

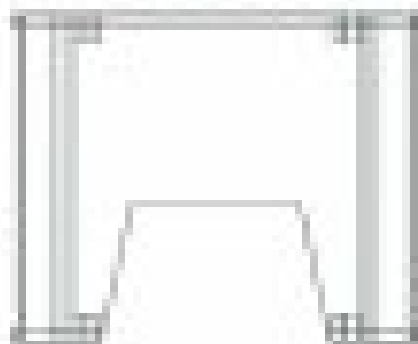


A COPY OF THIS SHEET MUST ACCOMPANY EACH
CORRESPONDING TRENCH SHIELD AT EVERY JOB SITE

Site	Mass (kg/ha)	Yield
FIELD A	25 - 35	1.4-1.6
FIELD B	20 - 30	
FIELD C(1)	20 - 30	
FIELD C(2)	10 - 20	

100

1000



- [illegible]

ARCOSA

[illegible]

Images of wounds indicate that these significant wound areas follow the same line of weakness or fracture injury or result

[illegible]

Source: *Journal of the American Statistical Association*, 92(439), 1039-1052.



NAXSA

North American
Excavation Shoring Association

STEEL TRENCH SHIELD ASSEMBLY & USAGE

A guide to key steps for steel trench shield assembly and usage.

1. ANY USE OF A TRENCH SHIELD WITHOUT MANUFACTURER'S SPREADERS AND PINS OR EQUAL WILL VOID THE TABULATED DATA AND WARRANTY.
2. TRENCH SHIELDS ARE DESIGNED TO BE USED WITHOUT PLATES EXTENDING BELOW, ABOVE, OR NEXT TO IT. ANY USE OF SUCH PLATES OR PANELS MAY VOID THE TABULATED DATA AND MAY REQUIRE SITE SPECIFIC ENGINEERING.
3. TRENCH SHIELDS ARE DESIGNED TO BE PUSHED TO GRADE IF NECESSARY. AS NOTED BELOW, ANY UNNECESSARY ABUSE BY THE EXCAVATOR AND OR OPERATOR (SUCH AS POUNDING WITH THE BUCKET) WILL VOID THE TABULATED DATA AS WELL AS THE WARRANTY.
4. CONDITION OF SHIELD, SPREADER PIPES, AND SPREADER PINS MUST BE CHECKED/ INSPECTED FOR SERVICEABILITY BY THE COMPETENT PERSON PRIOR TO EACH USE. PSF RATING IS NOT VALID IF THERE IS ANY VISIBLE DAMAGE TO, OR REPAIRS MADE TO THE SHIELD THAT HAS NOT BEEN DOCUMENTED AND CERTIFIED BY A REGISTERED PROFESSIONAL ENGINEER.
5. A MINIMUM OF 4 SPREADERS OR A MANUFACTURER-APPROVED ALTERNATIVE, MUST BE INSTALLED ON THE TRENCH SHIELD PRIOR TO USE.
6. WARNING: LIFTING EYES ARE DESIGNED AND INTENDED FOR ASSEMBLY/DISASSEMBLY AND LIFTING ONLY. DO NOT PULL OR LIFT BY EYES WHEN SHIELD IS STUCK OR HAS PRESSURE AGAINST IT. LOOSEN SHIELD BY PULLING ON PULLING EYES OR DIGGING ALONG SIDES.

ASSEMBLY



1) REMOVE FROM TRUCK BY LIFTING PANELS WITH 4 POINT LIFT LUGS. ALWAYS USE OSHA APPROVED SLINGS. PLACE ONE SIDEWALL FLAT ON THE GROUND WITH COLLARS FACING UP.



2) PLACE SPREADER PIPE ON TO COLLARS OR BRACKETS AND PIN IN PLACE. SECURE PINS WITH KEEPERS.



3A) LOWER SECOND SIDEWALL ONTO SPREADERS AND PIN IN PLACE.
3B) FOR SPREADERS LONGER THAN 72" LIFT SIDEWALL WITH SPREADERS OVER MATCHING SIDEWALL PRIOR TO PINNING IN PLACE.



4) PLACE SLING IN TOP 4 LIFT LUGS. STAND SHIELD IN UPRIGHT POSITION AND PREPARE FOR INSTALLATION.

DISASSEMBLY



1) PLACE OSHA APPROVED SLING IN TOP 4 LIFT LUGS. STAND SHIELD IN UPRIGHT POSITION AND LIFT BOX FROM EXCAVATION. WARNING: LIFT LUGS ARE INTENDED FOR LIFTING ONLY.



2) PLACE SHIELD ON EITHER SIDEWALL.



3) CONNECT SLING TO 4 LIFTING EYES OF TOP SIDEWALL. REMOVE SPREADER PINS FROM THE UPPER PORTION OF THE SPREADERS. LIFT THE TOP SIDEWALL FROM THE SPREADERS.



4) UNPIN SPREADERS FROM THE LOWER SIDEWALL AND REMOVE SPREADERS.

USING A TRENCH SHIELD IN STABLE SOIL



1) EXCAVATED TO GRADE JUST SLIGHTLY WIDER THAN THE TRENCH SHIELD. DIG WALLS VERTICAL TO MINIMUM OF 18" BELOW THE TOP OF THE SHIELD. SLOPE SOILS ABOVE SHIELD ACCORDING TO MANUFACTURER'S TABULATED DATA. INSTALL SHIELD IN TRENCH.



2) PERFORM DESIRED WORK, THEN EXCAVATE IN FRONT OF THE TRENCH SHIELD.



3) PULL SHIELD FORWARD BY FRONT TOP SPREADER PIPE OR PULLING EYES. PULLING EYES SHALL BE USED WITH SPREADERS WIDER THAN 72" OR WHEN SOIL PRESSURE IS SEVERE ENOUGH TO CAUSE SPREADER TO DEFLECT. CONTINUE EXCAVATING AND PULL SHIELD FORWARD, BACKFILL AS WORK PROGRESSES.

USING A TRENCH SHIELD IN UNSTABLE SOIL



1) EXCAVATE UNTIL SOIL BEGINS TO CRUMBLE BEYOND DESIRED TRENCH WIDTH. PLACE SHIELD IN LINE OF EXCAVATION AND EXCAVATE FROM WITHIN.



2) CONTINUE EXCAVATING WITHIN SHIELD WHILE ALTERNATELY PUSHING DOWN ON SHIELD CORNERS UNTIL PROPER GRADE IS REACHED.



3) PERFORM DESIRED WORK, THEN PULL SHIELD FORWARD AND UP AT APPROPRIATE ANGLE AND REPEAT PREVIOUS STEPS AS NECESSARY.

WARNING: ANY USE OF THIS PRODUCT NOT SPECIFICALLY DESCRIBED ON THIS CERTIFICATE COULD CAUSE CAVE-IN, COLLAPSE, OR STRUCTURAL FAILURE, AND MAY RESULT IN INJURY OR DEATH