

EAL MFG

CONCRETE PRODUCTS & ACCESSORIES



3912 W. ILLINOIS AVE. DALLAS TX, 75211

(214) 630-1154

PRICE

SERVICE

QUALITY

Welcome to EAL MFG



It is our goal to be the standard of excellence in our chosen markets by serving our customers with unsurpassed, quality products and service while placing total value on one-to-one relationship. We know that the customer is the most important person in the relationship, therefore we will do everything we can to help our customer be successful.

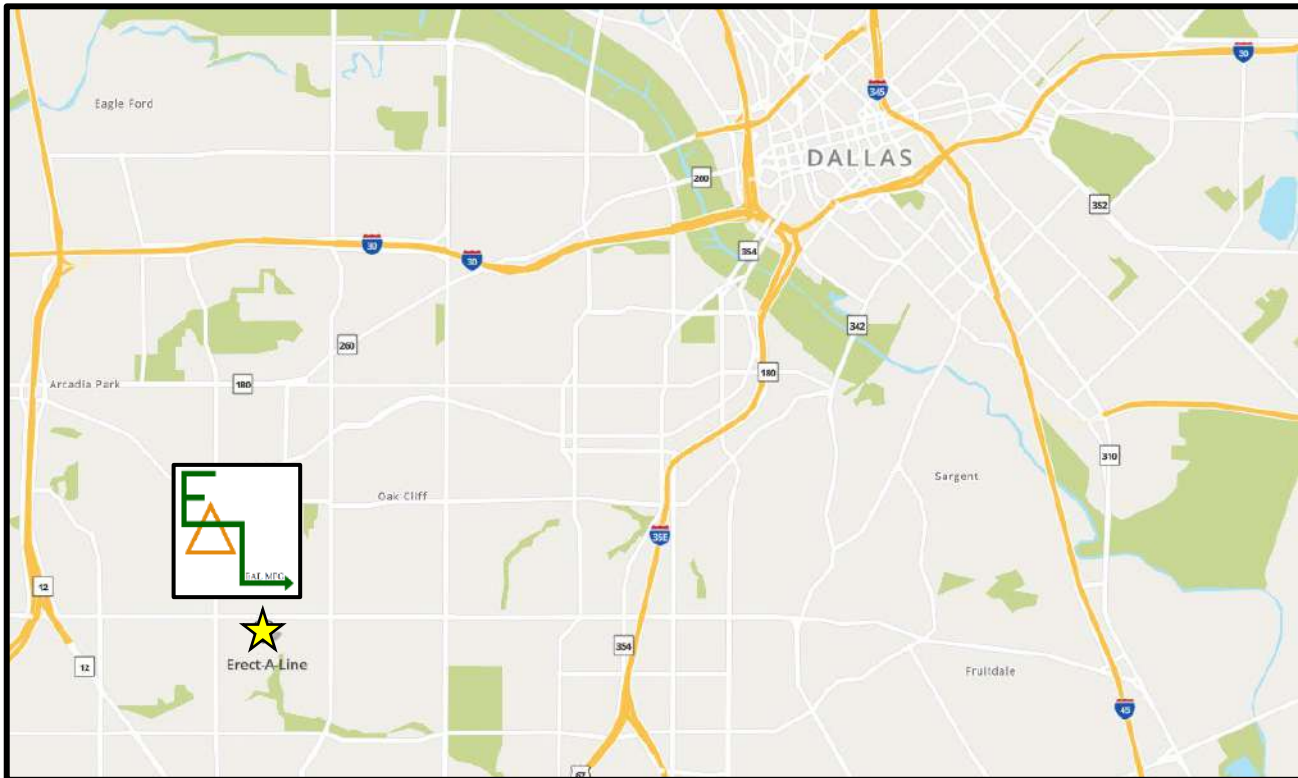
EAL MFG is large enough to handle the most demanding production needs and small enough to remain personal and easily accessible. So next time you are in a need of one of our products, do not hesitate to call, email, or send an inquiry through our website. If the product you need is not listed in our catalog or on our website, we can perform custom fabrication specifically to meet your needs.

To our existing customer, we appreciate and value your support and loyalty. To our potential new customers, we welcome you to the EAL MFG family.


Sincerely,

Ray Harper - President

Company Information



 3912 W. Illinois Ave. Dallas TX, 75211

 (214) 630-1154

 www.ealmfg.com

Business Hours:

Monday - Friday 8:00AM - 5:00PM

Shipping Hours:

Monday - Friday 7:00AM - 4:00PM

Contact Our Sales Team Today!

Carissa Alexander

-Director of Sales

☎ (469) 759-1001 ✉ calexander@ealmfg.com

Anthony Dougherty

-Sales Executive

☎ (469) 759-1007 ✉ adougherty@ealmfg.com

Anna Becerra

-Sales Executive

☎ (469) 754-0591 ✉ abecerra@ealmfg.com

Eva Bullo

-Sales Assistant

☎ (214) 630-1154 ✉ ebullo@ealmfg.com

Ray Harper

-President

Table of Contents

1	-Epoxy Line
2	-Curb & Radius Accessories
3	-Dowel Bar & Accessories
4	-Finishing Tools
5 - 6	-Keyway
7	-Loose Frame Baskets
8	-Paving Basket
9	-Rebar & Dowel Supports
10	-Retro Fit Kits
11	-Stakes
12 -14	-String Line
15	-Special Orders -Tie Bar & Multipiece Tie Bars
16	-Tilt Wall
17	-Welded Dowel Assemblies
18	-Quote Request Information

Call for a quote today!!

(214) 630-1154 www.ealmfg.com

INTRODUCING OUR STATE OF THE ART EPOXY LINE

At EAL MFG, we do everything we can to ensure your success!

The individual relationship we have with each customer is the most important factor in our business and we are constantly thinking of ways to help your business complete marketplace across the United States.

Over the years, the demand for epoxy coated rebar and smooth round has increased, limiting sources, driving costs skywards and impeding our customer ability to compete. EAL MFG has created solution, expanding to a new facility, and adding a state of the art 12 bar coating line that can coat sizes from 1/2" to 2" diameter.

Send us your steel to coat, or we can coat from our huge inventory.

Rebar & Smooth Round
30 ft to 60 ft
#4 to #14



ASK US FOR DETAILS

(214) 630-1154 www.ealmfg.com

Curb & Radius Accessories

Used to form a radius line for a curbing or paving machine to follow

Yellow or Green Fiberglass Radius Board 11/64" x 5/8"

12' - #3740



Orange Fiberglass Radius Board 1/4" x 1-1/4"

16' - #3716

20' - #3720



Fiberglass Rod 3/8"

16' - #3725

20' - #3735



Splice Clip



For Yellow Fiberglass Radius Board 11/64" x 5/8"
#3745



For Orange Fiberglass Radius Board 1/4" x 1-1/4"
#3900



For 3/8" Fiberglass Rod
#3920

Metal Radius Clip for Tubing

Clip attaches to either a threaded rod or a slotted rod which allows insertion of either CPVC or PVC 3/4" tubing.



1-1/16" clip for PVC - #3500

1-5/16" clip for PVC - #3600

Metal Radius Clip for Fiberglass Rod

Clip attaches to either a threaded rod or a slotted rod which allows insertion of 3/8" fiberglass rod.



3/8" clip - #3375

Lattice Clip

Clip attaches to a threaded rod which allows insertion of fiberglass board.



For Yellow Fiberglass Radius Board 11/64" x 5/8"
#3750

For Orange Fiberglass Radius Board 1/4" x 1-1/4"
#3200

Plastic Radius Clip for Tubing

Corrosion resistant clip attaches to a threaded rod which allows insertion of 3/4" tubing.



1-1/16" clip for CPVC - #3500P

Dowel Bar & Accessories

Saw cut steel dowels available in:

1/2" diameter	5/8" diameter	3/4" diameter	7/8" diameter	1" diameter
1-1/2" diameter	1-1/8" diameter	1-1/4" diameter	1-3/8" diameter	1-3/4" diameter
				2" diameter

Custom cut to length

Stainless steel Dowels are also available by special order.

Finishes:

****Also available in Bond Breaker****



-Plain



-Epoxy



-Red Oxide



-Galvanized



-Stainless Steel

Metal Dowel Cap

Installed on dowels to allow movement in expansion joints.



- 1" x 5" - #MDS1
- 1-1/4" x 5" - #MDC1-1/4
- 1-1/2" x 6" - #MDC1-1/2
- 1-1/2" x 10" - #MDC1-1/2x10

Grout Retention Ring for Dowels

Used for retention of grouting material to improve dowel support.



- For 1" Dowel - #GRR1
- For 1/2" Dowel - #GRR1/2
- For 3/4" Dowel - #GRR3/4
- For 1-1/4" Dowel - #GRR1-1/4
- For 1-1/2" Dowel - #GRR1-1/2

Plastic Dowel Cap

Corrosion resistant plastic cap installed on dowels to allow movement in expansion joints.



- 1/2" x 4" - #PDC1/2
- 5/8" x 4" - #PDC5/8
- 3/4" x 4" - #PDC3/4
- 7/8" x 4" - #PDC7/8
- 1" x 4" - #PDC1
- 1-1/8" - #PDC 1-1/8
- 1-1/4" x 4" - #PDC1-1/4
- 1-1/2" x 4" - #PDC1-1/2
- 2" x 5" - #PDC2



Epoxy Spray Paint

Used to touch up dowels and baskets. Fast drying, long lasting, VOC compliant, Meets ASTM D3963 Specifications.

#EPCSPRAYPAINT-A

Finishing Tools

B-Brooms

B-Brooms are water resistant brooms manufactured to install on the rear of a paving machine, to drag across the wet cement for a textured finish, similar to a tine broom.

Each Broom is 6' long with 24" long polypropylene bristles.

Each bristle is .140" wide (slightly larger than 1/8").

#1015



Straight Edge Handles & Blades

Available in different sizes and are sold individually or as complete sets with brace sets and hardware included.

12' Straight Edge Handle - #6225

16' Straight Edge Handle - #6220

10' Straight Edge Blade - #6230

12' Straight Edge Blade - #6235

16' Straight Edge Blade - #6240



10' Straight Edge Complete w/ 12' Handle - #6245

10' Straight Edge Complete w/ 16' Handle - #6246

12' Straight Edge Complete w/ 12' Handle - #6250

12' Straight Edge Complete w/ 16' Handle - #6249

16' Straight Edge Complete w/ 16' Handle - #6253



Curb Darby

A Curb Darby is a handheld tool used in finishing concrete. (1" x 2" rectangle steel blade in specified length with welded handles)

4' Curb Darby - #6268

6' Curb Darby - #6267

8' Curb Darby - #6266

10' Curb Darby - #6265

12' Curb Darby - #6264



Accessories

Two Piece Brace Set w/ Hardware

-Support braces for attaching handle to blade (Including wing, nuts, and bolts)

#6251



Hardware for Straight Edges

- Hardware for attaching handle to blade (Including wing, nuts, and bolts: 5 pieces each for brace sets)

#6252



Keyway & Accessories

A galvanized steel cold joint left permanently in concrete slabs.
Manufactured in 10' lengths with dowel knockouts.

Two Way Keyway

For slabs depths of 4"
#350KW



For slabs depths of 5"
#KW450

For slabs depths of 6"
#KW550

For slabs depths of 8"
#KW750

Pee Wee Keyway

24ga @ 30" C/C
#1084A



24ga @ 12" C/C
#1085A

24ga w/legs for
6-7 paving @ 30" C/C
#1087A

Nail On Keyway

24ga #1065

26ga #1055

30ga #1054



24ga w/legs for 5" paving - #1067

24ga w/legs for 6" paving - #1060A

24ga w/legs for 7" paving - #1068

24ga w/legs for 8" paving - #1061A

24ga w/legs for 9" paving - #1063

24ga w/legs for 10" paving - #1062

24ga w/legs for 11" paving - #1064

24ga w/legs for 12" paving - #1066



Standard Keyway

24ga 1" holes @ 12" c/c #1091

24ga 1" holes @ 24" c/c #1090

24ga 1" holes @ 30" c/c #1094A



24ga w/legs for 8-1/2" holes @ 30" c/c #1092A

24ga w/legs for 10" holes @ 30" c/c #1093A

24ga w/legs for 12" holes @ 30" c/c #1095A

24ga w/legs for 8-1/2" holes @ 24" c/c #1096A



Keyway & Accessories

Two Way Keyway Stake

Installs though Two-Way Keyway to support keyway during installation or can be used for nailing form board.

12" - #12NSTK

15" - #15NSTK

18" - #18NSTK

24" - #24NSTK



Flexible Screed Cap

A strip that is easily removed after the concrete hardens leaving a wedge shape joint that is easily and economically sealed.

1/2" Removable 375' Roll
#1560

3/8" Removable 500' Roll
#1561

3/8" Non-Removable 375' Roll
#1562



Marking Pin / Keyway Stake

Stake / Pin with angled point on one end.

.250 x 12" - #7766

.306 x 12" - #7780

.306 x 14" - #7767

.306 x 15" - #7768



Splice Clip for Two-Way Keyway

Corrosion resistant, plastic splice for joining two-way keyway end to end.

#355KW



Loose Frame Baskets

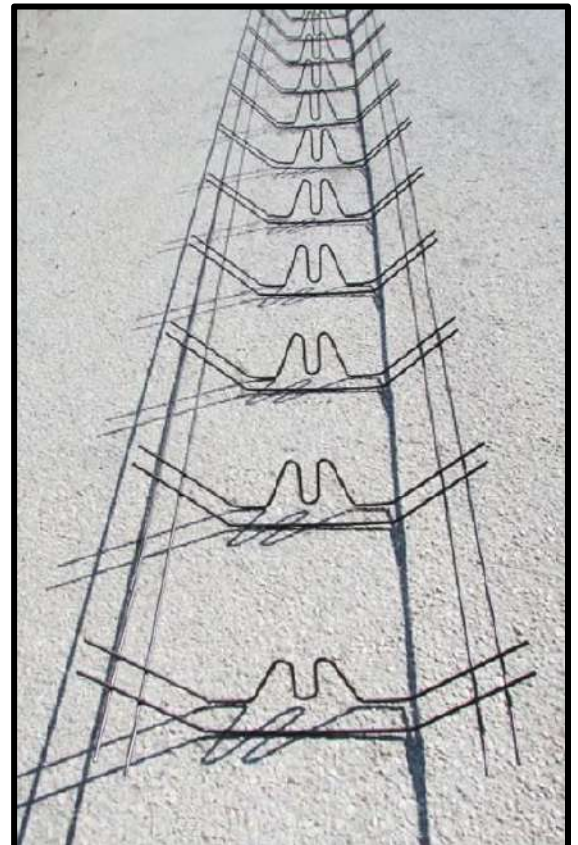
12' Loose Frame Baskets are pre-formed baskets made to support dowels at half the paving height. Loose Frame Baskets can be used as a contraction or an expansion basket. The actual length of the basket is **11' 6"** (12' billable basket)

Basket is Fabricated from .177 ga wire with dowel spacing at 12" centers.
(12 dowel slots per basket)
****EXCLUDING #7999****

The centers expansion is formed to hold 3/4" board.

Baskets support up to 1-1/8" dowels for:

- 4"-6" paving - #7980**
- 6"-8" paving - #8000**
- 6"-8" paving @ 18 C/C - #7999**
- 8"-10" paving - #8006**
- 10"-12" paving - #8015**



Paving Basket Accessories

Basket Stake

Fits over bottom of basket to attach to sub grade.

Boxes of 100/EA or can be put in drums upon request

12" .306ga stake with 2" .306ga crosswire welded 2" from top
#7773

15" .306ga stake with 2" .306ga crosswire welded 2" from top
#7774

19" .306ga stake with 2" .306ga crosswire welded 2" from top
#7775



60D Nail Stake

6" long 60D Nail Basket Stake with 2" long crosswire.

Boxes of 100/EA or can be put in drums of 5000

#7745



Basket Clips

A steel clip with formed indentation to fit wire around the bottom runner of basket to attach to subgrade.

#7744



Rebar & Dowel Supports



P-Stake

Support dowel or tie bar in concrete pavement. Fabricated from .306 ga wire. Common loop is 1", can be made for different dowel sizes. Loops can be made to fit #4 through #12 bar.

9" - #PS9

12" - #PS12

15" - #PS15

24" - #PS24



P-Stake with Stop

Support dowel or tie bar in concrete pavement with stop bar that can be welded to specified height. Fabricated from .306 ga wire. Loops can be made to fit #4 through #12 bar.

10" - #PS10WS

12" - #PS12WS

15" - #PS15WS



Spade Stake

11" spade stake for up to #6 bar made of heavy duty 18ga steel with 13/16" dowel hole. Stake is pointed at one end for better penetration of subgrade.

#7900



Retro Fit Kit Foam Core Board

A foam insert is used to form a joint in the polyester concrete backfill rather than saw cutting because the joint must extend through the entire backfill depth. The existing pavement may be at less than its maximum volume so shrinkage cannot be relied upon to create the joint.



Retro Fit Dowel Cap

Using end caps on the dowels bars establishes a small gap between the dowel bar and the polyester concrete backfill at the end of the bar. As moisture content and temperature of the pavement changes, the concrete volume varies changing the joint width. The gap at the end of the dowel bar accommodates those changes.



Retro Fit Dowel Chair

Support chairs hold the dowels bars in position inside the slot as the concrete backfill is placed and consolidated.



For 1-1/2 dowels

#FOAMCOREBOARD1-1/2"

#RET1-1/2RETROCAP

#RET1-1/2RETROCHAIR

For 1-1/4 dowels

#FOAMCOREBOARD1-1/4"

#RET1-1/4RETROCAP

#RET1-1/4RETROCHAIR

Stakes

Form Pin Stakes

Form Pin Stakes (also known as line pin stakes/pegs/and solid stakes) are steel pins with forged points on one end. Line Stakes have chiseled points to prevent rotation of stake and for easier penetration of subsurface. These stakes are solid without any holes. They are used for form pins, stringline set up, and general staking purposes. They are heavy duty which allows the stakes to be reused multiple times.

Form Pin Stakes are available in 1/2" through 1" diameters, made to specified lengths from 18" to 72".

Most popular sizes:

3/4"X24" #FP3/4X24

7/8"X24" #FP7/8X24

1"X18" #FP1X18

3/4"X30" #FP3/4X30

7/8"X30" #FP7/8X30

1"X24" #FP1X24

3/4"X36" #FP3/4X36

7/8"X36" #FP7/8X36

1"X30" #FP1X30

3/4"X48" #FP3/4X48

7/8"X48" #FP7/8X48

Nail Stakes

Nail Stakes are steel pins with points to allow them to be driven in to the subsurface with ease. Nail Stakes have holes drilled alternately every 3" to 6". Once the stakes are inserted into the ground, the holes allow the nailed attachment of wood boards or forms.

3/4" x 12" #NS3/4X12

3/4" x 30" #NS3/4X30

7/8" x 12" #NS7/8X12

3/4" x 18" #NS3/4X18

3/4" x 36" #NS3/4X36

7/8" x 18" #NS7/8X18

3/4" x 24" #NS3/4X24

3/4" x 42" #NS3/4X42

7/8" x 24" #NS7/8X24

3/4" x 48" #NS3/4X48

7/8" x 30" #NS7/8X30

7/8" x 36" #NS7/8X36

7/8" x 42" #NS7/8X42

7/8" x 48" #NS7/8X48

3/4" – 1" Stake Puller

Extract 3/4", 7/8", and 1" stakes from sub grade.

#4975



Pencil Rod

Most commonly used in battered walls and foundations of unusual width where snap ties are not practical.

1/4" x 10' #PR1/4x10FT

5/16" x 10' #PR5/16x10FT



Stringline & Accessories

SAB Aluminum Bracket

Lightweight dual purpose bracket fits both 3/4" and 7/8" stakes. Clamps to line pin stake for insertion of slotted or threaded rods.



With hex bolts and nuts

#2778-B

With L bolts and nuts

#2778-L

Aluminum Bracket

Lightweight bracket for 3/4" stakes. Threads tapped into body of bracket; no nuts required. Clamps to line pin stake for insertion of slotted or threaded rods.

With hex bolts

#2780-B

With hardened hex bolts

#2780-BH



One Piece Bracket w/ Hex Bolts

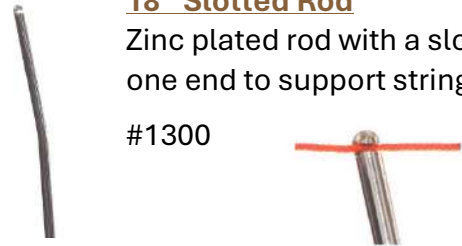
Zinc plated steel bracket for 3/4" stakes. Clamps to line pin stake for insertion of slotted or threaded rods.

#2101-B

18" Slotted Rod

Zinc plated rod with a slot at one end to support string line.

#1300



JGM Quick Set Adjustable Bracket

Zinc plated steel bracket for 3/4" stakes. Clamps to line pin stake for insertion of slotted or threaded rods. Labor saving because no wrenches are needed for installation. Spring action allows for quick horizontal and vertical adjustments.

#2205



18" Threaded Rod

Zinc plated rod with a threaded end, allows for attachment of plastic tips radius or lattice clips.

#1200



Plastic Tips

Manufactured from pliable plastic which allows it to be used in a weather conditions, tip screws on to threaded rod to attach stringline.

#3100



Stake Extension Bracket

Plated bracket connects two stakes to increase height.

#4900

Stringline & Accessories

Polyester String

1/8" diameter polyester string with polyester core, braided for extra strength, used for stringline layouts. The breaking strength is 600lbs PSI.

1000' Yellow #STR4300
3000' Yellow #STR4303
5000' Yellow #STR4305

1000' Fluorescent Orange #STR4300-F
3000' Fluorescent Orange #STR4303-F
5000' Fluorescent Orange #STR4305-F

5000' Fluorescent Yellow #STR4355

1000' White #STR4700-A



Polyethylene String

1/8" diameter polyethylene string used for stringline layouts.

1000' Yellow #STR4200

Polyester GAC Cable

1/8" string with a braided polyester outside jacket and a 1/16" galvanized aircraft cable 7x7 strand as core. 480 lb. PSI breaking strength. The Yellow filament has red tracers through it for better visibility. This string has minimal contraction and expansion.

1000' Yellow w/Red Tracers #STR4500

5000' Yellow w/Red Tracers #STR4505



Polyester String w/ Kevlar Core

1/8" diameter polyester string with Kevlar core, braided for extra strength. The breaking strength is 600lbs PSI. Less contraction and expansion than polyester core string.

1000' Yellow #STR4400
3000' Yellow #STR4403
5000' Yellow #STR4405

1000' Fluorescent Orange #STR4400-F
3000' Fluorescent Orange #STR4403-F
5000' Fluorescent Orange #STR4405-F



Polypropylene String

4500' Orange #STR4100



5500' White 1 Ply #STR4105



Stringline & Accessories

Galvanized Aircraft Cable w/ Orange Plastic Jacket

Used for stringline layout in lower tolerance projects.

1000' 1/16" Cable (3/32" OD)
#STR4800

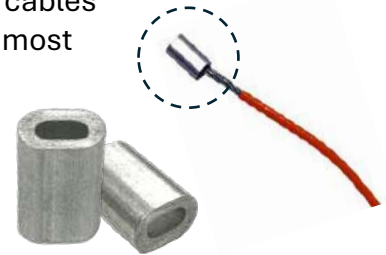


5000' 1/16" Cable (3/32" OD)
#STR4801

Aluminum Swage Sleeve

Splices two GAC cables end to end using most crimping pliers.

1/16"
#STR4785



Modified Winch for Stringline

Winch is mounted on metal base with holes for staking into sub surface enabling the tightening of stringline during the layout process. Plated for weather resistance, has 600 lbs. breaking strength.

#STR6805

Stringline Frame and Reel (Cox Reel)

Used to roll up and store stringline. Heavy Duty all metal construction with ball bearing mounted reel. Holds up to 10,000+ ft and has locking pin.



#STR6915

Galvanized Aircraft Cable 7 x 7

Used for stringline layouts.

5000' 1/16" Cable #STR4790



Wire Sensor Line (Piano Wire)

5000' x .50
#STR4834



Special Order

Pipe Bollards

Steel pipe bollards are available in 2", 3", 4", 5", 6", 8" & 10" diameters.

Bollards are available in light, standard, and heavy wall thickness. Custom cut to length. Painting and galvanizing are also available. Used as a protective barrier around buildings and parking lots. Can be installed in sub surface or fitted with base plates for above ground application.



Pipe Sleeves



Pipe sleeves provides a protective, attractive cover for pipe bollards. Designed to absorb impact to protect both cars and the structures they surround. Sleeves have two recessed reflective stripes to increase visibility. Made of 1/8" thick high-density plastic. Contains ultraviolet and antistatic to resist fading and endure extreme temperatures. Available in many different sizes and colors.

Armor Joints Safety End Treatment Custom Fabrication
Embed Angles Base Plates Grates
Chase Plates Embed Anchors Miscellaneous Steel Fabrication

Bare, Painted, or Galvanized
Can be made to DOT Specifications



Tie Bars & Multi-Piece Tie Bars

Saw cut steel tie bars available in #4, #5, #6, #7, #8, #9 & #10 sizes.

Finishes: Plain, Red Oxide, Epoxy, and Tectyl
(TX DOT Approved)

Multi Piece Tie Bars

#6 x 50" Multi Piece Tie Bar set includes (1) 25" threaded male and (1) 25" threaded female with coupling.

#M1002

#5 x 42" Multi Piece Tie Bar set includes (1) 21" threaded male and (1) 21" threaded female with coupling.

#M2002



#4 x 34" Multi Piece Tie Bar set includes (1) 17" threaded male and (1) 17" threaded female with coupling.

#M3002

Custom sizes and lengths available.



Tilt Wall

TWM Lift Insert

The lift insert assembly is easily positioned and tied to the rebar mat. They are the attachment points for the lifting cables during erection of concrete panels.

The insert assembly is available in standard overall heights (tilt wall panel thickness) of 5- 1/2", 6", 6-1/2", 7", 7-1/4", 8", 9", 10", 11" and 12". Other sizes available upon request

TWM Lift Clutch

Attaches to the spherical head of the lift insert. Used for lifting of panel.

TWM Brace Insert

Tied to reinforcing bar before pouring of the panel. Allows attachment of tilt wall brace
The insert assembly is available in standard overall heights (tilt wall panel thickness) of 5- 1/2", 6", 6-1/2", 7", 7-1/4", 8", 9", 10", 11" and 12". Other sizes available upon request

TWM 3/4" Inverted Brace Insert

Used for attaching brace to the outside of the panel when there is insufficient room to attach on the inside of the panel.

TWM Edge Lift Insert

Allows lifting of the panel from the edge of the wall instead of the side.

TWM Shear Bar 23.5"

Supports the positioning of the TWM Edge Lift Insert.

TWM Tension Bar

TWM Reveal

TWM Barrel Spicket

TWM Clear Resin Base Cure

TWM Bond Breaker/Cure

TWM Barrel Agitator

TWM Barrel Handle

TWM 3.5 Gallon Sprayer

TWM Shim Pack

TWM Pipe Brace Coupler

Coupler that attaches to the pipe brace and pipe brace extension for extending the length of brace

TWM Pipe Brace Extension

Attaches to pipe brace coupler and pipe brace for extending the length of pipe brace.

TWM Pipe Brace

Adjustable steel brace used to temporarily support the panel after lifting.

TWM 3/4" x 3-1/2" Coil Bolt

Secures pipe brace to brace insert on the panel.

TWM 3/4" Coil Wing Nut

Allows for easy installation on 3/4" adjustable coil bolt.

TWM Washer Plate

Acts as a backup washer plate for the coil bolt when attached to a strongback.

TWM 3/4" x 18" Adjustable Coil Bolt

Adjustable and attaches strongback to the panel.

Emergency Lift Plate

Used when existing lift anchor is inaccessible or in incorrect position. Bolted to panel.

TWM Spreader Beam

Used for multiple pick points, distributes weight evenly.

Full take-off capabilities and detailing plans available.



Welded Dowel Assemblies / Load Transfer Baskets

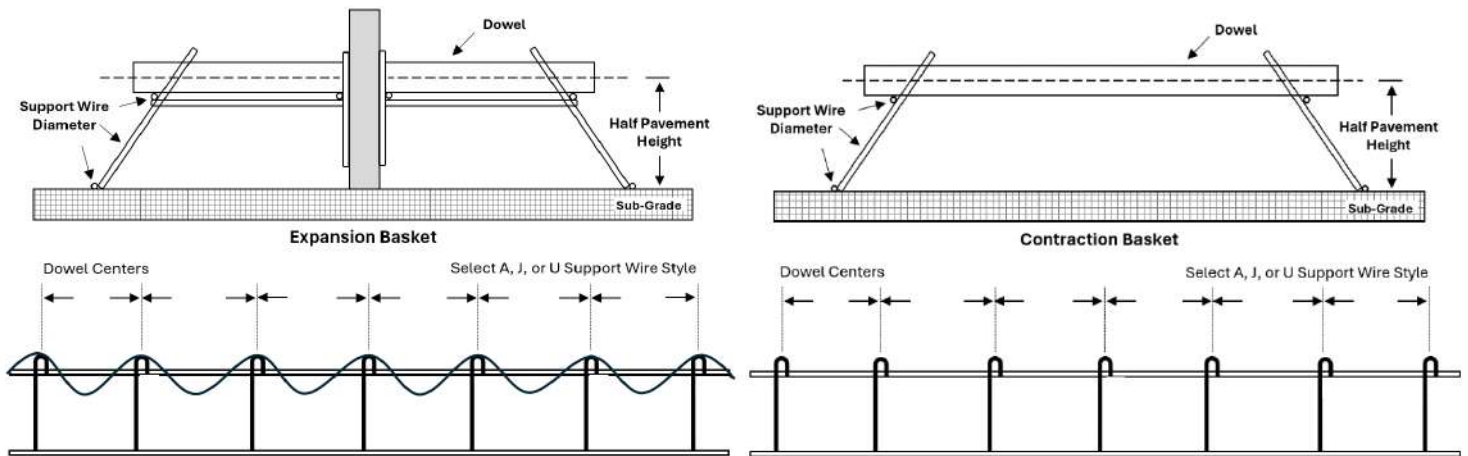
Each order is manufactured to customer specifications.

Dowels Coating Available:

Plain, Red Oxide Painted, Epoxy Coated, Tectyl Dipped, & Galvanized

Side Frame Coatings Available:

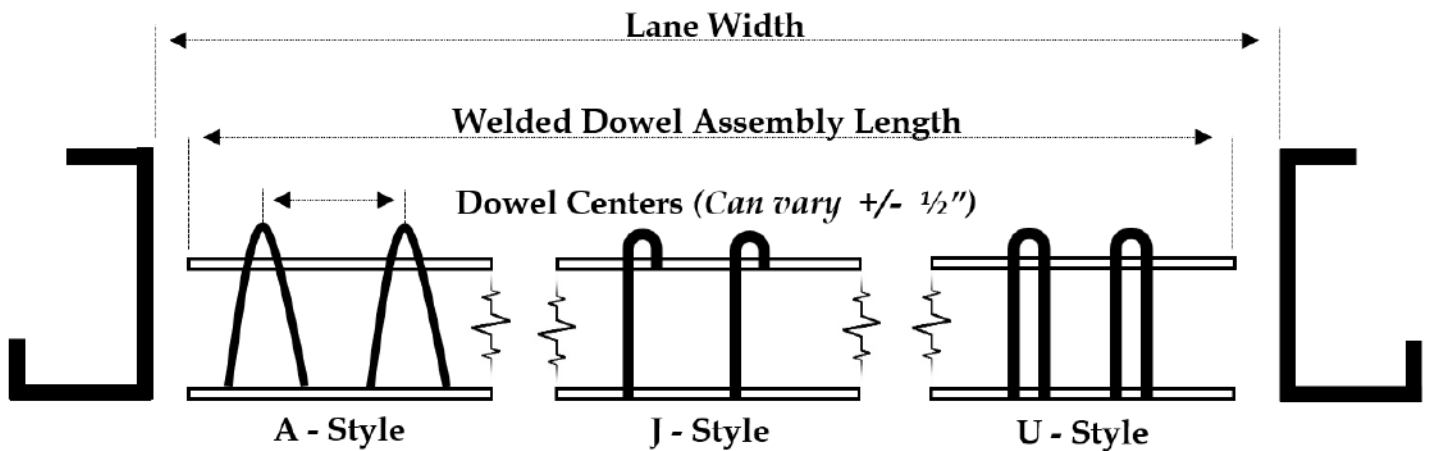
Plain, Red Oxide Painted, & Tectyl Dipped



Also available:

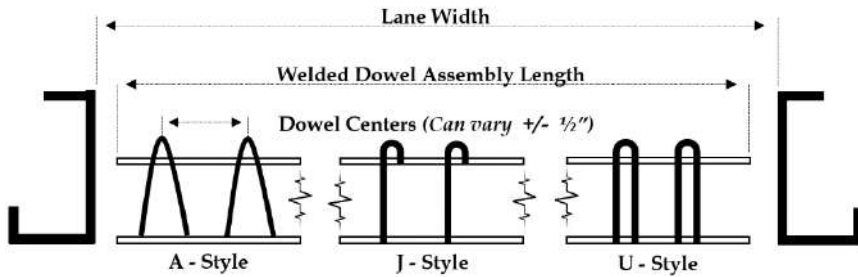
Tie Bar Baskets, Dummy Baskets, Skewed Baskets, & Cantilever

Meets DOT Specifications



$$\text{Billable Length} = \text{Number of Dowels} \times \text{Spacing}$$

Quote Information



DOWEL COATING SELECTION

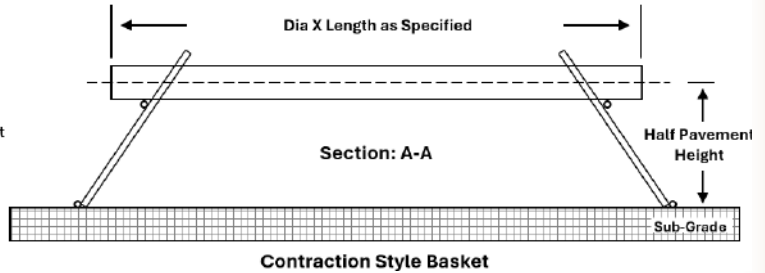
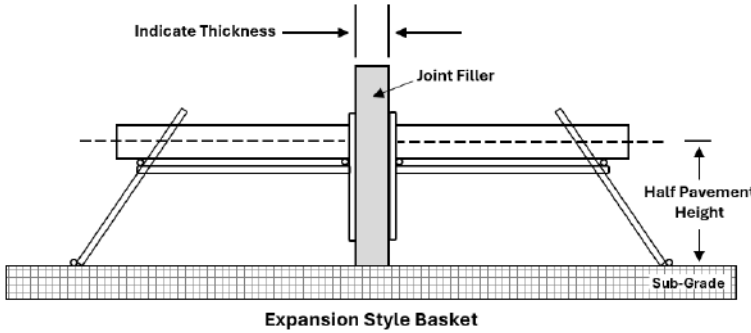
- Plain
- 1/2 Red oxide Painted
- 3/5 Red oxide Painted
- Red oxide Painted
- Epoxy Coated
- Epoxy Coated w/Patched Ends
- Tectyl Dipped

SIDE FRAME COATING SELECTION

- Full Dipped Red Oxide Painted
- Bottom 1" Epoxy Coated

WIRE SIZE

- .250 ga
- .306 ga
- .362 ga



Today's Date

Date Material is Needed

Name

Company

E-mail

Coating Spec. Requirements

Project Name

Ship to City, State

Made to Order Baskets

Billable Length = Number of Dowels x Center

Dowel Size (Dia. x Length)	Dowel Coating	Basket Type (Cont. or Expan.)	Pvmt. Height	Centers	Leg Style	Length of Basket	QTY of EACH	QTY of LFT	Wire Size	# of Dowels	Side Frame Coating

Loose Dowels

Dowel Size (Dia. x Length)	Dowel Coating	QTY of EACH	Dowel Size (Dia. x Length)	Dowel Coating	QTY of EACH

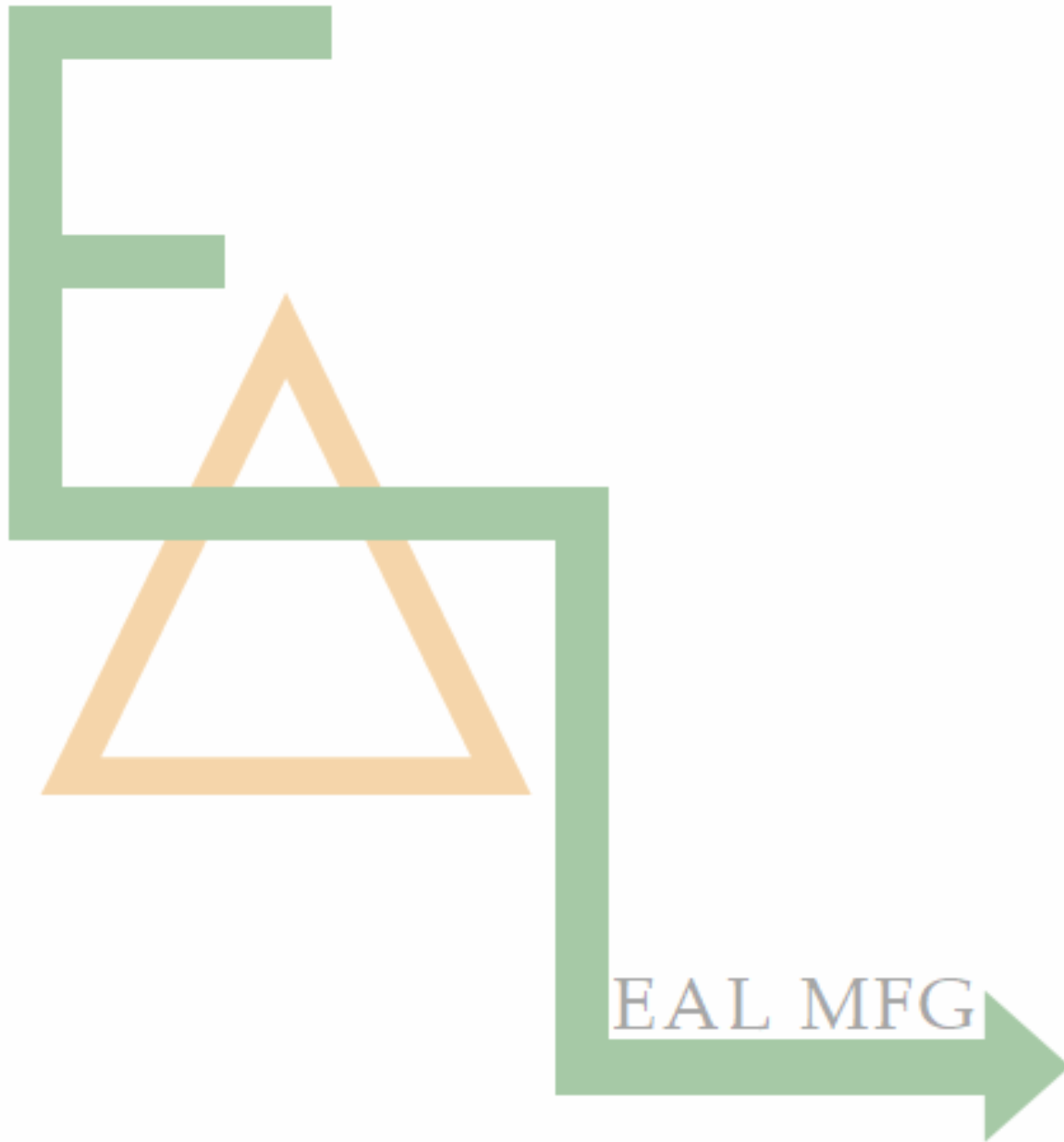
Other Items Needed

Item	QTY of EACH	Item	QTY of EACH

Call for a quote today!!

(214) 630-1154 www.ealmfg.com

(Basket Stakes, P-Stakes, Dowel Caps, ETC.)



3912 W. ILLINOIS AVE. DALLAS TX, 75211

(214) 630-1154

www.ealmfg.com



11/2024 -V1