

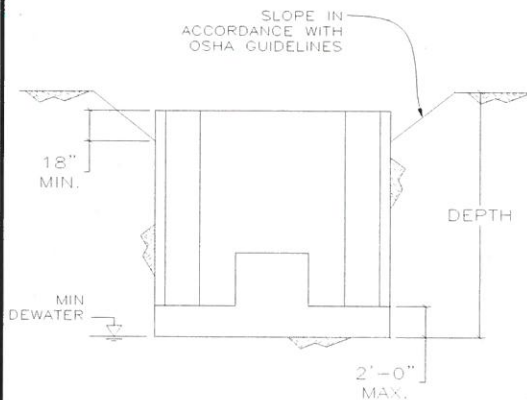
MANHOLE BOX CERTIFICATION

A COPY OF THIS SHEET MUST ACCOMPANY EACH CORRESPONDING
MANHOLE BOX AT EVERY JOB SITE



MODEL NUMBER	SERIAL NUMBER	SIZE
MAN-4 88DKE	33048	8' HIGH x 8' LONG

SOIL	MAX DEPTH	PSF	SOIL DESCRIPTION
TYPE A	40	2400	Stiff Cohesive Soil, 25 PSF per foot, clay, silty clay, clay loam with unconfined compressive strength of 1.5 ton per square foot or greater. See note 7.
TYPE B	40	2400	Medium Cohesive to granular soil, 45 PSF per foot of depth. Clay with unconfined compressive strength greater than 0.5 TSF but less than 1.5 TSF. Cohesionless gravel, silt, silt loam or sandy loam. See note 7.
TYPE C	30	2400	Soft Cohesive to Saturated Soil, 60 PSF per foot of depth. Clay with unconfined compressive strength less than 0.5 TSF, saturated sand, clay or fractured rock that is not stable. See notes 7 & 11.



Spreader pipes shall be 5" sch. 80 and a maximum length of 8'. NEVER lean steel plates, sheeting, plywood, or sheathing of any kind against spreaders.



LIMITATIONS

- 1.) This tabulated data has been prepared by a registered professional engineer as required to comply with OSHA standard 29 CFR part 1926, subpart P.
- 2.) Shield may be suspended no more than 2 feet above bottom of the trench and only if there is no possible loss of soil from behind or below bottom of shield.
- 3.) 72 PSF surcharge loads have been included in the above depth ratings. The allowable working depth of the shield must be reduced to account for any surcharge loading which occurs within the influence line of the shield that would exceed 72 psf. Otherwise, site specific engineering is required.
- 4.) Shoring shields shall be installed in a manner that will prevent lateral or otherwise hazardous movement of soils. Shoring shields are not intended to provide stability to adjacent buildings or other structures.
- 5.) Soil above shield must be sloped according to OSHA Subpart P, & must begin no less than 18" below top of panel.
- 6.) Shields may be stacked as long as each panel is rated to the depth it is used and manufacturer approved stack connections are utilized to prevent lateral movement of the shields.
- 7.) Contractors' competent person is fully responsible for classifying soils in accordance with OSHA guidelines, prior to use of system.
- 8.) Any modifications to panels will void tabulated data unless otherwise specified or allowed in writing by Pro-Tec Equipment.
- 9.) Shields must be inspected prior to each use for any damage or deterioration. If any assembly has sustained damage or permanent deformation, the tabulated data is void until repairs are made as specified by a registered professional engineer.
- 10.) Pro-Tec shoring systems are to be used in accordance with Federal, state and local laws. Refer to Occupational Safety and Health Administration (OSHA) rules and regulations Vol. 54, No. 209, 10/31/89. Subpart P.
- 11.) Contractor is fully responsible for ensuring groundwater level on all sides of shoring is maintained below base of excavation at all times, otherwise certification is invalid.
- 12.) Capacity and depth ratings account for 33% overstress for shore-term loading conditions.

Usage of boxes other than specified could cause failure or cave-ins resulting in serious injury or death.

Phone (517) 541-0303 ~ 1-800-292-1225 ~ Fax (517) 541-0329
Address: 4837 West Grand River Ave. ~ Lansing, MI 48906



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.

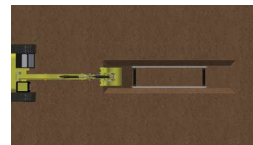


4) UNPIN SPREADERS FROM THE LOWER SIDEWALL AND REMOVE SPREADERS.

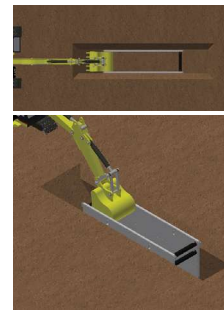
USING A TRENCH SHIELD IN STABLE SOIL



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