



## BRIDGE PLANK

### MINIMUM RECOMMENDATIONS FOR INSTALLATION

REFERENCE THE PROJECT PLANS  
AND SPECIFICATIONS FOR SPECIFIC PROJECT REQUIREMENTS.

#### BRIDGE FLOOR FASTENING

##### A. WELDING

1. WELD EACH PLANK TO ALL STRINGERS WITH FILLET WELDS 3" LONG WITH THE FOLLOWING BEAD THICKNESS:
  - a. 3 GAGE (0.239) & LIGHTER: 1/8"
  - b. HEAVIER THAN 3 GAGE (0.239): 3/16"

REFERENCE DWG 1008703 "BRIDGE PLANK RECOMMENDED WELDING PROCEDURES".

2. END SPLICES ARE TO BE STAGGERED, LOCATED OVER THE STRINGERS AND BUTT WELDED AT THE CRESTS.

##### B. BOLTING

1. BOLT EACH PLANK TO BRIDGE STRINGER WITH 5/8" DIAMETER ASTM A 307 STUDS OR BOLTS. USE 2-1/2" SQUARE WASHERS.
2. BOLT OVERLAPPING SIDE JOINTS WITH 5/8" DIAMETER ASTM A 325 HIGH STRENGTH BOLTS.

#### ASPHALT SURFACE APPLICATION

##### INSTALLATION

1. CLEAN METAL SURFACES OF ALL FOREIGN MATTER.
2. APPLY A TACK COAT OVER THE FLOOR SURFACE.
3. FILL AND COMPACT ALL CORRUGATIONS WITH ASPHALT TO THE TOP OF THE FLOOR.
4. OVERLAY A LEVELING COURSE AND ADDITIONAL COURSES AS NECESSARY TO FINAL WEARING COURSE AND COMPACT TO REQUIRED DENSITY.
5. THE FINAL WEARING COURSE SHOULD HAVE A 2" CROWN AT THE CENTERLINE OF THE ROADWAY SLOPED TO 1" AT EACH OUTER EDGE OF THE DECK.



RECOMMENDED WELDING PROCEDURES FOR INSTALLING  
CONTECH BRIDGE PLANK

WHEN CONTECH BRIDGE PLANK IS WELDED IN PLACE TO THE BRIDGE STRINGERS, IT IS VERY IMPORTANT THAT PROPER PROCEDURES ARE FOLLOWED. IF NOT, THE PLANKS WILL LOOSEN AND THE PAVEMENT WILL BREAK UP, RESULTING IN COSTLY AND EXTENSIVE REPAIRS.

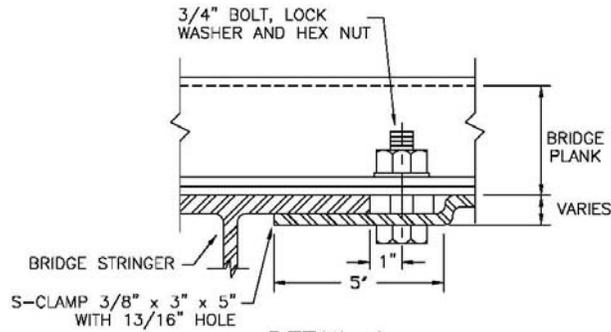
EXPERIENCED, QUALIFIED WELDERS SHOULD PERFORM THE WELDING IN ACCORDANCE WITH CURRENT ASTM AND AWS SPECIFICATIONS. REFERENCE THE PROJECT PLANS AND SPECIFICATIONS FOR SPECIFIC PROJECT REQUIREMENTS.

THE FOLLOWING TABLE LISTS THE GUIDELINES FOR WELDING IN THE INSTALLATION OF BRIDGE PLANK:

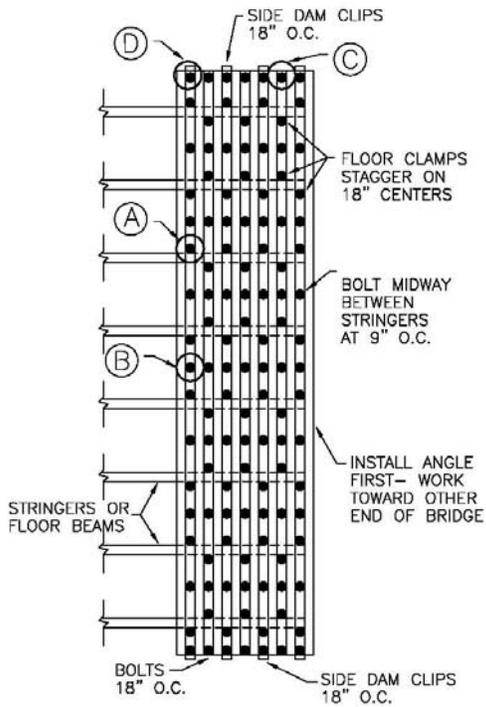
CORRUGATION	MATERIAL	THICKNESS	ELECTRODE TYPE	ELECTRODE DIAMETER	AMPERES
6" x 2"	ASTM A929 GALVANIZED GRADE 36	12 GA. And 10 GA.	AWS E6010 E6011	3/32" 1/8"	40-80 75-125
6" x 2"	ASTM A1101 BLACK GRADE 36	7GA.	AWS E7018 E6011	3/32" OR 1/8" 3/32" OR 1/8"	70-165 40-125
9" x 3"	ASTM A1101 BLACK GRADE 40	8, 7 and 5 GA.	AWS E6010 E6011	3/32" 1/8"	40-80 75-125
9" x 3"	ASTM A1108 BLACK GRADE 40	3, 5/16" and 3/8" GA.	AWS E7018 E6010	1/8" OR 5/32" 1/8" OR 5/32"	115-220 110-170
12" x 4-1/4"	ASTM A1101 BLACK GRADE 45	9, 8 and 7 GA.	AWS E7018 E6010	3/32" OR 1/8" 3/32" OR 1/8"	70-165 40-125

THE E6010 AND E6011 ELECTRODES ARE USED FOR WELDING GALVANIZED MATERIAL BECAUSE OF THE DEEPER PENETRATING QUALITIES OF THESE RODS. BY USING A WHIPPING MOTION PARALLEL TO THE SEAM WHILE WELDING, THE ZINC WILL BE VOLATIZED AHEAD OF THE WELD POOL, THUS REDUCING OR ELIMINATING CRACKS AND POROSITY IN THE WELDS DUE TO ZINC.

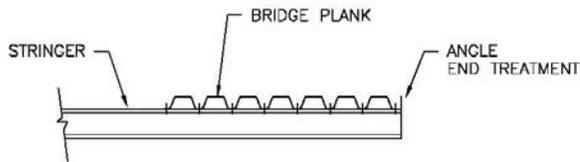
EVERY WELDER HAS THEIR OWN WELDING TECHNIQUES FOR OBTAINING THE BEST RESULTS IN THE WELDING OF VARIOUS MATERIALS. HOWEVER, BY USING THESE GUIDELINES, THE WELDER SHOULD PRODUCE QUALITY WELDS.



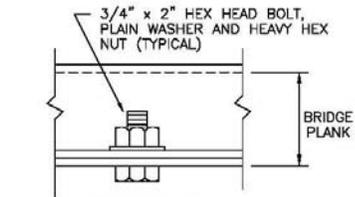
**DETAIL A**  
ATTACHED TO STRINGER



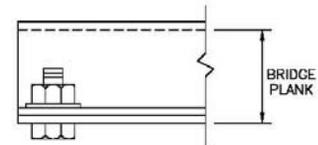
**PLAN VIEW**



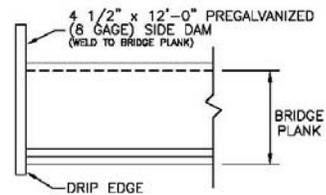
**SECTION**



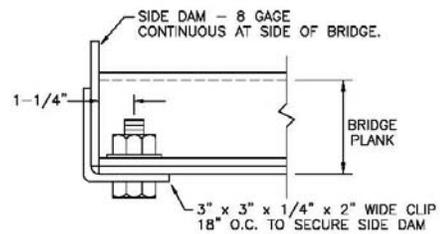
**DETAIL B**  
MIDWAY BETWEEN STRINGERS



**DETAIL C**  
AT SIDE OF BRIDGE

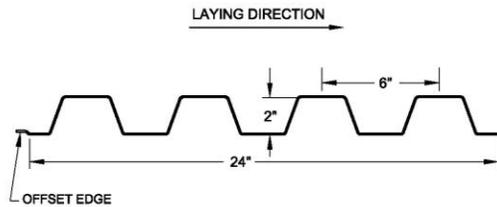
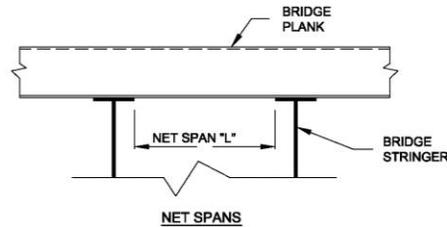


**DETAIL D**  
WELDED SIDE DAM

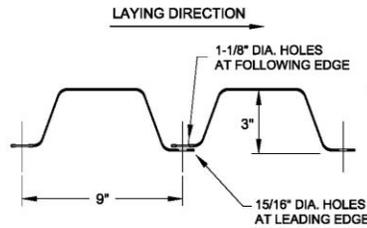


**ALTERNATE DETAIL D**  
SIDE DAM AND CLIP

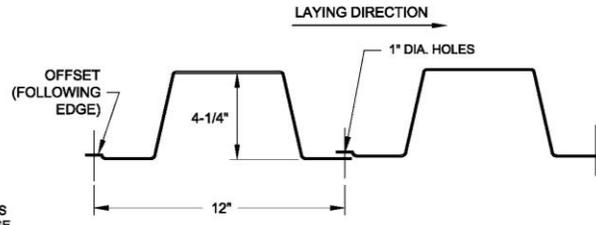
## BRIDGE PLANK BOLTED DECK DETAILS



**6" x 2" CROSS SECTION**



**9" x 3" CROSS SECTION**



**12" x 4-1/4" CROSS SECTION**

6" x 2" SECTION PROPERTIES	SPECIFIED THICKNESS (INCHES)	GAGE	EFFECTIVE SECTION MODULUS (IN <sup>2</sup> /FT)	MOMENT OF INERTIA (IN <sup>4</sup> /FT)	WEIGHT (PSF)	"L" MAXIMUM ALLOWABLE NET SPAN - (INCHES)		
						HS-15	HS-20	HS-25
	0.105	12	1.062	1.151	5.98	25	21	20
	0.135	10	1.342	1.466	7.63	28	24	22
	0.179	7	1.732	1.920	10.06	32	27	24

9" x 3" SECTION PROPERTIES	SPECIFIED THICKNESS (INCHES)	GAGE	EFFECTIVE SECTION MODULUS (IN <sup>2</sup> /FT)	MOMENT OF INERTIA (IN <sup>4</sup> /FT)	WEIGHT (PSF)	"L" MAXIMUM ALLOWABLE NET SPAN - (INCHES)		
						HS-15	HS-20	HS-25
	0.164	8	2.906	4.680	10.1	48	40	35
	0.179	7	3.173	5.120	11.0	52	42	37
	0.209	5	3.680	5.973	12.8	58	47	40
	0.239	3	4.160	6.840	14.7	63	51	44
	0.313	5/16	5.318	8.751	18.3	77	61	52
	0.375	3/8	6.276	10.331	21.9	88	70	59

12" x 4-1/4" SECTION PROPERTIES	SPECIFIED THICKNESS (INCHES)	GAGE	EFFECTIVE SECTION MODULUS (IN <sup>2</sup> /FT)	MOMENT OF INERTIA (IN <sup>4</sup> /FT)	WEIGHT (PSF)	"L" MAXIMUM ALLOWABLE NET SPAN - (INCHES)		
						HS-15	HS-20	HS-25
	0.149	9	3.65	8.62	9.59	66	53	45
	0.164	8	4.01	9.48	10.55	71	57	48
	0.179	7	4.34	10.34	11.50	75	60	51

NOTE:

ALL DIMENSIONS ARE SUBJECT TO MANUFACTURING TOLERANCES.

## BRIDGE PLANK SECTION PROPERTIES AND CROSS SECTIONS