



Road Salt Storage
Facility Design for
Success!



LEARNING OBJECTIVES

At the end of this learning experience, I will be better able to...

- 1 Secrets of Successful Road Salt Stockpile Building Design Elements
- 2 Secrets to eliminating COST out of the project
- 3 Secrets of a well written Performance Specification

Road Salt Storage Buildings



BRITESPAN
BUILDING SYSTEMS INC

I DO need this

I DON'T want that!



BRITESPAN
BUILDING SYSTEMS INC

I DO NEED this!

- Long Lasting Building – Rust Prevention!
- Must meet/exceed Storage Capacity
- Building Me Something that Won't Get Destroyed
- Can We Get the Cost Driven Down?

More “WANTS”, but not “NEEDS”

- Easy to Load In – fast, dump & run
- Easy to maneuver inside with Loader (Speed)
- Brightly-lit interior (safety)
- Smallest footprint possible on site (space)

Let's Design for "RUST/Longevity"

- Maximum Air Flow – reduce condensation
- Isolate Salt Stockpile from reaching Frames
- Use Frames & Hardware that are Hot Dipped Galvanized *after* production.

What can happen if you don't...



What can happen if you don't...



Good:

- Maximum Air Flow – reduce condensation
- Isolate Salt Stockpile from reaching Frames
- Use Frames & Hardware that are Hot Dipped Galvanized *after* production.



Better:

- Maximum Air Flow – reduce condensation
- Isolate Salt Stockpile from reaching Frames
- Use Frames & Hardware that are Hot Dipped Galvanized *after* production.



BEST:

- Maximum Air Flow – reduce condensation
- Isolate Salt Stockpile from reaching Frames
- Use Frames & Hardware that are Hot Dipped Galvanized *after* production.

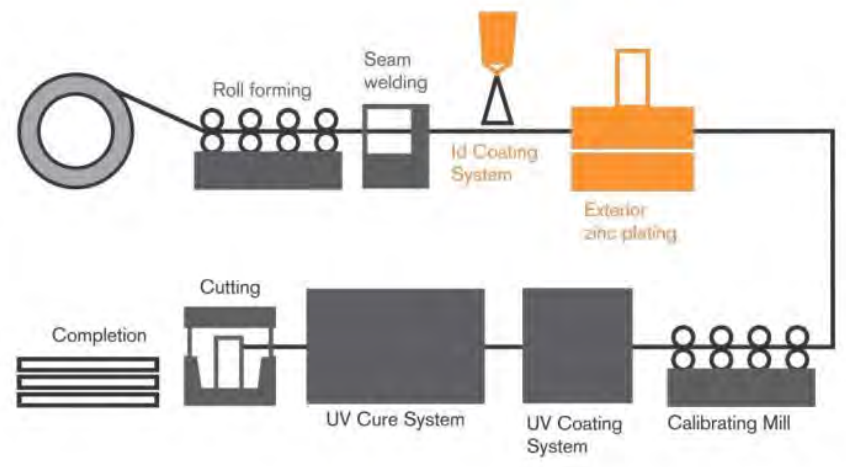




- Maximum Air Flow – reduce condensation
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Hot Dip vs In-Line (Triple Coat)





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Hot Dipped or In-Line Galvanizing ...
[linkedin.com](https://www.linkedin.com)







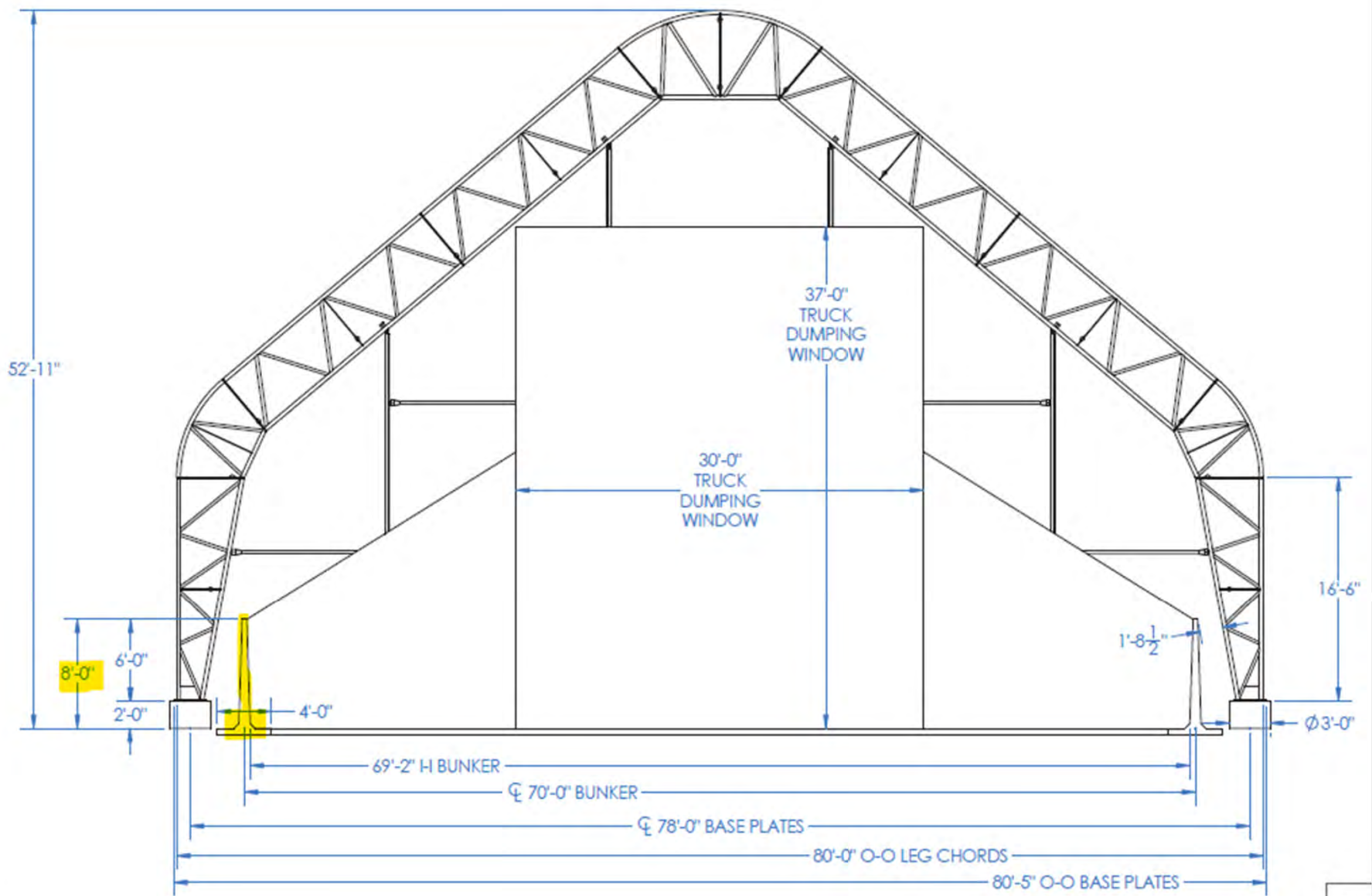


Britespan
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I DO NEED this!

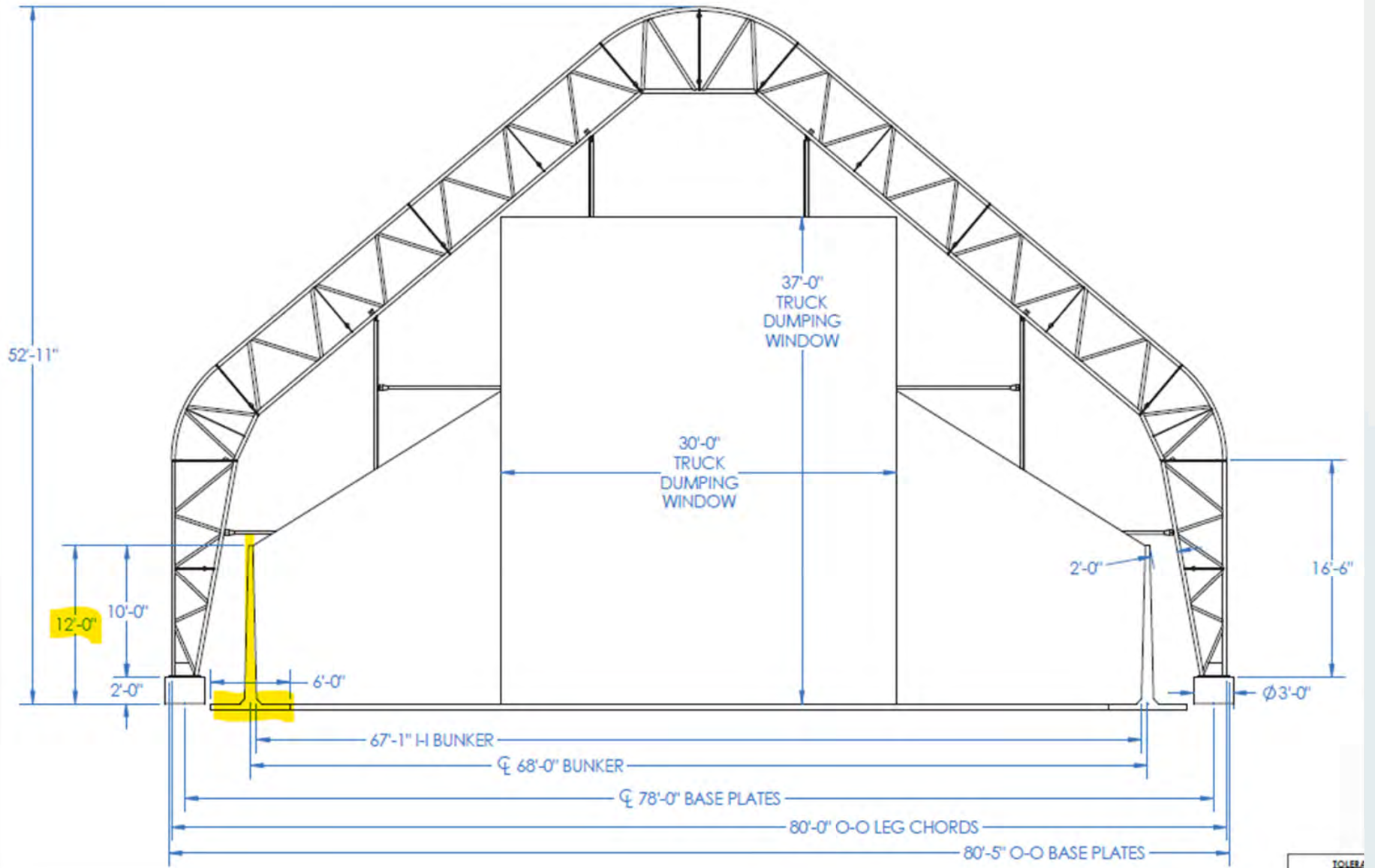
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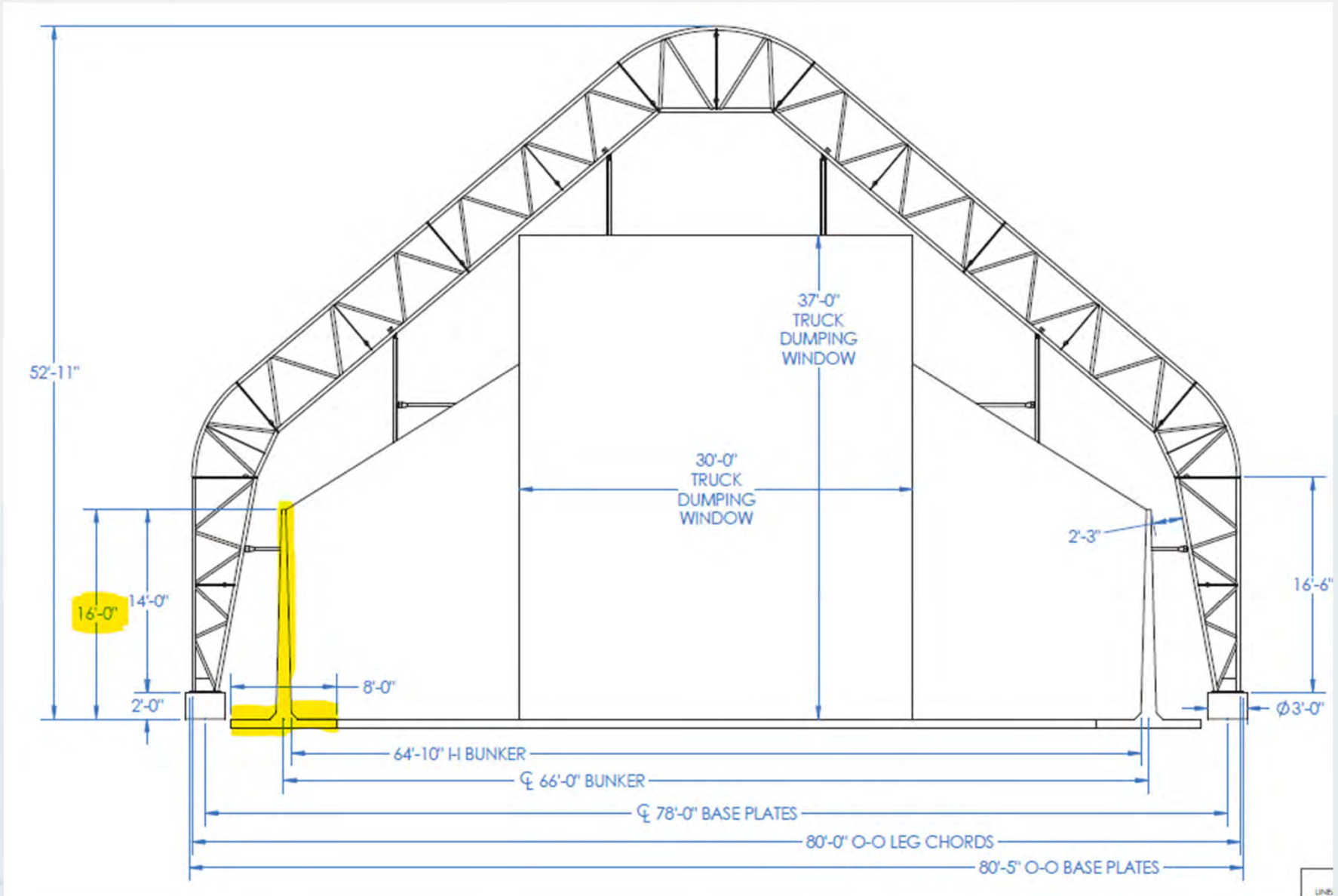


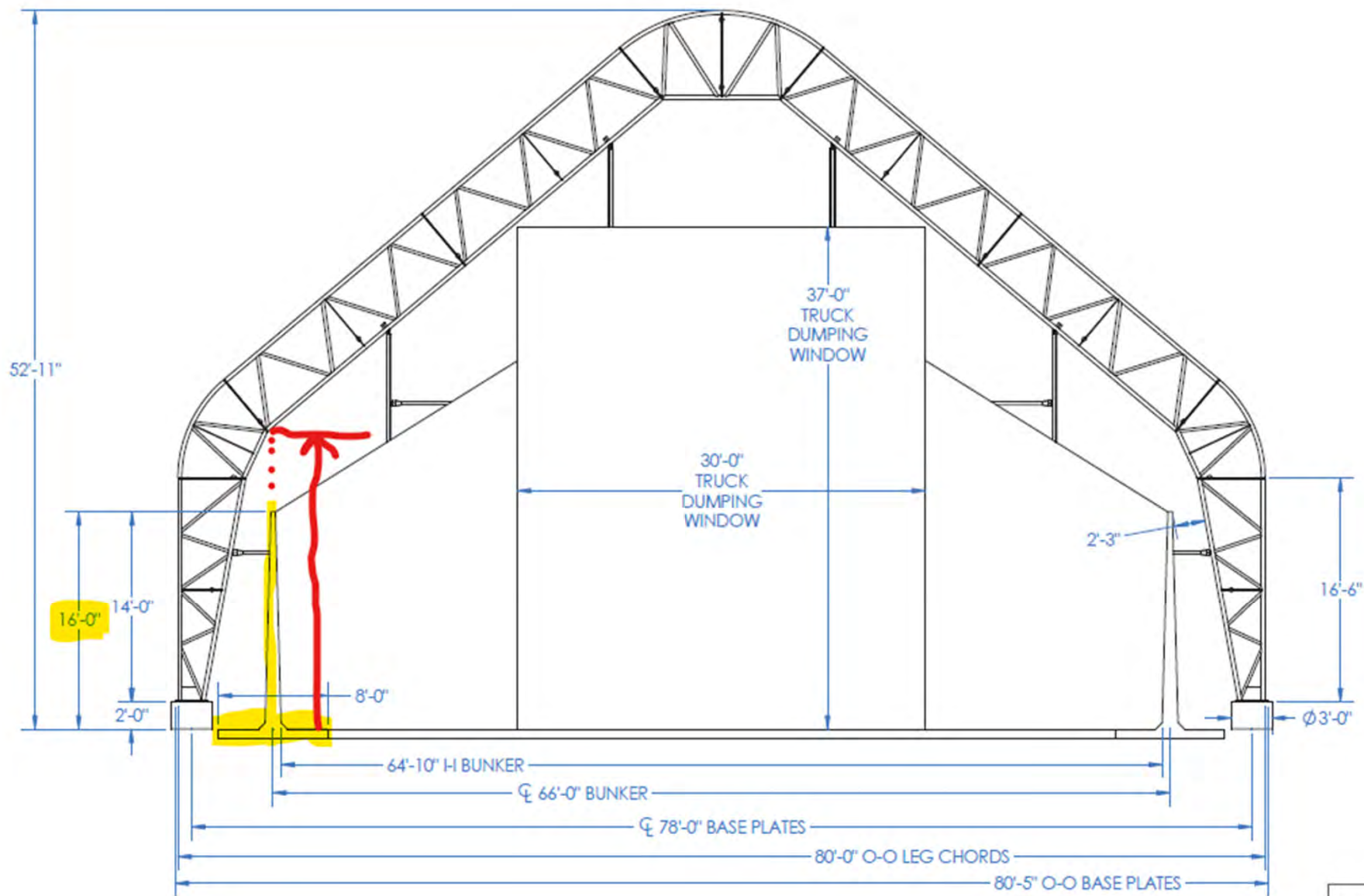
#SHOW4SNOW



NORTH AMERICAN
SNOW
 CONFERENCE 2022







I DO NEED this!

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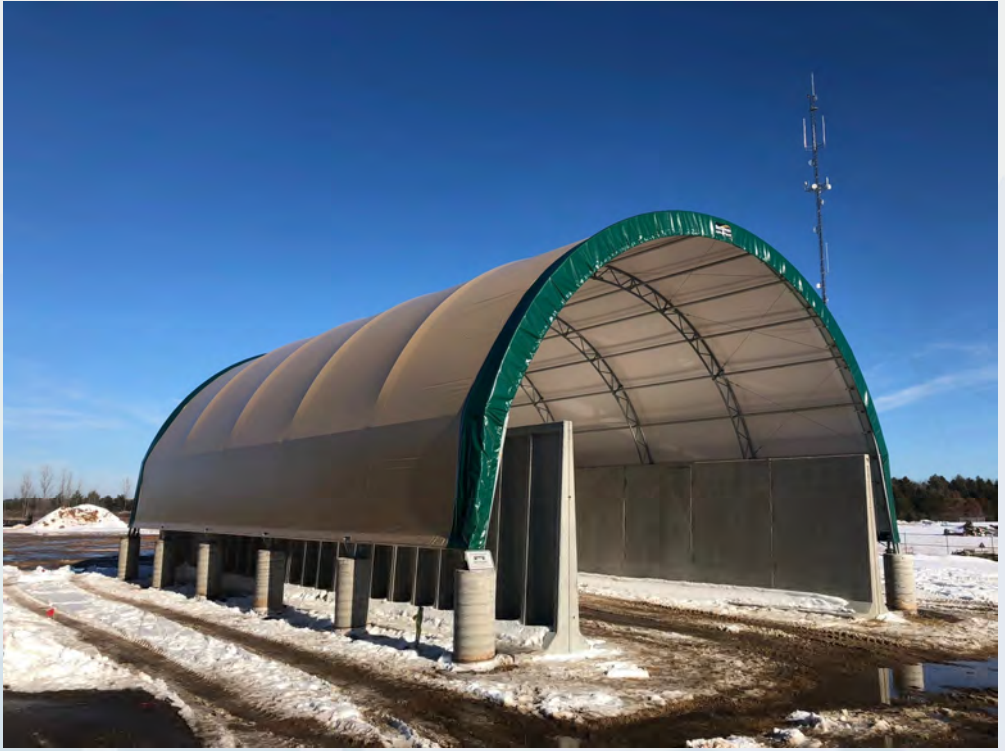
25% - 40% LESS

Pier + Panel



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25% - 40% LESS



Pier + Panel

Using Tension Membrane Structures:

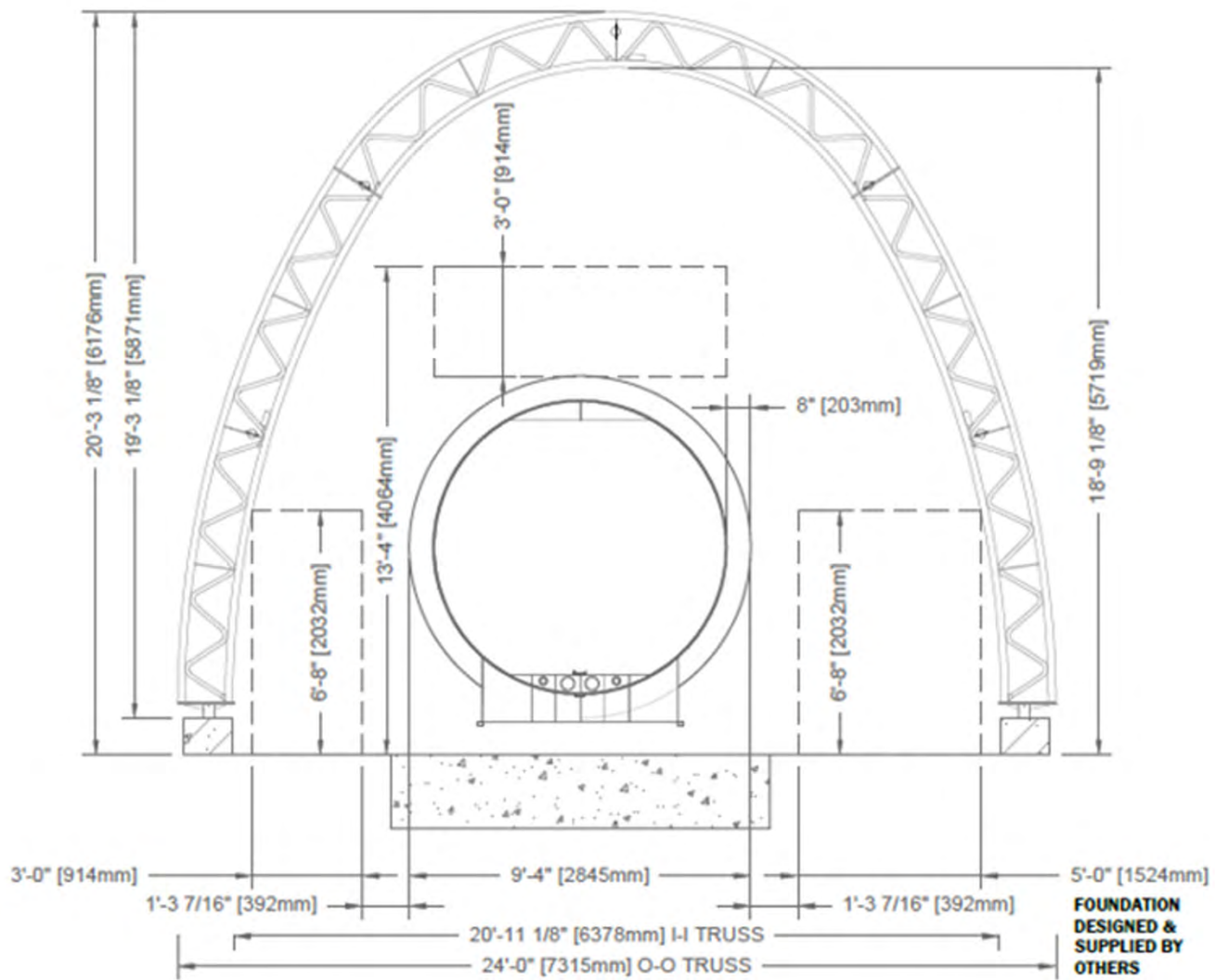
- Super-Bright Interiors
- Design for tall clearances without building in a ton of cost
- Fabric doesn't rust/condensate like steel
- FAST construction – less maintenance or repairs

Tension Membrane Structures

- DIV 13
- Frame Supported, Tension Membrane
- Hoop Structures
- (Tensile Structures)

Inclusions

- Site Specific Design Criteria
- Clearances & Restrictions
- HDG Mandates, Performance Mandates
- Quality Control Measures
- Execution



2.1.3 ENGINEERING DESIGN CRITERIA

1. IBC 2018	ASCE 7 - 16
2. SNOW LOAD	25 PSF ground snow load
3. COLLATERAL LOAD	0.25 pounds per square foot projected over entire roof
4. WIND LOAD	110 V-ult
5. OCCUPANCY CATEGORY	CAT II – Normal Human Occupancy
6. EXPOSURE CATEGORY	C
7. RAINFALL	4" per hour, for at least 2 hours
8. USE GROUP	S-2
9. CONSTRUCTION TYPE	II-B
10. FLAMMABILITY	ASTM E84
11. WIND IMPORTANCE FACTOR	1.0
12. SNOW IMPORTANCE FACTOR	1.0
13. SEISMIC DESIGN CATEGORY	B

D=Dead Load + Collateral Load

S=Symmetrical Snow or Live Load (Balanced or Unbalanced)

Ws = Wind Internal Suction

Wp = Wind With Internal Pressure

E = Earthquake

Warranty?

Sourcewell

Formerly NJPA



Awarded Contract

Contract # 091319-BRT

Sourcewell



Awarded Contract

NCL Government Capital

Tax-Exempt Municipal Leasing

#011620-NCL

Maturity Date: 03/13/2024

Questions?





THANK YOU!!!

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