

Manufacturing Facilities Proposal



Construction proposal

To assist business owners with expansion projects, Wisconsin Public Service has compiled information and renderings of common building types in business and industrial parks in Wisconsin. This proposal includes floor plans, timetables and construction costs for conventional and pre-engineered buildings.

Plans are based on the following:

- Typical manufacturing layout
- Ease of warehousing
- Layout versatility
- Energy efficiency

Estimated costs include:

- Carpentry
- Concrete
- Concrete wall panels (on conventional option)
- Structural steel and steel erection
- Doors and windows
- Electrical (nonmachinery hookups)
- Fire protection (standard use)
- HVAC
- Masonry
- Plumbing
- Roofing, thermal and moisture protection
- Site work
- Site utilities
- Specialties
- General conditions

Based on building size, estimated costs also include:

30,000 square feet

- 1 truck loading dock and equipment with 9' x 10' overhead door
- 1 ground-level 12' x 14' overhead door
- 10-ton crane system (100 lineal feet)
- 800-amp service
- 2,000-square-foot office area finished

50,000 square feet

- 2 truck loading docks and equipment with 9' x 10' overhead doors at each
- 1 ground-level 12' x 14' overhead door
- 10-ton crane system (150 lineal feet)
- 800-amp service
- 5,000-square-foot office area finished

100,000 square feet

- 4 truck loading docks and equipment with 9' x 10' overhead doors at each
- 2 ground-level 12' x 14' overhead doors
- 10-ton crane system (300 lineal feet)
- 1,200-amp service
- 8,000-square-foot office area finished

200,000 square feet

- 8 truck loading docks and equipment with 9' x 10' overhead doors at each
- 4 ground-level 12' x 14' overhead doors
- 10-ton crane system (500 lineal feet)
- 2,400-amp service
- 12,000-square-foot office area finished

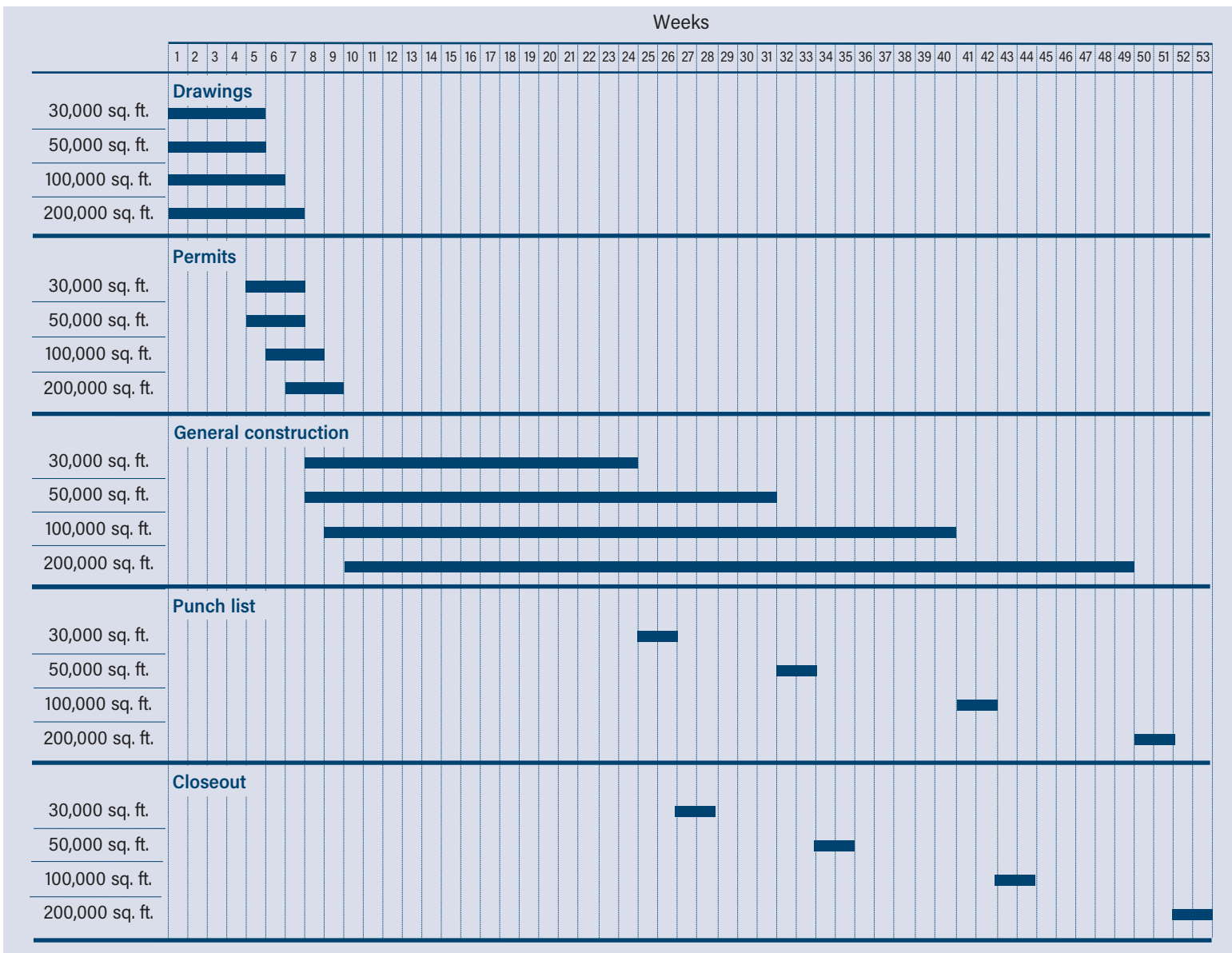
Fast Track scheduling

The chart below indicates schedules for pre-engineered and upgraded conventional buildings at four spec sizes: 30,000 square feet, 50,000 square feet, 100,000 square feet and 200,000 square feet.

Examples (time from preliminary drawings through closeout)

Facility size

- 30,000 square feet 28 weeks
- 50,000 square feet 35 weeks
- 100,000 square feet 44 weeks
- 200,000 square feet 53 weeks



Manufacturing Facilities

Project specifications

Specifications for these buildings include:

- 10-ton overhead crane systems
- 2' x 4' ceiling tiles (in office areas)
- Plant to be open structure painted
- 2' x 4' LED recessed lights (in office areas)
- Recessed truck loading dock systems with overhead doors
- At-grade overhead doors (12' x 14')
- 6" (R-19) exterior wall insulation, R-24 ceiling insulation (min.)
- Electrical installation and service*
- ADA Code
- Architectural plans and engineering
- 2010 International Building Code (IBC) adherence
- Building eave height 24'
- Flooring in offices (plant sealed concrete)
- Ceiling fans in plant
- Doors, frames and all hardware
- Energy-efficient T-12 lighting in plant to 70 foot-candles
- Fire protection
- Footings and foundations
- Excavation and backfill
- High-efficiency, gas-fired forced air heating and cooling in offices
- High-efficiency, gas-fired unit heaters in plant
- Exterior lighting (LED)
- Interior wall framing
- Local permits for building
- State permits for building
- Plumbing
- Rough site grade
- Site utilities
- Supervision and general conditions for project
- Construction management

**800-amp (30,000- and 50,000-square-foot options); 1,200-amp (100,000-square-foot option); 2,400-amp (200,000-square-foot option)*



Scalable building option

Building costs

| | UPGRADED CONVENTIONAL | PRE-ENGINEERED |
|------------------------------------|--------------------------|-----------------------|
| 30,000-square-foot facility | | |
| General construction | \$1,784,700.00 | \$1,555,200.00 |
| Plumbing | \$44,100.00 | \$44,100.00 |
| HVAC | \$88,200.00 | \$88,200.00 |
| Electrical | \$118,125.00 | \$118,125.00 |
| Sitework | \$131,625.00 | \$131,625.00 |
| Total costs | \$2,166,750.00 | \$1,937,250.00 |
| Cost per square foot | \$72.23 | \$64.58 |



30,000-square-foot upgraded conventional facility

| | | |
|------------------------------------|-----------------------|-----------------------|
| 50,000-square-foot facility | | |
| General construction | \$2,907,710.00 | \$2,473,990.00 |
| Plumbing | \$73,125.00 | \$73,125.00 |
| HVAC | \$141,075.00 | \$141,075.00 |
| Electrical | \$193,950.00 | \$193,950.00 |
| Sitework | \$211,615.00 | \$211,615.00 |
| Total costs | \$3,527,475.00 | \$3,093,755.00 |
| Cost per square foot | \$70.55 | \$61.88 |



50,000-square-foot upgraded conventional facility

| | | |
|-------------------------------------|-----------------------|-----------------------|
| 100,000-square-foot facility | | |
| General construction | \$5,711,965.00 | \$4,210,090.00 |
| Plumbing | \$96,415.00 | \$96,415.00 |
| HVAC | \$236,250.00 | \$236,250.00 |
| Electrical | \$268,875.00 | \$268,875.00 |
| Sitework | \$402,750.00 | \$402,750.00 |
| Total costs | \$6,716,255.00 | \$5,214,380.00 |
| Cost per square foot | \$67.16 | \$52.14 |



100,000-square-foot pre-engineered facility

| | | |
|-------------------------------------|-----------------------|-----------------------|
| 200,000-square-foot facility | | |
| General construction | \$8,245,250.00 | \$7,200,000.00 |
| Plumbing | \$183,375.00 | \$183,375.00 |
| HVAC | \$390,375.00 | \$390,375.00 |
| Electrical | \$399,375.00 | \$399,375.00 |
| Sitework | \$545,625.00 | \$545,625.00 |
| Total costs | \$9,764,000.00 | \$8,718,750.00 |
| Cost per square foot | \$48.82 | \$43.59 |



200,000-square-foot pre-engineered facility

General construction includes general conditions, fire protection, site work, concrete, masonry, steel and metal, carpentry, doors and windows, overhead doors, and truck docks.

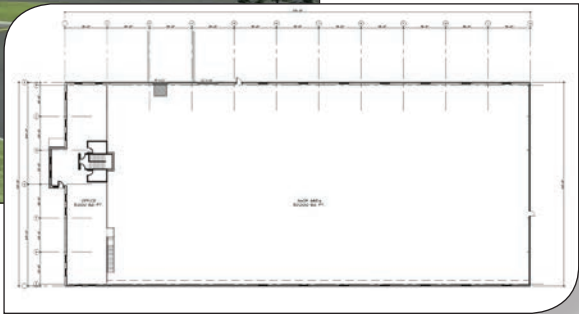
Prices were estimated as of April 2017 and may vary, depending on conditions.

Building plans

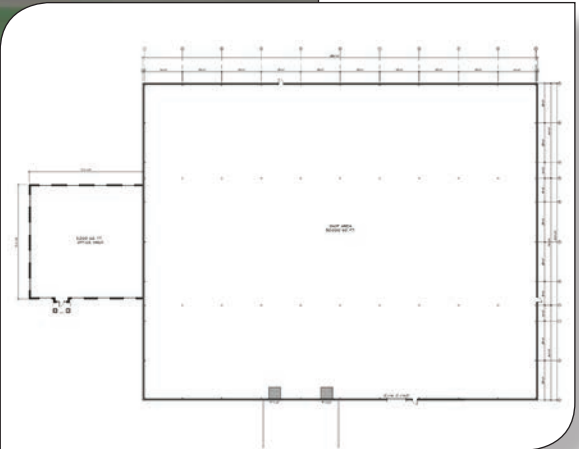
These renderings give you a sample of what your building could look like. All are scalable to a size that meets your needs. The images and plans shown here reflect the specifications and building costs provided with the Fast Track program.



30,000-square-foot upgraded conventional facility

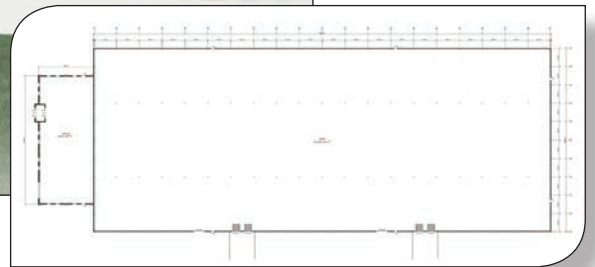


50,000-square-foot upgraded conventional facility

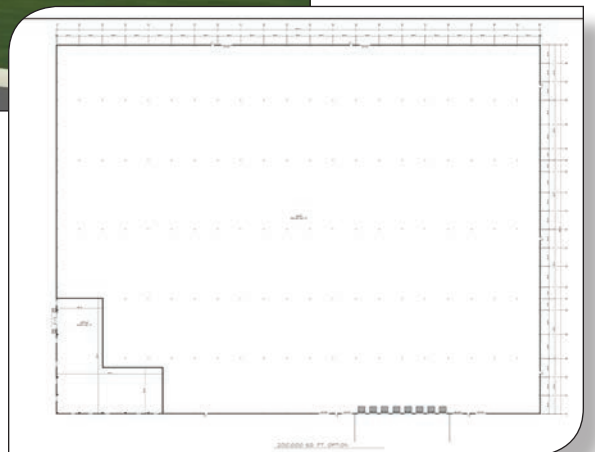




100,000-square-foot pre-engineered facility



200,000-square-foot pre-engineered facility



Drawings and estimates
were provided by:



Smet Construction Services
300 N. Broadway
Suite 2B
Green Bay, WI 54303
Phone: 920-532-3828
www.smet.com

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For more information about the
Manufacturing Facilities Proposal, contact:

**Wisconsin Public Service
Community and Economic Development**

Carol Karls
cskarls@wisconsinpublicservice.com
920-433-1135

700 N. Adams Street
P.O. Box 19001
Green Bay, WI 54307-9001



www.wisconsinpublicservice.com