

30'x45' COMPOSITE STEEL OFFICE BAY

INCLUDED IN LCA:

(3)-BEAM #1 - W21x44 TO W24x55 (1)-BEAM #2 - W24x62 TO W21x93 3/4"Øx4" HEADED STUDS - 146 TO 182 STEEL CONNECTIONS - 0.06 TO 0.25 PSF 2" WIDE RIB GALVANIZED COMPOSITE DECKING, 20 GA. CONCRETE = 3,000 PSI, LIGHTWEIGHT (115 PCF), 20-29% SCMs WWR 6x6 W1.4xW1.4 ASTM A615, GRADE 60 REBAR - 0.00 TO 0.15 PSF

NOTE: ITALICS INDICATES ITEMS WITH VARIABLE DESIGN BY DIFFERENT DESIGNERS.



PROJECT	SEI SE2050 Working Group	
TITLE	Embodied Carbon Intensity Diagrams	



Appendix: This is the sheet that was given to designers to design the "typical" bay



OFFICE (STEEL)

NOTES:

- 1. LOADING CRITERIA: SDL: 10 PSF LL: 50 (R) + 15 PSF (NR - PARTITIONS)
- MATERIAL CRITERIA: CONCRETE = 3,000 PSI, LIGHTWEIGHT (115 PCF) REINFORCEMENT = WWR 6x6 W1.4xW1.4, ASTM A185 STEEL DECK = ASTM A653, GAGE 20 W-SHAPES = ASTM A992 HEADED STUDS = 3/4"Øx4" AWS D1.1 TYPE B

ADDITIONAL DESIGN OUTPUT:

- 1. PSF STEEL CONNECTION WEIGHT (OVER BAY AREA)
- 2. LBS REBAR TOTAL IN BAY (IF ANY)
- 3. UNSHORED CONSTRUCTION. CONSIDER CONSTRUCTION LIVE LOAD OF 20 PSF.

PROJECT	SEI SE2050 Working Group	DATE	04/14/2020	
TITLE	Embodied Carbon Intensity Plots	DRAWN BY	KRP	SE2050
	Example Systems			
	System #1			COMMITTING TO ZERO