

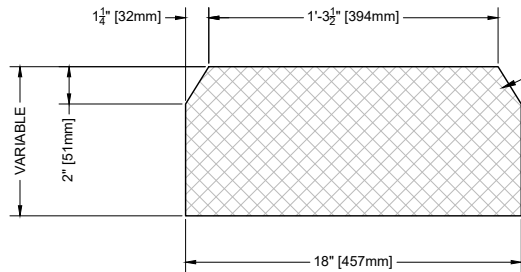
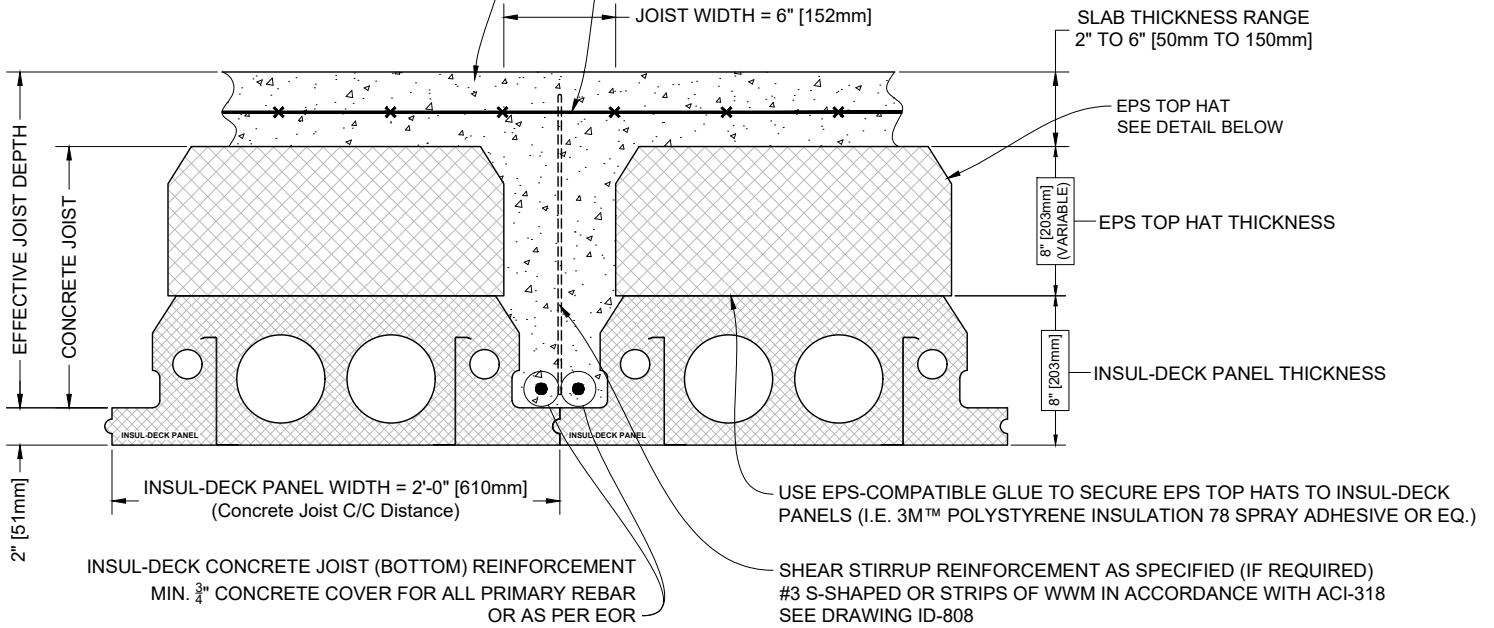
**NOTES:**

**EPS TOP HATS INCREASE INSUL-DECK'S EFFECTIVE JOIST (T-BEAM) DEPTH WHICH IN TURN INCREASES LIVE LOAD CAPACITY AND CLEAR SPAN OF THE FLOOR SYSTEM**

WHEN SELECTING TOP HAT THICKNESS, PAY ATTENTION TO MAXIMUM SLENDERNESS (HEIGHT TO WIDTH) RATIO FOR CONCRETE JOISTS

CONCRETE COMPRESSIVE STRENGTH AS SPECIFIED  
 MAX.  $\frac{3}{8}$ " [10mm] AGGREGATE AND 6" [150mm] SLUMP  
 OR AS PER EOR

SLAB REINFORCEMENT AS PER EOR  
 E.G. WWM 6x6 [152x152] OR #3 [10M] EACH WAY



**EPS TOP HAT - ID15-Fabricated**  
 CUSTOM ORDERED IN ANY HEIGHT  
 COMES IN 4' OR 8' [1.22m OR 2.44m] LONG SECTIONS  
 MADE FROM MODIFIED EXPANDED POLYSTYRENE  
 (EPS - INCLUDES FLAME-RETARDANT)  
 DENSITY - REFER TO TABLE BELOW

Product	U.S. EPS Board Type (ASTM C578)	Canada EPS Board Type (CAN/ULC-S701)	Density	Thermal Conductance (per inch [25mm] thickness)
EPS Top Hats - ex Surrey BC	Type II	Type 2	min. 1.35 pcf [21.6 kg/m <sup>3</sup> ]	R-4.00 ft. <sup>2</sup> ·h·°F/Btu [RSI-0.7044 K·m <sup>2</sup> /W]
EPS Top Hats	Type VIII	Type 1	min. 1.15 pcf [18.4 kg/m <sup>3</sup> ]	R-3.80 ft. <sup>2</sup> ·h·°F/Btu [RSI-0.6692 K·m <sup>2</sup> /W]
Insul-Deck	Type VIII	Type 1	avg. 1.25 pcf [20 kg/m <sup>3</sup> ]	R-3.80 ft. <sup>2</sup> ·h·°F/Btu [RSI-0.6692 K·m <sup>2</sup> /W]



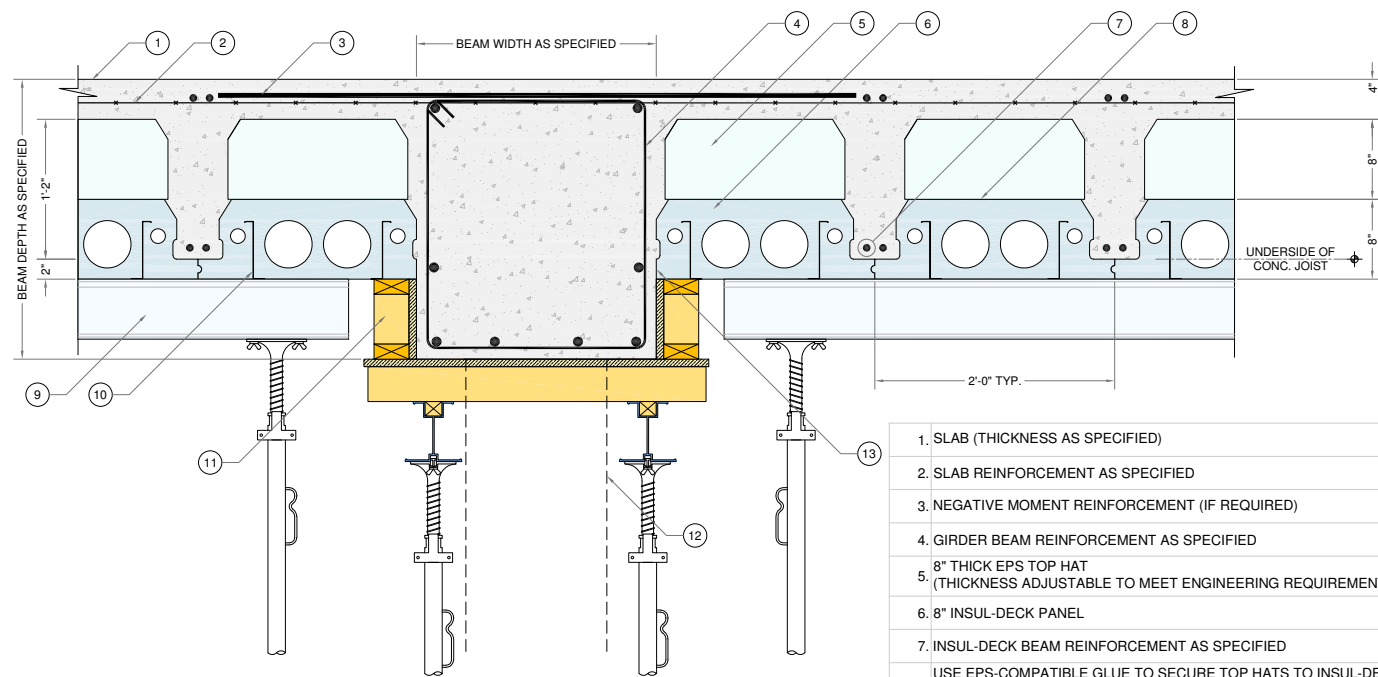
**INSUL-DECK**  
 65 Grady Knight Industrial Ct.  
 Villa Rica, GA 30180-2107  
 Phone: 800-475-6720  
 Fax: 727-216-7946  
 Email: insuldeck@insuldeck.com  
 Web: www.insuldeck.com

IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE REGULATIONS AND BUILDING CODE REQUIREMENTS CONCERNING THE USE OF THESE PRODUCTS.  
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# EPS Top Hats

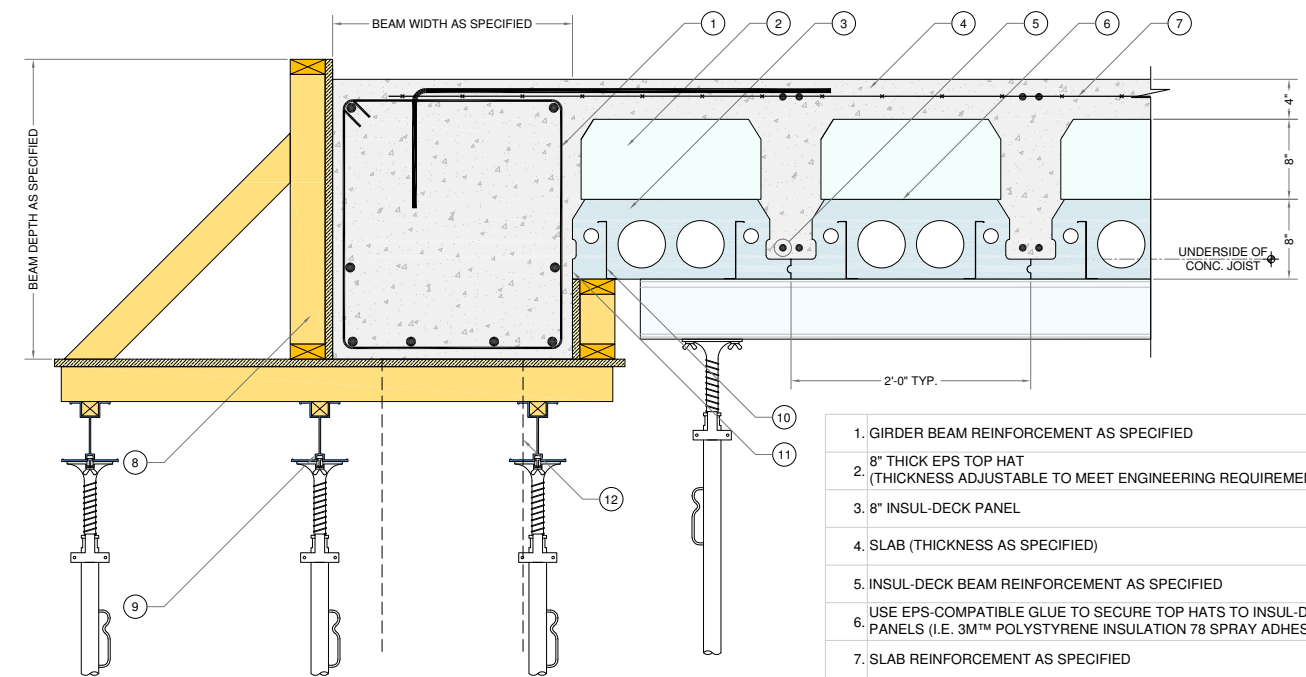
DATE DRAWN:	2017-02-15	COMMENTS:	N/A
REVISION NO.:	R2	SHEET SIZE:	8.5" x 11" [216mm x 279mm]
REVISION DATE:	2021-10-01	SCALE:	NOT TO SCALE
DRAWN BY:	TECHNICAL	APPROVED BY:	G. K.

**ID-108**



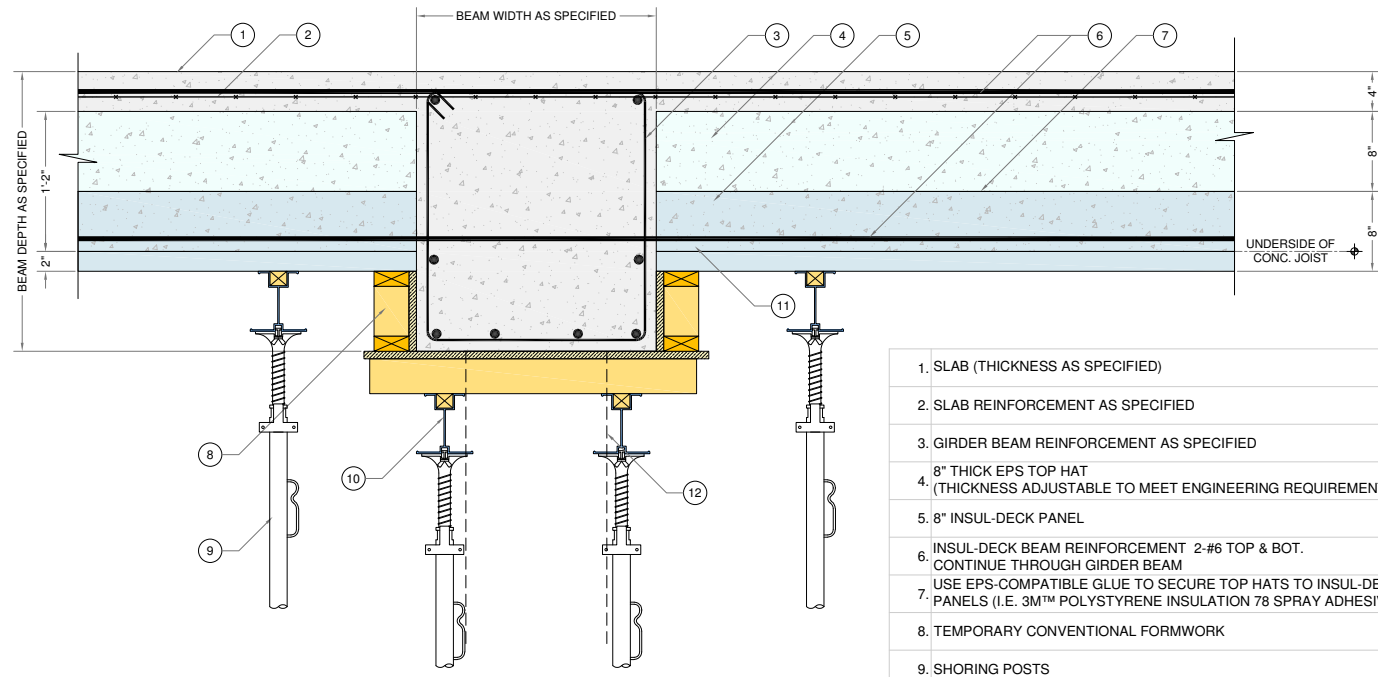
**1** SECTION DETAIL  
S-1 SCALE: N.T.S.

1. SLAB (THICKNESS AS SPECIFIED)
2. SLAB REINFORCEMENT AS SPECIFIED
3. NEGATIVE MOMENT REINFORCEMENT (IF REQUIRED)
4. GIRDER BEAM REINFORCEMENT AS SPECIFIED
5. 8" THICK EPS TOP HAT (THICKNESS ADJUSTABLE TO MEET ENGINEERING REQUIREMENTS)
6. 8" INSUL-DECK PANEL
7. INSUL-DECK BEAM REINFORCEMENT AS SPECIFIED
8. USE EPS-COMPATIBLE GLUE TO SECURE TOP HATS TO INSUL-DECK PANELS (I.E. 3M™ POLYSTYRENE INSULATION 78 SPRAY ADHESIVE OR EQ.)
9. SHORING BEAMS - SPACING AS PER SHORING SUPPLIER
10. INTEGRATED INSUL-DECK PANEL METAL FURRING SPACED AT 12" O.C. FOR FINISH ATTACHMENT
11. TEMPORARY CONVENTIONAL FORMWORK
12. COLUMN / WALL SUPPORT BEYOND
13. CUT OFF THE FIRST INSUL-DECK WING ON EITHER SIDE OF GIRDER (OR MORE TO SHIFT INSUL-DECK BEAMS LEFT OR RIGHT AS NEEDED FOR VERTICAL PENETRATIONS)



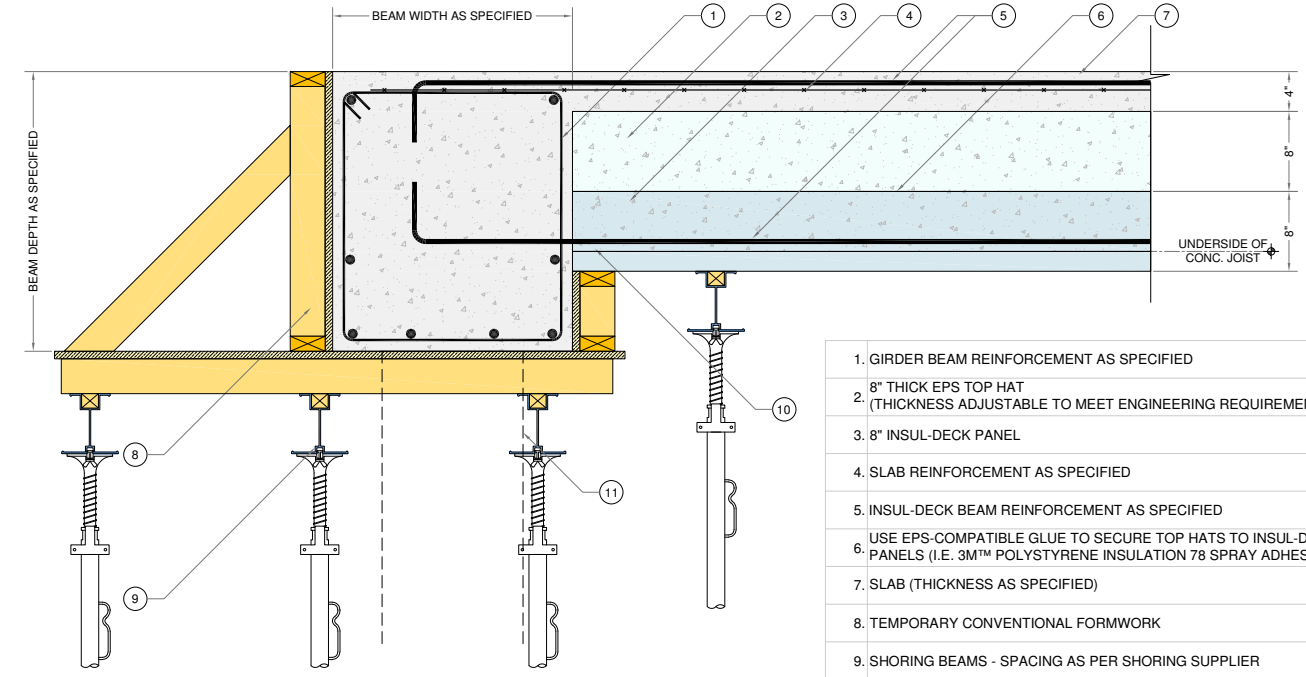
**3** SECTION DETAIL  
S-1 SCALE: N.T.S.

1. GIRDER BEAM REINFORCEMENT AS SPECIFIED
2. 8" THICK EPS TOP HAT (THICKNESS ADJUSTABLE TO MEET ENGINEERING REQUIREMENTS)
3. 8" INSUL-DECK PANEL
4. SLAB (THICKNESS AS SPECIFIED)
5. INSUL-DECK BEAM REINFORCEMENT AS SPECIFIED
6. USE EPS-COMPATIBLE GLUE TO SECURE TOP HATS TO INSUL-DECK PANELS (I.E. 3M™ POLYSTYRENE INSULATION 78 SPRAY ADHESIVE OR EQ.)
7. SLAB REINFORCEMENT AS SPECIFIED
8. TEMPORARY CONVENTIONAL FORMWORK
9. SHORING BEAMS - SPACING AS PER SHORING SUPPLIER
10. INTEGRATED INSUL-DECK PANEL METAL FURRING SPACED AT 12" O.C. FOR FINISH ATTACHMENT
11. CUT OFF THE FIRST INSUL-DECK WING (OR MORE TO SHIFT INSUL-DECK BEAMS LEFT OR RIGHT AS NEEDED FOR VERTICAL PENETRATIONS)
12. COLUMN/WALL SUPPORT BEYOND



**2** SECTION DETAIL  
S-1 SCALE: N.T.S.

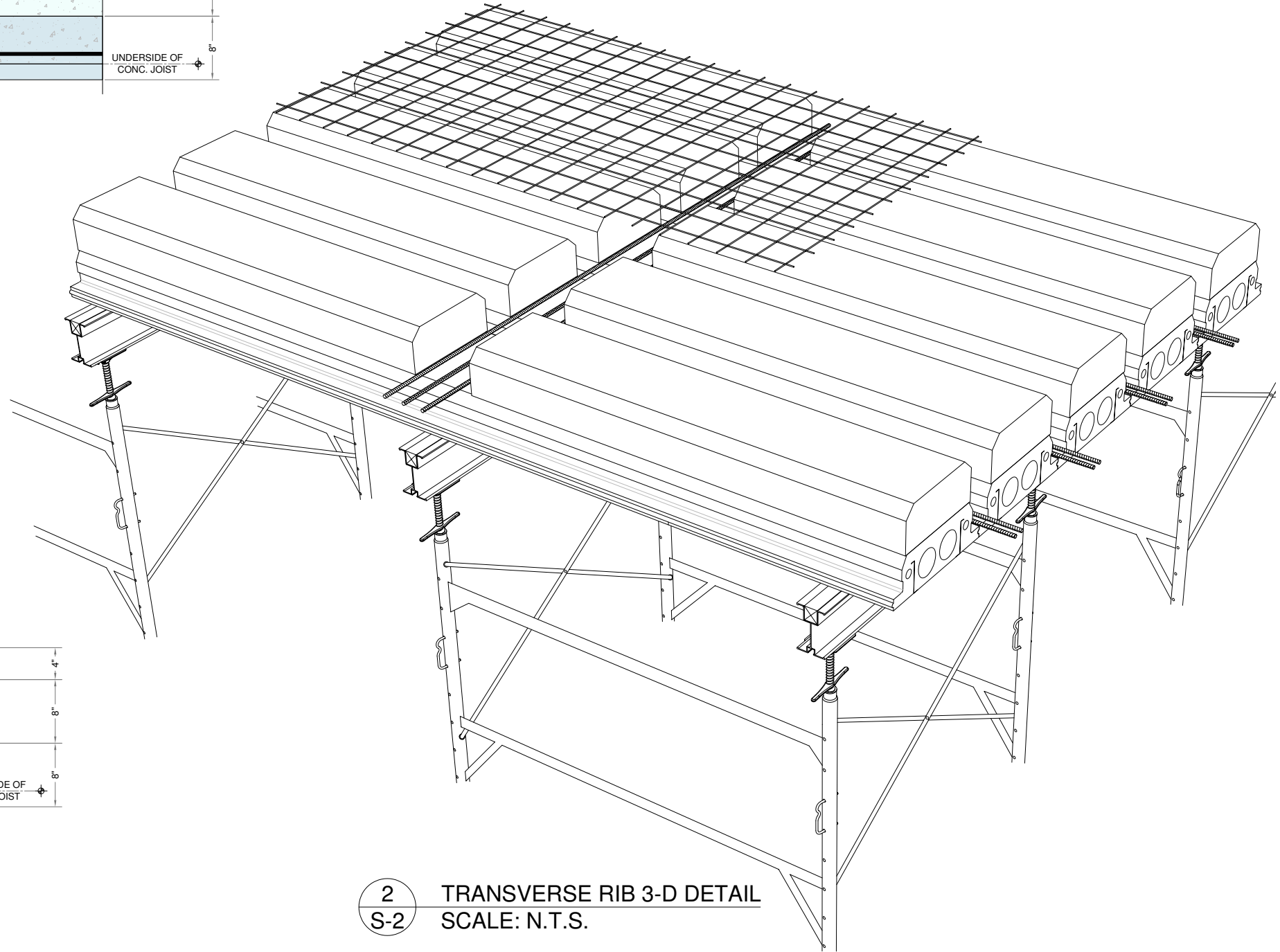
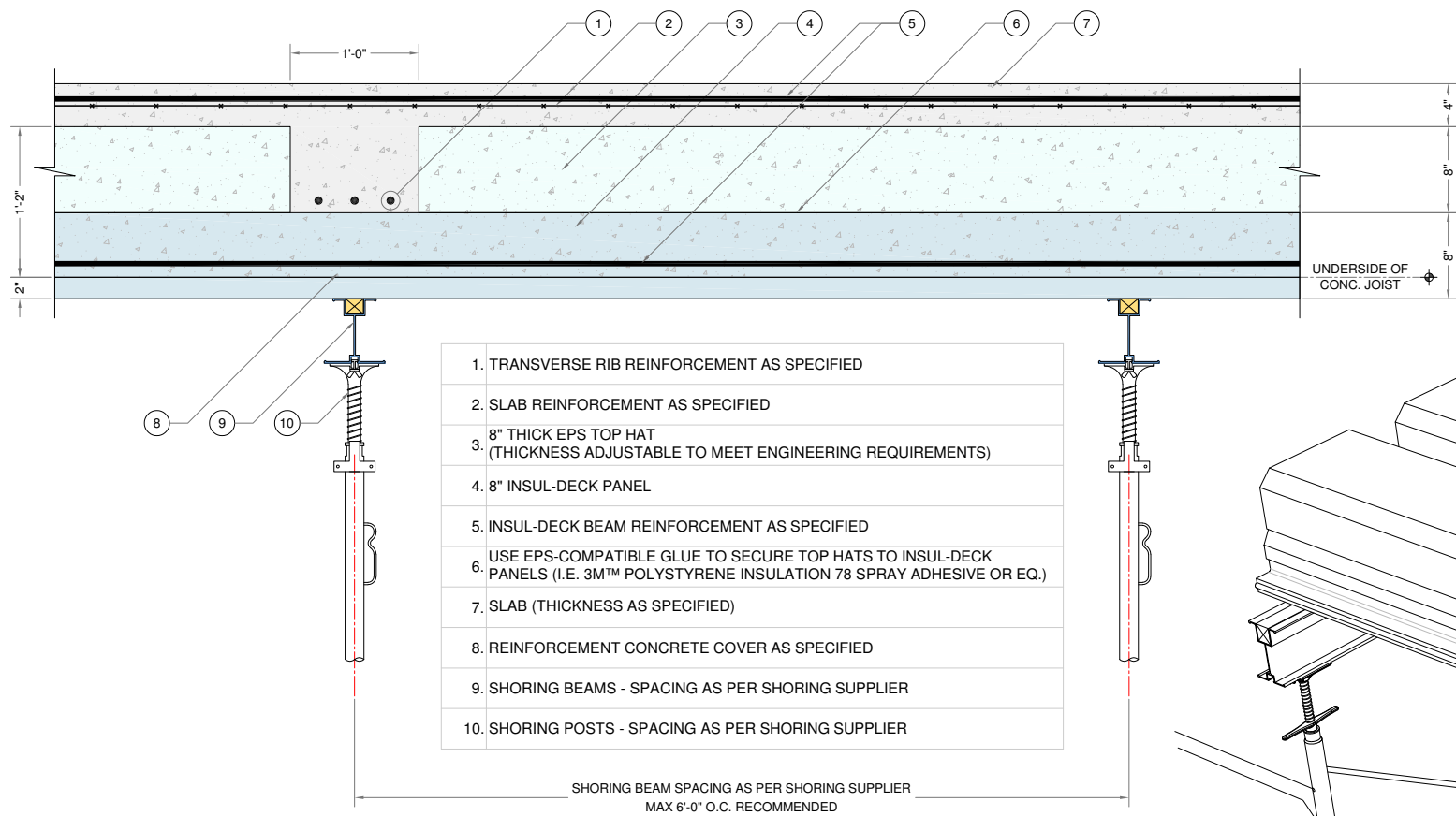
1. SLAB (THICKNESS AS SPECIFIED)
2. SLAB REINFORCEMENT AS SPECIFIED
3. GIRDER BEAM REINFORCEMENT AS SPECIFIED
4. 8" THICK EPS TOP HAT (THICKNESS ADJUSTABLE TO MEET ENGINEERING REQUIREMENTS)
5. 8" INSUL-DECK PANEL
6. INSUL-DECK BEAM REINFORCEMENT 2-#6 TOP & BOT. CONTINUE THROUGH GIRDER BEAM
7. USE EPS-COMPATIBLE GLUE TO SECURE TOP HATS TO INSUL-DECK PANELS (I.E. 3M™ POLYSTYRENE INSULATION 78 SPRAY ADHESIVE OR EQ.)
8. TEMPORARY CONVENTIONAL FORMWORK
9. SHORING POSTS
10. SHORING BEAMS - SPACING AS PER SHORING SUPPLIER
11. REINFORCEMENT CONCRETE COVER AS SPECIFIED
12. COLUMN / WALL SUPPORT BEYOND



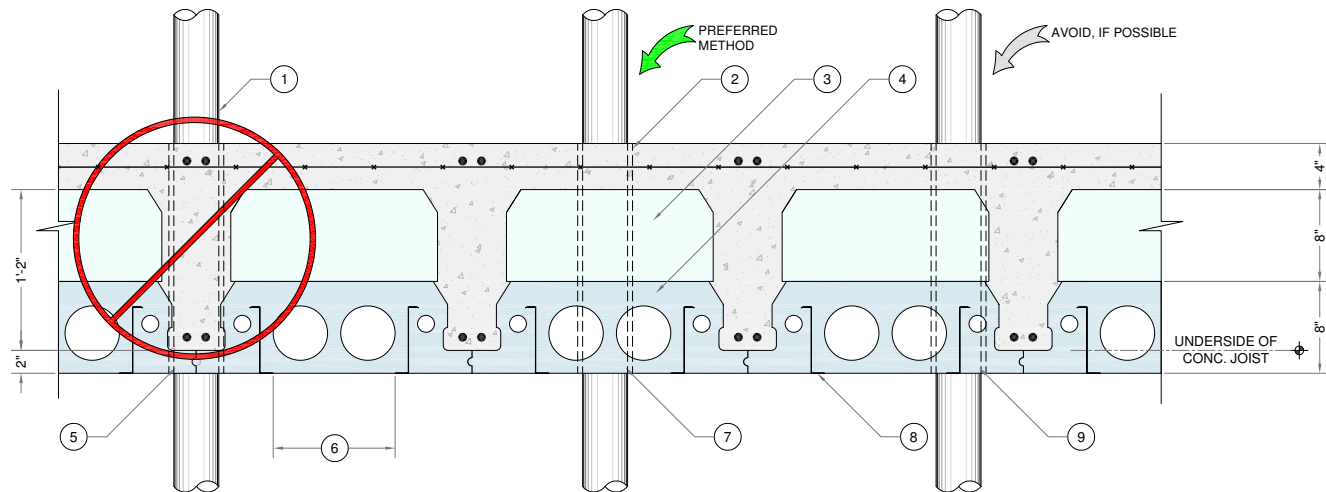
**4** SECTION DETAIL  
S-1 SCALE: N.T.S.

1. GIRDER BEAM REINFORCEMENT AS SPECIFIED
2. 8" THICK EPS TOP HAT (THICKNESS ADJUSTABLE TO MEET ENGINEERING REQUIREMENTS)
3. 8" INSUL-DECK PANEL
4. SLAB REINFORCEMENT AS SPECIFIED
5. INSUL-DECK BEAM REINFORCEMENT AS SPECIFIED
6. USE EPS-COMPATIBLE GLUE TO SECURE TOP HATS TO INSUL-DECK PANELS (I.E. 3M™ POLYSTYRENE INSULATION 78 SPRAY ADHESIVE OR EQ.)
7. SLAB (THICKNESS AS SPECIFIED)
8. TEMPORARY CONVENTIONAL FORMWORK
9. SHORING BEAMS - SPACING AS PER SHORING SUPPLIER
10. REINFORCEMENT CONCRETE COVER AS SPECIFIED
11. COLUMN/WALL SUPPORT BEYOND

<b>Plastbau® Technology</b> <b>INSUL-DECK®</b> Lightweight Forming System for Concrete Floors and Roofs Phone: 800-475-6720 Fax: 727-216-7946 Email: insuldeck@insuldeck.com Web: www.insuldeck.com 65 Grady Knight Industrial Ct. Villa Rica, GA 30180-2107	<b>TYPICAL INSUL-DECK TO BEAM INTERFACE DETAILS</b>	
	DATE: 2012-01-15	SCALE: NOT TO SCALE
	REVISION NO.: R-03	CUSTOMER:
	REVISION DATE: 2017-09-13	PROJECT:
IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE REGULATIONS AND BUILDING CODE REQUIREMENTS CONCERNING THE USE OF THESE PRODUCTS. IT IS FURTHER THE RESPONSIBILITY OF THE USER TO RESEARCH AND UNDERSTAND SAFE METHODS OF USE AND HANDLING OF THESE PRODUCTS.	DRAWN BY: TECHNICAL	APPROVED BY: G. K.
		DRAWING NO: S-1



1 TRANSVERSE RIB DETAIL  
S-2 SCALE: N.T.S.



2 TRANSVERSE RIB 3-D DETAIL  
S-2 SCALE: N.T.S.

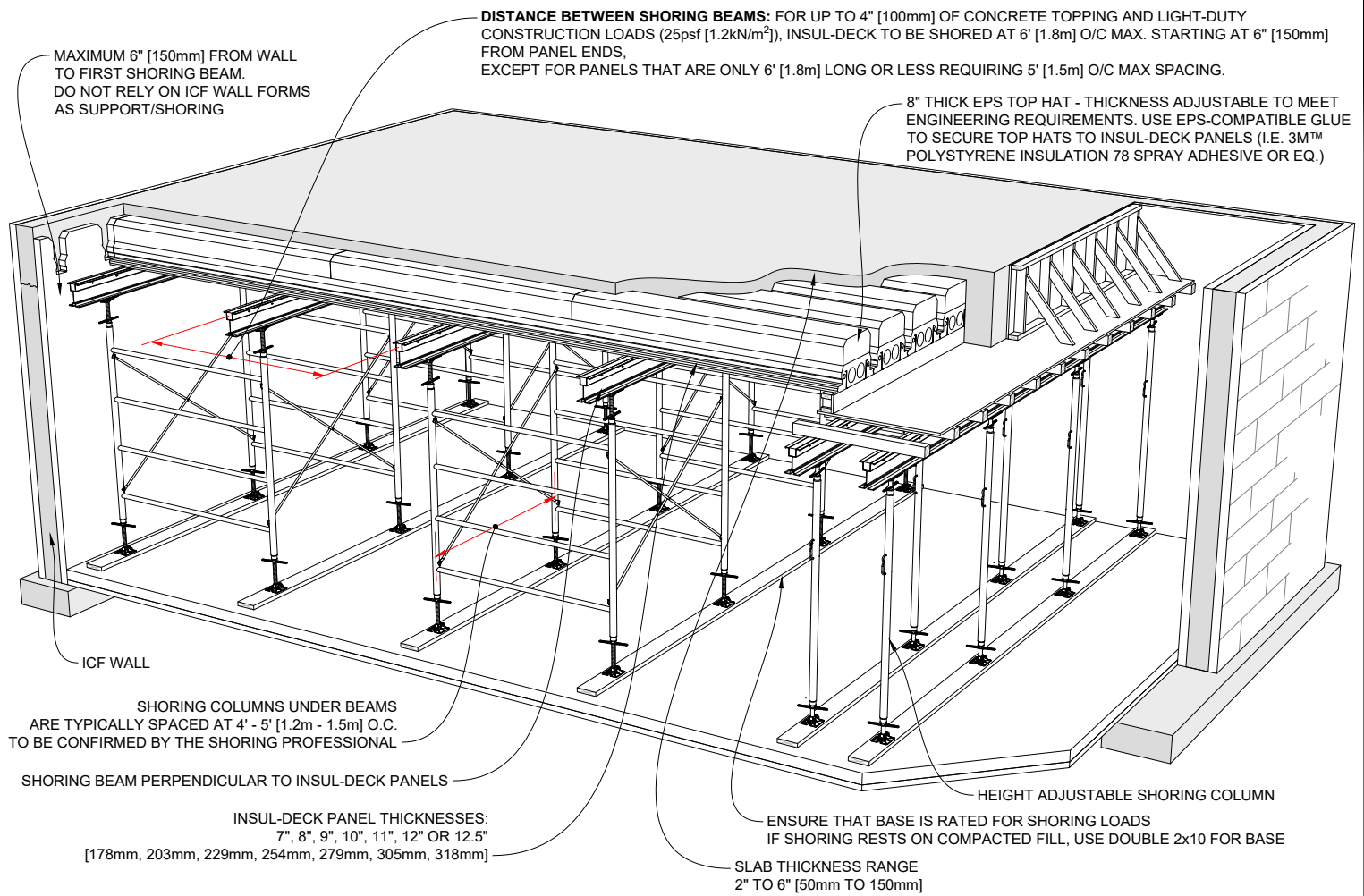
1. UTILITY RISER TYP.
2. SLEEVE FOR UTILITY RISER.
3. 8" THICK EPS TOP HAT (THICKNESS ADJUSTABLE TO MEET ENGINEERING REQUIREMENTS)
4. 8" INSUL-DECK PANEL
5. PENETRATIONS AT THIS LOCATION CAN BE DONE **ONLY** WITH PERMISSION FROM ENGINEER OF RECORD
6. PREFERRED UTILITY LINE LOCATION
7. PREFERRED LOCATION FOR UTILITY PENETRATION
8. INTEGRATED INSUL-DECK PANEL METAL FURRING FOR FINISH ATTACHMENT - SPACING @ 12" O.C.
9. UTILITY PENETRATIONS ARE OK. NOTE THAT THE METAL FURRING MUST BE CUT AND ADDITIONAL SHORING AND/OR PLYWOOD FORMWORK SUPPORT IS NECESSARY
10. SHORING OMITTED FOR CLARITY

3 PENETRATION DETAIL  
S-2 SCALE: N.T.S.

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 Web: www.insuldeck.com

TYPICAL INSUL-DECK TRANSVERSE RIB  
& PENETRATION DETAILS

DATE:	2012-01-15	SCALE:	NOT TO SCALE
REVISION NO.:	R-03	CUSTOMER:	
REVISION DATE:	2017-09-13	PROJECT:	
DRAWN BY:	TECHNICAL	APPROVED BY:	G. K.
IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE REGULATIONS AND BUILDING CODE REQUIREMENTS CONCERNING THE USE OF THESE PRODUCTS. IT IS FURTHER THE RESPONSIBILITY OF THE USER TO RESEARCH AND UNDERSTAND SAFE METHODS OF USE AND HANDLING OF THESE PRODUCTS.			DRAWING NO.:
			S-2



**1** TYPICAL INSUL-DECK WITH EPS TOP HATS SHORING LAYOUT  
 REINFORCEMENT OMITTED FOR CLARITY

**SHORING AND BRACING:**  
 INSTALLER IS RESPONSIBLE FOR THE DESIGN AND CORRECT INSTALLATION OF SHORING OF INSUL-DECK FORMS IN ACCORDANCE WITH ACI (AMERICAN CONCRETE INSTITUTE) 347-04 "GUIDE TO FORMWORK FOR CONCRETE" OR CURRENT APPLICABLE CODES. ANY VARIANCE FROM THESE STANDARDS MUST BE PROVIDED AND CERTIFIED IN ADVANCE BY A QUALIFIED ENGINEER, LICENSED FOR THE JOBSITE LOCATION AND SPECIFICATIONS.

Insul-Deck with Top Hats Floor Weights (lb/sqft)				
	2" Slab	3" Slab	4" Slab	5" Slab
8" Insul-Deck Panel + 5" Top Hat	64.2	76.7	89.2	101.7
8" Insul-Deck Panel + 6" Top Hat	67.4	79.9	92.4	104.9
8" Insul-Deck Panel + 7" Top Hat	70.5	83.0	95.5	108.0
8" Insul-Deck Panel + 8" Top Hat	73.6	86.1	98.6	111.1
8" Insul-Deck Panel + 9" Top Hat	76.7	89.2	101.7	114.2
8" Insul-Deck Panel + 10" Top Hat	79.9	92.4	104.9	117.4
8" Insul-Deck Panel + 11" Top Hat	83.0	95.5	108.0	120.5
8" Insul-Deck Panel + 12" Top Hat	86.1	98.6	111.1	123.6

**Notes:**  
 The above are unfactored estimated weights which include concrete (150pcf), reinforcement (3lb/sqft), Insul-Deck Panel (2lb/sqft) and misc. (2lb/sqft)

Insul-Deck with Top Hats Floor Weights (Kg/m <sup>2</sup> )				
	50mm Slab	75mm Slab	100mm Slab	125mm Slab
203mm Insul-Deck Panel + 130mm Top Hat	297.4	357.4	417.4	477.4
203mm Insul-Deck Panel + 150mm Top Hat	302.9	362.9	422.9	482.9
203mm Insul-Deck Panel + 180mm Top Hat	311	371	431	491
203mm Insul-Deck Panel + 200mm Top Hat	316.5	376.5	436.5	496.5
203mm Insul-Deck Panel + 230mm Top Hat	324.6	384.6	444.6	504.6
203mm Insul-Deck Panel + 250mm Top Hat	330.1	390.1	450.1	510.1
203mm Insul-Deck Panel + 280mm Top Hat	338.2	398.2	458.2	518.2
203mm Insul-Deck Panel + 300mm Top Hat	343.7	403.7	463.7	523.7

**Notes:**  
 The above are unfactored estimated weights which include concrete (2400kg/m<sup>3</sup>), reinforcement (15kg/m<sup>2</sup>), Insul-Deck Panel (10kg/m<sup>2</sup>) and misc. (10kg/m<sup>2</sup>)

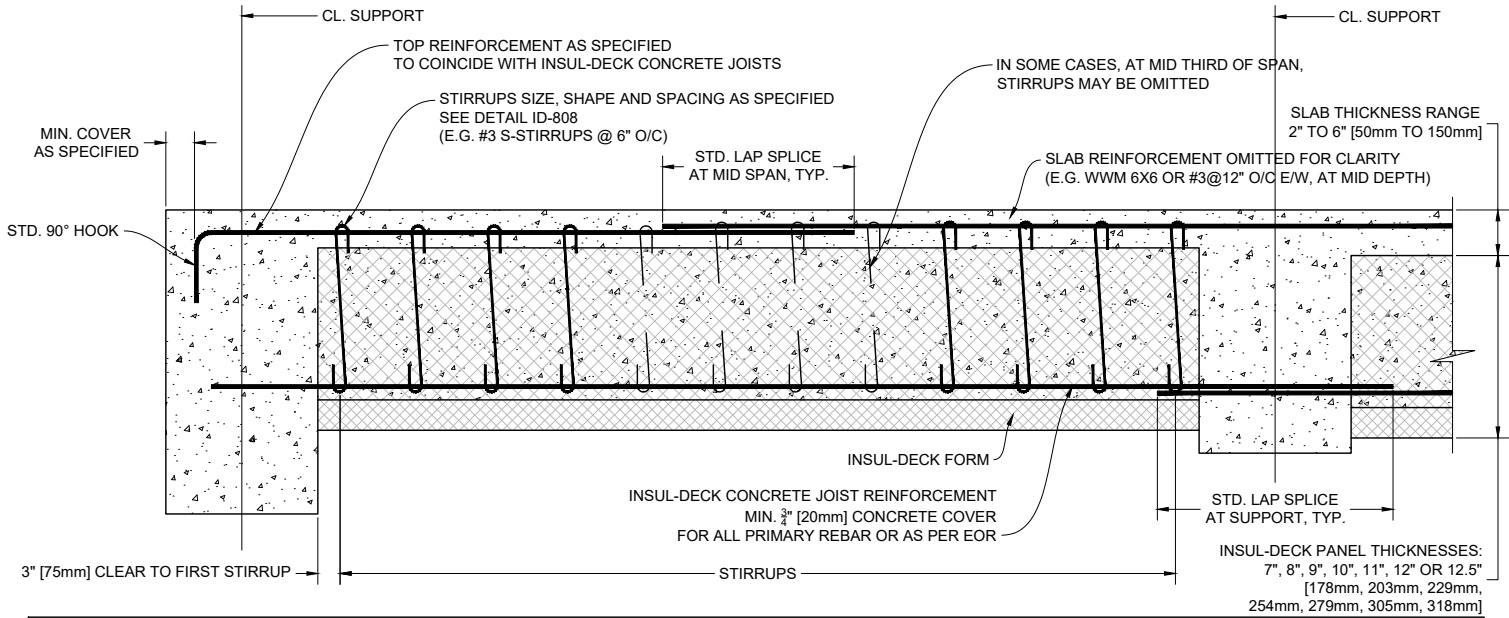
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**INSUL-DECK®**  
 INSUL-DECK  
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 Fax: 727-216-7946  
 Email: insuldeck@insuldeck.com  
 Web: www.insuldeck.com

**INSUL-DECK & EPS TOP HAT SHORING DETAIL**

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DATE DRAWN:	2017-02-15	COMMENTS:	N/A
REVISION NO.:	R2	SHEET SIZE:	8.5" x 11" [216mm x 279mm]
REVISION DATE:	2021-10-01	SCALE:	NOT TO SCALE
DRAWN BY:	TECHNICAL	APPROVED BY:	G. K.

**ID-112**



### BEAM AND JOIST CURTAILMENT RULES

	TYPE	DESCRIPTION	SUPPORT		SUPPORT	
TOP REINF.	TL	CONTINUOUS TOP LEFT END CONDITION	[Diagram: Top bar starting at left support and extending to mid-span]			
	TC	CONTINUOUS TOP	[Diagram: Top bar extending across the entire span]			
	TR	CONTINUOUS TOP RIGHT END CONDITION	[Diagram: Top bar starting at mid-span and ending at right support]			
BOT. REINF.	BL	CONTINUOUS BOTTOM BAR LEFT END CONDITION	[Diagram: Bottom bar starting at left support and extending to mid-span]			
	BC	CONTINUOUS BOTTOM	[Diagram: Bottom bar extending across the entire span]			
	BR	CONTINUOUS BOTTOM RIGHT END CONDITION	[Diagram: Bottom bar starting at mid-span and ending at right support]			

← CL. SUPPORT      ← CL. SPAN      ← CL. SUPPORT      ← CL. SPAN

## 1 INSUL-DECK CONCRETE JOIST REINFORCEMENT DETAIL

FOR SPECIAL CASES ONLY Scale: N.T.S.

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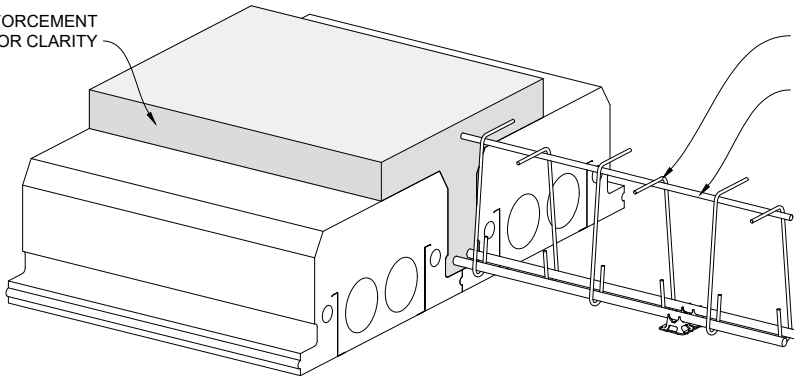
### CONCRETE JOIST REINFORCEMENT DETAIL SPECIAL CASES ONLY

DATE DRAWN:	2017-02-15	COMMENTS:	N/A
REVISION NO.:	R2	SHEET SIZE:	8.5" x 11" [216mm x 279mm]
REVISION DATE:	2021-10-01	SCALE:	NOT TO SCALE
DRAWN BY:	TECHNICAL	APPROVED BY:	G. K.

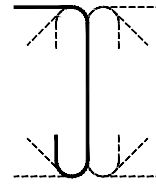
**ID-114**



SLAB REINFORCEMENT  
OMITTED FOR CLARITY



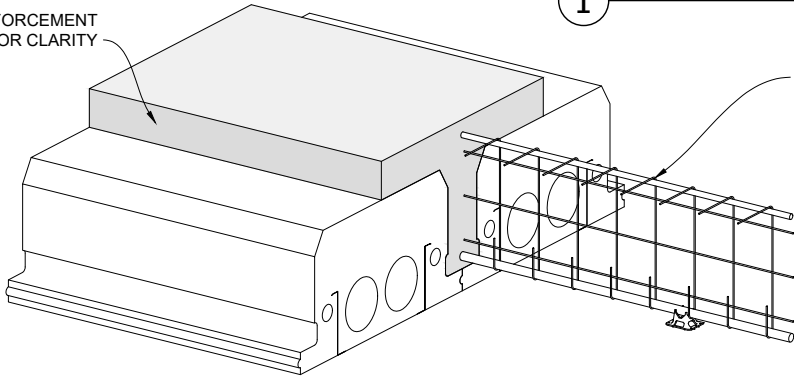
STIRRUPS AS SPECIFIED  
ALTERNATE LEFT TO RIGHT  
TOP LONGITUDINAL DEVELOPMENT BAR



**1** SHEAR REINFORCEMENT OPTION 1

Scale: N.T.S.

SLAB REINFORCEMENT  
OMITTED FOR CLARITY

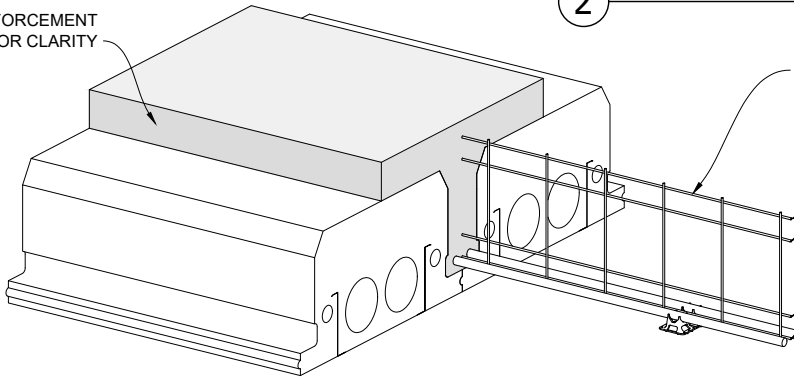


WELDED WIRE FABRIC/MESH - REFER TO ACI-117  
BOTTOM WITH U-HOOK DEVELOPMENT, TOP FLAT FOR INSTALL  
VERTICAL STRAND SPACING AS REQUIRED BY SHEAR CALC'S.

**2** SHEAR REINFORCEMENT OPTION 2

Scale: N.T.S.

SLAB REINFORCEMENT  
OMITTED FOR CLARITY



WELDED WIRE FABRIC/MESH  
REFER TO ACI-318 CHAPTER 12 FOR SPECIFIC DIMENSIONAL  
REQUIREMENTS FOR HORIZONTAL STRANDS  
VERTICAL STRAND SPACING AS REQUIRED BY SHEAR CALC'S.  
(TOP LONGITUDINAL BAR NOT NEEDED FOR DEVELOPMENT)

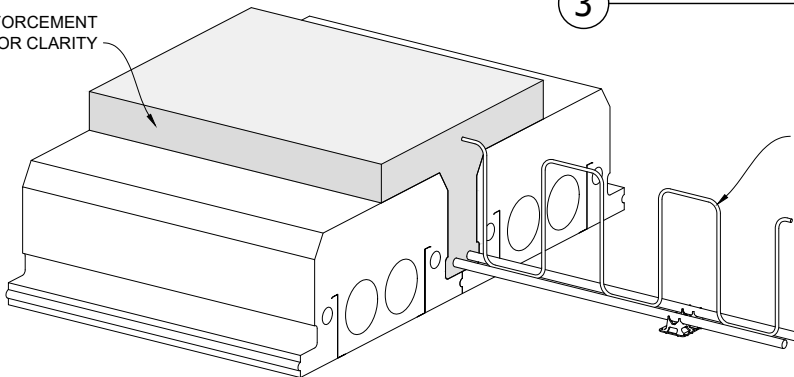
TOP STRAND TO HAVE MIN. COVER AS REQUIRED  
SECOND TOP STRAND TO BE 2" DOWN

BOTTOM STRAND TO BE IN LINE WITH  
LONGITUDINAL REINFORCEMENT  
NEXT STRAND TO BE 2" UP.

**3** SHEAR REINFORCEMENT OPTION 3

Scale: N.T.S.

SLAB REINFORCEMENT  
OMITTED FOR CLARITY



SINGLE BAR (TYPICALLY #3 [10m]) BENT AS REQUIRED  
(TOP LONGITUDINAL BAR NOT NEEDED FOR DEVELOPMENT)

**4** SHEAR REINFORCEMENT OPTION 4

Scale: N.T.S.

Plastbau® Technology

**INSUL-DECK®**

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Web: [www.insuldeck.com](http://www.insuldeck.com)

**SHEAR STIRRUP OPTIONS**

DATE DRAWN:	2017-02-15	COMMENTS:	N/A
REVISION NO.:	R2	SHEET SIZE:	8.5" x 11" [216mm x 279mm]
REVISION DATE:	2021-10-01	SCALE:	NOT TO SCALE
DRAWN BY:	TECHNICAL	APPROVED BY:	G. K.
			DRAWING NO.:
			<b>ID-808</b>

IT IS THE RESPONSIBILITY OF THE USER TO COMPLY WITH ALL APPLICABLE REGULATIONS AND BUILDING CODE REQUIREMENTS CONCERNING THE USE OF THESE PRODUCTS.  
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