LOUISA COUNTY

Courthouse Coal Bin Repairs

Seeking Bids to Refurbish Coal Bin Roof **Bids Due: 4:00 PM October 19, 2026**

Louisa County plans to repair the roof of the existing coal bin located near the west entrance of the Louisa County Courthouse, 117 South Main Street, Wapello, Iowa. Proposed repairs are identified in the Engineering Plan created by Richard Keith, P.E., which are attached to this document.

Work to include:

1. All materials, equipment, and labor to construct the repairs identified on the Engineering Plan
    a. Installation of 3 steel beams with mounting brackets and blocking as shown
    b. Removal of 3 metal coal chute lids sandblast area and apply coating
    c. Removal of access hatch and replacement with concrete field cast lid
    d. Application of specified coating, gap filler and other materials to provide a water tight finish

Work by Others:

1. Louisa County will remove all furnishings and tools located within basement under the roof to allow space for repairs to be completed

Bidding Assumptions:

1. Project will be bid lump sum to include all work identified in Engineering Plan
2. Proposal shall include all ancillary work such as site preparation, shoring, falsework, cleanup, etc to complete the project
3. Contractor shall make independent measurements and field verify all dimensions shown on Engineering Plan
4. Bidders shall conduct a site visit with county officials and become familiar with existing conditions prior to bidding
5. Materials shall strictly follow specifications identified in Engineering Plan
6. Contractor shall provide proof of insurance and $5,000 bid bond

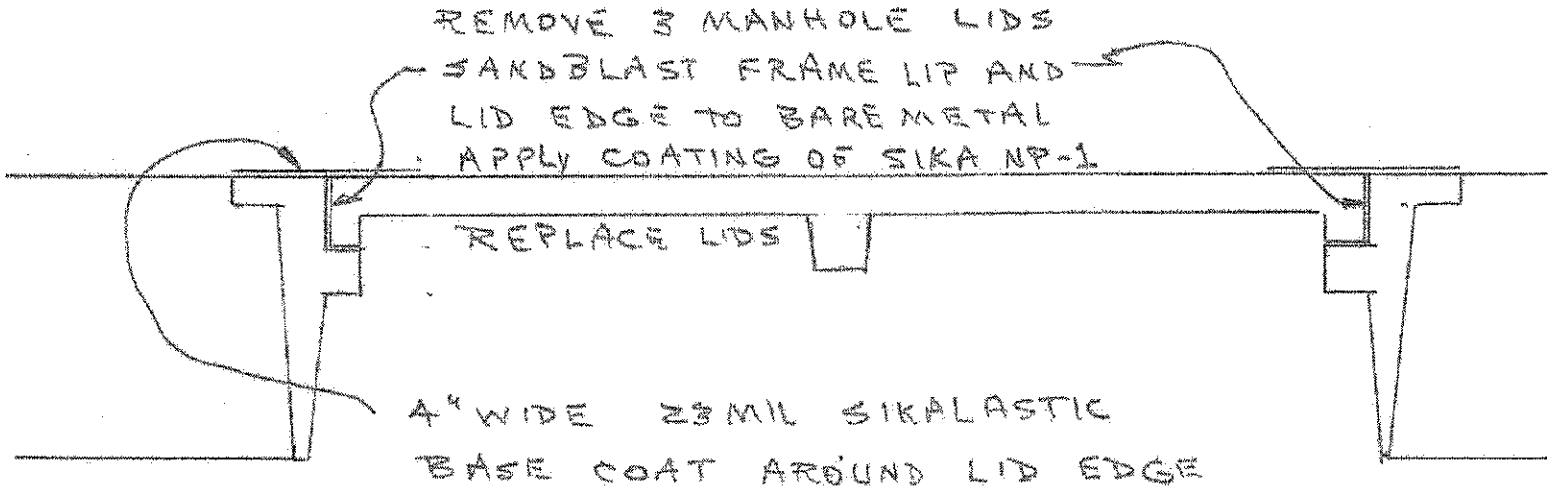
Company Name: _____

Company Contact: _____

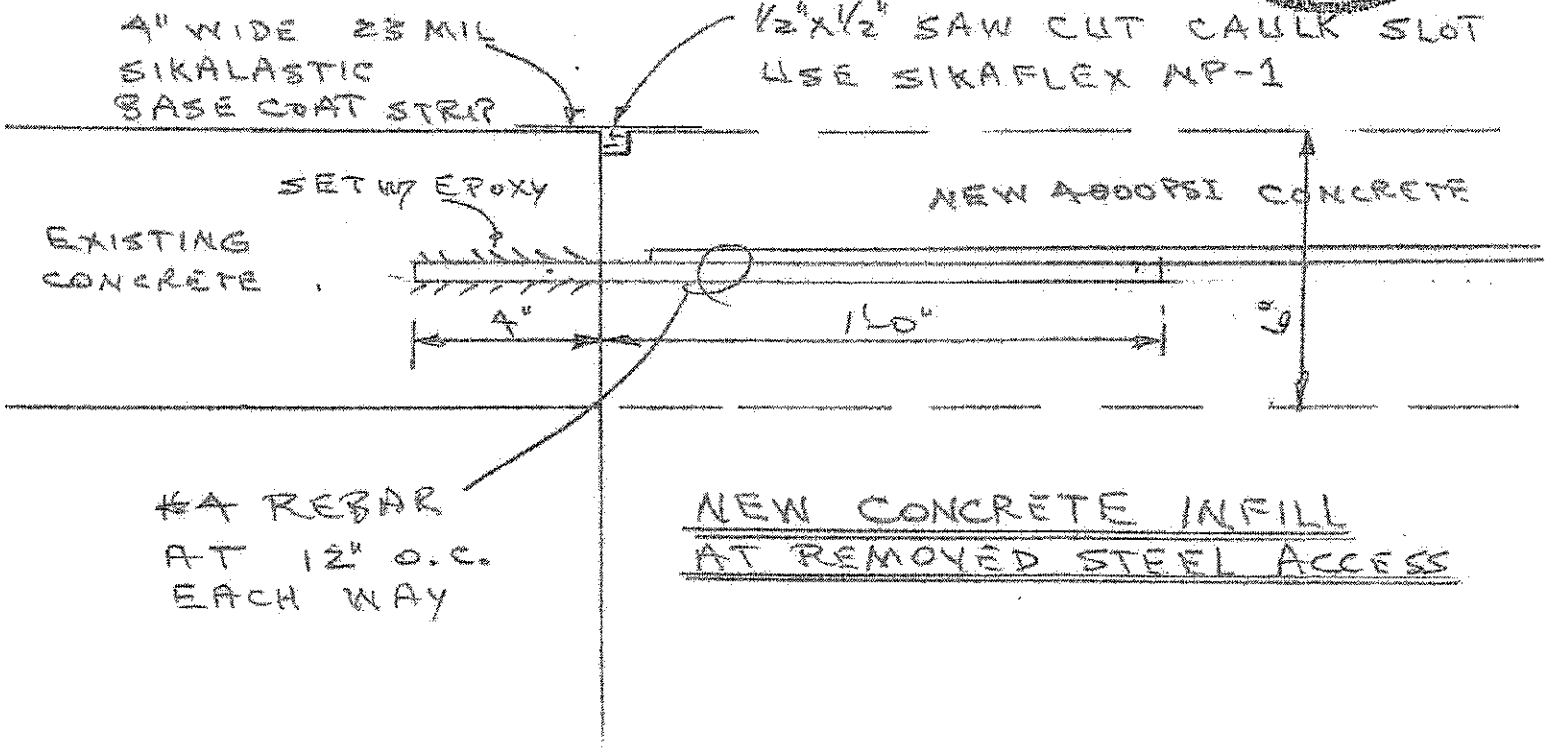
Pre Bid Visit Date: _____

Proposal Amount: _____

* Drop bids off at Louisa County Auditor's office by 4:00 pm 10/19/2026

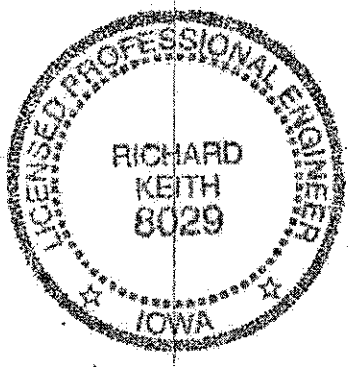






NEW CONCRETE INFILL
AT REMOVED STEEL ACCESS

NORTH

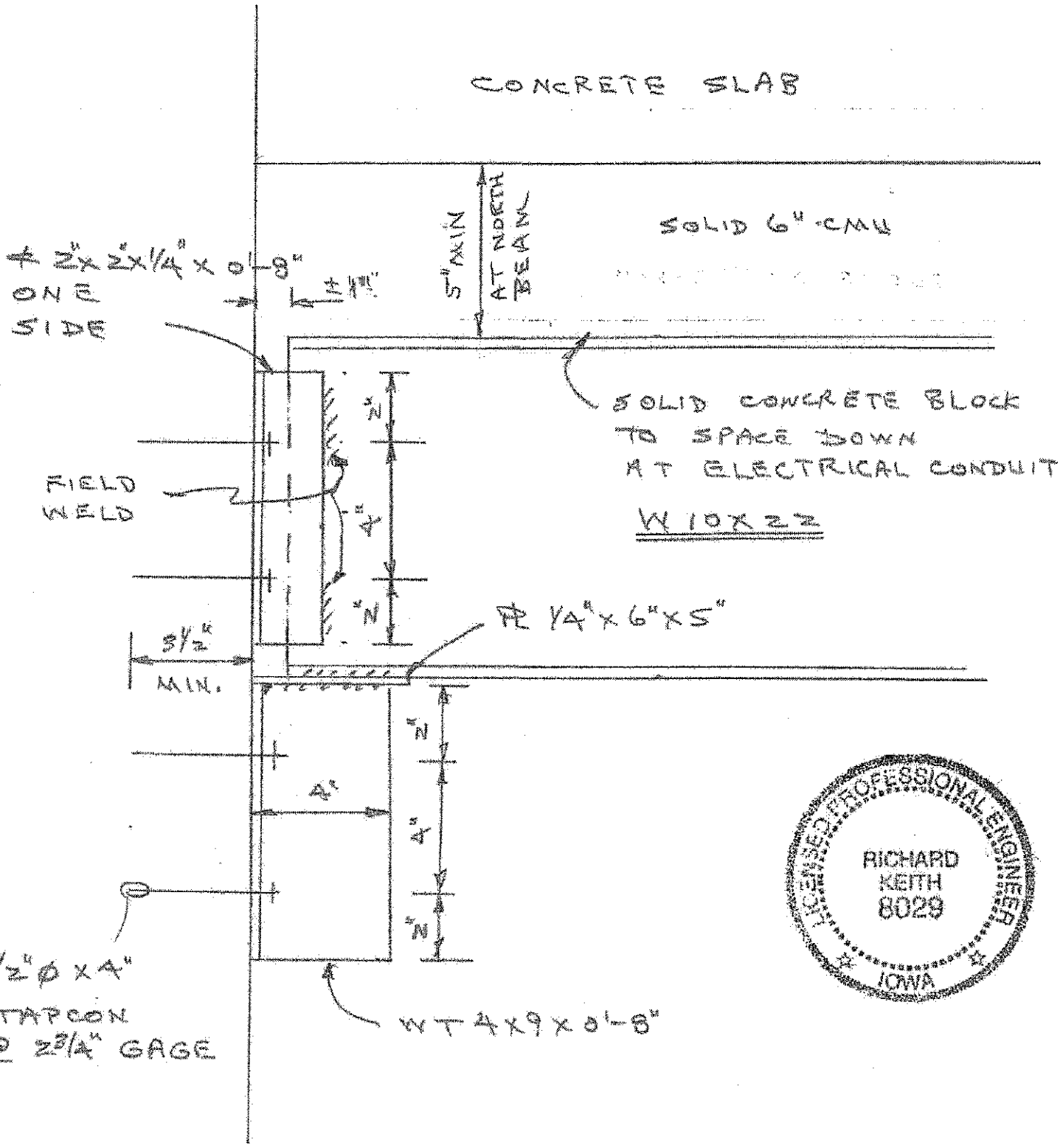


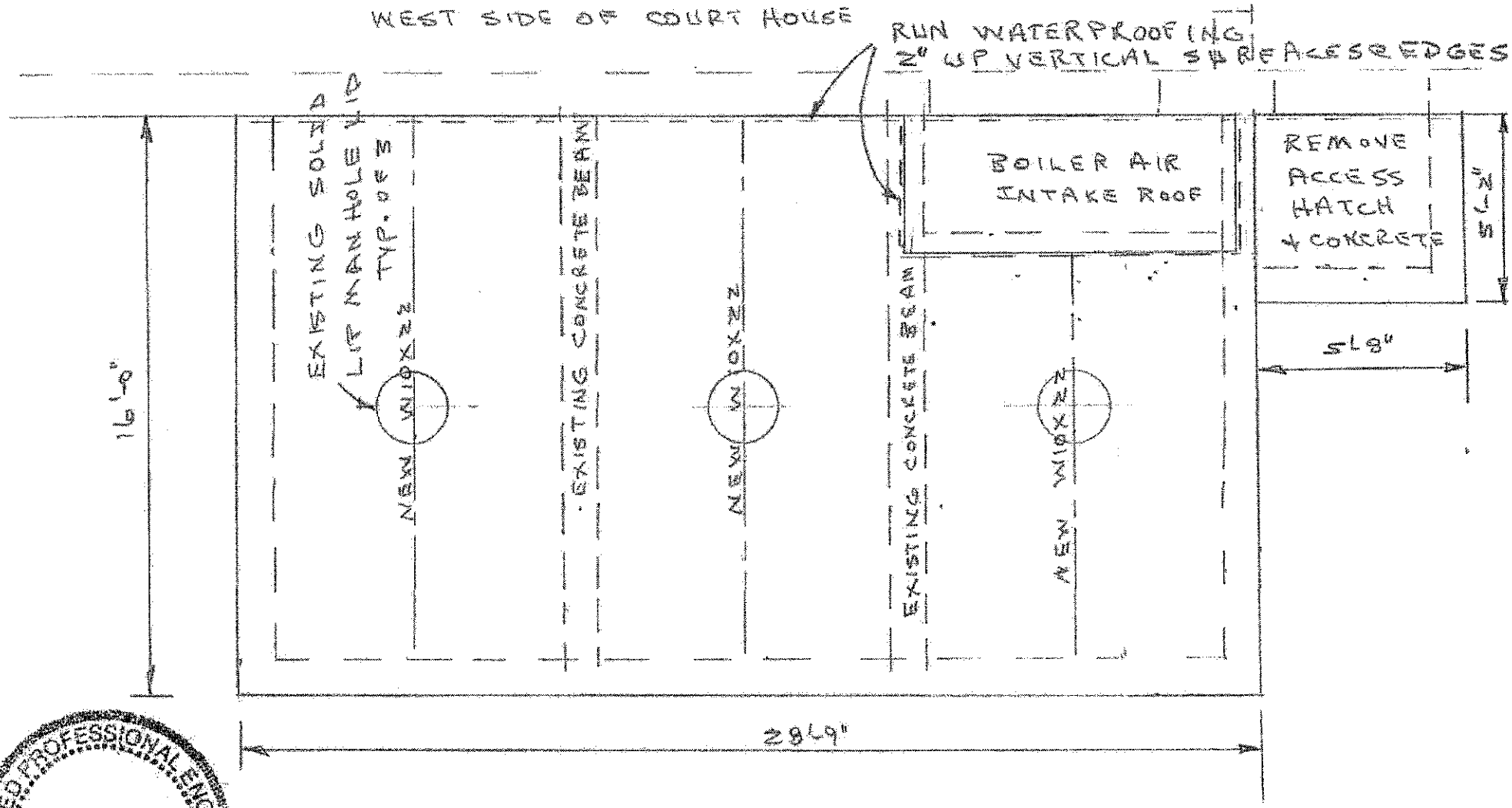
EXTERIOR
WALL
FOUNDATION

REMOVE STEEL
ACCESS DOOR
+ FRAME

BOILER
FRESH
AIR
INTAKE

SAW CUT
PERIMETER
OF RUSTED
STEEL
FRAME


CONCRETE SLAB
SOLID 6" CMU
5" MIN AT NORTH BEAM
± 2"x 2"x 1/4" x 0'-8"
ONE SIDE
± 1"
SOLID CONCRETE BLOCK TO SPACE DOWN AT ELECTRICAL CONDUIT
W 10X22
FIELD WELD
"N
"A
"N
PL 1/4" x 6" x 5"
5 1/2" MIN.
"N
A"
"A
"N
1/2" ø x 4" TAPCON @ 2 3/4" GAGE
WT 4X9 X 0'-8"
LICENSED PROFESSIONAL ENGINEER
RICHARD KEITH
8029
IOWA



LICENSED PROFESSIONAL ENGINEER
RICHARD KEITH
8029
IOWA

COAL BIN ROOF

INSTALL 3 STEEL BEAMS TO SUPPORT SPAWLING CONCRETE SLABS. REMOVE EXISTING SURFACE COATING / MASTIC SAND BLAST CONCRETE TO CSP-3 SURFACE TEXTURE, FILL SURFACE SPAWLS AT REBAR WITH SIKADUR CRACK FIX HI-MOD EPOXY, 3 PLACES, APPLY SIKALASTIC MT PRIMER ON ALL HORIZONTAL SURFACES, APPLY SIKALASTIC-726 BALCONY ONE SHOT TO ALL PRIMED SURFACES - INCLUDING 2" UP AT ALL VERTICAL EDGES

LOUISA COUNTY

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2. Proposal shall include all ancillary work such as site preparation, shoring, falsework, cleanup, etc to complete the project
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5. Materials shall strictly follow specifications identified in Engineering Plan
6. Contractor shall provide proof of insurance and $5,000 bid bond

Company Name: _____

Company Contact: _____

Pre Bid Visit Date: _____

Proposal Amount: _____

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PRODUCT DATA SHEET

Sikadur® Crack Fix

Low-viscosity, high-strength epoxy sealing system

PRODUCT DESCRIPTION

Sikadur® Crack Fix is a 2-component, 100 % solids, moisture-tolerant, low-viscosity, high-strength, multi-purpose, epoxy resin adhesive. It conforms to the current ASTM C-881 and AASHTO M-235 specifications.

USES

- Gravity-feed of cracks in horizontal concrete and masonry
- Low pressure injection of cracks in structural concrete, masonry, wood, etc.

CHARACTERISTICS / ADVANTAGES

- Formulation identical to popular, high strength adhesive Sikadur® 35, Hi-Mod LV
- Five times stronger than concrete
- Convenient easy to use, single tube cartridge - fits standard caulk guns
- Deep, penetrating and tenacious bonding of cracks in structural concrete
- No mess - self-mixing

PRODUCT INFORMATION

Packaging	Carton contains 12 single caulk tube-style cartridges Each cartridge packaged with 2 static mixers and 2 flow restrictors
Color	Clear, amber
Shelf Life	24 months in original, unopened containers
Storage Conditions	Store dry at 40 to 95 °F (4 to 35 °C). Condition material to 60 to 75°F (15 to 24 °C) before using.
Viscosity	Approximately 375 cps.

TECHNICAL INFORMATION

Compressive Strength		**40 °F (4 °C)**	**73 °F (23 °C)**	**90 °F (32 °C)**	(ASTM D-695) Tested at: 73 °F (23 °C) 50 % R.H.
	4 hour	-	-	-	
	8 hour	-	180 psi (1.2 MPa)	3,200 psi (22.1 MPa)	
	16 hour	-	4,500 psi (31.1 MPa)	6,300 psi (43.5 MPa)	
	1 day	-	6,000 psi (41.4 MPa)	9,100 psi (62.8 MPa)	
	3 day	4,000 psi (27.6 MPa)	9,000 psi (62.1 MPa)	10,500 psi (72.5 MPa)	
	7 day	6,800 psi (46.9 MPa)	11,000 psi (75.9 MPa)	10,500 psi (72.5 MPa)	
	14 day	10,300 psi (71.1 MPa)	12,000 psi (82.8 MPa)	10,500 psi (72.5 MPa)	
	28 day	12,400 psi (85.6 MPa)	13,000 psi (89.7 MPa)	10,500 psi (72.5 MPa)	
	Material cured and tested at the temperatures indicated and 50 % R.H.				
Modulus of Elasticity in Compression	2.9 X 10^5 psi (2,000 MPa) (7 days at 73 °F (23 °C) and 50 % R.H.)				(ASTM D-695) Tested at: 73 °F (23 °C) 50 % R.H.
Flexural Strength	11,000 psi (75.9 MPa) 7 days				(ASTM D-790) Tested at: 73 °F (23 °C) 50 % R.H.
Modulus of Elasticity in Flexure	3.1 x 10^6 psi (2,139 MPa) 7 days				(ASTM D-790) Tested at: 73 °F (23 °C) 50 % R.H.
Tensile Strength	7,000 psi (48.3 MPa) 7 days				(ASTM D-638) Tested at: 73 °F (23 °C) 50 % R.H.
	Hardened concrete to hardened concreted				
	2 day (moist cure)		Bond Strength 1,300 psi (9.0 MPa)		(ASTM C-882) Tested at: 73 °F (23 °C) 50 % R.H.
	14 day (moist cure)		Bond Strength 1,350 psi (9.3 MPa)		
Elongation at Break	6.9 % (7 days)				(ASTM D-638) Tested at: 73 °F (23 °C) 50 % R.H.
Shear Strength	4,800 psi (33.1 MPa) 14 days				(ASTM D-732) Tested at: 73 °F (23 °C) 50 % R.H.
Heat deflection temperature	121 °F (49 °C) (7 day [fiber stress loading = 264 psi (1.8 MPa)]				(ASTM D-648) Tested at: 73 °F (23 °C) 50 % R.H.

Water Absorption	0.27 % (7 days)	(ASTM D-570) Tested at: 73 °F (23 °C) 50 % R.H.

APPLICATION INFORMATION

Mixing Ratio	Component A : Component B = 2:1 by volume			
Coverage	1 cartridge yields approximately 10.7–11.0 cu. in. (175–180 ml) of usable epoxy resin.			
Pot Life	Approximately 25 minutes (60 gram mass)			
Cure Time	**Tack Free Time**	**40 °F (4 °C)***	**73 °F (23 °C)***	**90 °F (32 °C)***
	(3–5 mils)	14–16 hours	3–3.5 hours	1.5–2 hours

* Material cured and tested at the temperatures indicated.

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

LIMITATIONS

- Minimum substrate and ambient temperature 40 °F (4 °C). Maximum substrate temperature is 95 °F (35 °C).
- Minimum age of concrete must be 21–28 days, depending on curing and drying conditions.
- Do not apply over wet, glistening surface.
- Not for injection of cracks subjected to osmotic or hydrostatic pressure during application.
- Do not inject cracks greater than 1/4 in. (6.3 mm) Consult Technical Service at 1-800-933-SIKA.
- Not an aesthetic product. Color may alter due to variations in lighting and/or UV exposure.

ENVIRONMENTAL, HEALTH AND SAFETY

For further information and advice regarding transportation, handling, storage and disposal of chemical products, user should refer to the actual Safety Data Sheets containing physical, environmental, toxicological and other safety related data. User must read the current actual Safety Data Sheets before using any products. In case of an emergency, call CHEMTREC at 1-800-424-9300, International 703-527-3887.

APPLICATION INSTRUCTIONS

SUBSTRATE PREPARATION

Surface must be clean, dry and sound. Remove dust from crack by brushing or by blowing clean with oil free compressed air.

MIXING

Cartridge Set-Up: Remove twist-cap and port plug from top of cartridge. Press one of enclosed "flow restrictors" into opening. Insert one of the enclosed static mixers through twist-cap and attach to threading. Insert Sikadur® Crack Fix cartridge into good quality caulking gun. Point upward during initial squeeze of gun's trigger to purge any entrapped air. As mixed resin approaches end of mixer, discard rest of initial squeeze and portion of next squeeze to ensure uniform blend of adhesive components.

APPLICATION METHOD / TOOLS

To gravity feed cracks - Blow vee-notched crack clean with oil-free compressed air. Dispense Sikadur® Crack Fix slowly into vee-notched crack. Continue placement until completely filled. Seal underside of slab prior to filling if cracks reflect through.
To inject cracks - Set appropriate injection ports. Seal ports and surface of crack with Sikadur® 31, Hi-Mod Gel or Sikadur® 33. When the epoxy adhesive seal has cured, inject Sikadur® Crack Fix with slow steady pressure. Consult Technical Service for additional information.

Product Details

Sustainability / Certifications / Approvals +

Product Information +

Technical Information −

Testing

90+/-5	(ASTM D-2240) 75°F (24°C) 50% RH

Tensile Strength

2400 +/- 200 psi	(ASTM D-412) 75°F (24°C) 50% RH

Tear Strength

300 lbf/in. +/- 50 lbf/in.	(Die C, ASTM D-624) 75°F (24°C) 50% RH

Dry film thickness

35 mils (38 WFT)

50 sf/ 1.33 gal A+B+C mix

Application

Application Information +

Application steps −

SUBSTRATE PREPARATION

Sikalastic®-726 Balcony One Shot is applied in a single step, because of this proper substrate preparation is essential to achieve the proper performance of Sikalastic®-726 Balcony One Shot.

Concrete -

Should be cleaned and prepared to achieve a laitance and contaminant-free, open textured surface by blast cleaning or equivalent mechanical means. The desired surface texture is CSP 3 per ICRI Guidelines. In addition, the substrate surface must be thoroughly cleaned by blowing/vacuuming to remove all particulates that may interfere with bonding. Can be applied with or without primer.

Plywood -

Give Feedback

Should be clean and smooth, APA and exterior grade, not less than ½" thick, and spaced and supported according to APA guidelines. Joints should be sealed with Sikaflex® 2c or 1a and detailed and may need embedded fabric reinforcement. Primer is required for plywood.

DETAILING

For cracks less than 1/16" width: Apply a 23 mil detail coat of a Sikalastic® Base Coat, extending 2" on either side and centered over the crack.

For cracks 1/16" width or greater and less than 1" width: Must be routed to at least ¼" by ¼", and sealed with an appropriate Sikaflex® sealant, installed per sealant Product Data Sheet, and coated with a 23 mil detail coat of a Sikalastic® Base Coat, extending 2" on either side and centered over the crack. Non-moving cracks can be filled with compatable rigid repair materials.
NOTE: Cracks may indicate a structural issue and should be addressed by a structural engineer or appropriate design professional.

For joints 1/16" or greater and up to 1" width: Joints should be sealed with the appropriate Sikaflex® sealant, installed per sealant Product Data Sheet, and coated with a 23 mil detail coat of a Sikalastic® Base Coat, extending 2" on either side and centered over the crack.

For joints greater than 1" width: Should be treated as expansion joints and brought up through the system and/or use Emseal Expansion Joint. For additional questions please contact Sika Technical Services.

Fabric Reinforcement: An optional 3" or 6" wide Sikalastic Flexitape Heavy fabric strip may be embedded within the base coat. Flexitape width shall be chosen such that a minimum of 1" tape is embedded on either side of the crack/joint. Apply additional coating as required to fully embed the Flexitape in the coating.

Panelized Joints: Panelized joints that are restrained across the joint and without differential movement may be sealed and the deck coating, including detail coat, applied over the joint.

NOTE: movement within panelized joints may cause deterioration of the aggregated wear coat, in which case the joints should be treated as expansion joints and brought up through the Sikalastic Traffic System and sealed with Sikaflex® sealant. For additional questions please contact Sika Technical Services

PRIMING

Sikalastic®-726 Balcony One Shot does not require primer on direct application to concrete with moisture content below 4%, other substrates may require primer.

Primer Selection - Determine maximum moisture content of concrete substrate by weight with a Tramex CME or CMExpert type concrete moisture meter. Primer is not required for concrete but if moisture content in concrete is greater than 4% then Sikalastic® MT Primer is required, see primer guide below.

Sikadur®-22 Lo-Mod FS- For concrete with a maximum moisture content of 4 % by weight and existing polyurethane coatings, apply a single coat application of Sikadur®-22 Lo-Mod FS with a flat squeegee or roller at approximately 160 sf/gal. Apply evenly without puddling. Allow primer to cure until tack-free, typically 2-4 hours(at 75°F (24°C) 50 % R. H).
Sikadur®-22 Lo-Mod FS should be overcoated within 36 hours after tack-free. Refer to a separate product data sheet for additional information.

Give Feedback

Sikalastic® Primer – For existing polyurethane coatings only, clean then solvent wipe existing coating, allow solvent to flash off, and then apply Sikalastic® Primer with a flat squeegee or phenolic resin core roller at approximately 250 - 300 sf/gal. and work well into the substrate to ensure adequate penetration and sealing, and puddles are avoided. Sikalastic® Primer is not suitable for metal substrates. Sikalastic® Primer adheres to sealants and existing coatings. Refer to separate primer data sheet for additional information.

Sikalastic® FTP LoVOC Primer - For plywood decks, for concrete with a maximum moisture content of 4 % by weight, and existing polyurethane coatings, apply Sikalastic® FTP LoVOC Primer with a flat squeegee or roller at approximately 175 sf/gal. Work primer well into the substrate to ensure adequate penetration and sealing. Apply evenly without puddling. Refer to separate primer data sheet for additional information

Sikalastic® 100 VB - For concrete with a maximum moisture content of 5 % by weight, apply Sikalastic® 100 VB with a flat squeegee or roller at approximately 160 sf/gal to achieve 10 mils. For concrete decks with a maximum moisture content of 6% by weight or applications, apply two applications of Sikalastic® 100VB with a flat squeegee or phenolic resin roller at approximately 160 sf/gal to achieve 10 mils per application. Work primer well into the substrate to ensure adequate penetration and sealing and puddles are avoided. For applications as a moisture barrier and additonal infomation refer to seperate primer data sheet.

Sikadur®-22 Lo-Mod LT- For cold weather applications on concrete with a maximum moisture content of 4 % by weight and existing polyurethane coatings, apply a single coat application of Sikadur®-22 Lo-Mod LT with a flat squeegee or roller at approximately 160 sf/gal. Apply evenly without puddling. Allow primer to cure until tack-free, typically 2-4 hours (at 50°F (10°C) 50 % R. H). Sikadur®-22 Lo-Mod LT should be overcoated within 36 hours after tack-free. Refer to a separate product data sheet for additional information.

Sikalastic® EP Primer/Sealer- For Wood (timber, plywood) and Metal (aluminum, galvanized, cast iron, copper, lead, brass, stainless steel, steel, zinc). Apply by brush or phenolic resin core roller at the recommended rate,100-250 sf/gal depending on the substrate. Correct amount of primer will saturate the substrate and leave a slight film on the substrate top surface. Apply evenly without puddling. Refer to separate primer data sheet for additional information.

MIXING

Premix the Part A component using a low speed (400–600 rpm) mechanical mixer and Jiffy Paddle (2-5 Gallon Model) to obtain uniform color, making sure to scrape the solids from the bottom and sides of the pail. Pour Part C slowly into Part A and ensure aggregate from Part C is fully mixed into Part A. Slowly pour Part B into Part A/C mix and while mixing scrape the side of the container. Mix the combined material thoroughly until a homogenous mixture and uniform color is obtained (typically 3 minutes). Use care not to allow the entrapment of air into the mixture.

MIXING – TINT BASE

Do not batch down or combine multiple mixes, mix directly in original Sikalastic®-726 Balcony One Shot packaging. Premix the Part A component using a low speed (400–600 rpm) mechanical mixer and Jiffy Paddle (ES Model, 2-5 Gallon paddle) to obtain uniform color, the Tint Base will have a off-white color before adding colorant. Add one (1) Sika One Shot Color Pak into Part A and mix at slow speed until a homogenous mixture and uniform color is obtained with no streaks (~1 min). Use care not to allow the entrapment of air into the mixture. Pour Part C slowly into the pigmented Part A and ensure aggregate from Part C is fully mixed into Part A. Slowly pour Part B into Part A/C mix and while mixing scrape the side of the container. Mix the combined material thoroughly until a homogenous mixture and uniform color is obtained (typically 3 minutes). Use care not to allow the entrapment of air into the mixture.

Give Feedback

APPLICATION

Apply to yield 38 WFT using a notched squeegee or trowel (Recommend: 1/4" V-notched squeegee or trowel) , and backroll using a phenolic resin core roller (3/8") the area should be backrolled two times, one perpendicular to the other. Ensure roller is saturated with excess material before starting backroll. Extend coating over entire area including previously detailed cracks and joints. Coating should be tack fee after about 6 hours at 70 °F and 50 % RH. Allow coating to cure for a minimum of 8 hours before opening to pedestrian traffic.

REMOVAL

Remove liquid coating immediately with dry cloth. Once cured, coating can only be removed by mechanical means.

Documents

Sikalastic-726 Balcony One Shot - Guide Specification	Specification	DOCX - 36 KB (EN)	(/dam/dms/us01/5/GuideSpec_Sikalastic-726%20Balcony%20One%20Shot_Pedestrian%20Traffic%20Coating.docx)		
Sikalastic®-726 Balcony One Shot	Product Data Sheet (PDS)	PDF - 899 KB (EN)	(/dam/dms/us01/y/sikalastic_-726_balconyoneshot.pdf)		
Sikalastic-726 Balcony One Shot Part A	Safety Data Sheet (SDS)	PDF - 231 KB (EN)	(/dam/dms/us01/6/Sikalastic-726-Balcony-One-Shot-Part-A.pdf)		
Sikalastic-726 Balcony One Shot Part B	Safety Data Sheet (SDS)	PDF - 200 KB (EN)	(/dam/dms/us01/y/Sikalastic-726-Balcony-One-Shot-Part-B.pdf)		
Sikalastic-726 Balcony One Shot Part C	Safety Data Sheet (SDS)	PDF - 144 KB (EN)	(/dam/dms/us01/l/Sikalastic-726-Balcony-One-Shot-Part-C.pdf)		

BUILDING TRUST

PRODUCT DATA SHEET

Sikalastic®-726 Balcony One Shot

TWO COMPONENT, ALIPHATIC, CHEMICALLY-CURED, PRIMERLESS POLYURETHANE PEDESTRIAN WATERPROOFING & TRAFFIC COATING SYSTEM

PRODUCT DESCRIPTION

Sikalastic®-726 Balcony One Shot is a two-component, aliphatic, chemically cured, elastomeric polyurethane waterproofing coating system that has both superior flexibility and abrasion resistance. Easily applied in a single coat with or without primer and designed for pedestrian traffic specifically balcony waterproofing applications.

USES

Sikalastic®-726 Balcony One Shot may only be used by experienced professionals.

Sikalastic®-726 Balcony One Shot is designed for exclusive use on pedestrian traffic applications. Including:

- Balconies
- Pedestrian Plaza & Rooftop Decks
- Foot bridges and walkways
- Mechanical rooms

CHARACTERISTICS / ADVANTAGES

- Integrally textured for slip resistance
- Low odor and fast turnarounds
- Outstanding resistance to abrasion and wear
- UV resistant
- Resistant to deicing salts
- Volatile Organic Compounds (VOC): 20.9 g/L
- One Step System of 35 mils
- Primerless on concrete- can be applied with primer

PRODUCT INFORMATION

Packaging	2.66 gal. kit; 2x 1.20 gal. comp. A, 2x 0.13 gal. comp. B, 2x 2.19 lbs. comp. C	
Color	Gray & Tan	
Shelf Life	1 year in original, unopened containers.	
Storage Conditions	Store dry at 41-95 °F (5-35 °C). Condition material to 65-85 °F (18-30 °C) before using.	
Solid content by volume	92.17%	ASTM D-2697

Shore A Hardness	90+/-5	(ASTM D-2240) 75°F (24°C) 50% RH
Tensile Strength	2400 +/- 200 psi	(ASTM D-412) 75°F (24°C) 50% RH
Elongation at Break	500% +/-50%	(ASTM D-412) 75°F (24°C) 50% RH
Tear Strength	300 lbf/in. +/- 50 lbf/in.	(Die C, ASTM D-624) 75°F (24°C) 50% RH
Dry film thickness	35 mils (38 WFT) 50 sf/ 1.33 gal A+B mix	
Pot Life	15 min	

BASIS OF PRODUCT DATA

Results may differ based upon statistical variations depending upon mixing methods and equipment, temperature, application methods, test methods, actual site conditions and curing conditions.

ENVIRONMENTAL, HEALTH AND SAFETY

LIMITATIONS

- To avoid dew point conditions during application relative humidity must be no more than 95 % and substrate temperature must be at least 5°F (3 °C) above measured dew point temperature.
- Maximum moisture content of concrete substrate by weight when measured with a Tramex CME is 4%.
- Minimum ambient and substrate temperature during application and curing of material is 40 °F (4 °C); maximum is 95 °F (35 °C).
- Do not store materials outdoors directly exposed to sunlight and moisture. Cover and protect materials with breathable type covers such as canvas tarpaulins to allow venting and protection from weather and moisture. Observe temperature storage and conditioning requirements.
- Do not thin with solvents
- Minimum age of concrete must be 21–28 days, depending on curing and drying conditions.
- Any repairs required to achieve a level surface must be performed prior to application (consult a Sika representative for guidance on various product solutions). Surface irregularities may reflect through the cured system.
- Do not apply to a porous or damp surface where moisture vapor transmission will occur during application and cure.
- Substrate must be dry prior to application. Do not apply to a frosted, wet or damp surface.
- Do not proceed if rain is imminent within 6–12 hours of application. Allow sufficient time for the substrate to dry after rain or inclement weather as there is the potential for bonding problems.
- When applying over existing coatings compatibility and adhesion testing is recommended.
- Precautions should be taken to prevent odors and/or vapors from entering the building/structure, including but not limited to turning off and sealing air intake vents or other means of ingress for odors and for vapors into the building/structure during product application and cure.
- On grade, lightweight concrete, asphalt pavement, or insulated split slab applications, must not be coated with Sikalastic®-726 Balcony One Shot without Sika technical review. Contact Sika Technical Services or Product Engineering.
- Unvented metal pan decks or decks containing a between-slab membrane require further technical evaluation and priming with a moisture tolerant primer-contact Sika regarding recommendations.
- Do not subject to continuous water immersion.
- Mockups to verify application methods and substrate conditions as well as desired skid resistance and aesthetics are highly recommended.
- Sikalastic®-726 Balcony One Shot requires proper water management including proper draingage on a waterproofing membrane and proper use of pitched or sloped substrate

SUBSTRATE PREPARATION

Sikalastic®-726 Balcony One Shot is applied in a single step, because of this proper substrate preparation is essential to achieve the proper preformance of Sikalastic®-726 Balcony One Shot.

Concrete -

Should be cleaned and prepared to achieve a laitance and contaminant free, open textured surface by blast cleaning or equivalent mechanical means. The desired surface texture is CSP 3 per ICRI Guidelines. In addition, the substrate surface must be thoroughly cleaned by

blowing/vacuuming to remove all particulates that may interfere with bonding. Can be applied with or without primer.

Plywood –
Should be clean and smooth, APA and exterior grade, not less than ½" thick, and spaced and supported according to APA guidelines. Joints should be sealed with Sikaflex® 2c or 1a and detailed, and may need embedded fabric reinforcement. Primer is required for plywood.

DETAILING

Non-structural cracks up to 1/16 inch – Apply a detail coat of a Sikalastic® 710, 710 NP or 720 Base Coat at 23 mils dry, 4" wide, centered over the crack. Allow to become tack free before overcoating.

Cracks and joints over 1/16 up to 1 inch – Seal previously routed and primed cracks and joints with Sika Sealant and allow to skin over and cure for 24 hours min. Apply a detail coat of a Sikalastic® 710, 710 NP or 720 Base Coat at 23 mils dry, 4" wide, centered over the crack. Allow to become tack free before overcoating.

Joints over 1 inch – Should be treated as expansion joints and brought up through the Sikalastic® Traffic System and sealed with Sika sealant (see Sealant Guide).

Panelized Joints - Panelized joints that are restrained across the joint and without differential movement may be sealed and the deck coating, including detail coat, applied over the joint.

NOTE: movement within panelized joints may cause deterioration of the aggregated wear coat, in which case the joints should be treated as expansion joints and brought up through the Sikalastic Traffic System and sealed with Sikaflex® sealant. For additional questions please contact Sika Technical Services.

PRIMING

Sikalastic®-726 Balcony One Shot does not require primer on direct application to concrete with moisture content below 4%, other substrates may require primer.

Primer Selection - Determine maximum moisture content of concrete substrate by weight with a Tramex CME or CMExpert type concrete moisture meter. Primer is not required for concrete but if moisture content in concrete is greater than 4% then Sikalastic® MT Primer is required, see primer guide below.

Sikalastic® Primer – For existing polyurethane coatings, clean then solvent wipe exisiting coating, allow solvent to flash off, and then apply Sikalastic® Primer with a flat squeegee or phenolic resin core roller at approximately 250 - 300 sf/gal. and work well into the substrate to ensure adequate penetration and sealing, and puddles are avoided. Sikalastic® Primer is not suitable for metal substrates. Sikalastic® Primer adheres to sealants and existing coatings. Refer to separate primer data sheet for additional information.

Sikalastic® FTP LoVOC Primer - For plywood decks and for metal flanges and penetrations, apply Sikalastic® FTP LoVOC Primer with a flat squeegee or roller at approximately 175 sf/gal. Work primer well into the substrate to ensure adequate penetration and sealing, and puddles are avoided. Refer to separate primer data sheet for additional information

Sikadur®-22 Lo-Mod FS- For concrete with a maximum moisture content of 4 % by weight, apply a single coat application of Sikadur®-22 Lo-Mod FS with a flat squeegee or roller at approximately 160 sf/gal. Apply evenly without puddling. Refer to a separate product data sheet for additional information

Sikalastic® MT Primer - For concrete with a maximum moisture content of 5 % by weight, and for metal flanges and penetrations, apply Sikalastic® MT Primer with a flat squeegee or roller at approximately 175 sf/gal. For concrete decks with a maximum moisture content of 6% by weight, apply two applications of Sikalastic® MT Primer with a flat squeegee or phenolic resin roller at approximately 175 sf/gal per application. Work primer well into the substrate to ensure adequate penetration and sealing, and puddles are avoided. Refer to separate primer data sheet for additional information.

MIXING

Premix the Part A component using a low speed (400–600 rpm) mechanical mixer and Jiffy Paddle (2-5 Gallon Model) to obtain uniform color, making sure to scrape the solids from the bottom and sides of the pail. Pour Part C slowly into Part A and ensure aggregate from Part C is fully mixed into Part A. Slowly pour Part B into Part A/C mix and while mixing scrape the side of the container. Mix the combined material thoroughly until a homogenous mixture and uniform color is obtained (typically 3 minutes). Use care not to allow the entrapment of air into the mixture.

APPLICATION

Apply at 37.6 sf/gal to yield 38 WFT using a notched squeegee or trowel (Recommend: 1/4" V-notched squeegee or trowel) , and backroll using a phenolic resin core roller (3/8") the area should be backrolled two times, one perpendicular to the other. Ensure roller is saturated with excess material before starting backroll. Extend coating over entire area including previously

detailed cracks and joints. Coating should be tack fee after about 6 hours at 70 °F and 50 % RH. Allow coating to cure for a minimum of 8 hours before opening to pedestrian traffic.

REMOVAL

Remove liquid coating immediately with dry cloth. Once cured, coating can only be removed by mechanical means.

OTHER RESTRICTIONS

See Legal Disclaimer.

LEGAL DISCLAIMER

- **KEEP CONTAINER TIGHTLY CLOSED**
- **KEEP OUT OF REACH OF CHILDREN**
- **NOT FOR INTERNAL CONSUMPTION**
- **FOR INDUSTRIAL USE ONLY**
- **FOR PROFESSIONAL USE ONLY**

Prior to each use of any product of Sika Corporation, its subsidiaries or affiliates ("SIKA"), the user must always read and follow the warnings and instructions on the product's most current product label, Product Data Sheet and Safety Data Sheet which are available at usa.sika.com or by calling SIKA's Technical Service Department at 1-800-933-7452. Nothing contained in any SIKA literature or materials relieves the user of the obligation to read and follow the warnings and instructions for each SIKA product as set forth in the current product label, Product Data Sheet and Safety Data Sheet prior to use of the SIKA product.

SIKA warrants this product for one year from date of installation to be free from manufacturing defects and to meet the technical properties on the current Product Data Sheet if used as directed within the product's shelf life. User determines suitability of product for intended use and assumes all risks. User's and/or buyer's sole remedy shall be limited to the purchase price or replacement of this product exclusive of any labor costs. **NO OTHER WARRANTIES EXPRESS OR IMPLIED SHALL APPLY INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. SIKA SHALL NOT BE LIABLE UNDER ANY LEGAL THEORY FOR SPECIAL OR CONSEQUENTIAL DAMAGES. SIKA SHALL NOT BE RESPONSIBLE FOR THE USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT OR ANY OTHER INTELLECTUAL PROPERTY RIGHTS HELD BY OTHERS.**

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Sika Corporation
201 Polito Avenue
Lyndhurst, NJ 07071
Phone: +1-800-933-7452
Fax: +1-201-933-6225
usa.sika.com

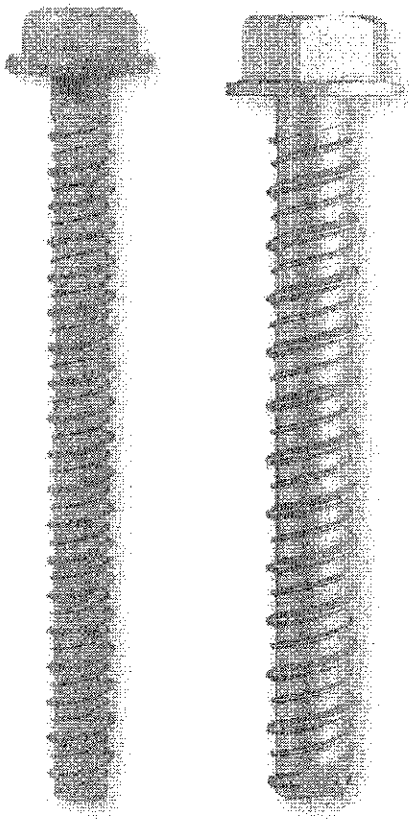
Sika Sarnafil
100 Dan Road
Canton, MA 02021
Phone: +1 800-451-2504
Fax: +1 781-828-5365
usa.sika.com/sarnafil
webmaster.sarnafil@us.sika.com

Sika Mexicana S.A. de C.V.
Carretera Libre Celaya Km. 8.5
Fracc. Industrial Balvanera
Corregidora, Queretaro
C.P. 76920
Phone: 52 442 2385800
Fax: 52 442 2250537

RED HEAD
CONCRETE ANCHORING SPECIALISTS

Large Diameter Tapcon (LDT) Anchors

Finished head, Removable Anchor



LDT

(3/8" & 1/2") (5/8" & 3/4") Sawtooth™

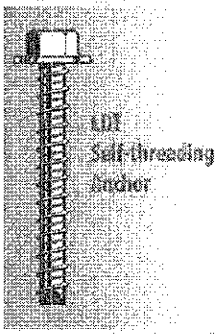
3/8" and 1/2" are available with Envirex coating

Uses standard drill bits—no special drill bits to purchase or lose!

DESCRIPTION/SUGGESTED SPECIFICATIONS

Self-threading Anchors—

SPECIFIED FOR ANCHORAGE INTO CONCRETE



LDT Self-threading Anchor

The LDT anchor is a high performance anchor that cuts its own threads into concrete.

Anchor bodies are made of hardened carbon steel and zinc plated, **Grade 5.**

The anchors shall have a finished hex washer head with anti-rotation serrations to prevent anchor back-out. The head of the anchor is stamped with a length identification code for easy inspection.

The anchor shall be installed with carbide tipped hammer drill bits made in accordance to ANSI B212.15-1994.

ADVANTAGES

SAVE TIME

EASILY INSTALLED

- Installs in less than half the time of wedge anchors or adhesive anchors
- Simply drill a pilot hole and drive the LDT anchor by hand or impact

EASILY REMOVED

- No torching or grinding required to remove anchors

SAVE MONEY

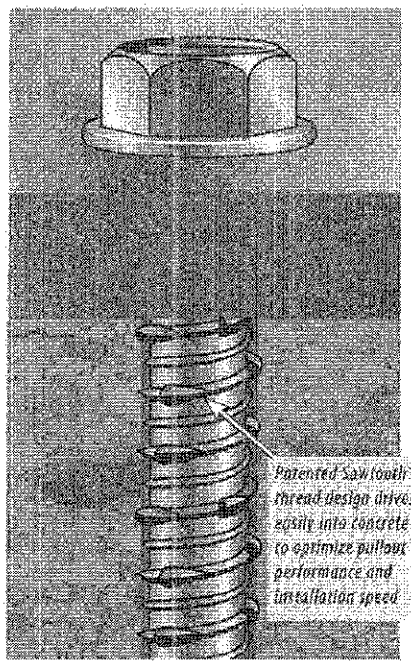
LOWER DRILL BIT COSTS

- Use standard ANSI bits instead of proprietary bits
- Single piece design, no nut and washer to assemble

USE STANDARD ANSI BITS

- No special proprietary bits to purchase or lose
- Reduce chances for anchor failure due to incorrect bit usage

Sawtooth Threads™ diameters available on 5/8" and 3/4"



IMPROVED PERFORMANCE IN LARGE DIAMETER HOLES

- Superior performance to wedge anchor
- Higher loads in shallow embedments
- Closer edge/spacing distance than mechanical anchors
- More threads for better thread engagement and higher pullout resistance
- Durable induction-hardened tip

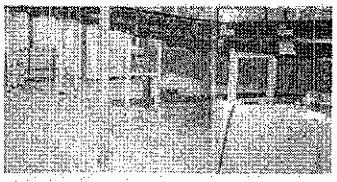
EASY INSTALLATION

- Easy 2-step installation, simply drill a pilot hole and drive
- Installs in less than half the time of a wedge anchor
- Efficient thread cutting
- Use standard drill bit sizes
- Single piece design—no nut and washer assembly
- Easily removed

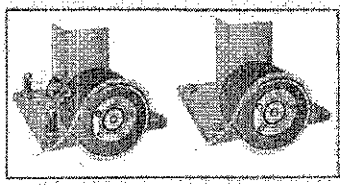
ITW Red Head
Call our toll free number 800-848-5619 or visit our web site for the most current product and technical information at www.itwredhead.com

LDT Anchors

APPLICATIONS





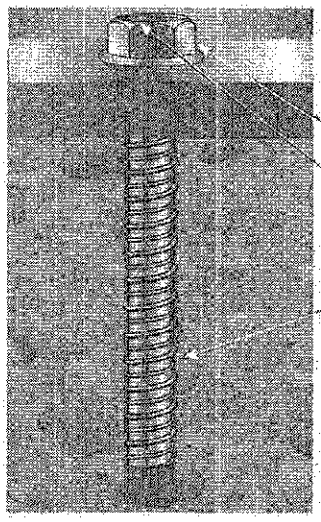


Racking, shelving and conveyors are just a few high volume applications ideal for Large Diameter Tapcon (LDT™). The ease and speed of installation of the LDT can reduce installation time to less than half the time of typical systems used today.

For installation speed, high performance and easy removability, LDT is the anchor of choice.

The LDT's finished head and lack of exposed threads virtually eliminates tire damage on fork lift trucks.

FEATURES



Easy Installation
Installs into concrete by hand or impact wrench

Anti-rotation Serrated Washer
— Prevents anchor back-out

Extra Large Flex Washer Head
— With increased bearing surface

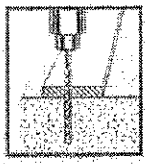
Length Identification Head Stamp
— For embedment inspection after installation

Hi-Lo Threads
— Cuts its own threads into concrete for greater pull-out resistance

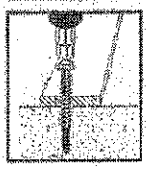
LDT 3/8" and 1/2" are available with *Envirox* coating
1,000 hours salt spray ASTM B117. Approved for use in ACQ and MCQ lumber*
*Excessive content of copper in the ACQ and MCQ lumber may affect the anchor finish.

INSTALLATION STEPS

Installation Steps for Concrete, Lightweight Concrete and Metal Deck

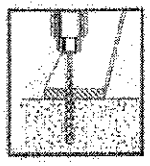


1. Using the proper size carbide bit (see chart) drill "a pilot hole at least 1" deeper than anchor embedment. "

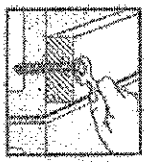


2. Using an **electric impact wrench**, or socket wrench (hand install) insert anchor into hole and tighten anchor until fully seated. (see chart for socket size) (do not over tighten).

Installation Steps for Hollow or Grout-filled CMU
(3/8" and 1/2" diameter)



1. Using a 5/16" (for 3/8" LDT) or 7/16" (for 1/2" LDT) carbide tipped bit, drill a pilot hole at least 1" deeper than anchor embedment. "



2. Using a socket wrench insert anchor into hole and hand tighten anchor until fully seated. (9/16" socket for 3/8" and 3/4" socket for 1/2") (do not over tighten).



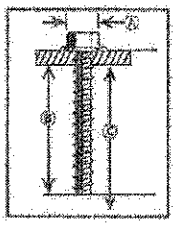
LDT's can be installed by hand or with an impact wrench
Installation by hand—is easy, simply using a socket wrench



Installation by impact wrench—is recommended for faster installations or for high volume projects. Installation with impact wrench—is *not* recommended for hollow block.

Selection Chart

LDT Size	ANSI Standard Drill Bit Diameter	Ⓐ Anchor Head (Socket Size) Diameter	Washer Diameter	Ⓑ Minimum Embedment	Ⓒ Hole Depth	USE IN		
						Concrete	CMU Hollow	CMU Grout-filled
LDT 3/8"	5/16"	9/16"	13/16"	1-1/2"	2-1/2"	YES	YES	YES
LDT 1/2"	7/16"	3/4"	1"	2-1/2"	3-1/2"	YES	NO	YES
LDT 5/8"	1/2"	13/16"	1-3/16"	2-3/4"	3-3/4"	YES	NO	YES
LDT 3/4"	5/8"	15/16"	1-5/16"	3-1/4"	4-1/4"	YES	NO	YES



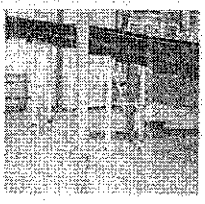
See page 75 for effective lengths and length indication code.

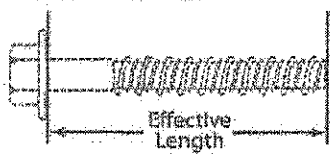
SELECTION CHART

LDT Carbon and Stainless Steel

Carbon Steel with Zinc Plating: Meets ASTM B695 and B633 specifications for zinc plating of 5um = .0002" thickness. This coating is well suited for non-corrosive interior environments.

Carbon Steel with EnvireX Coating: Provides additional corrosion protection for outdoor applications.





PART NUMBER CARBON STEEL ZINC PLATED	PART NUMBER CARBON STEEL EnvireX COATING	PART NUMBER FOR 410 STAINLESS STEEL	ANCHOR DIA. In. (mm)	DRILL BIT DIA. In. (mm)	EFFECTIVE LENGTH In. (mm) (see detail on left)	MAX. THICKNESS OF MATERIAL TO BE FASTENED In. (mm)	QTY/WT PER BOX lbs.	QTY/WT PER MASTER CARTON lbs.
LDT-3816	——	SLDT-3816	3/8 (9.5)	5/16 (7.9)	1-3/4 (44.5)	1/4 (6.4)	50/ 3.0	400/ 24.0
LDT-3824	——	SLDT-3824	3/8 (9.5)	5/16 (7.9)	2-1/2 (63.5)	1 (25.4)	50/ 4.5	400/ 34.0
LDT-3830	LDT-3830 X	SLDT-3830	3/8 (9.5)	5/16 (7.9)	3 (76.2)	1-1/2 (38.1)	50/ 5.0	400/ 40.0
LDT-3840	LDT-3840 X	SLDT-3840	3/8 (9.5)	5/16 (7.9)	4 (101.6)	2-1/2 (63.5)	50/ 6.5	400/ 52.0
LDT-3850	——	SLDT-3850	3/8 (9.5)	5/16 (7.9)	5 (127.0)	3-1/2 (89.0)	40/ 7.5	320/ 60.0
LDT-1230	——	SLDT-1230	1/2 (12.7)	7/16 (11.1)	3 (76.2)	1/2 (12.7)	25/ 4.5	150/ 27.0
LDT-1240	LDT-1240 X	SLDT-1240	1/2 (12.7)	7/16 (11.1)	4 (101.6)	1-1/2 (38.1)	25/ 6.0	150/ 36.6
LDT-1250	LDT-1250 X	SLDT-1250	1/2 (12.7)	7/16 (11.1)	5 (127.0)	2-1/2 (63.5)	25/ 7.6	150/ 45.6
LDT-1260	——	——	1/2 (12.7)	7/16 (11.1)	6 (152.4)	4 (101.6)	20/ 9.0	120/ 54.0
LDT-5830	——	——	5/8 (15.9)	1/2 (12.7)	3 (76.2)	1/4 (6.4)	10 / 3.5	100 / 35.0
LDT-5840	——	——	5/8 (15.9)	1/2 (12.7)	4 (101.6)	1-1/4 (31.8)	10 / 4.0	100 / 40.0
LDT-5850	——	——	5/8 (15.9)	1/2 (12.7)	5 (127.0)	2-1/4 (57.1)	10 / 4.7	100 / 47.0
LDT-5860	——	——	5/8 (15.9)	1/2 (12.7)	6 (152.4)	3-1/4 (82.6)	10 / 5.4	50 / 27.0
LDT-3444	——	——	3/4 (19.1)	5/8 (15.9)	4-1/2 (114.3)	1-1/4 (31.8)	10 / 7.4	50 / 37.0
LDT-3454	——	——	3/4 (19.1)	5/8 (15.9)	5-1/2 (139.7)	2-1/4 (57.1)	10 / 8.1	50 / 40.5
LDT-3462	——	——	3/4 (19.1)	5/8 (15.9)	6-1/4 (158.8)	3 (76.2)	10 / 9.1	30 / 27.3

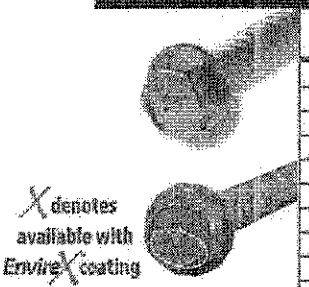
* The stainless steel LDT's will be gold in color in order to differentiate them from the carbon steel anchors.

DESIGN GUIDE

For proper selection of anchor diameters based upon predrilled holes in base plates and fixtures.

HOLE DIAMETER IN FIXTURE In. (mm)	SUGGESTED LDT DIAMETER In. (mm)
7/16 (11.1)	3/8 (9.5)
1/2 (12.7)	3/8 (9.5)
9/16 (14.3)	1/2 (12.7)
5/8 (15.9)	1/2 (12.7)
3/4 (19.1)	5/8 (15.9)
7/8 (22.2)	3/4 (19.1)

LENGTH INDICATION CODE*



CODE	LENGTH OF ANCHOR In. (mm)
A	1-1/2 < 2 (38.1 < 50.8)
B	2 < 2-1/2 (50.8 < 63.5)
C	2-1/2 < 3 (63.5 < 76.2)
D	3 < 3-1/2 (76.2 < 88.9)
E	3-1/2 < 4 (88.9 < 101.6)
F	4 < 4-1/2 (101.6 < 114.3)
G	4-1/2 < 5 (114.3 < 127.0)
H	5 < 5-1/2 (127.0 < 139.7)
I	5-1/2 < 6 (139.7 < 152.4)
J	6 < 6-1/2 (152.4 < 165.1)

* Located on top of anchor for easy inspection.

PERFORMANCE TABLE

LDT Anchors — Ultimate Tension and Shear Values (Lbs/kN) in Concrete

ANCHOR DIA. In. (mm)	EMBEDMENT DEPTH In. (mm)	f'c = 2000 PSI (13.8 MPa) TENSION Lbs. (kN)	f'c = 2000 PSI (13.8 MPa) SHEAR Lbs. (kN)	f'c = 3000 PSI (20.7 MPa) TENSION Lbs. (kN)	f'c = 3000 PSI (20.7 MPa) SHEAR Lbs. (kN)	f'c = 4000 PSI (27.6 MPa) TENSION Lbs. (kN)	f'c = 4000 PSI (27.6 MPa) SHEAR Lbs. (kN)
3/8 (9.5)	1-1/2 (38.1)	1,336 (5.9)	2,108 (9.4)	1,652 (7.3)	2,764 (12.3)	1,968 (8.8)	3,416 (15.2)
	2 (50.8)	1,492 (6.6)	3,096 (13.9)	2,024 (9.0)	3,228 (14.4)	2,552 (11.4)	3,428 (15.2)
	2-1/2 (63.5)	3,732 (16.6)	3,312 (14.7)	3,748 (16.7)	3,364 (15.0)	3,760 (16.7)	3,424 (15.2)
	3-1/2 (88.9)	5,396 (24.0)	3,312 (14.7)	6,624 (29.5)	3,368 (15.0)	7,852 (34.9)	3,428 (15.2)
1/2 (12.7)	2 (50.8)	3,580 (15.9)	5,644 (25.1)	3,908 (17.4)	6,512 (29.0)	4,236 (18.8)	7,380 (32.8)
	3-1/2 (88.9)	7,252 (32.3)	6,436 (28.6)	8,044 (35.8)	7,288 (32.4)	8,836 (39.3)	8,140 (36.2)
	4-1/2 (114.3)	10,176 (45.3)	7,384 (32.8)	10,332 (46.0)	7,968 (35.4)	10,488 (46.7)	8,552 (38.0)
5/8 (15.9)	2-3/4 (69.9)	5,276 (23.5)	8,656 (38.5)	6,560 (29.2)	11,064 (49.2)	7,844 (34.8)	13,476 (59.9)
	3-1/2 (88.9)	7,972 (35.5)	10,224 (45.9)	9,848 (43.8)	12,144 (54.0)	11,724 (52.2)	14,060 (62.5)
	4-1/2 (114.3)	11,568 (51.5)	12,316 (54.8)	13,432 (59.8)	13,580 (60.4)	16,892 (75.1)	14,840 (66.0)
3/4 (19.1)	3-1/4 (82.6)	6,876 (30.6)	7,140 (31.8)	9,756 (43.4)	10,728 (47.7)	12,636 (56.2)	14,316 (63.6)
	4-1/2 (114.3)	10,304 (45.8)	13,120 (58.4)	14,424 (64.2)	16,868 (75.0)	18,540 (82.5)	20,612 (91.7)
	5-1/2 (139.7)	13,048 (58.0)	17,908 (79.7)	18,156 (80.8)	21,718 (96.9)	23,268 (130.5)	25,652 (114.1)

The Red Head®
Call our toll free number 800-848-5611 or visit our web site for the most current product and technical information at www.theredhead.com

PERFORMANCE TABLE

LDT Anchors — Allowable Tension and Shear Values* (Lbs/kN) in Concrete Carbon and Stainless Steel

ANCHOR DIA. In. (mm)	EMBEDMENT DEPTH In. (mm)	f'c = 2000 PSI (13.8 MPa) TENSION Lbs. (kN)	f'c = 2000 PSI (13.8 MPa) SHEAR Lbs. (kN)	f'c = 3000 PSI (20.7 MPa) TENSION Lbs. (kN)	f'c = 3000 PSI (20.7 MPa) SHEAR Lbs. (kN)	f'c = 4000 PSI (27.6 MPa) TENSION Lbs. (kN)	f'c = 4000 PSI (27.6 MPa) SHEAR Lbs. (kN)
3/8 (9.5)	1-1/2 (38.1)	334 (1.5)	527 (2.3)	413 (1.8)	691 (3.1)	492 (2.1)	854 (3.8)
	2 (50.8)	373 (1.7)	759 (3.4)	506 (2.2)	807 (3.6)	638 (2.8)	855 (3.8)
	2-1/2 (63.5)	933 (4.2)	828 (3.7)	937 (4.2)	841 (3.7)	940 (4.2)	856 (3.8)
	3-1/2 (88.9)	1,349 (6.0)	828 (3.7)	1,656 (7.4)	842 (3.7)	1,963 (8.7)	857 (3.8)
1/2 (12.7)	2 (50.8)	895 (4.0)	1,411 (6.3)	977 (4.3)	1,628 (7.2)	1,059 (4.7)	1,845 (8.2)
	3-1/2 (88.9)	1,813 (8.0)	1,409 (7.2)	2,011 (8.9)	1,822 (8.1)	2,209 (9.8)	2,035 (9.0)
	4-1/2 (114.3)	2,544 (11.3)	1,846 (8.2)	2,583 (11.5)	1,992 (8.9)	2,622 (11.7)	2,138 (9.5)
5/8 (15.9)	2-3/4 (69.9)	1,319 (5.9)	2,164 (9.7)	1,840 (7.3)	2,766 (12.3)	1,961 (8.7)	3,369 (15.0)
	3-1/2 (88.9)	1,993 (8.9)	2,556 (11.4)	2,462 (10.9)	3,036 (13.5)	2,931 (13.0)	3,515 (15.6)
	4-1/2 (114.3)	2,892 (12.9)	3,079 (13.7)	3,358 (14.9)	3,395 (15.1)	4,223 (18.8)	3,710 (16.5)
3/4 (19.1)	3-1/4 (82.6)	1,719 (7.6)	1,785 (7.9)	2,439 (10.8)	2,682 (11.9)	3,159 (14.0)	3,579 (15.9)
	4-1/2 (114.3)	2,576 (11.5)	3,280 (14.6)	3,606 (16.0)	4,217 (18.7)	4,635 (20.6)	5,153 (22.9)
	5-1/2 (139.7)	3,202 (14.5)	4,477 (19.9)	4,539 (20.2)	5,445 (24.2)	5,817 (25.9)	6,413 (28.5)

* Allowable values are based upon a 4 to 1 safety factor. (Ultimate/4)

PERFORMANCE TABLE

LDT Anchors — Recommended Edge & Spacing Requirements for Tension Loads* Carbon and Stainless Steel

ANCHOR DIA. In. (mm)	EMBEDMENT DEPTH In. (mm)	EDGE DISTANCE REQUIRED TO OBTAIN MAX. WORKING LOAD In. (mm)	LOAD FACTOR APPLIED AT MIN. EDGE DISTANCE 1-3/4 Inches (44mm)	SPACING DISTANCE REQUIRED TO OBTAIN MAX. WORKING LOAD In. (mm)	LOAD FACTOR APPLIED AT MIN. SPACING DISTANCE 3 Inches (76mm)
3/8 (9.5)	1-1/2 (38.1)	2 (50.8)	70%	6 (152.4)	44%
	2 (50.8)	2 (50.8)	70%	6 (152.4)	44%
	2-1/2 (63.5)	3 (76.2)	70%	6 (152.4)	44%
	3-1/2 (88.9)	4 (101.6)	70%	6 (152.4)	44%
1/2 (12.7)	2 (50.8)	2-1/4 (57.2)	65%	8 (203.2)	27%
	3-1/2 (88.9)	3 (76.2)	65%	8 (203.2)	27%
	4-1/2 (114.3)	4 (101.6)	65%	8 (203.2)	27%

* Edge and spacing distance shall be divided by .75 when anchors are placed in structural lightweight concrete. Linear interpolation may be used for intermediate spacing and edge distances.

For 5/8" and 3/4" LDT Anchors, the critical edge distance for these anchors is 10 times the anchor diameter. The edge distance of these anchors may be reduced to 1-3/4" provided a 0.65 load factor is used for tension loads, a 0.19 load factor is used for shear loads applied perpendicular to the edge, or a 0.60 load factor is used for shear loads applied parallel to the edge. Linear interpolation may be used for intermediate edge distances.

PERFORMANCE TABLE

LDT Anchors — Recommended Edge & Spacing Requirements for Shear Loads* Carbon and Stainless Steel

ANCHOR DIA. In. (mm)	EMBEDMENT DEPTH In. (mm)	EDGE DISTANCE REQUIRED TO OBTAIN MAX. WORKING LOAD In. (mm)	LOAD FACTOR APPLIED AT MIN. EDGE DISTANCE 1-3/4 Inches (44mm)	SPACING DISTANCE REQUIRED TO OBTAIN MAX. WORKING LOAD In. (mm)	LOAD FACTOR APPLIED AT MIN. SPACING DISTANCE 3 Inches (76mm)
3/8 (9.5)	1-1/2 (38.1)	3 (76.2)	25%	6 (152.4)	57%
	2 (50.8)	4 (101.6)	25%	6 (152.4)	57%
	2-1/2 (63.5)	5 (127.0)	25%	6 (152.4)	57%
	3-1/2 (88.9)	5 (127.0)	25%	6 (152.4)	57%
1/2 (12.7)	2 (50.8)	5 (127.0)	25%	8 (203.2)	60%
	3-1/2 (88.9)	5 (127.0)	25%	8 (203.2)	60%
	4-1/2 (114.3)	5-1/2 (139.7)	25%	8 (203.2)	60%

* Edge and spacing distances shall be divided by .75 when anchors are placed in structural lightweight concrete. Linear interpolation may be used for intermediate spacing and edge distances.

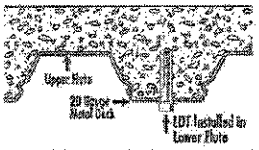
LDT Anchors — Ultimate Tension Load (Lbs/kN) in Concrete Block
(anchors should be installed by hand in hollow block)

ANCHOR DIA. In. (mm)	EMBEDMENT DEPTH In. (mm)	HOLLOW CONCRETE BLOCK		GROUT FILLED CONCRETE BLOCK	
		TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
3/8 (9.5)	1-1/2 (38.1)	916 (4.1)	3,176 (14.1)	1,592 (7.1)	3,900 (17.3)
1/2 (12.7)	2-1/2 (63.5)	N/A	N/A	5,924 (26.4)	6,680 (29.7)

LDT Anchors — Allowable Tension and Shear* (Lbs/kN) in Concrete Block
(anchors should be installed by hand in hollow block)

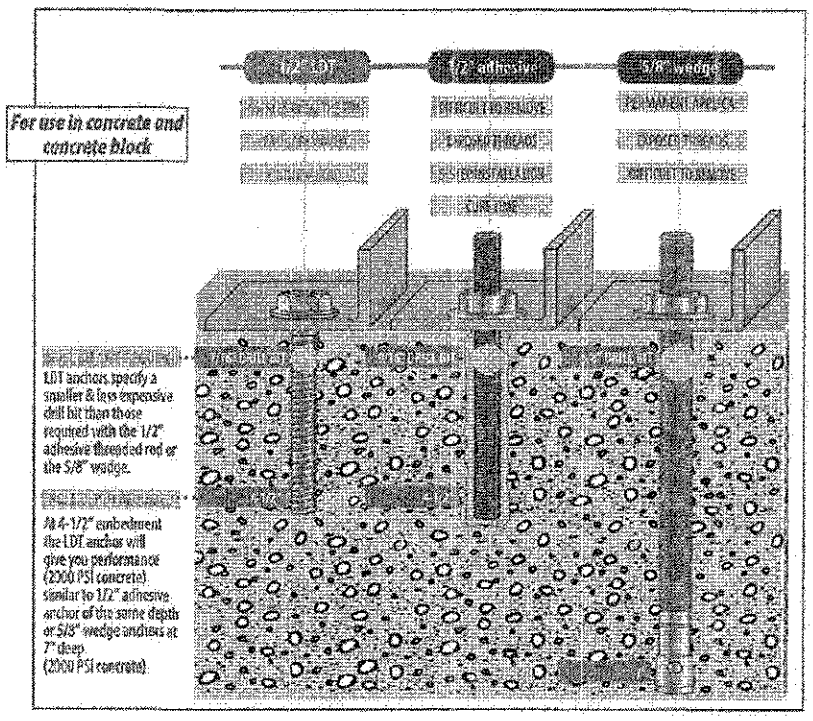
ANCHOR DIA. In. (mm)	EMBEDMENT DEPTH In. (mm)	HOLLOW CONCRETE BLOCK		GROUT FILLED CONCRETE BLOCK	
		TENSION Lbs. (kN)	SHEAR Lbs. (kN)	TENSION Lbs. (kN)	SHEAR Lbs. (kN)
3/8 (9.5)	1-1/2 (38.1)	229 (1.0)	794 (3.5)	398 (1.8)	975 (4.3)
1/2 (12.7)	2-1/2 (63.5)	N/A	N/A	1,481 (6.6)	1,670 (7.4)

* Allowable values are based upon a 4 to 1 safety factor. (Ultimate/4)

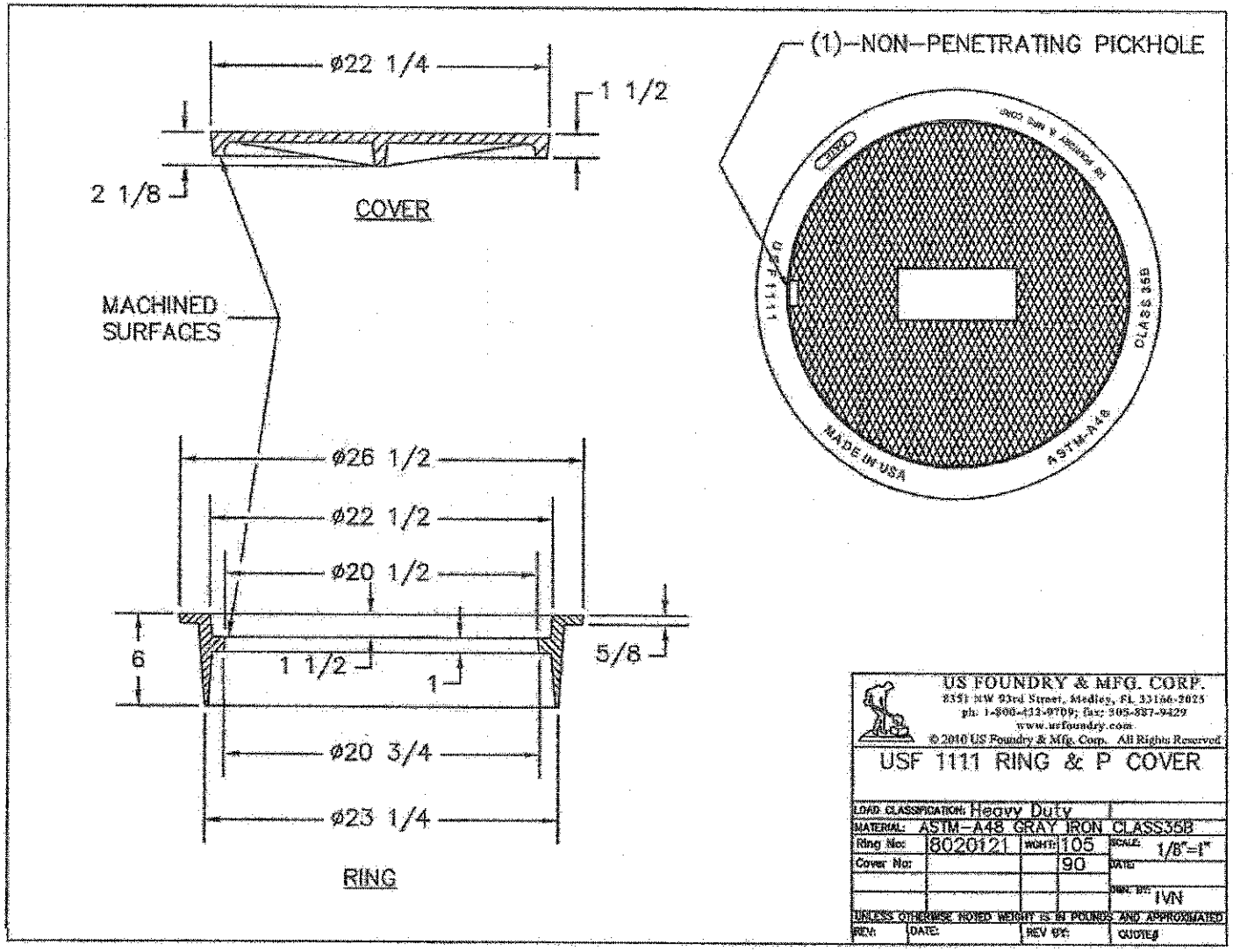


LDT Anchors — Anchoring Overhead In 3000 PSI Lightweight Concrete On Metal Deck

ANCHOR	DRILL HOLE DIAMETER In. (mm)	EMBEDMENT In. (mm)	3000PSI (20.7 MPa) CONCRETE		
			ULTIMATE TENSION LOAD Lbs. (kN)		ALLOWABLE WORKING LOAD Lbs. (kN)
3/8" LDT	5/16 (7.9)	1-1/2 (38.1)	Upper Flute	2,889 (12.9)	722 (3.2)
			Lower Flute	1,862 (8.3)	465 (2.1)



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US FOUNDRY & MFG. CORP.
8351 NW 93rd Street, Medley, FL 33166-2025
ph: 1-800-433-9709; fax: 305-887-9429
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USF 1111 RING & P COVER

LOAD CLASSIFICATION:	Heavy Duty				
MATERIAL:	ASTM–A48 GRAY IRON CLASS35B				
Ring No:	8020121	WGHT:	105	SCALE:	1/8"=1"
Cover No:			90	DATE:	
				DWN. BY:	IVN

UNLESS OTHERWISE NOTED WEIGHT IS IN POUNDS AND APPROXIMATED

REV:	DATE:	REV BY:	QUOTE#