ARCOSA
SHORING PRODUCTS

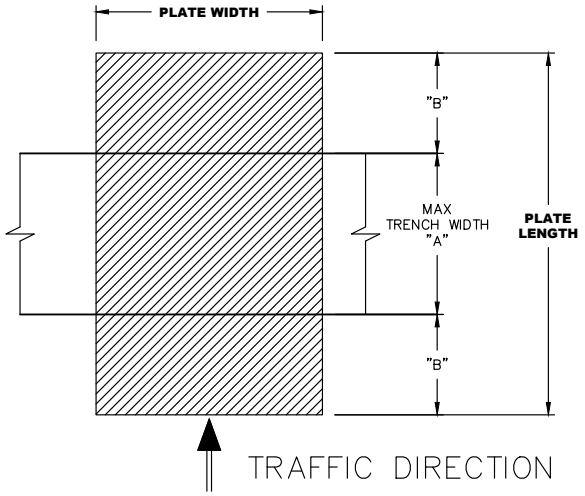
Steel Road Plate

Tabulated Data

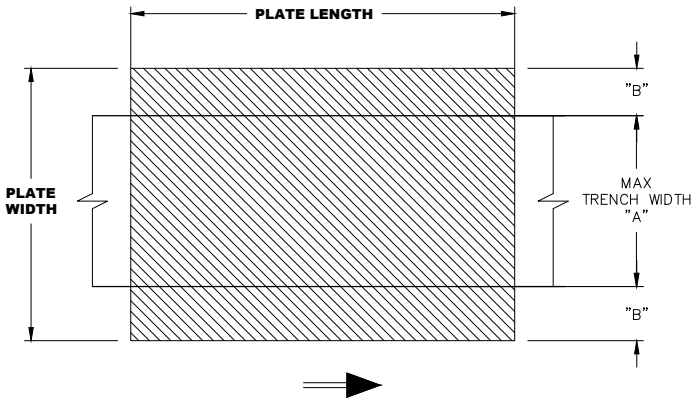
Applies to the following Manufacturers:

GME Shoring Solutions • Pro-Tect Equipment • Efficiency Production • Cerda Industries

SINGLE PLATE PERPENDICULAR



SINGLE PLATE PARALLEL

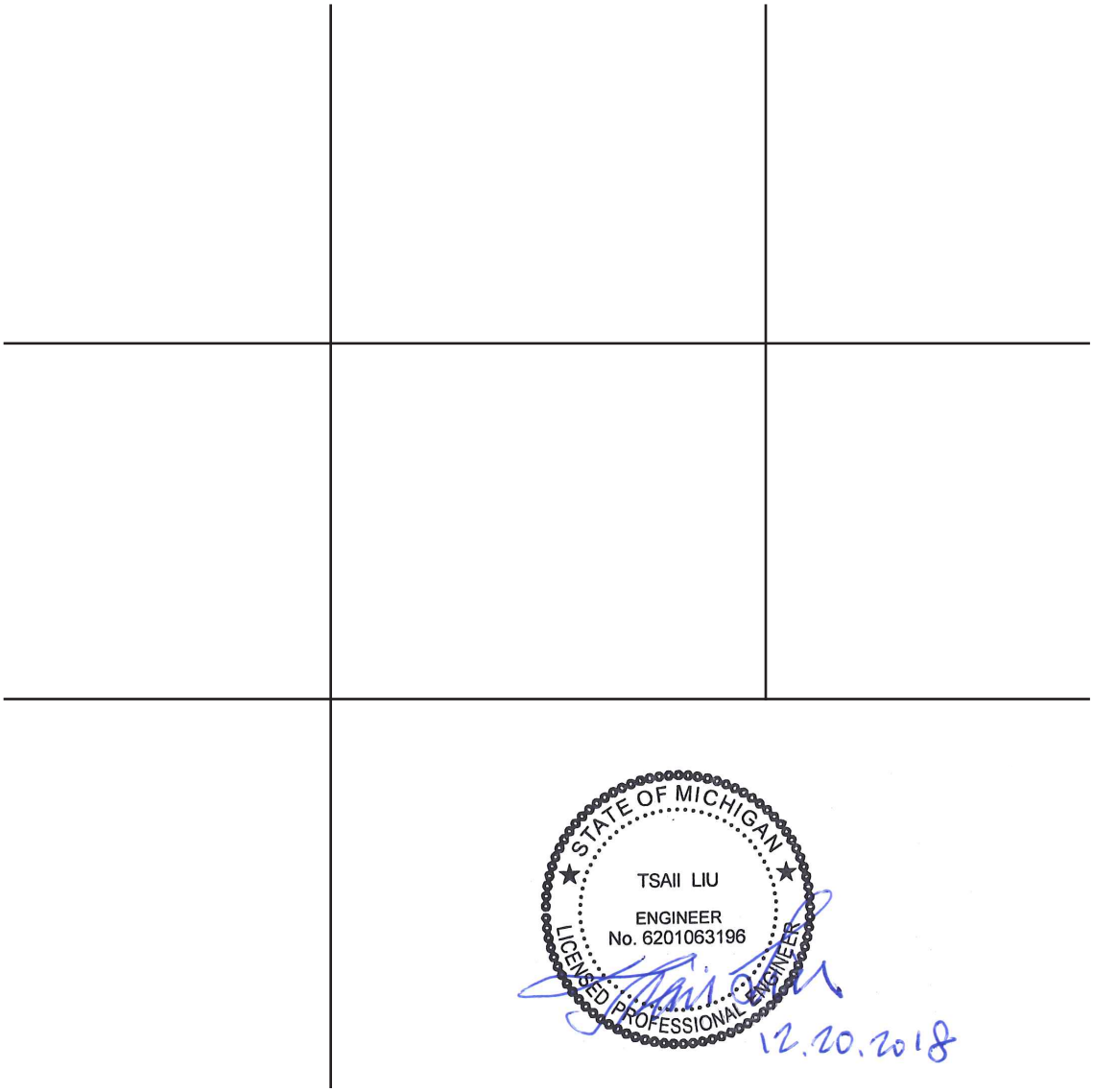


SINGLE PLATE - 1" Thick								
PLATE WIDTH (FT.)	PLATE LENGTH (FT.)	PLATE THICKNESS	WEIGHT (LBS)	PARALLEL		PERPENDICULAR		TOTAL THICKNESS
				"A"	"B"	"A"	"B"	
4	4	1"	653	12"	18"	12"	18"	1"
4	8	1"	1,307	12"	18"	42"	27"	1"
5	5	1"	1,021	24"	18"	24"	18"	1"
5	8	1"	1,634	24"	18"	48"	24"	1"
5	10	1"	2,042	24"	18"	48"	36"	1"
5	12	1"	2,450	24"	18"	48"	48"	1"
6	8	1"	1,960	36"	18"	60"	18"	1"
6	12	1"	2,940	36"	18"	60"	42"	1"
8	8	1"	2,614	42"	27"	42"	27"	1"
8	10	1"	3,267	48"	24"	42"	39"	1"
8	12	1"	3,921	60"	18"	42"	51"	1"
8	16	1"	5,227	60"	18"	42"	75"	1"
8	20	1"	6,534	60"	18"	42"	99"	1"
10	16	1"	6,534	72"	24"	48"	72"	1"
TWO PLATES - 1" Thick EACH (Stacked with no offset)								
PLATE WIDTH (FT.)	PLATE LENGTH (FT.)	PLATE THICKNESS	WEIGHT (LBS)	PARALLEL		PERPENDICULAR		TOTAL THICKNESS
				"A"	"B"	"A"	"B"	
4	8	1"	1,307	12"	18"	60"	18"	2"
5	8	1"	1,634	24"	18"	60"	18"	2"
5	10	1"	2,042	24"	18"	84"	18"	2"
5	12	1"	2,450	24"	18"	108"	18"	2"
6	12	1"	2,940	36"	18"	108"	18"	2"
8	8	1"	2,614	60"	18"	60"	18"	2"
8	10	1"	3,267	60"	18"	84"	18"	2"
8	12	1"	3,921	60"	18"	108"	18"	2"
8	16	1"	5,227	60"	18"	132"	30"	2"
8	20	1"	6,534	60"	18"	132"	54"	2"
10	16	1"	6,534	84"	18"	144"	24"	2"
THREE PLATES - 1" Thick EACH (Stacked with no offset)								
PLATE WIDTH (FT.)	PLATE LENGTH (FT.)	PLATE THICKNESS	WEIGHT (LBS)	PARALLEL		PERPENDICULAR		TOTAL THICKNESS
				"A"	"B"	"A"	"B"	
8	16	1"	5,227	60"	18"	156"	18"	3"
8	20	1"	6,534	60"	18"	156"	42"	3"

NOTES:

1. Traffic loading based on H25- 44 truck loading as per AASHTO - 16th and 17th Edition at 45 mph and OSHA 1910. 23(E)(7) (i) .
2. Plates shall be uniformly supported and centered over trench.
3. Trench walls under the plates shall be stable and continuously supported.
4. The plates shall be anchored and monitored by contractor to prevent lateral movement.
5. When used in traffic situations, the supporting surfaces of the trench shall be smooth and hard, such as concrete or asphalt.
6. When used in traffic situations, approaches shall be smoothed out by using appropriate asphalt ramps at both ends.
7. Provide barriers or closure plates at trench ends (where appropriate)
8. 1” Plate must be ASTM A36 or greater (Yield Strength = 36,000 psi min.)
9. 1” Plate must be +/- 10 percent of 40.8 pounds per square foot (PSF)
10. Contractor shall be responsible to maintain traffic control in compliance with all local, state, and federal rules & regulations.

P.E. Certification



Tabulated Data for SINGLE 1" Steel Road Plate Utilized as End Plates with EPI Trench Shields

Page 1 of 2

Specified Carbon Steel Plate:

Grade	= ASTM A-36
Yield Strength	= 36.0 ksi minimum
Plate Thickness	= l" minimum
Plate Width	= see tabular
Plate Length	= Plate length is dictated by the height for the trench shield(s).

Guidelines:

The above specified carbon steel plate may be used as an end plate in conjunction with the tabulated data shown on *Page 2 of 2* and all applicable site limitations. Note that no allowance has been made for surcharge (spoil pile, etc.) and/or long term use.

Important Warning:

The use of road plates to achieve additional support area around and/or beneath trench shields is not encouraged. Consult the trench shield manufacturer.

Floating End Plates shall be properly sized, attached, and secured to each other and against the ends of the trench shield panels in such a way so as to prevent pronounced sliding and lack of bearing surface. Full bearing shall be provided for floating end plates at each trench shield panel.

The installation, use, and removal for end plates shall be supervised by qualified personnel for each site specific application.

Attachment of the end plate to the trench shield shall be done in accordance with recognized industry practices and by competent personnel. Attachments shall incorporate all applicable loads from the trench shield-end plate system, including installation and handling loads. Note that extra care must be exercised when handling assembled units (use temporary bracing, etc.). Inspection of all equipment shall be performed prior to and after each use for signs of wear.

Arcosa Shoring Products tabulated data for manufactured trench shields shall be consulted for the limitations and uses for the trench shield. In all cases, the shallowest depth rating capacity tabulated for either the trench shield or the end plate shall be used. The end panel loads for the widths specified on *Page 2 of 2* do not affect the trench shield tab data.

All Local, Federal and State Ordinances, Rules, Standards, Codes, etc., shall apply.

Tabulated Data for SINGLE 1" Steel Road Plate Utilized as End Plates with EPI Trench Shields

Page 2of 2

Floating End Plate (Free to Rotate at each Trench Shield Panel)						
SPREADER Length (Ft.)	**A-25 SOIL**		**B-45 SOIL**		**C-60 SOIL**	
	Depth (Ft.)	Rating (PSF)	Depth (Ft.)	Rating (PSF)	Depth (Ft.)	Rating (PSF)
5	60	1500	33	1485	25	1500
6	43	1075	24	1080	18	1080
7	31	775	17	765	13	780
8	24	600	13	585	10	600
9	19	475	10	450	8	480
10	14	350	8	360	6	360

Fixed End Plate (Welded both In & Out at each Trench Shield Panel)						
SPREADER Length (Ft.)	**A-25 SOIL**		**B-45 SOIL**		**C-60 SOIL**	
	Depth (Ft.)	Rating (PSF)	Depth (Ft.)	Rating (PSF)	Depth (Ft.)	Rating (PSF)
5	91	2275	50	2250	38	2280
6	62	1550	34	1530	26	1560
7	45	1125	25	1125	19	1140
8	36	900	20	900	15	900
9	29	725	[6	720	12	720
10	21	525	12	540	9	540

Maximum Inward Deflection		
SPREADER Length (Ft.)	**FLOATING END PLATE** (In.)	**FIXED END PLATE** (In.)
5	.72	.14
6	1.03	.21
7	1.41	.28
8	1.84	.37
9	2.32	.46
10	2.66	.57

P.E. Certification

Tabulated Data for TWO 1” Steel Plates BACK TO BACK Utilized as End Plates with Steel Trench Shields

Page 1 of 2

Specified Carbon Steel Plate:

Grade	= ASTM A-36
Yield Strength	= 36.0 ksi minimum
Plate Thickness	= l” minimum
Plate Width	= see tabular
Plate Length	= Plate length is dictated by the height for the trench shield(s).

Guidelines:

The above specified carbon steel plate may be used as an end plate in conjunction with the tabulated data shown on *Page 2 of 2* and all applicable site limitations. Note that no allowance has been made for surcharge (spoil pile, etc.) and/or long term use.

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Arcosa Shoring Products tabulated data for manufactured trench shields shall be consulted for the limitations and uses for the trench shield. In all cases, the shallowest depth rating capacity tabulated for either the trench shield or the end plate shall be used. The end panel loads for the widths specified on *Page 2 of 2* do not affect the trench shield tab data.

All Local, Federal and State Ordinances, Rules, Standards, Codes, etc., shall apply.

Tabulated Data for TWO 1" Steel Plates BACK TO BACK Utilized as End Plates with Steel Trench Shields

Page 2 of 2

Floating End Plate (Free to Rotate at each Trench Shield Panel)					Maximum Inward Deflection	
SPREADER Length (Ft.)	RATING (PSF)	A-25 SOIL Depth (Ft.)	B-45 SOIL Depth (Ft.)	C-60 SOIL Depth (Ft.)	SPREADER Length (Ft.)	TWO FLOATING END PLATE (In.)
5	2700	108	60	45	5	.72
6	1980	79	44	33	6	1.03
7	1440	58	32	24	7	1.41
8	1080	43	24	18	8	1.84
9	900	36	20	15	9	2.32
10	660	26	15	11	10	2.66
11	540	22	12	9	11	3.19
12	420	17	9	7	12	3.73
13	360	14	8	6	13	4.27

P.E. Certification