (1993, February 5), 25 pages.
- 88-237, (1994, May 23), 6 pages.
- 91-0110, (1996, January 19), 6 pages.

- Standard Interpretations and Compliance Letters

There are several hundred Standard Interpretations and Compliance Letters relating directly to the topic of Recordkeeping. Please refer to the Search Page on the "http://www.OSHA.gov" web site. From here you can access these documents either by the specific regulation, or by conducting a search. You can also contact OSHA at one of their regional offices. They will provide you with forms and answers to any questions you may have. Don't hesitate to use them as a valuable resource.

Senior Management must arrange for the following to attend the opening conference:

- The President of UT/IJP
- Other Personnel, as directed

Management must request copies of all applicable safety and health standards as well as a copy of any employee complaint.

The Walk Around Inspection:

After the opening conference, the OSHA compliance officer will go through the facility to inspect for safety and health hazards. At a minimum, the OSHA compliance officer will likely ask for documentation of the following:

- Compliance with the hazard communication standard.
- Compliance with the lockout/ tag out standard.
- Record keeping for employee training
- The employee written safety and health management program

When senior management members and other UT/IJP employees accompany an OSHA compliance officer on an inspection, they should be respectful while firmly standing up for UT/IJP rights and viewpoints. The conduct of UT/IJP personnel shall be in accordance with the following guidelines:

- Do not physically interfere with the OSHA compliance officer when they are making the inspection
- Do not give false or misleading information.
- Accompany the OSHA compliance officer at all times during the inspection.
- Answers to an OSHA compliance officer's questions are to be responsive to the question asked. Do not offer any information beyond the scope of the question. Avoid making any statement that could be construed as an admission of a violation of any recognized health standard.
- Do not discuss with the OSHA compliance officer any previous safety inspections.

The conduct of UT/IJP personnel shall be in accordance with the following guidelines (continued):

- If the OSHA compliance officer wants to take photographs, senior management must request copies of the photographs. Senior management will also take photographs of the area from the same and different angles.
- Watch and take notes regarding all activities of the OSHA compliance officer. Notes should be detailed and should include such pertinent information as to the name(s) of the OSHA compliance officer(s), time of arrival, activities of OSHA compliance officer, amount of time spent at each location, comments about violations and potential citations, who was interviewed, what was said, etc.
- Immediately correct minor but apparent safety problems in order to help establish UT/IJP "**good faith"** effort to comply with all OSHA health and safety standards.
- The OSHA compliance officer cannot and will not act in a consultative capacity. If they see or if UT/IJP personnel points out a violation, the OSHA compliance officer must issue a citation.

Closing Conference:

After the walk around inspection, a closing conference is held with the OSHA compliance officer, senior management, and any employee representative. The OSHA compliance officer will discuss all unsafe and unhealthy situations observed and will identify all applicable sections of the standards which may have been violated. Management will ensure that all violations are understood. When appropriate, Management will produce records to show compliance efforts and fully explain any difficulties that will be encountered in the correction of safety hazards. Management and employees will not admit violation or indicate how long it will take to correct a potential violation.

Post Inspection Activities:

Time limits to correct violations generally range from 5 to 30 days, unless an extension is requested. Time limits will be given in person at the closing conference or mailed within 30 days in a written report of the inspection findings. Follow-up action will be documented in writing, by senior management, listing specific action steps, the individual accountable, and the target date for completion. Management is responsible for completing all corrective action.

OSHA inspection reports, UT/IJP response, and all correspondence to and from OSHA will be retained permanently by the Safety and Health Manager.

Questions an OSHA Compliance Officer Might Ask

Administrative Interview

1. Do you have a written Hazard Communication Plan?

   29CFR 1910.1200 requires employers to have a written plan which describes how the training, labeling, MSDS management and other requirements of "Right-to-Know" will be met. More citations and fines are given for this than anything else.

2. Do you have a complete written inventory (list) of hazardous materials?

   29CFR 1910.1200 requires employers maintain a current list of all hazardous materials used in the workplace. This list must be accessible to employees.

3. Has a specific person been assigned responsibility for your safety program?

   29CFR 1910.1200 and other regulations require that you assign responsibility for various aspects of the safety program. Some states specifically require that employers name a person with overall safety responsibility.

4. Do you have a formal disciplinary policy relating to safety?

   29CFR 1910. Various sections require employers enforce safety rules. Employees may not decide on their own when to follow the rules.

5. Do employees ever complain of headaches, nausea, dizziness or skin problems?

   All OSHA standards require that employers evaluate workplace hazards and determine whether material use or employee complaints mean that there is any over-exposure to unsafe conditions. These are typical symptoms of over-exposure.

6a. Do employees wear respirators or dust masks?

6b. If "Yes": Do you have written respirator procedures?

   29CFR 1910.134 requires that if any employee uses a respirator, including a dust mask, written procedures must cover use, fit testing, cleaning and maintenance of the respirator.

6c. Do you have records showing fit testing of respirators and training?

   29CFR 1910.134 requires employers to test the fit of each respirator on each employee and train the employee to check and properly use the respirator.

7. Do you have written training records?

   29CFR 1910.1200, .1450, .1030 and virtually all other OSHA regulations require written training records which document date, subject, attendees and trainer.

8a. Do you have more than 10 employees?

8b. If "Yes": Do you have a written Emergency Contingency Plan?

   29CFR 1910.38 outlines the requirements for an emergency contingency plan for those who employ more than 10 at any one time during the year.

8c. Are your Forms 200, 300, 300A and 301 up-to-date and posted from Feb 1 until April 30?

   29CFR 1904 requires that employers of more than 10 at any one time in the year maintain occupational illness and injury reports on Form 300 or equivalent and summarize them on Form 300A which is posted from Feb 1 until April 30.

9a. Can you reasonably anticipate that any employees will be exposed to human blood this year because of their jobs?

9b. Have you assigned responsibility for first-aid to an employee?

9c. If "Yes": Do you have written Blood borne Pathogen Exposure Control Plan? 9d. Have employees been trained in protective equipment and procedures?

   29CFR 1910.1030 requires that employers develop an Exposure Control Plan, train employees, keep records, and offer Hepatitis B vaccinations if it can be reasonably anticipated that one or

more employees could be exposed to human blood or blood products as a result of doing their assigned duties. If you have assigned first aid responsibilities to an employee you are required to have a Blood borne Pathogen Program. Special waste management and use of approved disinfectants are also required. The key is "reasonable anticipation". Good Samaritan acts are not covered.

Janitorial & Chemical Storage Area Overview

10. Is the area neat and clean, without spills on the floor?
    29CFR 1910.22 requires that all work places be clean, orderly and sanitary.
11. Are there any containers without legible labels?
12. Do all secondary container labels list the product, the hazards and the manufacturer?
    29CFR 1910.1200 requires that all containers of hazardous materials be labeled. The manufacturer's label is fine if legible. If materials are moved from the original to a "secondary" container, it must be labeled. The label must include the name of the material, a description of the hazard and the manufacturer's name. Just the name is not enough.
13. Is there an MSDS on hand for each hazardous material?
14. Are MSDSs accessible to all employees at all times?
15. Pick a product. Ask to see the MSDS. Could an employee have found it in 4-5 minutes?
    29CFR 1910.1200 requires that employers have an MSDS for each hazardous material. Employees must have access to MSDS's at all times during the work shift and be able to find a specific one in less that 5 minutes without asking for access to the collection.

General Work Areas Overview

16. Is the fire extinguisher tag marked for monthly inspections and service in the last year?
    29CFR 1910.157 requires that all portable fire extinguishers be visually inspected monthly and serviced annually. If the tag isn't marked it is difficult to prove inspections.
17. Is the area clean and uncluttered?
    29CFR 1910.22 requires that all work places be clean, orderly and sanitary.
18. Are oily rags kept anywhere but in metal cans with closed lids?
    29CFR 1910.38 requires employers to identify and correct fire hazards. Oily rags should be kept in a closed metal container.
19. Are drinks or food kept near any hazardous materials?
    29CFR 1910.142 requires that no employee be allowed to have food or beverages in an area where they could be contaminated with toxic or infectious materials.
20. Are there any unlabeled containers?
    29CFR 1910.1200 requires that all containers of hazardous materials be labeled. The manufacturer's label is fine if legible. If materials are moved from the original to a "secondary" container, it must be labeled. The label must include the name of the material, a description of the hazard and the manufacturer's name. Just the name is not enough.
21. Are any respirators stored which are not in bags or cabinets?
    29CFR 1910.134 requires that respirators be stored and maintained in a way that they will be cleaned, protected and ready for use. Respirators left in the open may absorb contaminants and become unusable.
22. Are gloves, goggles or safety glasses clean and in good repair?
    29CFR 1910.132 requires that safety equipment be maintained in clean and sanitary condition and that it be used only if in good repair. Broken or dirty equipment raises questions in an inspector's mind and leads to a more intensive inspection.

23. Are there extension cords across aisles or walkways?

    29CFR 1910.22 requires that all work place be clean, orderly and sanitary. Cords across aisles present a slip and fall hazard as well as a potential electrical hazard.

24. Look at ladders. Are there broken steps or parts in bad repair?

    29 CFR 1910.25 requires employers to "inspect ladders frequently and those which have developed defects shall be withdrawn from service for repair or destruction and tagged or marked as "Dangerous, Do Not Use"."

25. Are there any broken or missing electrical switch or outlet covers?

    29 CFR 1910.305 requires that pull boxes, junction boxes and fittings have plates or covers. Broken plates and covers do not provide adequate protection.

Employee Area Overview

26. Is the OSHA Poster or state equivalent posted?
27. Are emergency phone numbers posted by telephones?
28. Is an evacuation route map posted?

    29 CFR 1910.38.

29. Is there a fully stocked first aid kit?

    9 CFR 1910.262 requires that there be a first aid kit stocked with supplies appropriate to the situation. It must be continuously stocked for any emergency.

30. Are lunches, snacks or drinks stored in a cabinet or refrigerator with chemicals?

    29 CFR 1910.142 requires that no employee be allowed to have food or beverages in an area where it could be contaminated with toxic or infectious materials.

Employee Interview

OSHA uses "performance based" standards for its enforcement of safety regulations. The best program on paper will mean nothing if your employees cannot do the right thing or do not know where to get information. Whether your employees can answer questions correctly (or not) is the test OSHA inspectors use to evaluate your compliance with OSHA rules.

31a. Please show me the MSDS for_____(name a product)_____.

Did the employee answer -- "What's an MSDS?"

31b. Did the employee know where the MSDS's are kept?

31c. Did it take less than 5 minutes for the employee to find the correct MSDS?

    29 CFR 1910.1200 Employees should know what an MSDS is and be able to locate a specific one in less that 5 minutes. MSDS's should be indexed and stored in an organized fashion.

32a. When were you last trained on safety issues? Did the employee say "I don't remember" or "Never"? 32b. Has training been in the last year?

    29 CFR 1910.1200 states that "employers shall provide information and training on hazardous chemicals...at the time of their initial assignment and whenever a new hazard is introduced into their work area." Some states also specifically require annual retraining.

33. If you had to evacuate the building where would you go for a head count? Did the employee know a pre-determined specific place?

    29 CFR 1910.38 requires that emergency contingency plans specify the means of accounting for all employees after an evacuation of the facility.

Purpose:

To establish the policy and procedures regarding UT/IJP requirements for compliance with OSHA record keeping and posting guidelines for occupational injuries and illnesses.

Policy:

All locations are to post the "Job Safety and Health Protection" poster (or state equivalent) in prominent places in the workplace.

OSHA requires that employers maintain a record of certain occupational injuries that occur at each business establishment on the OSHA Form Log 300 and 300A: Log of Work-Related Injuries and Illnesses and Summary of Work-Related Injuries and Illnesses. At the end of each year, OSHA requires the summary section of the OSHA Form Log 300A to be posted at each business establishment no later than February 1 and remain in place until April 30. UT/IJP will comply with this requirement. The Safety and Health Manager is responsible for maintaining the information on the log in a current status and distributing the OSHA Form Logs.

The "Job Safety and Health Protection" poster and the Form Log and Summary of Occupational Injuries and Illnesses can be ordered from OSHA, free of charge, at 303-844-1600

Record Retention:

OSHA Form Log, January – November reports can be discarded upon receipt of the next monthly report.

Year-end OSHA Form Log 200, 300, 300A, and 301, retain for 5 years following the year to which they relate

Common OSHA Violations

1. Failing to provide information about the Hazard Communication standard and the actual hazards of the chemical that are present.
2. Not having a Hazard Communication Program.
3. Not having a written fire prevention program.
4. OSHA Log hasn't been properly maintained or is missing.
5. Not having an MSDS for every hazardous chemical in use.
6. Not properly labeling all containers or groups of containers containing hazardous chemicals.
7. Not marking exits or accesses to exits.
8. Improper building design, construction, maintenance or occupancy of a building or structure containing employees.
9. Fire extinguishers not located or mounted in an accessible and safe location or not provided.
10. Failure to provide fire extinguisher training.
11. Improper wiring is present in one of the following ways:
    - Unused openings and electrical boxes not closed.
    - Conductors entering boxes are not protected from abrasion
12. Improperly using a flexible cord in one of the following ways:
    - Flexible cord smaller than a #12 was spliced
    - Solder used to splice a flexible cord
    - Used as a substitute for fixed wiring
    - Ran through holes in the ceiling and/or walls
    - Ran through doorways and/or windows
13. Exposed or non-current carrying metal surfaces of fixed equipment are not grounded.
14. Failing to provided electrical boxes and fittings with an approved cover, or failing to ground metal covers.
15. Disconnects, circuit breakers, and other over-current devices aren't legibly and Permanently labeled.
16. Tongue guard on grinder is more than ¼" from the edge of the stone.
17. Missing or inadequate machine guarding.
18. Work rest is missing or more than 1/8" from a grinding wheel.
19. Not providing a suitable eyewash or shower.
20. Persons without respirators performing tasks that require respirators.
21. Written standard operating procedures governing the use and selection of respirators shall be established.
22. Employers shall make conveniently available protectors suitable for the task to be performed. Protective eye, head, face, body, feet and hand equipment shall be provided when there is reasonable probability of injury.
23. A Platform four feet or more from the ground is not provided with a standard railing (and toe board) where required.
24. Broken or damaged ladders being used.
25. Furniture, barrels, boxes, or other devices used in lieu of ladders.

It is imperative that management photocopies these pages and gives them to all employees during a training session. All employees shall be trained on the risk of blood borne pathogens and the proper handling of blood and other bodily fluids.

What Everyone Needs to Know

Blood borne pathogens are microorganisms carried by human blood (and other body fluids) and cannot be seen with the naked eye. They can be spread through contact with infected blood. If they get into the bloodstream, an individual may become infected and sick.

Most personnel cannot reasonably anticipate coming into contact with blood during their day-to-day work duties. That's why it's imperative that all personnel understand the danger of exposure to blood borne pathogens and ways to minimize their risk.

Blood borne pathogens may be present in blood and other materials, such as:

- body fluids containing visible blood
- semen and vaginal secretions
- torn or loose skin

Blood borne pathogens can cause infection by entering the body through:

- open cuts and nicks
- skin abrasions
- dermatitis
- acne
- mucous membranes of the mouth, eyes or nose

Workplace Transmission

The most common blood borne pathogens are HIV, Hepatitis B, and Hepatitis C:

HIV (AIDS)

HIV, the human immuno-deficiency virus, attacks the body's immune system causing it to weaken and become vulnerable to infections that can lead to a diagnosis of acquired immune deficiency syndrome or AIDS.

HIV is transmitted mainly through sexual contact and sharing contaminated needles, but also may be spread by contact with infected blood and body fluids. HIV is NOT transmitted indirectly by touching or working around people who are HIV-positive.

Employees can prevent getting HIV by stopping the passage of the virus from a person who has HIV to them. In many instances, the employee has control over the activities that can transmit HIV. Since HIV is most frequently transmitted by sharing needles or through

sexual intercourse, employees can stop transmission by refusing to engage in these behaviors.

Hepatitis B

Hepatitis is a general term used to describe inflammation (swelling) of the liver. Alcohol, certain chemicals or drugs, and viruses such as hepatitis A, B, C, D, E and G may cause hepatitis.

- Hepatitis B is a serious, sometimes fatal disease, caused by a virus that infects and attacks the liver. The virus is transmitted through direct contact with infected blood, semen, or vaginal fluid. It is primarily spread through sexual contact.
- In studies that examine transmission following injections into the skin, HBV is 100 times more contagious than HIV.
- **HBV can also be transmitted indirectly because it can survive on surfaces dried and at room temperature for at least a week!** That's why contaminated surfaces are a major factor in the spread of HBV.
- Each year there are up to 200,000 new infections and 5,000 hepatitis B related deaths in the U.S. (compared to 40,000 new HIV infections per year).
- One in approximately 20 persons now has, or will one day have, hepatitis B
- Transmission of hepatitis B is preventable:
    - Use latex condoms during sex
    - Do not share needles
    - Use universal precautions in the workplace
    - Get the hepatitis B vaccination

Hepatitis C

Hepatitis is a general term used to describe inflammation (swelling) of the liver. Alcohol, certain chemicals or drugs, and viruses such as hepatitis A, B, C, D, E and G may cause hepatitis.

- Hepatitis C is a serious, often fatal disease, caused by a virus that infects and attacks the liver. HCV is more common than hepatitis B and ranks slightly below alcoholism as a cause of liver disease.
- However, HCV is not as infectious as HBV because there are generally lower levels of the hepatitis C virus in the blood than of the hepatitis B virus
- HCV is primarily transmitted through blood-to-blood contact -- most commonly through shared needles. The risk of transmitting HCV through sexual contact appears to be low, but precautions should be taken anyway. HCV cannot be transmitted by casual contact such as shaking hands or sharing bathroom facilities.
- Up to 180,000 people may become infected with HCV each year in the U.S.
- Transmission of hepatitis C is preventable:
    - Use latex condoms during sex
    - Do not share needles
    - Use universal precautions in the workplace
    - HOWEVER, unlike hepatitis B, currently there is NO VACCINE for hepatitis C. And also unlike HBV, there is no drug to prevent HCV infection after an exposure.

Guidelines for Handling Blood and Other Bodily Fluids

Many personnel are concerned that HIV may be spread through contact with blood and other body fluids when an accident occurs at work.

HIV, as noted earlier, has been found in significant concentrations in blood, semen, vaginal secretions, and breast milk. Other body fluids, such as feces, urine, vomit, nasal secretions, tears, sputum, sweat, and saliva do not transmit HIV unless they contain visible blood. However, these body fluids do contain potentially infectious germs from diseases other than AIDS. **If an individual has contact with any of these body fluids, they are at risk of infection from these germs**. It should be remembered that the risk of transmission of these germs depends on many factors, including the type of fluid contacted, the type of contact made, and the duration of the contact.

Very simply, it is good hygiene policy to treat all spills of body fluids as ***infectious*** in order to protect personnel from becoming infected with any germs and viruses. The procedures outlined below offer protection from all types of infection, and should be followed routinely.

How Should Blood and Body Fluid Spills be Handled?

Whenever possible, employees shall wear disposable, waterproof gloves when they expect to come into direct hand contact with body fluids (when treating bloody noses, handling clothes soiled by incontinence, or cleaning small spills by hand). Gloves used for this purpose shall be put in a plastic bag or lined trash can, secured, and disposed of daily. Hands should always be washed after gloves are removed, even if the gloves appear to be intact.

If an employee has unexpected contact with body fluids or if gloves are not available (for example, applying pressure to a bleeding wound), the employee shall wash their hands and other affected skin for at least 30 seconds with soap and water after the direct contact has ended. This precaution is recommended to prevent exposure to other pathogens, not just HIV. As has been discussed, blood, semen, vaginal secretions, and blood-contaminated body fluids transmit HIV. Wiping a runny nose, saliva, or vomit does not pose a risk for HIV transmission.

- *Hand washing*

Proper hand washing requires the use of soap and warm water and vigorous washing under a stream of running water for at least 30 seconds. If hands remain visibly soiled, more washing is required. Scrubbing hands with soap will suspend easily removable soil and microorganisms, allowing them to be washed off. Running water is necessary to carry away dirt and debris. Rinse your hands under running water and dry them thoroughly with paper towels or a blow dryer. When hand washing facilities are not available, use a waterless antiseptic cleanser, following the manufacturer's directions for use.

- *Disinfectants*

An EPA approved germicide or a solution of 99 parts water to 1 part household bleach (or ¼ cup bleach to one gallon of water) will inactivate HIV, and should be used to clean all body fluid spills. Higher concentrations of bleach can be corrosive, and are unnecessary. Surfaces should be cleaned thoroughly prior to disinfecting.

- Disinfecting Hard Surfaces and Caring for Equipment

Although hard surfaces have not been found to be a means of transmitting HIV, it is good hygiene policy to clean any soiled hard surfaces thoroughly. To do this, scrub the surface to remove any soil and apply a germicide (like the bleach/water solution described above) to the equipment used. Mops should be soaked in this solution after use and rinsed thoroughly with warm water. The solution should be promptly disposed of down a drainpipe. Remove gloves and discard them in appropriate receptacles, and wash hands as described above.

Laundry Instructions for Clothing Soiled with Body Fluids

It is important to remember that laundry has never been implicated in the transmission of HIV. To ensure safety from transmission of other germs, contaminated clothes must be laundered with soap and water to eliminate potentially infectious agents. The addition of bleach will further reduce the number of potentially infectious agents. Clothing soaked with body fluids may be washed separately from other items. Pre-soaking may be required for heavily soiled clothing. Otherwise, wash and dry as usual, following the directions provided by the manufacturer of the laundry detergent. If the material can be bleached, add ½ cup of household bleach to the wash cycle. If the material is not colorfast, add ½ cup of non-chlorine bleach to the wash cycle.

It is good hygiene to treat all bodily fluids as infectious.

Hazardous Material Spill Response

Purpose:

To establish the policy and procedures regarding Management and employee response and actions to a hazardous material spill or leak.

Policy:

Federal, state, and local environmental laws dictate the specific handling and disposal methods of hazardous materials. Failure to comply with these laws can be very costly as well as environmentally negligent. UT/IJP will fully comply with all laws and regulations pertaining to the handling and disposal methods of hazardous materials. UT/IJP will train all employees in the proper procedures to follow and what to do when they encounter a hazardous spill or leak.

Overview:

There are four classifications of hazardous chemicals that employees will likely come into contact with. These are:

IGNITABLES---TOXICS---CAUSTICS---REACTIVES

IGNITABLES- Ignitable products are either flammable or combustible. A spill of this nature creates two problems: one involving the potential for explosion and/or fire, and the other is the pollution of the environment. Examples are gasoline, paint thinners, petroleum solvents, alcohol, and adhesives.

TOXICS- These products are poisonous to the body and can cause illness or death. Examples are anti-freeze, paint, insecticides, fertilizer, and cleaning fluids.

CAUSTICS- A caustic is anything that burns, strongly irritates, corrodes or simply destroys the skin. Examples are acids and drain cleaners.

REACTIVES- These products react violently when mixed with other products. The most common example is dry or liquid chlorine.

Procedure:

Regardless of the nature of the spill, and before starting any cleanup activities, the employee(s) shall always secure the area around the spill. This is to include asking all other unnecessary employees and customers to move a safe distance away from the spill site. The employee(s) shall also barricade or cord off access to the site with tape or other visual barriers as needed to keep people from wandering into the spill site. Once the area is secure, Management shall be notified of the spill, its location, and when the area is clean. Management shall also notify public officials as necessary.

Employee(s) that are required and directed to conduct the cleanup shall always check the warning label of an unbroken container or the Material Safety Data Sheet (MSDS) of the product involved in the spill or leak. Either the product label or the MSDS should have cleanup

procedures (Section VII of the MSDS form). If not, or if time does not permit, the employee(s) shall consider the product extremely hazardous and use the following cleanup procedure:

1. Immediately shut off or eliminate all possible sources of ignition to include turning off anything that might produce a spark, flame, or friction.
2. A fire extinguisher must accompany all ignitable spill cleanups.
3. Cover the spill or leak with absorbent materials to reduce evaporation.
4. Ventilate the area as well as possible by opening doors and windows.
5. If a spill is large, a fan shall be set up at least ten feet from the person cleaning up the spill. The fan shall be behind the person cleaning up the spill to blow the hazardous vapors away from their breathing area.
6. Wear safety goggles, gloves, disposable overshoes, and respirator (as necessary) prior to cleaning up the substance.
7. Small spills (one pint or less) can be cleaned up with absorbent materials (rags, paper towels, etc.), and placed into a plastic bag. These bags will be labeled as a flammable or combustible. The label on the bag must also have the following information: (1) the name of the product in the bag, (2) the quantity of material in the bag, (3) name of manufacturer, (4) and the date of the spill. The words "Hazardous Waste" must be clearly marked on the bag.
8. After the spill area is thoroughly dry, the spill area shall be scrubbed with a mild detergent using a broom or mop.
9. The bags shall then be placed in properly labeled containers for disposal. UT/IJP can accumulate hazardous waste on site for up to 90 days without a permit. Disposal shall be in accordance to guidelines of local and state regulations.
10. All efforts shall be taken to prevent hazardous material from entering sewage systems. If infiltration occurs, the fire department shall be notified.

Employee(s) in contact with the hazardous material shall be informed to recognize physical symptoms of accidental exposure (found in MSDS Section VI). They shall be told that if they develop a ***skin rash, shortness of breath, asthma or any abnormal condition, they are to see a doctor immediately for an evaluation!***