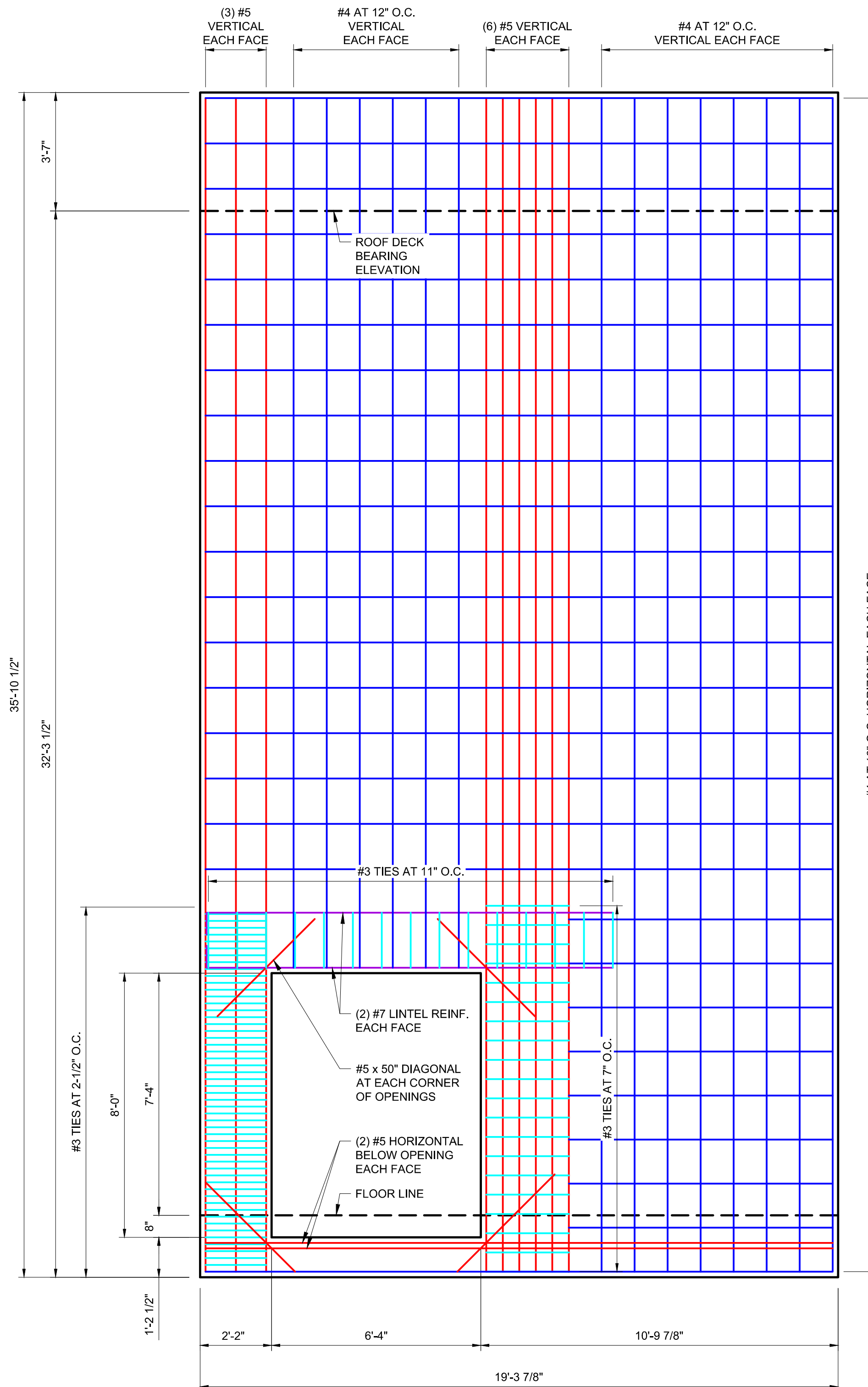


**TIPS REINFORCING**

3/8" = 1'-0"

- TIPS  
 3" EXTERIOR CONCRETE WYTHE (COMPOSITE)  
 4" EPS INSULATION  
 2-1/4" INTERIOR CONCRETE WYTHE (COMPOSITE)  
 9-1/4" TOTAL THICKNESS



**ORIGINAL PANEL REINFORCING**

3/8" = 1'-0"

- ORIGINAL PANEL  
 7-1/4" STRUCTURAL SECTION (NON-COMPOSITE)  
 2" DOW EXTRUDED POLYSTYRENE BOARD INSULATION  
 3" EXTERIOR CONCRETE FACE (NON-COMPOSITE)  
 12-1/4" TOTAL THICKNESS

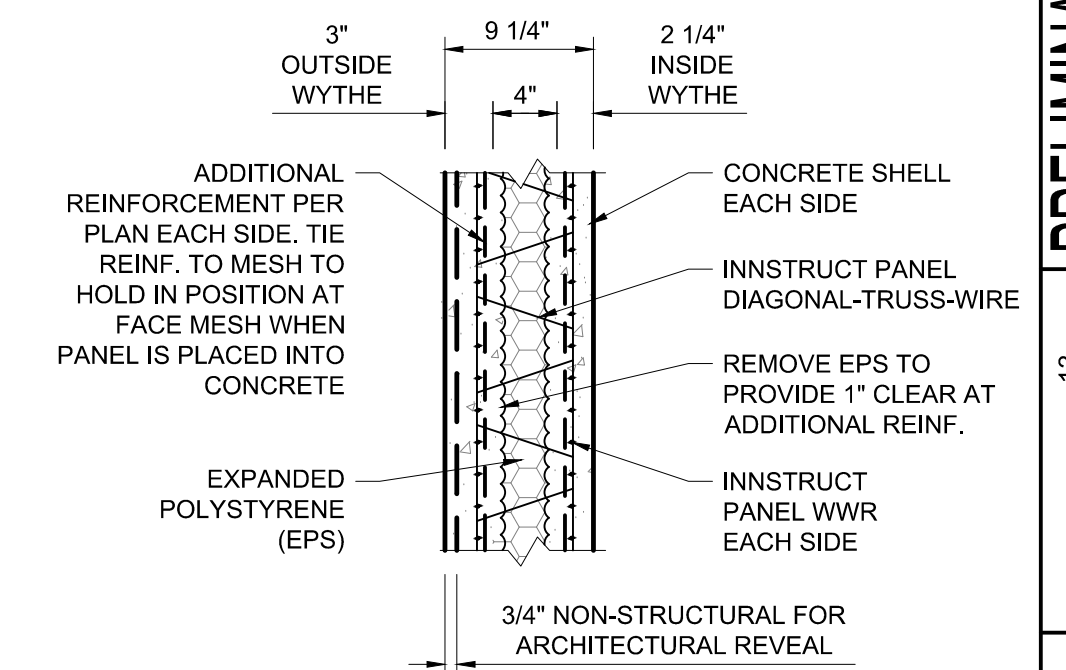
LIMITATION OF COMPARISON:  
 ORIGINAL PANEL DRAWINGS ARE BASED ON  
 PROJECT PLANS

TIPS COMPARISON DRAWINGS ARE PRELIMINARY  
 AND ARE SUBJECT TO CHANGE BASED ON FINAL  
 DESIGN.

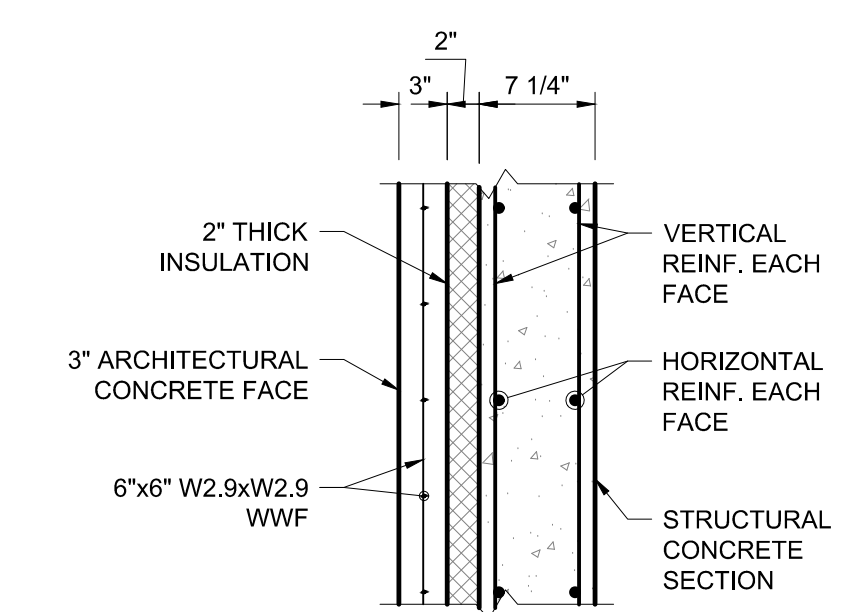
**BAR SIZE LEGEND:**

- #3 - CYAN
- #4 - BLUE
- #5 - RED
- #6 - GREEN
- #7 - PURPLE
- #8 - PINK

TIE BAR - - - - (SIZE PER COLOR)



**TYPICAL TIPS SECTION**  
 SCALE: N.T.S.



NOTE:  
 FIBER CONNECTORS AT 16"  
 O.C. EACH WAY TO CONNECT  
 3" CONCRETE FACE TO  
 STRUCTURAL SECTION

**ORIGINAL PANEL SECTION**  
 SCALE: N.T.S.

NO.	REVISIONS	BY	DATE

**FORSGREN Associates Inc.**  
 This document or any part thereof in detail or design is the property of Forsgren Associates Inc. and shall not be reproduced or transmitted in any form or by any means without the written authorization of Forsgren Associates Inc.  
 95 WEST 100 SOUTH, STE. 115, LOGAN, UT 84321  
 PH: 435.227.0333 FAX: 435.227.0334

**PRELIMINARY DRAWING NOT FOR CONSTRUCTION**

PROJECT NO. 13
DRAWN
DESIGNED
APPROVED
QA/QC

**INNOVATIVE STRUCTURAL SOLUTIONS**

**PROJECT 13A**  
**TIPS COMPARISON**

SHEET NO:
DATE: NOVEMBER 2020
PAGE NO:

# INNSTRUCT | Total Integrated Panel System (TIPS)

## Basic Design Comparison and Material Displacement Estimate

Project: **13A**  
 Panel Description: S100 Overhead door  
 Total Wall Square Feet: 16,200  
 Total Panels in Project: 26

Prepared by: Kim D. Blackburn  
 Date: 1/1/2021

**Panel Configuration:**

- 5 Number of Similar Panels in Project
- 35.83 Height (ft)
- 19.33 Width (ft)
- 51 Area of Openings (ft<sup>2</sup>) Overhead doors
- 642 Panel Area (ft<sup>2</sup>)
- 150 Concrete Weight (lbs./ft<sup>3</sup>)



### Original Design Configuration:

3	Architectural Wythe (in)
2	Insulation (in)
7.25	Structural Wythe (in)
10.25	Concrete Thickness (in)
12.25	Total Thickness (in)
15.1	R-value Materials Only

### Innstruct | TIPS Design Configuration:

3	Outside Wythe (in)
4	Insulation (in)
2.25	Inside Wythe (in)
5.25	Concrete Thickness (in)
9.25	Total Thickness (in)
22.6	R-value Materials Only

### Design Comparison | Material Displacement:

#### Original Design

Material	Amount	Units
Concrete	20	cubic yds
Reinforcement	2,401	lbs.
Panel Weight	84,669	lbs.

#### TIPS Design

Amount	Units	% Reduced
10	cubic yds	<b>49%</b>
529	lbs.	<b>78%</b>
42,666	lbs.	<b>50%</b>

INNOVATIVE STRUCTURAL SOLUTIONS

375 East 400 North - Morgan, Utah 84050 | [www.innstruct.com](http://www.innstruct.com)

BETTER PANEL | LESS EFFORT | MORE PROFIT