



Department of Public Administration - Maintenance Operations  
Architecture, Facility Management Services and Street Light Utility

1532 West Michigan Street • Duluth, Minnesota • 55806  
218-730-5730 • FAX 218-723-3560

[tgroshong@duluthmn.gov](mailto:tgroshong@duluthmn.gov)

August 26, 2010

**ADDENDUM NO. 1 - Bid # 10-28DS CITY HALL ELEVATOR MODERNIZATION.**

Project Number: 0907

**TO ALL BIDDERS:**

This ADDENDUM is issued to modify, interpret or supplement the bidding documents and is hereby made a part of the bidding documents. Please attach this ADDENDUM to the Project Manual in your possession, make the following modification to your Bid and acknowledge receipt of this ADDENDUM on your Bid Form.

***SPECIFICATIONS:***

1. The following plan holders are on record as of this date:

*Laggerquist Elevators.* – 302 West Superior Street, Suite 508 Lonsdale Bldg., Duluth, MN 55802

*Schindler Elevator Corp.*, 301 West First Street, Duluth, MN 55802

*Thyssen Krupp Elevator*, 4511 West First Street, Duluth, MN 55802

*Minnesota Elevator, Inc.*, 19336 – 607<sup>th</sup> Avenue, Mankato, MN 56001

*Otis Elevator Co.*, 411 West Michigan Street, Duluth, MN 55802

2. BID TIME: *EXTENSION* - There is a need and desire to extend this bid time. The new bid date and time is as follows:

**Tuesday, September 14, 2010 at 2:00 PM, CST.** All other items remain the same.

3. APPROVALS:

A. SEE ATTACHED “PRODUCTS” AT END OF ADDENDUM.

4. DECOMMISSION ELEVATORS (as provide by Elevator Advisory Group):

Please note the following changes and/or modifications to the project specifications for the modernization of the elevators in the CITY HALL located in Duluth, Minnesota:

- A. BID DUE DATE: **The bid due date has been extended from August 24<sup>th</sup> to Tuesday, September 14<sup>th</sup>, 2010 at 2:00 PM - CST.**

B. 2.01 SCOPE OF WORK

The two traction passenger elevators (#1 and #2) shall be decommissioned by the following means:

**(ADD)**

4. **Install concrete floors (minimum of 150lb sq/ft) at each level of both hoistways. At the lowest landing, provide steel grating floors in lieu of concrete (in both hoistways)**
5. **Provide and install lockable, 2 hour rated steel swing doors and jambs at each level in both hoistways.**

Remove **the following**

**(ADD)**

6. **Remove both elevators in their entirety including ALL related equipment and parts from their respective machine rooms and hoistways.**
7. **Remove ALL hoistway doors and tracks.**

**If you should notice any discrepancies, have any questions, comments, or request clarification – please feel free to contact our office.**

**KATHY MARKWELL**

Elevator Advisory Group, Inc.  
375 Kellogg Boulevard East  
Saint Paul, MN 55101  
651.293.0595

5. MODERNIZATION ELEVATORS (as provide by Elevator Advisory Group):

Please note the following changes and/or modifications to the project specifications for the modernization of the elevators in the CITY HALL located in Duluth, Minnesota:

A. BID DUE DATE: **The bid due date has been extended from August 24<sup>th</sup> to Tuesday, September 14<sup>th</sup>, 2010 at 2:00 PM - CST.**

B. 2.01 DATA OUTLINE

**(ADD) PIT LADDER:** Remove and replace with NEW code-compliant pit ladder

**(ADD) GOVERNOR TENSION SHEAVES:** Provide NEW

C. 2.53 CAB, 3., e.

**TOE KICK (replace with) GUARD – ~~Stainless Steel~~ (replace with) CODE COMPLIANT**

D. 2.54 RELATED WORK, A. ~~Work By Owner~~ **(replace with) ADDITIONAL WORK INCLUDED**

E. 2.54 RELATED WORK, A. **ADDITIONAL WORK INCLUDED,**

2. Any modification to existing shaftway to provide a legal shaftway in compliance with the latest code requirements, **(ADD)** including but not limited to setbacks and ledges.

7. Any modifications to machine room to provide adequate and code compliant access to same.

**(ADD)** Stabilize and re-inforce the existing ship ladder to machine room to provide safe and convenient access. Provide a legal landing with steps outside of machine room.

**(ADD)** Provide adequate access to machine room for removal and replacement of any equipment, including cranes. Upon completion of project, access shall have a code-compliant, lockable door installed.

F. 2.54 RELATED WORK, . **WORK BY ELEVATOR CONTRACTOR: *(REMOVE THE FOLLOWING)***

~~1. Contractor must assist Owner with coordination of WORK BY OWNER (as described in 1.13 Related Work — WORK BY OWNER)~~

7. **Painting of machine room *(ADD)* and PIT floors with good grade of grey enamel paint.**

**If you should notice any discrepancies, have any questions, comments, or request clarification – please feel free to contact our office.**

***KATHY MARKWELL***

Elevator Advisory Group, Inc.  
375 Kellogg Boulevard East  
Saint Paul, MN 55101  
651.293.0595

**DRAWINGS:** PLEASE ADD THE ATTACHED DRAWING SHEET A1:1 AS PART OF THE CONTRACT DOCUMENTS. PLEASE NOTE THAT DETAILS SHOWN ARE REPRESENTATIVE OF MINIMUM QUALITY AND DESIGN STANDARDS. ALTERNATIVES AND ADJUSTMENTS ON SITE ARE ANTICIPATED.

End Addendum 1

Sincerely,

A handwritten signature in blue ink, appearing to read "Terry Groshong". The signature is stylized and cursive.

Terry L. Groshong, AIA  
City Architect



Department of Public Administration - Maintenance Operations  
Architecture, Facility Management Services and Street Light Utility

1532 West Michigan Street • Duluth, Minnesota • 55806

218-730-5730 • FAX 218-723-3560

[tgroshong@duluthmn.gov](mailto:tgroshong@duluthmn.gov)

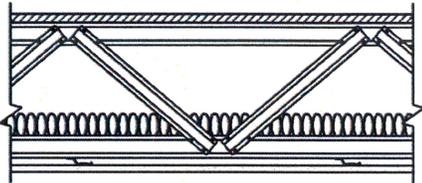
ADDENDUM ONE

APPROVED PRODUCT SPECS  
CITY HALL ELEVATOR MODERNIZATION

BID #: 10-28DS  
BIDS DUE: September 14, 2010

## Floor/Ceiling Assemblies - Steel Framing

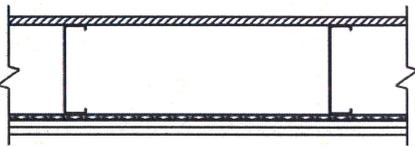
<b>1 Hour</b>	Design #	GA File #	STC - N/A	IIC - N/A
	<b>UL L565</b>	<b>FC 4515</b>	Sound Test # N/A	Test # N/A



[Link to .PDF file](#)  
[Link to .DWG file](#)  
[Link to .DWG/Text file](#)

5/8" (15.9 mm) Fire-Shield C Gypsum Board applied at right angles to resilient furring channels 12" o.c. when insulation is used and 16" o.c. without insulation. Gypsum board attached with 1-1/8" type S drywall screws 12" o.c. Gypsum board end joints attached with screws 12" o.c. to additional pieces of channel 60" long located 3" back on either side of end joints. Resilient furring channels applied at right angles to light gage steel trusses spaced 48" o.c. with 1/2" Type S-12 screws. Steel trusses supporting 23/32" wood structural panels applied at right angle to trusses with construction adhesive and mechanical fasteners 12" o.c. and 15/32" wood structural panel underlayment applied at right angles to trusses with mechanical fasteners 12" o.c. Joints staggered between underlayment and subfloor.

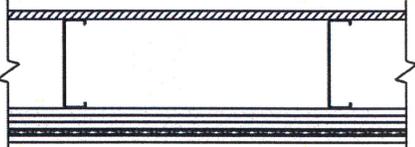
<b>1.5 Hour</b>	Design #	GA File #	STC - N/A	IIC - N/A
	<b>UL L527</b>		Sound Test # N/A	Test # N/A



[Link to .PDF file](#)  
[Link to .DWG file](#)  
[Link to .DWG/Text file](#)

Base Layer 5/8" (15.9 mm) Fire-Shield C Gypsum Board applied at right angles to resilient furring channels with 1" Type S screws 24" o.c. Resilient furring channels applied at right angles to channel shaped steel joists and spaced 16" o.c. with 1/2" Type S-12 screws to steel joists 24" o.c. Face layer 5/8" Fire-Shield C Gypsum Board applied at right angles to channels through base layer with 1-5/8" Type S drywall Screws 12" o.c. Edge joints offset 16" from base layer joints. Butt joints of face layer to occur between resilient channels with 1-1/2" type G screws spaced 8" o.c. attached to base layer. Steel joists supporting 3/4" T&G plywood floor applied at right angle to joists

<b>2 Hour</b>	Design #	GA File #	STC - N/A	IIC - N/A
	<b>UL L556</b>	<b>FC 4750</b>	Sound Test # N/A	Test # N/A



[Link to .PDF file](#)  
[Link to .DWG file](#)  
[Link to .DWG/Text file](#)

Base Layer 5/8" (15.9 mm) Fire-Shield Gypsum Board applied at right angles to 8" steel joists 24" o.c. with 1-1/4" Type S-12 drywall screws 12" o.c. Second layer 5/8" Fire-Shield Gypsum Board applied at right angles to joists with 2" Type S-12 drywall Screws 12" o.c. Joints staggered 24" from base layer. Third layer 5/8" Fire-Shield Gypsum Board applied at right angles to joists with 2-1/2" Type S-12 drywall Screws 12" o.c. Joints staggered 12" from second layer. Rigid furring channels applied at right angles to joists over third layer with two 2-1/2" Type S-12 drywall Screws at each joist. Face layer 5/8" Fire-Shield Gypsum Board applied at right angles to furring channels with 1-1/8" Type S drywall Screws 12" o.c. Steel joists supporting 3/4" T&G plywood floor applied at right angle to joists with #10x1-5/8" screws 12" o.c. along joists.

ELEVATOR SHAFT FLOOR INFILL ASSEMBLY

FLOOR LEVELS 1-4

GROUND FLOOR/SUB BASEMENT DIFFERENT



- ABOUT
- WEATHERSTRIPS**
- THRESHOLDS
- MATS & GRATES
- STRIP DOORS
- DOOR ACCESSORIES
- HOW TO ORDER
- CONTACT

Path: [Online Catalog](#) - [Weatherstrips](#) - [Magnetic Weatherstrip](#) - 574C-48

**Drawing**

Reese Catalog Number: 574C-48

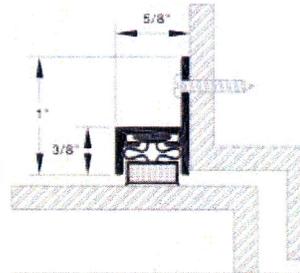
Description: 574C-48 - Anodized Clear Aluminum, Magnetic Weatherstrip, 1" x 5/8", Length: 48 inches

Retail Price\*: \$ 29.36 each

Quantity:

Options:

Comment (specify fractional inches or comments here)



All parts come with holes unless otherwise specified.

\* Note all items are listed at retail price.

Your actual price will vary.

Call and hear for yourself.

**1-800-328-0953**



- ABOUT
- WEATHERSTRIPS
- THRESHOLDS
- MATS & GRATES
- STRIP DOORS
- DOOR ACCESSORIES
- HOW TO ORDER
- CONTACT

Path: [Online Catalog](#) - [Thresholds](#) - [Saddle Threshold](#) - S205A

**Installation** **Drawing**

Reese Catalog Number: S205A

Description: S205A - Mill Aluminum Saddle Threshold, 1/2" x 5"

Retail Price\*: \$ 10.49 per foot



Fire Rated



Handicap Accessible

Quantity:

Options:

Length

inches

Comment (specify fractional inches or comments here)

Fire Rated

Yes  No

All parts come with holes unless otherwise specified.

\* Note all items are listed at retail price.

Your actual price will vary.



Call and hear for yourself.

**1-800-328-0953**

# INSTALLATION INSTRUCTIONS



1. Preferred installation method uses two people. One installer and one helper.
2. The installer should be standing on the push side (the side of the door that you would have to push the door away from you in order to open it) of the opening with the helper on the pull side (the side of the door that you would have to pull towards you in order to open it).
3. Before installing, check opening for correct size. Rough opening should be door width + 2" and door height + 1" (3'0" x 7'0" door will have opening of 38" x 85")
4. Open package and place trim piece and installation tools on push side of opening.
5. Place door side of unit on pull side of opening.
6. Have helper stand door side up in the opening.
7. Push unit tight against hinge jamb side of opening.
8. Engage 4 compression anchors by turning the anchor with screw driver clockwise.
9. Place 4' level vertically on hinge edge of frame.
10. If out of level / plumb, compress and/or expand compression anchors to adjust the frame in the opening on both jambs.
11. Once frame is correct in the opening use the #8 x 2" screws to attach the unit to the wall framing at screw holes located in flange on frame. (4 screws into each jamb) – do not over tighten.
12. On pull side of the door have helper screw in the 2 each #8 x 2 1/2" screws at the base of each jamb.
13. Remove the two screws from the spreader bar and take the spreader bar off of the unit. This can be thrown away.
14. Take the trim piece and slide the tabs on the trim piece into the slots on the door side.
15. Slide trim piece onto door side until it is tight against the wall.
16. Clamp the frame together to hold firm while attaching.
17. Pre-drill through the tab once trim side is clamped tight to the wall.
18. At the 4 compression anchor locations insert self tapping screw into screw hole.
19. Drive the screw through the tab from the trim piece and into the wall. Do not over tighten.
20. Push plugs into the 4 holes at compression anchor locations.
21. On push side of the door have helper screw in the 2 each #8 x 2 1/2" screws at the base of each jamb.
22. Install wall stop, closer arm, and / or any other loose hardware items.
23. Clean up and move on to the next one.

© 2009 Amweld International, LLC. All rights reserved. Marks having the designation of ® or TM are the property of Amweld International, LLC.

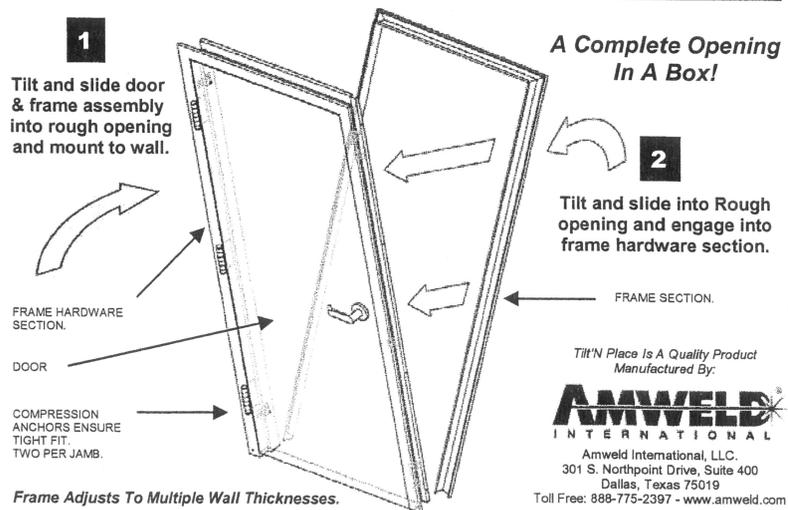
12-2-09 / DP-Amweld

## The Following Is Included:

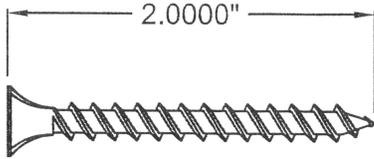
- Screws:
  - 8 Each [#8 x 2"] Stud Screws
  - 4 Each [#10 x 2 1/2" SMS] Trim Screws with security head
  - 4 Each [#8 x 2-1/2"] Sill Screws
- Security bit for trim screws
- Any loose hardware / silencers

## You Will Need These Tools:

- Level
- Screwdriver
- P2 Bit & #2 Drill Bit
- Clamps



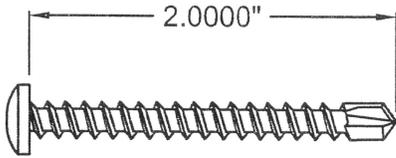
A



QTY 8 - #8 x 2" FHS

Attaches Frame Hardware Section to Wall.

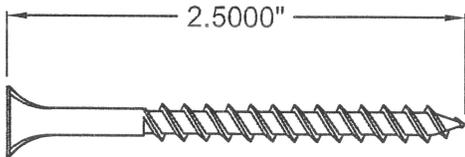
B



QTY 4 - #10 x 2" OHS (Security Screw)

Attaches Frame Trim Section to Wall.

C



QTY 4 - #8 x 2-1/2" FHS

Attaches Frame to wall at Base of Jamb.

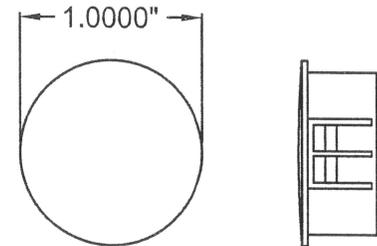
D



QTY 1 - SECURITY SCREW BIT

Drive Bit for Security Screws above.

E



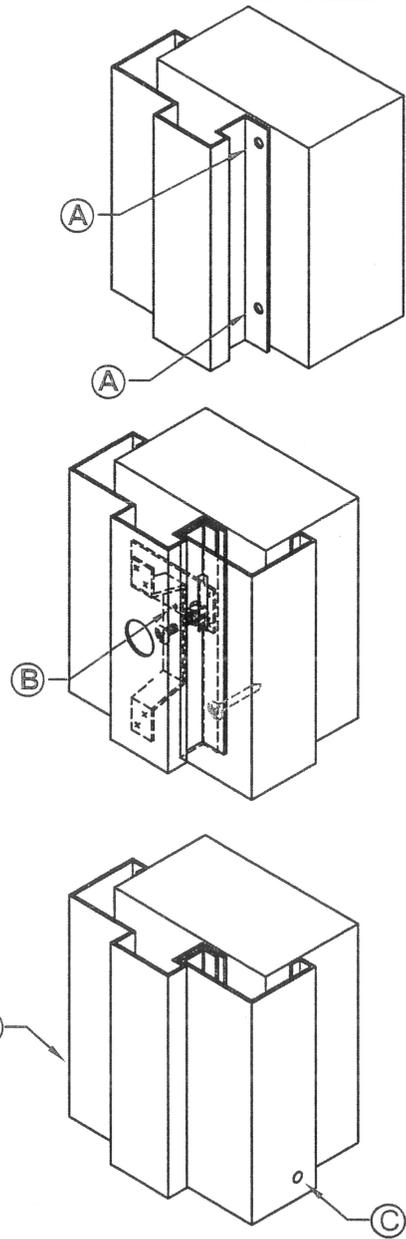
QTY 4 - PLASTIC COVER

Hole Plug. Install after assembly.

F

QTY 2 - KEYS & QTY 1 PUSH PIN

For supplied Hardware.



These Items should be supplied in the Installation Instruction Package with every hardware frame section for the TNP Product.

PRODUCT LINE: TILT'N PLACE SCREW PACK

REVISIONS

**AMWELD**  
INTERNATIONAL

WWW.AMWELD.COM

DRAWN BY:

EEH

APPROVED BY:

DATE:

5/28/10

DATE APPROVED:

LTR.

CHANGE

DATE

BY

DRAWING NO:

TNP-SCREWPACK



OR EQUAL

Toll Free: (800) 541-3912

Search here...

Go!

Request For Quote

- Architectural Screening / Fencing
  - View Blocking Louvers
    - Steel View Blocking Louvers - Orsogril
      - Orsogril Talia
    - Aluminum View Blocking Louvers
  - Rectangular Mesh Patterns
    - Standard and Heavy Rectangular Steel
      - Orsogril Sterope
      - Orsogril Britosterope
    - Narrow Rectangular Steel
      - Orsogril Danae
    - Barnett Bates Aluminum
    - Aluminum: STB-A / STB-B
    - Aluminum: AA-4
  - Square Mesh Patterns
    - Largest Square and UBC Square Steel
      - Orsogril Alcione
    - Mid-Square and Small Square Steel
      - Orsogril Pleione
      - Orsogril Dione
    - Inchblock - Steel Pattern
    - Square Mesh Patterns - Aluminum
    - Square Mesh Patterns - Aluminum (AA-2, AA-4)
  - Gates - Hinged or Cantilever - Sliding
    - Steel
    - Aluminum
- All Types of Grating ←
  - Steel Grating
  - Heavy Duty Steel Grating
  - Aluminum Grating ←
  - Aluminum Plank Grating
  - Stair Treads
    - Aluminum & Steel
  - Safety Grating
  - Fiberglass Grating
- PhotoFocus Design Ideas
- Download Library
- Finishing & Colors
- BB20 20-Year Limited Warranty
- Fabrication Standards

Ask a Question

Your Name:  
.....

Your Email:  
.....

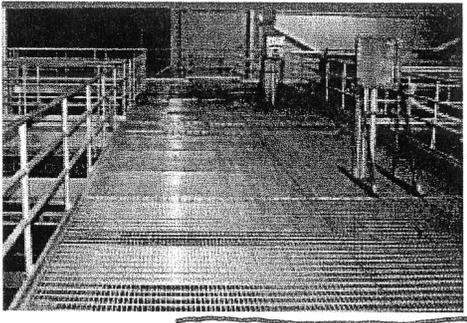
Your Question:  
.....

Submit

Home » [All Types of Grating](#) » Aluminum Grating

- [About Us](#)
- [Our Process](#)
- [Links](#)
- [Contact Us](#)

## Aluminum Grating ←



EXAMPLE OF GROUND FLOOR INFILL.

These Products on the Job:



**Why specify aluminum?** The unique metallurgical properties and exceptional strength-to-weight ratio of aluminum grating offers solid money-saving benefits for many applications. It is lighter in weight and is therefore easier to handle and install than steel grating. Because it does not rust, aluminum grating is commonly used in food preparation facilities, water and waste-water treatment plants, pumping stations and aboard ships. Its non-sparking properties are ideal for safety in industries where volatile chemicals are handled.

**Good reasons to choose BarnettBates:** Friendly and accurate assistance from the first call, fair pricing, fast/accurate fabrication and on-time delivery to the job site. Depend on it.

Our aluminum grating is manufactured with your choice of either standard rectangular main (bearing) bars or bearing bars with an "I-bar" extrusion profile. The I-bar profile offers top and bottom surface grooves and provides the same strength using less aluminum when compared with rectangular bars having the same maximum bar width and height dimensions. Both rectangular and I-bar shapes are extruded from 6063-T6 or 6061-T6 aluminum (per ASTM B-221). I-bar grating is available in sizes 1" through 2-1/2". Rectangular bar grating is available in sizes ranging from 1" x 1/8" up to 2-1/2" x 3/16". Rectangular bars are also available with a serrated surface for added safety. All BarnettBates grating is (and always has been) manufactured in full compliance with NAAMM standards.

BarnettBates offers an unusually wide variety of grating configurations from close mesh with bearing bars spaced at 5/16" to open mesh with up to 1-7/8" spacing, in panel widths up to 3' and spans up to 24'. Other panel widths and lengths are available via special order. Aluminum gratings are commonly supplied unfinished (mill finish), but are also available with optional anodized or powder coated finishes. An abrasive SlipNOT anti-slip surface finish is also available to enhance skid resistance.

**Crossbar Design Unique to the industry** - Without an increase in cost, the proprietary (and fully NAAMM compliant) BarnettBates Crossbar Design offers the architect or project specifier what many consider to be a much more attractive "clean-look" finished product appearance - with enhanced strength and rigidity... and without the unsightly machine twisted/swage crossbars common to competitive aluminum grating.

### **Here's how our unique assembly process works...**

BarnettBates aluminum grating features expanded tubular cross bars (ASTM B-210), the structural efficiency of which is enhanced during our grating assembly/manufacture process. Tubular cross bars are inserted into pre-punched holes in the bearing bars. A mandrel is drawn through each cross bar tube expanding the tube to pressure-lock the bars in place creating four evenly spaced "flutes" extending the entire length of the crossbar. The resulting fluted crossbars and the work-hardening that occurs during manufacture enhances grating rigidity in the crossbar direction. This superior pressure-lock process assures maximum grating strength and service life.

Contact Us for more information - samples, as needed.

BarnettBates Corporation  
500 Mills Road  
Joliet, IL 60433  
Toll-Free: (800) 541-3912  
Fax: (815) 726-9210



[Privacy Policy](#) | [Site Map](#)

© BarnettBates Corporation. All rights reserved.

Website Marketing by Top Floor Technologies

# 19-4 / 19-2 Aluminum Grating Load Table

Bearing Bar Size		Clear Span												Weight Per Sq. Ft. (lbs) [I-Bar]								
		2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"	8'-0"	9'-0"	19-4	19-2	15-4	15-2	11-4	11-2		
1 x 1/8	U	.421	.269	.187	.137	.105	.83	Loads and deflections are theoretical values based on 12,000 PSI unit stress. For pedestrian comfort deflections in excess of 1/4" are not recommended.  U = Uniform Load, lbs. per sq.ft. C = Concentrated Mid-Span Load, lbs. per ft. of grating width D = Deflection in Inches														
	D	.144	.225	.441	.441	.576	.729															
	C	.421	.337	.241	.241	.211	.187															
	D	.115	.180	.353	.353	.461	.583															
1 x 3/16 or 1" I-bar	U	.632	.404	.281	.206	.158	.125															
	D	.144	.225	.441	.441	.576	.729															
	C	.632	.505	.421	.361	.316	.281															
	D	.115	.180	.259	.353	.461	.583															
1 1/4 x 1/8	U	.658	.424	.292	.215	.164	.130													.105	.87	.73
	D	.115	.180	.259	.353	.461	.583													.720	.871	1.037
	C	.658	.526	.439	.376	.329	.292													.263	.239	.249
	D	.092	.144	.207	.272	.369	.467													.576	.697	.829
1 1/4 x 3/16 or 1 1/4" I-bar	U	.987	.632	.439	.322	.247	.195	.158	.130	.110	.93	.81										
	D	.115	.180	.259	.353	.461	.583	.720	.871	1.037	1.217	1.411										
	C	.987	.789	.658	.564	.493	.439	.395	.359	.329	.304	.282										
	D	.092	.144	.207	.282	.369	.467	.576	.697	.829	.973	1.129										
1 1/2 x 1/8	U	.947	.606	.424	.309	.237	.187	.152	.125	.105	.90	.77	.59	.47								
	D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	1.944								
	C	.947	.758	.632	.541	.474	.421	.379	.344	.346	.291	.271	.237	.211								
	D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	1.555								
1 1/2 x 3/16 or 1 1/2" I-bar	U	1.421	.909	.632	.464	.355	.281	.227	.188	.158	.135	.116	.89	.70								
	D	.096	.150	.216	.294	.384	.486	.600	.726	.864	1.014	1.176	1.536	1.944								
	C	1.421	1.137	.947	.812	.711	.632	.568	.517	.474	.437	.406	.355	.316								
	D	.077	.120	.173	.235	.307	.389	.480	.581	.691	.811	.941	1.229	1.555								
1 3/4 x 3/16 or 1 3/4" I-bar	U	1.934	1.238	.860	.632	.484	.382	.309	.256	.215	.183	.158	.121	.96								
	D	.082	.129	.185	.252	.329	.417	.514	.622	.741	.869	1.008	1.317	1.666								
	C	1.934	1.547	1.289	1.105	.967	.860	.774	.703	.645	.595	.553	.484	.430								
	D	.066	.103	.148	.202	.263	.333	.411	.498	.592	.695	.806	1.053	1.333								
2 x 3/16 or 2" I-bar	U	2.526	1.617	1.123	.825	.632	.499	.404	.334	.281	.239	.206	.158	.125								
	D	.072	.113	.162	.221	.288	.365	.450	.545	.648	.761	.882	1.152	1.458								
	C	2.526	2.021	1.684	1.444	1.263	1.123	1.011	.919	.842	.777	.722	.632	.561								
	D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166								
2 1/4 x 3/16 or 2 1/4" I-bar	U	3.197	2.046	1.421	1.044	.799	.632	.512	.423	.355	.303	.261	.200	.158								
	D	.064	.100	.144	.196	.256	.324	.400	.484	.576	.676	.784	1.024	1.296								
	C	3.197	2.558	2.132	1.827	1.599	1.421	1.279	1.163	1.066	.984	.914	.799	.711								
	D	.051	.080	.115	.157	.205	.259	.320	.387	.461	.541	.627	.819	1.037								
2 1/2 x 3/16 or 2 1/2" I-bar	U	3.947	2.526	1.754	1.289	.987	.780	.632	.522	.439	.374	.322	.247	.195								
	D	.058	.090	.130	.176	.230	.292	.360	.436	.518	.608	.706	.922	1.166								
	C	3.947	3.158	2.632	2.256	1.974	1.754	1.579	1.435	1.316	1.215	1.128	.987	.877								
	D	.046	.072	.104	.141	.184	.233	.288	.348	.415	.487	.564	.737	.933								

**NOTE:** When gratings with serrated bearing bars are selected, the depth of grating required to service a specified load will be 1/4" greater than shown in the table above

## Conversion Table

The loads shown above are for type 19-4 and 19-2 gratings. To determine the load carrying capacities for alternative bar spacings, multiply the loads given by the following conversion factors (Deflection remains constant): For types 15-4 and 15-2: 1.26 For types 11-4 and 11-2: 1.71 For types 10-4 and 10-2: 1.87 For types 8-4 and 8-2: 2.32 For types 7-4 and 7-2: 2.68 For types 6-4 and 6-2: 3.10 Other spacings available

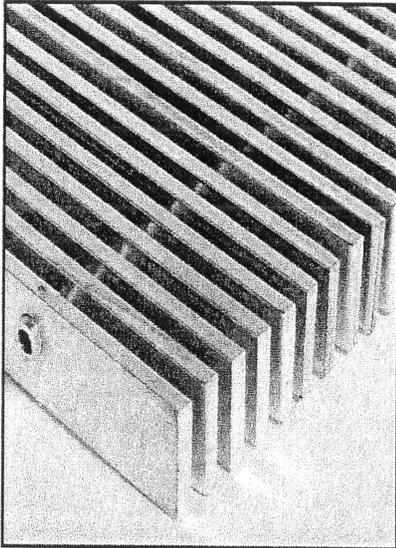
## Selection Guide: 19-4 Plain Surface Grating

For deflection of not more than 1/4" when subjected to the severest of the following: (1) the uniform loads below, (2) under concentrated mid-span loads of 300 lbs. up to 6'-0" span, or (3) 400 lbs. for spans 6'-0" and over.

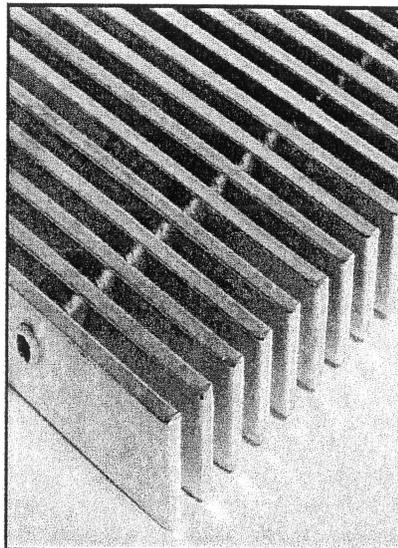
Safe Uniform Load lbs./Sq.Ft.	2'-0"	2'-6"	3'-0"	3'-6"	4'-0"	4'-6"	5'-0"	5'-6"	6'-0"	6'-6"	7'-0"
50	1 x 1/8	1 x 1/8	1 x 3/16	1 x 3/16	1 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16
75	1 x 1/8	1 x 1/8	1 x 3/16	1 x 3/16	1 1/4 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16
100	1 x 1/8	1 x 1/8	1 x 3/16	1 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16
125	1 x 1/8	1 x 1/8	1 x 3/16	1 1/4 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16	
150	1 x 1/8	1 x 1/8	1 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16	
200	1 x 1/8	1 x 1/8	1 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16		
300	1 x 1/8	1 x 3/16	1 1/4 x 3/16	1 1/2 x 3/16	1 3/4 x 3/16	2 x 3/16	2 1/4 x 3/16	2 1/2 x 3/16			

**Bearing Bar/Crossbar Spacings - widest range available anywhere. (Examples shown below)**

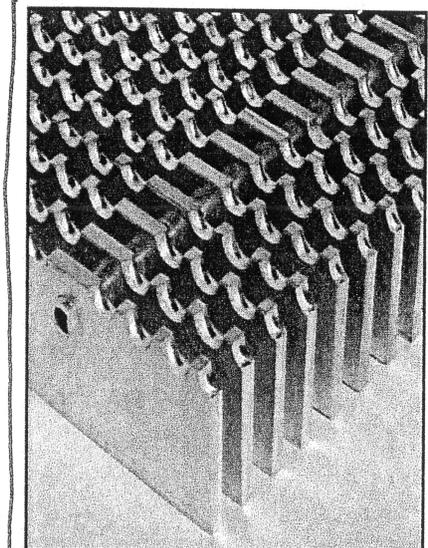
BarnettBates offers spacing narrow enough to meet ADA requirements and to help prevent footwear from being caught, or wide enough for special purpose product screening or equipment safety shielding.



*P-6-4, 1" x 3/16", Smooth Surface, 3/8" bearing bar centers; 4" cross bar centers*



*P-7-4, 1" x 3/16", Smooth Surface, 7/16" bearing bar centers; 4" cross bar centers*



*P-8-4, 1" x 3/16", Serrated Surface, 1/2" bearing bar centers; 4" cross bar centers*

