



BLH

PHL Toughdeck Platform Scale

Installation Instructions

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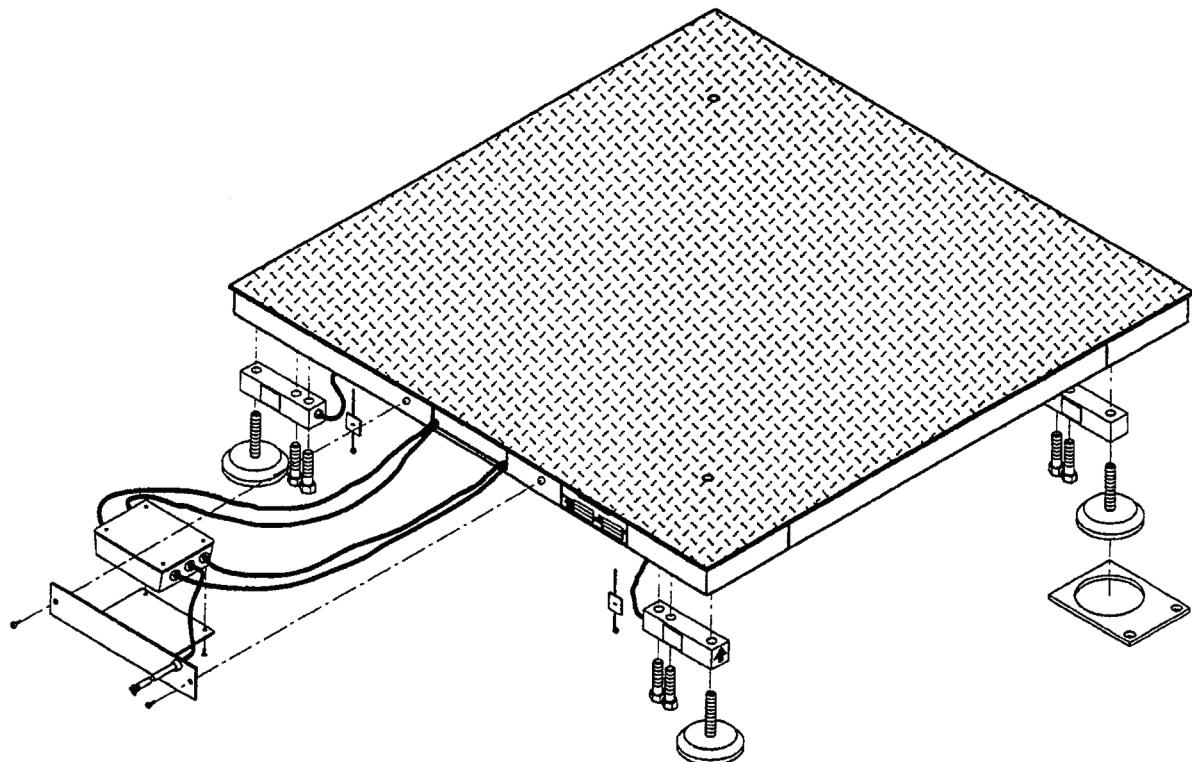
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1.0 INTRODUCTION

1.1 General Description

The Toughdeck Floor Scales are fully electronic, low profile load receivers. The Toughdeck is available in sizes from 30" x 30", to 60" x 84", and capacities from 2K to 10K, in either stainless steel or mild steel. All models are adjustable in height from 3.25" to 3.62". The Toughdeck comes in two versions, with the stainless steel SS models designed for harsh washdown environments.

All models use four corner-mounted load cells, with the cells recessed into the frame channels for protection. A signal-trim summing board for any necessary corner corrections is enclosed in a junction box mounted on a slide-out tray for easy access. All models use a stainless steel NEMA Type 4X junction box. All models come pre-trimmed, and corner corrections should not be necessary unless a load cell is changed.

Load cell cables are enclosed in conduit through the main channels, and held down with replaceable cable ties near each corner, eliminating the possibility of cable damage in portable applications. Also useful for portable applications are threaded corner holes in the deck for removable eyebolts to allow lifting the scale from above with chains. Because of the possibility of foot and load cell damage from forklift tines, the scale should always be lifted from above with chains through the eyebolts.

The adjustable feet are used to allow leveling the scale to make up for minor floor irregularities. For permanent installations, two of the four feet can be held in place on the floor with optional floor Mounting Plates to guard against deck movement.

Also available as options are custom frames for pit installations, and access ramps for all sizes and models of the Toughdeck. Decks designed for use in pits can be ordered with holes drilled in the deck directly above each foot for adjusting foot height with a hex key from above. Information for ordering optional equipment as well as replacement parts will be found in Section 4.4 of this manual.

1.2 Model Designations

The model identification plate is located on the side of the frame next to the slide-out junction box tray. Both model and serial number should be listed when ordering replacement parts.

The following model designations are used to describe the different scale versions:

HP - mild steel, high precision, NTEP certified as "legal-for-trade".

SS - non-washdown stainless steel model, for dry chemical and corrosive environments.

1.3 Operating Requirements

Electrical Grounding

For systems where the scale is connected to a 120 VAC circuit, the instrument must be directly connected to an earth ground with a ground interface cable that has no more than 3 ohms resistance throughout its length and connections.

Load Cell Excitation

Rated Excitation - 10 VDC
Maximum Excitation - 15 VDC

Grade Level Requirements

The supporting surface for the four feet of the scale must be level within 1/4" of horizontal.

Safe Static Overloading Capacity

Maximum - 150% of scale capacity

Scale Total Height Range

3.25" - 3.62"

2. INSTALLATION

2.1. Overview

Standard installation of an assembled scale consists of the following steps:

- 1) Selecting a site.
- 2) Checking levelness and smoothness of site.
- 3) Unpacking scale.
- 4) Adjusting the four feet on the scale.
- 5) Installing mounting plates to the floor.
- 6) Connecting cable from junction box to indicator.
- 7) Calibrating the unit.

Pit installations and access ramps are described in Sections 2.6 and 2.7.

2.2. Site Preparation

The scale must not be loaded beyond its capacity, even momentarily. Do not select a site where overweight loads would have to maneuver to avoid crossing the platform. Avoid areas where the scale might receive damaging side impacts from wheels, forklift tines, etc., or shock damage from falling objects. Avoid areas where water may damage a scale not meant for a washdown environment.

The interface cable between the scale and the indicator must be protected against crushing, cutting, or moisture damage. If the chosen site has such potential dangers, some method of protection, such as running the cable in conduit, will be necessary.

In operation, the scale must be level within 1/4". Either choose a site where the floor is close to this standard to avoid excessive shimming, or modify the floor at the chosen site to meet this standard.

2.3. Unpacking

Depending on the model, the scale may be shipped assembled, or may be shipped unassembled with the following components to be installed:

- 1) Four load cells
- 2) Four foot assemblies for corners
- 3) Summing board and junction box
- 4) Cable ties and miscellaneous hardware.

Remove all packing material and inspect scale for visible damage caused during shipment. A 1/2" - 20 threaded hole will be found in two diagonally opposed corners of the deck. If the scale will have to be moved, install 1/2" eyebolts in two holes for lifting the scale with chains from a spreader bar.

Lift the scale only with a properly designed spreader bar as shown in Figure 2. Lifting force must be vertical to avoid bending or breaking the eye bolts.

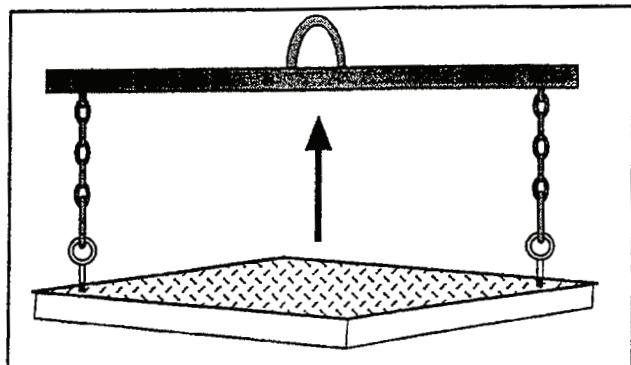


FIGURE 2: PROPER LIFTING TECHNIQUE

If the scale you purchased was shipped completely assembled, skip ahead to Section 2.4.3

2.4. Assembly

2.4.1. Installing Load Cells

Layout the four load cells near the corners where they are to be installed. Thread the cable from each load cell through the conduit tubing in the frame and into the junction box according to the wiring diagram in Figure 3. Note that in Figure 3, both the scale and the junction box are viewed from the bottom. To be certain of correct load cell/junction box terminal matching, see the numbers on the terminals inside the junction box and the corner numbering diagram in Figure 6 on Page 4.

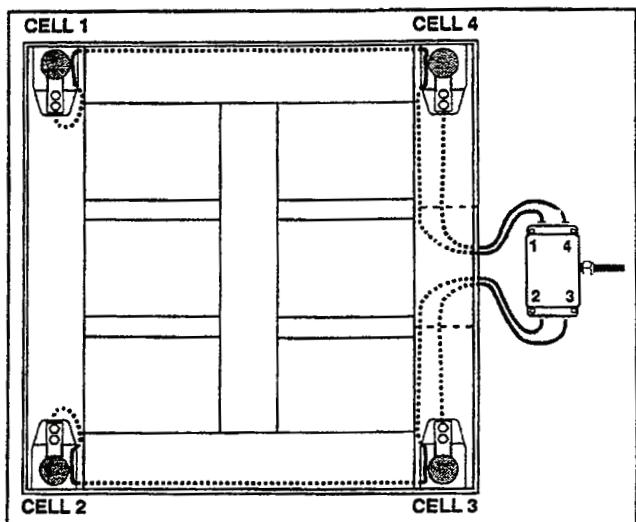


FIGURE 3: BOTTOM VIEW OF SCALE

Check that the threaded holes for the load cell screws are free of debris. Blow out holes with compressed air if necessary.

Position load cells with alignment arrows pointed up toward the deck and loosely install the Grade 5, 1/2" - 20NF hex head cap screws provided, as shown in Figure 4. Position the load cell to maintain the 1.625 dimension shown in Figure 5 if the base will be used with a pit frame or access ramp. With a torque wrench, tighten all bolts to 75 ft-lbs.

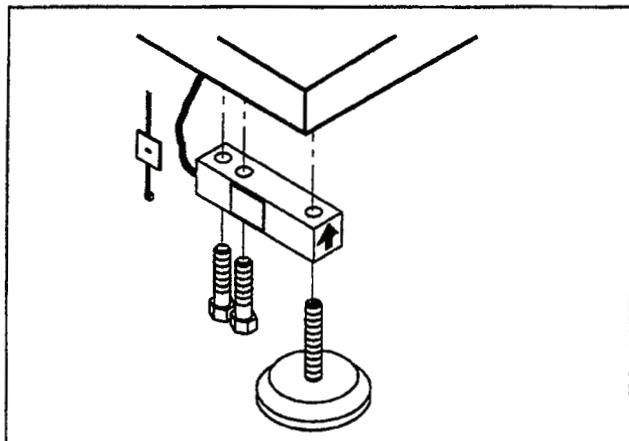


FIGURE 4: LOAD CELL ASSEMBLY

Route the load cell cables near each corner so that the cable will be free from possible contact with each foot. Hold the cable in position with the adhesive-backed cable ties supplied in the hardware kit.

Do not cut load cell cables. Coil extra cable before it enters the junction box, tie with cable ties, and insert the coils into the channel near the junction box.

After coiling excess cable, pass each individual end of load cell cable through its grommet in the junction box cover (or through cable fittings in the NEMA 4X junction box). Connect each load cell cable in the junction box as shown in Section 2.4.2, Table 1.

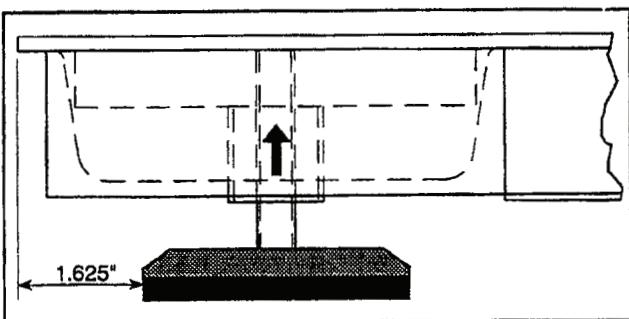


FIGURE 5: FOOT PAD -- SIDE VIEW

2.4.2. Load Cell Wiring to Junction Box

The four load cells are each wired to their respective terminals in the junction box according to the corner numbering system below, and according to the color coding in Table 1.

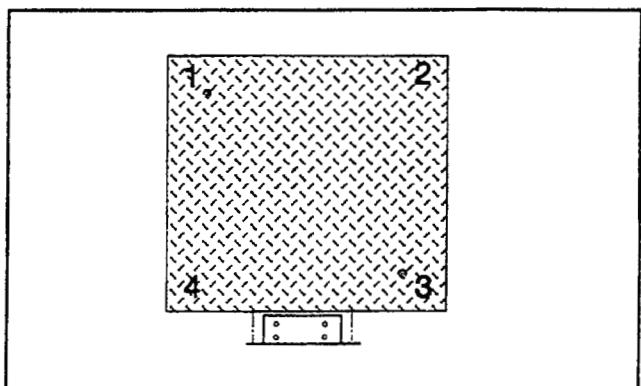


FIGURE 6: CORNER NUMBERING--TOP VIEW

CABLE COLOR CODE	J-BOX TERMINAL
Red	+Excitation
Black	- Excitation
Green	+Signal
White	- Signal
Bare or Clear	Shield

TABLE 1

If using the NEMA - 4X stainless steel model of junction box with strain relief hubs, pull excess cable out of the junction box enclosure and tighten the strain relief hubs with a wrench. To be watertight, the hubs must be tightened to the point where the rubber sleeving begins to protrude out of the hub. Finally, pull on each of the four cables to make sure they do not slip.

INSTALLATION NOTE:

Floor scales may build up a static electricity charge during weighing operations. This type of charge can travel through the load cell cable to the indicator. BLH highly recommends that all scales be adequately grounded so that static charges and transient electrical surges drain directly to ground.

2.4.3. Installing and Adjusting Feet

For load cell protecting during shipping, the scale feet may be shipped detached from the load cells. If so, the feet are securely anchored in the packing crate below the deck. Remove the four feet from the packing crate.

Screw one foot into each load cell and turn all the way in until the foot lightly touches either the load cell or the underside of the deck. Then unscrew each foot three complete turns.

Place a spirit level on the deck. Adjust any "high" corners not in contact with the floor by further unscrewing the feet on those corners until they just contact the floor surface. When all feet are in contact with the floor, check the deck with the spirit level to be sure it meets the level and height requirements in Section 2.2.

2.4.4. Mounting Plate Installation

For permanent applications, the scale should be secured to the floor to prevent sideways movement. Two mounting plates, with holes that slightly exceed the foot diameter, are available as an option for that purpose.

Lift the scale so that the feet are approximately 1" off the floor. Slide mounting plates under two diagonally opposed feet. Lower the scale back to the floor, and position the plates as in Figure 7 so that the boltdown holes are accessible from above.

Using the mounting plates as templates, drill pilot holes into the floor for suitable anchor bolts. Bolt the plates to the floor using 1/2" anchor bolts. Recheck foot adjustment and deck levelness after this operation.

For installations using access ramps, mounting plates are not necessary, as the ramps have built-in mounting plates to secure the scale feet.

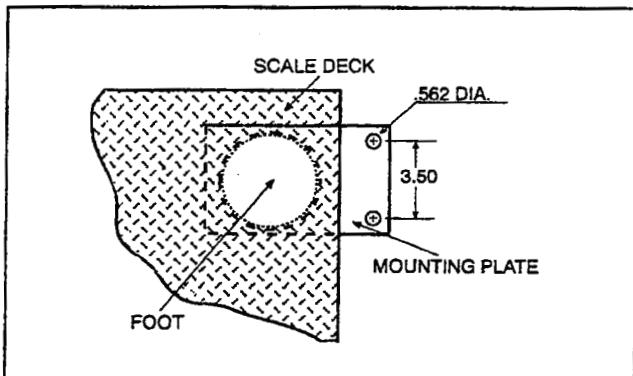


FIGURE 7: MOUNTING PLATE INSTALLATION

2.5. Electrical Interface to Indicator

Supplied with the Toughdeck Floor Scale is 20 feet of 6-wire cable to connect the scale to the weight indicator. If your scale uses the NEMA 4X junction box, push one end of this cable into the junction box tray through the strain relief bushing hole in the faceplate. Connect the wires to the INDICATOR terminal (Figure 8) according to Table 2. Pull out excess cable and tighten the strain relief bushing.

If using the standard junction box, put the cable through the hole in the junction box faceplate. Connect the wires to the INDICATOR terminal according to Table 2. Pull out excess cable. Put the strain relief bushing from the hardware kit onto the cable. With a large pliers, compress the bushing on the cable and push the bushing with cable into the hole provided in the junction box tray (see Figure 10).

CABLE COLOR CODE	JUNCTION BOX
Red	#7 (+Excitation)
Black	#5 (-Excitation)
Green	#3 (+Signal)
White	#2 (-Signal)
Bare	#1 (Shield)
Yellow	#6 (+Sense)
Blue	#4 (-Sense)

TABLE 2

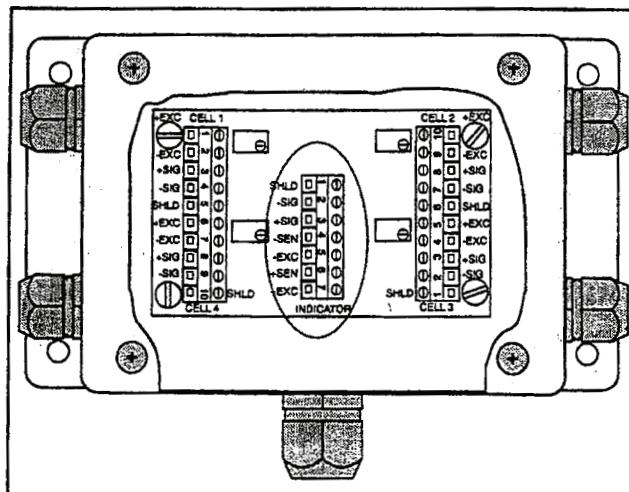


FIGURE 8: NEMA 4X J-BOX INDICATOR TERMINAL

The cable must be routed to the indicator in a manner that will protect the cable from damage. Two methods of cable protection in non-washdown applications are shown in Figure 9 on the following page. When planning cable routing with either of these two methods, leave a loose coil of excess cable under the scale to facilitate future lifting of the scale for servicing or cleaning.

NOTE: In washdown applications, we recommend removing the junction box entirely from the floor platform and mounting it externally on a wall or in some other protected location. Load cell cables from the scale platform to the junction box should be protected with conduit.

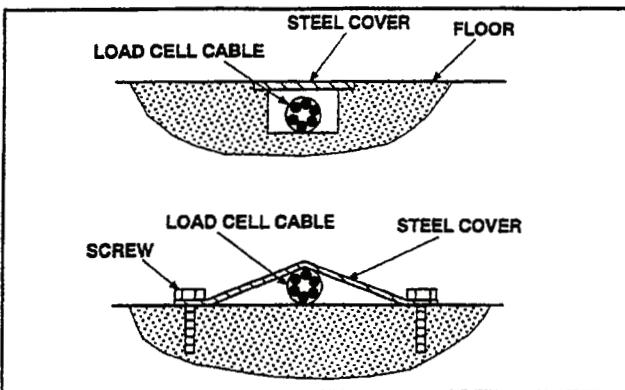


FIGURE 9: CABLE PROTECTION

When the interface cable is protected and in its final position, the connections may be completed at the indicator. Refer to the instruction manual for the indicator to determine its input wiring leads.

Trim corners, if necessary, per Section 3.2. Install the standard junction box onto the junction box tray with the four #4 x 5/8 self-tapping screws provided. The junction box must be positioned so that the indicator cable exits the junction box on the same side as the hole in the junction box tray as shown in Figure 10.

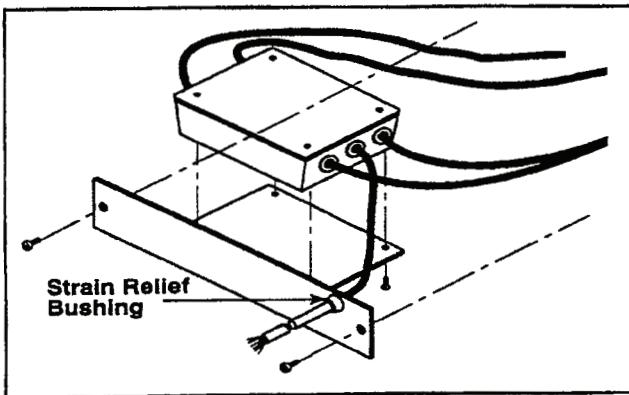


FIGURE 10: STANDARD JUNCTION BOX TRAY

If using the NEMA 4X junction box, screw the box onto the tray with the four flat head screws supplied so that the indicator cable strain relief hub lines up with the large hole in the center of the tray. Check all strain relief fittings for tightness, and screw on the junction box cover.

Slide the junction box tray into the cut-out and secure it with the two #10 x 3/8" screws provided.

2.6. Pit Installation *

Any of the Toughdeck models may be installed in a shallow pit using the optional Toughdeck Pit Frame. Height-adjustment holes may be ordered as an option. The following site considerations and pit frame drawings are meant only as a brief overview of the principles involved with mounting the scale in a floor-level pit. The pit is to be installed into a suitable poured-concrete foundation according to standard construction practices.

Site Considerations

Debris, floor sweepings, or material spills may accumulate in the pit and interfere with scale operation. Provision should be made for periodic cleaning of the pit. All Toughdeck models have 1/2" - 20 threaded holes for eyebolts so the scale can be easily lifted from the pit.

In washdown applications with stainless steel models, the pit floor must slope to a center drain with sump or sewer connections. A 1" in 12" slope is recommended.

Weight overloads, even momentary ones such as driving a loaded forklift over a scale corner, will damage load cells. Plan the pit location out of main traffic areas to prevent such accidental damaging overloads.

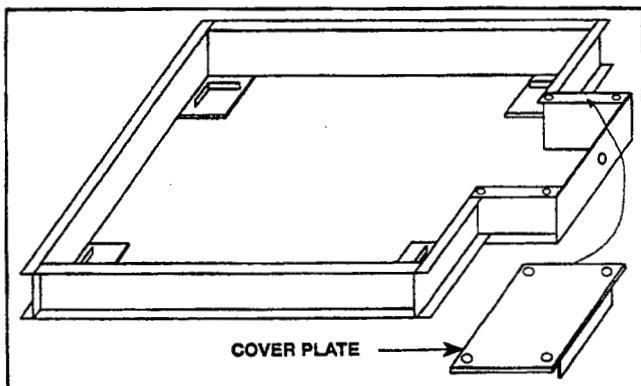


FIGURE 11: CHANNEL IRON PIT FRAME

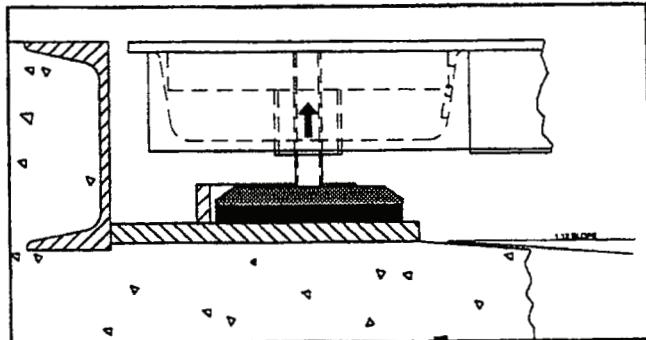


FIGURE 12: PIT SECTION

*See inside rear cover for pit frame concrete detail drawing

2.7 Access Ramps

Access ramps are available for Toughdeck Floor Scales in either 36" or 48" length, in either mild steel or stainless steel. Designed to bolt to the floor, the access ramps have built-in mounting plates which attach to the scale feet. When used with access ramps, side movement of the scale is automatically eliminated, and no other mounting plates are necessary.

Access ramps can only be attached to the scale on one of the two scale sides which are perpendicular to the longitudinal axis of the load cells. For example, the scale shown in Figure 13 below could have an access ramp on the left side as shown, and/or on the right side. The top and bottom sides, however, will not accept the ramp mounting plates.

Part numbers and ordering information for access ramps is found in Section 4.4 of this manual.

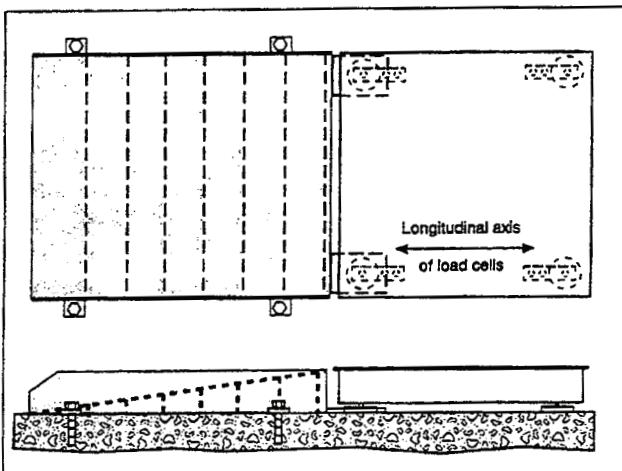


FIGURE 13: OPTIONAL ACCESS RAMPS

3. ADJUSTMENTS AND CALIBRATION

3.1. Mechanical Adjustments

To accommodate minor floor unevenness, scale feet can be adjusted for height. Adjustments allow total scale heights between 3.25" and 3.62". Adjust the feet by hand (lift the scale corner slightly with a pry bar) or use a 3/4" open-end wrench until all feet are contacting the floor equally. No jam nuts are supplied for locking the feet, as there is a slight decrease in accuracy when jam nuts are tightened. However, if you feel that your application requires jam nuts to secure the feet, they may be added.

The feet will have to be unscrewed beyond the 3.25" height to allow room for the jam nuts between the foot pads and the load cells.

Caution: Do not extend the feet beyond a maximum scale height of 3.62". The foot stem may be damaged by bending or stripping of threads if extended beyond that point.

When all height adjustments are completed, recheck levelness of the deck with a spirit level. The deck must be level within 1/4".

3.2. Corner Correction

All assembled Toughdeck scales are delivered with the junction box corner-trimmed. Corner trimming is only necessary after replacing a load cell.

To calibrate the scale, the output from each load cell must be matched by adjusting the signals with potentiometers at the junction box--a process known as trimming.

Remove the junction box cover and identify the correct load cell terminal corresponding to each corner. See Figure 6 on Page 4 for scale deck corner numbering.

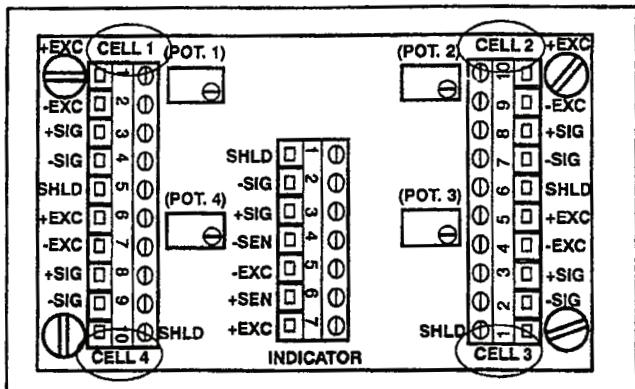


FIGURE 14: J-BOX CORNER IDENTIFICATION

The indicator must be connected and calibrated approximately, but it need not indicate exactly the correct weight value. A test weight will be required. Recommended test weights are 500 lb for the 2 K models, 1,250 lb for the 5K models, and 2,500 lb for the 10 K models.

Without any weight on the scale, zero the indicator. Then turn all four potentiometers to increase the reading until a clicking sound is heard from each potentiometer. This insures the maximum signal from each load cell.

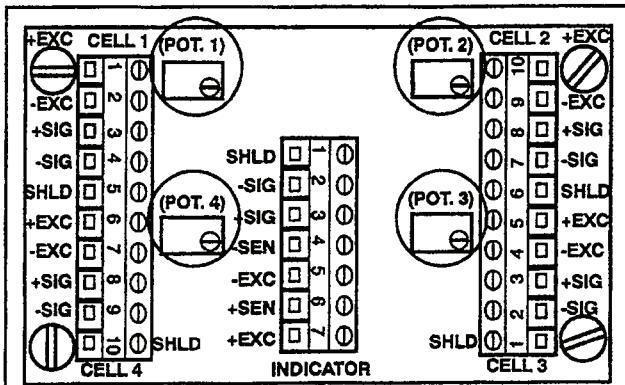


FIGURE 15: TRIM POTENTIOMETERS

With all potentiometers now at full signal, place the test weight over one corner and record the indicated weight. Repeat the process for each of the other three corners. The load cell which has the lowest corner reading will be your reference point and will not be trimmed.

Now place the test weight over one of the other three corners and adjust that cell's output with its potentiometer down to the reference cell output. Repeat this procedure with the other two high corners.

Adjustments are somewhat interactive, and adjusting the three higher outputs may affect the reference cell output, especially in smaller scale decks. Rezero the indicator and repeat the test until all corners are within $\pm .1\%$ of the test weight being used.

3.3. Calibration Procedure

Refer to the operator's manual for the indicator to determine correct calibration procedure.

It is recommended that the scale be "exercised" before calibration to be certain that everything is seated. Load the scale to near capacity 2 or 3 times.

Then, with no load on the scale, place the indicator in its calibration mode and perform a zero calibration. Now place test weights on the platform equal to 70% - 80% of the scale's capacity. If several weights are used, they should be evenly distributed around the platform. Perform a span calibration.

Remove the test weights and check the zero reading. If necessary, repeat the calibration process.

4. SERVICE INFORMATION

4.1. Troubleshooting Guide

A. System does not operate--no display.

1. Power disconnected: *Check and reconnect*
2. Indicator fuse blown. *Replace fuse. Check for cause.*
3. Interface cable cut or disconnected: *Repair*
4. Signal leads incorrectly installed at indicator: *Install according to indicator installation manual*

B. Display stays at zero.

1. Indicator faulty: *Service indicator*
2. Load cell connections faulty: *Check cable connections in junction box and at indicator*

C. Erratic weights.

1. Vibration near scale: *Remove source of vibration or move scale.*
2. Platform not level to within 1/4": *Level scale by adjusting feet or shimming if necessary.*
3. Load cell or cable water damage: *Replace.*
4. Debris under load cells or platform: *Clean.*
5. Indicator faulty: *Use simulator to test indicator for stability. Service indicator.*

D. Consistently high or low weights.

1. Indicator not properly adjusted to zero: *Zero the indicator according to operator's manual.*
2. Platform binding: *Obtain adequate clearance for free platform movement.*
3. Indicator not calibrated: *Calibrate according to indicator manual and Section 3.3*
4. Load cells faulty: *Test and replace load cells if necessary. For load cell testing procedure, see the Tech Notes section in RLWS, "Load Cell Product Selection Guide".*
5. Feet touching deck underside: *Adjust feet downward to provide clearance*

4.2. Periodic Maintenance

The space between the platform side and pit frame, and the surface beneath the platform must be periodically cleaned to prevent debris build up. More frequent cleaning of these areas is necessary with scales mounted in pits.

Maintenance Notes

Do not attempt to use scales with load cells that are not hermetically sealed in washdown applications. A common failure in non-hermetically-sealed load cells is water damage.

Use care with high pressure steam washdowns for hermetically-sealed load cells. The steam may not damage the load cells, but the elevated temperatures may cause incorrect readings until the unit cools to room temperature.

4.3. Load Cell Replacement

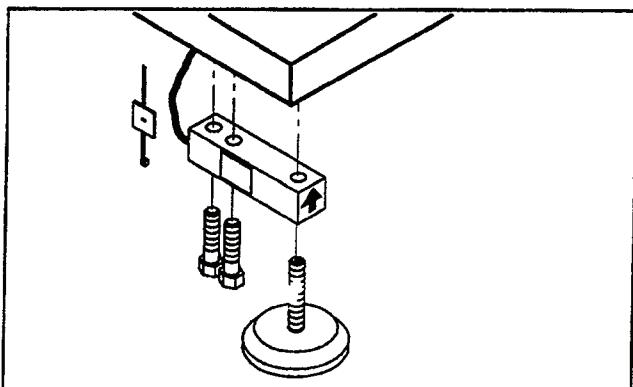


FIGURE 16: LOAD CELL REPLACEMENT

Replacement load cells may be ordered according to the part numbers in the chart on the following page.

Lift scale with chains and proper spreader bar and remove defective load cell. Remove foot from load cell. Disconnect load cell cable from junction box and cut cable ties. When the cable is freed, pull it out of the scale frame channels.

Install new load cell by following directions in Sections 2.4.1 and 2.4.2.

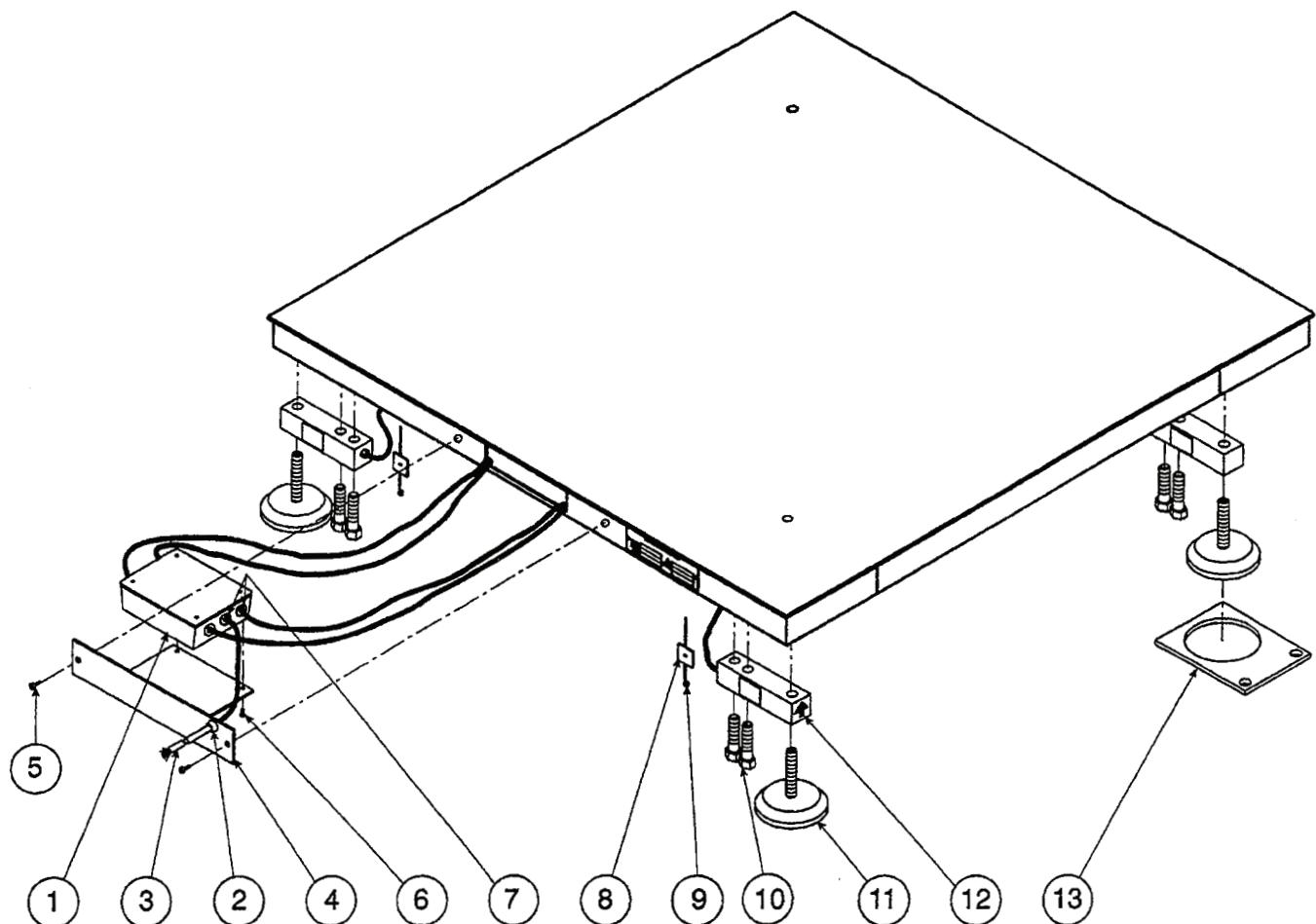
Corner correction trimming and calibration will be necessary after load cell replacement. Follow instructions in Section 3.2 and Section 3.3.

4.4 Replacement Parts List and Accessories

SIZE	CAP.	REPLACEMENT LOAD CELL PART NUMBERS*				ACCESSORIES*		
			HP	SS		PIT FRAME	36" RAMP	48" RAMP
30 X 30	2K		545.0000			268.0061	268.0083	268.0093
30 X 30	2K			202.0127		268.0062	268.0084	268.0094
36 X 36	2K		545.0000			268.0063	268.0085	268.0095
36 X 36	2K			202.0127		268.0064	268.0086	268.0096
48 X 48	5K		545.0005			268.0065	268.0087	268.0097
48 X 48	5K			202.0129		268.0066	268.0088	268.0098
48 X 48	10K		545.0010			268.0065	268.0087	268.0097
48 X 48	10K			202.0131		268.0066	268.0088	268.0098
48 X 60	5K		545.0005			268.0069	268.0087	268.0097
48 X 60	5K			202.0129		268.0070	268.0088	268.0098
48 X 60	10K		545.0010			268.0069	268.0087	268.0097
48 X 60	10K			202.0131		268.0070	268.0088	268.0098
48 X 72	5K		545.0005			268.0071	268.0087	268.0097
48 X 72	5K			202.0129		268.0072	268.0088	268.0098
48 X 72	10K		545.0010			268.0071	268.0087	268.0097
48 X 72	10K			202.0131		268.0072	268.0088	268.0098
60 X 60	5K		545.0005			268.0067	268.0089	268.0099
60 X 60	5K			202.0129		267.0068	268.0090	268.0100
60 X 60	10K		545.0010			268.0067	268.0089	268.0099
60 X 60	10K			202.0131		268.0069	268.0090	268.0100
60 X 72	5K		545.0005			268.0073	268.0089	268.0099
60 X 72	5K			202.0129		268.0074	268.0090	268.0100
60 X 72	10K		545.0010			268.0073	268.0089	268.0099
60 X 72	10K			202.0131		268.0074	268.0090	268.0100
60 X 84	5K		545.0005			268.0075	268.0089	268.0099
60 X 84	5K			202.0129		268.0076	268.0090	268.0100
60 X 84	10K		545.0010			268.0075	268.0089	268.0099
60 X 84	10K			202.0131		268.0076	268.0090	268.0100

* Items in shaded boxes are stainless steel models.

4.4 Replacement Parts List and Accessories (continued)



Ref.	Description	Part Number
1	Junction Box, NEMA 4X -- 4 Channel, Signal Trim (all Models)	442.0008
2	Strain Relief Bushing (MS Models)	120.2053
3	Cable, 6 Wire, Deck to Indicator	120.1023
4	Junction Box Tray (Mild Steel (MS) Models)	269.0123
4	Junction Box Tray (Stainless Steel (SS) Models)	269.0124
5	Junction Box Tray Screw (MS Models)	102.2022
5	Junction Box Tray Screw (SS Models)	102.2023
6	Junction Box Enclosure Screw (MS Models)	103.0216
6	Junction Box Enclosure Screw (SS Models)	103.0605
7	Rubber Grommet, Load Cell Cable (MS Models)	119.5063
	Rubber Grommet, Deck to Indicator cable	119.5042
8	Cable Tie Mount, 1" Square	120.2034
9	Cable Ties, 3"	120.2007
10	Load Cell Screw (MS Models)	103.2275
10	Load Cell Screw (SS Models)	103.2279
11	Foot Assembly (MS Models)	268.0053
11	Foot Assembly (SS Models)	268.0060
12	Load Cell	See Page 10
OPTIONAL		
13	Mounting Plate, MS Models, set of two plates	268.0081
13	Mounting Plate, SS Models, set of two plates	268.0082

4.5. WARRANTY INFORMATION and FIELD ENGINEERING

BLH warrants the products covered hereby to be free from defects in material and workmanship. BLH's liability under this guarantee shall be limited to repairing or furnishing parts to replace, f.o.b. point of manufacture, any parts which, within one (1) year from date of shipment, of said product(s) from BLH's plant, fail because of defective workmanship or material performed or furnished by BLH. As a condition hereof, such defects must be brought to BLH's attention for verification when first discovered, and the material or parts alleged to be defective shall be returned to BLH if requested. BLH shall not be liable for transportation or installation charges, for expenses of Buyer for repairs or replacements or for any damages from delay or loss of use for parts to be replaced. BLH may use improved designs of the parts to be replaced. This guarantee shall not apply to any material which shall have been repaired or altered outside of BLH's judgement, to affect its strength, performance, or reliability, or to any defect due in any part to misuse, negligence, or accident or any cause other than normal and reasonable use, nor shall it apply beyond their normal span of life to any materials whose normal span of life is shorter than the applicable period stated herein. In consideration of the forgoing guarantees, all implied warranties are waived by the buyer, if not manufactured by BLH. If any modifications or repairs are made to this equipment without prior factory approval, the above warranty can become null and void.

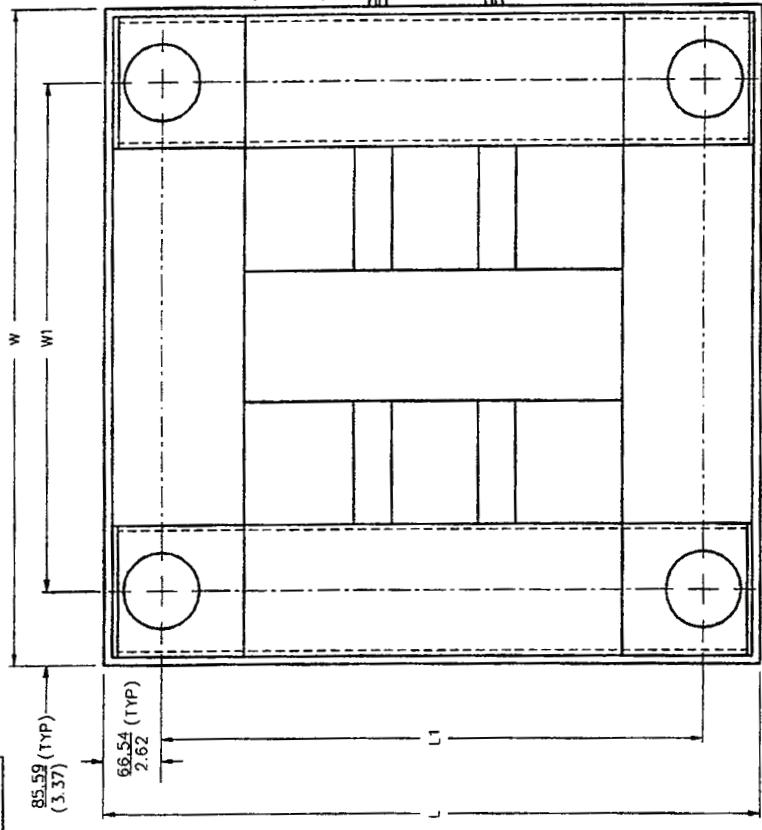
FIELD ENGINEERING

The field service department at BLH is the most important tool to assure the best performance from your application. The expertise and understanding of BLH's Field Engineers can solve even the most perplexing installation problem. Precise calibration and start-up procedures, performed by a qualified, experienced field engineer, assures not only the reliability of BLH components, but the integrity of the entire weigh system.

Factory: (Main Number) (781) 821-2000

First Used On: FIRST DOB NO.: C.D. FILE NAME:
466844/7376-1 PHL/466844

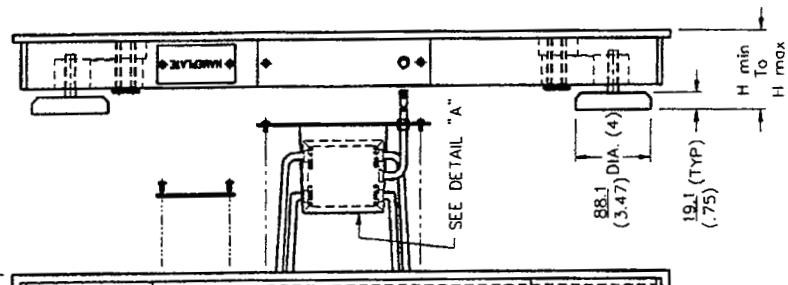
SHEET 1 OF 1 -3
No. D/C. No. Name Description 466844
PCO



D

C

B



SEE DETAIL "A"

DETAIL A

GENERAL NOTES

1. DIMENSIONS APPLY TO TOUGHDECKS
IN MILD STEEL/STAINLESS STEEL/
HOSTILE ENVIRONMENTS IN CAPACITIES
2K/5K/10K

DIMENSIONS (INCH)					
CAPACITY	L	L1	W	W1	H MIN / MAX
2K	30.00	24.75	30.00	23.25	3.62
2K	36.00	30.75	36.00	29.25	3.62
Similar to the BL WSS 446.0230. BLH 466844-4. CODE IDENT: 03090 BL TECHNOLOGIES INC. © 1993. All rights reserved. No part of this document may be reproduced or transmitted in whole or in part without written permission of the author or BLH. BLH ELECTRONICS, INC. BLH. ALL INFORMATION CONTAINED IS UNPUBLISHED PROPERTY OF BLH INC. THE INFORMATION CONTAINED HEREIN IS PROVIDED BY BLH INC. AS AN OUTLINE AND IS NOT A CONTRACTUAL DOCUMENT. IT IS PROVIDED FOR INFORMATION PURPOSES ONLY AND IS SUBJECT TO CHANGE. BLH INC. IS NOT RESPONSIBLE FOR THE USE OF THIS INFORMATION AND DISCLAIMS ALL WARRANTIES WITH REGARD TO THIS INFORMATION, WHETHER EXPRESSED OR IMPLIED. BLH INC. HAS MADE A GOOD FAIR EFFORT TO ENSURE THAT THE INFORMATION PROVIDED IS CORRECT AND ACCURATE.					
2K/5K/10K	48.00	42.75	48.00	41.25	3.62
5K/10K	60.00	54.75	48.00	41.25	3.62
5K/10K	72.00	66.75	48.00	41.25	3.62
5K/10K	60.00	54.75	60.00	53.25	3.62
5K/10K	72.00	66.75	60.00	53.25	3.62
5K/10K	84.00	78.75	60.00	53.25	3.62

A
C
A

TOUGHDECK PLATFORMS OUTLINE DIMENSIONS			
466844-3	PHL	BLH ELECTRONICS, INC.	BLH

D

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1

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3

4

1

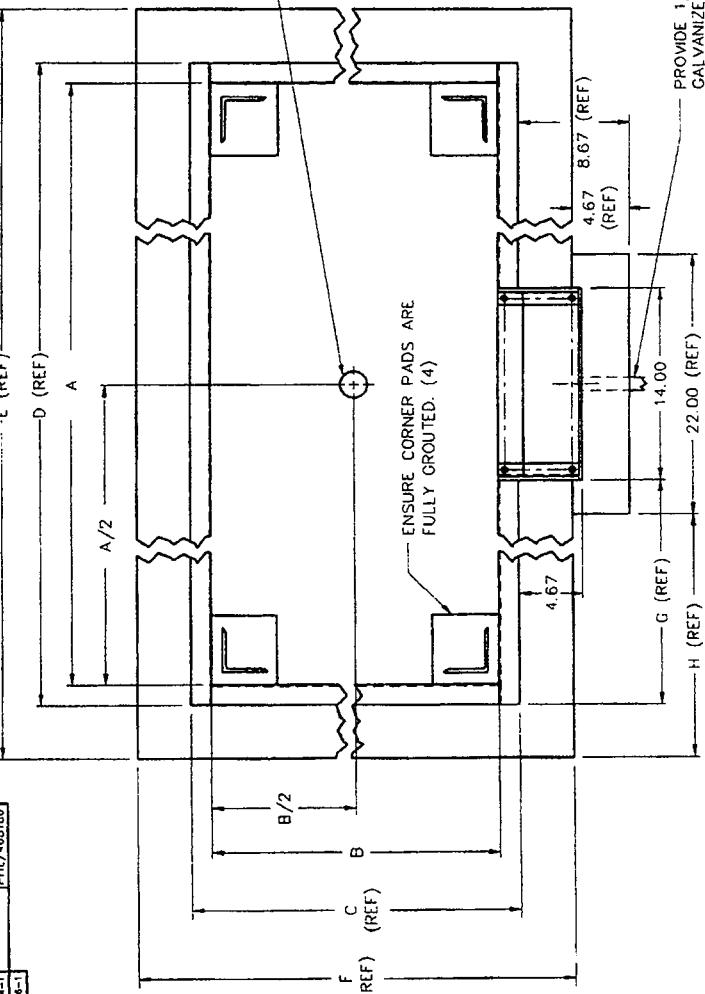
D

LAST USED ON	FIRST JOB NO.	CARD FILE NAME	468186
468023 7/12-1		PHL/468186	
468377 7/14-1			

D

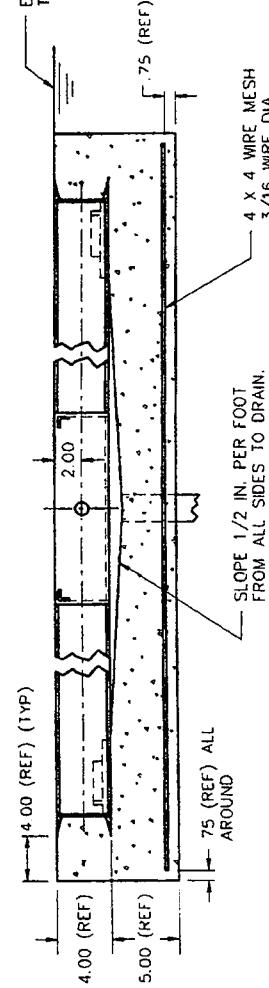
C

B



NOTES:

1. USE CONCRETE OF MINIMUM YIELD STRENGTH 5000 PSI OR 6-BAG MIX.
2. ALLOW 7 DAYS TO CURE. WET CONCRETE PERIODICALLY DURING THIS TIME.
3. DIMENSIONS SHOWN ASSUME FIRM, STABLE CONDITIONS. WHEN SOIL CONDITIONS ARE NOT ADEQUATE, PLACE FOUNDATION AT SUFFICIENT DEPTH.
4. IN WET OR WASHDOWN APPLICATIONS WE RECOMMEND THE USE OF HERMETICALLY SEALED LOAD CELLS, AND THAT THE JUNCTION BOX BE MOUNTED REMOTELY IN A DRY LOCATION.
5. WIRE MESH TO HAVE MINIMUM .75 COVER, BOTTOM AND SIDES.

EXISTING SHOP FLOOR
TYP. ALL AROUND

TABULATION							
SCALE SIZE	A	B	C	D	E	F	G
2.5 x 2.5	30.75	30.75	33.92	33.92	41.92	41.92	9.96
3 x 3	36.75	36.75	39.92	39.92	47.92	47.92	12.96
4 x 4	48.75	48.75	51.92	51.92	59.92	59.92	18.96
5 x 5	60.75	60.75	63.92	63.92	71.92	71.92	24.96
4 x 5	60.75	48.75	51.92	63.92	59.92	59.92	24.96
4 x 6	72.75	48.75	51.92	75.92	83.92	59.92	30.96
5 x 6	72.75	60.75	63.92	75.92	83.92	71.92	30.96
5 x 7	84.75	60.75	63.92	87.92	95.92	71.92	36.96

A

similar to two RLW's 446.0052 / BLH # 468185-4 REV. B A RELEASED W/ECN B ECN 15021 REDRAW TO EX0 WO CHANGES P&C BLH ELECTRONICS, INC. Date: 10/17/96 By: [Signature]	CODE IDENT 03089 Proprietary - The designs and data contained herein are the property of BLH Electronics, Inc. and shall not be disclosed to any third party without written consent of BLH Electronics, Inc. Date: 10/17/96 By: [Signature]
4.00 (REF)	4.00 (REF) (1typ)
5.00 (REF)	5.00 (REF)
75 (REF) ALL AROUND	75 (REF) ALL AROUND
7.75 (REF)	7.75 (REF)

A

TOUCHDECK PIT FRAME
CONCRETE DETAILS
REF. 468186-3

1

2

3

4

BLH NOBEL
A **VPG** Brand
blhnobel.com