

HIGH ARCH SPREADER TABULATED DATA

Model Number: 11.ACC-ARCH-SRS-2-96-120-3P

3810 Magnolia Pkwy
Pearland TX 77584

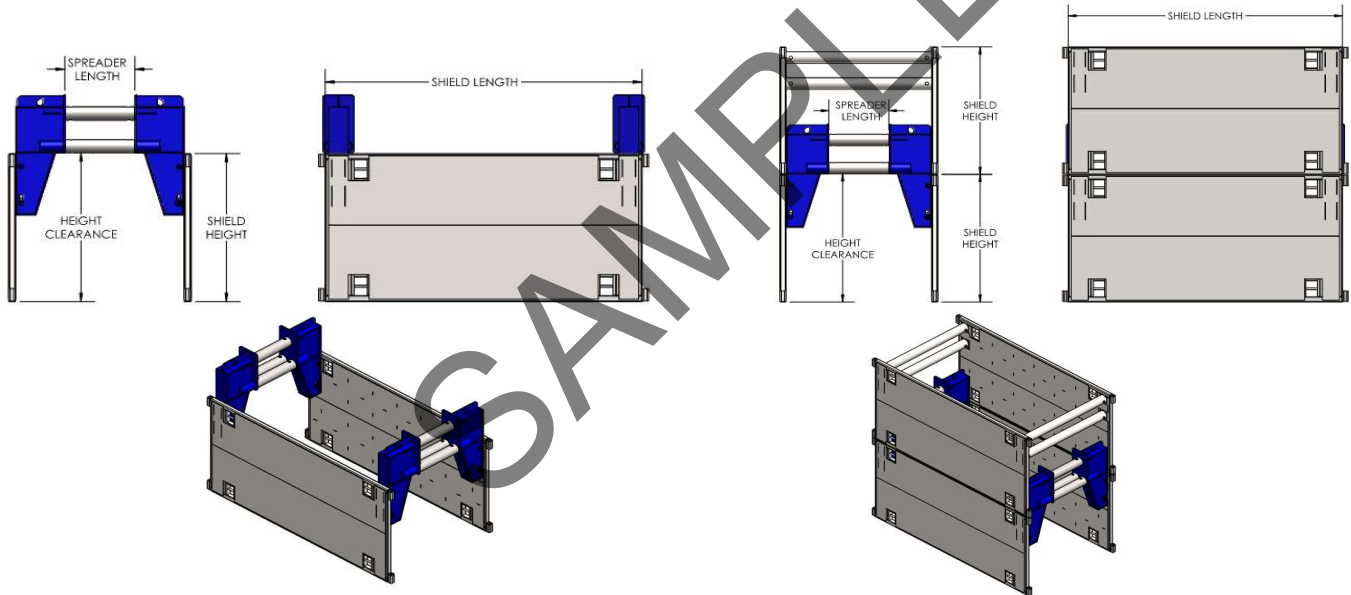
Serial Number	PS2XXXX	Max Clearance Height	120 IN	Spreader Pin Size	2 IN
Maximum Shield Height	10 FT	Spreader Size	8" SCH 80 Pipe	Pin Yield Strength	54 KSI
Maximum Shield Length	24 FT	Spreader Yield Strength	65 KSI ¹²	Weight	1605 LBS
Min Clearance Height	96 IN	Max Spreader Length	15 FT	Surcharge	72 PSF

STACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHIELD LENGTH (FT)	PSF	A-25 (FT)	B-45 (FT)	C-60 (FT)	C-80 (FT)
8	8	12	5783	40	40	40	40
8	8	16	4337	40	40	40	40
8	8	20	3470	40	40	40	40
8	8	24	2891	40	40	40	35
10	10	12	4626	40	40	40	40
10	10	16	3470	40	40	40	40
10	10	20	2776	40	40	40	34
10	10	24	2313	40	40	37	28

UNSTACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHIELD LENGTH (FT)	PSF	A-25 (FT)	B-45 (FT)	C-60 (FT)	C-80 (FT)
NO SHIELD	8	12	2578	40	40	40	31
NO SHIELD	8	16	1934	40	40	31	23
NO SHIELD	8	20	1547	40	33	25	18
NO SHIELD	8	24	1289	40	27	20	15
NO SHIELD	10	12	1682	40	36	27	20
NO SHIELD	10	16	1261	40	26	20	15
NO SHIELD	10	20	1009	37	21	16	12
NO SHIELD	10	24	841	31	17	13	10



NOTES & LIMITATIONS:

- 1) This document has been prepared and sealed by a Licensed Professional Engineer (P.E.), in accordance with OSHA 29 CFR Part 1926, Subpart P.
- 2) Where soils are sloped, the slope shall extend to not less than 18 in. below the top of the trench shield. The trench shield is not required to extend above the soil surface where soils are flat and level with the top of the shield. See shield tabulated data tables for allowable sloping requirements.
- 3) Arch spreaders shall be used under the supervision and direction of a Competent Person as defined by CRF, Part 1926, Subpart P. Among other qualifications, the Competent Person shall be trained in the use of high arch spreaders and have practical field experience with the use of shields, soil classification, and recognizing hazardous conditions.
- 4) High arch spreaders are not intended to provide support or stability to adjacent buildings, structures, utilities, or foundations.
- 5) High arch spreaders shall be used in strict compliance with all applicable OSHA requirements and the limitations outlined in this document.
- 6) High arch spreaders shall be inspected by the Competent Person prior to each use to verify they are in serviceable condition and free from damage, deformation, or defects.
- 7) Surcharge loads are included in the maximum depth table. Surcharge loads are possible due to heavy equipment, vibrations, or stock piles adjacent to the trench. Adjacent is defined as within a horizontal distance equal to the depth of the excavation.
- 8) Competent person must ensure surcharge limits and equipment setbacks are maintained at all times, unless approved in writing by a P.E.
- 9) All spreaders shall be secured to sockets using pins or other mechanical connections approved by the manufacturer prior to use. Side loading or vertical loading of high arch spreaders—including leaning plates or sheeting against spreaders—is prohibited unless approved in writing by the Manufacturer or a P.E.
- 10) Repairs, alterations, or modifications to high arch spreaders—including changes to geometry, length, or capacity—are strictly prohibited unless approved in writing by a P.E.
- 11) Refer to the applicable trench shield tabulated data sheets for spreader pipe requirements (larger diameter, sched, and ksi control), allowable depths, and configuration limitations. The maximum allowable depth ratings and PSF ratings are the lower of those tabulated on the shield and the high arch spreader.
- 12) To achieve tabulated depth ratings, the Owner shall use 8 in. NPS Schedule 80 pipe spreaders with minimum specified yield strength $F_y \geq 65$ ksi (API 5L X65 or approved equal) and provide certified MTRs, calculations, and/or load testing if requested for P.E. approval.

WARNING: USE OF SHIELDING OTHER THAN OUTLINED IN THIS DOCUMENT CAN CAUSE FAILURE, COLLAPSE, OR CAVE-INS, AND MAY RESULT IN SERIOUS INJURY OR DEATH.

HIGH ARCH SPREADER TABULATED DATA

Model Number: 11.ACC-ARCH-SRS-2-96-120-4P

3810 Magnolia Pkwy
Pearland TX 77584

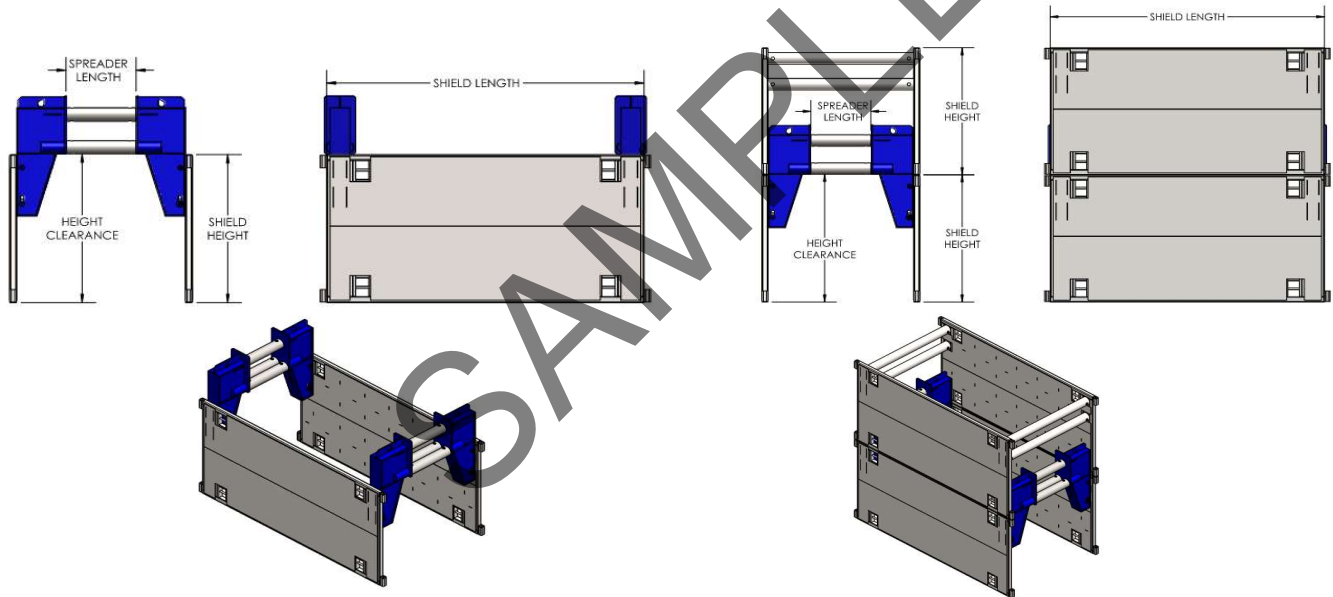
Serial Number	PS2XXXX	Max Clearance Height	120 IN	Spreader Pin Size	2 IN
Maximum Shield Height	10 FT	Spreader Size	8" SCH 80 Pipe	Pin Yield Strength	54 KSI
Maximum Shield Length	24 FT	Spreader Yield Strength	65 KSI ¹²	Weight	1684 LBS
Min Clearance Height	96 IN	Max Spreader Length	15 FT	Surcharge	72 PSF

STACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHEILD LENGTH (FT)	PSF	A-25	B-45	C-60	C-80
8	8	12	5783	40	40	40	40
8	8	16	4337	40	40	40	40
8	8	20	3470	40	40	40	40
8	8	24	2891	40	40	40	35
10	10	12	4626	40	40	40	40
10	10	16	3470	40	40	40	40
10	10	20	2776	40	40	40	34
10	10	24	2313	40	40	37	28

UNSTACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHEILD LENGTH (FT)	PSF	A-25	B-45	C-60	C-80
NO SHIELD	8	12	4089	40	40	40	40
NO SHIELD	8	16	3067	40	40	40	37
NO SHIELD	8	20	2453	40	40	40	30
NO SHIELD	8	24	2044	40	40	33	25
NO SHIELD	10	12	2816	40	40	40	34
NO SHIELD	10	16	2112	40	40	34	26
NO SHIELD	10	20	1690	40	36	27	20
NO SHIELD	10	24	1408	40	30	22	17



NOTES & LIMITATIONS:

- 1) This document has been prepared and sealed by a Licensed Professional Engineer (P.E.), in accordance with OSHA 29 CFR Part 1926, Subpart P.
- 2) Where soils are sloped, the slope shall extend to not less than 18 in. below the top of the trench shield. The trench shield is not required to extend above the soil surface where soils are flat and level with the top of the shield. See shield tabulated data tables for allowable sloping requirements.
- 3) Arch spreaders shall be used under the supervision and direction of a Competent Person as defined by CRF, Part 1926, Subpart P. Among other qualifications, the Competent Person shall be trained in the use of high arch spreaders and have practical field experience with the use of shields, soil classification, and recognizing hazardous conditions.
- 4) High arch spreaders are not intended to provide support or stability to adjacent buildings, structures, utilities, or foundations.
- 5) High arch spreaders shall be used in strict compliance with all applicable OSHA requirements and the limitations outlined in this document.
- 6) High arch spreaders shall be inspected by the Competent Person prior to each use to verify they are in serviceable condition and free from damage, deformation, or defects.
- 7) Surcharge loads are included in the maximum depth table. Surcharge loads are possible due to heavy equipment, vibrations, or stock piles adjacent to the trench. Adjacent is defined as within a horizontal distance equal to the depth of the excavation.
- 8) Competent person must ensure surcharge limits and equipment setbacks are maintained at all times, unless approved in writing by a P.E.
- 9) All spreaders shall be secured to sockets using pins or other mechanical connections approved by the manufacturer prior to use. Side loading or vertical loading of high arch spreaders—including leaning plates or sheeting against spreaders—is prohibited unless approved in writing by the Manufacturer or a P.E.
- 10) Repairs, alterations, or modifications to high arch spreaders—including changes to geometry, length, or capacity—are strictly prohibited unless approved in writing by a P.E.
- 11) Refer to the applicable trench shield tabulated data sheets for spreader pipe requirements (larger diameter, sched, and ksi control), allowable depths, and configuration limitations. The maximum allowable depth ratings and PSF ratings are the lower of those tabulated on the shield and the high arch spreader.
- 12) To achieve tabulated depth ratings, the Owner shall use 8 in. NPS Schedule 80 pipe spreaders with minimum specified yield strength $F_y \geq 65$ ksi (API 5L X65 or approved equal) and provide certified MTRs, calculations, and/or load testing if requested for P.E. approval.

WARNING: USE OF SHIELDING OTHER THAN OUTLINED IN THIS DOCUMENT CAN CAUSE FAILURE, COLLAPSE, OR CAVE-INS, AND MAY RESULT IN SERIOUS INJURY OR DEATH.

HIGH ARCH SPREADER TABULATED DATA

3810 Magnolia Pkwy
Pearland TX 77584

Model Number: 11.ACC-ARCH-SRS-2-120-144-3P

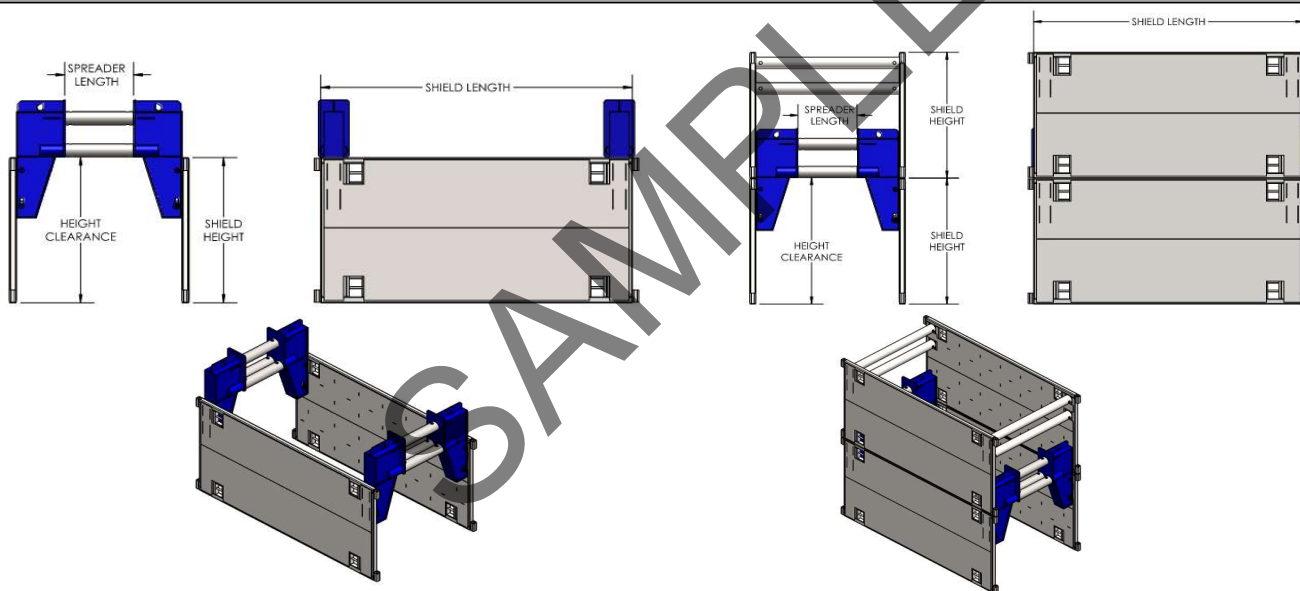
Serial Number	PS2XXXX	Max Clearance Height	144 IN	Spreader Pin Size	2 IN
Maximum Shield Height	10 FT	Spreader Size	8" SCH 80 Pipe	Pin Yield Strength	54 KSI
Maximum Shield Length	24 FT	Spreader Yield Strength	65 KSI ¹²	Weight	1889 LBS
Min Clearance Height	120 IN	Max Spreader Length	15 FT	Surcharge	72 PSF

STACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHIELD LENGTH (FT)	PSF	A-25	B-45	C-60	C-80
8	8	12	2356	40	40	38	29
8	8	16	1767	40	38	28	21
8	8	20	1413	40	30	22	17
8	8	24	1178	40	25	18	14
10	10	12	1885	40	40	30	23
10	10	16	1413	40	30	22	17
10	10	20	1131	40	24	18	13
10	10	24	942	35	19	15	11

UNSTACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHIELD LENGTH (FT)	PSF	A-25	B-45	C-60	C-80
NO SHIELD	8	12	1774	40	38	28	21
NO SHIELD	8	16	1331	40	28	21	16
NO SHIELD	8	20	1065	40	22	17	12
NO SHIELD	8	24	887	33	18	14	10
NO SHIELD	10	12	1228	40	26	19	14
NO SHIELD	10	16	921	34	19	14	11
NO SHIELD	10	20	727	26	15	11	8
NO SHIELD	10	24	614	22	12	9	7



NOTES & LIMITATIONS:

- 1) This document has been prepared and sealed by a Licensed Professional Engineer (P.E.), in accordance with OSHA 29 CFR Part 1926, Subpart P.
- 2) Where soils are sloped, the slope shall extend to not less than 18 in. below the top of the trench shield. The trench shield is not required to extend above the soil surface where soils are flat and level with the top of the shield. See shield tabulated data tables for allowable sloping requirements.
- 3) Arch spreaders shall be used under the supervision and direction of a Competent Person as defined by CRF, Part 1926, Subpart P. Among other qualifications, the Competent Person shall be trained in the use of high arch spreaders and have practical field experience with the use of shields, soil classification, and recognizing hazardous conditions.
- 4) High arch spreaders are not intended to provide support or stability to adjacent buildings, structures, utilities, or foundations.
- 5) High arch spreaders shall be used in strict compliance with all applicable OSHA requirements and the limitations outlined in this document.
- 6) High arch spreaders shall be inspected by the Competent Person prior to each use to verify they are in serviceable condition and free from damage, deformation, or defects.
- 7) Surcharge loads are included in the maximum depth table. Surcharge loads are possible due to heavy equipment, vibrations, or stock piles adjacent to the trench. Adjacent is defined as within a horizontal distance equal to the depth of the excavation.
- 8) Competent person must ensure surcharge limits and equipment setbacks are maintained at all times, unless approved in writing by a P.E.
- 9) All spreaders shall be secured to sockets using pins or other mechanical connections approved by the manufacturer prior to use. Side loading or vertical loading of high arch spreaders—including leaning plates or sheeting against spreaders—is prohibited unless approved in writing by the Manufacturer or a P.E.
- 10) Repairs, alterations, or modifications to high arch spreaders—including changes to geometry, length, or capacity—are strictly prohibited unless approved in writing by a P.E.
- 11) Refer to the applicable trench shield tabulated data sheets for spreader pipe requirements (larger diameter, sched, and ksi control), allowable depths, and configuration limitations. The maximum allowable depth ratings and PSF ratings are the lower of those tabulated on the shield and the high arch spreader.
- 12) To achieve tabulated depth ratings, the Owner shall use 8 in. NPS Schedule 80 pipe spreaders with minimum specified yield strength $F_y \geq 65$ ksi (API 5L X65 or approved equal) and provide certified MTRs, calculations, and/or load testing if requested for P.E. approval.
- 13) Upper shield may be placed either collar side up or down and achieve same values listed above.

WARNING: USE OF SHIELDING OTHER THAN OUTLINED IN THIS DOCUMENT CAN CAUSE FAILURE, COLLAPSE, OR CAVE-INS, AND MAY RESULT IN SERIOUS INJURY OR DEATH.

HIGH ARCH SPREADER TABULATED DATA

3810 Magnolia Pkwy
Pearland TX 77584

Model Number: 11.ACC-ARCH-SRS-2-120-144-4P

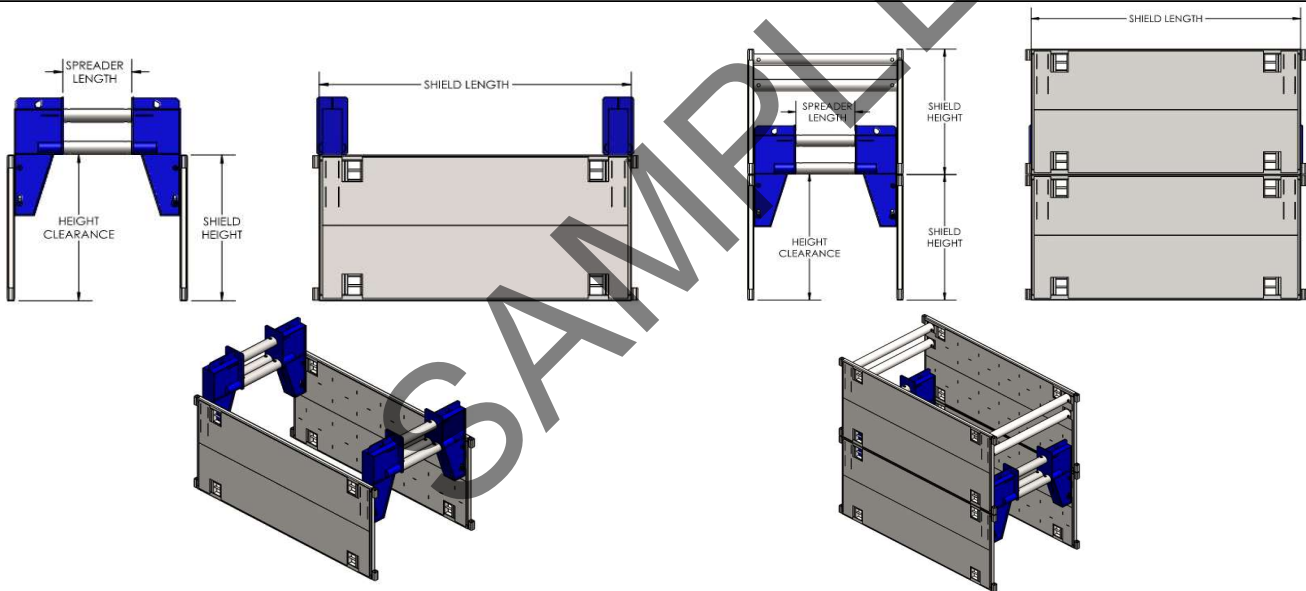
Serial Number	PS2XXXX	Max Clearance Height	144 IN	Spreader Pin Size	2 IN
Maximum Shield Height	10 FT	Spreader Size	8" SCH 80 Pipe	Pin Yield Strength	54 KSI
Maximum Shield Length	24 FT	Spreader Yield Strength	65 KSI ¹²	Weight	1968 LBS
Min Clearance Height	120 IN	Max Spreader Length	15 FT	Surcharge	72 PSF

STACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHIELD LENGTH (FT)	PSF	A-25	B-45	C-60	C-80
8	8	12	3021	40	40	40	37
8	8	16	2266	40	40	37	27
8	8	20	1812	40	39	29	22
8	8	24	1510	40	32	24	18
10	10	12	2417	40	40	39	29
10	10	16	1812	40	39	29	22
10	10	20	1450	40	31	23	17
10	10	24	1208	40	25	19	14

UNSTACKED SHIELD CONDITION

UPPER SHIELD HEIGHT (FT)	LOWER SHIELD HEIGHT (FT)	SHIELD LENGTH (FT)	PSF	A-25	B-45	C-60	C-80
NO SHIELD	8	12	3090	40	40	40	38
NO SHIELD	8	16	2317	40	40	37	28
NO SHIELD	8	20	1854	40	40	30	22
NO SHIELD	8	24	1545	40	33	25	18
NO SHIELD	10	12	2203	40	40	36	27
NO SHIELD	10	16	1652	40	35	26	20
NO SHIELD	10	20	1322	40	28	21	16
NO SHIELD	10	24	1101	40	23	17	13



NOTES & LIMITATIONS:

- 1) This document has been prepared and sealed by a Licensed Professional Engineer (P.E.), in accordance with OSHA 29 CFR Part 1926, Subpart P.
- 2) Where soils are sloped, the slope shall extend to not less than 18 in. below the top of the trench shield. The trench shield is not required to extend above the soil surface where soils are flat and level with the top of the shield. See shield tabulated data tables for allowable sloping requirements.
- 3) Arch spreaders shall be used under the supervision and direction of a Competent Person as defined by CRF, Part 1926, Subpart P. Among other qualifications, the Competent Person shall be trained in the use of high arch spreaders and have practical field experience with the use of shields, soil classification, and recognizing hazardous conditions.
- 4) High arch spreaders are not intended to provide support or stability to adjacent buildings, structures, utilities, or foundations.
- 5) High arch spreaders shall be used in strict compliance with all applicable OSHA requirements and the limitations outlined in this document.
- 6) High arch spreaders shall be inspected by the Competent Person prior to each use to verify they are in serviceable condition and free from damage, deformation, or defects.
- 7) Surcharge loads are included in the maximum depth table. Surcharge loads are possible due to heavy equipment, vibrations, or stock piles adjacent to the trench. Adjacent is defined as within a horizontal distance equal to the depth of the excavation.
- 8) Competent person must ensure surcharge limits and equipment setbacks are maintained at all times, unless approved in writing by a P.E.
- 9) All spreaders shall be secured to sockets using pins or other mechanical connections approved by the manufacturer prior to use. Side loading or vertical loading of high arch spreaders—including leaning plates or sheeting against spreaders—is prohibited unless approved in writing by the Manufacturer or a P.E.
- 10) Repairs, alterations, or modifications to high arch spreaders—including changes to geometry, length, or capacity—are strictly prohibited unless approved in writing by a P.E.
- 11) Refer to the applicable trench shield tabulated data sheets for spreader pipe requirements (larger diameter, sched, and ksi control), allowable depths, and configuration limitations. The maximum allowable depth ratings and PSF ratings are the lower of those tabulated on the shield and the high arch spreader.
- 12) To achieve tabulated depth ratings, the Owner shall use 8 in. NPS Schedule 80 pipe spreaders with minimum specified yield strength $F_y \geq 65$ ksi (API 5L X65 or approved equal) and provide certified MTRs, calculations, and/or load testing if requested for P.E. approval.
- 13) Upper shield may be place either collar side up or down and achieve same values listed above.

WARNING: USE OF SHIELDING OTHER THAN OUTLINED IN THIS DOCUMENT CAN CAUSE FAILURE, COLLAPSE, OR CAVE-INS, AND MAY RESULT IN SERIOUS INJURY OR DEATH.