



ej

Access Covers,  
Grates, and Frames  
Catalog 18



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Visit [ejco.com](http://ejco.com) for a comprehensive product database with advanced search and browsing capabilities.

# We are making good things happen.



Through the years, we've forged strong bonds with our customers. As a company with strong roots in family and heritage, it's no wonder that we regard our customers as part of our family as well. We call it our *customer connection* and we continuously strive to improve it by:

- furnishing product design support from conception through installation
- providing onsite assistance by our engineers and customer service personnel who know the local standards
- hosting seminars and technical demonstrations
- providing engineers and architects with the necessary tools (for example, drawings to aid the specification process)
- communicating new product innovations and additions to product lines
- delivering products quickly and smoothly worldwide

All sales by EJ USA, Inc. are subject to and governed by the EJ USA, Inc. Terms and Conditions of Sale, which can be located at <http://r.ejco.com/ustc> and are hereby incorporated into this catalog by reference.

# Access Covers, Grates, and Frames

## Catalog 18



### One Company. Many Solutions.

EJ is a family-owned company that has grown into a global supplier of infrastructure access solutions. Along the way, EJ acquired the strengths and talents of several reputable companies throughout the U.S. and Canada.

EJ customers can expect a robust portfolio of products and services designed to meet their specific needs—all backed by a legacy built on trust and reliability. Our ability to leverage the largest range of access solutions allows us to bring you more solutions with a focus on ergonomics, security and safety.

In addition, our castings meet Federal and State transportation departments and individual customer specifications throughout North America. This Access Covers, Grates, and Frames catalog contains products such as manhole frames and covers, drainage frames and grates, curb inlets, and trench products. A listing of available Individual product catalogs can be viewed in the Additional Information section (pages 365-370).

# We Are EJ

EJ is the leader in the design, manufacture and distribution of access solutions for water, sewer, drainage, telecommunications and utility networks worldwide.

We offer the broadest range of high-quality infrastructure access solutions. Our distribution coverage continues to expand into new markets. As an entrepreneurial family-owned company, we have a long, successful heritage of meeting change with innovation.

Since our founding in 1883, we have grown by providing access solutions to meet the demands of the world's growing infrastructure. Fueled by innovation, our design, manufacturing, and distribution processes continue to evolve—creating solutions that provide an unparalleled customer experience.

EJ has a long history of fostering strong customer relationships. These relationships are supported with personal contact from

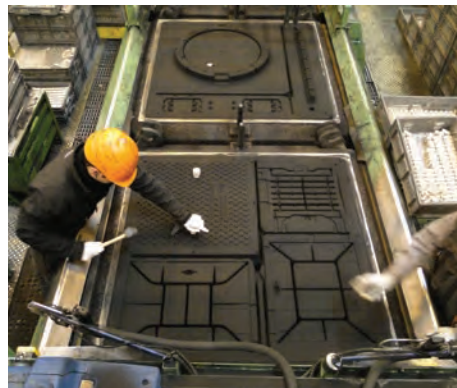
company representatives, a complete offering of product literature, a comprehensive web site (ejco.com), trade show exhibits, as well as seminars and training opportunities. All these services help to provide customers with the product information required for successful projects.

No matter where you go, EJ provides access solutions that adhere to the local specifications in a timely and competitive manner. We also work with our customers to produce access solutions to meet their specialized requirements. Our sales staff around the world understands the unique needs of your market.

Our people: our core strength. While working together, employees use their expertise, knowledge, and ability to achieve positive results. Core values at EJ include safety and security, honesty and integrity, environmental responsibility, respect for others, quality and excellence, and social responsibility. These values are imbedded into our culture and are practiced daily throughout the organization.

Our state-of-the-art manufacturing plants employ world class machinery, systems, and processes to produce specified products efficiently and on time.

Wherever you are, whatever your specific requirement might be, EJ has the best access solutions for your infrastructure project.



## Product Range

EJ offers a comprehensive portfolio of products and services, including municipal and construction castings, fabricated products, composite products, water distribution solutions, and other infrastructure access solutions.

## Quality Manufacturing

Integrating technology, lean processes and over a century of experience in crafting metal castings and fabrications, keeps our facilities performing at peak efficiencies.

## Distribution Network

Access solution products, including municipal and construction castings, are available worldwide at our internal stocking locations and from our extensive network of distribution partners.

# A Legacy is Cast



William E. Malpass (standing back right) with employees during the 1920s.

The EJ legacy dates back to 1883 when William E. Malpass and his father-in-law Richard W. Round established a foundry on the shores of Lake Charlevoix, in the town of East Jordan, Michigan, USA. This foundry was called Round and Malpass Foundry and originally produced cast parts for the lumber industry, machinery, ships, agricultural equipment, and railroads. In 1886, William's brother, James, joined the business and the company was renamed East Jordan Iron Works.

In the 1920s, when the lumbering era came to a close, the company welcomed the second generation to the business and expanded into new markets allowing continued success in changing times. Production shifted to street castings, water works valves, fire hydrants, and various industrial castings.

Through World War II, the foundry produced castings for the war effort. In the 1950s, semi-automation was introduced into the foundry.

During the 1960s, the third generation automated the foundry with the addition of a high-pressure molding line. By integrating automatic sand processing and mechanized casting handling systems, the company was operating the largest automated molding line in the United States and maximized production capabilities.

Since the late 1980s, the business has been led by the fourth generation descendants of the Malpass family. They have transformed the Midwest business into an international leader of providing access solutions to infrastructure systems.

Beginning in the 1990s, acquisitions throughout the United States allowed the company to expand product lines, sales offices, distribution capabilities, and customer services across North America. In 2001, a new foundry was built in Oklahoma providing additional capacity to service growing markets in the United States, as well as Central and South America. The fifth generation of the Malpass family began joining the company in the late 1990s, continuing the strong family commitment to the company's success.

In the early 2000s, East Jordan Iron Works began turning its attention to expansion in other parts of the world, with the acquisition of Cavanagh Foundry in Ireland (2000), Norinco in France (2004), McCoy Construction Castings in Canada (2006), and HaveStock in Australia (2010).

In 2012, East Jordan Iron Works and its affiliated companies began doing business using the same name and brand, EJ. One global name and brand, supported by a single mission, vision, and set of values has unified the company. This action leverages

all company resources to improve internal operations, as well as provide superior product offerings and services to its valued customers.

Increasing its global footprint, EJ continues to grow through acquisition and reinvestment with the addition of Bernard Cassart & Cie in Belgium (2012), Syracuse Castings Sales Corporation and Syracuse Castings West Corporation in the USA (2012), Etheridge Foundry & Machine Company in the USA (2012), E.A. Quirin Machine in the USA (2013), GMI Composites in the USA (2014), the municipal casting distribution of Mueller Canada Ltd., in Canada (2014), GAV GmbH in Germany (2015), Peter Savage Ltd. and Integrated Ducting Systems in the United Kingdom (2015), Schacht und Bautechnik Vertriebs GmbH (SBV) in Austria (2016), as well as the expansion of composite manufacturing in Birr, Ireland in (2018), the construction of a state-of-the-art manufacturing facility in Northern Michigan, USA (2018) and the construction of a new fabrication facility in New York, USA (2019).

Today, the company provides a full line of access solutions for the infrastructure systems of municipalities, utility companies, airport and port authorities, and private companies. EJ supplies products to infrastructure projects in 6 of the 7 continents.

EJ continues to be 100% owned by descendants of William E. Malpass, and members of the family continue to be active in managing the business. The fourth and fifth generation remain dedicated to maintaining the company's long-established culture and values, setting strategies and priorities. This has allowed EJ to remain one of the most stable, progressive, and well-tooled manufacturing companies in the world. The corporate headquarters continues to remain in East Jordan, Michigan, USA.

# Product Lines

## Access Covers, Grates and Frames

- Manhole Covers and Frames
- Innovative Access Solutions
- Composite Manhole Covers and Frames
- Drainage Grates, Frames and Curb Inlets
- Linear Trench Drainage Grates
- Junction Boxes
- Cleanout/Monument Boxes

## Access Hatches

- Aluminum Access Hatches
- Modular Access Solutions
- Custom Fabrication

## Adjustment Risers

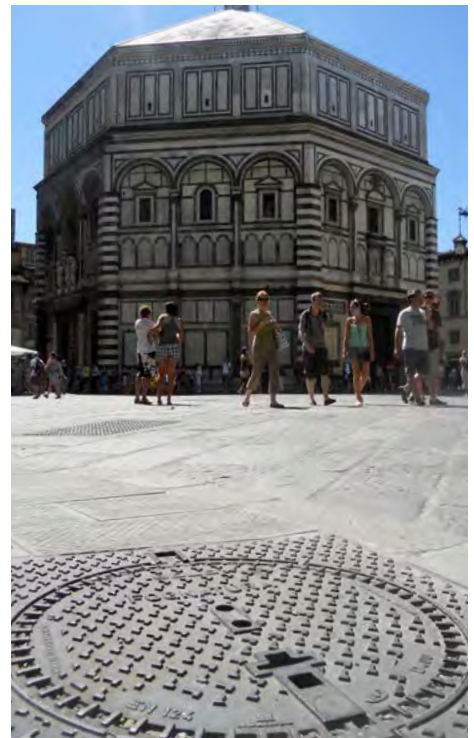
- Riser Rings
- INFRA-RISER® Adjustment Risers

## Water Distribution

- WaterMaster® Fire Hydrants
- FlowMaster® RW Gate Valves
- Valve Boxes, Covers and Risers
- Meter Boxes

## Streetscape and Urban Design

- Tree Grates
- Designer Trench Drainage Grates
- DURALAST® Detectable Warning Plates



# Capabilities

## Service

- Employees with localized knowledge throughout the world
- On-site assistance
- Seminars and technical presentations
- Communicate new product innovations
- Assistance with specification process

## Innovative Use of Technology

- Electronic invoicing and EDI transactions
- ejco.com—comprehensive product database with advanced search
- Material certification provided upon request
- CAD and PDF drawings available

## Quality Manufacturing

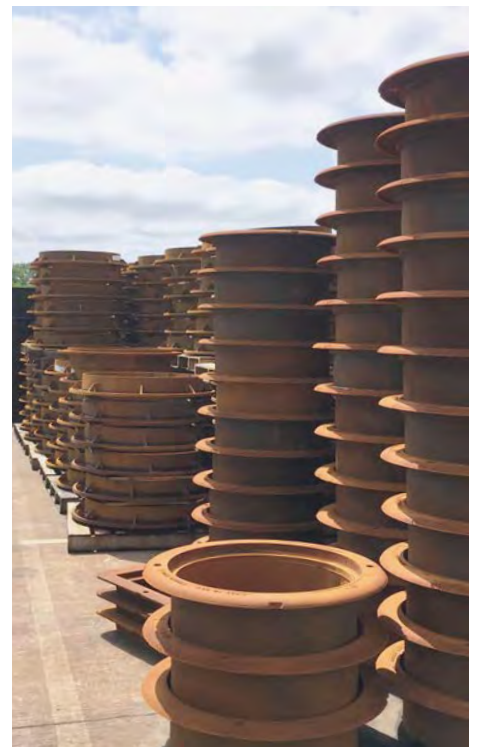
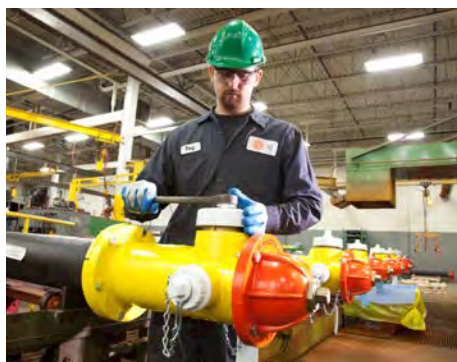
- Product research and development
- Commitment to reinvestment
- North America ISO 9001 certified facilities
- Europe ISO 9001, ISO 14001, OHSAS 18001 certified facilities
- Australia ISO 9001 certified facilities

## Manufacturing Facilities

- East Jordan Foundry, USA
- Ardmore Foundry, USA
- Picardie Foundry, France
- Birr Fabrication & Composites, Ireland
- Youngstown Fabrication, USA
- Syracuse Fabrication, USA
- Salt Lake City Fabrication, USA
- East Jordan Water Products, USA
- Muskegon Composites, USA
- Ardennes Metal Fabrication, France
- Nuneaton Fabrication, UK
- Boppard Fabrication, Germany
- Brisbane Fabrication, Australia
- Melbourne Fabrication, Australia
- Perth Fabrication, Australia
- Sydney Fabrication, Australia

## Distribution

- Delivering products quickly and smoothly worldwide
- Stocking branch locations throughout the United States, Canada, Europe, and Australia
- Distribution centers located in Michigan, Oklahoma, Ireland, United Kingdom, France, Germany, and Australia



# Environmentally Friendly

As a good neighbor, we are committed to global sustainability and strive to be respectful stewards in the communities where we operate. EJ conducts business around the world in compliance with regional environmental legislation and approved codes of practice.

We understand that "being green" is not just a saying; it's a critical guiding principal that is exemplified in the way we conduct business:

- Creating partnerships with the communities in which we operate.
- Using best in class environmental abatement technologies to contain and reduce our emissions.
- Facilities that use processes and controls to minimize our impact on the environment.
- Continuously improving efficiencies and reducing internal waste streams.
- Encouraging the use of castings in their natural state without coatings or paint; knowing that over time iron gains a natural patina that resists rust and corrosion.
- Designing innovative products that use less material, yet still maintain the structure integrity and load rating.
- Universal wastes, including computers, lamps and batteries, are collected and properly recycled.



### Scrap Metal

Our castings contain over 85% recycled content and our foundries meet some of the most stringent environmental regulations in the world. Products produced at our foundries are 100% recyclable.

[Post-consumer and post-industrial scrap metals are recycled into castings that build your infrastructure.](#)



### Molding Sand

Over 90% of our green sand is reclaimed daily and reused in our molding process. Foundry sands are recycled for use in cement production at nearby facilities.



### Recycled Tires

Recycled tires make up the majority of our INFRA-RISER® multi-purpose rubber composite adjustment risers. Boasting 92% recycled content, this environmentally friendly product also reduces unwanted storm water infiltration into sanitary sewer systems.



### Messaging

Environmentally friendly messaging helps protect our waterways. Castings read "Dump No Waste! Drains to Waterways" accompanied by a fish image. These permanently cast messages and environmentally friendly designs serve as an enduring reminder against dumping into our waterways.

### Awards:

- Emmet County Recycler of the Year 2012
- Charlevoix County Recycler of the Year 2007
- American Foundry Society Metalcaster of the Year 2019



# Innovative Access Solutions



# Benefits of Hinged Manhole Assemblies

## Functionality

- Ergonomics—Cover easily opens for access. Also works great in situations where a cover can't be dragged out of the way due to space restrictions or the elevation of the access point.
- Time Savings—For secured covers, users don't have to spend time moving/finding the right cover orientation on the frame to re-bolt the cover.

## Safety









- Resting Open Cover—Hinge design allows cover to rest in an upright and open position for clear access. The cover also acts as a visible barrier to one side of the structure.
- Safety Catch—Safety catch helps prevent the cover from inadvertently closing.\*

## Security

- One-Point Security—Connecting one side to the frame via the hinge, only one security option is needed to secure the cover, simplifying locking/unlocking the structure during service.
- Range of Security Options—Standard bolting can keep the cover secured to the frame. Upgrading locks and special security bolting can deter theft.

EJ offers a wide range of hinged manhole solutions. Please use this table below for highlights and comparisons between our hinged manhole product lines.

Hinged Manhole Assembly Comparison

Product	ERGO® ACCESS ASSEMBLY	ERGO® XL ACCESS ASSEMBLY	CAPTIVE HINGE	HINGECO® ACCESS ASSEMBLY
				
<b>Clear Opening</b>	24" and 28"	30" and 36"	24"	24"
<b>Frame Height</b>	4" (for 24" clear opening) 6" (for 24" clear opening) 7" (for 24" clear opening) 7" (for 28" clear opening)	4 1/2" (for 30" clear opening) 5 1/2" (for 30" clear opening) 6" (for 36" clear opening)	4"	4" bottom flange—round 4" bottom flange—square 6" top flange
<b>Hinge Detail</b>				
<b>Top Flange Available</b>	—	—	—	Yes
<b>Lift Assist Available</b>	—	Yes	—	—
<b>Grate Available</b>	Yes	Yes (30")	Yes	—
<b>Security Options</b>	Cam lock, bolts	Cam lock, bolts	Captive hinge pin, cam lock, bolts	Slam lock
<b>Standard Iron Type</b>	Ductile iron cover Gray iron frame	Ductile iron cover Gray iron frame	Ductile iron cover Ductile iron frame	Ductile iron cover Ductile iron frame
<b>Load Rating</b>	Heavy duty	Heavy duty	Heavy duty	Heavy duty†

\*Complete removal of the cover is recommended when entering the access point.

†HINGECO is suggested for unintended vehicular traffic rated applications.

## ERGO® ACCESS ASSEMBLY

The ERGO® Access Solution has been designed with ergonomics in mind to optimize worker safety by incorporating a hinge feature.

The cover opens to 120°, where the cover securely rests and can be removed. The safety catch at 90° prevents accidental closure.

The ERGO access assembly is customizable to most city specifications with multiple frame openings and heights available. For clear openings greater than 28", please refer to the ERGO XL access assembly.

### Standard Features

- Heavy duty
- Gasketed
- Patented hinge assembly
- Opens to and removes at 120°
- Safety catch at 90°
- Ductile iron cover
- MPIC® multi-tool pick bar
- Made in the USA

### Options

- Available on SELFLEVEL®
- Special lettered covers
- Custom logo covers
- Environmental messaging
- Grates available
- Cam lock security
- EON LOCK® bolting
- Watertight (L1)\*
- Multiple frame openings and heights available (see table)



ERGO access assembly with custom logo cover in Detroit, Michigan.



Showing 24" ERGO with cam lock



Drainage grate available for 24" ERGO



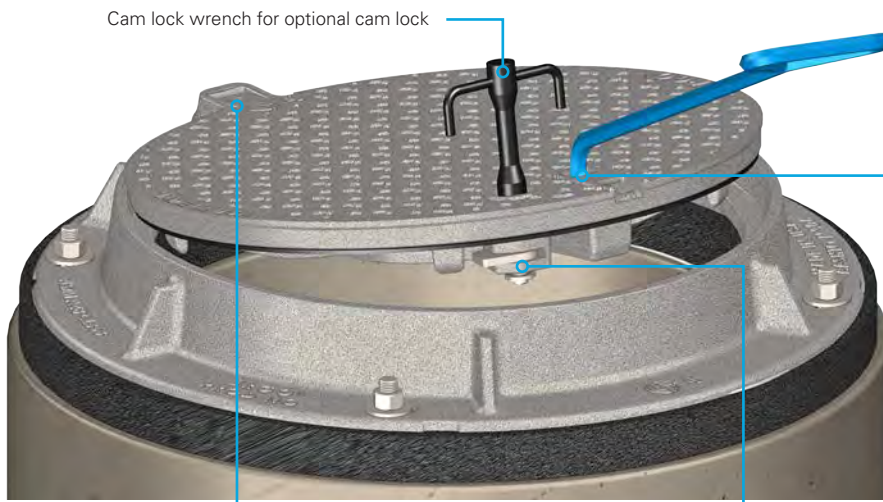
### T-Gasket

The thick and durable gasket cushions traffic shock and resists infiltration.



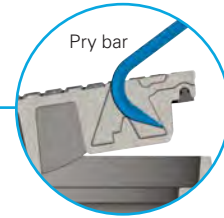
**Important Safety Information**  
Complete removal of the cover is recommended when entering the access point.

\*Bolted cover, no cam lock, beaded gasket, and non-draining hinge pocket frame assembly required.



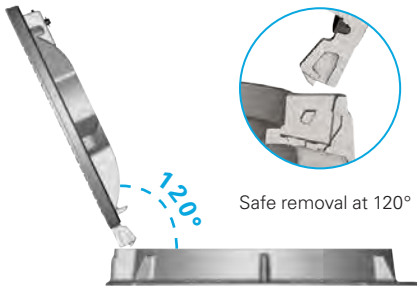
Cam lock wrench for optional cam lock

**MPIC® Multi-tool Pick Bar**



Pry bar

**Safe Cover Removal**



Safe removal at 120°

**Safety Catch**



**Cam Lock Security Option**



The patented hinge design allows the cover to open up to 120°, where it rests in a safe and secure position. From the 120° position, the cover can be safely removed.

U.S. Patent 7,908,798

Patented ERGO hinge design has a safety catch at 90° to prevent accidental closure.

The cam lock provides improved security to frame and cover assemblies, and also eliminates loose and missing fasteners. The cam lock wrench is only removable when the cover is in the locked position, ensuring it is engaged.



Custom logo cover made from a photo of Mt. Edgecumbe, by local photographer Tim Shobe, for the City of Sitka, Alaska.

ERGO Access Assembly Sizes

Clear Opening	Frame Height	Series No.
24	4	ERGO24
24	6	ERGO24
24	7	ERGO24
28	7	ERGO28

Note: All dimensions are in inches.



Visit our YouTube Channel for videos on this and other products at [www.youtube.com/AccessInfrastructure](http://www.youtube.com/AccessInfrastructure)

## ERGO® XL ACCESS ASSEMBLY

The ERGO® XL access assembly offers an advanced level of functionality and safety for 28" clear openings and above.

This product is easy to lift open, reduces excess strain, and promotes safe working conditions. To address ease of use, choose an optional stainless steel mechanical strut that reduces the lifting force to raise the cover to less than 50 lb.

### Standard Features

- Heavy duty
- Gasketed
- Patented hinge assembly
- Opens to 120°
- Safety catch and removal at 90°
- Ductile iron cover
- MPIC® multi-tool pick bar
- Made in the USA

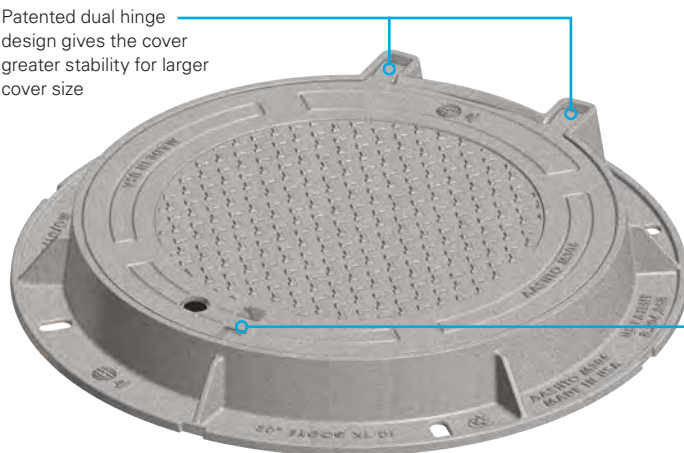
### Options

- Airport extra heavy duty
- Special lettered covers
- Custom logo covers
- Environmental messaging
- Grates available
- Cam lock security
- EON LOCK® bolting
- Watertight (L1)\*
- Lift assist
- Multiple frame openings and heights available (see table)

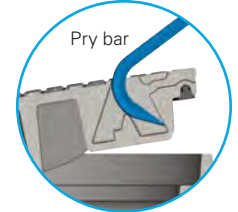


ERGO XL adds convenience to 30" and 36" access assemblies.

Patented dual hinge design gives the cover greater stability for larger cover size



### MPIC® Multi-tool Pick Bar



### ERGO XL Access Assembly Sizes

Clear Opening	Frame Height	Series No.
30	4 1/2	ERGO30
30	5 1/2	ERGO30
36	6	ERGO36

Note: All dimensions are in inches.

**Important Safety Information**  
Complete removal of the cover is recommended when entering the access point.

\*Bolted cover, no cam lock, beaded gasket, and non-draining hinge pocket frame assembly required.

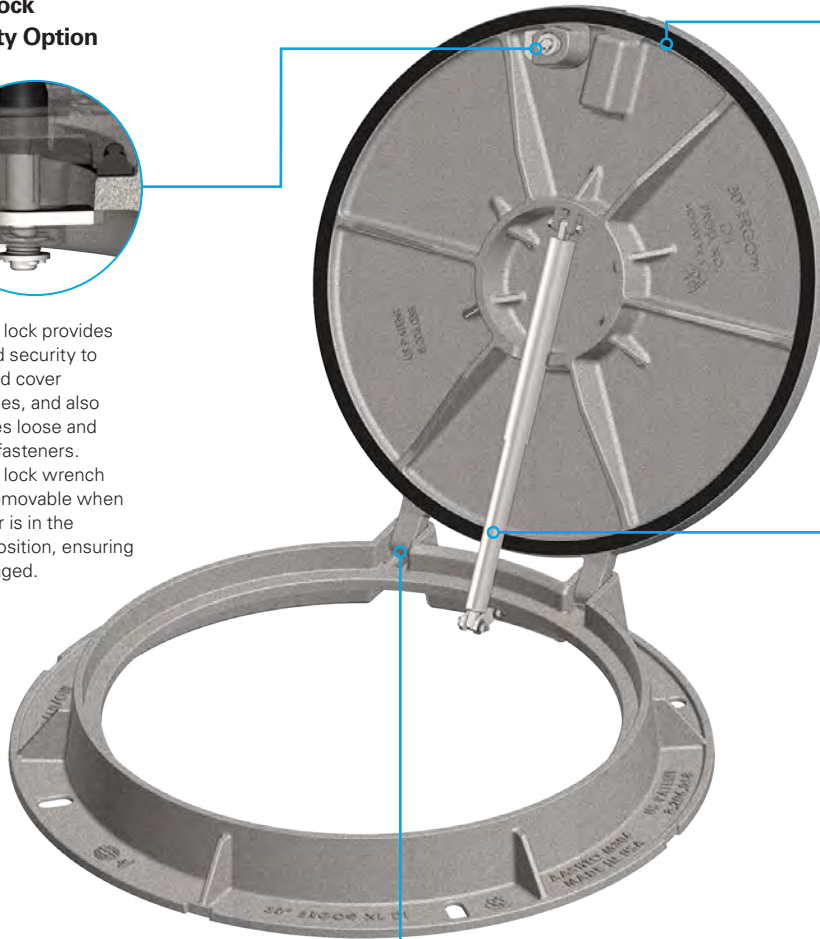
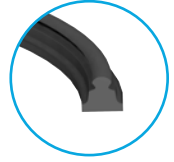
**Cam Lock Security Option**



The cam lock provides improved security to frame and cover assemblies, and also eliminates loose and missing fasteners. The cam lock wrench is only removable when the cover is in the locked position, ensuring it is engaged.

**T-Gasket**

The thick and durable gasket cushions traffic shock and resists infiltration.



**Lift Assist**

Optional lift assist is a corrosion-resistant stainless steel mechanical spring strut that reduces the lifting force of the cover to less than 50 lb. It is available only on the ERGO® XL.

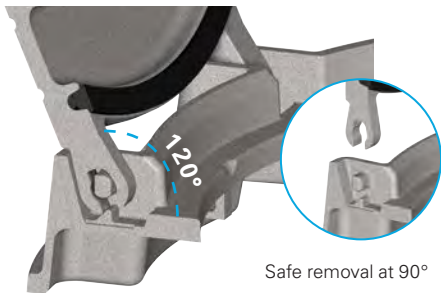
**Mechanical Strut Lift Assist**

The rugged design is clean and maintenance free. The strut takes up less space in the clear opening than a traditional spring assist. It is fully self-contained, protecting coils from exposure to the elements.

Made without internal gases or seals, the struts have an effective operating temperature range of -30° F to 400° F. The durability has been tested at over 150,000 cycles.



**Opening Range and Safe Cover Removal**



Our patented dual hinge design allows the cover to open up to 120°, where it rests in a safe and secure position. From the 90° position, the cover can be safely removed.

U.S. Patent 8,206,058



Visit our YouTube Channel for videos on this and other products at [www.youtube.com/AccessInfrastructure](http://www.youtube.com/AccessInfrastructure)

## CAPTIVE HINGE ACCESS ASSEMBLY

The Captive Hinge access assembly is an advanced solution that addresses present concerns in the market such as cover theft, ergonomics, safety, pressure relief, and security. Once a cover with a captive hinge pin is installed, the cover cannot be removed.

### Standard Features

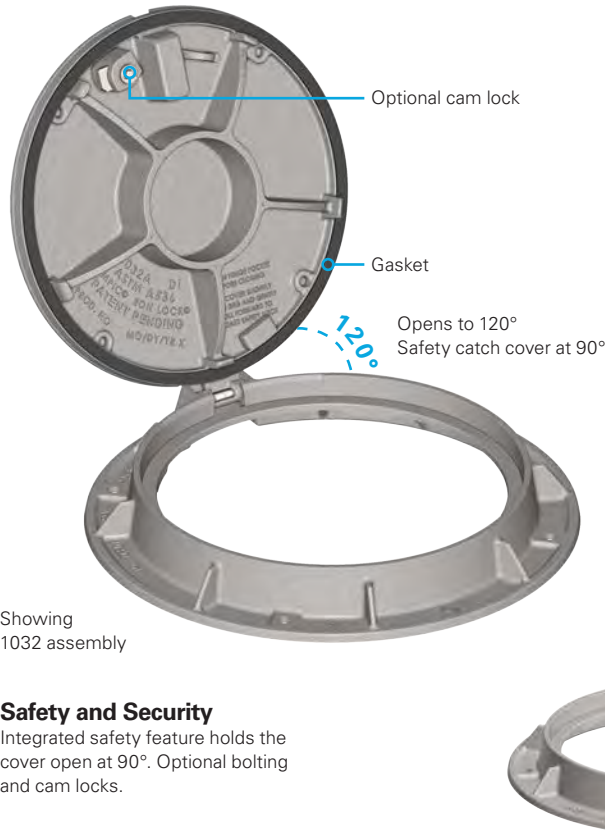
- Heavy duty
- Gasketed
- Opens to 120°
- Safety catch at 90°
- Ductile iron frame and cover
- MPIC® multi-tool pick bar
- Patented hinge assembly
- Non-slip surface
- Made in the USA

### Options

- Drainage grates
- Special lettered covers
- Custom logos
- Environmental messaging
- Wireless remote monitoring
- Security — Cam lock, bolting
- Multiple frame openings and frame heights available
- Captive hinge optional pin makes cover non-removable



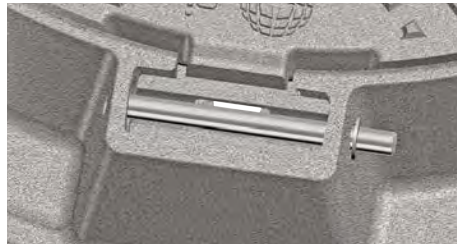
**Important Safety Information**  
If used without an installed pin, complete removal of the cover is recommended when entering the access point.



**Safety and Security**  
Integrated safety feature holds the cover open at 90°. Optional bolting and cam locks.

### Theft Resistant Hinge Pin

The end user has the option to permanently connect the cover to the frame to prevent cover theft. A cover can be made captive before delivery or after installation.

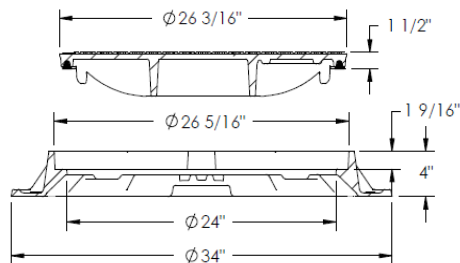


**Option 1—Preinstalled** (cutaway view shown)  
Captive hinge pin installed during manufacturing by EJ.



**Option 2—Retrofit** (cutaway view shown)  
The retrofitting captive hinge pin can be installed anytime if a preinstalled pin hasn't been used. The pin comes with a spring built within the pin, which sets during installation to permanently secure the hinge to the frame.

**Note:** The Captive Hinge pin is not a requirement for the hinging function of this product.



Optional drainage grate with cam lock

## HINGECO® ACCESS ASSEMBLY

Combine ergonomics and security with the HINGECO® access assembly.

The design of this cover allows it to pivot on the hinge and holds it at 120° to provide unobstructed access to the clear opening of the frame. In combination with the slam lock, there is no need for multiple cam locks to secure the cover. One slam lock keeps the cover secured and can be unlocked with a standard pry bar.

Precasting the HINGECO access assembly is made easy with the top flange version. By casting the assembly upside down, getting a smooth, flat surface is simplified during the pouring process.

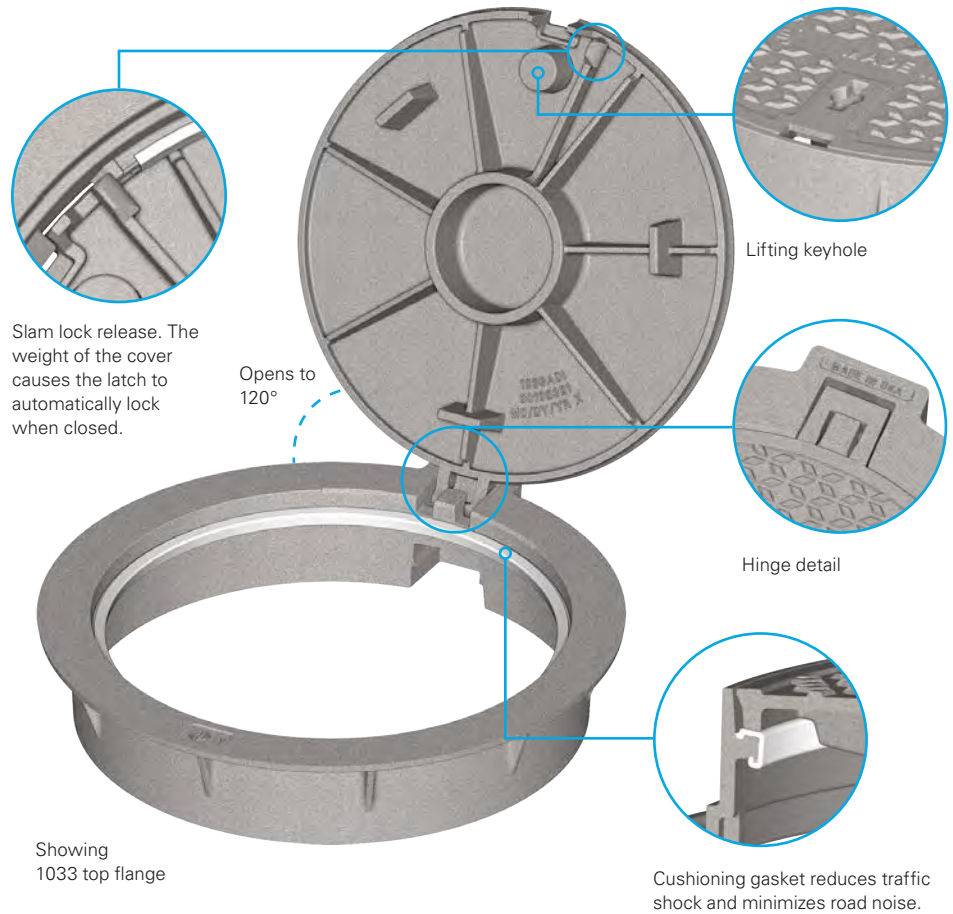
### Standard Features

- Heavy duty
- Ductile iron frames and covers
- Proof load exceeds AASHTO M 306 40,000 lb requirement
- Hinged cover opens to 120°
- Cover locks in 90° open position, must be lifted to be released
- Cover removes at 90°
- Slam lock release feature, which automatically locks when closed
- Made in the USA

### Options

- Round or square frames
- Special lettered and custom logo covers
- Cushioning gasket on bearing surfaces
- Lift handle
- Top flange available

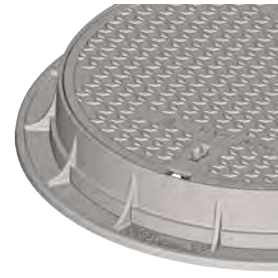
Note: HINGECO is traffic rated, but not intended for continuous traffic applications.



### Frame Options



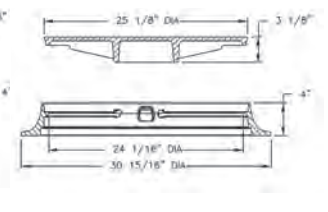
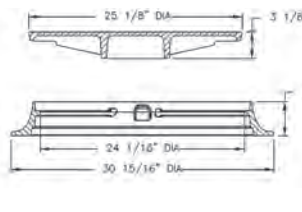
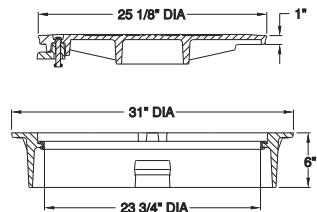
1033 top flange



1033 bottom flange



1034 bottom flange



Important Safety Information  
Complete removal of the cover is recommended when entering the access point.

## SELFLEVEL® ASPHALT ACCESS ASSEMBLY

The SELFLEVEL® access assembly is a highly engineered infrastructure solution. Unlike traditional manhole units, its unique design allows for a range of movement that keeps the SELFLEVEL access assembly perfectly aligned with the finished road surface. This unit works for both retro fit and new installations.

### Standard Features

- Heavy duty
- Upper frame is supported by road surface
- Unit stays level with the road surface, even when road heaves due to extreme temperature changes
- Up to 5° tip angle for top frame
- Proof load exceeds AASHTO M 306 standards
- Frame fits with existing manhole covers
- Made in the USA

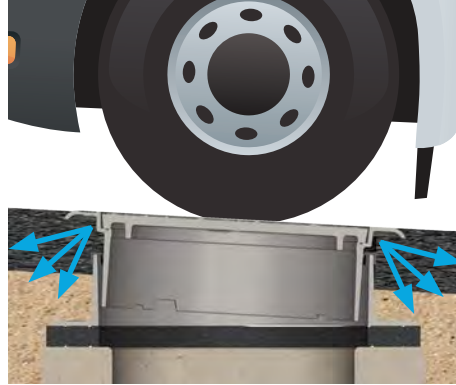
### Options

- Special lettered covers
- Custom logo covers
- ERGO® SELFLEVEL assembly
- Transitional frame (square base to round top)
- EON LOCK® bolting
- Cam lock
- Neoprene gasket for cover
- Watertight Level 1 (L1)\*
- INFRA-RISER® adjustment riser
- Multiple frame openings and heights available



SELFLEVEL access assembly installed in Traverse City, Michigan.

### Range To Move With Surface



Once installed, the unit will continue to move with the road surface. The road surface aids in absorption of traffic vibration and shock, further protecting the life of your infrastructure and critical underground structures.



SELFLEVEL has a range of motion of up to a 5° tip angle while still moving with surface.

### Reduce Surface Movement Issues



#### SELFLEVEL® Access Assembly Helps Eliminate:

- Frost heave/uplift
- Manhole structure settling
- Site deterioration
- Pavement cracking

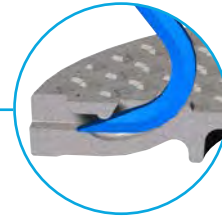
#### SELFLEVEL® Access Assembly also Provides:

- Improved ride quality to meet smooth street initiatives
- Inclined installations

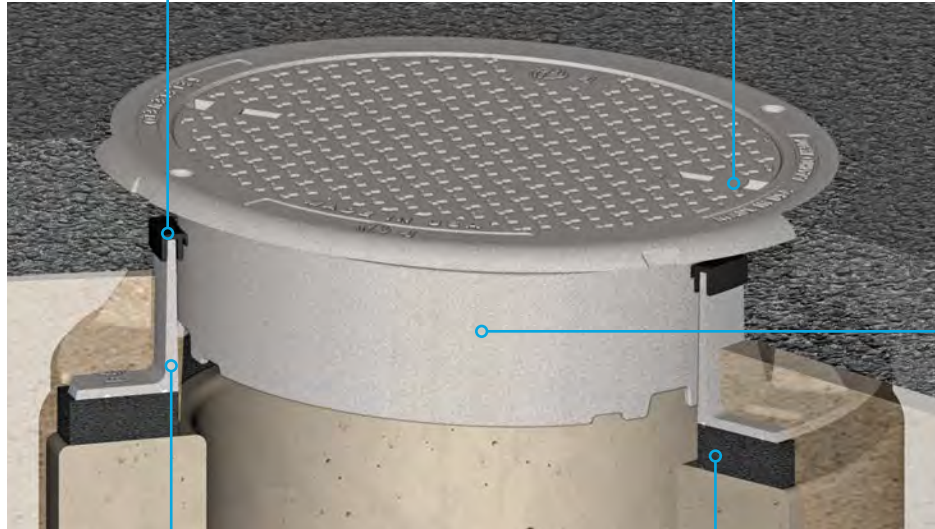
\*Bolted assembly with gasket required.

**Multi-functional Seal**

The multi-functional seal helps keep the upper frame centered within the guide frame, which prevents the two pieces from touching. Seal protects against excess debris and material from entering the manhole.



**EPIC® Pick Bar**



**Upper Frame**

The upper frame of the SELFLEVEL assembly is supported by and moves with the surrounding road surface. This allows it to remain level with the road surface. This "floating" affect helps prevent road damage and protects the infrastructure underground by dispersing traffic vibrations and shock throughout the road surface, rather than into the structure below.

**Guide Frame**

This frame facilitates self-centering and keeps the upper frame centered over the manhole structure.

Optional INFRA-RISER adjustment riser



After asphalt has been packed, the SELFLEVEL compacts level with the surrounding roadway for a smooth finish that will last longer than traditional manhole assemblies in situations where there can be frost heave and natural road settling.

**ERGO® SELFLEVEL® Assembly**



ERGO SELFLEVEL for asphalt combines the ergonomic and security benefits of the hinged cover with the roadway leveling benefits of the SELFLEVEL frame.

SELFLEVEL Asphalt Access Assembly Sizes

Cover Size	Clear Opening	Series No.
26	24	1205, 1037, 3024
29 5/8	27 15/16	3028
32	30	1322, 3027

Note: All dimensions are in inches.



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## SELFLEVEL® CONCRETE ACCESS ASSEMBLY

The concrete SELFLEVEL Access Solution has been designed specifically for concrete applications. By incorporating adjustment brackets into the design, the frame can be held up during the concrete installation. After the concrete cures, the brackets should be removed, and the upper frame will move with the pavement.

This product is ideal for environments with frost heave, as the frame floats with the surface. It also works well for communities with a smooth street initiative, or inclined installations.

### Standard Features

- Heavy duty
- Upper frame is supported by road surface, and can be installed with a maximum tip angle of 5°
- Steel sleeve protects the unit (SELFLEVEL) from concrete interference
- Lifting handles on upper frame allow for easier handling during installation
- Lower frame is bolted to structure below.
- Proof load exceeds AASHTO M 306 standards
- Frame fits with existing manhole covers

### Options

- Special lettered covers
- Custom logo covers
- ERGO® SELFLEVEL assembly
- Transitional frame (square base to round top)
- EON LOCK®
- Cam lock
- Neoprene gasket for cover
- Watertite assembly
- INFRA-RISER® adjustment riser
- Multiple frame openings and heights available



The SELFLEVEL® access assembly is a highly engineered infrastructure solution. It provides additional benefits that a traditional manhole unit cannot provide. Its unique design allows a range of movement, providing installations that are perfectly aligned with the finished road surface.

### Reduce Surface Movement Issues

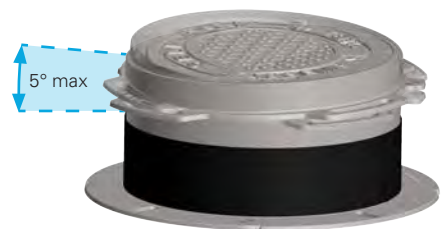


#### SELFLEVEL® Access Assembly Helps Eliminate:

- Frost heave/uplift
- Manhole structure settling
- Site deterioration
- Pavement cracking

#### SELFLEVEL® Access Assembly Also Provides:

- Improved ride quality to meet smooth street initiatives
- Inclined installations



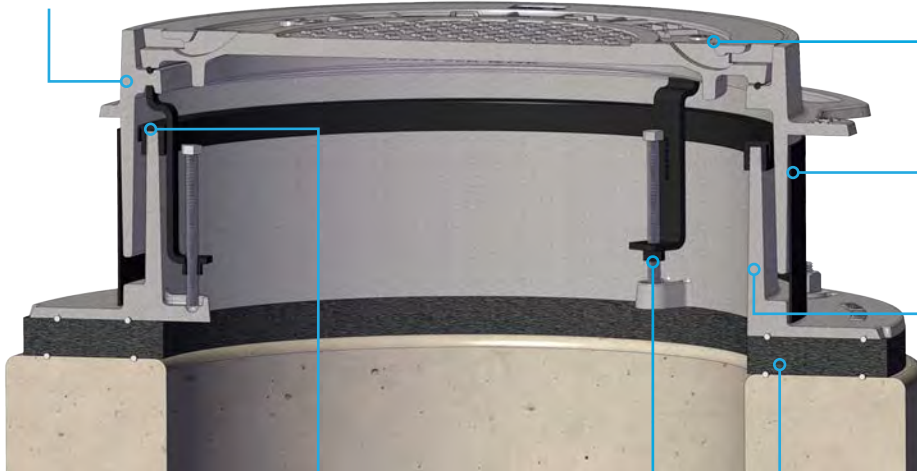
SELFLEVEL has a range of motion of up to a 5° tip angle while still moving with surface

**Upper Frame**

The upper frame of the SELFLEVEL assembly is supported by and moves with the surrounding road surface. This allows it to remain level with the road surface. This “floating” effect helps prevent road damage and protects the infrastructure underground by dispersing traffic vibrations and shock throughout the road surface, rather than into the structure below.



**EPIC® Pick Bar**



**Steel Sleeve**

Creates a void, while pouring concrete, to allow upper frame to float with the road surface.

**Guide Frame**

This frame facilitates self-centering. The guide frame comes with a multi-functional seal. It reduces water infiltration and protects against excess debris and material from entering the manhole.

**Multi-functional Seal**

The multi-functional seal helps keep the upper frame centered, which prevents the two pieces from touching.



Optional INFRA-RISER® Rubber Composite Adjustment Riser.



**Adjustment Tab and Bracket**

Adjustment bracket and bolt for raising the upper frame up off the lower frame during pouring, giving it clearance to ‘float’ when set in concrete. After concrete has cured, the bracket and bolt are removed and can be reused. Adjustment bolt tabs can be cut off for greater clear opening after installation.

SELFLEVEL Concrete Assembly Sizes

Cover Size	Clear Opening	Series No.
26	24	3025
32	30	3027

Note: All dimensions are in inches.



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## REVOLUTION® ACCESS ASSEMBLY

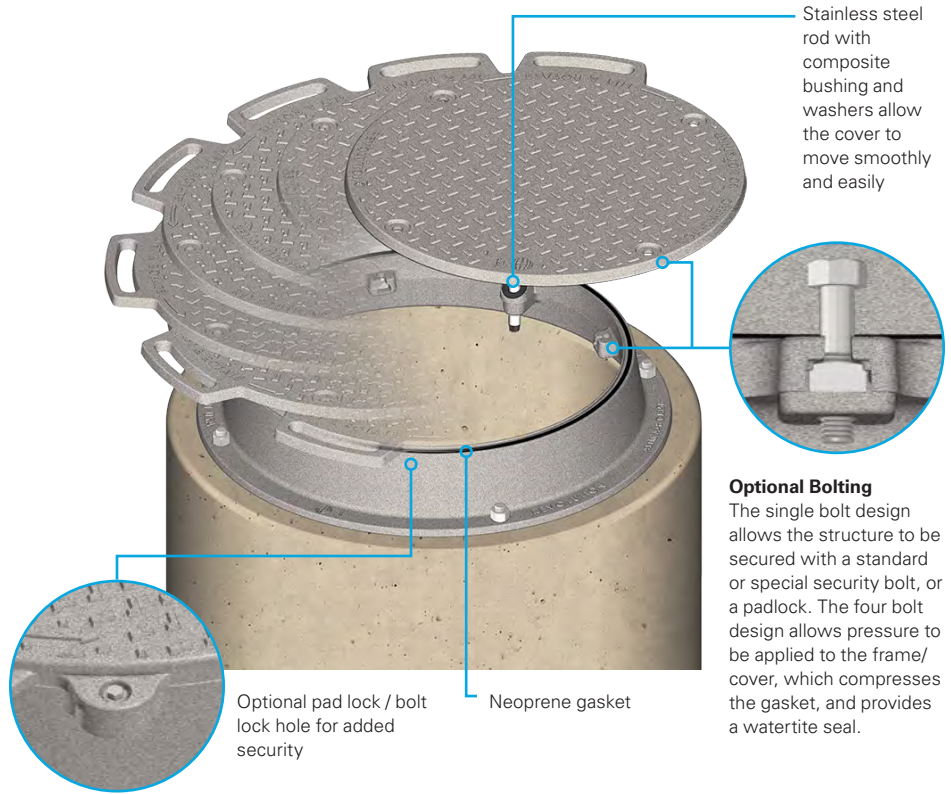
Discover the REVOLUTION® access assembly — it is the perfect solution for elevated structures and raised access points. The cover pivots away from the hole opening, eliminating the need for manually raising or lowering the cover. It rotates in either direction on a cast-in stainless steel rod that ensures it remains attached to the frame. No special tools are required to open and close.

### Standard Features

- Non-traffic rated
- Lightweight cover — easy to open, no lifting required, and takes only one person to operate
- Stainless steel rod cast in cover
- Water resistant — cover overlaps frame
- A 1/4" round neoprene gasket is secured to prevent roll out and provides odor control
- 5" frame height
- Made in the USA

### Options

- Special lettering
- Watertight (L1)
- Integrated hole for optional padlock
- EON LOCK® bolting
- Security bolting



### Lift and Rotate Cover



To open the cover, slightly lift, and rotate the cover. The patented design provides cover lift and rotation with minimal effort. Worker safety is improved by eliminating the need to hoist heavy covers when opening or closing the elevated unit.

### Resists Water Infiltration



The surface of the cover extends slightly past the edge of the frame, and the neoprene gasket helps seal the unit against water infiltration. A watertite seal can be achieved with the four bolt design.

### REVOLUTION Size Options

Clear Opening Dia.	Series No.
24	REVO24
28	REVO28
30	REVO30

Note: All dimensions are in inches.

### Important Safety Information

- Securely bolt the frame to manhole cone on 29 3/4" bolt circle
- Do not subject cover to any load when in open position
- Do not install in areas of vehicular traffic



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## CAMPRESSION® ACCESS ASSEMBLY

The CAMPRESSION® access assembly solution minimizes water infiltration, controls odor and provides improved security.

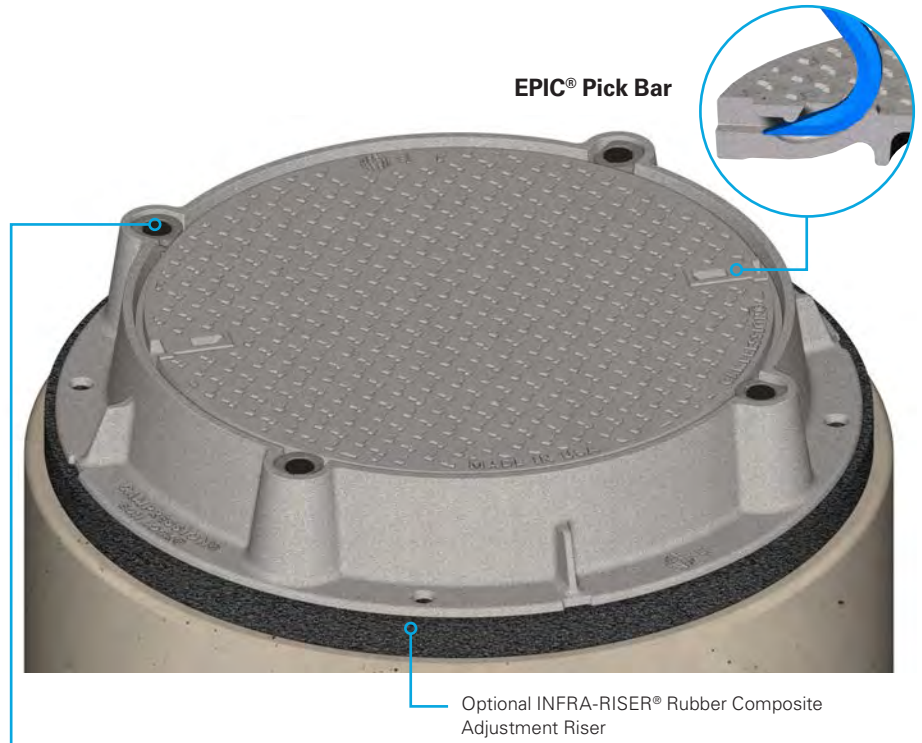
Evenly distributed cam locks apply pressure to the cover against a neoprene gasket, forming a tight seal to minimize water infiltration.

### Standard Features

- Heavy duty load application meets AASHTO M 306 certification
- Ductile iron cam locks with EON LOCK® bolts provide watertight (L1) and security features
- 1/4" round neoprene gasket
- EPIC® closed pick slots
- Lightweight ductile iron cover, per ASTM A 536
- 6" frame height
- Made in the USA

### Options

- Custom logo cover
- Special lettered cover
- 2" adjustment riser available

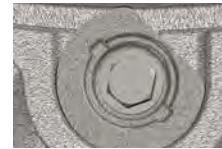


### Cam Locks

Ductile iron cam locks rotate to open cover, and back to tighten and secure cover. No need to completely remove the bolts—just loosen bolts and rotate cam.



Closed with cap on

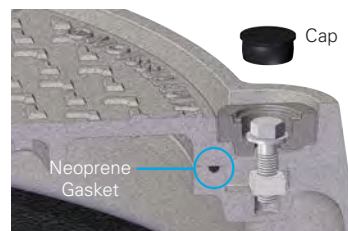


Cap off, loosen bolt, rotate cam



Rotate 90° to open

### EON LOCK® Bolting



EON LOCK® replaceable threads.

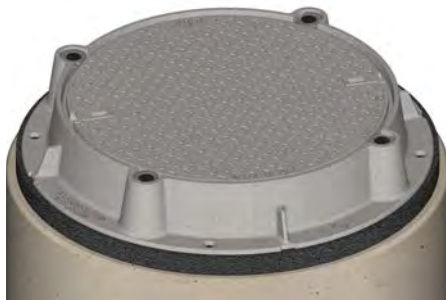
### Stackable Frames



Frames stack to improve safety and conserve space during handling, transit, and storage.



24" three bolt assembly (CAMP24 series)



30" four bolt assembly (CAMP30 series)



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## DUCTILE IRON HINGED HATCH ACCESS ASSEMBLY

Ductile iron access hatches have been designed for improved ergonomics, and are available in heavy duty and airport extra heavy duty applications.

On a cover that can weigh as much as 550 lb, the lifting force required to open the cover is less than 35 lb due to the uniquely designed mechanical strut.

The self-engaging safety bar provides added protection while the underground infrastructure is accessed, and safety grates can be specified for added fall through protection.



### Standard Features

- Ductile iron frame and cover
- Cover opens to 105°, safety catch and removal at 90°
- Self-engaging safety bar
- EON LOCK® bolting
- MPIC® multi-tool pick bar
- Bolting
- Made in the USA

### Options

- Mechanical lift assist (standard feature for airport rated models)
- Top and bottom flange designs
- Safety grate
- INFRA-RISER® adjustment riser
- Forming skirt



8197 grate option  
36" x 36"

### Wide Availability of Sizes

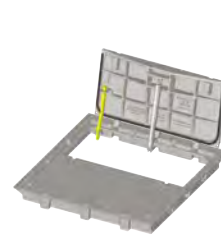
Shown below are just a sample of the various cover openings and sizes. See the table below for the full range of available clear opening sizes and load ratings.



8192 hinged hatch  
24" x 36"



8198 hinged hatch  
with dual lift assist  
48" x 48"



8218 double assembly  
48" x 48"



8196 double assembly  
30" x 62"

### Ductile Hinged Hatch Clear Opening Options

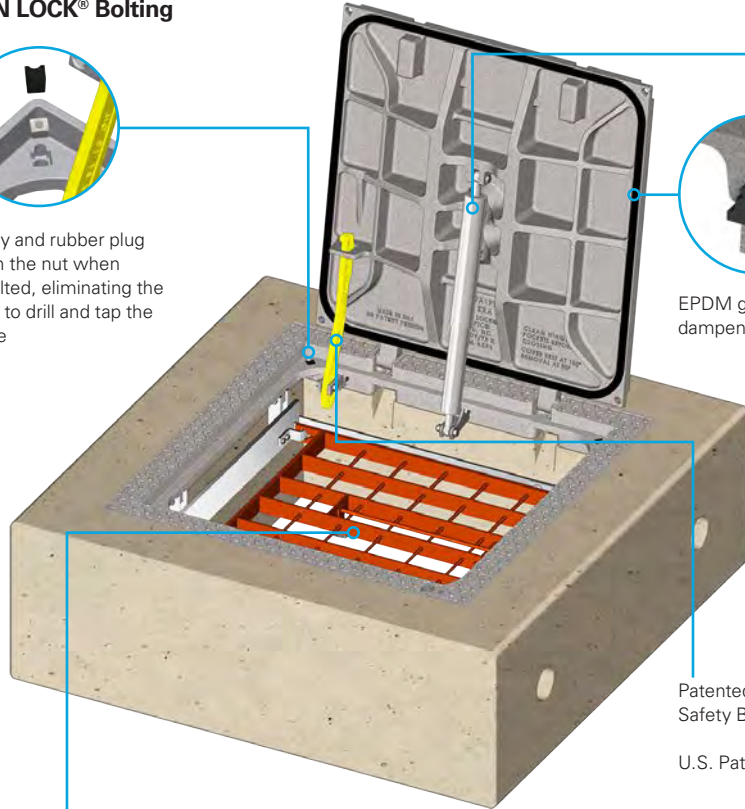
Clear Opening Size	Airport Extra Heavy Duty Series No.	Heavy Duty Series No.
24 x 24	8195	8215
24 x 36	8192	8212
30 x 30	8196	8216
30 x 62	8196—Double	8216—Double
36 x 36	8197	8217
36 x 74	8197—Double	8217—Double
48 x 48	8198	8218
48 x 48	—	8218—Double
48 x 98	8198	8218

Note: All dimensions are in inches.

**EON LOCK® Bolting**



Cavity and rubber plug retain the nut when unbolted, eliminating the need to drill and tap the frame



EPDM gasket for sound dampening

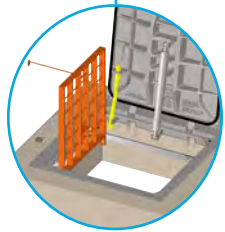
Patented Self-engaging Safety Bar

U.S. Patent 8,449,216

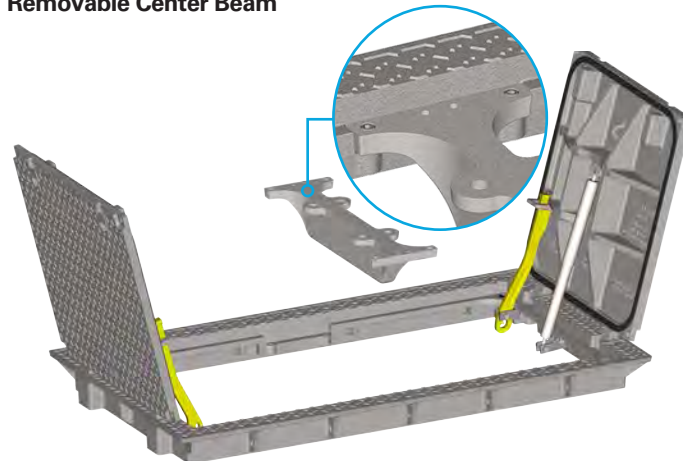
**Optional Safety Grate**

Provides additional safety features

- Doors cannot be closed unless the fall through protection has been put back in place (protecting the next operator).
- Visual inspections and limited maintenance can be done while safety grate is left in place.
- Orange safety grates create a visual barrier around the pit; promotes an awareness of the hazard.
- Grate can be locked independently of the hatch, adding another level of security when needed.



**Removable Center Beam**



Removable center beam provides a much greater clear opening access on several double hatch models. Removal/replacement is simple with 4 bolts securing the beam to the frame.

U.S. Patent 10,851,515

**Lift Assist**

Lift Assist is a corrosion-resistant stainless steel mechanical spring strut. The rugged design is clean and maintenance free. The strut takes up less space in the clear opening than a traditional spring assist. It is fully self-contained, protecting coils from exposure to the elements.

Made without internal gases or seals, the struts have an effective operating temperature range of -30° F to 400° F. The durability has been tested at over 150,000 cycles.



**Optional Cam Lock**



Security cam lock and wrench shown. Wrench is only removable when cover is in the locked position.

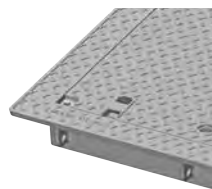
**Optional Forming Skirt**



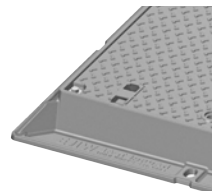
Available forming skirt simplifies precasting the hatch in concrete—no need for added forming to protect the inner hatch. The leave-in-place aluminum skirt can be made to fit any concrete slab thickness. (Image showing hatch upside down with forming skirt.)

U.S. Patent 10,851,515

**Frame Options**



Top flange frame



Bottom flange frame



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## HINGED GRATE ASSEMBLY WITH SLAM LOCK

The heavy duty hinged grate assembly works great for drainage inlets that require a higher level of security than a stand alone frame and grate.

The heavy duty ductile iron frame and hinged grate, a part of the 5624 series, is typically installed in high traffic areas. The slam lock closure feature prevents the grate from opening inadvertently and conceals the lock from unauthorized access. Self wedge seating allows traffic to push the grate into the frame — preventing the grate from rocking.

The lightweight grate opens to 115° and removes at 90°.

### Standard Features

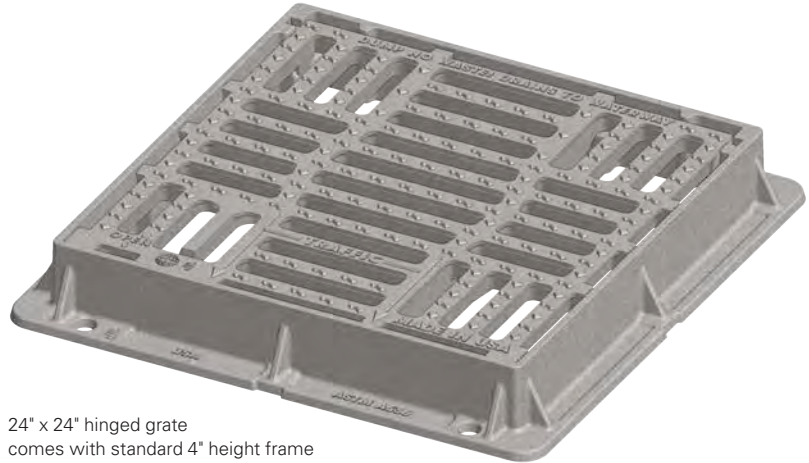
- Heavy duty
- Square grate 290 sq. in. open area
- Ductile iron frame and grate meet ASTM A 536 requirements
- Lightweight grate opens to 115° and removes at 90°
- Self wedging grate seating
- Slam lock (locking feature)
- Made in the USA

### Options

- 3 flange (including left and right hand variations) and 4 flange frames available
- Special lettering



Grate includes directional instruction markings and anti-slip texture. Special lettering options (including environmental messaging) are available.

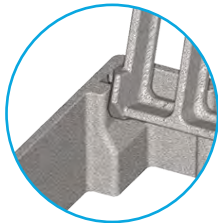


24" x 24" hinged grate comes with standard 4" height frame



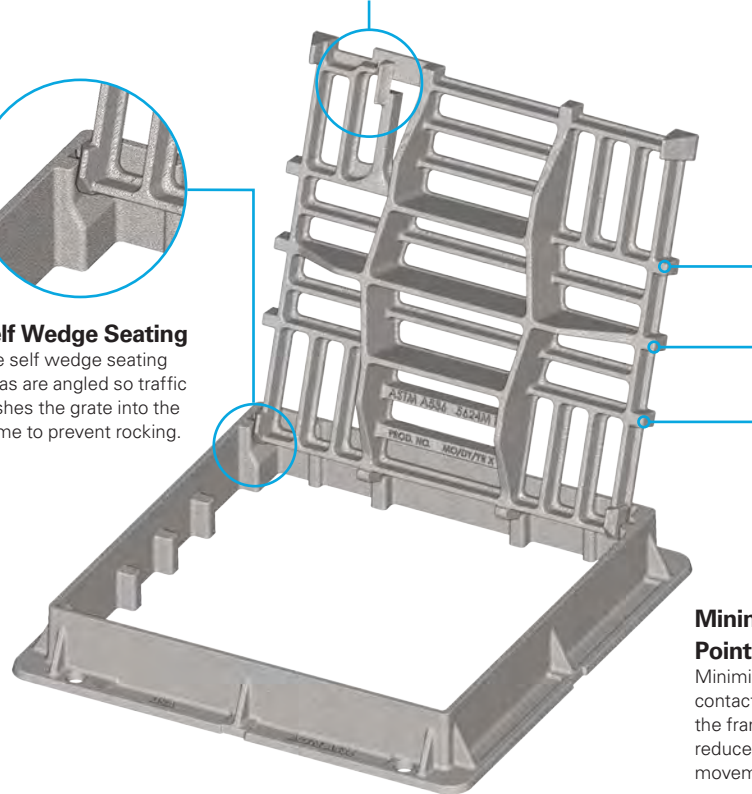
### Slam Lock

The slam lock design is an integral arm that moves when the grate is shut preventing the grate from being opened inadvertently. When closed, the seamless design also makes the latch invisible to the untrained eye, providing greater security from unauthorized removal of the grate.



### Self Wedge Seating

The self wedge seating areas are angled so traffic pushes the grate into the frame to prevent rocking.



### Minimal Rest Points

Minimizing the contact points around the frame helps reduce noise and movement.



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## MULTILEAF™ HINGED COVERS

The MULTILEAF™ range of hinged and locked covers are suited for applications that require large, unobstructed access openings.

The hinged triangular cover design distributes the overall weight of the cover, reducing strain to open the covers. Each cover uses a 3 point contact with the frame seat to minimize rocking of the cover and reduces road noise.

Also designed into the MULTILEAF is the sequential overlapping cover design. Using strategically placed tabs on the covers, the first cover can secure all covers with just one lock.



### Standard Features

- Wide range of clear openings, cover configurations, and load ratings
- Medium duty to airport extra heavy duty proof load ratings
- Open to 105° (and greater, depending on series) for complete access to the opening
- 90° safety catch that prevents the covers from unintended closure
- Covers remove at 90°\*

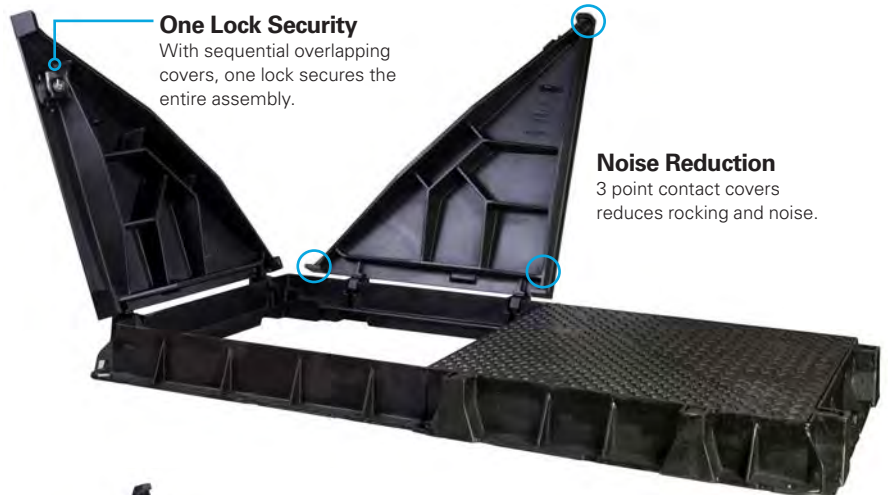
### Options

- Ductile iron or gray iron frames
- Lift assist with gas spring struts to reduce effort for opening/closing
- Security lock options
- Fall through protection grates
- Available with PREMARK® anti-skid coating



Optional lift assist greatly reduces effort to open and close cover.

\*May require detaching any hinge pins, lift assist, or safety bars before removing



### One Lock Security

With sequential overlapping covers, one lock secures the entire assembly.

### Noise Reduction

3 point contact covers reduces rocking and noise.



MULTILEAF distributes the weight of the large access cover over 2, 3, and 4 triangular shaped, hinged covers; minimizing strain when accessing the structure while retaining strength when closed.

Including the TI4S, TI9S, DT4S, and DT9S series, MULTILEAF offers a wide range of features to fit your application's needs.

The MULTILEAF range of hinged and locked covers are produced in France.

## ERMATIC® MODULAR COVERS

The ERMATIC® Modular Cover system is a comprehensive and highly engineered range of access covers for a wide variety of underground services. This modular system can be customized to fit any underground vault dimension or cover configuration. The ERMATIC range leverages the global engineering and design experience within EJ, to enhance ergonomic design and security.

### Standard Features/ Options

- Pedestrian to airport rated (or EN124 Standards – B125, C250, D400, E600, F900)
- Wide range of cover sizes from 24" x 24" and larger
- Watertight (L1)
- Security locking
- Available with hinged and spring loaded struts for assisted opening
- Ergonomic lift handles for opening
- Available with safety grates and/or safety railings
- Cover options: solid cover with LLLL® slip resistant tread, recessed for concrete infill or brick pavers, or cover with removable inner hatch/cover
- Available with PREMARK® anti-skid coating

### Project Applications

- Sewerage: inspection pits for sludge chambers, access shafts for large plants, etc.
- Telecommunications: cable jointing chambers, etc.
- Utility: lighting, signals, transformer pits, cable joint boxes, etc.

### Project Types

- Airports and ports
- Railways
- Tunnels
- Power stations
- Water treatment and purification plants
- Manufacturing plants
- Exhibition centers, leisure parks, stadiums, and other public arenas

The ERMATIC range of modular covers are produced in France.



**Modular Construction**—The use of modular elements gives a vast range of sizes. Frame elements (side frames and end plates) are assembled using bolts and aluminium joints to provide linear openings for even the longest ducts. For clear openings wider than 47 3/16" (1200 mm), ERMATIC units use removable beams supported in boxes which are fixed to the frames. This allows the construction of units to suit the largest openings.

### Ultimate Protection

ERMATIC products assure protection against damage, debris or aggressive chemicals, and allow designers to conceal underground services.



1/2/3 covers unit



Continuous duct cover



Removable beams give unobstructed access to large vaults.



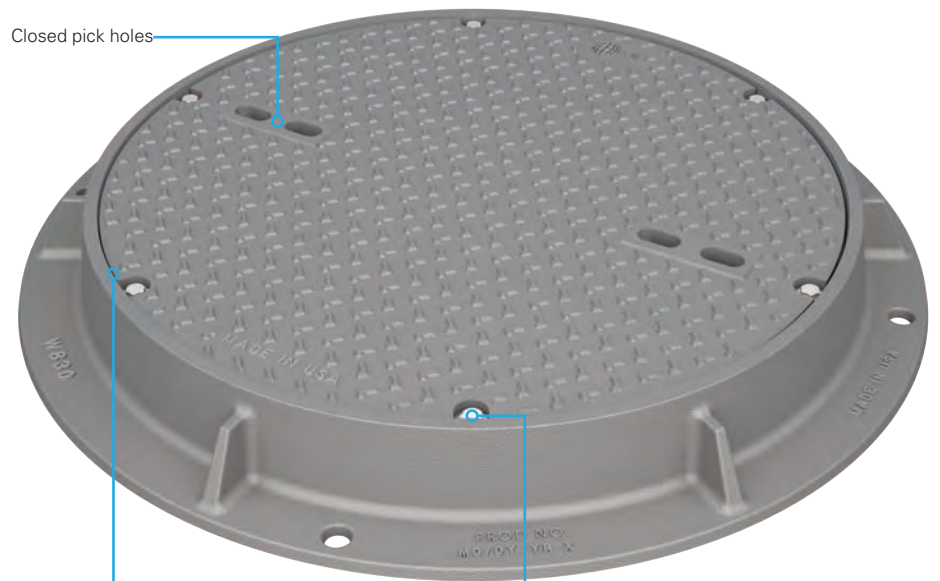
Modular design allows for infinite length to accommodate even the longest duct systems.

## DUOSEAL® WATERTIGHT ACCESS ASSEMBLY

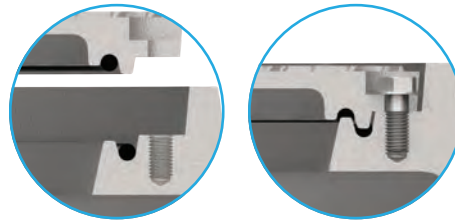
Prevent discharges, protect against inflow, and suppress odors with DUOSEAL® watertight access assembly.

The DUOSEAL access assembly is ideal for flood prone areas or to prevent unwanted fluids from overflowing due to a surcharge in the system.

The bolted, dual-gasket design creates a watertight barrier to contain manhole structures and prevent inflow or overflow. The assembly has been tested to EJ Watertight Level 8 (L8)\*, meaning it can withstand 3 1/2 atmospheres of pressure (51.45 psi), which is the equivalent of having approximately 118 ft of water on top of the manhole assembly.



### Dual Gaskets



A dual gasket configuration between the frame and cover compress to seal the assembly and separate the interior structure from the external environment.

### Bolted

6 stainless steel bolts and washers screw into blind bolt holes. This ensures the cover is securely attached to the frame and does not allow fluid into or out of the manhole.

### Watertight



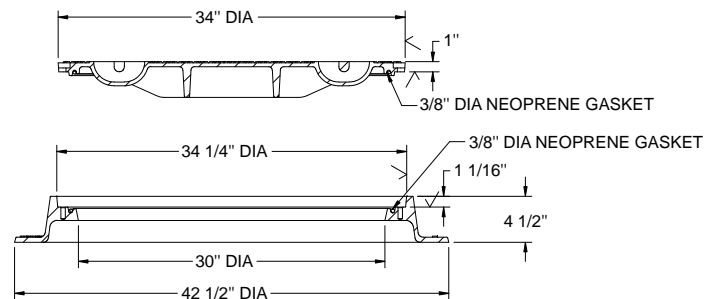
**Level 8  
Watertight\***  
(3 1/2 atm, 51.45 psi)

### Standard Features

- Heavy duty rated
- Watertight (L8)
- Closed pick bars
- 30" clear opening
- 4 1/2" frame height
- Dual 3/8" diameter round neoprene gaskets
- Ductile iron cover with gray iron frame
- Stainless steel bolting
- Made in the USA

### Options

- Special lettered covers
- Custom logo covers
- Security bolting



## Features and Options



# Optimized Designs

Years ago, castings were overbuilt to handle the inconsistencies of molding and iron quality. Now, with more controlled manufacturing processes and a better understanding of design practices, these antiquated designs can be updated.

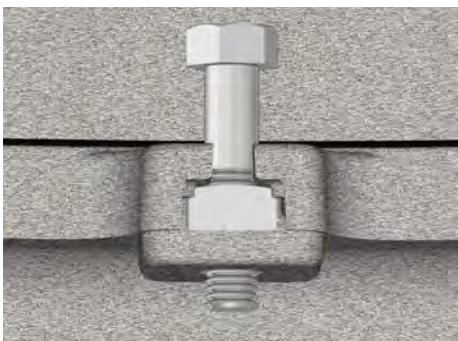
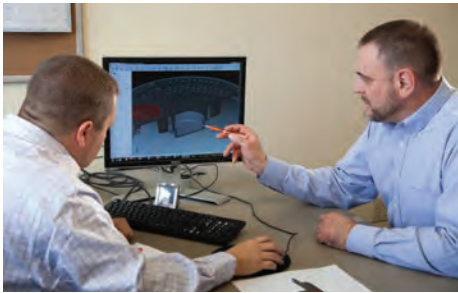
Our modern castings provide superior performance with reduced weight, saving energy and raw material.

### Benefits

- Load ratings that exceed AASHTO M 306 proof load testing
- Reduced weight for ergonomic benefits
- Improved product functionality
- Added strength and durability
- Less raw material usage — a green product
- Interchangeability with your existing street castings



Stackable frames improve safety and conserve space during storage, in transit, and when handling.



### EON LOCK® Bolting

EJ has developed a reliable, hassle-free way to ensure solid, long lasting security.

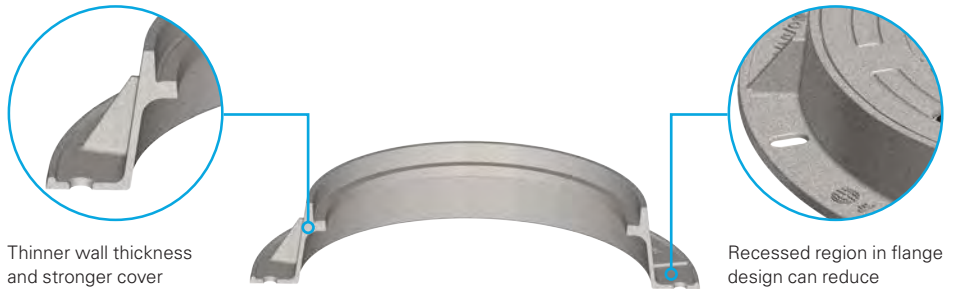
U.S. Patent 7,712,515



Ribbed modern cover design for ductile iron



Platen modern cover design for gray iron



Thinner wall thickness and stronger cover seating

Recessed region in flange design can reduce material and weight

Modern frame designs offer improved performance and safety. They are lighter weight and withstand higher load ratings.

# Safety and Security

Personal safety for all of our customers and employees is imperative. We incorporate safe practices into every process, product and service we provide—from design and manufacture, through distribution and end use.

Adding to safety is security. Infrastructure security is a concern for all government entities both large and small. EJ offers different levels of infrastructure security. In most cases, the simplest security is appropriate, however the end user has several innovative options.

### Benefits

- Intuitive safety features and options that provide physical and visual barriers to protect both workers and the public
- Wide range of security options to protect against accidental opening or closing and prevent unauthorized access or removal



### Safety Grate

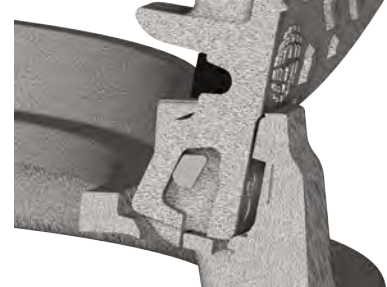
Designed for fall through protection, safety grates offer access for visual inspections and limited maintenance while the safety grate is in place. When in the open position, the safety orange aluminum grates create a visual barrier around the pit. Safety grates can also be locked to prevent unauthorized entry.



### Safety Bar

Self-engaging safety bar locks into place when the cover is fully opened and prevents accidental closure. The safety bar easily lifts up and out of the locking position, allowing the cover to close.

U.S. Patent 8,449,216



### Safety Catch

Offered in our hinged manhole covers, the safety catch design helps prevent unintended closure. The design also allows for the cover to be removed and opened to angles greater than 90°, providing clear access to the structure below.

U.S. Patent 7,908,798



### ADA Compliance

Provides safe walking and biking surfaces and equal access for all modes of transportation.



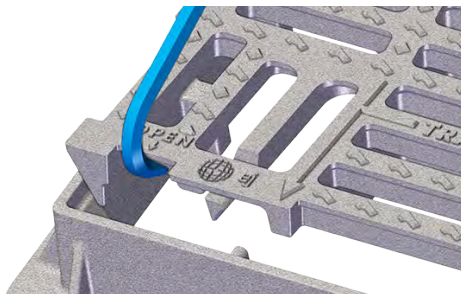
Missing and stolen covers are dangerous to pedestrians and motorists. Make sure they are properly secured against the hazards in their environment.



### Cam Bolting

Available on the CAMPRESSION® series, the arrangement of cam bolting locks applies pressure to the cover and gasket for a tight seal. The design does not require the bolt to be removed to open the cover. Simply loosen the bolt enough to rotate the cam to the open position to remove the cover. Cam bolting eliminates loose and missing fasteners.

### Other Bolting Options



### Slam Lock

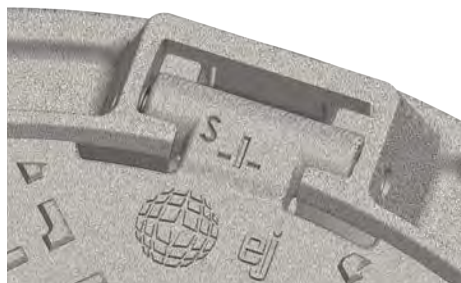
The self engaging slam lock feature automatically locks the cover/grate to the frame when closed. To the untrained eye, the unlocking technique for the slam lock is not easily recognizable. With a standard pry bar, the latch releases when the pry bar is applied to the right location.



**Standard Bolting**—  
The simplest way to secure covers or grates to the appropriate frame. Standard hex bolts or cap screws are the most common.



**Pent Head Bolting**—  
Provides a bit more security over standard bolting. Pent head bolts are substituted for the standard hex head style. Tools for pent head bolts are commonly available.



### Captive Hinge

Using a theft resistant hinge pin permanently secures the cover to the frame. This patented feature is referred to as our Captive Hinge design.

U.S. Patent 8,057,123



### Cam or Keyed Locks

The cam lock provides improved security to frame and cover assemblies, while eliminating loose and missing fasteners. EJ offers various cam and lock options to fit your needs. (underside view shown)



**Tamper Proof Bolting**—  
These type of bolts are used for situations that require special security above standard and pent head bolting. Tools required for removal are not as common.

# Ease of Use

Whether it is an access point you need to get into daily, or only on an occasional basis, ease of entry to the chamber is key for authorized personnel.

Our designs incorporate features that improve reliability and ergonomics to make use simple and reduce effort.

### Benefits

- Ergonomically engineered to minimize effort and reduce strain
- Intuitive operation that requires minimal training
- Multiple handling options that can accommodate your existing tools



### Mechanical Strut

Mechanical strut greatly reduces the effort required to open the cover. For example, a 550 lb cover can be opened using less than 35 lb of force at the handle. The fully contained, corrosion-resistant stainless steel strut takes up minimal space and is superior to exposed spring lift assist systems.



### Hinged Covers and Hatches

Ranging from standard manholes to large hatches, EJ offers a wide range of solutions to fit your application's proof load and usage needs (see page 9 for benefits of hinged cover designs).

U.S. Patent 7,908,798

### EPIC® Pick Bar

EPIC pick bar solution improves stability and increases leverage in this patented, closed hole design.

U.S. Patent 7,905,679

### MULTILEAF™ Hinged Covers

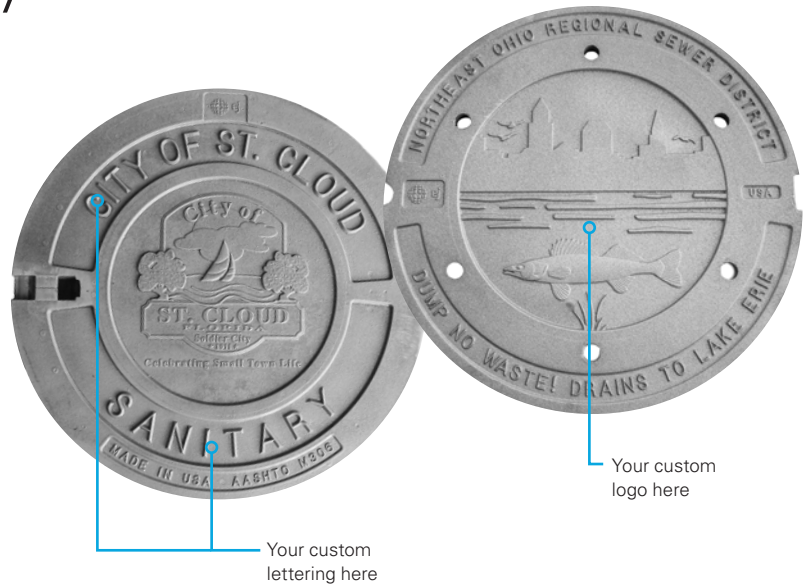
To withstand heavy loads, large openings typically required heavy covers. Innovations from EJ, such as the MULTILEAF, use a multi-cover design to distribute the weight between several covers, making opening the large cover area much easier while retaining strength.

# Custom Logo Covers

## Promote Your Identity

### Customize Your Casting

Always popular, custom covers may feature a slogan, logo, mascot or a popular characteristic. EJ provides custom logo and lettered covers for many municipalities, utilities and universities in a multitude of cover designs. Specialized lettering, in any language, lets you specify the city, corporation and type of structure beneath the cover. Customized logos and lettering are available on a wide selection of EJ manhole covers.



## Coating of Castings

AASHTO M306 specifically calls for castings to be uncoated. Cast iron is a highly corrosion resistant product and coatings are not needed. Coatings have been applied in the past for aesthetic reasons and may hide castings defects.

EJ is dedicated and committed to environmental stewardship for clean air, water, and earth, while adhering to standard specifications designated by AASHTO.



# Fabricated Products

EJ offers a variety of fabricated solutions for both on road and off road applications.

We manufacture an extensive range of access solutions in a variety of materials — including galvanized steel, stainless steel, aluminium, ductile iron and composite — in our world class production facilities.

Our range of fabricated steel drainage grating conforms to rigorous DOT and municipal standards. Approved products are used on federal highway projects across the USA.

Access hatches are designed to withstand heavy use. They are also available for lighter weight applications including pedestrian or unintended vehicular traffic.

## Applications

- Infrastructure access
- Drainage and storm water management
- Utility and telecommunication vaults
- Pump and lift stations
- Decorative streetscapes

## Services

- Knowledgeable customer support
- Experienced engineering
- High quality materials and hardware
- Automated welding and machining
- Hand fabrication
- Large volume production
- Custom solutions

## Products

- Access hatches
- Infill floor doors
- Steel riser rings
- Roadway grates
- Reticuline grates
- Bar grates
- Trench frames
- Tree guards
- Hand rails and safety bars
- Trash racks and intake screens
- Other custom fabricated solutions to satisfy your specific application

## Access Hatches



Fabricated aluminum and steel access hatches are available in a wide range of styles, equipped with the features you need for your project.

## Infill Floor Doors



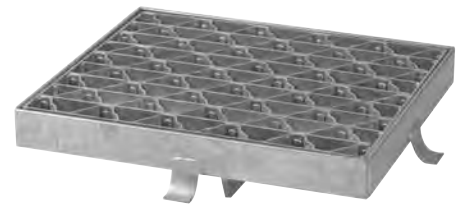
Infill hatches accommodate pavers or concrete of varying heights to maintain the flow and identity of a streetscape, campus, or park landscape.

## Roadway Grates



Our fabricated grating can be customized to fit existing drainage structures.

## Catch Basin and Curb Inlet Grates



Including galvanized riveted reticuline and bar grates.

## Trench Frames and Grates



Build to any length of drainage required and incorporate cast iron trench or fabricated steel grates to meet your project needs.

## Riser Rings



Adjust any manhole or catch basin to grade on your resurfacing projects, new installations, or rehabilitation work. Available in round, square, or rectangular sizes.

# Municipal and Construction Casting Load Ratings

## Loading Requirements

All products manufactured by EJ are designed to meet or exceed the specified loading requirements. They conform to AASHTO and ASTM standards. These standards specify material quality and load requirements.

## Proof Load Testing

All H-20 heavy duty traffic rated construction castings must pass a proof load test conducted in accordance with AASHTO M306 guidelines. The proof load testing procedure calls for the load to be concentrated on a 9" x 9" contact area in the center of the cover or grate and hold 40,000 pounds for one minute. Following the test the casting is carefully inspected. Cracks or permanent deformation are cause for rejection. Frequently, EJ castings are tested far beyond the specified proof load, often to destruction.

## Material Selection

Depending on the model, our construction castings can be manufactured using either gray iron or ductile iron. Gray iron has an unequalled record of success as a material for construction castings. Gray iron is highly resistant to corrosion and maintains compressive strength, abrasion resistance, vibration absorption, and low-notch sensitivity. Additionally, gray iron has a long service life and is very cost effective. Ductile iron combines the advantages of gray iron with greater strength, toughness, higher impact resistance and increased durability without additional weight. Because it has the ability to withstand greater loads without failure, it is often specified for extra-heavy load applications.

Gray and Ductile Iron Load Ratings and Descriptions

Rating	Acceptable Load Weight (lbs)	Description
Airport Extra Heavy Duty	Max. 200,000	Casting has been proof load tested to a minimum 200,000 lbs. This includes an additional safety factor over FAA design loading.
Extra Heavy Duty	Max. 100,000	Casting has been proof load tested to 100,000 - 200,000 lbs. This meets the design loading associated with the FAA wheel loading.
Heavy Duty	Max. 40,000	Casting must meet the requirements of AASHTO M306 to be classified as heavy duty. AASHTO M306 requires that castings bear a minimum of 40,000 lbs on a 9" x 9" area.
Medium Duty	Max. 16,000	Castings designated as medium duty accept loading from 16,000 - 40,000 lbs. These castings can accept standard traffic loading, and are in conformance with H-20/HS-20 (wheel load of 16,000 lbs. on a tire contact area of 10" x 20") or Federal Specification RR-F-621D (25,000 lbs. on a 9" x 9" load contact area).
Light Duty	Max. 2,500	Light duty castings are able to withstand some vehicular loading, but are not designed to accept roadway traffic. Items can accept loading from 2,500-16,000 lbs. These products may be subject to occasional traffic from process maintenance, mowers, etc.
Non-traffic	Under 2,500	Castings designated as non-traffic are intended for use in areas that are not subject to vehicle traffic. Generally nothing over 2,500 lbs. should be placed on these items. Duty rating is 0 - 2,500 lbs.

## Flow Capacities of Inlet Grates

Selecting and specifying the proper type of inlet grates for drainage is an important part of a stormwater management design plan. EJ manufactures many different types and sizes of inlet drainage grates to meet your design needs. See a listing of EJ drainage tables for round grates and catch basins in the back of this catalog.

The flow capacity of any inlet grate in a sump or ponded condition is a function of the depth of water over the grate and the open area of the grate. For this calculation, the orifice equation is used. The orifice equation can be used to determine the flow through a grate.

$$Q = CA\sqrt{2gd}$$

where  $Q$  = flow

$C$  = orifice coefficient

$A$  = open area of grate (ft<sup>2</sup>)

$g$  = acceleration due to gravity (32.2 ft/sec<sup>2</sup>)

$d$  = depth of water over grate (feet)

Using an orifice coefficient of 0.67 and correcting open area from square feet to square inches and depth of water from feet to inches, this equation simplifies to:

$$Q = 0.0108 A\sqrt{d}$$

where  $Q$  = flow (CFS, cubic feet per second)

$A$  = open area of grate (in<sup>2</sup>)

$d$  = depth of water over grate (inches)

Note: This equation is valid for inlet grates in a sump condition where water depths are 4 inches or greater. At water depths less than 4 inches an inlet grate acts as a weir to incoming flow and requires different analysis to determine flow capacity. The weir equation used is listed below and it is used to determine how much water flows to the grate:

$$Q = 3.33 L(H)^{3/2}$$

where  $Q$  = flow (CFS)

$L$  = perimeter of grate where flow is present (in feet)

$H$  = depth of water above grate (in feet)

It is important to note that the orifice or weir calculations listed above do not compensate for any reduction in flow capacity due to clogging by debris. This adjustment may vary and is left up to the discretion of the specifying engineer. In traveled portions of roadways, inlets should be placed at low points and along slopes. The inlets placed along slopes are intended to reduce inlet bypass and to reduce or eliminate ponding which can be a hazard to traffic. Maximum allowable ponding varies between specifying bodies.

### Example 1:

Calculate the flow capacity of an EJ model 5105 TYPE M1 Inlet Grate with 6 inches of water over it. Since depth exceeds 4" the orifice equation is applicable.

Recall:  $Q = 0.0108 A\sqrt{d}$        $A = 175 \text{ in}^2$

$d = 6 \text{ inches}$

$$Q = 0.0108 \times 175 \times \sqrt{6}$$

$$Q = 4.6 \text{ CFS}$$



**Example 2A:**

Select a suitable EJ manhole catch basin unit with a grate to handle 6 CFS. Depth of water is 5 inches.

Recall:  $Q = 0.0108 A \sqrt{d}$                        $Q = 6 \text{ CFS}$

$d = 5 \text{ inches}$

Solve for A:                       $A = Q / (0.0108 \sqrt{d})$

$A = 6 / (0.0108 \sqrt{5})$

$A = 249 \text{ in}^2$



Choose EJ model V-5622 Grate with 266 sq. in. open area.

**Sinusoidal and Vane grate flow characteristics**

It is generally accepted that vane grates are more efficient than standard bar grates when capturing water that is moving across them. Sinusoidal and vane grates have greater efficiency due to better directional flow characteristics. Sinusoidal and vane grates typically allow less water to bypass the grate. Please note that if a vane grate is installed improperly (i.e. backwards) the grate will have poor flow characteristics, while sinusoidal grates accept water equally in either direction.

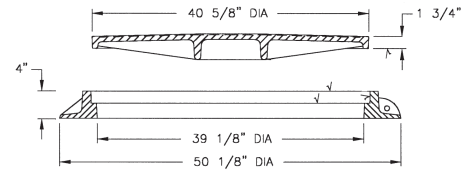


# Manhole Frames and Covers



### 430 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces



### 1000 FRAME & COVER

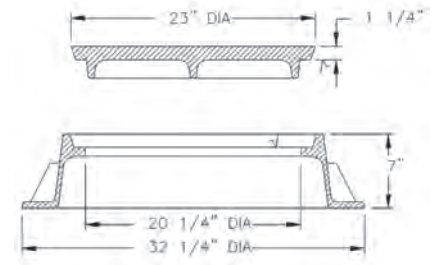
Heavy duty  
Machined bearing surfaces

Options

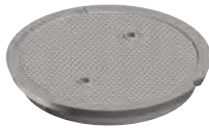
- Solid or vented covers
- Custom logo covers
- Special lettered covers
- Watertite assembly
- Adjusting risers
- Gasket seal covers
- Type E outer cover and Type F 8" diameter inner cover
- 4" height frame — 1000Z1
- Stackable frame



Type A solid cover 1 1/2" dia. flat bosses on cover face illustrated



**Type B Vented Cover**  
20 – 1 1/4" dia. holes



**Type C Vented Cover**  
2 – 1" dia. holes



**Type M Radial Flat Grate**  
Approx. 140 sq. in. open area



**Type N Oval Grate**  
Approx. 115 sq. in. open area  
2 1/4" height above frame  
"DUMP NO WASTE!" lettering and trout image



**Type O1 Beehive Grate**  
Approx. 140 sq. in. open area  
5 1/4" height above frame  
"DUMP NO WASTE!" lettering and trout image



**Type O2 Beehive Grate**  
7" height above frame

Available Frames for 1000 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
1000Z1	32 1/4	4
1000	32 1/4	7
1010Z	32 1/4	7
V-5665	34 13/16	7 1/4

Note: All dimensions are in inches.

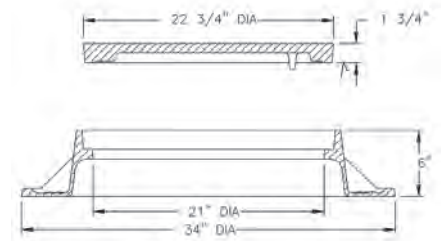
## 1020 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Solid, vented or custom logo covers
  - Special lettered covers
  - Watertite assembly
  - Adjusting risers
  - Gasket seal covers
  - Stackable frames



Type A solid cover illustrated



**Type N Oval Grate**  
Approx. 135 sq. in. open area  
2 1/2" height above frame



**Type M1 Radial Flat Grate**  
Approx. 120 sq. in. open area  
"DUMP NO WASTE!" lettering and trout image



**Type P Concave Grate**  
Approx. 150 sq. in. open area  
5/8" depth of concave



**Type M2 Flat Bar Grate**  
Approx. 150 sq. in. open area



**Type M3 ADA Grate**  
Approx. 87 sq. in. open area  
"DUMP NO WASTE!" lettering



**Type O1 Beehive Grate**  
Approx. 115 sq. in. open area  
Height above frame 4"



**Type O2 Beehive Grate**  
7" height above frame

### Available Frames for 1020 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
1037	34	4
1885*	32 1/2	4
1077	36	4
2995	34	4
2996***	34TF	4 1/2
1020	34	6
1022-1	34	7
1022-2	34	7
1022-3	36	7
1076**	36	7
1550	34	8
1051	34	9
1050Z1	34	9
1050	36	9

Note: All dimensions are in inches.

\*Special lock bar and mud ring (security)

\*\*Special non-rocking feature

\*\*\*Frame is reversible, can be installed as top flange

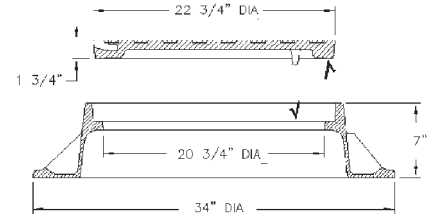
### 1022 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1020 covers and grates

- Options
- Solid, vented or custom logo covers
  - Special lettered covers
  - Watertite assembly
  - Adjusting risers
  - Gasket seal covers
  - 36" base flange — 1022Z2, 1022Z3



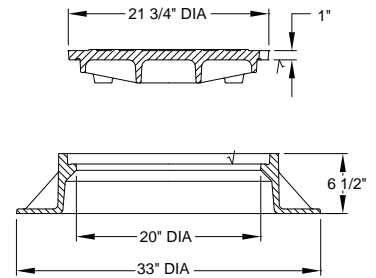
1022Z1 Illustrated



### 1030 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1060 covers and grates

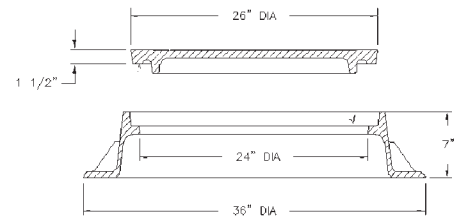
- Options
- Solid or vented covers
  - Special lettered covers
  - Adjusting risers
  - Grates



## 1040 — 1049 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Solid, vented or custom logo covers
  - Heavy duty cover with square indent top
  - Extra heavy duty cover — 1905
  - Light weight composite cover — only available bolt down
  - Watertite assembly
  - Hinged unit
  - Adjusting risers
  - Gasket seal covers
  - Frost proof
  - Z1 frame available with centering lugs
  - Stackable frames



**Type A Solid Cover**



**Type B Vented Cover**  
16 hole



**Type M1 Flat Grate**  
Approx. 190 sq. in. open area  
"DUMP NO WASTE!" lettering and trout image



**Type M2 Flat Bar Grate**  
Approx. 170 sq. in. open area  
"DUMP NO WASTE!" lettering and trout image



**Type M3 ADA Grate**  
Approx. 130 sq. in. open area  
"DUMP NO WASTE!" lettering



**Type N Oval Grate**  
Approx. 230 sq. in. open area  
1" height above frame  
"DUMP NO WASTE!" lettering and trout image



**Type O2 Beehive Grate**  
Approx. 185 sq. in. open area  
6" height above frame

Available Frames for 1040 — 1049 Covers and Grates

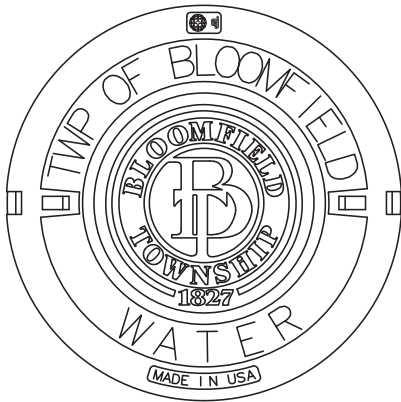
Catalog Number	Base Flange Diameter	Frame Height
1080	32 1/2	4
2800	33 1/2	TF
1046	36	4
2450	34	5**
1045	36	7
1045Z1	36	7
1045Z2	34	7
1040	39	7
1044*	38 3/4	7
1047	36	8
1048	36	9
1049	36	10
1795	36	adj.

Note: All dimensions are in inches.

\*Frost proof

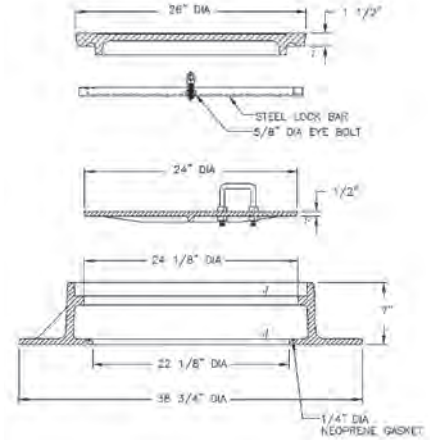
\*\*Reversible frame

### 1040 — 1049 CUSTOM LOGO COVERS



### 1044 FRAME & COVER

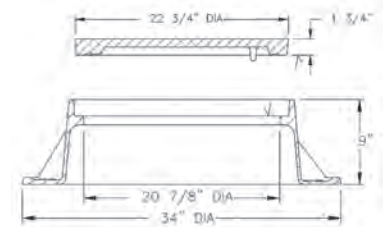
- Heavy duty
- Machined bearing surfaces
- Frost proof
- Lock bar
- Accepts 1040 covers



### 1050 FRAME & COVER

- Heavy duty
- Machined bearing surfaces
- Accepts 1020 covers and grates
- Light weight stackable frame

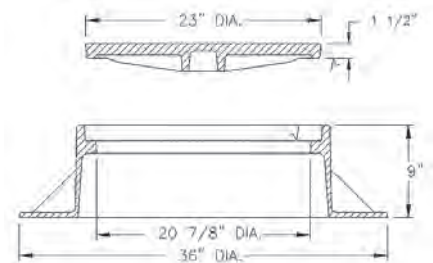
- Options
- Solid, vented or custom logo covers
  - Special lettered covers
  - Watertite assembly
  - Adjusting risers
  - Gasket seal covers



### 1058 FRAME & COVER

- Heavy duty
- Machined bearing surfaces

- Options
- Solid or vented covers
  - Special lettered covers
  - Watertite assembly
  - Grate
  - Logo cover — V-1370-1



**Type M2 Grate**  
 Medium duty  
 Approx. 120 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering and fish  
 image



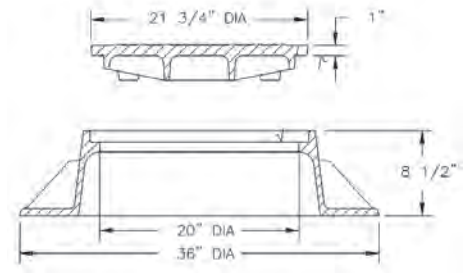
**Solid Cover for Bolting**

## 1060 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Stackable frame

**Options**

Solid or vented covers  
 Special lettered covers  
 Custom logo covers  
 Watertite assembly  
 Adjusting risers  
 Gasket seal covers



Type A Solid Cover illustrated

Available Frames for 1060 Covers and Grates

Catalog Number	Base Flange Dia.	Frame Height
1170	27 3/4	5
1171	26	5
1180	34 1/4	5
1190	40	5
1030	33	6 1/2
1060	36	8 1/2
2850	34 TF	4

Note: All dimensions are in inches.



**Type A Solid Cover**



**Type B Vented Cover**  
25 holes



**Type M2 Radial Flat Grate**  
Heavy duty  
Approx. 145 sq. in. open area



**Type M1 Flat Grate**  
Medium duty  
Approx. 115 sq. in. open area



**Type N Oval Grate**  
Approx. 135 sq. in. open area  
2 1/2" height above frame



**Type O1 Beehive Grate**  
Approx. 135 sq. in. open area  
4" height above frame

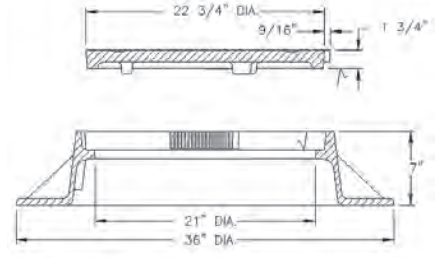


**Type O2 Beehive Grate**  
7" height above frame

### 1076 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Locking covers  
 Unit provided with non-rock ratchet feature  
 Stackable frames

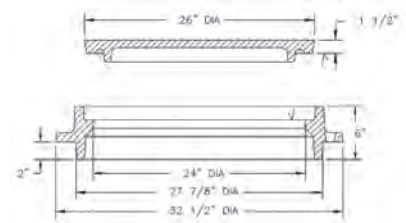
Options  
 Gasket seal covers  
 4" height frame available — 1077



### 1080 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1040 covers and grates

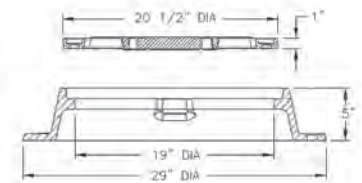
Options  
 Solid or vented covers  
 Special lettered covers  
 Adjusting risers  
 Gasket seal cover  
 Watertite assembly  
 Grates



### 1085 FRAME & COVER

Heavy duty  
 2 bolt assembly supplied as standard  
 Stackable frames

Options  
 Solid or vented covers  
 Custom logo covers  
 Special lettered covers  
 Grates



City of New York Parks & Recreation shown.



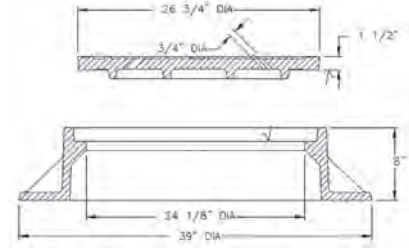
**Type M Flat Grate**  
 Heavy duty  
 Approx. 72 sq. in  
 open area

**Vented Cover**

### 1090 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Vented cover

Options  
Special lettered covers



### 1106 FRAME & COVER

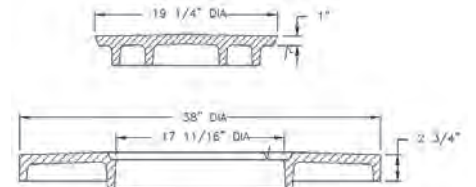
Heavy duty  
Machined bearing surfaces



### 1110 FRAME & COVER

Heavy duty  
Gate well frame & cover  
Machined bearing surfaces

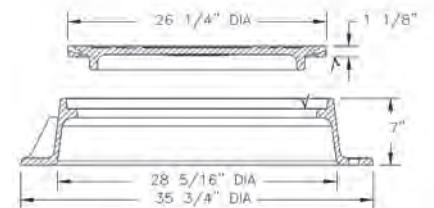
Options  
Special lettered covers



### V-1115-3 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frames

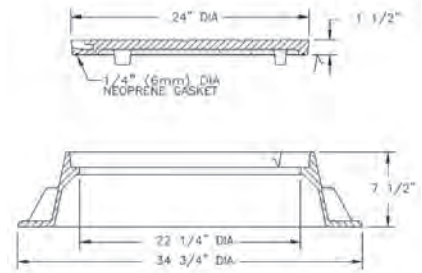
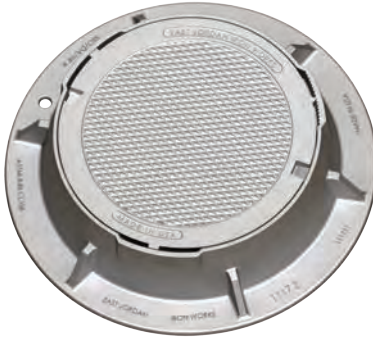
Options  
Special lettered covers  
Custom logo covers  
Grates  
Hinged unit  
Adjusting risers



### 1117 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Unit provided with non-rock ratchet feature

- Options
- Gasket seal covers
- Adjusting risers
- Grates



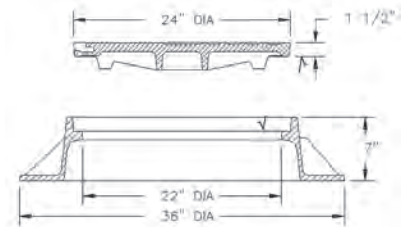
### 1118 — 1120 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

- Options
- Solid, vented or custom logo covers
- Special lettered covers
- Watertite assembly
- Adjusting risers
- Gasket seal covers
- Grates
- TF Frame 2800 — see page 124
- Stackable frames



1120 Illustrated



**Type M Flat Grate**  
 Approx. 125 sq. in.  
 open area



**Type M2 ADA Grate**  
 Approx. 84 sq. in.  
 open area

Available Frames for 1118 — 1120 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
1118	34	4
2860**	34 TF	4
1311	32	4
1119	34	7
1120Z1	36	7
1117*	34 3/4	7 1/2
2030	31 1/2	Adjustable

Note: All dimensions are in inches.

\*Locking feature

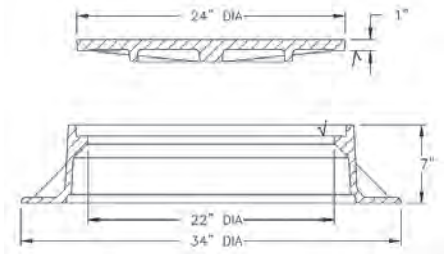
\*\*Top Flange Frame

### 1122 FRAME & COVER

Heavy duty  
Machined bearing surfaces

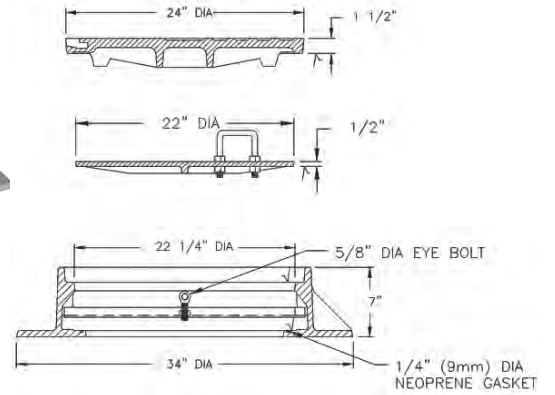
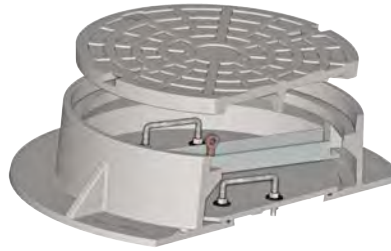
Options

- Solid or vented covers
- Special lettered covers
- Gasket seal covers



### 1123 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Frost proof  
Accepts 1120 covers

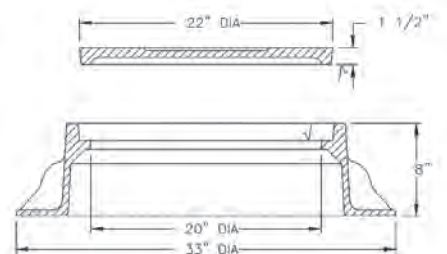


### 1125 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Also accepts 1130 cover and grates

Options

- Special lettered covers



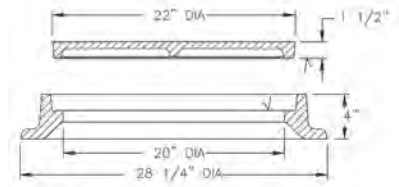
### 1130 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 For 24" sewer pipe bell  
 Confirm dimensions before ordering

- Options
- Special lettered covers
- Grates
- Gasket seal covers
- Medium duty covers
- Extra heavy duty ductile iron cover



Type A solid cover illustrated



**Type M1 Flat Grate**  
 Medium duty  
 Approx. 115 sq. in.  
 open area



**Type M3 Radial Grate**  
 Heavy duty  
 Approx. 170 sq. in.  
 open area



**Type N Oval Grate**  
 Approx. 135 sq. in.  
 open area  
 2 1/2" height above frame



**Type O1 Beehive Grate**  
 Approx. 135 sq. in.  
 open area  
 4" height above frame



**Type O2 Beehive Grate**  
 Approx. 135 sq. in.  
 open area  
 7" height above frame

Available Frames for 1130 Covers and Grates

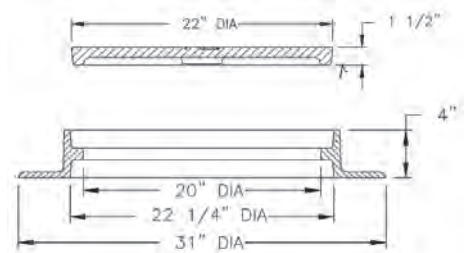
Catalog Number	Base Flange Diameter	Frame Height
1490	28	4
1130	28 1/4	4
1135	31	4
2935*	28 TF	4
1140	28 1/4	6
1125	33	8

Note: All dimensions are in inches.  
 \*Reversible

### 1135 FRAME & COVER

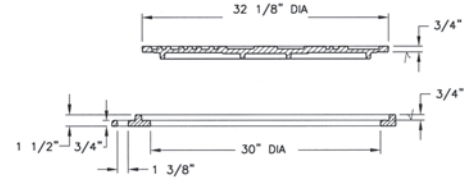
Heavy duty  
 For 24" sewer pipe bell  
 Reversible frame  
 Accepts 1130 covers and grates

- Options
- Special lettered covers
- Grates
- Gasket seal covers
- Medium duty covers



### 1136 FRAME & COVER

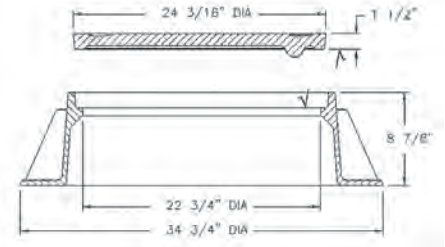
Light duty (Non-traffic)  
Machined bearing surfaces



### 1143 FRAME & COVER

Heavy duty  
Machined bearing surfaces

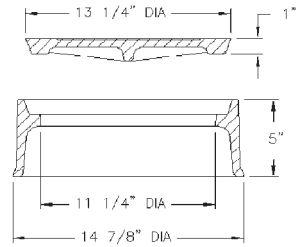
Options  
Special lettered covers



### 1150 FRAME & COVER

Medium duty  
For 12" sewer pipe bell  
Confirm dimensions before ordering

Options  
Adjusting risers  
Grates



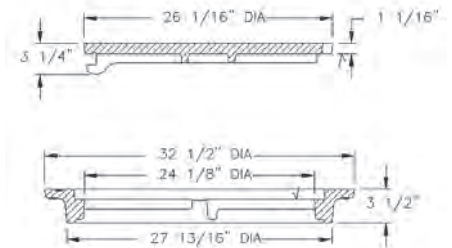
**Type M Flat Grate**  
Approx. 40 sq. in.  
open area



**Type N Oval Grate**  
Approx. 50 sq. in.  
open area  
2" height above frame

### 1154 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
"Turn and Lock" feature is standard  
Options  
7" height base flange frame



1154 Frame Heights

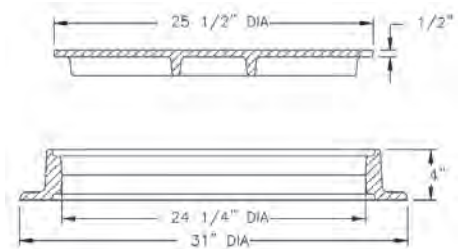
Frame Type	Frame Height
1154Z1 TF	3 1/2
1154Z2 BF	7

Note: All dimensions are in inches.

### 1155 FRAME & COVER

Light duty (Non-traffic)

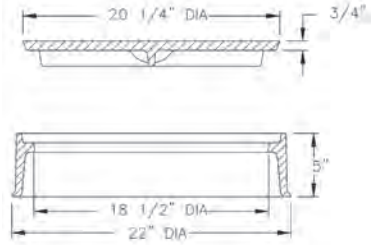
Options  
Special lettered covers  
"DUMP NO WASTE!" lettering



### 1160 FRAME & COVER

Medium duty  
 For 18" sewer pipe bell  
 Confirm dimensions before ordering

Options  
 Grates



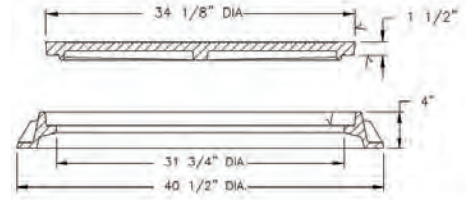
**Type M Flat Grate**  
 Approx. 75 sq. in.  
 open area



**Type N Oval Grate**  
 Approx. 105 sq. in.  
 open area  
 2 1/2" height above frame

### 1161 FRAME & COVER

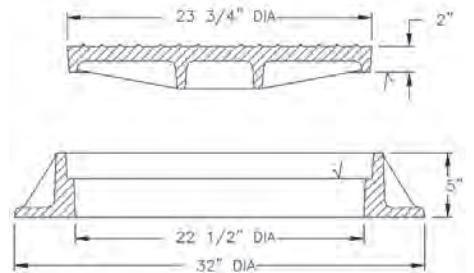
Heavy duty  
 Machined bearing surfaces  
 Options  
 Special lettered covers  
 Custom logo covers  
 Gasket seal covers  
 Non-stacking frame available



### V-1168 FRAME & COVER

Heavy duty

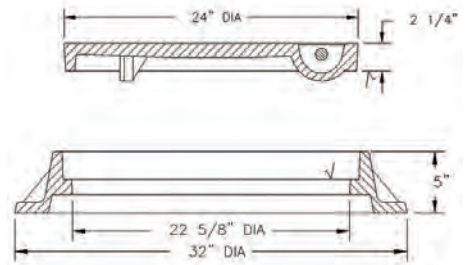
Options  
 Custom logo covers  
 Special lettered covers



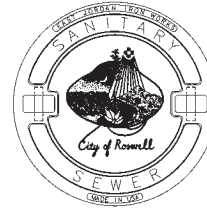
### 1177 FRAME & COVER

Heavy duty  
Machined bearing surfaces

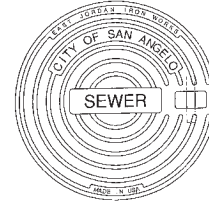
- Options
- Custom logo covers
- Special lettered covers
- Adjusting risers
- Grates



**Flat Grate**  
Approx. 190 sq. in.  
open area



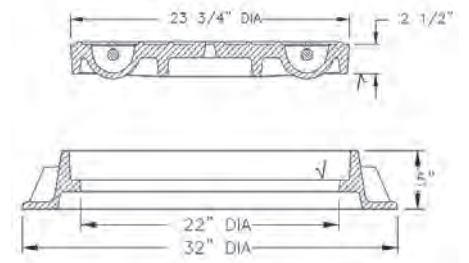
**Custom Logo Covers**



### 1202 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Specify Type cover or grate

- Options
- Custom logo covers
- Special lettered covers
- Grates
- Adjusting risers
- "DUMP NO WASTE!" lettering



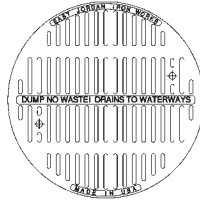
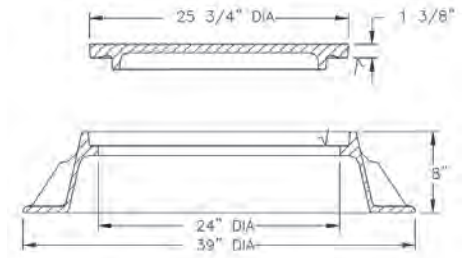
**Flat Radial Grate**  
Approx. 117 sq. in.  
open area



**Custom Logo Cover**

### 1203 FRAME & COVER

- Heavy duty
- Machined bearing surfaces
- Options
- Solid or vented covers
- Special lettered covers
- Grate with "DUMP NO WASTE!" lettering
- Custom logo covers
- Gasket seal covers
- Cam lock covers
- Watertite assembly
- Adjusting risers
- ADA grate
- Square flange frame available — 1203Z3



**1040M3 ADA Grate**  
Heavy duty  
Approx. 130 sq. in.  
open area

Available Frames For 1203 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
1203Z1	39	4
1405	34	6
1203Z2	39	8
1207	36	8
1204	43	10

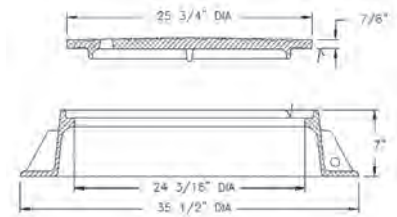
Note: All dimensions are in inches.

### 1205 FRAME & COVER

- Heavy duty
- Machined bearing surfaces
- Options
- Solid or vented covers
- Custom logo covers
- Grates
- Gasket seal covers
- Adjusting risers
- Hinged unit



Type A solid cover illustrated



Available Frames for 1205 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
1205Z1	35 1/2	4
1205	35 1/2	7
1936	35 1/2	9

Note: All dimensions are in inches.



**Type M Flat Grate**  
Approx. 200 sq. in.  
open area  
"DUMP NO WASTE!"  
lettering



**Type M2 Circular Vane Grate**  
Approx. 403 sq. in.  
open area



**Type O2 Beehive Grate**  
Approx. 185 sq. in.  
open area



**Type O3 9" Tall Beehive Grate**  
Approx. 163 sq. in.  
open area

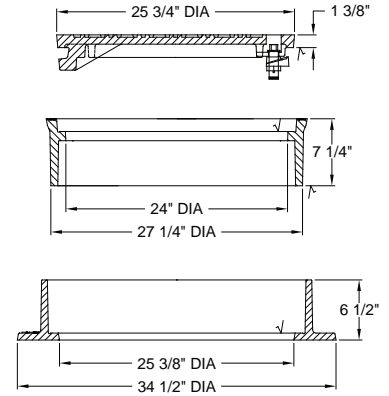
### 1208 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Adjustable frame  
 Accepts 1203 covers

Options  
 Special lettered covers  
 Cam lock covers



1208 adjustable frame and 1203A2 cover with optional cam lock illustrated



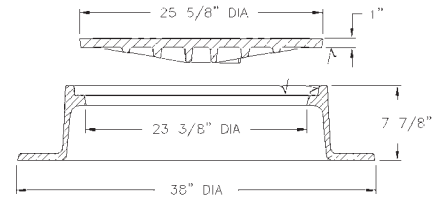
### 1210 FRAME & COVER

Heavy duty  
 Vertical and horizontal machined surfaces

Options  
 Solid or vented covers  
 Special lettered covers  
 Adjusting risers



Type A Solid PLD Cover



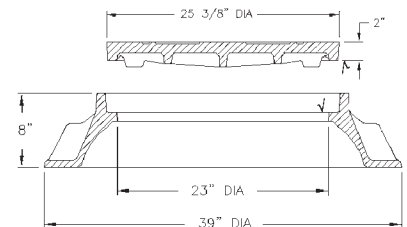
### 1212 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Stackable frame

Options  
 Solid or vented covers  
 Special lettered covers  
 Custom logo covers  
 Also accepts 1700 covers  
 Gasket seal covers  
 Cam lock covers  
 Watertite assembly  
 Adjusting risers  
 Grate — 1700  
 4" height frame — 1214Z



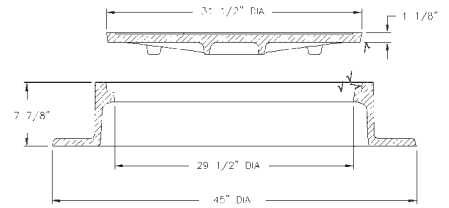
Type A1 Solid Cover  
 "DUMP NO WASTE!"  
 lettering and trout  
 image



### 1220 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces

- Options  
Solid or vented covers  
Special lettered covers  
Adjusting risers  
Gasket seal covers  
4" height frame

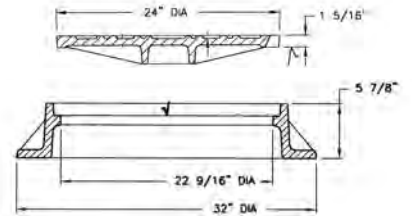


Type BVH Perforated  
PLD Cover

### 1224 FRAME & COVER

Heavy duty

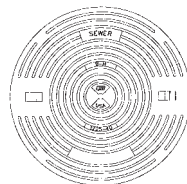
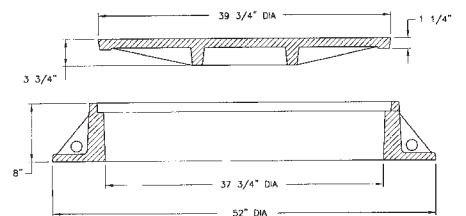
- Options  
Special lettered covers  
Watertite assembly  
Gasket seal covers



### 1225 FRAME & COVER

Heavy duty  
Machined bearing surfaces

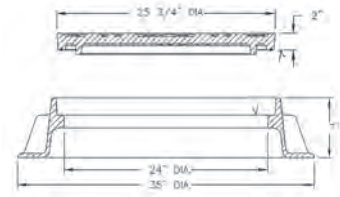
- Options  
Special lettered covers  
Watertite assembly  
Hinged unit



### 1227 FRAME & COVER

Heavy duty  
Machined bearing surfaces

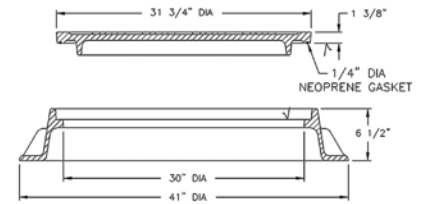
Options  
Special lettered covers  
Gasket seal cover



### 1230 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1810 series covers

Options  
Special lettered covers  
Gasket seal covers  
Watertite assembly  
Grate — V3600-4  
Slab style frame — V-1700-4  
Reversible frame — V-1600-4  
Adjusting risers  
Hinged unit



Available Frames for 1230 Covers and Grates

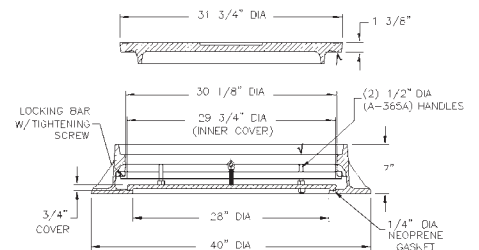
Catalog Number	Frame Height
1820	5 5/8
1232	6 1/2
1233	7
1234	8
1825	10

Note: All dimensions are in inches.

### 1233 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Frost proof  
Accepts 1230 covers

Options  
Special lettered covers

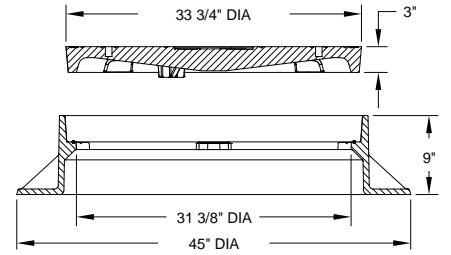


### 1240 AIRPORT MANHOLE FRAME & COVER

Extra heavy duty  
 Proof load 245,000 lbs.  
 Machined bearing surfaces  
 Bolted assembly

Options  
 Solid or vented covers  
 Special lettered covers

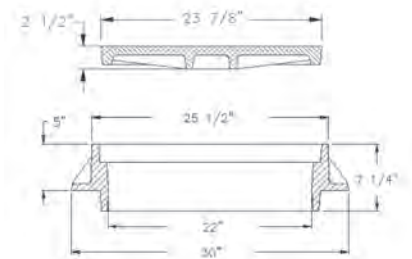
MATERIAL SPECIFICATIONS  
 Frame - Gray Iron ASTM A48, Class 35B  
 Cover - Ductile Iron ASTM A536



### V-1243 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

Options  
 Solid and vented covers  
 Custom logo covers  
 Special lettered covers  
 Adjusting risers  
 Grate — V-3317

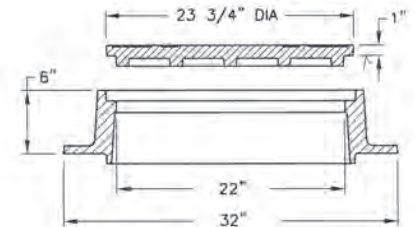


Custom Logo Cover

### 1251 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

Options  
 Custom logo covers  
 Special lettered covers  
 Adjusting risers  
 Grates



**Flat Grate**  
 Approx. 172 sq. in.  
 open area

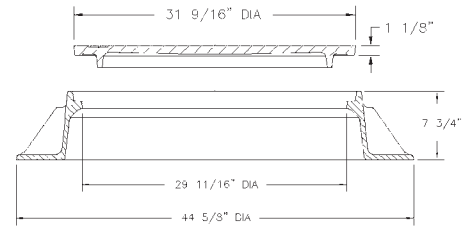


**Type A Solid Cover**

### 1266 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces  
Perforated cover is standard

Options  
Grates  
Special locking device



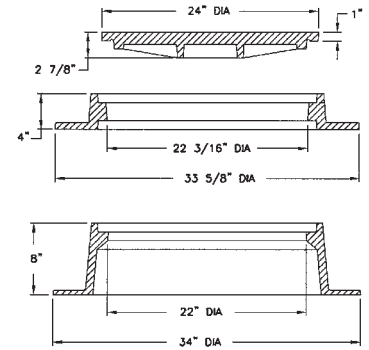
### 1267 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Specify 4" or 7" height frame  
4" frame is reversible

Options  
Special lettered covers  
Adjusting risers  
Grates  
Gasket seal covers  
Watertite assembly  
Consider 1122Z 7" frame as an alternative



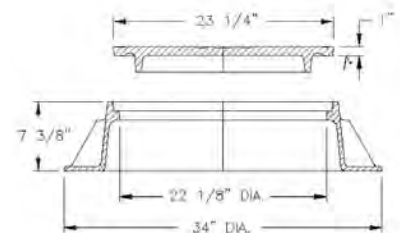
**Flat Radial Grate**  
Approx. 122 sq. in.  
open area



### V-1301 FRAME & COVER

Heavy duty  
Machined bearing surfaces

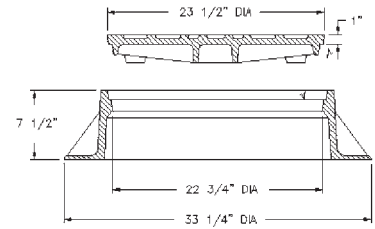
Options  
Solid and vented covers  
Custom logo covers  
Special lettered covers  
Grate — V-3501



### V-1304 FRAME & COVER

Heavy duty  
Machined bearing surfaces

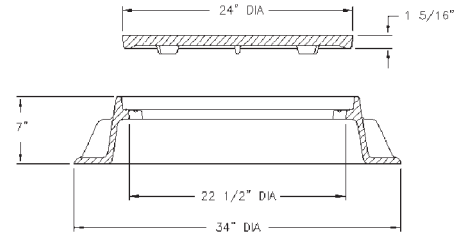
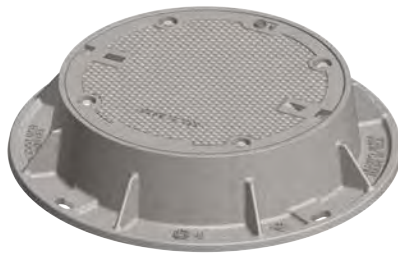
Options  
Special lettered covers



### 1310 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

Options  
Special lettered covers  
Watertite assembly  
Gasket seal covers  
Bolted assembly  
2", 2 1/2", and 3" adjusting risers — 1310H  
4" height frame — 1311  
Grate — Type M and M2

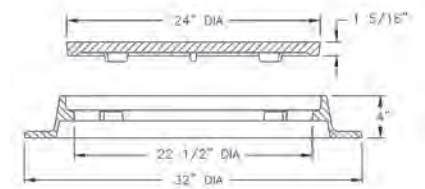


**Type M Grate**  
Approx. 182 sq. in.  
open area

### 1311 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

Options  
Special lettered covers  
Watertite assembly  
Gasket seal covers  
Bolted assembly  
Adjusting riser — 1224  
7" height frame — 1310  
Grate — 1120M

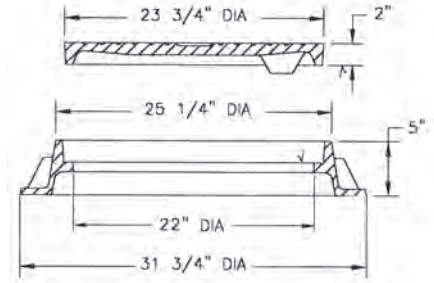


**Type M Flat Grate**  
Approx. 125 sq. in.  
open area

### V-1317 FRAME & COVER

Heavy duty  
Machined bearing surfaces

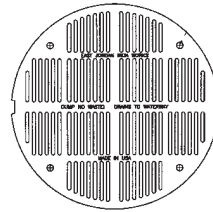
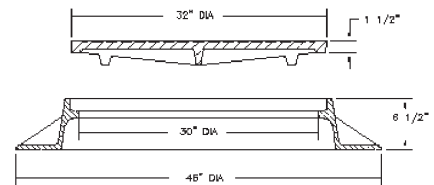
- Options  
Solid and vented covers  
Special lettered covers  
Custom logo covers  
Watertite assembly  
Adjusting risers  
Grates — V-3317 & 1710



### 1320 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Also accepts 1480 covers and grates

- Options  
Solid, vented and custom logo covers  
Special lettered covers  
Watertite assembly  
Gasket seal covers  
ADA Grate  
Hinged unit  
Type E ductile outer cover with 1040  
26" diameter "inner" cover



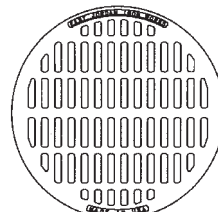
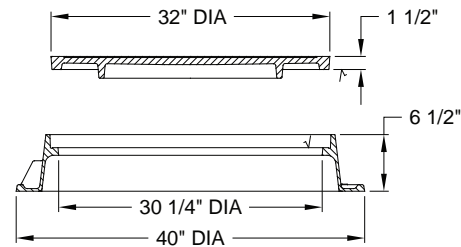
**Type M Flat Grate**  
Approx. 360 sq. in.  
open area

**Type M1 ADA Grate**  
Approx. 262 sq. in.  
open area

### 1322 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1320, 1322, 1324, 1480, V-1419,  
V-1420, V-1432 & V-1816 covers

- Options  
Special lettered covers  
Watertite assembly  
Gasket seal covers  
Grates  
ADA Grate — 1480  
Type E ductile outer cover with  
1040 — 26" diameter "inner" cover

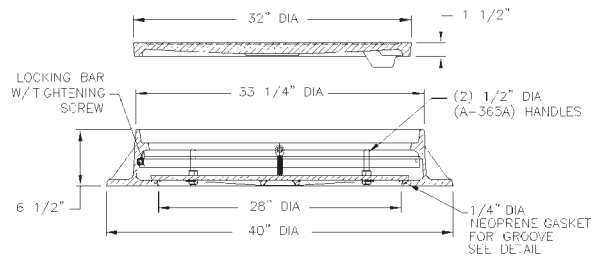
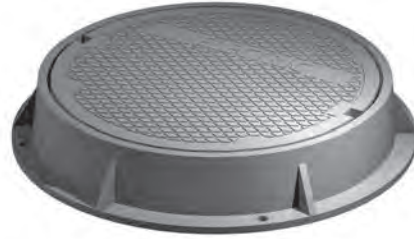


**Type M Grate**  
Approx. 240 sq. in.  
open area

### 1323 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Frost proof  
 Accepts 1320, 1322 &  
 1480 covers

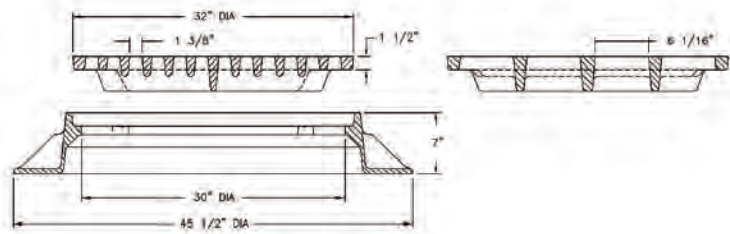
Options  
 Special lettered covers  
 Custom logo covers  
 Pick bars



### 1324 AIRPORT MANHOLE FRAME & GRATE

Extra heavy duty  
 Proof load 200,000 lb.  
 Approximate 270 sq. in. open area  
 Bolted assembly  
 "DUMP NO WASTE!" lettering

Options  
 Solid or vented covers  
 Special lettered covers  
 Gasket seal covers  
 Adjusting risers



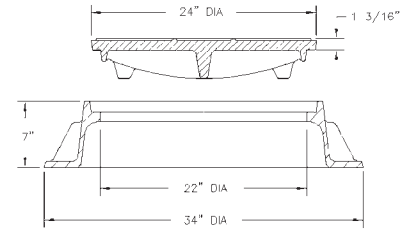
#### MATERIAL SPECIFICATIONS

Frame — Gray Iron ASTM A48 Class 35B  
 Grate — Ductile Iron ASTM A536

### 1325 FRAME & COVER

Heavy duty  
Machined bearing surfaces

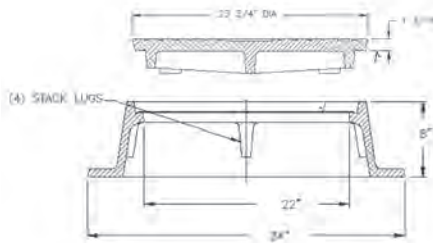
Options  
Special lettered covers  
Watertite assembly



### V-1326 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

Options  
Solid and vented covers  
Custom logo covers  
Special lettered covers  
Adjusting risers  
Grates  
Watertite — V-2326



Available Frames for V-1326 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
V-1136	30	2 1/2
V-1326-4	32	4
V-1327	32	6
V-1326-3	34	6
V-1327-1	36	6
V-1326	34	8
V-1326-2	34	8

Note: All dimensions are in inches.



**1120 Type M2 ADA Grate**  
Approx. 84 sq. in. open area



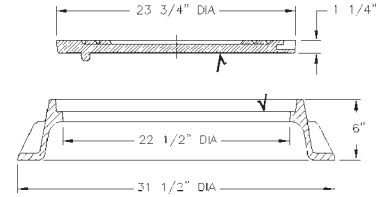
**1248 Type M2 Grate**  
Approx. 192 sq. in. open area

### 1337 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options

- Special lettered covers
- 7" height frame — 1771
- 2 1/2" height frame — V-1136
- Top flange frame — 2855
- Gasket seal covers
- Watertite assembly
- Grate — V-3337

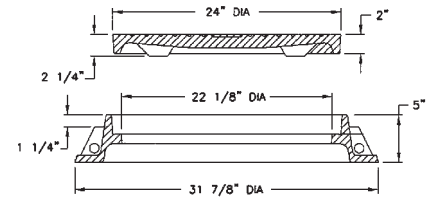


### 1342 FRAME & COVER

Heavy duty  
Machined bearing surfaces

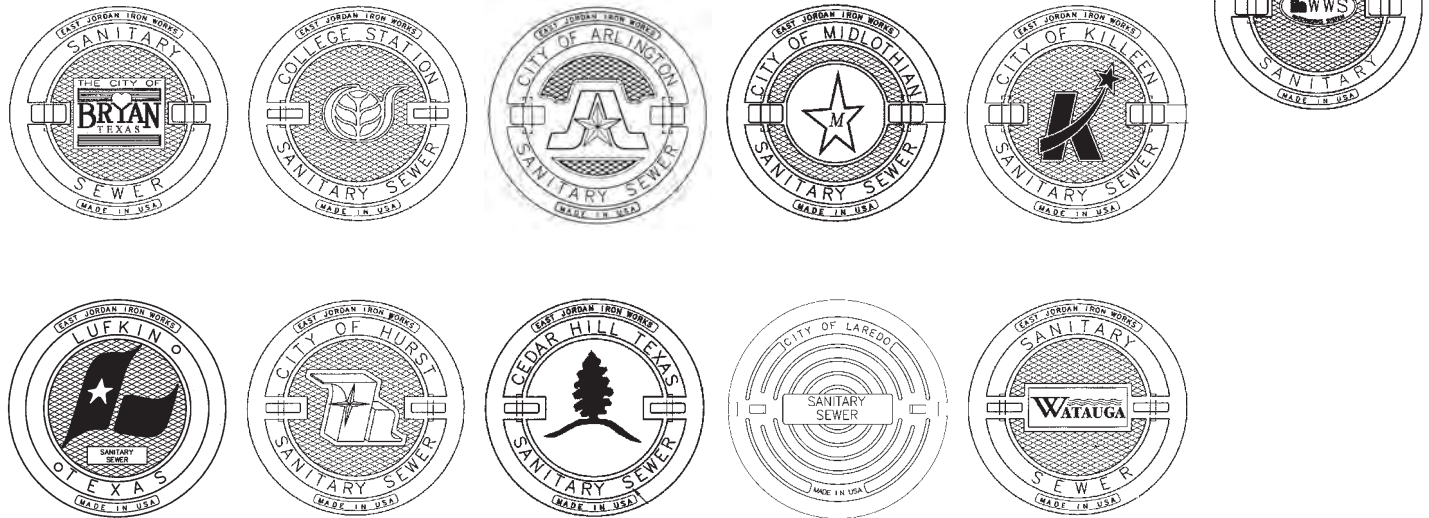
Options

- Special lettered covers
- Custom logo covers
- Solid or vented covers
- Grates
- Watertite assembly
- Adjusting risers
- Pick slots



**V-3342 Flat Grate**  
Approx. 145 sq. in open area

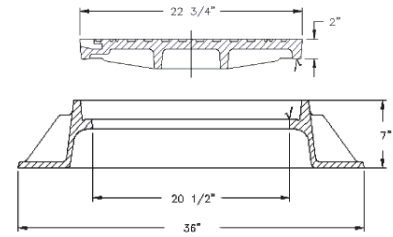
#### Custom Logo Covers



### V-1344 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

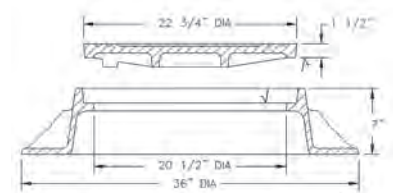
Options  
Custom logo covers  
Special lettered covers  
Adjusting risers  
Grate — V-3344



### V-1345 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

Options  
Custom logo covers  
Special lettered covers  
Adjusting risers



### 1348 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

Options  
Custom logo covers  
Special lettered covers  
Gasket seal covers  
Watertite assembly  
Adjusting risers  
Grate — V-3418-1  
ADA Grate — V-3418-3



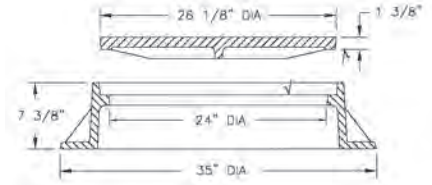
**Radial Grate**  
Approx. 162 sq. in.  
open area



### V-1355 FRAME & COVER

Heavy duty  
Machined bearing surfaces

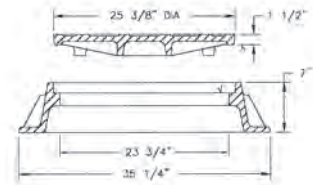
- Options  
Solid and vented covers  
Special lettered covers  
Custom logo covers  
Hinged unit



### V-1357 FRAME & COVER

Heavy duty  
Machined bearing surfaces

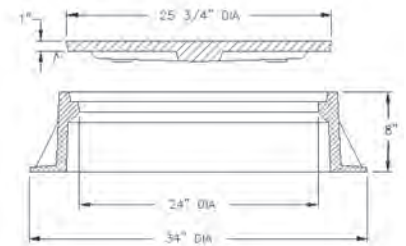
- Options  
Special lettered covers  
Custom logo covers  
Adjusting risers  
Reversible frame — V-1600-3 & 2932Z  
Grate — V-3600-3 ductile iron, approximate 180 sq. in. open area



### V-1358 FRAME & COVER

Heavy duty  
Machined bearing surfaces

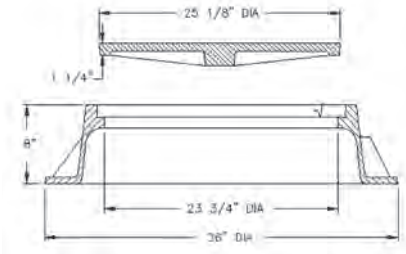
- Options  
Solid and vented covers  
Special lettered covers  
Adjusting risers



**V-1360 FRAME & COVER**

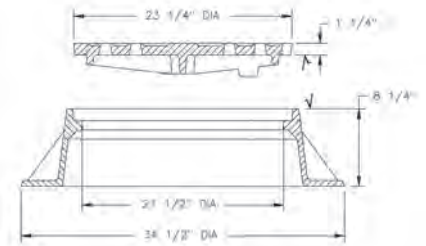
Heavy duty  
Machined bearing surfaces

Options  
Solid and vented covers  
Special lettered covers  
Adjusting risers

**V-1383 FRAME & COVER**

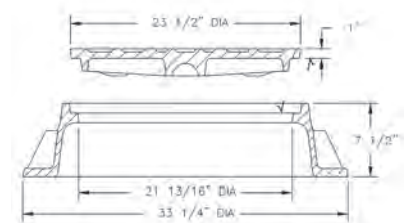
Heavy duty  
Machined bearing surfaces

Options  
Solid and vented covers  
Custom logo covers  
Special lettered covers  
Gasket seal cover  
4" height frame — V-1383-1

**V-1384 FRAME & COVER**

Heavy duty  
Machined bearing surfaces  
Stackable frames

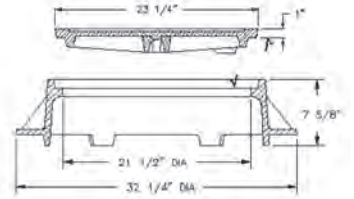
Options  
Solid and vented covers  
Special lettered covers  
Custom logo covers  
Gasket seal cover  
Ductile iron cover  
4" height reversible frame — V-1384-4  
6" height frame — V-1284-3  
Watertite assembly — V-2384  
Adjusting risers  
Grate — V-3384  
Cam lock assembly  
Security bolt assembly  
"DUMP NO WASTE!" lettering



### V-1403 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Centered lugs  
 Uses V-1501 cover

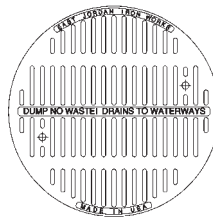
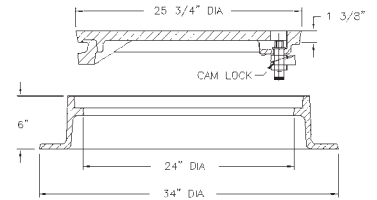
Options  
 Solid and vented covers  
 Special lettered covers  
 Custom logo covers  
 Adjusting risers  
 4 1/8" height frame — V-1406  
 Grate — V-3501, approximate  
 157 sq. in. open area



### 1405 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Cam lock cover

Options  
 Special lettered covers  
 Grate — 1203M  
 ADA grate — 1040M3

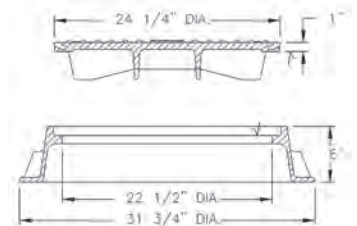


**1040M3 ADA Grate**  
 Heavy duty  
 Approx. 130 sq. in.  
 open area

### V-1407-1 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

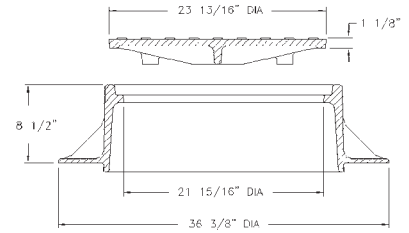
Options  
 Solid and vented covers  
 Special lettered covers  
 Custom logo covers  
 Adjusting risers  
 Accepts V-1375 cover  
 Grate — V-3324



### 1410 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Lock lug cover

Options  
Grates

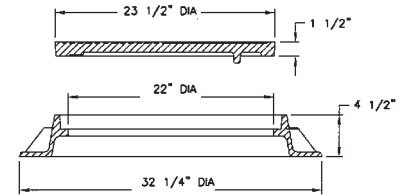


**Type M Flat Grate**  
Approx. 170 sq. in.  
open area

### V-1418-2 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

Options  
Custom logo covers  
Special lettered covers  
Adjusting risers  
Gasket seal covers  
Hinged unit  
Drainage grates



**V-3418-1 Grate**  
Approx. 169 sq. in.  
open area

Available Frames for V-1418-2 Covers and Grates

Catalog Number	Base Flange Diameter	Frame Height
V-1814	30	TF
V-1418-3	30	2 1/2
V-1600-2	28 1/2	4
V-1410-2	32 1/4	4 1/2
1348	32	5 3/4

Note: All dimensions are in inches.

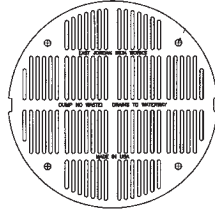
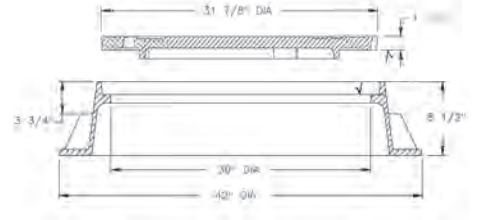
### Custom Logo Covers



### V-1419 — V-1420 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame

- Options
- Hinged unit
  - Gasket seal covers
  - Custom logo covers
  - Special lettered covers
  - Drainage grates
  - ADA drainage grates
  - Light duty drainage grates
  - Beehive grates



**Type M1 ADA Grate**  
Approx. 262 sq. in.  
open area

Available Frames for V-1419 — V-1420 Covers and Grates

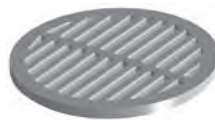
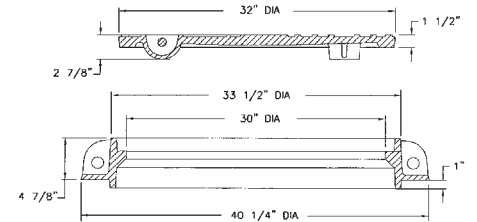
Catalog Number	Base Flange Diameter	Frame Height
V-1816	40 3/4	TF
2810	38	TF
1480	38	4
V-1420	40 3/4	4 1/2
V-1432*	40 1/4	4 7/8
1322	40	6 1/2
1320	46	6 1/2
V-1419	42	8 1/2

Note: All dimensions are in inches.  
\*Frame features mud ring

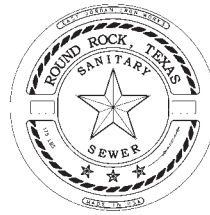
### V-1432 FRAME & COVER

Heavy duty  
Machined bearing surfaces

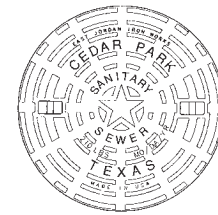
- Options
- Custom logo covers
  - Special lettered covers
  - Watertite assembly
  - Adjusting risers
  - Grates
  - Pick slots



**V-3419 Grate**  
Approx. 346 sq. in.  
open area



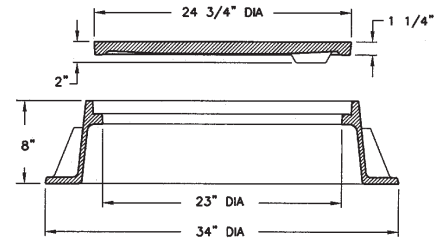
**Custom Logo Covers**



### 1433 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Solid or vented covers
  - Special lettered covers
  - Custom logo covers
  - Watertite assembly
  - Gasket seal covers
  - Grates



1433Z2 Illustrated



**Type M Grate**  
Approx. 100 sq. in.  
open area

Available Frames for 1433 Covers and Grates

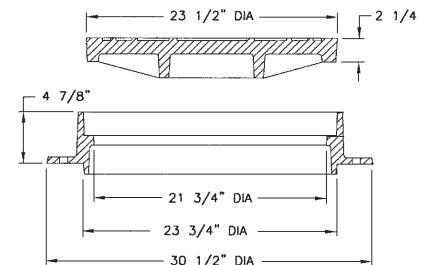
Catalog Number	Base Flange Diameter	Frame Height
1433Z3	34	4
1433Z2	34	8
1433Z1	37 1/4	9

Note: All dimensions are in inches.

### V-1438 FRAME & COVER

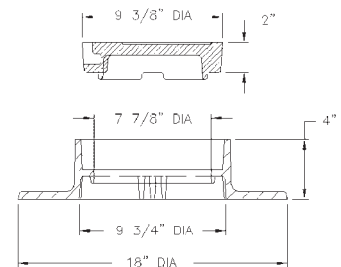
Heavy duty  
Machined bearing surfaces

- Options
- Custom logo covers
  - Special lettered covers
  - Watertite — 2438



### 1445 METER BOX FRAME & COVER

Heavy duty



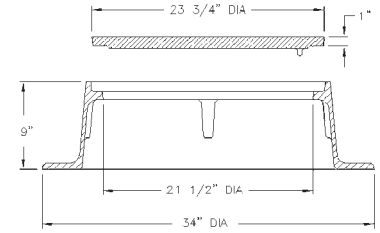
### 1450 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Z1 stackable frame and platen cover shown

- Options
- Solid or vented covers
  - Custom logo covers
  - Special lettered covers
  - Watertite assembly
  - Adjusting risers
  - Gasket seal covers
  - Lock lug cover
  - Ductile iron grate



1450Z1 Frame Illustrated



**Type M Flat Grate**  
 Approx. 110 sq. in.  
 open area

**Type B 20 Hole Cover**

Available Frames for 1450 Covers and Grates

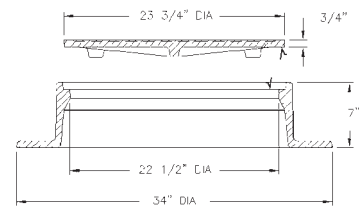
Catalog Number	Base Flange Diameter	Frame Height
2925 TF	23 3/4	4 TF
1690	31 1/4	4 5/8
1665Z1	37 7/8	7
1450Z	38	9
1450Z1	34	9
2020*	37 1/2	9
2035*	36	11

Note: All dimensions are in inches.  
 \*Frame has mud ring

### 1460 FRAME & COVER

Light duty (Non-traffic)  
 Machined bearing surfaces

- Options
- Solid or vented covers
  - Special lettered covers
  - Gasket seal covers
  - Grates



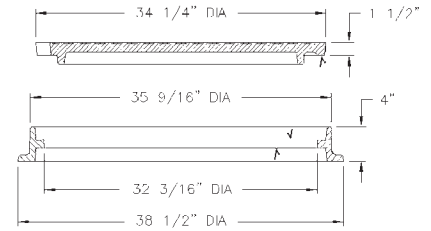
**Type M Flat Grate**  
 Approx. 140 sq. in.  
 open area

**Type B 20 Vented Cover**

### 1475 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

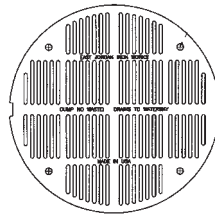
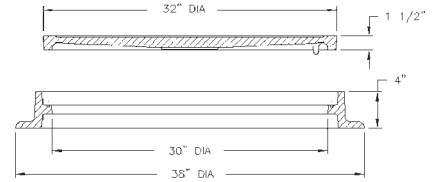
Options  
Square bottom flange frame available



### 1480 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

Options:  
Custom logo covers  
Special lettered covers  
Light duty cover or grate  
Watertite assembly  
Gasket seal covers  
Grates  
Hinged unit  
1320 Grate — heavy duty  
TYPE E ductile outer cover with 1040 26\"/>



**Type M1 ADA Grate**  
Approx. 262 sq. in. open area



**Type M Flat Grate**  
Light duty  
Approx. 275 sq. in. open area



**Custom Logo Cover**

Available Frames for 1475 Covers and Grates

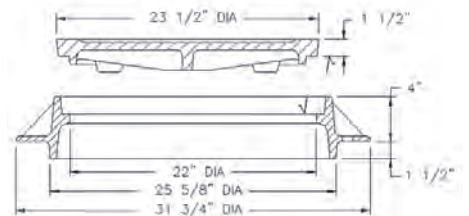
Catalog Number	Base Flange Diameter	Frame Height
1480*	38	4
V-1420	4 3/4	4 1/2
V-1432	40 1/4	4 7/8
1322	40	6 1/2
1320	46	6 1/2
1324	45 1/2	7
V-1419	42	8 1/2
V-1816**	40 3/4	4 1/2 TF
2810**	38	4 TF

Note: All dimensions are in inches.  
\*Reversible frame  
\*\*Top flange only

### V-1480 FRAME & COVER

Heavy duty  
Machined bearing surfaces

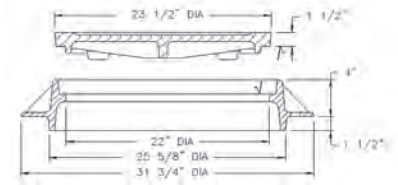
Options  
Solid and vented covers  
Custom logo covers  
Special lettered covers  
Grate — V-3418



### V-1481 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Uses V-1480 cover

Options  
 Solid and vented covers  
 Custom logo covers  
 Special lettered covers  
 Grate — V-3418

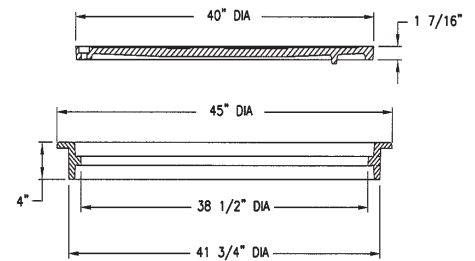


Section view illustrating mud ring

### 1484 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Reversible frame

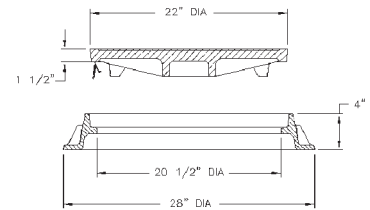
Options  
 Special lettered covers  
 Logo cover  
 Watertite assembly



### 1490 FRAME & COVER

Medium & heavy duty  
 Fits 24\"/>

Options  
 Watertite assembly  
 Gasket seal covers  
 1490Z2 reversible watertite frame  
 Adjusting risers

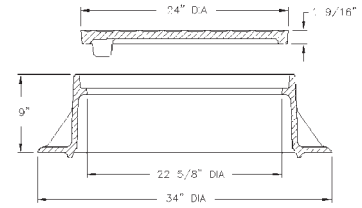


1490Z2 Reversible Frame

### 1500 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Lock lug cover  
Gasket seal covers  
4 1/2" height frame available



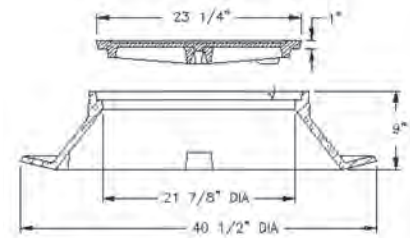
### V-1501 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Custom logo covers  
Special lettered covers  
4 7/8" height frame — V-1105  
5" height reversible frame — 1622  
9" height frame with mud ring — 2015  
Adjusting risers  
Grate — V-3501



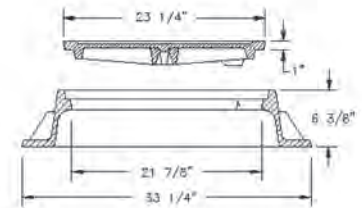
New Orleans standard



### V-1503 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses V-1501 cover

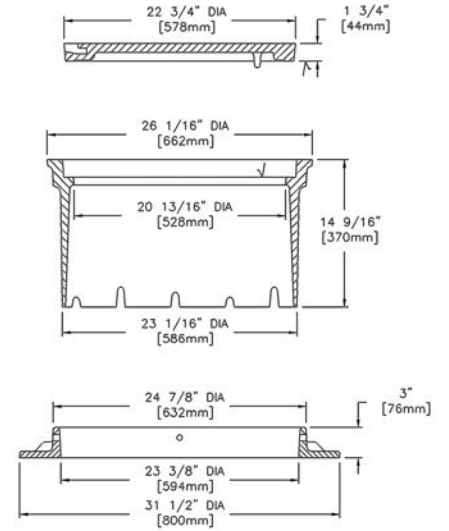
Options  
Custom logo covers  
Special lettered covers  
Adjusting risers  
4 7/8" height frame — V-1105  
5" height reversible frame — 1622  
Grate — V-3501



### 1510 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Adjustable manhole  
 Accepts 1020 covers and grates

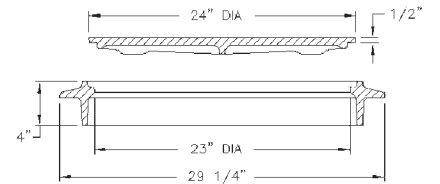
Options  
 Custom logo covers  
 Special lettered covers  
 Watertite assembly  
 Adjusting risers  
 Gasket seal



### 1515 FRAME & COVER

Light duty  
 Machined bearing surfaces

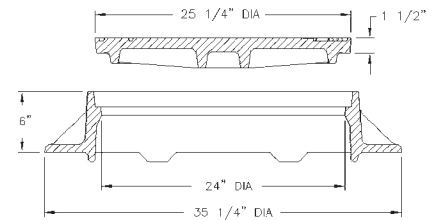
Options  
 Solid or vented covers  
 Custom logo covers  
 Special lettered covers  
 "DUMP NO WASTE!" lettering  
 and fish image



### 1520 FRAME & COVER

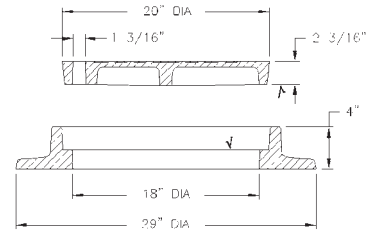
Heavy duty  
 Machined bearing surfaces

Options  
 Special lettered covers  
 Adjusting risers



### 1525 FRAME & COVER

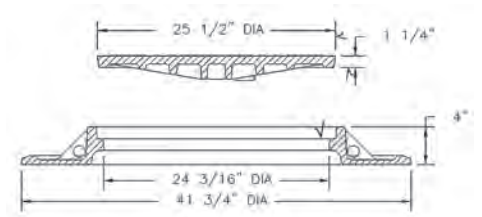
Heavy duty  
Machined bearing surfaces  
Vented cover  
"Water valve" lettering



### 1530 FRAME & COVER

Heavy duty  
Machined bearing surfaces

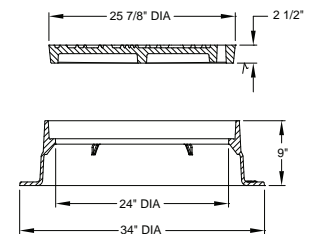
Options  
Special lettered covers  
Solid or vented covers



### 1543 — 1545 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Solid or vented covers  
Special lettered covers  
Cam lock cover — 1545  
Also accepts 1544 and 1970 covers



Illustrating 1545Z3 frame and 1545 cover with optional cam locks



Section view showing cam locks

1543 — 1545 Frame Sizes

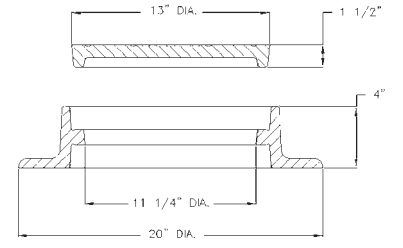
Catalog Number	Clear Opening	Flange Diameter	Frame Height
1543Z1	24	34	4
1545Z2*	24	34	6
1545Z3	24	34	9

Note: All dimensions are in inches.  
\*Reversible frame

### 1562 FRAME & COVER

Heavy duty  
Reversible frame

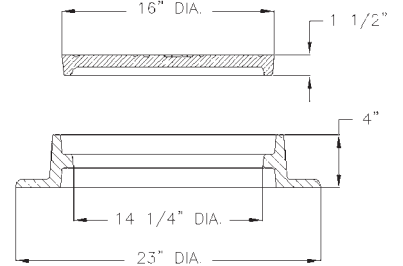
Options  
Special lettered covers



### 1563 FRAME & COVER

Heavy duty  
Reversible frame

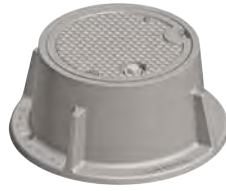
Options  
Special lettered covers



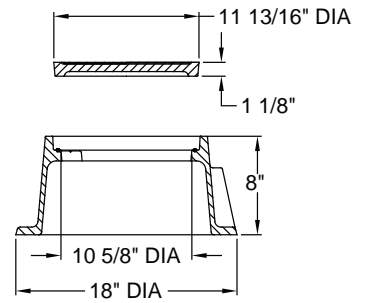
### 1564 MONUMENT BOX

Heavy duty

- Options
- Special lettered covers
- Watertite assembly
- Lock lug cover
- Cam lock covers



1564 with optional lock lug cover illustrated

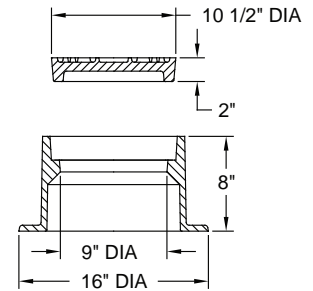


Cross section view showing lock lug

### 1565 MONUMENT BOX

Heavy duty

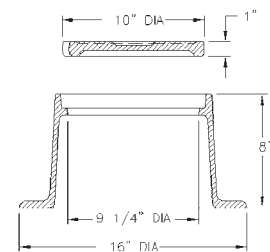
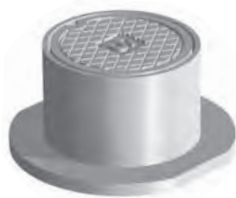
- Options
- 1 or 2 bolt assembly



### 1566 MONUMENT BOX

Heavy duty

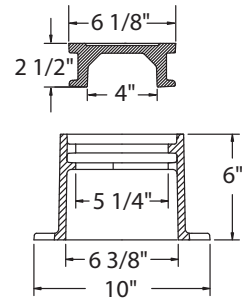
- Options
- Bolted assembly



### 1567 MONUMENT BOX

Heavy duty

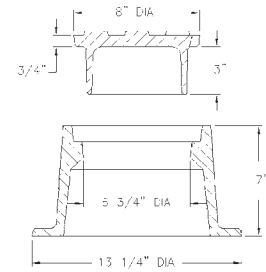
- Options
- Special lettered covers
- Lock lug cover



### 1570 MONUMENT BOX

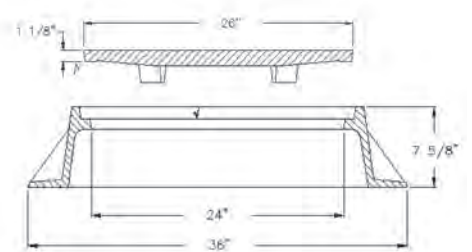
Heavy duty  
Accepts 2965 covers

- Options
- Special lettered covers
- Bolted assembly



### V-1570 FRAME & COVER

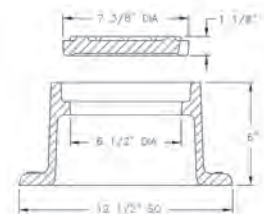
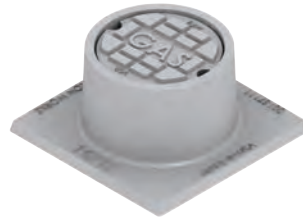
Heavy duty  
Machined bearing surfaces



### 1571 MONUMENT BOX

Heavy duty

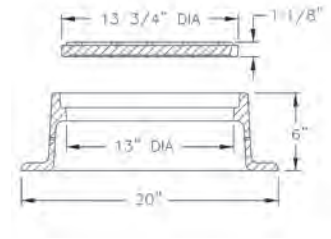
- Options
- Special lettered covers



### 1572 MONUMENT BOX

Heavy duty

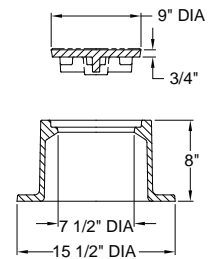
Options  
Special lettered covers



### 1574 MONUMENT BOX

Heavy duty

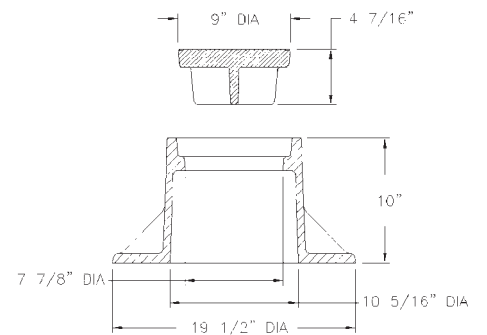
Options  
Special lettered covers  
Bolted assembly



### 1575 MONUMENT BOX

Heavy duty

Options  
Bolted assembly



### 1576 MONUMENT BOX

Heavy duty

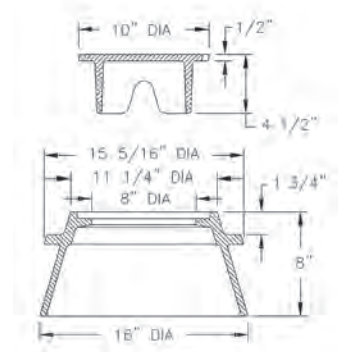
Options

Special lettered covers

Bolted assembly

Covers with 2" and 4" skirt depth

Adjusting risers



### 1577 MONUMENT BOX

Heavy duty

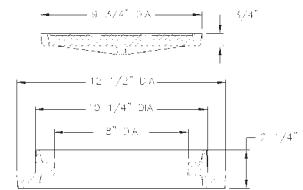
Reversible frame

For slab construction see 2885

Accepts 2975 covers

Options

2885 — 1 or 2 bolt assembly

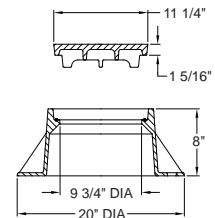


### 1578 MONUMENT BOX

Heavy duty

Options

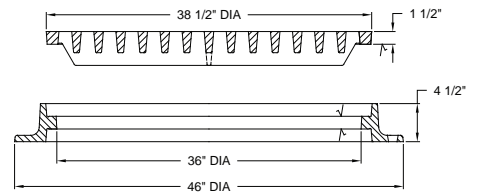
Watertite assembly



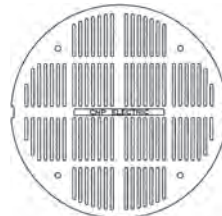
### 1581 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Reversible frame —  
 2815 for top flange  
 Accepts 1580 and 1581  
 covers and grates

Options  
 Watertite assembly  
 Light duty cover  
 Heavy duty ductile iron cover  
 Extra heavy duty ductile iron grate  
 Lift/Drop handles



**Type M Flat Grate**  
 Approx. 375 sq. in.  
 open area



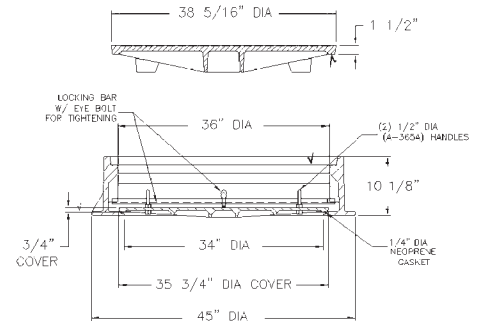
**Type M2 ADA Grate**  
 Approx. 304 sq. in.  
 open area



**Type E Outer Cover with  
 1040 Inner Cover**

### 1583 FRAME & COVER

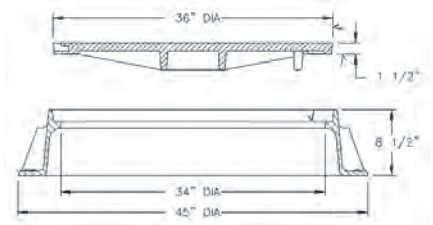
Heavy duty  
 Machined bearing surfaces  
 Frost proof assembly  
 Accepts 1580 covers



### 1585 FRAME & COVER

Heavy duty  
Vertical and horizontal machined bearing surfaces  
Stackable frame

Options  
Solid or vented covers  
Special lettered covers  
4 1/2" height frame — 1586  
Grates

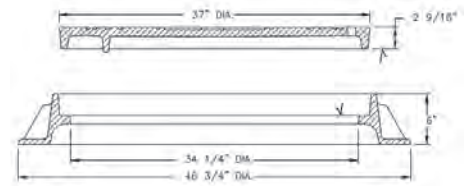


**Type M Flat Grate**  
Approx. 400 sq. in.  
open area

### 1588 FRAME & COVER

Heavy duty  
Machined bearing surfaces

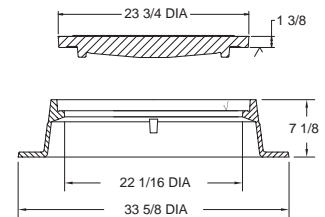
Options  
Special lettered covers  
Solid or vented covers



### 1590 FRAME & COVER

Heavy duty  
Machined bearing surfaces

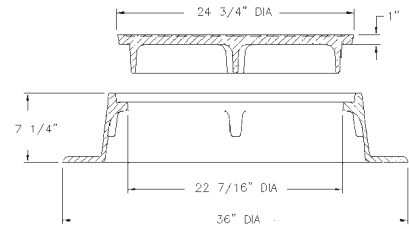
Options  
Solid or vented covers  
Gasket seal covers  
Grates



**Type M Flat Grate**  
Approx. 140 sq. in.  
open area

### 1600 FRAME & COVER

- Heavy duty
- Machined bearing surfaces
- Options
- Solid or vented covers
- Special lettered covers
- Watertite assembly
- Adjusting risers
- Grates
- 4" height reversible frame — 3020
- Bolted assemblies (V-2600, V-2800)



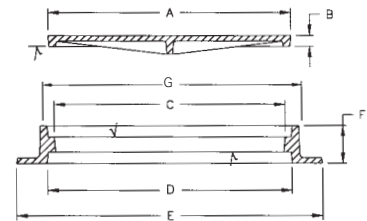
**Type M Flat Grate**  
Approx. 175 sq. in. open area

### V-1600 FRAMES & COVERS

- Heavy duty
- Machined bearing surfaces
- Reversible frame
- Options
- Solid or vented covers
- Special lettered covers
- Custom logo covers
- Bolted assemblies
- Grates (see V-3600)
- Hinged unit available in select sizes



Illustrating V-1600-4



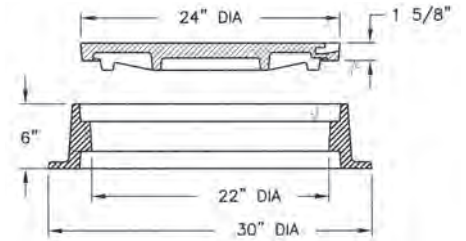
V-1600 Frames & Covers

Catalog Number	A Cover Dia.	B Cover Thk.	C Clear Opening	D Frame Opening	E Flange Dia.	F Height	G Drop In
V-1600-1	19 1/4	1 1/2	18 1/4	19 1/2	24	4	20 1/2
V-1600-2	23 1/2	1 1/2	22	23 3/4	28 1/2	4	24 3/4
V-1600-3	25 1/4	1 1/2	24	25 1/2	32 1/8	4	26 1/2
V-1600-4	31 3/4	1 3/8	30	32 1/8	38	4	33 1/8
V-1600-5	38	2	35 3/4	38 1/4	46	6	39 3/4
V-1600-6	50 1/4	2	48	50 1/2	56 1/2	6	52

Note: All dimensions are in inches.

### 1606 FRAME AND COVER

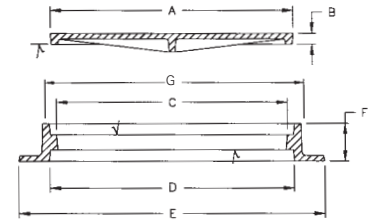
Heavy duty  
 Reversible frame  
 Machined bearing surfaces  
 Uses 2750 cover



### V-1610 FRAMES & COVERS

Heavy duty  
 Machined bearing surfaces  
 Reversible frame

Options  
 Special lettered covers  
 Logo covers  
 Bolted assembly  
 Grates (see V-3610)



Illustrating V-1610-4

V-1610 Frames & Covers

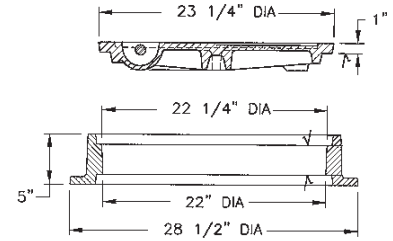
Catalog Number	Pipe Size	A Cover Dia.	B Cover Thk.	C Clear Opening	D Frame Opening	E Flange Dia.	F Frame Ht.	G Drop In
V-1610-1	12	10 1/4	1 1/2	8 1/2	10 1/2	14 1/2	4	11 1/2
V-1610-2	15	13 1/4	1 1/2	11 1/2	13 1/2	17 5/8	4	14 1/2
V-1610-3	18	16 1/4	1 1/2	14 3/8	16 1/2	20 1/2	4	17 1/2
V-1610-4	24	21 7/8	1 1/2	20 1/4	22 1/8	26 5/8	4	23 5/8
V-1610-5	30	27 7/8	1 1/2	26 3/8	28 1/4	32 1/2	4 1/8	29 1/2
V-1610-6	36	34	1 1/2	32	34 1/4	38 1/2	4	35 1/2
V-1610-7	42	39 5/8	1 1/2	38 1/4	39 7/8	44 1/2	4	41 7/8
V-1610-8	48	45 3/4	1 1/2	43 3/4	46	50 1/2	4	47 3/4

Note: All dimensions are in inches.

### 1622 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

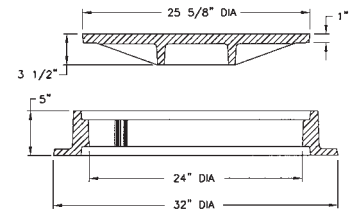
Options  
Adjusting risers  
Grate



### 1625 FRAME & COVER

Heavy duty  
Reversible frame  
Machined bearing surfaces

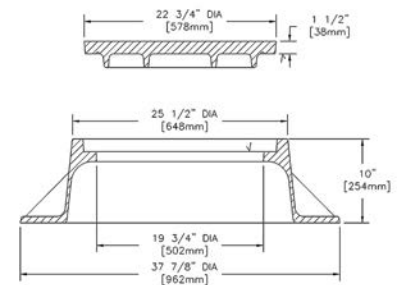
Options  
Solid or vented covers  
Special lettered covers  
Bolted assembly



### 1641 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1640 covers and grates

Options  
Gasket seal covers  
Grates

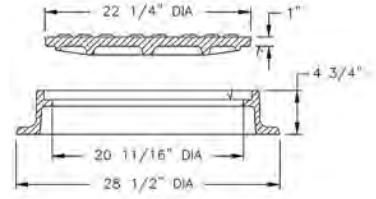


**Type M Radial Flat Grate**  
Approx. 120 sq. in.  
open area

### 1660 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1661 covers and grates

- Options
- Watertite assembly
  - Custom logo covers
  - Special lettered covers
  - Adjusting risers
  - Gasket seal covers
  - 9 3/4" height frame — 1661
  - 20 5/8" clear opening



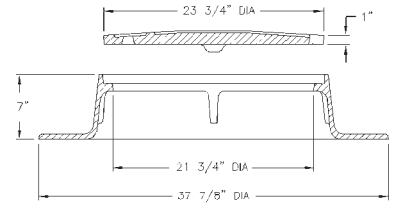
**Type M Flat Grate**  
 Approx. 120 sq. in. open area

**Type A2 Cover**  
 Closed pick holes

### 1665 FRAME & COVER

Heavy duty  
 Vertical and horizontal machined surfaces

- Options
- Solid or vented covers
  - Custom logo covers
  - Special lettered covers
  - Grates
  - Also accepts 1450 covers
  - Watertite assembly
  - Lock lug assembly
  - Adjusting risers
  - Top flange 4" frame — 2925

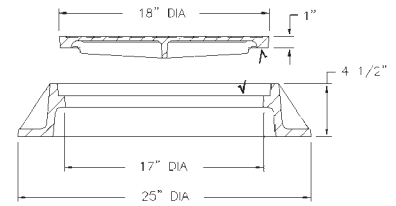


See 1450 for additional frame height.

**Type M Flat Grate**  
 Approx. 175 sq. in. open area

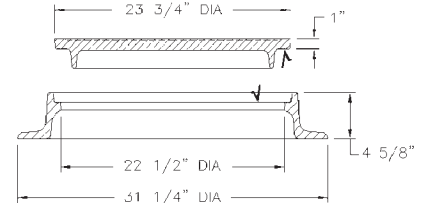
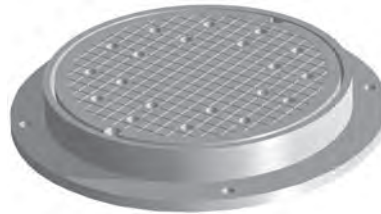
### 1680 FRAME & COVER

Light duty (Non-traffic)  
Machined bearing surfaces



### 1690 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1450 covers and grates



Options

- Solid or vented covers
- Custom logo covers
- Special lettered covers

Adjusting risers

Lug lock covers

7" height frame – 1665 – 21 1/2" clear opening

9" height frame – 1450 – 21 1/2" clear opening

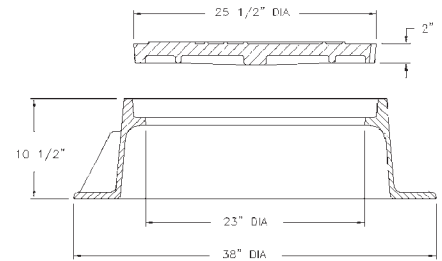
9" height frame – 2020 – 22" clear opening with mud ring



**Type M Flat Grate**  
Approx. 110 sq. in. open area

### 1700 — 1703 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frame



Options

Solid or vented covers

Grates

Watertite assembly

Gasket seal covers

Adjusting risers

Accepts 1212 covers



**Type M Flat Grate**  
Approx. 120 sq. in. open area

Available Frames for 1700 — 1703 Covers and Grates

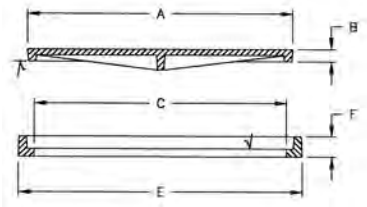
Catalog Number	Base Flange Diameter	Frame Height
1214	36	4
2770	31 3/4 TF	4 1/5
1703	38	5
1212	39	8

Note: All dimensions are in inches.

### V-1700 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Uses V-1600 cover  
 Uses V-3600 grates

Options  
 Solid and vented covers  
 Special lettered covers  
 Custom logo covers



Illustrating V-1700-3

NOTE:  
 Rings must be cast into concrete for heavy duty application.

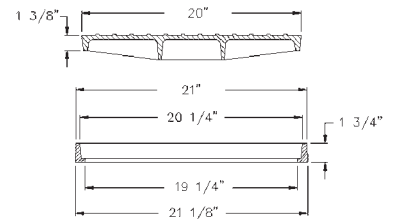
V-1700 Frame & Cover

Catalog Number	A Cover Diameter	B Cover Thickness	C Clear Opening	E Flange Diameter	F Frame Height
V-1700-1	19 1/4	18 1/8	1 1/2	21	2 1/2
V-1700-2	23 1/2	22	2 1/2	25 3/4	2 1/2
V-1700-3	25 1/4	24	1 1/2	27	2 1/2
V-1700-4	31 3/4	30	1 3/8	34 7/8	2 3/8
V-1700-5	38	36	2	40 1/2	3

Note: All dimensions are in inches.  
 \*4 piece bolted frame.

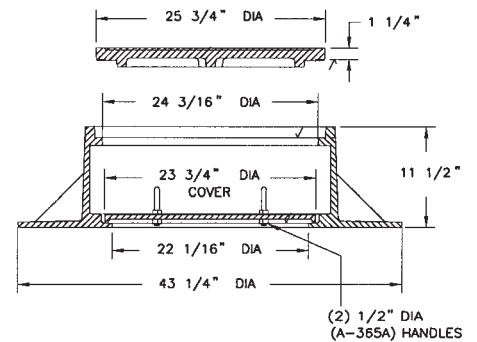
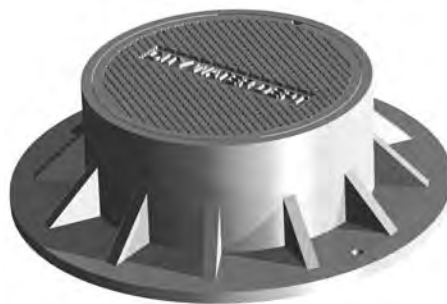
### V-1701 FRAME & COVER

Light duty (Non-traffic)



### 1706 FRAME & COVER

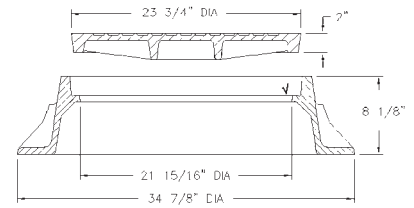
Heavy duty  
 Machined bearing surfaces  
 Frost proof assembly  
 Accepts 1705 covers



### 1710 — 1715 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frames

- Options
- Solid or vented covers
  - Grates
  - Gasket seal covers
  - Watertite assembly
  - Adjusting risers
  - 5" height reversible frame — 2022
  - 5" height frame — V-1317
  - 9" height frame — 1715



**Type O Beehive Grate**  
Approx. 140 sq. in. open area  
5 1/2" height above frame



**Type M Flat Grate**  
Approx. 115 sq. in. open area

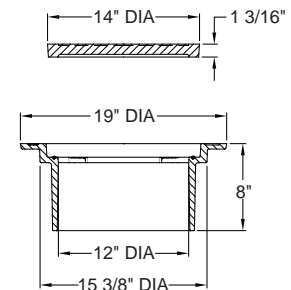
### 1716 AIRPORT CLEANOUT FRAME & COVER

Extra heavy duty  
Proof load 200,000 lb.  
Watertite assembly  
Bolted assembly recommended

- Options
- Recessed stainless steel hex bolts or special security bolts
  - Special lettered covers
  - 3" height frame — 1716Z



1716Z1 8" height frame illustrated



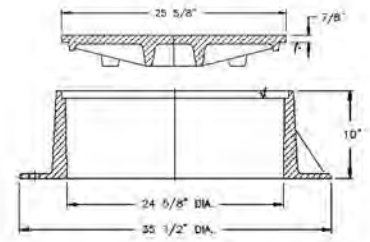
#### MATERIAL SPECIFICATIONS

Frame - Gray Iron ASTM A48, Class 35B  
Cover - Ductile Iron ASTM A536

### 1730 FRAME & COVER

Heavy duty  
Machined bearing surfaces

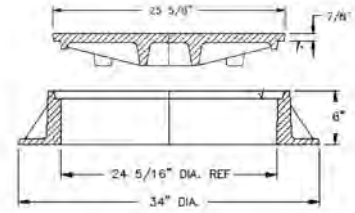
Options  
Special lettered covers



### 1731 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses 1730 cover

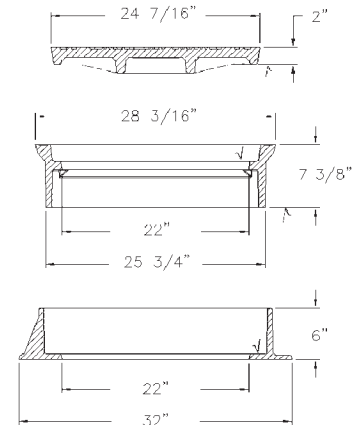
Options  
Special lettered covers



### 1733 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Adjustable manhole, 3 piece assembly

Options  
Special lettered covers



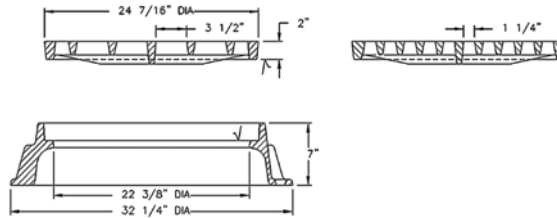
### 1734 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Stackable frames  
 Uses 1733 covers and grates

Options  
 Top flange frames  
 Special lettered covers  
 Grates

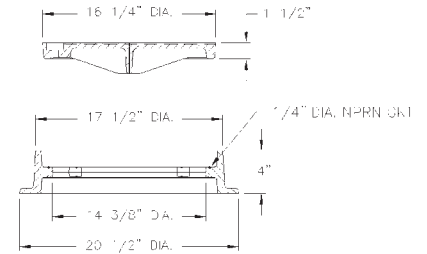


1734 frame with Type M Grate  
 "DUMP NO WASTE!" lettering and fish image  
 Approx. 166 sq. in. open area



### 1755 FRAME & COVER

Heavy duty  
 Reversible frame — 2905  
 for top flange  
 Unit assembled standard with  
 4 1/2" SS bolts and 1/4" gasket  
 Frame has cast bolting lugs  
 Watertite assembly



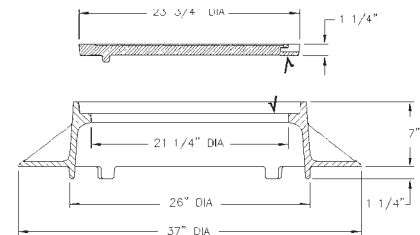
### 1771 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1770 covers and grates  
 Accepts 1337 and 2855 covers

Options  
 Special lettered covers  
 Extra heavy duty cover  
 Gasket seal cover  
 Cam lock  
 6" height frame — 1337



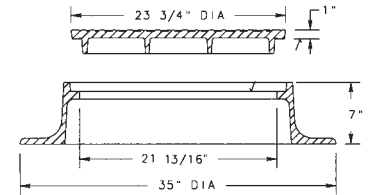
**Type M Flat Grate**  
 Approx. 185 sq. in.  
 open area



### 1775 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options  
Special lettered covers  
Bolted assembly  
Adjusting risers  
Gasket seal covers



### 1802 — 1825 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces  
Stackable frames  
Frame supplied with 4 - 1" diameter base  
flange holes on 43 1/2" bolt circle  
All units can be secured

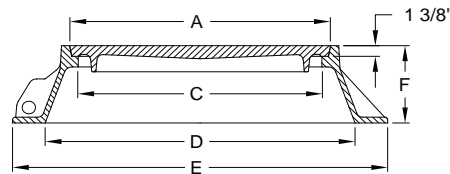
- Options  
Custom logo covers  
Type E 1810 outer cover  
Special lettered covers  
Gasket seal covers  
Two bolt assembly  
Two pent bolt assembly  
Cam lock assembly  
Pick bars, drop handles, closed pick holes  
Adjusting risers



Illustrated 1825Z 10" frame with 1810 Type A2 cover



1802Z1 5 5/8" frame with 1805 Type A7 cover



Illustrated 1805Z1VH 10" ductile iron frame with 1805 Type A7 ductile iron cover

1802—1825 Frame and Cover Assembly Options

Series Number	Reference	A Cover Diameter	C Clear Opening	D Frame Opening	E Flange Diameter	F Frame Height
1802	SB-27	28 15/16	27	34	46	5 5/8
1805	B-27	28 15/16	27	34	46	10
1820	SB-30	31 15/16	30	37	46	5 5/8
1825	B-30	31 15/16	30	38	46	10

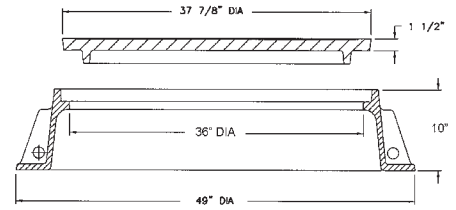
Note: all dimensions are in inches.

NOTE: Many of the covers in this series are manufactured with corporate names and their respective logos. These names and images are the protected property of our customers. EJ maintains custom covers for dozens of electrical, telecommunication, and other utility companies. Please contact your nearest EJ office for information regarding new or existing designs.

### 1812Z2 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Extra heavy duty ductile iron cover
  - Special lettered covers
  - Gasket seal covers
  - Bolted assembly
  - Ductile iron grates



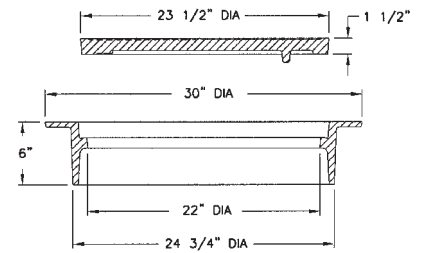
### V-1814 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses V-1418 covers

- Options
- Adjusting risers
  - Grates
  - Special lettered covers



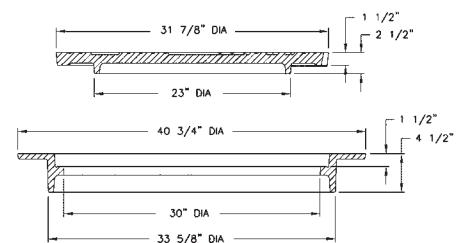
**V-3418-1 Grate**  
Approx. 169 sq. in.  
open area



### V-1816 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses V-1420 covers

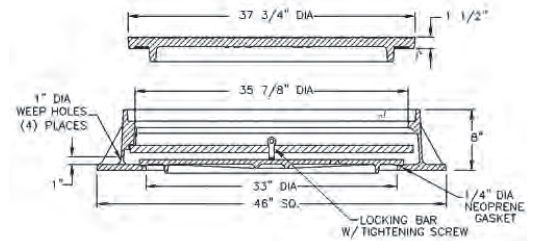
- Options
- Grates
  - Adjusting risers
  - Special lettered covers



### 1832 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Frost proof assembly  
 Inner and outer covers

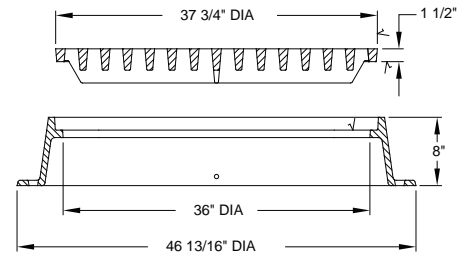
Options  
 Special lettered covers  
 Round flange frames



### 1833 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

Options  
 Special lettered covers  
 Extra heavy duty ductile iron covers  
 Ductile iron grates  
 Round flange frames



1833M ductile iron grate with 8" transitional frame illustrated

#### 1833 Frames

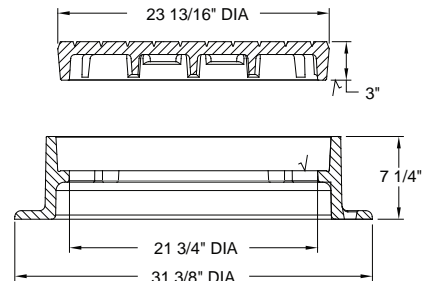
Catalog Number	Base Flange Diameter	Frame Height
1833Z3	52 TF	5
1833Z2	46 13/16 R	8
1833Z1	46 13/16 TF	8
1833Z	52 TF	10

Note: All dimensions are in inches.  
 TF = Transitional flange frame  
 R = Round flange frame

### 1835 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Stackable frame

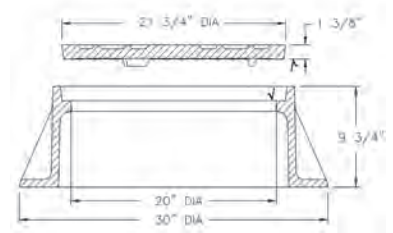
Options  
 Solid or vented covers  
 Special lettered covers  
 Gasket seal covers  
 Extra heavy duty ductile covers  
 4" height frame — 1834



### 1837 FRAME & COVER

Heavy duty  
Machined bearing surfaces

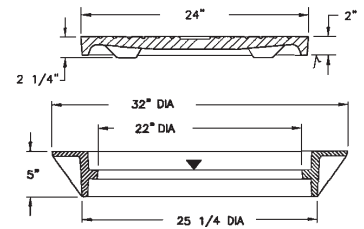
Options  
Special lettered covers



### 1842 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses 1342 covers

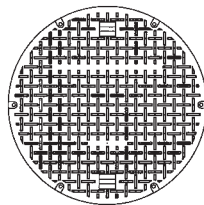
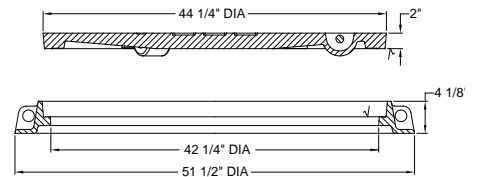
Options  
Adjusting risers  
Grates



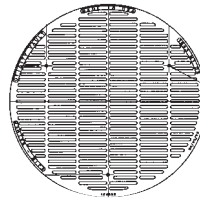
### 1843 — 1845 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Ductile iron covers

Options  
Solid or vented covers  
Special lettered covers  
Bolted assembly  
Watertite assembly  
Ductile iron ADA grate  
    1843M2 — light duty  
    1843M1 — heavy duty  
Airport rated covers  
Lifting rings  
Type E outer cover with 1120 24" diameter inner cover  
Type E outer cover with 1810 32" diameter inner cover  
8 1/2" height frames  
Top flange frames



1843 APT Cover

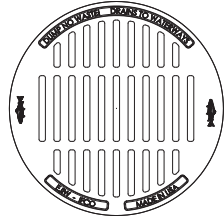
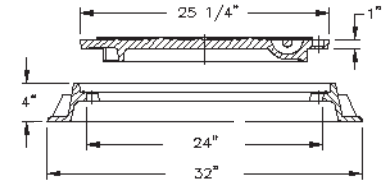


Type M1 ADA Grate  
Approx. 639 sq. in. open area

### 1847 — 1849 FRAME & COVER

Heavy duty  
Stackable frames

- Options
- Special lettered covers
- Custom logo covers
- Grates
- Bolted assembly
- Hinged unit
- Adjusting risers
- Reversible frame — 1849
- 6" height frames



**Type M Grate**  
Approx 126 sq. in.  
open area  
"DUMP NO WASTE!"  
lettering

1847 — 1849 Available Frames

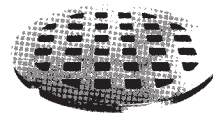
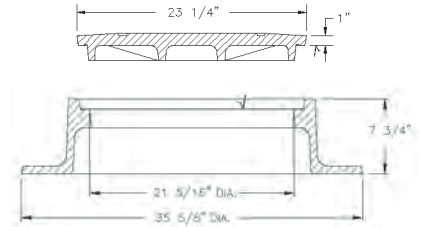
Catalog Number	Base Flange Diameter	Frame Height
1847	32	8
1848	32	4
1849*	34	4 TF

Note: All dimensions are in inches.  
\*Reversible frame

### 1850 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Solid or vented covers
- Adjusting risers
- Accepts 2015 covers
- Special lettered covers
- Custom logo covers
- "DUMP NO WASTE!"  
lettering and fish image
- Reversible 5" frame — 1622

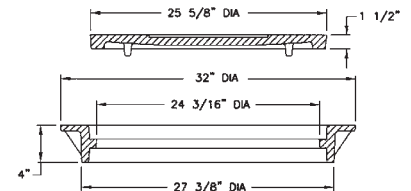


**Type M Flat Grate**  
Approx. 105 sq. in.  
open area

### 1854 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

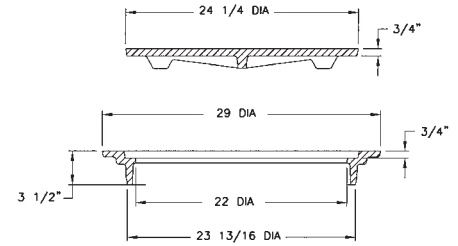
- Options
- Special lettered covers
- Bolted assembly



### 1855 FRAME & COVER

Light duty (Non-traffic)

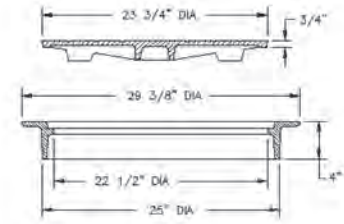
- Options
- Custom logo covers
- Special lettered covers
- ADA grates
- Bolted assembly
- "DUMP NO WASTE" lettering and fish image



### V-1860 FRAME & COVER

Light duty (Non-traffic)

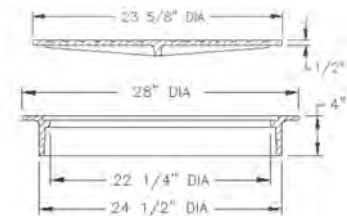
- Options
- "DUMP NO WASTE" lettering and fish image
- Solid and vented covers
- Special lettered covers
- Custom logo covers
- Grate — V-3860



**Vented 3 Hole Cover**  
"DUMP NO WASTE!"  
lettering and fish  
image

### V-1865 FRAME & COVER

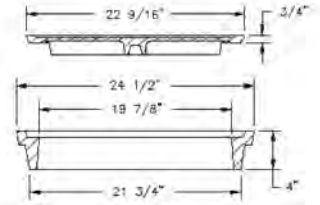
Light duty (Non-traffic)



### V-1866 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Reversible frame

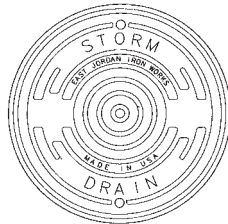
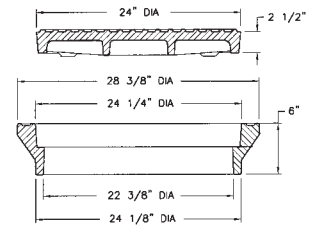
Options  
 Solid and vented covers  
 Custom logo covers  
 Special lettered covers  
 Grate — V-3866-1



### V-1874 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

Options  
 Special lettered covers  
 Solid or vented covers  
 Grates

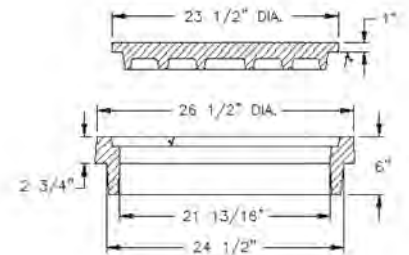


Storm Drain Cover

### V-1883 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

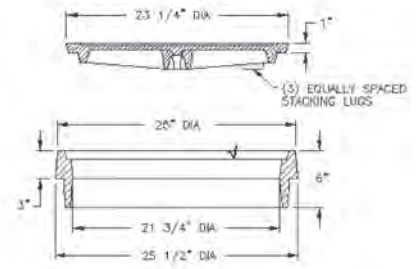
Options  
 Special lettered covers  
 Custom logo covers  
 Adjusting riser — V-1984  
 Grate — V-3883, approximate  
 135 sq. in. open area



### V-1886 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses V-1501 cover

Options  
Special lettered covers  
Custom logo covers  
Adjusting risers  
Grate — V-3501



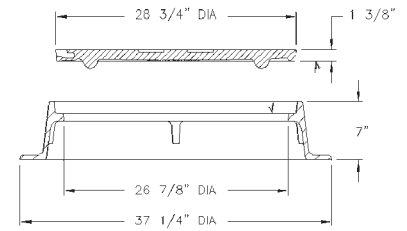
### 1890 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frames

Options  
Solid or vented covers  
Custom logo covers  
Special lettered covers  
Gasket seal covers  
Watertite assembly  
Grates  
Bolted assembly  
Adjusting risers  
3" height frame — 1891  
6" height top flange frame — V-1827  
Hinged unit



1890Z1 Illustrated



1890 Frame Heights

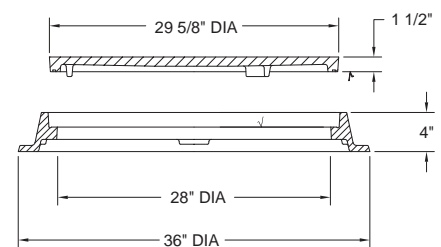
Catalog Number	Frame Height
1890Z	7
1890Z1	7
1891Z1	3

Note: All dimensions are in inches.

### 1892 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frames  
PA DOT Type A

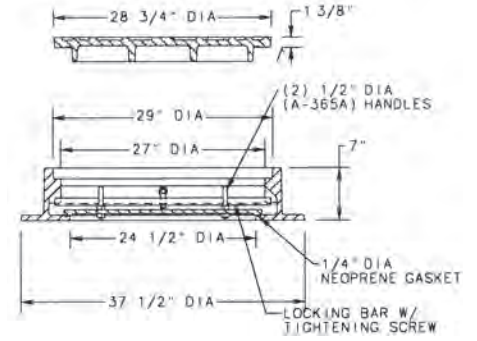
Options  
Special lettered covers  
Gasket seal covers  
Adjusting risers  
Square flange frames



### 1893 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Frost proof assembly  
 Accepts 1890 covers

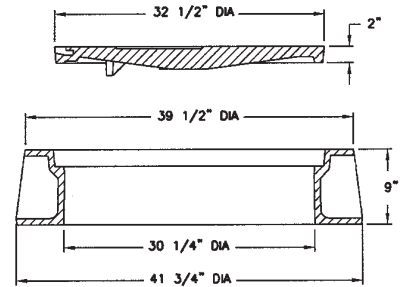
Options  
 Gasket seal covers  
 Locking



### 1895 AIRPORT MANHOLE FRAME & COVER

Airport Extra heavy duty  
 Proof load 345,000 lb.  
 Horizontal and vertical machined bearing surfaces  
 Watertite assembly

Options  
 Recessed stainless steel hex bolts or special security bolts  
 Special lettered covers  
 Gasket seal covers  
 Solid and vented covers  
 Drainage grate - 2780



#### MATERIAL SPECIFICATIONS

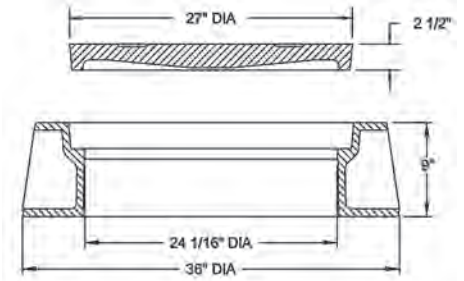
Frame - Gray Iron ASTM A48, Class 35B  
 Cover - Ductile Iron ASTM A536  
 Grate - Ductile Iron ASTM A536

**2780 Ductile Iron Type M Flat Grate**  
 Approx. 375 sq. in. open area

### 1900 AIRPORT MANHOLE FRAME & COVER

Extra heavy duty  
 Proof load 200,000 lb.  
 Solid and vented cover options

- Options
- Watertite assembly
  - Recessed stainless steel hex bolts or special security bolts
  - Special lettered covers
  - Solid and vented covers
  - Drainage grate — 2870



MATERIAL SPECIFICATIONS  
 Frame - Gray Iron ASTM A48, Class 35B  
 Cover - Gray Iron ASTM A48 Class 35B  
 Grate - Ductile Iron ASTM A536

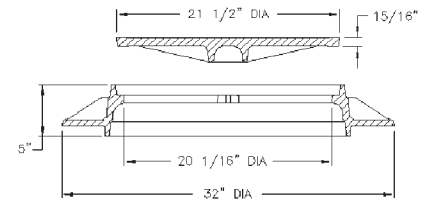


**2870 Ductile Iron Type M Flat Grate**  
 Approx. 236 sq. in. open area

### 1915 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

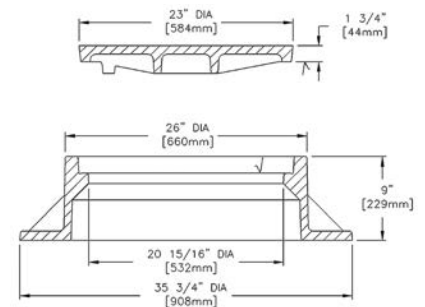
- Options
- Solid or vented covers
  - Special lettered covers
  - Watertite assembly
  - Adjusting risers



### 1920 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

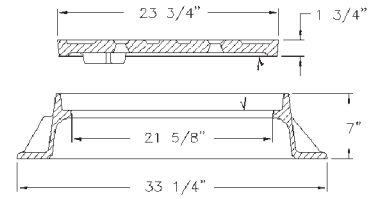
- Options
- Gasket seal covers



### 1925 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frames

Options  
Solid or vented covers  
Special lettered covers  
3" height frame — 1925Z2  
Adjusting risers

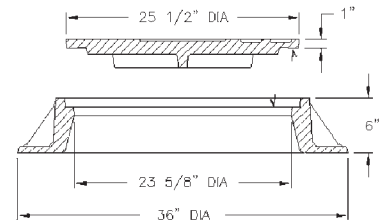


Type A1 Cover

### 1930 FRAME & COVER

Heavy duty  
Machined bearing surfaces

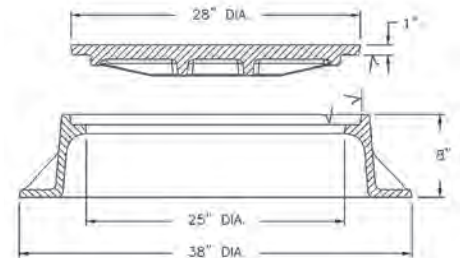
Options  
Solid and vented covers  
Special lettered covers  
Accepts 1944 and 1975 covers and grates  
Adjustable rings  
3" height frame — 1975  
8" height frame — 1944  
9" height frame — 1975



### 1932 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces  
Watertite assembly

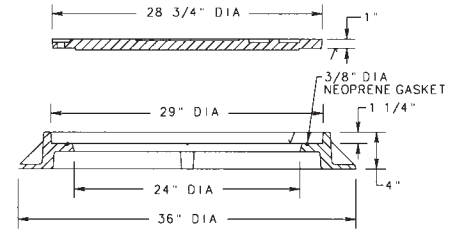
Options  
Special lettered covers  
Adjusting risers



### 1935 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Watertite assembly  
 Unit is supplied with  
 2 brass cam locks  
 Gasket seal

Options  
 Accepts 1940 covers  
 Special lettered covers



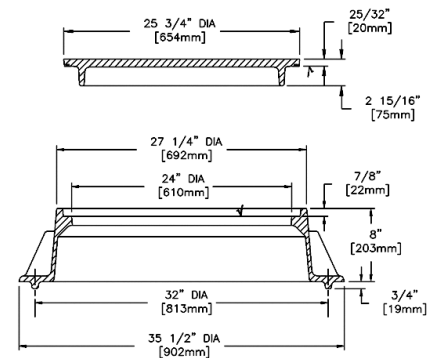
### 1936 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Special lettered covers

Options  
 Accepts 1205 covers and grates  
 Adjusting risers  
 Stackable frames



Wichita standard



#### 1936 Frame Sizes

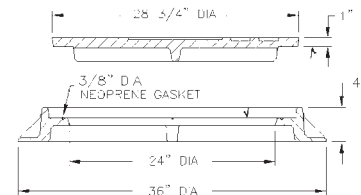
Catalog Number	Base Flange Diameter	Frame Height
1936Z1	35 1/2	8
1936Z2	51 1/2	8
1936Z4	35 1/4	4 1/4

Note: All dimensions are in inches.

### 1940 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Standard watertite unit  
 supplied with 3/8" dia. gasket

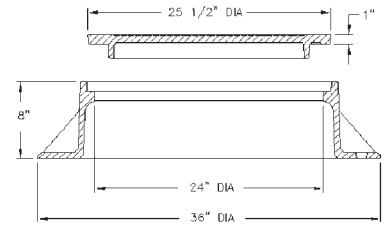
Options  
 Special lettered covers  
 Accepts 1935 covers



### 1944 FRAME & COVER

Heavy duty  
Machined bearing surfaces

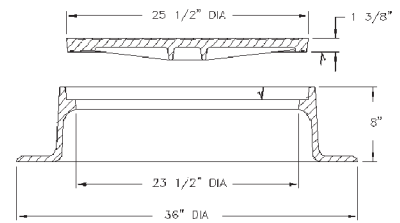
Options  
Solid or vented covers  
Watertite assembly  
Adjusting risers  
Accepts 1930 covers



### 1950 FRAME & COVER

Heavy duty  
Machined bearing surfaces

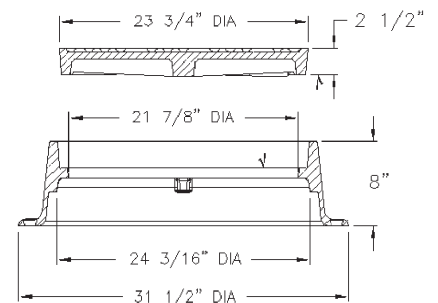
Options  
Solid or vented covers  
Gasket seal covers  
Watertite assembly



### 1960 FRAME & COVER

Heavy duty  
Machined bearing surfaces

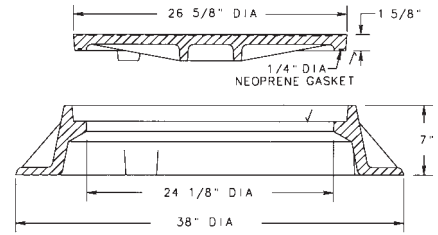
Options  
Gasket seal covers  
Adjusting risers



### 1965 FRAME & COVER

Heavy duty  
Machined bearing surfaces

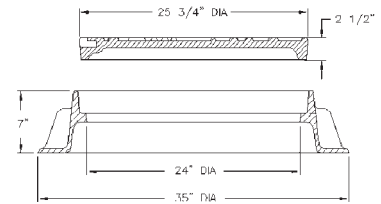
- Options
- Special lettered covers
  - Gasket seal covers
  - 3 1/2" height frame
  - 7" height frame
  - 9" height stackable frame
  - Adjusting risers including  
INFRA-RISER® adjustable riser



### 1970 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1543, 1545, and 1548 covers

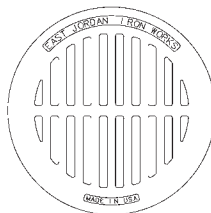
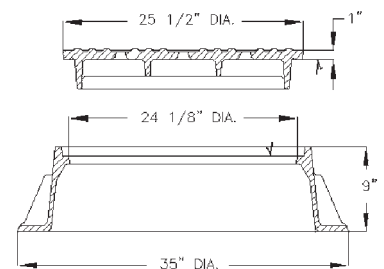
- Options
- Solid or vented covers
  - Special lettered covers
  - Gasket seal covers



### 1975 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Stackable frames

- Options
- Solid or vented covers
  - Custom logo covers
  - Accepts 1930 covers
  - 3" height frame — 1975Z1
  - Grates
  - Adjusting risers
  - Gasket seal covers

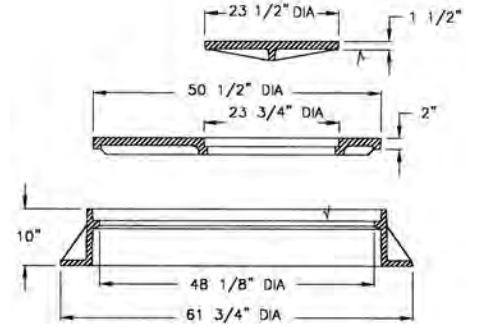


**Type M Grate**  
Approx. 125 sq. in.  
open area

### 1984 FRAME & COVER

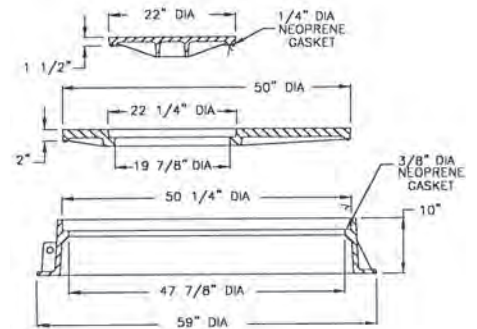
Heavy duty  
 Machined bearing surfaces  
 V-1418 inner cover  
 REF. V-7048

Options  
 Special lettered inner covers



### 1985 FRAME & COVER

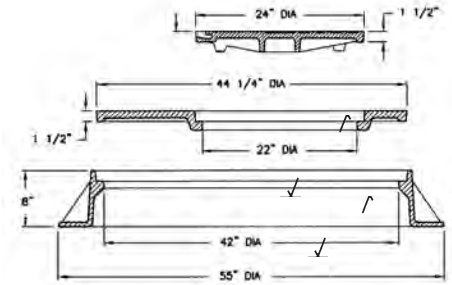
Heavy duty  
 Machined bearing surfaces  
 Gasket seal  
 Assembly with inner cover



### 1986 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Type E outer cover with inner cover

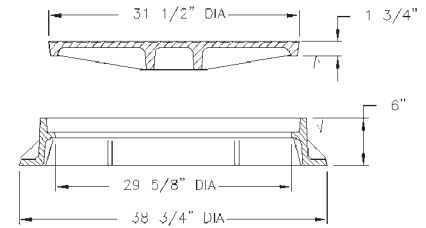
Options  
 Solid or vented covers  
 Special lettered covers  
 Custom logo covers



### 2010 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

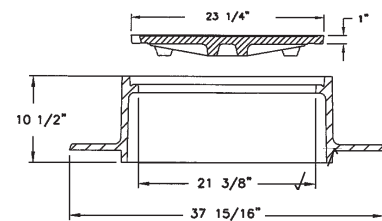
Options  
 Solid or vented covers  
 Special lettered covers  
 Accepts 2011 covers  
 Watertite assembly  
 Gasket seal covers  
 Adjusting risers



### 2015 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

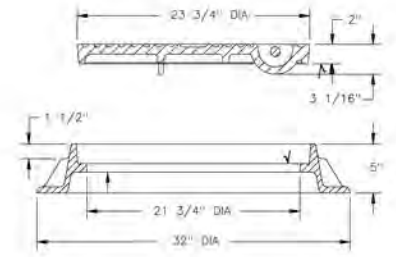
Options  
 Solid or vented covers  
 Special lettered covers  
 Adjusting risers  
 5" height reversible frame — 1622



### 2023 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Custom logo covers
- Special lettered covers
- Drainage grates
- Stackable frames
- Adjusting risers
- Reversible frame — 2022

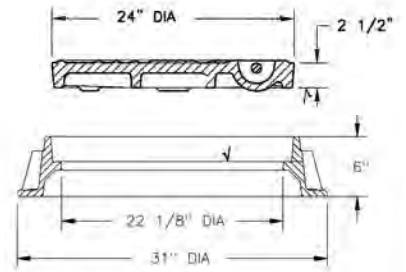


**Type M Flat Grate**  
Approx. 115 sq. in.  
open area

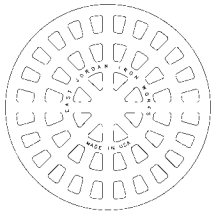
### 2024 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 2040 cover

- Options
- Custom logo covers
- Special lettered covers
- Drainage grates
- Adjusting risers
- Stackable frames
- “DUMP NO WASTE” lettering  
and fish image



#### Custom Logo Covers



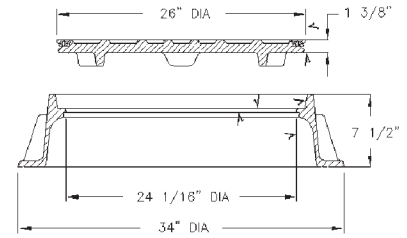
**1202M Grate**  
Heavy duty  
Approx. 117 sq. in.  
open area



### 2027 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces

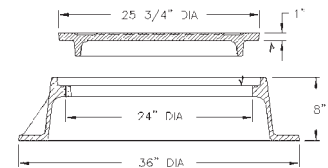
- Options  
Special lettered covers  
Wiper gasket or O-ring gasket  
Cam lock assembly  
4" reversible frames



### 2028 FRAME & COVER

Heavy duty  
Machined bearing surfaces

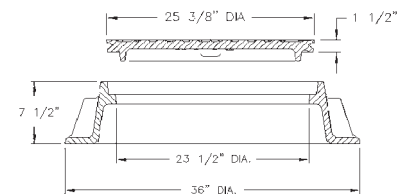
- Options  
Solid or vented covers  
Watertite assembly  
Special lettered covers  
Pick bar(s)



### 2029 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces

- Options  
Wiper gasket  
Special lettered covers

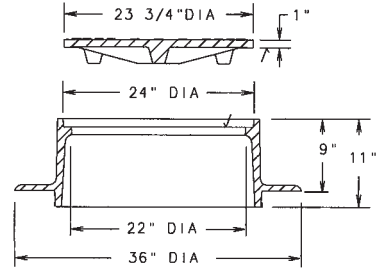


### 2035 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options

- Accepts 1450 covers
- Special lettered covers
- Vented covers
- Custom logo covers
- Drainage grates
- Adjusting risers



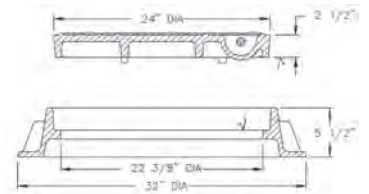
**Type M Flat Grate**  
Approx. 110 sq. in.  
open area

### 2040 FRAME & COVER

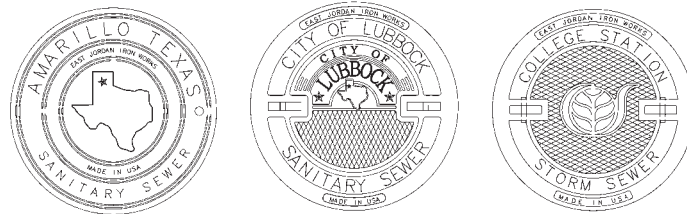
Heavy duty  
Machined bearing surfaces

Options

- Custom logo covers
- Special lettered covers
- Drainage grates
- Adjusting risers
- Accepts 2024 covers



**Custom Logo Covers**

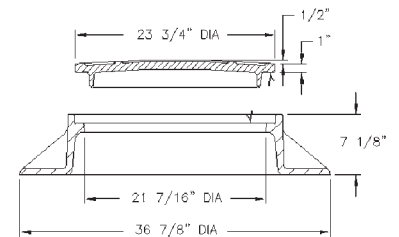


### 2045 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Domed cover  
Cover has 6 - 1" diameter holes

Options

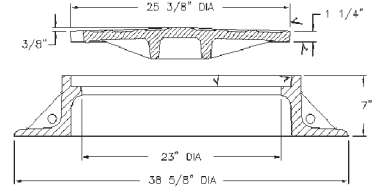
- Special lettered covers



### 2055 FRAME & COVER

Heavy duty  
Vertical and horizontal  
machined surfaces  
Domed cover  
Cover has 2 - 1" diameter holes

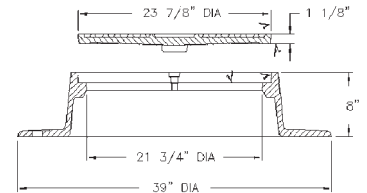
Options  
Adjusting risers



### 2060 FRAME & COVER

Heavy duty  
Vertical and horizontal  
machined surfaces  
Unit assembled with 3 - 5/8"  
SS bolts and 1/4" flat gasket  
Accepts 2065 covers  
Watertite assembly

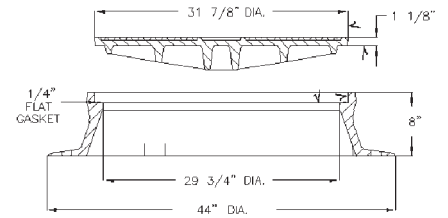
Options  
Special lettered covers  
Adjusting risers



### 2070 FRAME & COVER

Heavy duty  
 Vertical and horizontal machined surfaces  
 Unit assembled with 4 – 5/8" SS bolts and  
 1/4" flat gasket  
 Watertite assembly

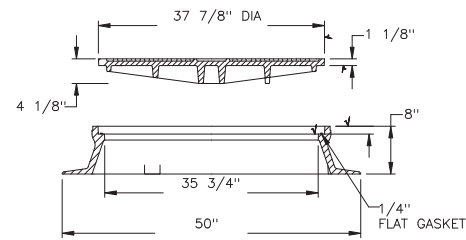
Options  
 Special lettered covers



### 2075 FRAME & COVER

Heavy duty  
 Vertical and horizontal machined surfaces  
 Unit assembled with 5 – 5/8" SS bolts and  
 1/4" flat gasket  
 Watertite assembly

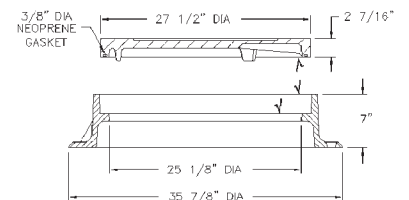
Options  
 Special lettered covers



### 2080 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

Options  
 Solid or vented covers  
 Special lettered covers  
 Gasket seal cover



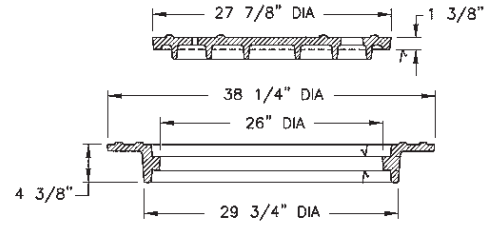
### 2100 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Specify Type cover or grate

- Options
- Custom logo covers
- Special lettered covers
- Reversible frame
- Watertite assembly
- Adjusting risers
- Grate



Oklahoma City



**Type M Grate**  
Oklahoma City Storm  
Approx. 205 sq. in. open area

### Custom Logo and Special Lettered Covers



City Of Ardmore Logo



City Of Moore



City Of Norman



City Of Edmond



City Of Broken Arrow



City Of Lawton

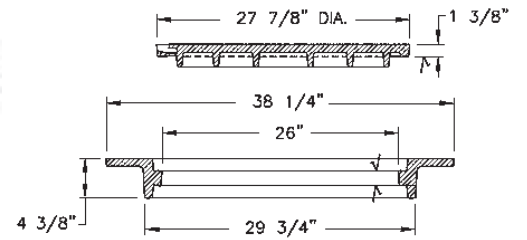
### 2101 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Specify Type cover or grate

- Options
- Special lettered covers
- Reversible frame
- Watertite assembly
- Adjusting risers
- Grate



City Of Tulsa



State Of Oklahoma

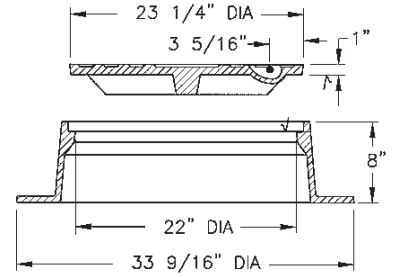


**Type M Grate**  
Approx. 205 sq. in. open area

### 2132 FRAME & COVER

Heavy duty  
Machined bearing surfaces

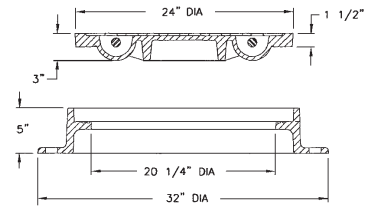
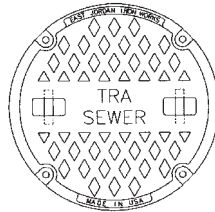
Options  
Adjusting risers  
4" reversible frame — 2132Z1  
Grates



### 2134 WATERTITE FRAME & COVER

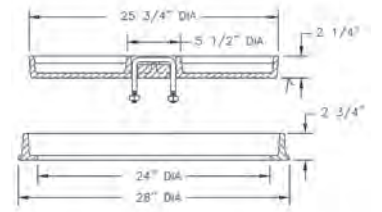
Heavy duty  
Watertite assembly

Options  
Special lettered covers



### 2222 — 2223 FRAME & COVER

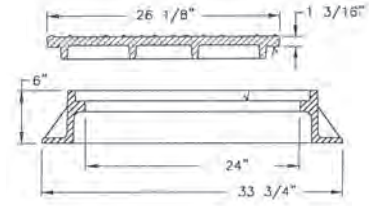
Light duty (Non-traffic)  
Sidewalk frame and cover  
Recessed for pavement infill  
Drop handle in cover  
2223 uses pick hole



**2224 FRAME & COVER**

Heavy duty  
Machined bearing surfaces

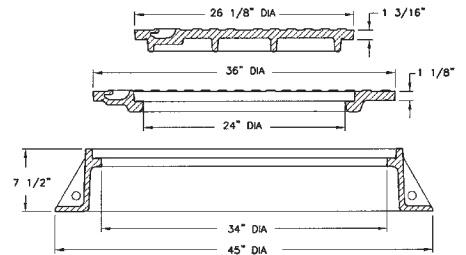
- Options
- Special lettered covers
- Custom logo covers
- Watertite assembly
- Hinged unit
- Adjusting risers
- 2224Z1 — 4" height reversible frame



**2228 FRAME & COVER**

Heavy duty  
Machined bearing surfaces  
Type E outer cover with 2228 inner cover

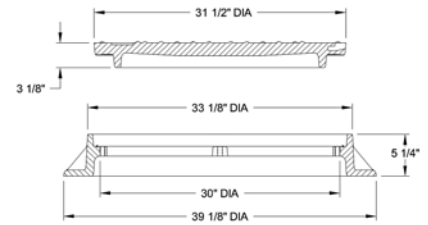
- Options
- Special lettered covers
- Composite inner cover — 26" diameter
- Bolted assembly



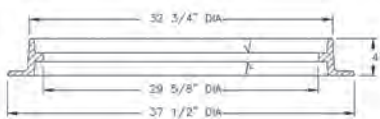
**2230 — 2232 FRAME & COVER**

Heavy duty  
Machined bearing surfaces  
2230Z1 frame is reversible

- Options
- Extra heavy duty cover
- Proof load tested 200,000 lb.
- Recessed stainless steel hex bolts or special security bolts
- Custom logo covers
- Special lettered covers
- Gasket seal covers
- Hinged unit
- 5 1/4" height frame — 2230Z - base flange 39 1/8"
- 2230ZPT — watertite assembly
- 2232 is a stackable version of the 2230



2231 Illustrated



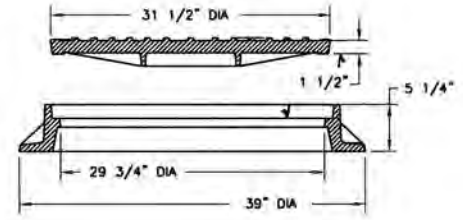
2230Z1 Reversible frame illustrated

**MATERIAL SPECIFICATIONS**

Frame - Gray Iron ASTM A48, Class 35B  
Cover - Ductile Iron ASTM A536

### 2295 FRAME & COVER

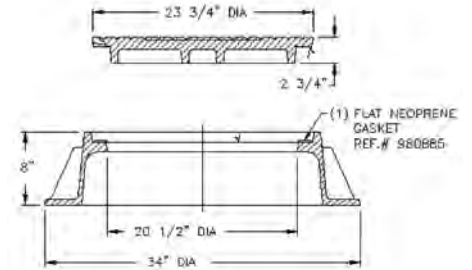
Heavy duty  
Machined bearing surfaces



### V-2326 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

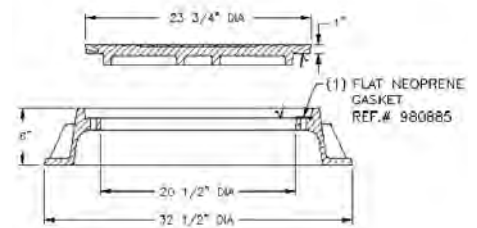
Options  
Special lettered covers  
Adjusting risers



### V-2327 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

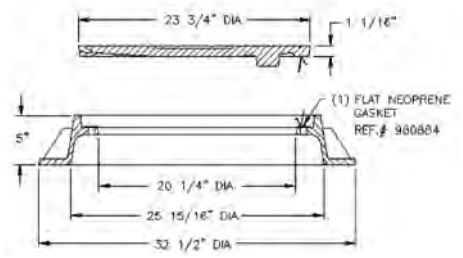
Options  
Special lettered covers  
Custom logo covers  
Adjusting risers



### V-2328 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

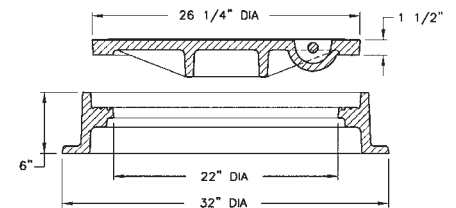
Options  
Special lettered covers



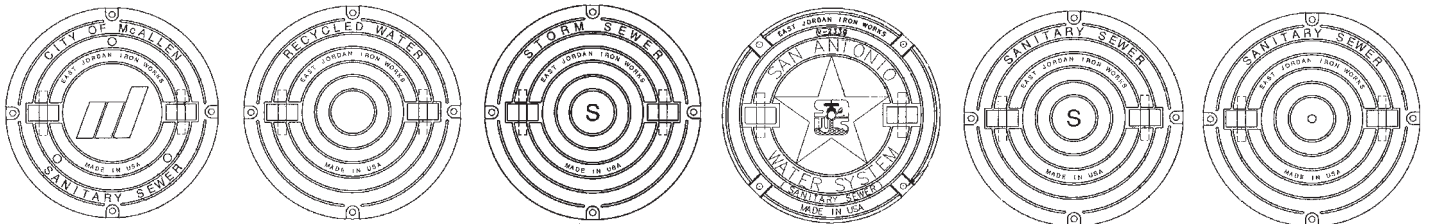
### V-2339 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

Options  
Special lettered covers  
Custom logo covers  
Solid or vented covers



#### Custom Logo Covers

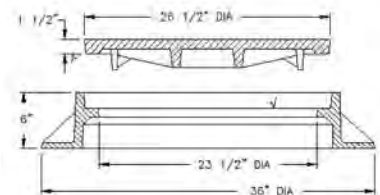


With center vent hole

### V-2357 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

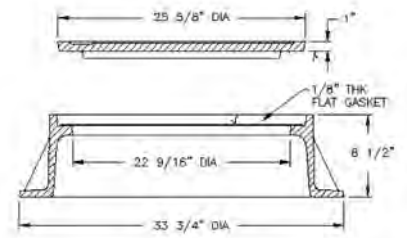
Options  
Special lettered covers  
Custom logo covers



### V-2358 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

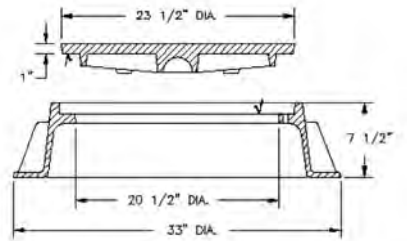
Options  
Special lettered covers



### V-2384 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

Options  
Special lettered covers  
Custom logo covers  
4" and 6" height frames



V-2384 Frame Sizes

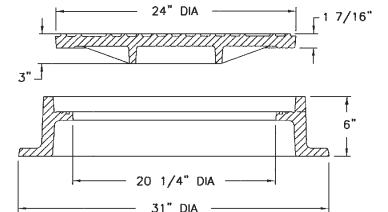
Catalog Number	Base Flange Diameter	Frame Height
V-2384-3	31	4
V-2384	33	7 1/2

Note: All dimensions are in inches.

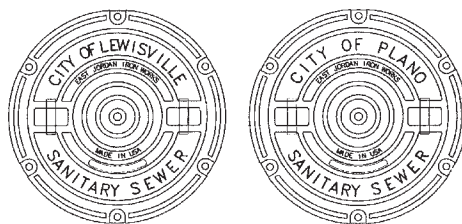
### V-2386 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers



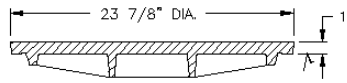
Custom Logo Covers



## 2405 COVER

Heavy duty

All 2405 covers can be used in the 2410, 2415, 2416, 2420, 2425, 2430 and 2455 units. Covers are interchangeable.



Options

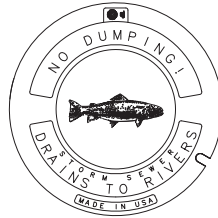
Special lettered covers

Custom logo covers

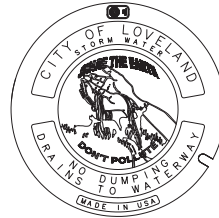
“DUMP NO WASTE!” lettering and fish image

Touch read cover available

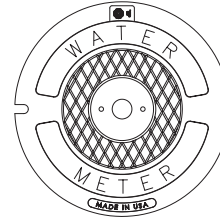
Non-bolted unit — V-1339



“DUMP NO WASTE!”



Loveland



Touch Read

### 2405 Cover and Available Frames

Catalog Number	Product Number	Cover Diameter	Clear Opening	Frame Opening	Flange Diameter	Bottom Flange Diameter	Frame Height
2410	00241011	23 7/8	22 1/8	24 3/16	34 5/8	34 5/8	4 BF
2415	00241511	23 7/8	22 1/8	22 5/8	29 1/2	N/A	5 TF
2416	00241611	23 7/8	21 3/4	22 1/2	29 1/4	N/A	4 TF
2420	00242011	23 7/8	22 1/8	24 1/8	34 5/8	34 5/8	8 BF
2425	00242511	23 7/8	22	24 1/8	30	30	4 BF or TF
2430	00243011	23 7/8	22 1/8	24 1/8	34 5/8	34 5/8	6 BF
2455*	00245511	36	34	37	45	45	5 1/4 BF

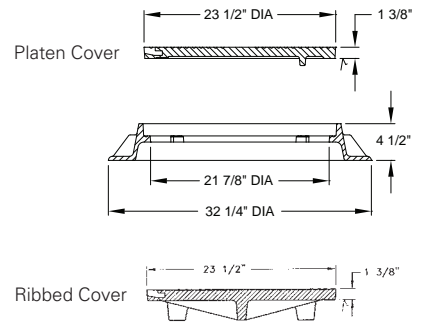
Note: All dimensions are in inches.

\* Dimensions for 2455 frame shown. 2405 cover fits inside of 2455E outer cover.

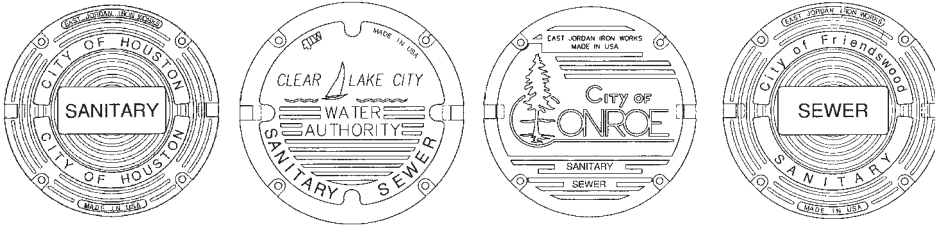
### V-2418-2 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers  
Logo covers



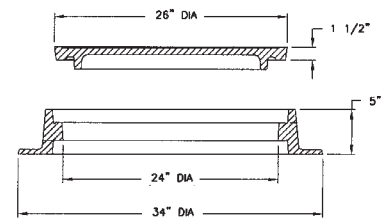
#### Custom Logo Covers



### 2450 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

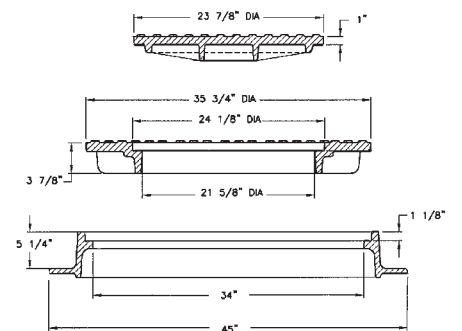
Options  
Special lettered covers  
Custom logo covers  
Watertite assembly  
Grates  
Adjusting risers  
Hinged unit  
Gasket seal covers  
Accepts 1040 covers



### 2455 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
TYPE E outer cover with 2455 inner cover

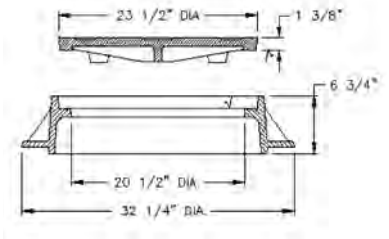
Options  
Special lettered covers  
Adjusting risers



## V-2480 WATERTITE FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Watertite assembly

Options  
Special lettered covers  
Custom logo covers  
Adjusting risers



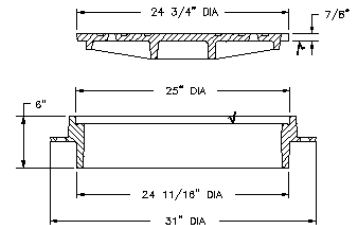
### Custom Logo Cover



## 2600 FRAME & 2603 COVER

Heavy duty  
Machined bearing surfaces  
Uses 2603 covers and grates

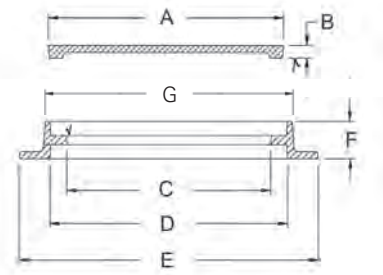
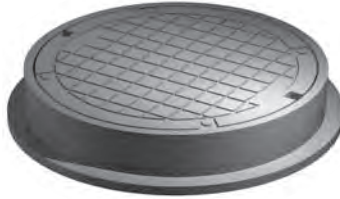
Options  
Bolted assembly



### V-2600/V-2610 FRAME & COVER

Heavy duty  
Reversible frames  
Watertite assembly

Options  
Special lettered covers



V-2600/V-2610 Frame & Cover

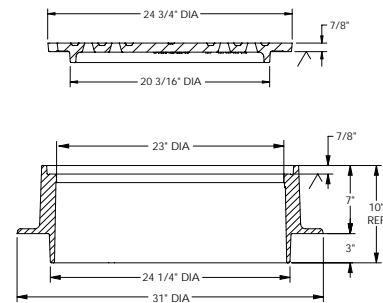
Bottom Flange	Top Flange	A Cover Dia.	B Cover Thk.	C Clear Opening	D Flange Opening	E Flange Dia	F Height	G Drop In
<b>V-2600 Series</b>								
V-2600-1	V-2800-1	19 1/4	1 1/2	18 1/4	19 1/2	21	4	24 3/4
V-2600-2	V-2800-2	23 1/2	1 3/8	21 3/4	23 3/4	28 1/2	4	24 3/4
V-2600-3	V-2800-3	25 1/4	1 3/8	21 7/8	25 1/2	32 1/8	4	26 1/2
V-2600-5	V-2800-5	38	1 7/8	34 3/8	38 1/4	46	6	40
<b>V-2610 Series</b>								
V-2610-1	V-2810-1	10 1/4	1 3/8	7 1/2	10 1/2	14 1/2	4	11 1/2
V-2610-2	V-2810-2	13 1/4	1 3/8	9 11/16	13 1/2	17 5/8	4	14 1/2
V-2610-4	V-2810-4	21 7/8	1 3/8	18 1/4	22 1/8	26 5/8	4	23 5/8
V-2610-5	V-2810-5	27 7/8	1 3/8	25 1/8	28 1/8	32 1/2	4	29 3/8
V-2610-6	V-2810-6	33 7/8	1 3/8	29 3/4	34 1/8	38 1/2	4	35 1/2
V-2610-7	V-2810-7	39 5/8	1 1/2	38 1/4	39 7/8	44 1/2	4	41 1/2
V-2610-8	V-2810-8	45 3/4	1 3/8	42 3/8	46	50 1/2	4	47 3/4

Note: All dimensions are in inches.

### 2603 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers  
Custom logo covers  
Bolted assembly

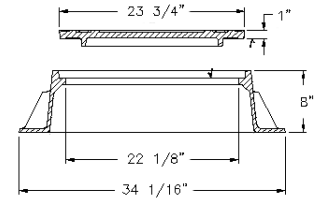


**Type M Grate**  
Approx. 185 sq. in.  
open area

### 2609 FRAME & COVER

Heavy duty  
Machined bearing surfaces

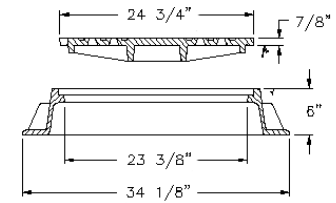
Options  
Special lettered covers  
Custom logo covers



### 2615 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses 2603 covers and grate

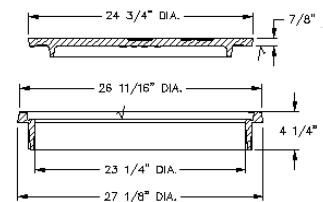
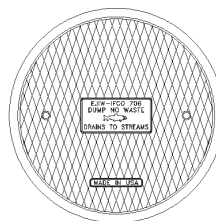
Options  
Special lettered covers  
Custom logo covers  
Bolted assembly



### 2626 FRAME & COVER

Heavy duty  
Machined bearing surfaces

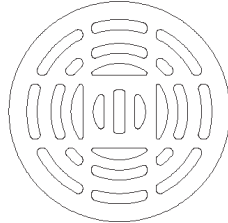
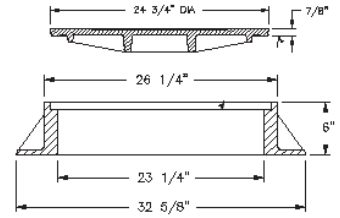
Options  
Special lettered covers  
"DUMP NO WASTE!" lettering and fish image  
Bolted assembly



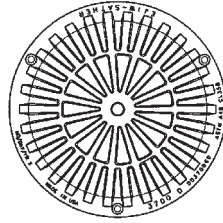
### 2640 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers  
Frames and grates available in  
gray or ductile iron  
Catch pan available if required



**Type P Concave Grate**  
Approx. 136 sq. in.  
open area

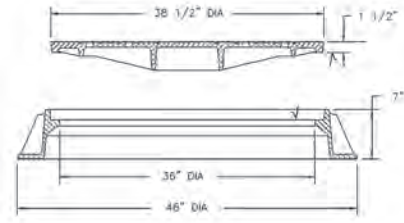


**Type O Beehive Grate**  
Approx. 163 sq. in.  
open area  
9" height above frame

### 2688 FRAME & COVER

Heavy duty  
Machined bearing surfaces

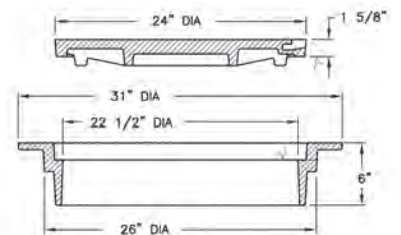
Options  
Watertite assembly  
Special lettered covers  
Z1 Reversible frame — 4"



### 2750 FRAME & COVER

Heavy duty

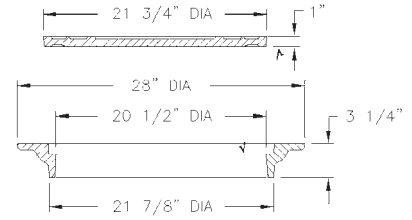
Options  
Special lettered covers



### 2755 FRAME & COVER

Heavy duty  
Machined bearing surfaces

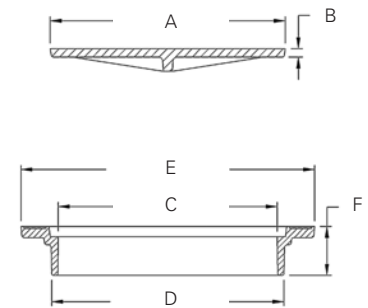
Options  
Special lettered covers



### 2790 FRAME & COVER/GRATE SERIES

Light duty (Non-traffic)

Options  
Solid covers  
Special lettered covers  
Grates



2790 Frame & Cover/Grate Series

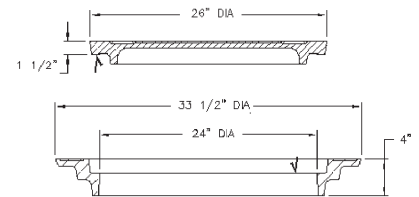
Catalog Number	A Cover Dia.	B Cover Thk.	C Clear Opening	D Flange Slv. OD	E Flange Dia	F Frame Height
2790-6	7 1/4	5/8	6	6 3/4	10 1/8	2 1/2
2790-8	9 3/4	9/16	8 7/16	9 3/8	14 1/4	2 1/4
2790-10	12	1/2	10 3/4	11 1/2	16	2 1/4
2790-12	14 3/8	1/2	13 7/6	14 3/16	18	3

Note: All dimensions are in inches.

### 2800 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1040 covers and grates

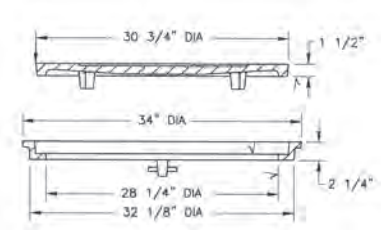
Options  
Solid or vented covers  
Special lettered covers  
Custom logo covers  
ADA grate  
Watertite assembly  
"DUMP NO WASTE!" lettering  
Gasket seal covers



### 2805 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces  
Bolted assembly

Options  
Special lettered covers  
Custom logo covers



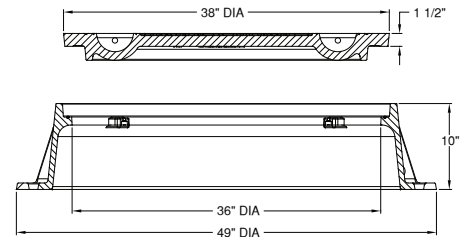
### 2812 AIRPORT MANHOLE FRAME & COVER

For slab construction  
Extra heavy duty  
Proof load 200,000 lb.  
Machined bearing surfaces

Options  
Recessed stainless steel hex bolts or special security bolts  
Special lettered covers  
Watertite assembly  
Gasket seal covers  
Drainage grate — 1580



Illustrating 1812Z2 frame with optional bolted watertite 2812 cover



#### MATERIAL SPECIFICATIONS

Frame - Gray Iron ASTM A48, Class 35B  
Cover - Ductile Iron ASTM A536  
Grate - Ductile Iron ASTM A536



**1580 Ductile Iron Type M Flat Grate**  
Approx. 468 sq. in. open area



2812 4 1/2" top flange frame and cover

#### 2812 Frame Sizes

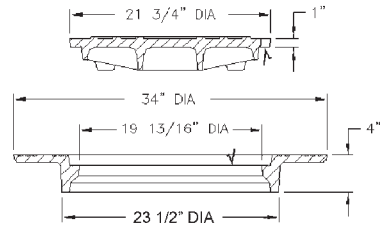
Catalog Number	Base Flange Diameter	Frame Height
2812	46 TF	4 1/2
2380Z	50	6
1812Z3	45 1/2	7
1812Z2	49	10
2381Z	50	10

Note: All dimensions are in inches.

## 2850 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1060 covers and grates

Options  
 Solid or vented  
 Custom logo covers  
 Special lettered covers  
 Watertite assembly  
 Gasket seal covers



**Type M1 Flat Grate**  
 Medium duty  
 Approx. 115 sq. in.  
 open area



**Type M2 Radial Grate**  
 Heavy duty  
 Approx. 145 sq. in.  
 open area



**Type N Oval Grate**  
 Approx. 135 sq. in.  
 open area  
 2 1/2" height above frame

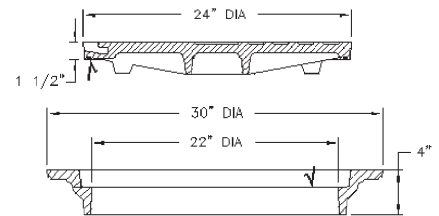


**Type O1 Beehive Grate**  
 Approx. 135 sq. in.  
 open area  
 4" height above frame

## 2860 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Accepts 1120 covers and grates

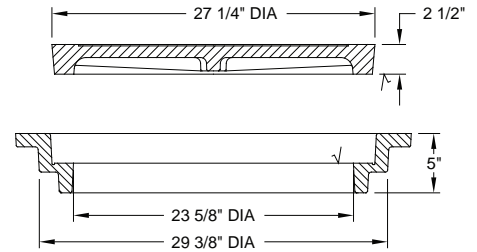
Options  
 Solid or vented covers  
 Special lettered covers  
 Custom logo covers  
 Gasket seal covers  
 Grates  
 Watertite assembly



## 2870 AIRPORT MANHOLE FRAME & COVER

For slab construction  
 Extra heavy duty, see chart for load rating  
 Machined bearing surfaces

- Options
- Recessed stainless steel hex bolts or special security bolts
  - Special lettered covers
  - Solid or vented covers
  - Drop handle
  - Drainage grate — 2870



### MATERIAL SPECIFICATIONS

Frame — Gray Iron ASTM A48, Class 35B



**Type M Ductile Iron Flat Grate**  
 Approx. 236 sq. in. open area

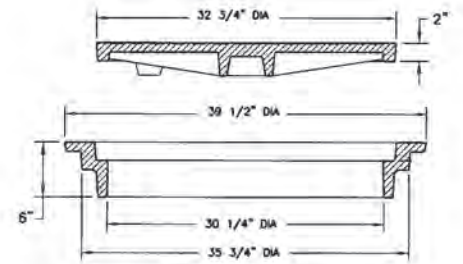
2870 Airport Manhole Frame & Cover

Catalog Number	Type	Material Specification	Proof Load
2870A	Cover	Gray Iron	110,000
2870ADI	Cover	Ductile Iron ASTM A536	200,000
2870M	Grate	Gray Iron ASTM A48 Class 35	140,000
2870MDI	Grate	Ductile Iron ASTM A536	200,000

## 2880 AIRPORT MANHOLE FRAME & COVER

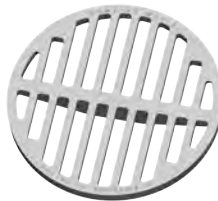
For slab construction  
 Extra heavy duty  
 Proof load of 200,000 lb.  
 Machined bearing surfaces

- Options
- Recessed stainless steel hex bolts or special security bolts
  - Gasket seal covers
  - Special lettered covers
  - Drainage grate - 2880



### MATERIAL SPECIFICATIONS

Frame - Gray Iron ASTM A48, Class 35B  
 Cover - Ductile Iron ASTM A536  
 Grate - Ductile Iron ASTM A536

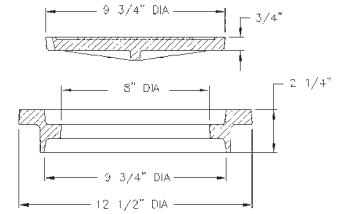


**Type M Ductile Iron Flat Grate**  
 Approx. 238 sq. in. open area

### 2885 FRAME & COVER

Heavy duty  
 Fits 8" sewer pipe bell  
 Accepts 2975 covers  
 Reversible frame, see 1577

Options  
 1 or 2 bolt unit  
 Specil lettered covers



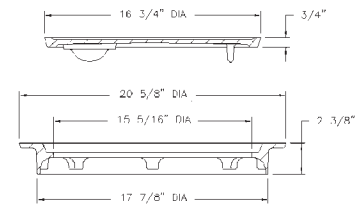
### 2890 FRAME & COVER

Light duty (Non-traffic)  
 Fits 15" sewer pipe bell

Options  
 Special lettered covers  
 Watertite assembly  
 Grate



**Type M Flat Grate**  
 Approx. 75 sq. in.  
 open area



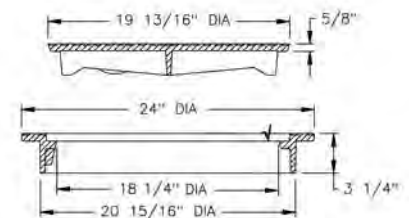
### 2900 FRAME & COVER

Light duty (Non-traffic)  
 Fits 18" sewer pipe bell

Options  
 Solid or vented covers  
 Special lettered covers  
 Watertite assembly  
 Grates  
 Gasket seal covers



**Type M Flat Grate**  
 Approx. 130 sq. in.  
 open area



### 2910 FRAME & COVER

Light duty (Non-traffic)  
Fits 21" sewer pipe bell

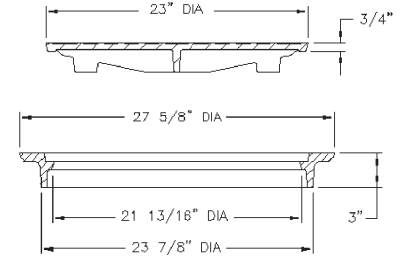
**Options**

- Solid or vented covers
- Special lettered covers
- Watertite assembly
- Grates

2910Z1 bottom flange frame available



**Type M Flat Grate**  
Approx. 150 sq. in.  
open area



### 2912 FRAME & COVER

Heavy duty  
Reversible frame  
Can be installed as a top  
flange or bottom flange unit

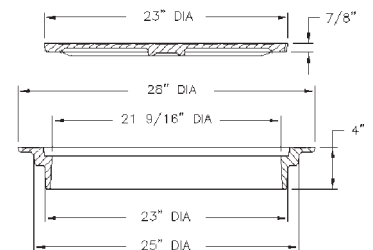


### 2915 FRAME & COVER

Light duty (Non-traffic)

**Options**

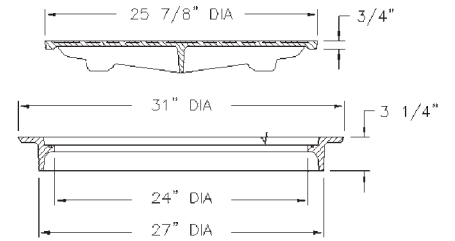
- Special lettered covers



### 2920 FRAME & COVER

Light duty (Non-traffic)  
Fits 24" sewer pipe bell

- Options
- Solid or vented covers
- Watertite assembly
- Gasket seal covers
- Grates

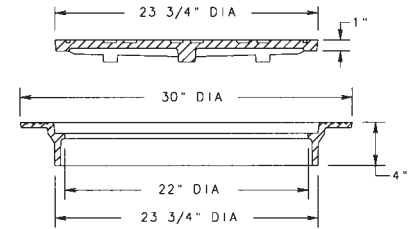


**Type M Flat Grate**  
Approx. 215 sq. in.  
open area

### 2925 FRAME & COVER

Medium duty

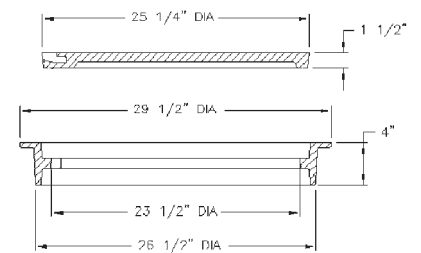
- Options
- Special lettered covers
- Lock lug covers
- Cross strap lock
- Also accepts 1450 and 1665 covers



### 2932 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

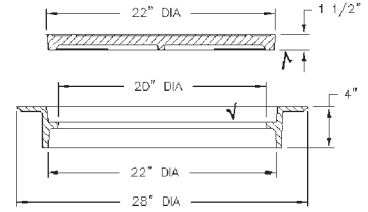
- Options
- Special lettered covers
- Watertite assembly
- Gasket seal covers
- Grates



### 2935 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Vented cover

Options  
Special lettered covers  
Custom logo covers  
Accepts 1130 covers

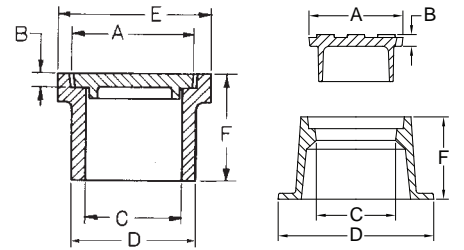


### 2960 — 2980 MONUMENT BOXES

Floor and monument boxes  
Floor boxes are used in concrete floors to provide access to openings and valve controls. They can also be used as forms in concrete floors wherever a round opening is desired.  
Sizes listed in order of clear openings



Illustrating bottom flange



Illustrating top flange

Illustrating bottom flange

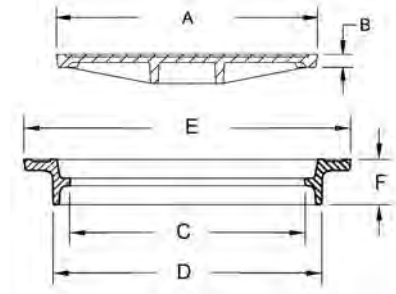
2960 — 2980 Monument Boxes

Catalog Number	A Cover Diameter	B Cover Thickness	C Clear Opening	D Drop In Dimension	E Top Flange	F Frame Height
2960	6 1/2	1 1/2	5	5 3/4	7 5/8	6 1/4
2965*	8	1	6 1/2	8	9 3/4	10
2966+	8	1	6 1/2	11 1/2	9 3/4	10
2967++	8	1	6 1/2	7 13/16	9 3/4	10
2970+++	8 1/4	3/4	7	7 3/4	9 1/2	6 1/4
2975+++	9 5/8	3/4	8 1/4	9	10 3/4	7 1/2
2980	11 3/8	5/8	10	-	13	7 1/2

Note: All dimensions are in inches.  
\* 2965 — Grate option, 1 1/2" and 2 1/2" Adjusting risers available with this unit  
+ 2966 unit has 4 lugs at base of frame  
++ 2967 unit is 2 piece split frame  
+++ 2970 & 2975 can be bolted

### 2982 FRAME & COVER

Heavy duty and Light duty (Non-traffic)  
Specify Type cover or grate



**Type M Flat Grate**  
Approx. 101 sq. in.  
open area

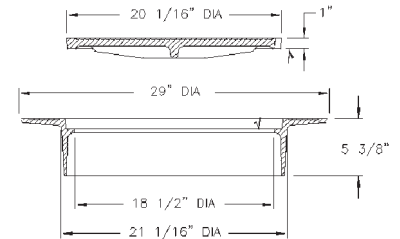
2982 Frame & Cover

Catalog Number	A Cover Dia.	B Cover Thk.	C Clear Opening	D Drop In Dimension	E Top Flange	F Frame Height
2982-18	17 1/4	1 1/4	15 1/2	18	21 3/4	3
2982-20	20	1	17 3/4	21 3/4	29	3 5/8
2982-24	28 3/4	2	22	25	30	4 3/4

Note: All dimensions are in inches.

### 2990 FRAME & COVER

Light duty (Non-traffic)  
Machined bearing surfaces

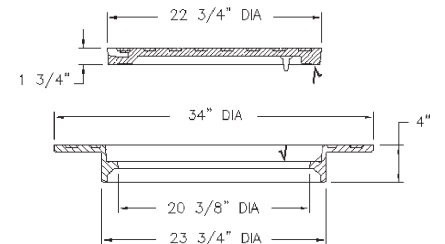


### 2995 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Accepts 1020 covers and grates



Type E "Outer" Cover with hole  
for valve box cover



Options

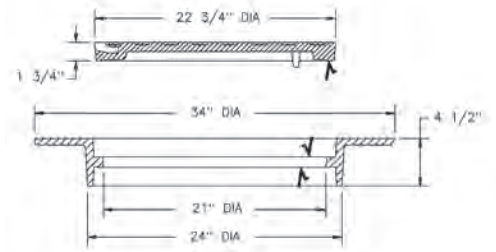
- Solid or vented covers
- Special lettered covers
- Watertite assembly
- Gasket seal covers
- Cross strap lock
- Grates

### 2996 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Reversible frame  
 Accepts 1020 covers and grates

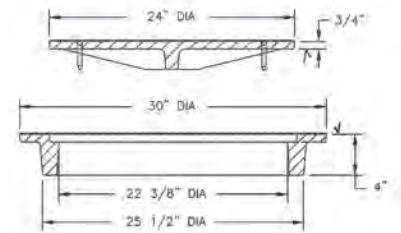
Options

- Solid or vented covers
- Special lettered covers
- Watertite assembly
- Gasket seal covers
- Cross strap lock
- Grates
- Type E "outer" cover with hole for valve box cover



### 3000 FRAME & COVER

Light duty (Non-traffic)  
 Machined bearing surfaces  
 Lift handles

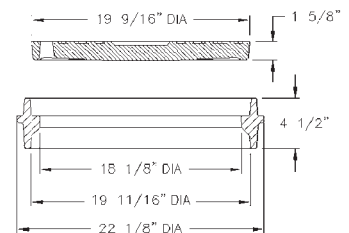


### 3005 FRAME & COVER

Heavy duty

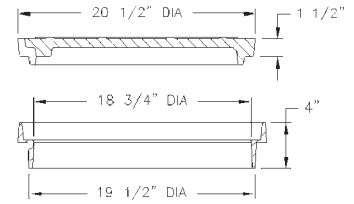
Options

- Vented covers
- Special lettered covers



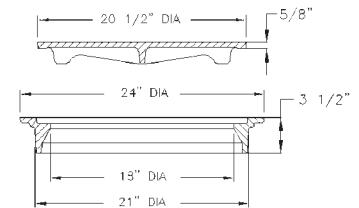
### 3010 FRAME & COVER

Heavy duty



### 3015 FRAME & COVER

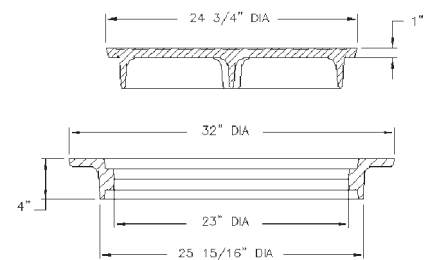
Light duty (Non-traffic)  
Special lettered covers



### 3020 FRAME & COVER

Heavy duty  
Reversible frame  
Accepts 1600 covers and grates

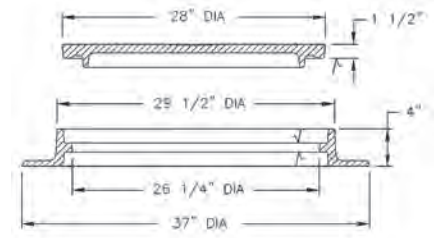
Options  
Special lettered covers  
Pick bar



### 3030 FRAME & COVER

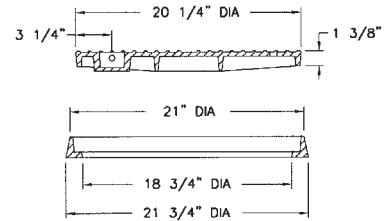
Heavy duty  
 Machined bearing surfaces  
 Reversible frame

Options  
 Special lettered covers



### 3033 INLET FRAME & COVER

Light duty (Non-traffic)



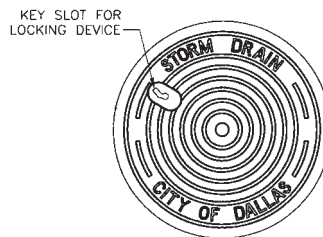
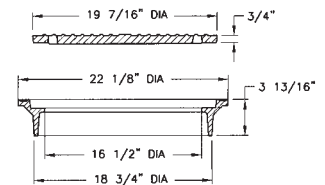
### 3034 INLET FRAME & COVER

Light duty (Non-traffic)

Options  
 Special lettered covers  
 "DUMP NO WASTE!" lettering  
 and fish image  
 Locking and non-locking cover



Non-locking cover



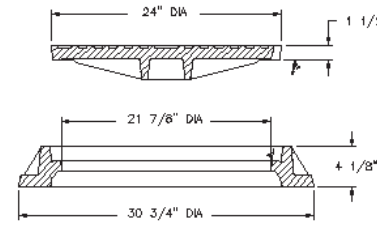
3034 with locking cover



### 3100 FRAME & COVER

Heavy duty  
Machined bearing surfaces

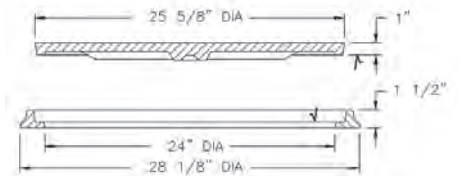
Options  
Special lettered covers  
Custom logo covers



### 3101 FRAME & COVER

Light duty (Non-traffic)  
Machined bearing surfaces  
Vented cover

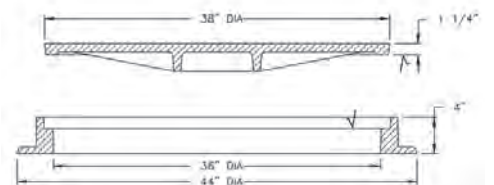
Options  
Special lettered covers



### 3106 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Vented cover

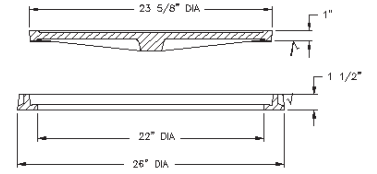
Options  
Special lettered covers  
4" and 6" height frames available  
Accepts 3166 covers



### 3110 FRAME & COVER

Light duty (Non-traffic)  
Machined bearing surfaces

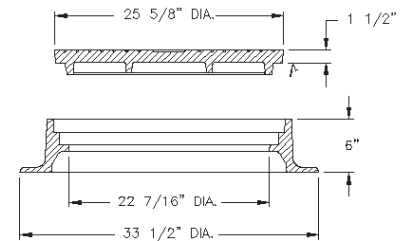
Options  
Special lettered covers  
Frame available with and without lugs



### 3115 FRAME & COVER

Heavy duty  
Machined bearing surfaces

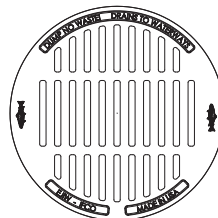
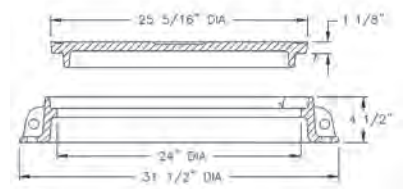
Options  
Special lettered covers  
Adjusting risers



### 3124 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers  
Custom logo covers  
Bolted assembly  
Watertite assembly  
Grate available — 1848  
Hinged unit  
"DUMP NO WASTE!" lettering  
and fish image

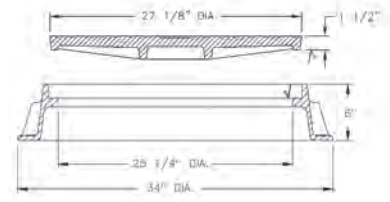


**1848 Type M Grate**  
Approx 126 sq. in.  
open area  
"DUMP NO WASTE!"  
lettering

### 3162 FRAME & COVER

Heavy duty  
Machined bearing surfaces

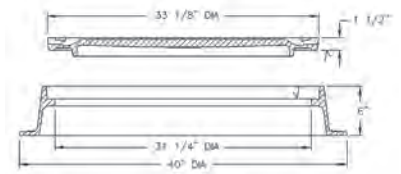
- Options
- Special lettered covers
- Platen covers
- Stackable frames
- Steel adjusting risers
- Watertite assembly



### 3163 FRAME & COVER

Heavy duty  
Machined bearing surfaces

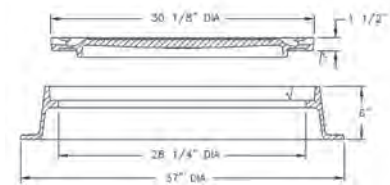
- Options
- Special lettered covers
- Platen covers
- Stackable frames
- Steel adjusting risers
- Watertite assembly



### 3164 FRAME & COVER

Heavy duty  
Machined bearing surfaces

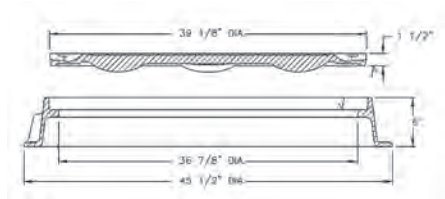
- Options
- Special lettered covers
- Platen covers
- Stackable frames
- Steel adjusting risers
- Watertite assembly
- Hinged unit



### 3165 FRAME & COVER

Heavy duty  
Machined bearing surfaces

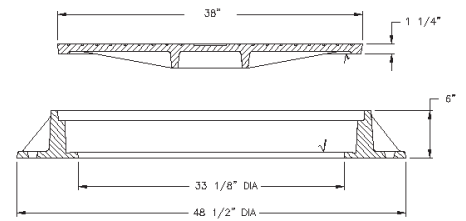
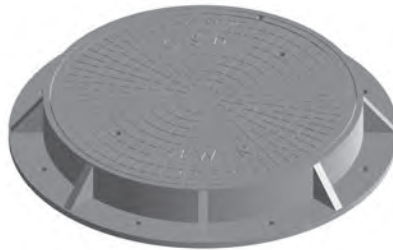
- Options
- Special lettered covers
- Platen covers
- Stackable frames
- Watertite assembly



### 3166 FRAME & COVER

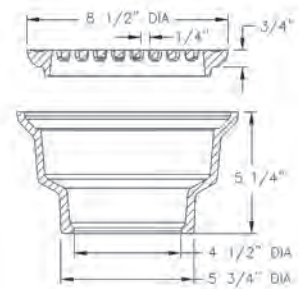
Heavy duty  
Machined bearing surfaces

- Options
- Special lettered covers



### 3505 AREA DRAIN

Light duty



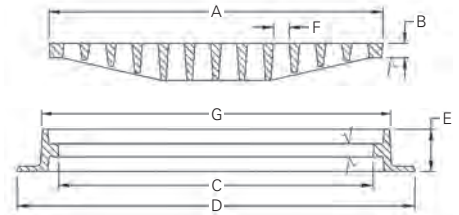
### V-3600 FRAME & GRATE SERIES

Heavy duty  
 Machined bearing surfaces  
 Reversible unit  
 Specify top or bottom flange

Options  
 Solid or vented covers — V-1600  
 Special lettered covers  
 Custom logo covers  
 Bolted assemblies



Illustrating V-3600-4



V-3600 Frame & Grate Series

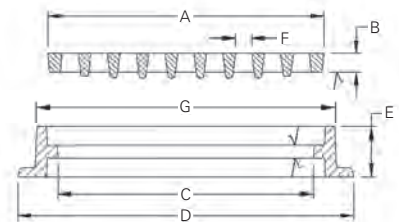
Catalog Number	A Cover Dia.	B Cover Thk.	C Clear Opening	D Flange	E Frame Height	F Slot Size	G Drop In	Open Area Sq. In.
V-3600-1	19 1/4	1 1/2	18 1/4	24	4	1 1/4	20 1/2	110
V-3600-2	23 1/2	1 1/2	21 3/4	28 1/2	4	1 1/8	24 3/4	196
V-3600-3	25 3/8	1 1/2	24	32 1/8	4	1 1/2	26 5/8	180
V-3600-4	31 7/8	1 3/8	30	38	4	1 1/2	33 1/8	350
V-3600-5	38	2	35 3/4	46	6	1 3/8	39 3/4	480
V-3600-6	50 1/4	2	48	56 1/2	6	1 1/2	52	760

Note: All dimensions are in inches.

### V-3610 FRAME & GRATE SERIES

Heavy duty  
 Machined bearing surfaces  
 Reversible unit  
 Specify top or bottom flange

Options  
 Solid or vented covers — V-1610  
 Special lettered covers  
 Custom logo covers  
 Bolted assemblies



V-3610 Frame & Grate Series

Catalog Number	A Cover Dia.	B Cover Thk.	C Clear Opening	D Flange	E Frame Height	F Slot Size	G Drop in	Open Area Sq. In.
V-3610-1	10 1/4	1 1/2	8 1/2	14 1/2	4	1 1/16	11 1/2	33
V-3610-2	13 1/4	1 1/2	11 1/2	17 5/8	4	1	14 1/2	54
V-3610-3	16 1/4	1 1/2	14 3/8	20 1/2	4	1 1/2	17 1/2	73
V-3610-4	21 7/8	1 1/2	20 1/4	26 5/8	4	1 5/16	23 5/8	159
V-3610-5	27 7/8	1 1/2	26 3/8	32 1/2	4 1/8	1 5/16	29 1/2	243
V-3610-6	33 7/8	1 1/2	32 1/4	38 1/2	4	1 9/16	35 1/2	350
V-3610-7	39 5/8	1 1/2	38 1/4	44 1/2	4	1 3/8	41 1/8	516
V-3610-8	45 3/4	1 1/2	43 3/4	50 1/2	4	1 5/16	47 3/4	665

Note: All dimensions are in inches.

### 3612 FRAME & COVER

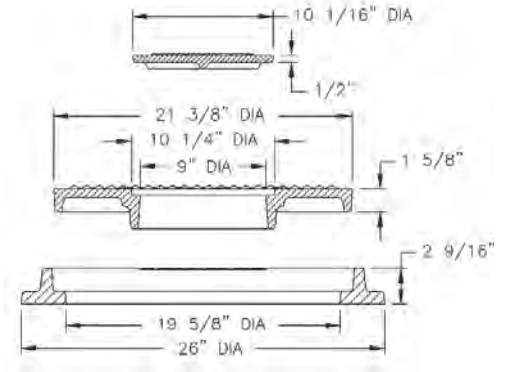
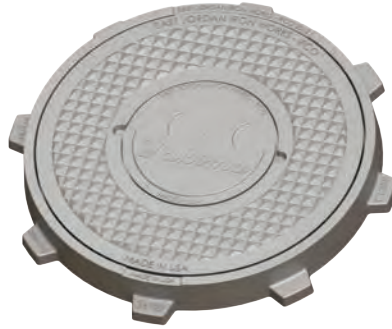
Light duty (Non-traffic)

Options

Special lettered covers

Custom logo covers

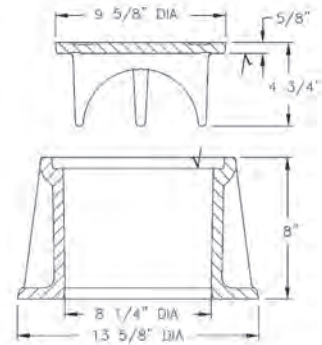
Type E outer cover and Type A inner cover



### 3614 FRAME & COVER

Heavy duty

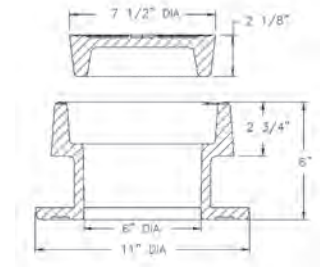
Machined bearing surfaces



### 3633 FRAME & COVER

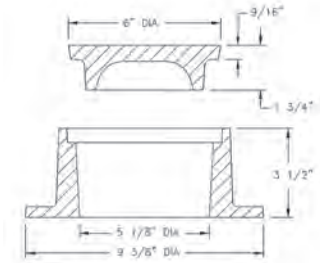
Heavy duty

Options  
Special lettered covers



### 3638 MONUMENT BOX & COVER

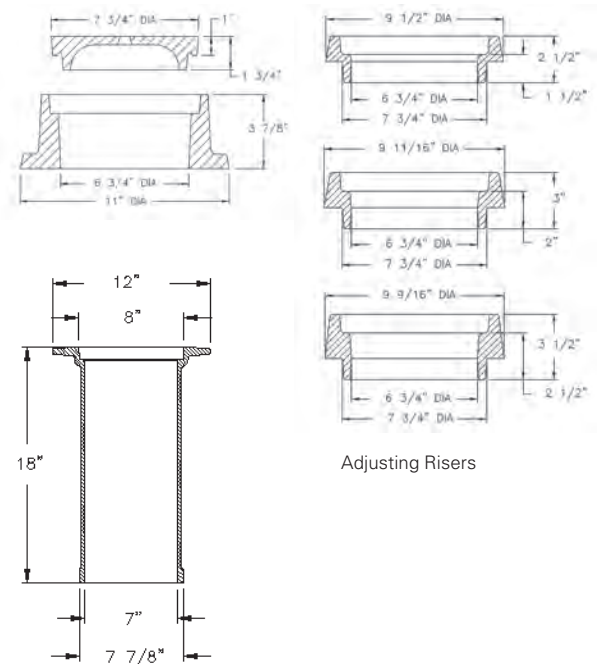
Heavy duty



### 3639 MONUMENT BOX & COVER

Heavy duty  
3 7/8" ht. frame  
18" height frame — 363912

Options  
Special lettered covers  
Adjusting risers



Adjusting Risers

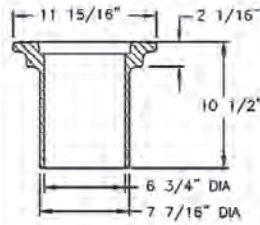
18" height frame 363912

### 3648 CLEANOUT

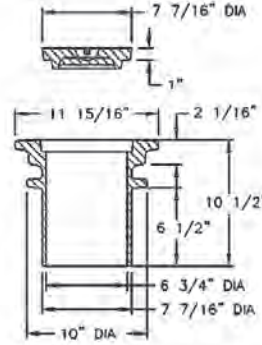
Heavy duty

Options

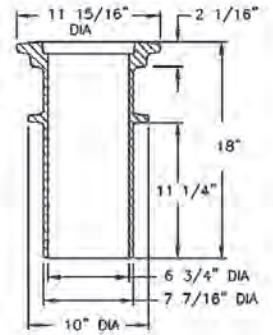
Special lettered covers



Z frame



Z1 frame



Z2 frame

### 3650 FRAME & COVER

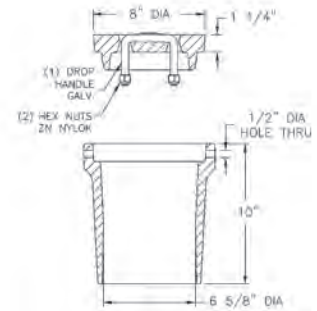
Heavy duty

Drop handle in cover

Options

Special lettered covers

Frame flange available-00365018



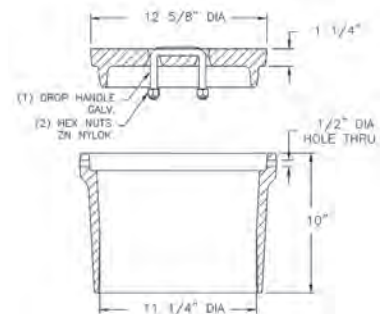
### 3651 FRAME & COVER

Heavy duty

Options

Special lettered covers-

Frame flange available-00365118



### 3661 LAMPHOLE FRAME & COVER

Heavy duty

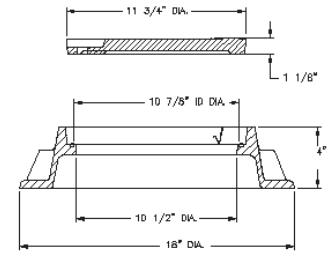
Options

Grates — ADA M2

Approximate 33 sq. in. open area

Bolted assembly

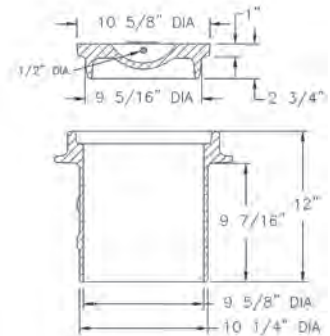
Watertite assembly



### 3663 FRAME & COVER

Heavy duty

Special lettered covers

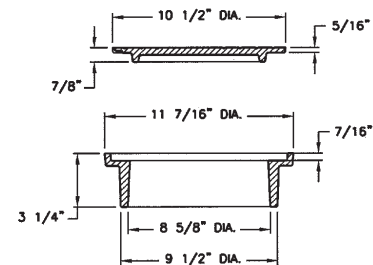


### 3670 METER BOX

Light duty (Non-traffic)

Options

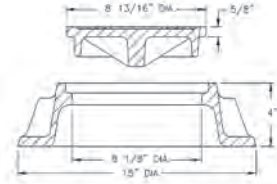
Ductile iron grates



### 3675 CLEANOUT

Heavy duty

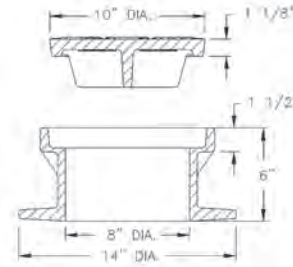
- Options
- Special lettered covers
- Watertite assembly
- Grates
- Adjusting risers
- Bolting



### 3680 FRAME & COVER

Heavy duty  
Machined bearing surfaces

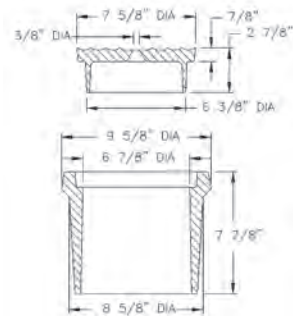
- Options
- Special lettered covers



### 3690 FRAME & COVER

Heavy duty

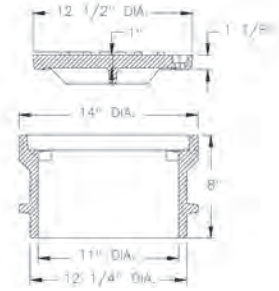
- Options
- Solid or vented covers



### 3698 FRAME & COVER

Heavy duty

- Options
- Bolted assembly
- Special lettered cover



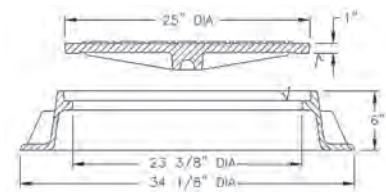
### 3700 — 3715 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Custom logo
- Special lettered covers
- Stackable frames
- Ductile iron covers
- Flat and beehive grates
- ADA grate
- Gasket seal covers
- Special locking covers
- Bolted, watertite assemblies
- Adjusting risers



3715 Illustrated



**Type M Flat Grate**  
Ductile iron  
Approx. 152 sq. in. open area



**Type O Beehive Grate**  
Gray iron  
Approx. 163 sq. in. open area  
9" height above frame



**3700M2 ADA Grate**

3700 — 3715 Frame & Cover

Catalog Number	Base Flange Diameter	Frame Height
3710	33 5/8	4
3711*	29 3/4-33 5/8	4 TF
3700	34 1/8	6
3715	34 1/8	6
3717	33 3/4	6
3705	33	6 1/8



3706 Tacoma Lettered Cover

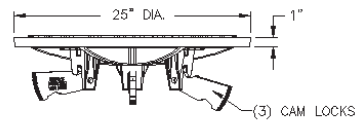


370763 Kent Logo Cover



3705 Bremerton Logo Cover

Note: All dimensions are in inches.  
\*Bolted top flange option

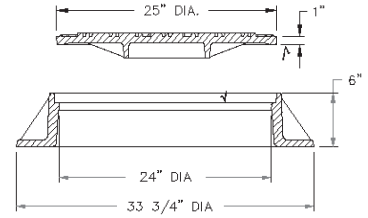
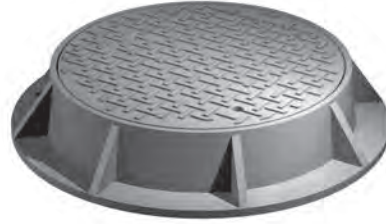


3704C Lock Cover

### 3717 FRAME & COVER

Heavy duty  
Machined bearing surfaces

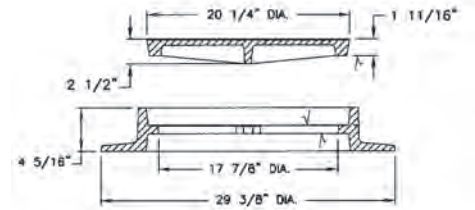
- Options
- Custom logo covers
- Special lettered covers
- Also uses 3700, 3705 and 3706 covers
- Grate — 3700 series
- Bolted assembly
- Watertite assembly



### 3718 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame

- Options
- Special lettered covers
- Watertite assembly
- Adjusting risers
- Grates

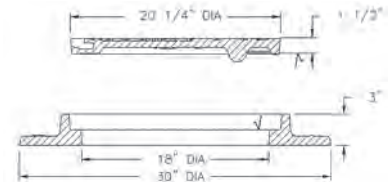


**Type M1 Grate**  
Approx. 107 sq. in.  
open area

### 3719 FRAME & COVER

Heavy duty  
Machined bearing surfaces

- Options
- Special lettered covers
- Solid or vented covers
- Ductile iron covers
- Grates



**Type M Grate**  
Approx. 121 sq. in.  
open area

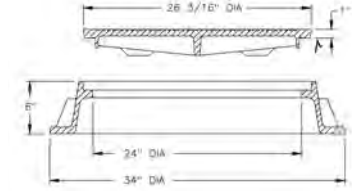


**Type C Touch Reader Cover**

### 3725 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Ductile iron covers  
 Accepts 3726 cover

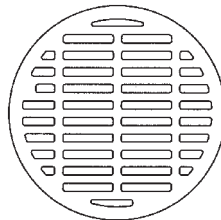
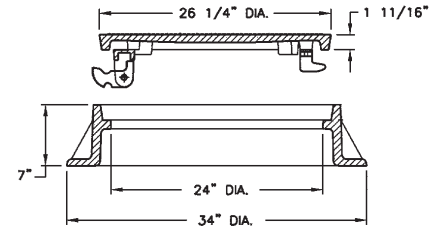
Options  
 Special lettered covers  
 Gate — 3726M  
 Bolted assembly (locking)  
 Watertite assembly



### 3730 FRAME & COVER

Heavy duty  
 Vertical and horizontal  
 machined bearing surfaces  
 Ductile iron cover  
 Cam lock

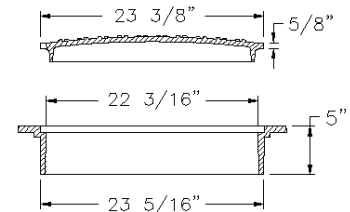
Options  
 Special lettered covers  
 Ductile iron grates  
 13" height frame



**Type M1 Grate**  
 Approx. 107 sq. in.  
 open area

### 3731 SIDEWALK FRAME & COVER

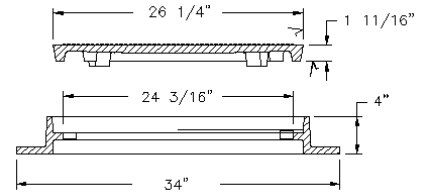
Light duty (Non-traffic)



### 3735 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Reversible frame  
 Uses 3730 cover

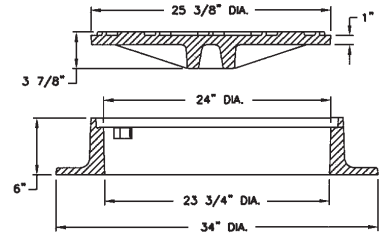
Options  
 Special lettered covers  
 Watertite assembly  
 Ductile iron grates



### 3736 FRAME & COVER

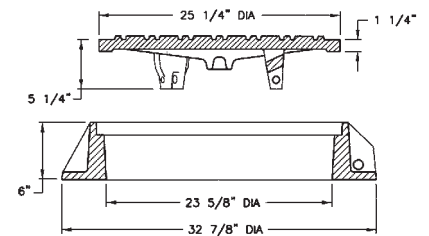
Heavy duty  
 Machined bearing surfaces

Options  
 Watertite assembly



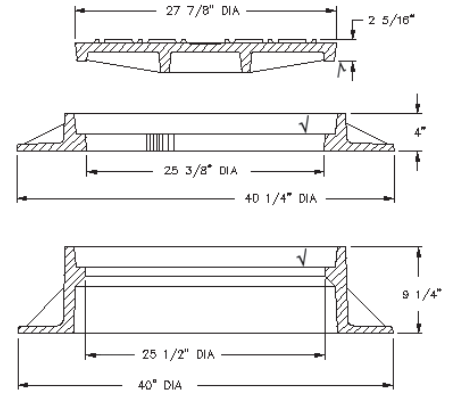
### 3740 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Ductile iron covers  
 Cam lock



### 3761 FRAME & COVER

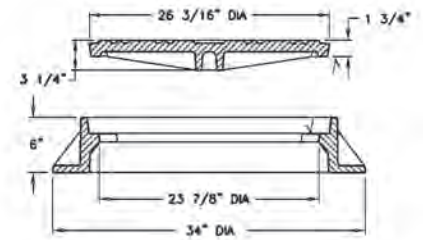
Heavy duty  
Machined bearing surfaces  
4" and 9" height frames



### 3767 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Ductile iron covers

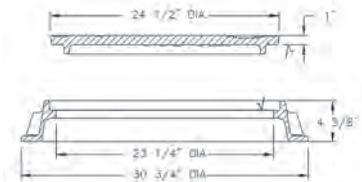
Options  
Special lettered covers  
Watertite assembly  
Adjusting risers



### 3770 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Ductile iron grates

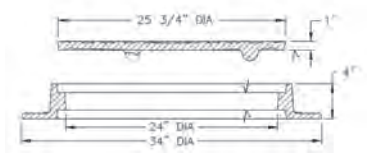


**Type M Grate**  
Approx. 153 sq. in.  
open area

### 3771 FRAME & COVER

Heavy duty  
 Machined bearing surfaces  
 Reversible frame  
 Accepts 3772 cover

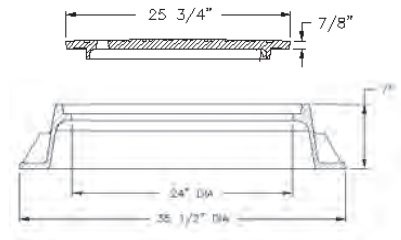
Options  
 Custom logo covers  
 Special lettered covers  
 Solid and vented covers  
 Gasketed frames  
 Grates  
 Ductile iron grates



### 3772 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

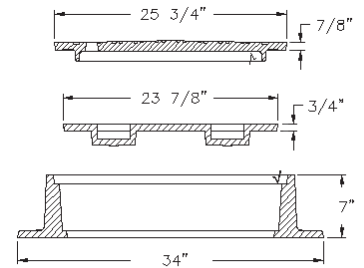
Options  
 Special lettered covers  
 Bolted assembly  
 Grates  
 4" reversible frame — 3771



### 3773 FROST PROOF FRAME & COVER

Heavy duty  
 Machined bearing surfaces

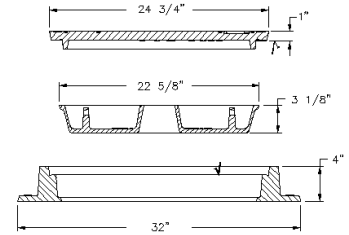
Options  
 Inner cover — 3773 used  
 makes unit frost proof



### 3777 FRAME & COVER

Heavy duty  
Machined bearing surfaces

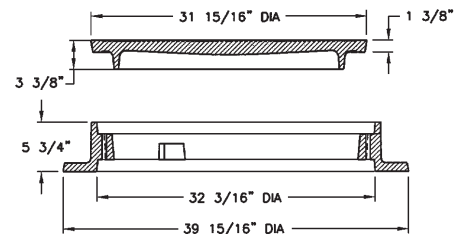
Options  
Special lettered covers  
Custom logo covers  
Frame pan



### 3790 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Reversible frame  
Uses 1810 cover

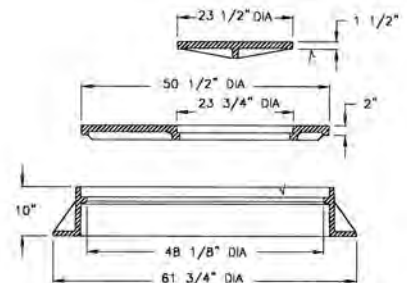
Options  
Special lettered covers  
Watertite assembly  
Gasket seal covers  
Two bolt and four bolt assembly (locking)



### V-7048 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
V-1418 inner cover

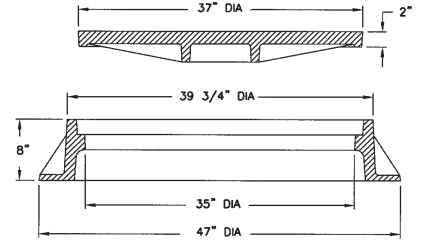
Options  
Special lettered inner covers  
Custom logo inner covers  
Watertite



### V-7068 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers



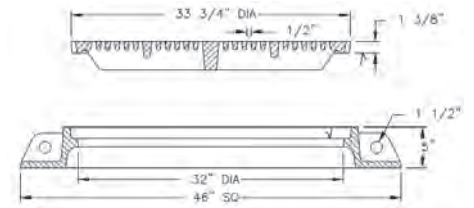
### V-7069 FRAME & GRATE

Heavy duty  
Machined bearing surfaces  
Ductile iron cover

Options  
Ductile iron ADA grate approx. 1523 sq. in. open area  
Adjusting risers



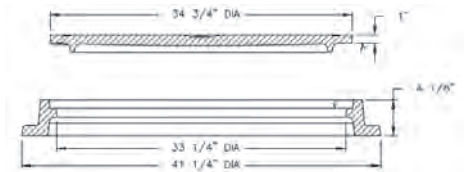
Illustrating ADA grate



### V-7070-1 FRAME & COVER

Heavy duty  
Machined bearing surfaces

Options  
Special lettered covers



# Drainage Grates, Frames, and Curb Inlets



### V-4066 CURB & GUTTER INLET

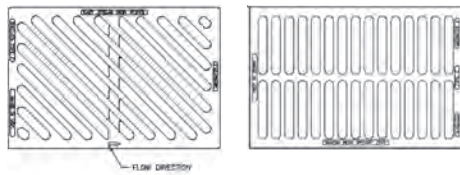
Heavy duty  
 With V-4066-1 grate  
 Curb back ht. adjusts from 7 1/2" to 11 3/4"

Options

"DUMP NO WASTE!" lettering and fish image on hood  
 V-4066-2 grate is concave, approximate 436 sq. in. open area  
 1" shorter frame with continuous bearing support for grate — V-4066-10

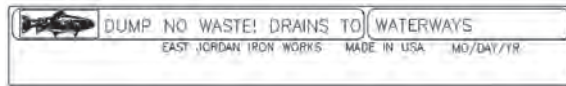
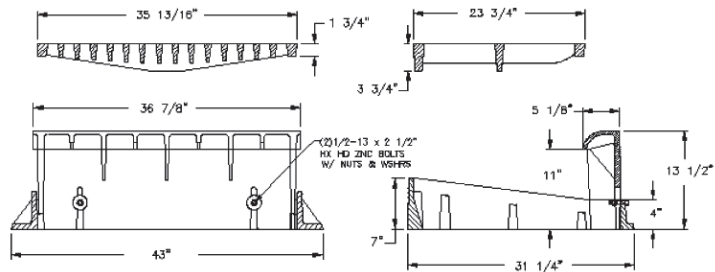


Illustrating V-4066-1



**V-4066-3 & V-4066-4 Grate**  
 Approx. 369 sq. in. open area

**V-4066-1 Grate**  
 Approx. 464 sq. in. open area

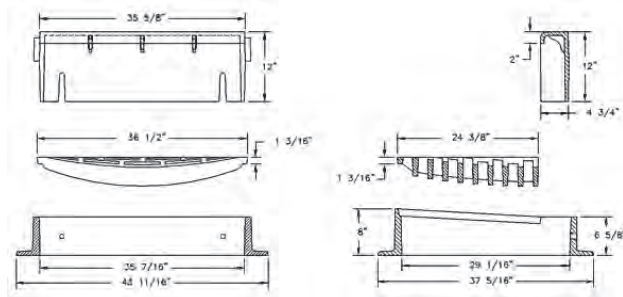
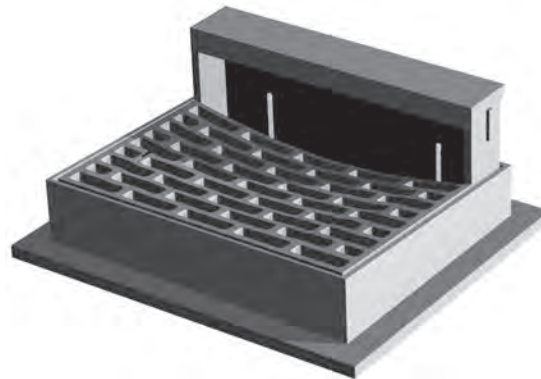


### V-4069-1 CURB & GUTTER INLET

Heavy duty  
 Approximate 382 sq. in. open area

Options

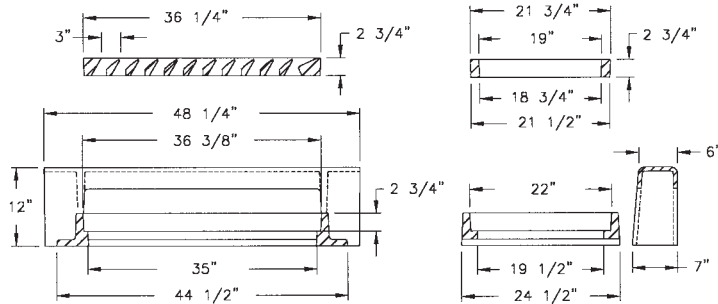
"DUMP NO WASTE!" lettering and fish image



### V-4074 CURB & GUTTER INLET

Heavy duty  
 Uses V-4070 hood  
 Approximate 359 sq. in. open area

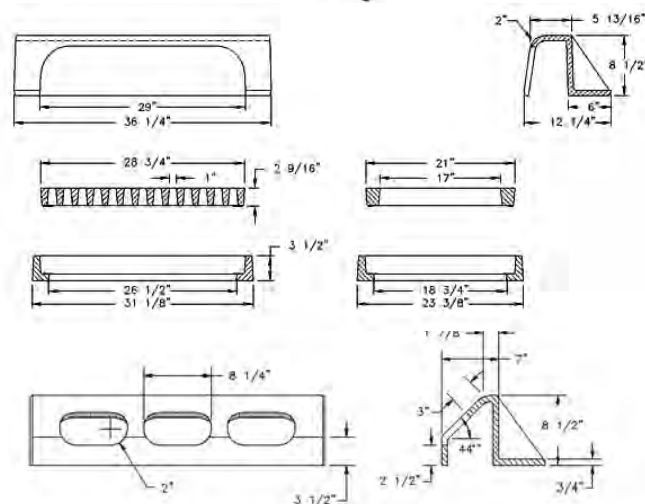
Options  
 "DUMP NO WASTE!" lettering and  
 fish image



### V-4075 CURB & GUTTER INLET

Heavy duty  
 Uses V-4275 frame and grate  
 Approximate 220 sq. in. open area

Options  
 "DUMP NO WASTE!" lettering and  
 fish image

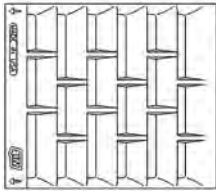


With V-4075-1 Mountable Back

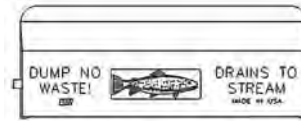
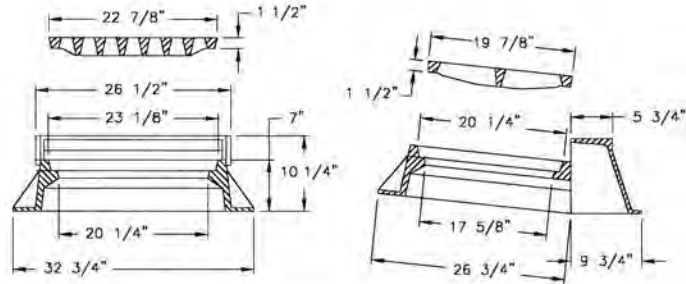
### V-4091 CURB & GUTTER INLET

Heavy duty  
 With V-4091-2 grate  
 Approximate 142 sq. in. open area

Options  
 "DUMP NO WASTE!" lettering  
 and fish image on hood  
 Double and triple units available



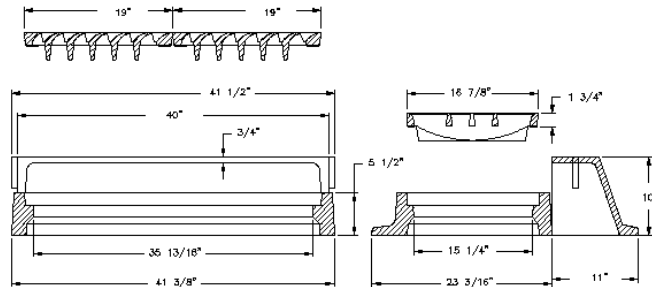
V-4091 Vane Grate



### V-4092 CURB & GUTTER INLET

Heavy duty  
 2 grates required  
 Approximate 196 sq. in. open area

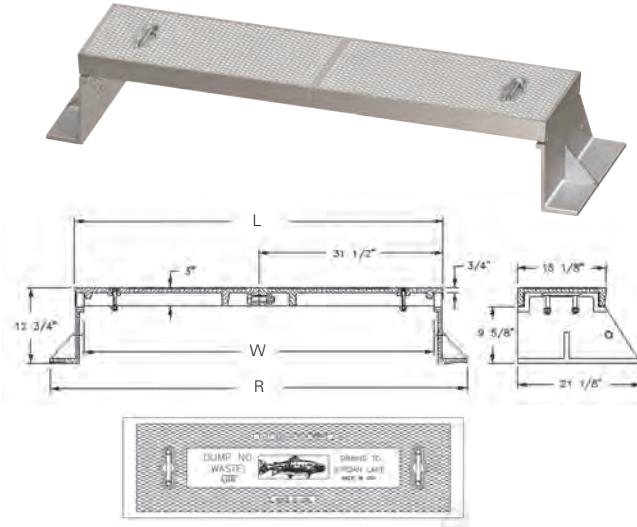
Options  
 "DUMP NO WASTE!" lettering  
 and fish image on hood  
 Full flange option see V-4250



### V-4096 CURB & GUTTER INLET

Light duty (Non-traffic)  
Behind the curb use

Options  
Special lettering  
"DUMP NO WASTE!" lettering and fish image on hood



V-4096 Curb & Gutter Inlet Sizes

Catalog Number	R	W	L
V-4096-1	60	48	51
V-4086-2	72	60	63

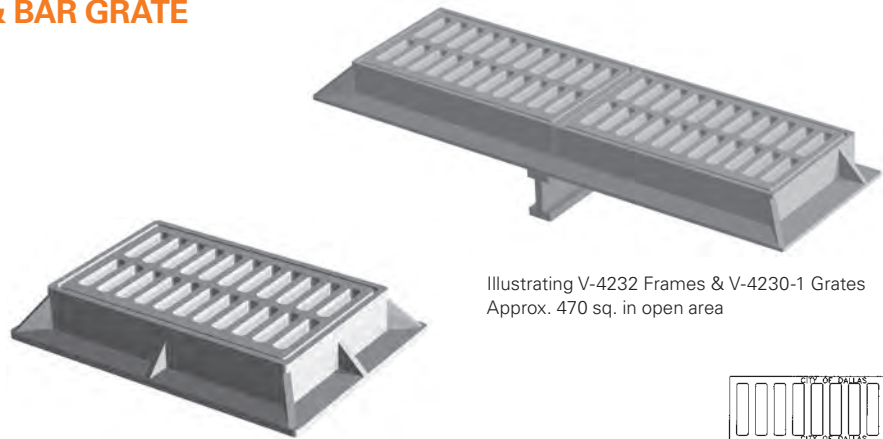
Note: All dimensions are in inches.

### V-4230 GUTTER INLET FRAME & BAR GRATE

Heavy duty  
Machined bearing surfaces

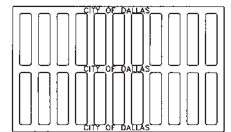
Options  
Special lettering  
Vane grate  
Ductile iron  
Bolted assembly  
"DUMP NO WASTE!" lettering and fish image

NOTE: Support all frame joints with steel I-beams supplied by other.

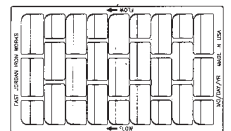


Illustrating V-4232 Frames & V-4230-1 Grates  
Approx. 470 sq. in open area

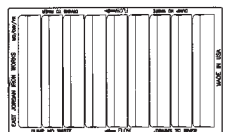
Illustrating V-4230 Frame & V-4230-1 Grate  
Approx. 235 sq. in open area



V-4230-1 Grate  
With special lettering

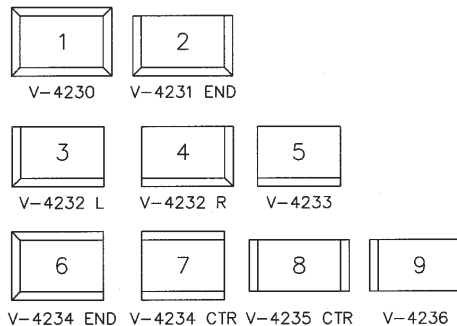


V-4230-2 Vane Grate  
Approx. 195 sq. in. open area

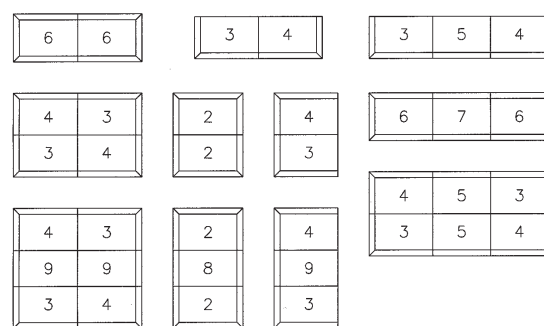


7600M Hydrodynamic Vane Grate  
Approx. 220 sq. in. open area  
"DUMP NO WASTE DRAINS TO RIVER"

#### Frame Styles



#### Frame Combination



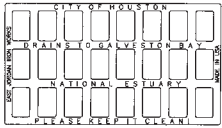
### V-4241 CURB & GUTTER FRAME & COVER

Heavy duty  
3 flange frame

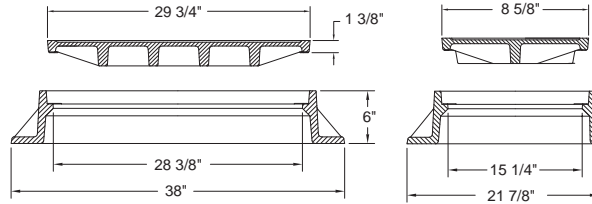
Options  
Special lettered grates and covers



Illustrating V-4243 solid cover



**V-4243-1 Grate**  
Approx. 240 sq. in  
open area



### V-4243 CURB & GUTTER FRAME & GRATES

Heavy duty  
Approximate 480 sq. in open area with  
2 grates

Options  
Custom logo covers  
Special lettered grates  
Special lettered covers  
Accepts V-4854 cover  
1 piece frame — V-4243Z2  
(two grates required)



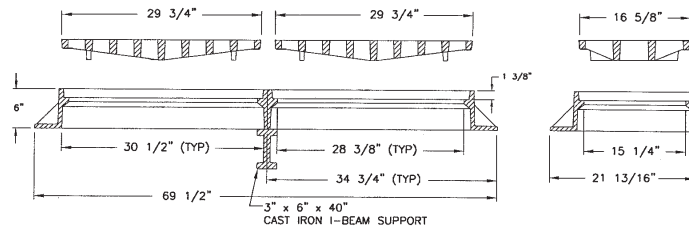
Illustrating V-4243Z1 left and right hand frames with I-beam and two grates



**V-4243-3 Cover**

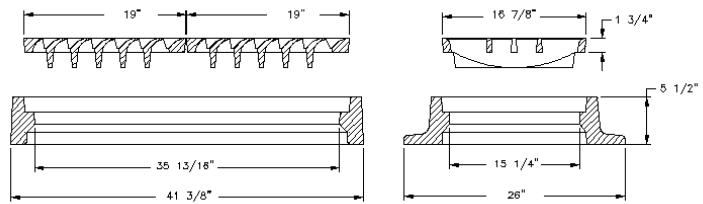


**V-4243-1 Grate**  
Approx. 240 sq. in  
open area



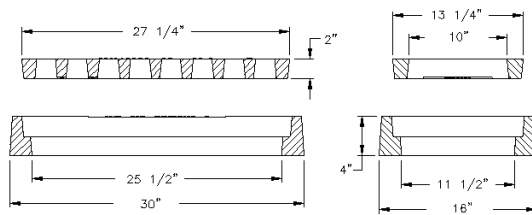
### V-4250 GUTTER INLET

Heavy duty  
 Accepts two V-4092 grates  
 Approximate 196 sq. in. open area



### V-4274 GUTTER INLET

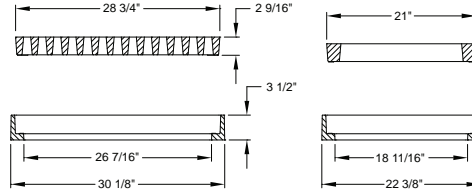
Heavy duty  
 Approximate 77 sq. in. open area



### V-4275 GUTTER INLET

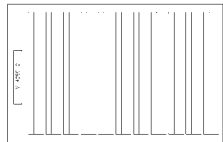
Heavy duty  
Approximate 220 sq. in. open area

Options  
For curb inlet see V-4075

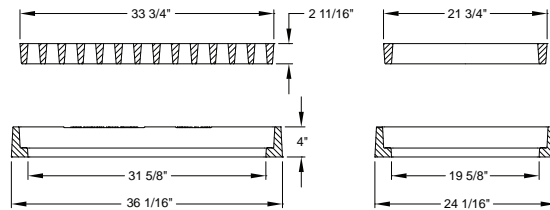


### V-4280 GUTTER INLET

Heavy duty  
With V-4280-1 grate  
Approximate 361 sq. in. open area

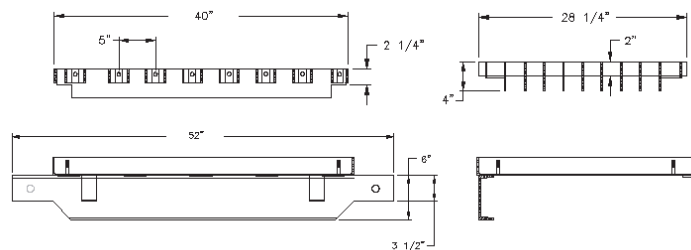


V-4280-2 Vane Grate  
Approx. 255 sq. in. open area



### V-4290 GUTTER INLET

Heavy duty  
Uses V-4863 grate  
Approximate 705 sq. in. open area  
Frame and grate fabricated from  
ASTM A36 steel  
Units are hot-dip galvanized



## V-4300 CURB INLET SERIES

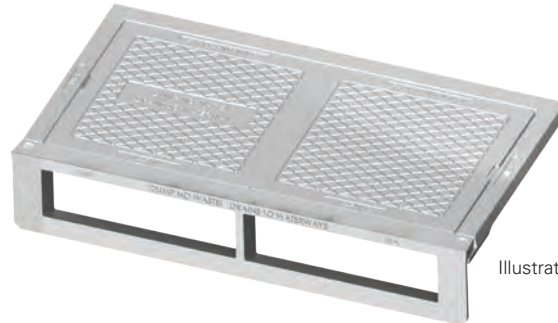
Light duty (Non-traffic)  
Designed for behind the curb access

### Options

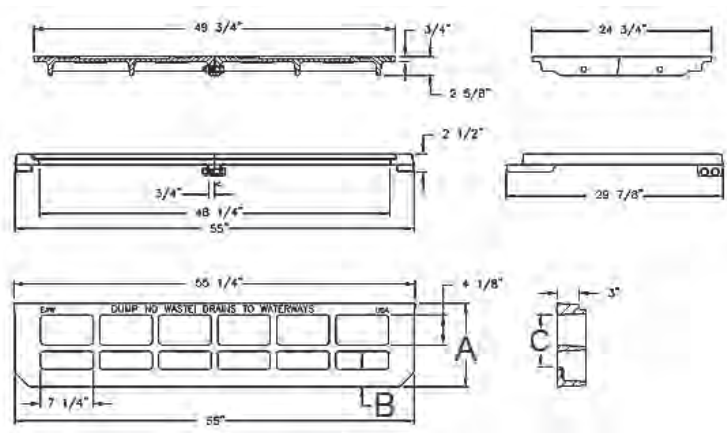
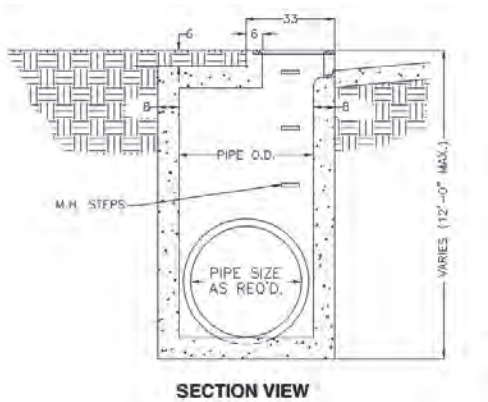
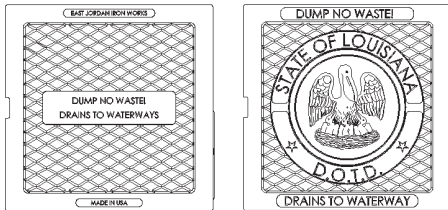
- Custom logo covers
- Special lettered covers
- “DUMP NO WASTE!” lettering and fish image covers and front grate



Illustrating V-4311-2



Illustrating V-4302



V-4300 Curb Inlet Series

Catalog Number	A Front Height	B Inlet Height	C Front Opening
V-4301	8 1/2	2 1/2	4 1/2
V-4302	10 1/2	2 1/2	6 5/8
V-4304	11 1/2	2 1/8	7 7/8
V-4305*	11 1/2	2 1/8	7 7/8
V-4306	12 1/2	2 1/2	8 1/2
V-4308	14 1/2	2 1/2	10 1/2
V-4309	11 1/2	2 1/2	6
V-4311	11 1/2	2 5/8	7 3/8
V-4312	17 1/2	2 5/8	13 3/8
V-4313	20 1/2	2 5/8	16 3/8

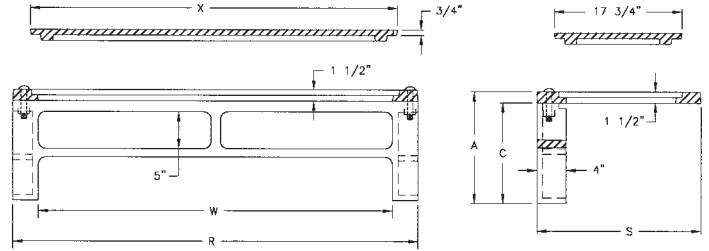
Note: All dimensions are in inches.  
\*Face of front grate has a 20' radius

### V-4340 CURB INLET SERIES

Light duty (Non-traffic)



Illustrating V-4341



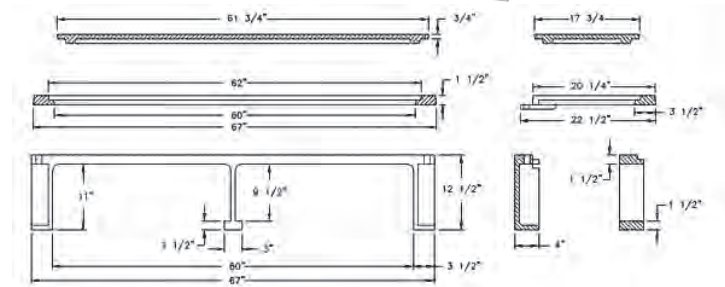
V-4340 Curb Inlet Series

Catalog Number	A Front Height	C Front Opening	R Frame Width	S Frame Depth	W Frame Clear Opening	X Cover Width	Y Cover Depth
V-4341	12	10 1/2	43	23 1/4	36	35 3/4	17 1/2
V-4342	13 1/2	12	55	22 1/2	48	49 3/4	17 3/4
V-4949	13 1/2	12	67	22 1/2	60	61 3/4	17 3/4

Note: All dimensions are in inches.

### V-4343-2 CURB INLET

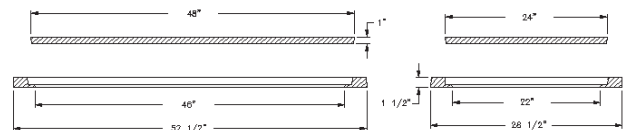
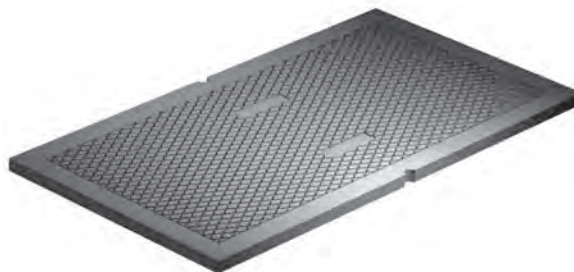
Light duty (Non-traffic)  
Special lettered cover  
"DUMP NO WASTE!" lettering



### V-4350 CURB INLET

Light Duty (Non-traffic)

Options  
Special lettered covers

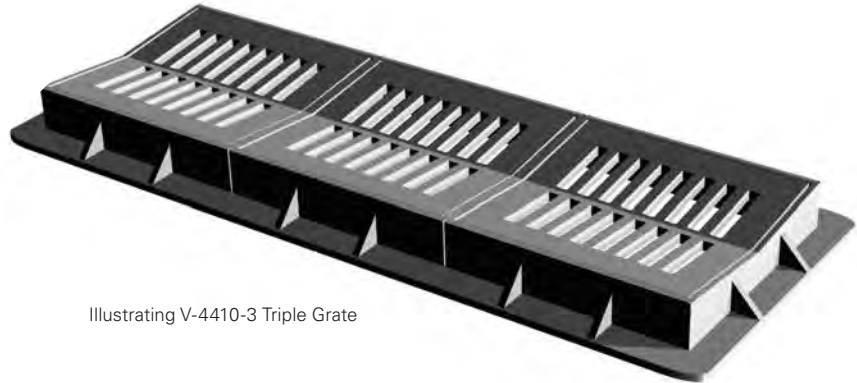


## V-4410 GUTTER INLET SERIES

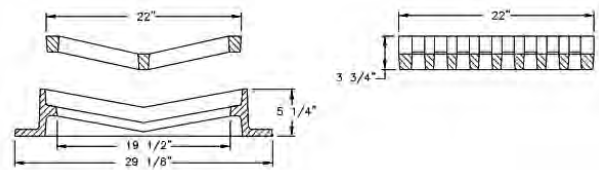
Heavy duty



Illustrating V-4410-1 Single Grate



Illustrating V-4410-3 Triple Grate



V-4410 Gutter Inlet Series

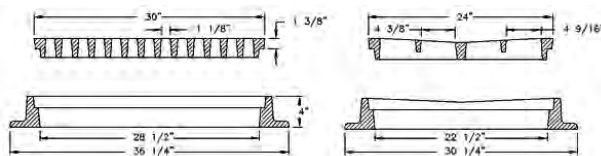
Catalog Number	Number of Grates	E Flange Width	Sq. In. Open
V-4410-1	1	29 1/4	178
V-4410-2	2	52 3/4	352
V-4410-3	3	78 3/8	528

Note: All dimensions are in inches.

## V-4430 GUTTER INLET

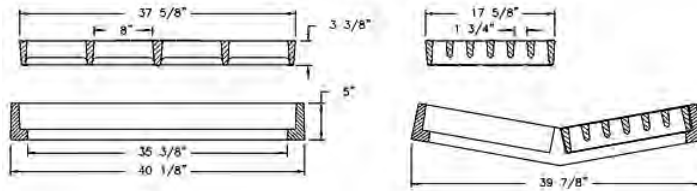
Heavy duty

Approximate 265 sq. in. open area



### V-4449 GUTTER INLET

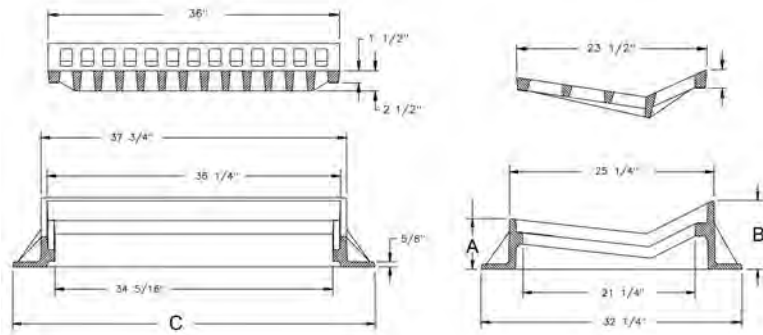
Heavy duty  
 Requires two grates  
 Approximate 751 sq. in. open area



### V-4510 — V-4516 GUTTER INLET

Heavy duty  
 Approximate 310 sq. in. open area

Options  
 "DUMP NO WASTE!" lettering and  
 fish image  
 Double frame design — V-4516



V-4510 — V-4516 Gutter Inlet

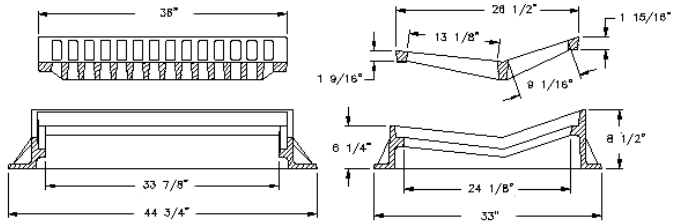
Catalog Number	A	B	C	Sq. In. Open
V-4510	6 1/4	8 1/2	44 3/4	310
V-4511	6 1/4	7 1/2	44 3/4	310
V-4516	6 1/4	7 1/2	82	620

Note: All dimensions are in inches.

### V-4520 GUTTER INLET

Heavy duty  
Approximate 458 sq. in. open area

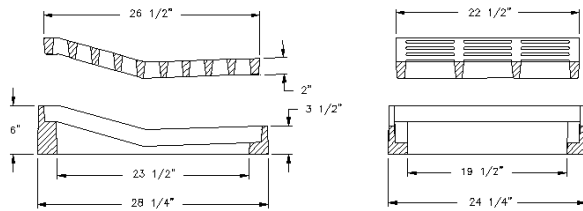
Option  
Bike Grate — V-4520-1



### V-4530 GUTTER INLET

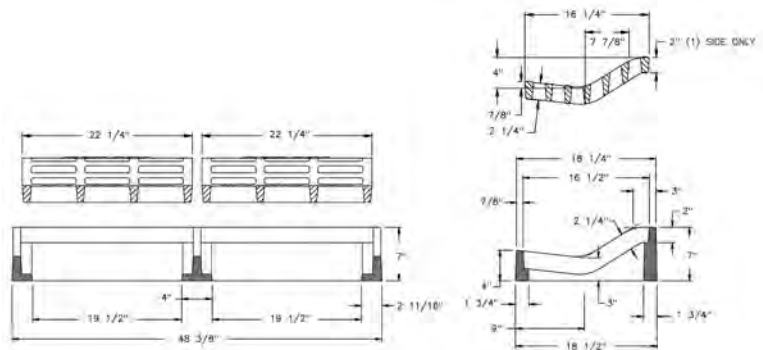
Heavy duty  
Approximate 272 sq. in. open area

Double unit available — V-4530-2  
Approximate 544 sq. in. open area



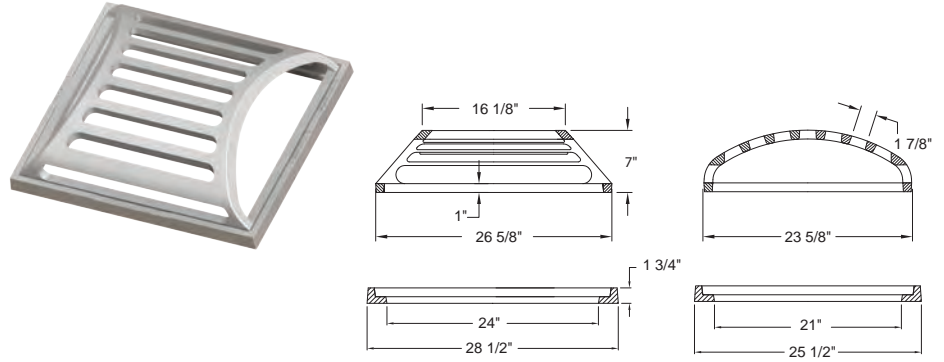
### V-4540 GUTTER INLET

Heavy duty  
Two grates required  
Approximate 300 sq. in. open area



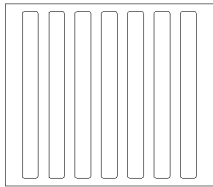
### V-4810 DITCH INLET

Heavy duty  
Approximate 430 sq. in. open area

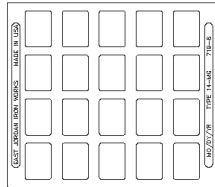


### V-4821 GUTTER INLET

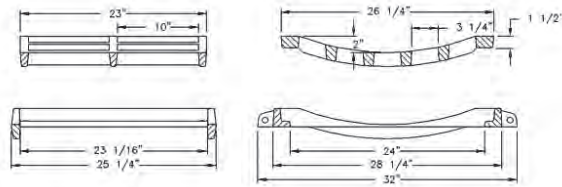
Light duty (Non-traffic)  
With V-4821-1 grate  
Approximate 330 sq. in. open area



**V-4821-2 Grate**  
Approx. 294 sq. in.  
open area

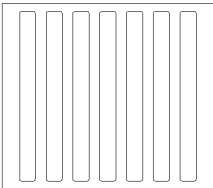


**V-4821-4 Grate**  
Approx. 290 sq. in.  
open area

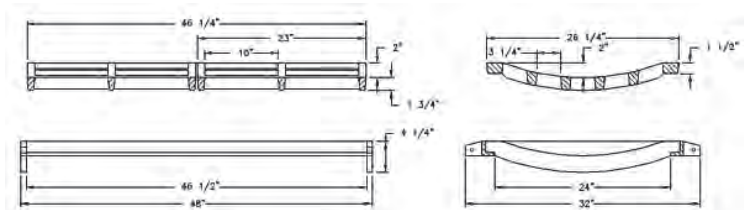


### V-4822 DITCH INLET

Light duty (Non-traffic)  
Uses two V-4821-1 grates  
Approximate 660 sq. in. open area

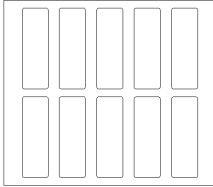


**V-4821-2 Grate**  
Approx. 588 sq. in.  
open area



### V-4823 DITCH INLET

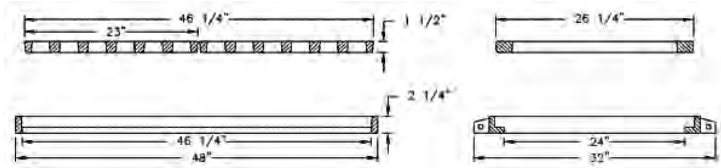
Light duty (Non-traffic)  
 Uses two V-4823 grates  
 Approximate 604 sq. in. open area



**V-4823-1 Grate**  
 Approx. 650 sq. in.  
 open area

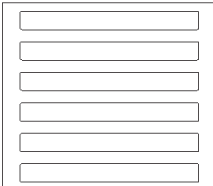


**V-4823-3 Vane Grate**  
 Approx. 650 sq. in.  
 open area

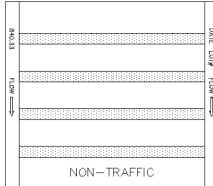


### V-4824 DITCH INLET

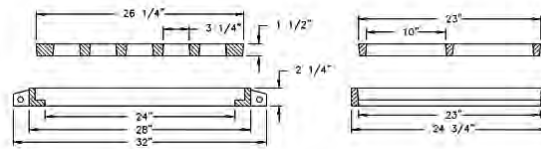
Light duty (Non-traffic)  
 Uses V-4823-1 grate  
 Approximate 302 sq. in. open area



**V-4823-2 Grate**  
 Approx. 325 sq. in.  
 open area



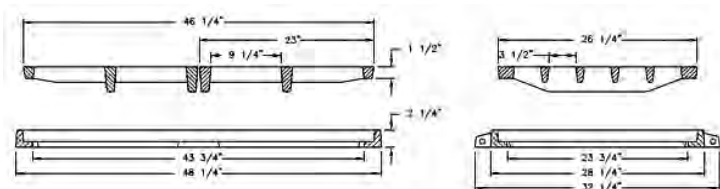
**V-4823-3 Vane Grate**  
 Approx. 325 sq. in.  
 open area



### V-4825 MEDIAN INLET

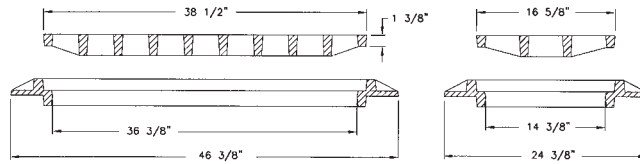
Heavy duty  
 Double assembly shown  
 Approximate 488 sq. in. open area

Options  
 Single and triple assemblies  
 Bolted assemblies



### V-4855 FRAME & GRATE

Heavy duty  
 Approximate 332 sq. in. open area  
 V-4855-1 grate not suitable  
 for pedestrian traffic



### V-4860 INLET FRAME & GRATE SERIES

Steel frame  
 Steel grate

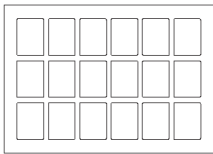
Options  
 Heavy duty cast iron grate — V-4861  
 Light duty (Non-traffic) steel grate — V-4862  
 Steel adjusting frames



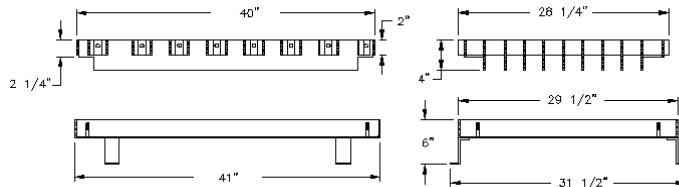
V-4860 Inlet Frame & Grate Series

Catalog Number	Material	Open Area	Load Rating
V-4861	Gray Iron	640	Heavy
V-4862	Steel	890	Light
V-4863	Steel	890	Heavy

Note: All dimensions are in inches.

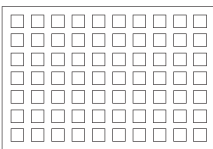


V-4861 Grate

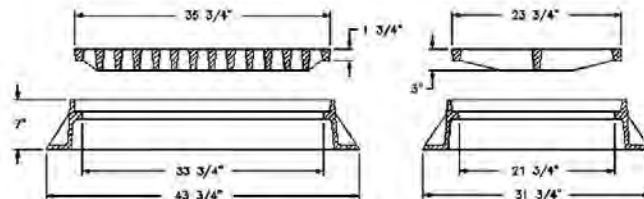


### V-4867 INLET FRAME & GRATE

Heavy duty  
 Uses V-4067-1 grate  
 Approximate 383 sq. in. open area

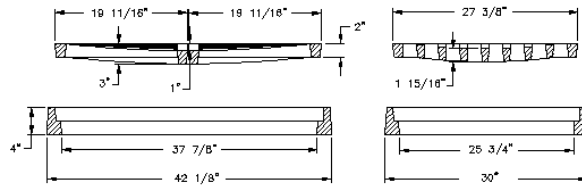
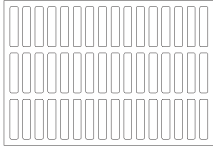


V-4067-3 Grate  
 Approx. 388 sq. in. open area



### V-4870 INLET FRAME & GRATE

Light duty (Non-traffic)  
 Uses two grates  
 Approximate 528 sq. in. open area  
 V-4870 concave grate light duty  
 (Non-traffic) 264 sq. in. open area

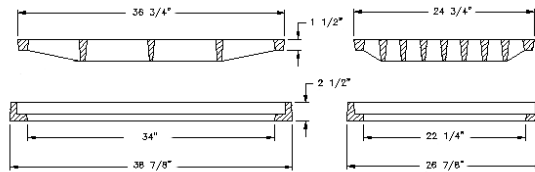
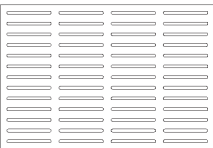


**V-4870-1 Grate**  
 Approx. 528 sq. in.  
 open area

### V-4873 INLET FRAME & GRATE

Heavy duty  
 Approximate 485 sq. in. open area

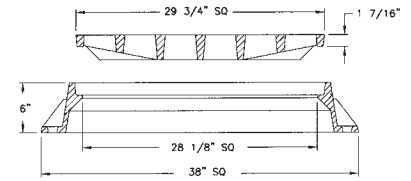
Options  
 V-4873-1 ADA grate  
 V-4870 concave grate light duty  
 (Non-traffic) 264 sq. in. open area



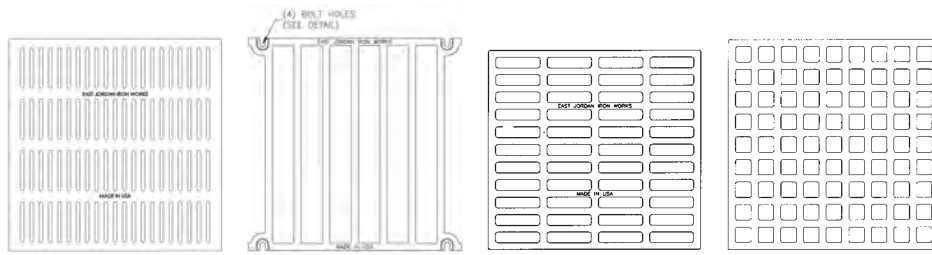
**V-4873-1 ADA Grate**  
 Approx. 195 sq. in.  
 open area

## V-4880 FRAME & GRATE SERIES

Heavy duty



Illustrating V-4880-1 Grate



**V-4880 ADA Grate**  
Heavy duty

**V-4880-2 Grate**  
Heavy duty  
Expressway use only

**V-4880-3 Grate**  
Heavy duty

**V-4880-4 Grate**  
Heavy duty

V-4880 Grates

Catalog Number	Open Area	Slot Dimension
V-4880-1	489 sq.	3 5/8 sq
V-4880-2	624 sq.	3 x 27 3/4
V-4880-3	444 sq.	1 5/8 x 6 3/11
V-4880-4	387 sq.	2 sq
V-4880-6	540 sq.	3 11/16 x 8 1/2

Note: All dimensions are in inches.

## 5000 CATCH BASIN INLET

Heavy duty

With Type M1 flat grate

approximate 160 sq. in. open area

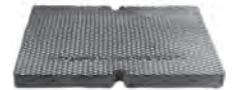
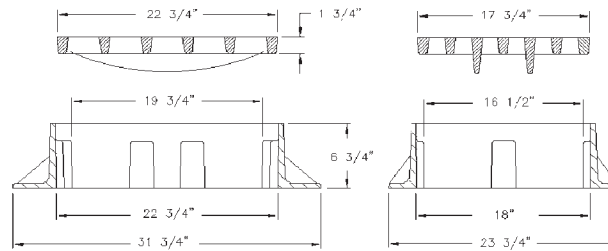
"DUMP NO WASTE!" lettering and fish image

Options

- 2" Adjusting riser
- Bolting
- Restricted flow grates
- Solid cover
- ADA grate
- 3 flange frame
- Round base flange frame — 5080
- Round base flange frame for hinged grate — 5000Z4



Illustrating 5000Z rectangular flange frame with Type M1 grate



Type A Solid Cover



Type M2 Sinusoidal Grate

Medium duty  
Approx. 160 sq. in. open area  
"DUMP NO WASTE!" Lettering and Fish Image



Type M3 Flat Restricted Grate

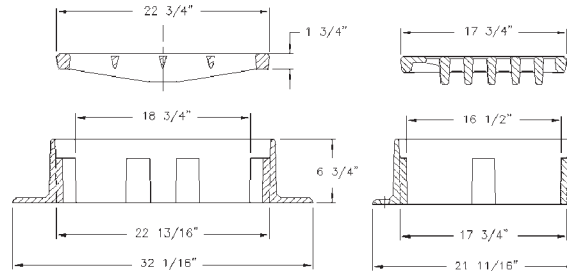
Available with 2, 4, 6, or 10 openings.  
Approx. 5 sq. in. per opening.  
6 hole grate with "DUMP NO WASTE!" Lettering and Fish Image



Illustrating 5000Z4 round base flange frame with Type M4 bolted and hinged grate

### 5020 CATCH BASIN INLET

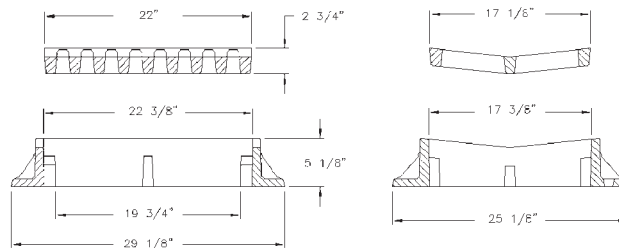
Heavy duty  
 Accepts 5000 grates and covers  
 With Type M1 flat grate –  
 Approximate 160 sq. in. open area



### 5030 CATCH BASIN INLET

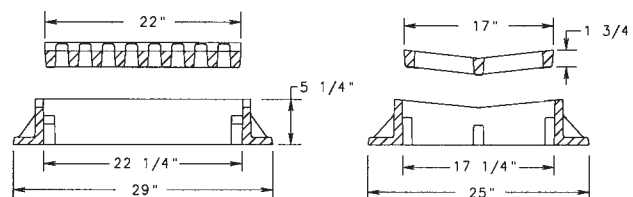
Light duty (Non-traffic)  
 Concave Inlet with 1 1/4" opening  
 Approximate 140 sq. in. open area

Options  
 Ductile grate — 5031



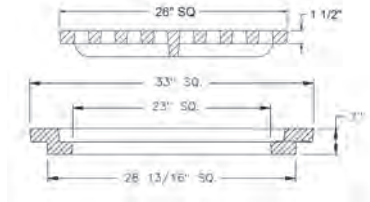
### 5031 CATCH BASIN INLET

Medium duty  
 Concave grate  
 Ductile iron frame & grate  
 Approximate 140 sq. in. open area



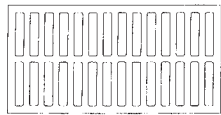
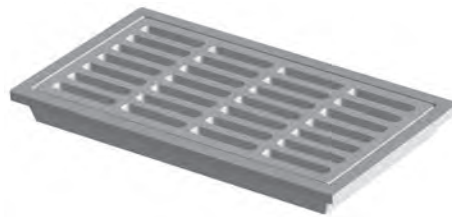
### 5050 CATCH BASIN INLET

Light duty (Non-traffic)  
Approximate 245 sq. in. open area

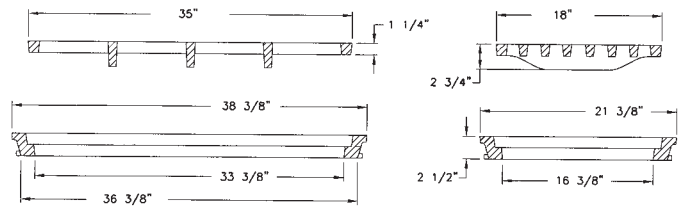


### 5055 FRAME & GRATE

Heavy duty  
Approximate 282 sq. in. open area



**V-5055-1 Grate**  
Approx. 280 sq. in.  
open area



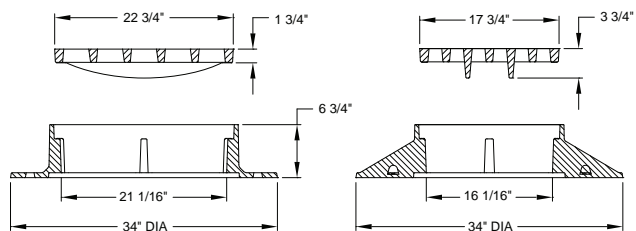
### 5080 CATCH BASIN INLET

Heavy duty  
Round base inlet  
Accepts 5000 grates and covers  
With Type M1 flat grate  
Approximate 160 sq. in. open area

Options  
4" height stackable frame



Illustrating 5080 frame with 5000 Type M1 grate



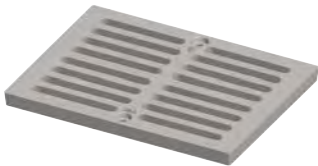
### 5085 CATCH BASIN INLET

Heavy duty  
 ADA grate  
 Approximate 84 sq. in. open area

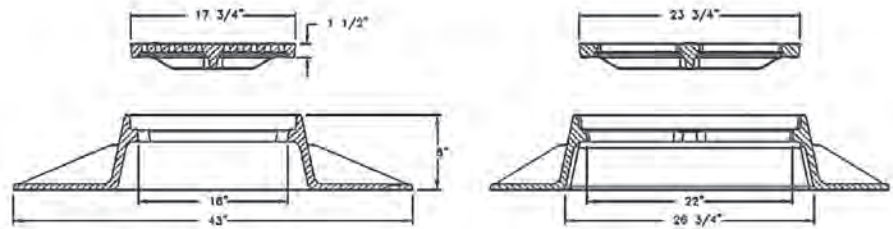
Options  
 Bolted assembly  
 Ductile iron



Illustrating Type M2 bolted ADA grate



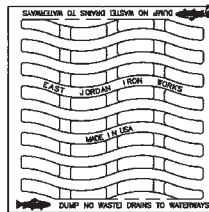
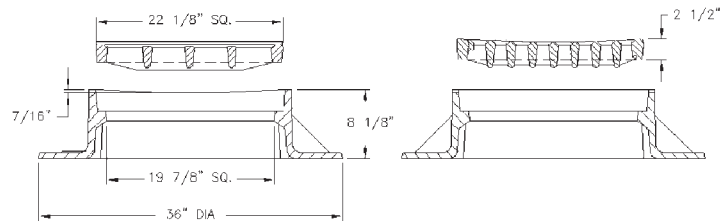
**Type M1 Bolted Grate**  
 Medium duty  
 Approx. 143 sq. in. open area



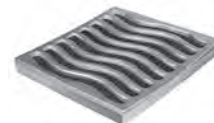
### 5100 CATCH BASIN INLET

Heavy duty  
 Concave inlet with 5105 Type M1 grate  
 Approximate 175 sq. in. open area  
 Accepts 5105 grates

Options  
 4" height stackable frames  
 ADA grate — 5105M3



**Type M1 5105 Grate**  
 "DUMP NO WASTE!"  
 Lettering and fish image



**Type M2 5105 Sinusoidal Grate**  
 Approx. 210 sq. in. open area  
 Does not have cross bars, for expressway use only.

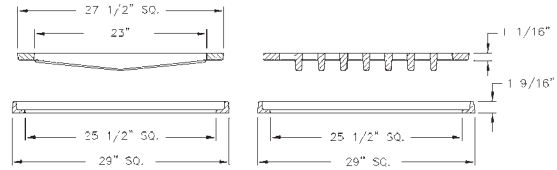


**Type M3 5105 ADA Grate**  
 "DUMP NO WASTE!"  
 Lettering and fish image

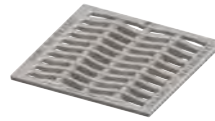
### 5110 CATCH BASIN INLET

Light duty flat grate (Non-traffic)  
 Type M1 grate —  
 "DUMP NO WASTE!" lettering  
 Approximate 360 sq. in. open area

- Options  
 Adjusting risers  
 Heavy duty grates  
 Medium duty grates



**Type M2 Flat Grate**  
 Medium duty  
 Approx. 340 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering



**Type M3 Sinusoidal Grate**  
 Heavy duty  
 Approx. 300 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering



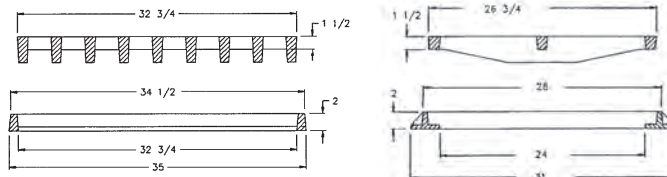
**Type M4 Flat Grate**  
 Medium duty  
 Approx. 295 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering



**Type M5 ADA Grate**  
 Heavy duty  
 Approx. 150 sq. in.  
 open area

### 5114 FRAME & GRATE

Medium duty  
 Approximate 482 sq. in. open area



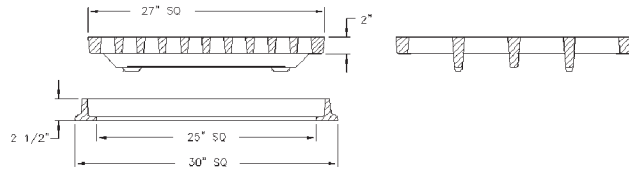
### 5115 CATCH BASIN INLET

Heavy duty  
 With Type M2 –  
 “DUMP NO WASTE!” lettering  
 and fish image  
 Approximate 300 sq. in. open area  
 5116 frame accepts 5115 grates

Options  
 Ductile iron grate — Type M3



**Type M1 Flat Grate**  
 Medium duty  
 Approx. 390 sq. in.  
 open area  
 2 1/2" x 7 1/2" grate  
 openings



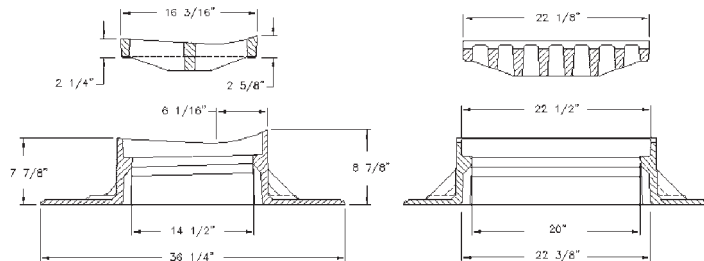
5116 frame & cover



5115 frame

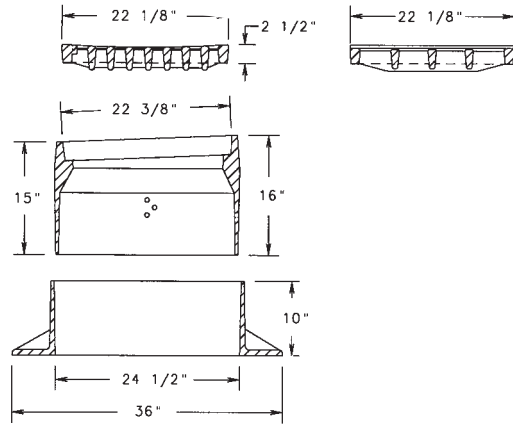
### 5120 CATCH BASIN INLET

Heavy duty  
 Catch basin inlet for roll Type curb  
 Approximate 148 sq. in. open area



### 5125 CATCH BASIN INLET

Heavy duty  
 Adjustable assembly  
 Front adjusts from 16 1/2" to 18 1/2"  
 Back adjusts from 17 1/2" to 19 1/2"  
 Accepts 1795 base flange  
 Accepts 5105 grates  
 Approximate 175 sq. in. open area

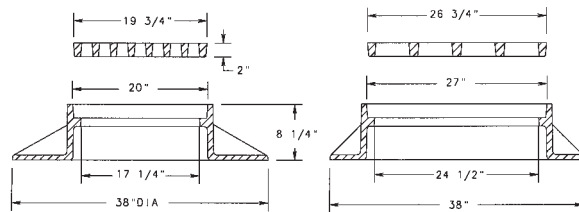


### 5130 CATCH BASIN INLET

Heavy duty  
 With Type M2 flat grate  
 "DUMP NO WASTE!" lettering  
 Approximate 215 sq. in. open area

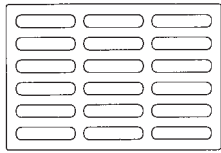


**Type M3 Flat Grate**  
 Approx. 240 sq. in.  
 open area

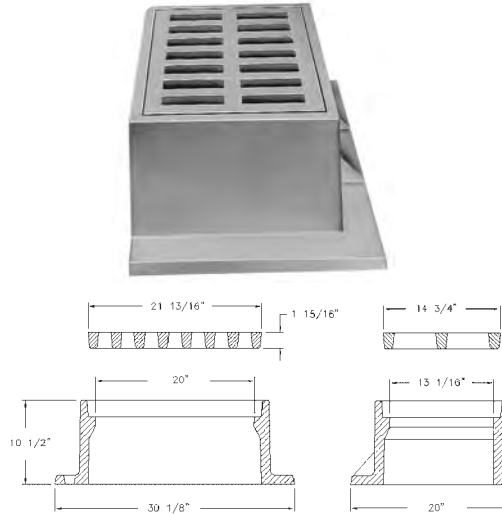


### 5150 CATCH BASIN INLET

Heavy duty  
 With 5800 Type M1 flat grate  
 Approximate 112 sq. in. open area



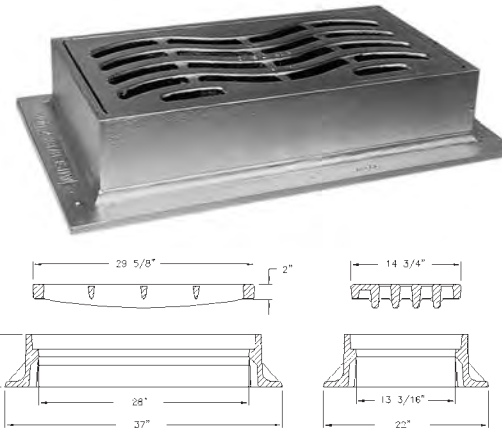
**Type M2 Flat Grate**  
 Approx. 130 sq. in.  
 open area



### 5190 — 5192 CATCH BASIN INLET

Heavy duty  
 Approximate 155 sq. in. open area

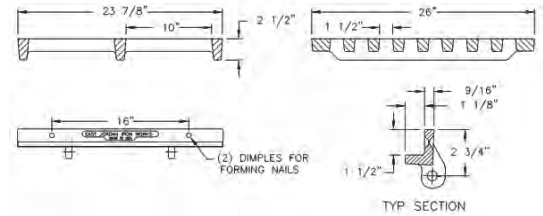
Options  
 5191 — Drop end flange  
 5192 — Drop front flange



### 5216 CATCH BASIN INLET

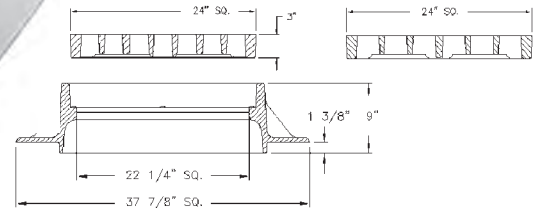
Heavy duty  
 Ductile iron  
 "DUMP NO WASTE!" lettering  
 and fish image

Options  
 M1 grate approximate 323 sq. in. open area  
 M2 grate approximate 238 sq. in. open area



### 5230 CATCH BASIN INLET

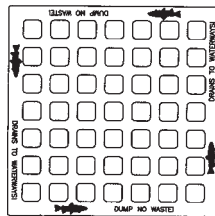
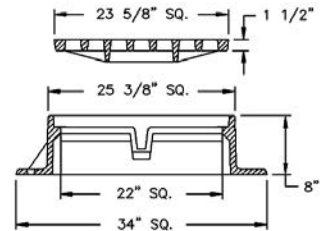
Heavy duty  
 Approximate 300 sq. in. open area



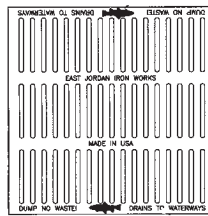
### 5235 CATCH BASIN INLET

Heavy duty  
 Accepts 5250 grate  
 Approximate 220 sq. in. open area  
 Ductile iron safety bar

Options  
 6" height frame — 5250  
 4" height frame — V-5622  
 ADA grate — V-5622-80  
 Solid cover — V-6622



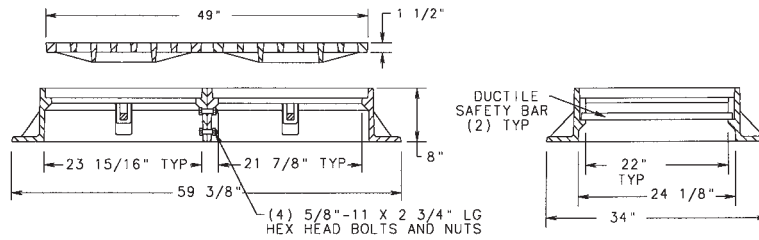
**5250 Type M Grate**  
 "DUMP NO WASTE!"  
 lettering and fish  
 image



**V-5622-80 ADA Grate**  
 Approx. 156 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering and fish  
 image

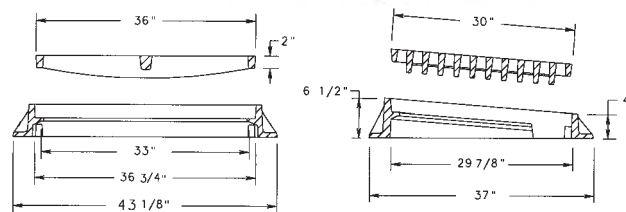
### 5236 CATCH BASIN INLET

Heavy duty  
 Accepts 5250 grate  
 Approximate 440 sq. in. open area  
 Bolted frame



### 5240 CATCH BASIN INLET

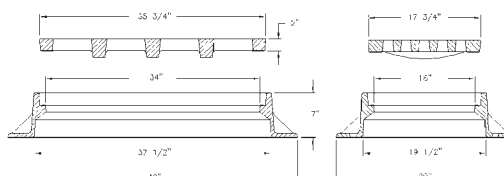
Heavy duty  
 "DUMP NO WASTE!" lettering and fish image  
 Approximate 510 sq. in. open area



### 5245 CATCH BASIN INLET

Heavy duty  
 "DUMP NO WASTE!" lettering and fish image  
 Approximate 210 sq. in. open area

Options  
 Accepts 7030 grates

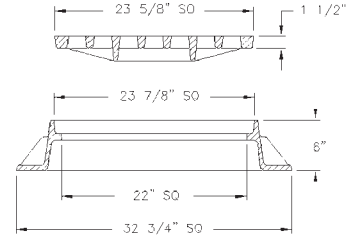


### 5250 CATCH BASIN INLET

Heavy duty  
 "DUMP NO WASTE!" lettering and fish image  
 Approximate 220 sq. in. open area  
 Stackable frame

Options

- 8" height frame — 5235
- 4" height frame — V-5622
- ADA grate — V-5622-80
- Solid cover — V-6622

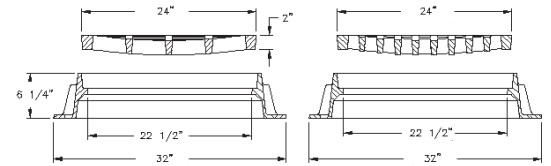


### V-5324-1 FRAME & GRATE

Heavy duty  
 Concave inlet  
 Approximate 243 sq. in. open area

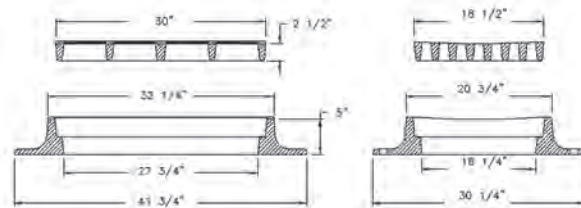
Options

- Accepts 5424 ADA grate
- Accepts 5344 vane grate
- 2 1/2" height frame — 5424



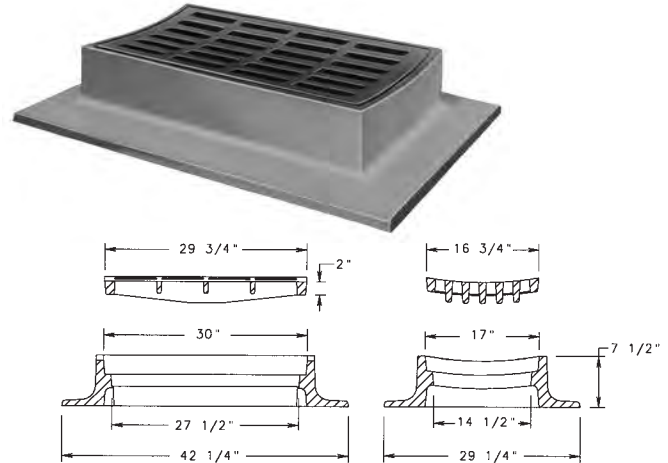
### 5334 CATCH BASIN INLET

Heavy duty  
 "DUMP NO WASTE!" lettering and fish image  
 Approximate 210 sq. in. open area, per grate



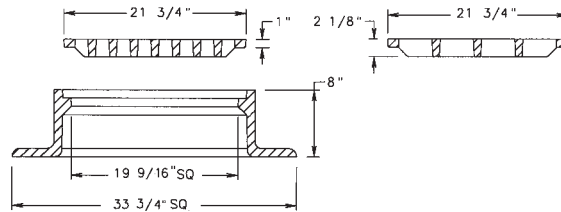
### 5335 CATCH BASIN INLET

Heavy duty  
 Concave Inlet  
 "DUMP NO WASTE!" lettering and  
 fish image  
 Approximate 200 sq. in. open area



### 5340 CATCH BASIN INLET

Heavy duty  
 Approximate 185 sq. in.  
 open area

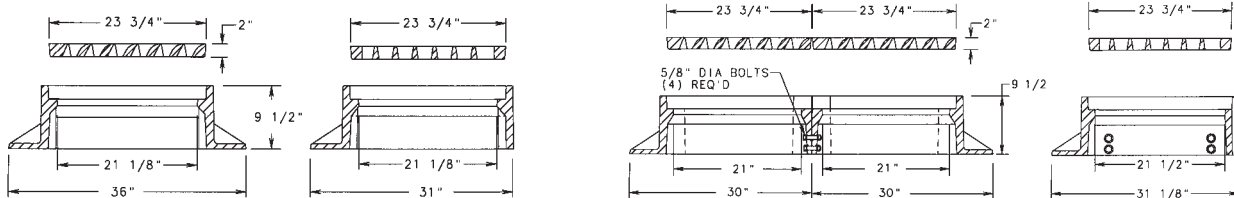


### 5342 CATCH BASIN INLET

Heavy duty  
 Accepts 5344 grate  
 Approximate 175 sq. in. open area  
 5344 — Double with open back  
 approximate 350 sq. in. open area



Options  
 6" height reversible frame — 5370



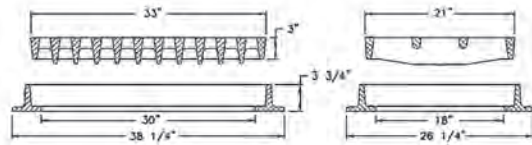
5342 illustrated

5344 — Double with open back illustrated

### 5352 CATCH BASIN INLET

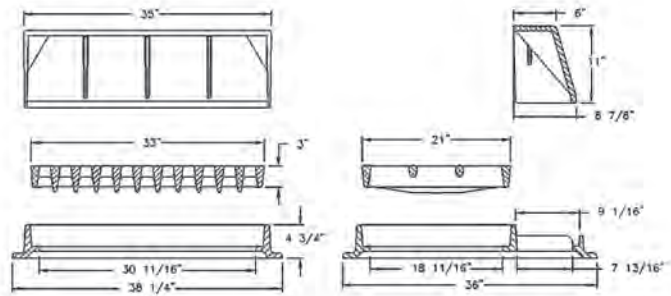
Heavy duty  
 Approximate 262 sq. in. open area

Options  
 Special lettered grates  
 "DUMP NO WASTE!" lettering and fish logo  
 Uses 5353 hood and frame  
 Uses 7080 hood and frame



### 5353 CATCH BASIN INLET

Heavy duty  
 Uses 5352M grate  
 Approximate 262 sq. in. open area  
 With Type T back "DUMP NO WASTE!"  
 lettering and fish image



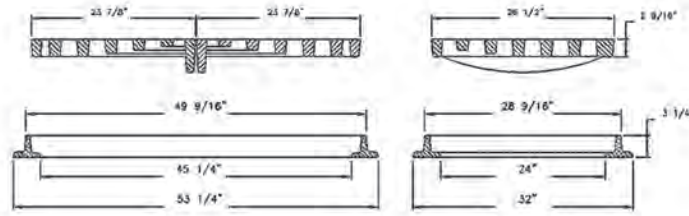
## 5355 CATCH BASIN INLET

Heavy duty  
 With Type M1 heavy duty grate  
 Approximate 540 sq. in. open area  
 Steel frame and grate available in all sizes  
 All available with 3 or 4 flanges

Options  
 Adjusting risers  
 Beehive grate  
 Bolted assembly  
 Special lettering  
 T1 4' hood



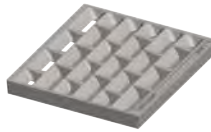
5355Z frame with Type M4 grates illustrated



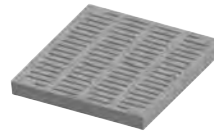
**Type M3 Grate**  
 Approx. 208 sq. in. open area  
 2 grates required



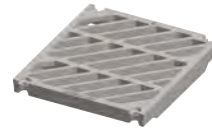
**Type M4 Grate**  
 Approx. 270 sq. in. open area  
 2 grates required



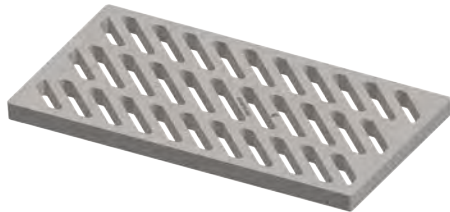
**Type M5 Vane Grate**  
 Approx. 205 sq. in. open area  
 2 grates required



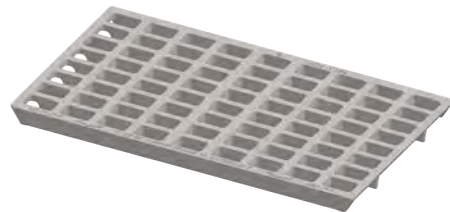
**Type M6 ADA Grate**  
 Approx. 140 sq. in. open area  
 2 grates required



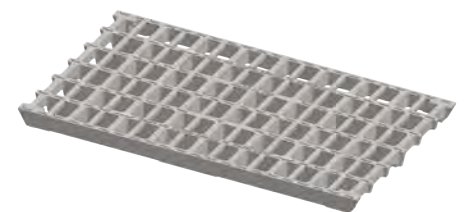
**Type M7 Ductile Grate**  
 Approx. 326 sq. in. open area  
 2 grates required



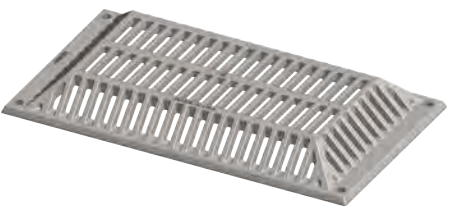
**Type M1**  
 Approx. 465 sq. in. open area  
 Single grate



**Type M8 Grate**  
 Approx. 639 sq. in. open area  
 Single grate with "DUMP NO WASTE!" lettering and fish image



**Type M9 Grate**  
 Approx. 686 sq. in. open area  
 Single grate with "DUMP NO WASTE!" lettering and fish image



**Type O beehive grate (Non-traffic)**  
 Approx. 341 sq. in. open area  
 Single grate

Available frames for 5355 covers and grates

Catalog Number	Frame Height
5355	3 1/4
5356	8
5357	10 1/8

Note: All dimensions are in inches  
 \*Steel frame available.

### 5356 CATCH BASIN INLET

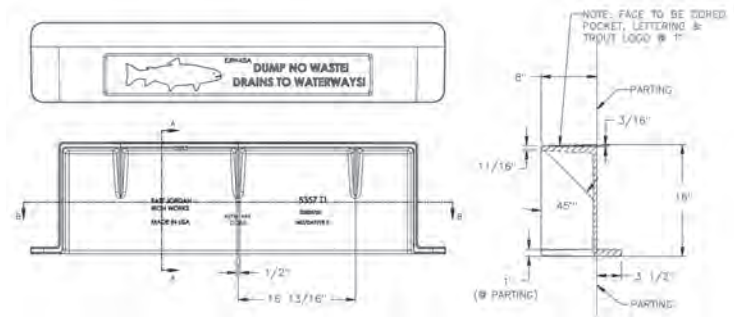
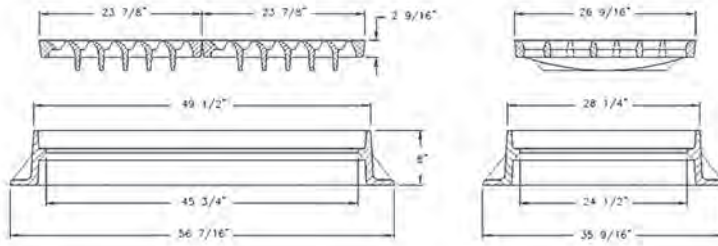
Heavy duty  
 Accepts 5355 grates  
 With Type M5 vane grate  
 Approximate 514 sq. in. of open area

Options

Available with 3 or 4 flange frames  
 Bolted assembly  
 Adjusting risers  
 Steel frames  
 Steel grates  
 5357 T1 4' hood — with "DUMP NO WASTE" lettering and fish image



4 flange frame  
 Illustrated

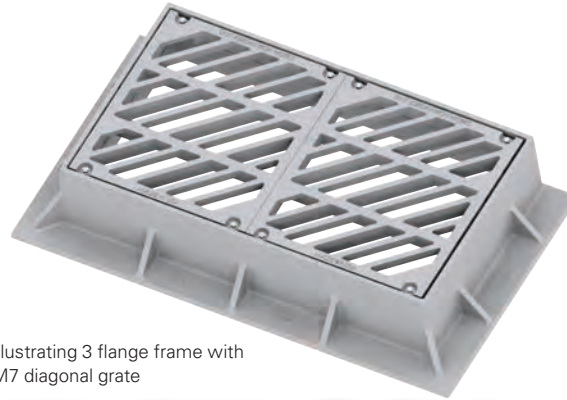


Optional T1 Hood

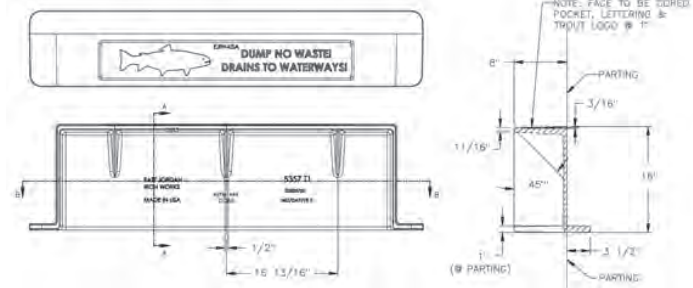
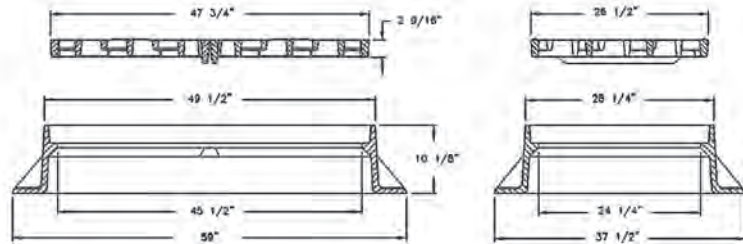
### 5357 CATCH BASIN INLET

Heavy duty  
 Accepts 5355 grates  
 With Type M7 diagonal grate  
 Approximate 652 sq. in. open area

Options  
 Available with 3 or 4 flange frames  
 Bolted assembly  
 Adjusting risers  
 Steel grates  
 T1 4' hood



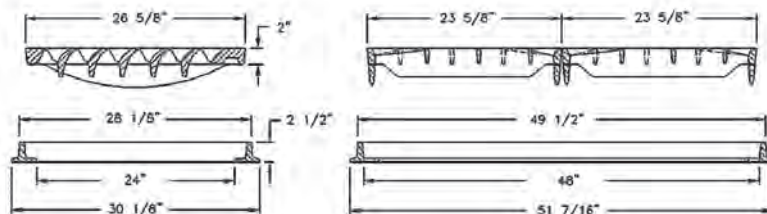
Illustrating 3 flange frame with M7 diagonal grate



Optional T1 Hood

### 5358 CATCH BASIN INLET

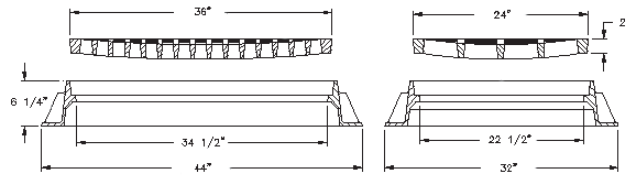
Heavy duty  
 Approximate 245 sq. in. open area  
 Bolted assembly  
 Single grate frame — 5358Z1  
 Double grate frame — 5358Z2



### V-5360-1 FRAME & GRATE

Heavy duty  
Concave inlet  
Approximate 405 sq. in. open area

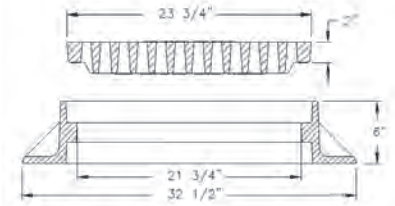
Options  
Accepts 7510 grates; sinusoidal, vane,  
diagonal and flat



### 5370 CATCH BASIN INLET

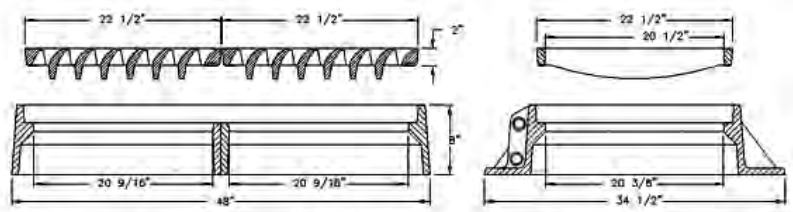
Heavy duty  
Reversible frame  
Approximate 215 sq. in. open area

Options  
Vane grate — 5344



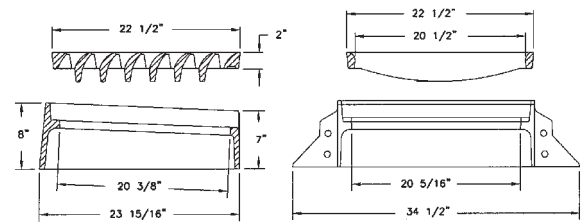
### 5375 CATCH BASIN INLET

Heavy duty  
 Multiple inlet  
 Accepts 5380 grate  
 Approximate 500 sq. in. open area  
 Frame is two pieces bolted together



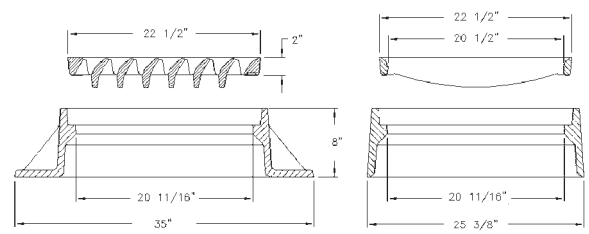
### 5376 CATCH BASIN INLET

Heavy duty  
 Double inlet  
 Accepts 5380 grates  
 Approximate 500 sq. in. open area  
 Frame is two pieces bolted together  
 Available 1 piece frame — 5376Z1



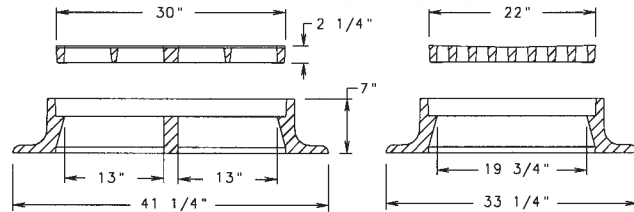
### 5380 CATCH BASIN INLET

Heavy duty  
 Grate is ductile iron  
 Approximate 250 sq. in. open area



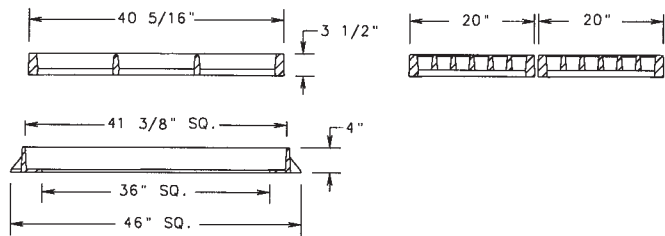
### 5385 CATCH BASIN INLET

Heavy duty  
 Approximate 280 sq. in. open area



### 5390 CATCH BASIN INLET

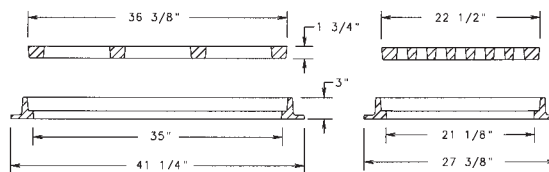
Heavy duty  
 Approximate 890 sq. in. open area  
 1 piece frame with 2 grates



### 5395 CATCH BASIN INLET

Heavy duty  
 With Type M1 grate  
 Approximate 260 sq. in. open area

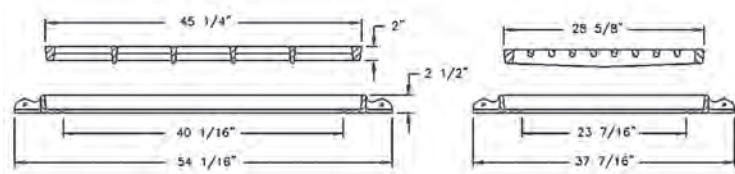
Options  
 Adjusting risers



### 5400 CATCH BASIN INLET

Heavy duty  
 Ductile iron grate  
 Approximate 750 sq. in. open area

Options  
 Double unit available — 5405



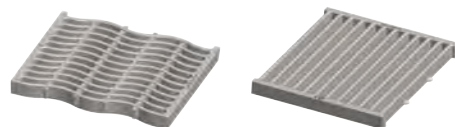
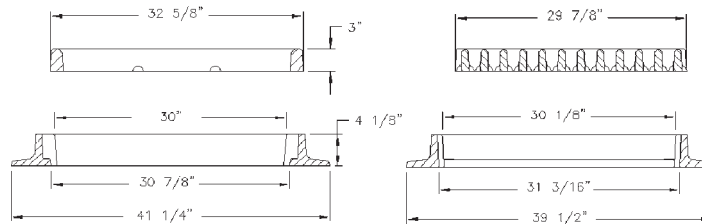
### 5416 CATCH BASIN INLET

Heavy duty  
 Machined bearing surfaces  
 Ductile iron  
 With Type M3 vane grate  
 approximate 365 sq. in. open area  
 5417 Double Inlet  
 with Type M2 Grate  
 approximate 1040 sq. in. open area  
 5418 Double Inlet without rear flange  
 with Type M2 Grate  
 approximate 1040 sq. in. open area

Options  
 Special lettering



Illustrating 5416 frame with Type M3 vane grate

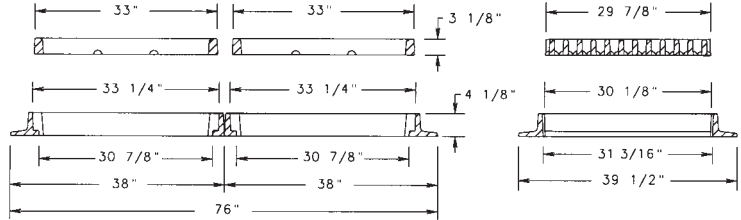


**Type M1 Sinusoidal Grate**  
 Approx. 490 sq. in. open area

**Type M2 Flat Grate**  
 Approx. 520 sq. in. open area

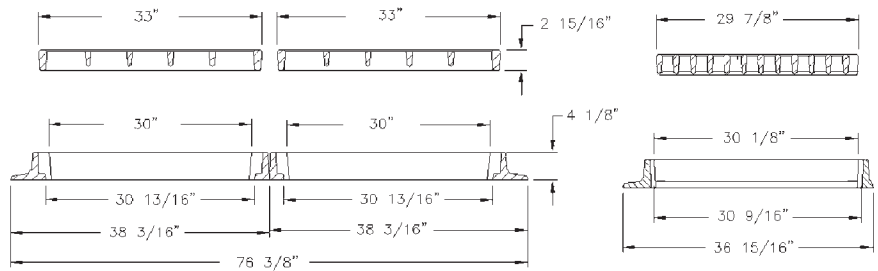
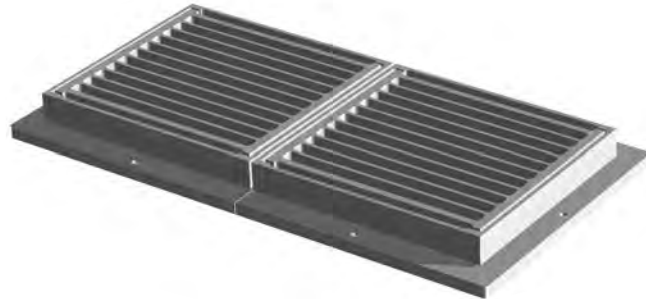
### 5417 CATCH BASIN INLET

Heavy duty  
 Double inlet 5416  
 With Type M2 grate  
 Approximate 1040 sq. in. open area  
 Uses 5416 grates



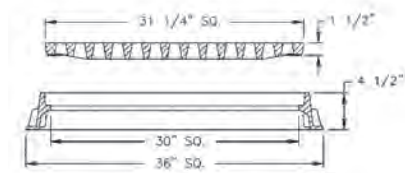
### 5418 CATCH BASIN INLET

Heavy duty  
 With Type M2 grate  
 Double inlet - without rear flange  
 Approximate 1040 sq. in. open area  
 Uses 5416 grates



### 5419 CATCH BASIN INLET

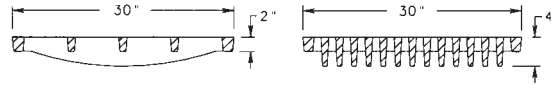
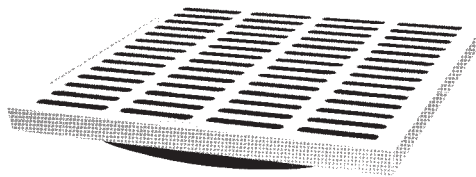
Heavy duty  
 "DUMP NO WASTE!" lettering  
 and fish image  
 Approximate 329 sq. in. open area



### 5420 CATCH BASIN INLET GRATE

Heavy duty  
 Approximate 335 sq. in. open area  
 Steel frame available

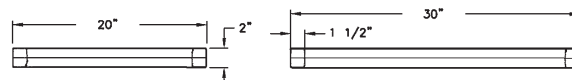
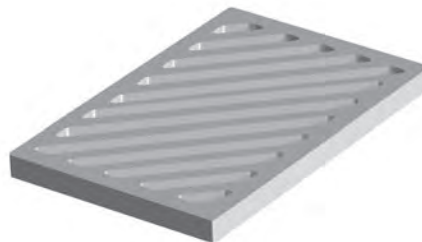
EJ recommends the use of steel or iron frames providing support to entire bearing surface



### 5421 CATCH BASIN INLET GRATE

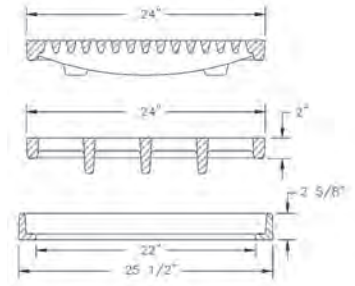
Heavy duty  
 Approximate 270 sq. in. open area  
 Steel frame available

EJ recommends the use of steel or iron frames providing support to entire bearing surface



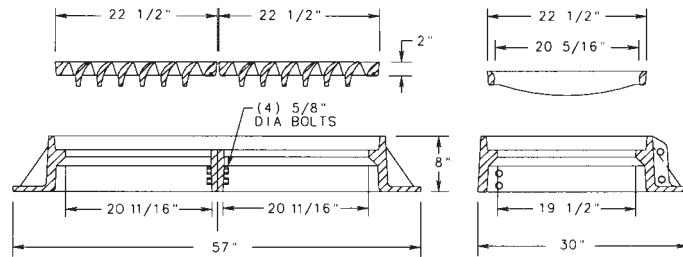
### 5424 CATCH BASIN INLET

Heavy duty  
 Approximate 122 sq. in. open area  
 ADA approved



### 5425 CATCH BASIN INLET

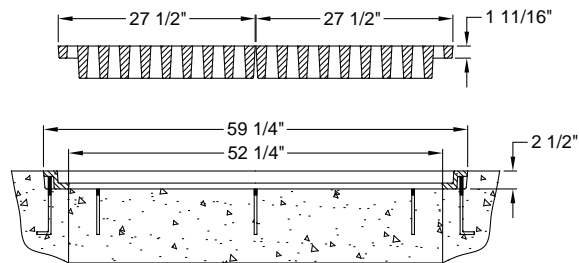
Heavy duty, double inlet  
 Approximate 440 sq. in. open area  
 Bolted assembly: frame is 2 pieces,  
 bolted together  
 Grate available in gray and ductile iron



### 5440 FRAME AND GRATES

Airport extra heavy duty  
 Approximate 590 sq. in. open area  
 Top Flange

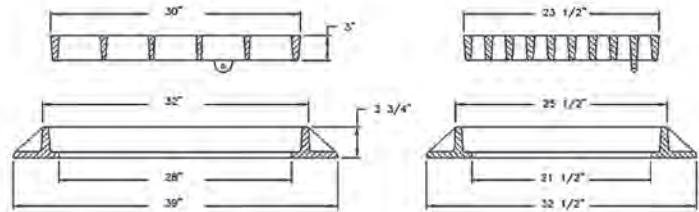
Options  
 Bolting  
 Anchor Bolts



### 5450 CATCH BASIN INLET

Heavy duty

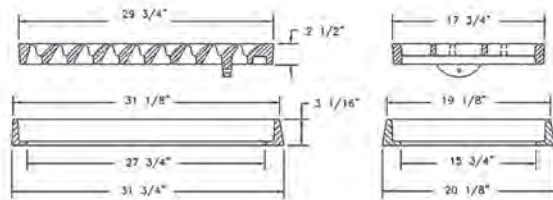
Approximate 335 sq. in. open area per grate



### 5460 CATCH BASIN INLET

Heavy duty

Approximate 220 sq. in. open area



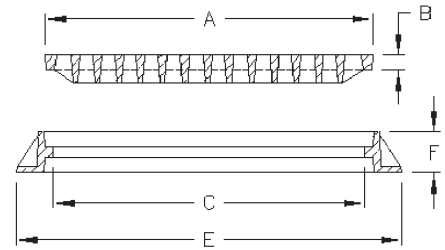
## V-5600 REVERSIBLE FRAMES & GRATES

Heavy duty  
 Reversible unit  
 Special lettered grates

Options  
 ADA compliant grates  
 Extra heavy duty grates  
 Vane grates



V-5630 assembly



### V-5600 Reversible Frame and Grate Options

Frame Series Number	Grate Series Number	Cover Series Number	A Grate Size	B Grate Thickness	C Clear Opening	E Flange Dimension	F Frame Height	Open Area Sq. In.
<b>Square</b>								
V-5613	V-5713	V-6713	13 3/8	1 9/16	11 5/8	19 1/8	4	55
V-5620	V-5720	V-6720	19 3/4	1 1/2	18	25 1/2	4	175
	V-5720-80‡		19 3/4	1 1/2	18	25 1/2	4	105
	V-5720**		19 3/4	1 1/2	18	25 1/2	4	175
V-5622	V-5622 (DI)•	V-6622	23 11/16	1 1/2	22	29 1/4	4	274
	V-5622**		23 11/16	1 1/2	22	29 1/4	4	266
	V-5622-2†		23 7/8	1 1/2	22	29 1/4	4	200
	V-5622-80‡		23 11/16	1 1/2	22	29 1/4	4	156
	V-5622-5		23 3/4	1 1/2	22	29 1/4	4	269
V-5622-1					22	32	5	
V-5624	V-5624	V-6624 8208	25 3/4	1 1/2	24	31 3/8	4	295
	V-5624-80‡		25 3/4	1 1/2	24	31 3/8	4	194
	V-5624**		25 3/4	1 1/2	24	31 3/8	4	295
V-5626-1	V-5726 (DI)•	V-6726	25 3/4	2	24	32	5	318
	V-5726**		25 3/4	2	24	32	5	321
	V-5726-80‡		25 3/4	2	24	32	5	194
V-5626-2					24	32	6	
V-5630	V-5630	V-6630	31 3/4	1 1/2	30 1/8	37 1/2	4	474
	V-5630**		31 3/4	1 1/2	30 1/8	37 1/2	4	474
	V5630-80‡		31 7/8	1 1/2	30 1/8	37 1/2	4	283
V-5630 (DI)					30 1/8	37 1/2	4	
V-5632	V-5732 (DI)•	V-6732	31 7/8	2	30	38 1/8	5	507
	V-5732**		31 7/8	2	30	38 1/8	5	478
	V-5732-80‡		31 7/8	2	30	38 1/8	5	283
V-5636	V-5636 (DI)•	V-6636	37 1/2	1 1/2	36	43 1/4	4	655
	V-5636**		37 1/2	1 1/2	36	43 1/4	4	651
	V-5636‡		37 1/2	1 1/2	36	43 1/4	4	356
V-5636 (DI)					36	43 1/4	4	
V-5642 (2P)	V-5742 (2P)	V-6642 (2P)	43 7/8	2	41 3/4	50 1/8	5	868
	V-5742 (2P)**		43 7/8	2	41 3/4	50 1/8	5	868
V-5648 (2P)	V-5648 (2P)	V-6648 (2P)	50 5/8	1 5/8	48 5/8	58 5/8	4 3/8	1360
	V-5648 (2P)**		50 5/8	1 5/8	48 5/8	58 5/8	4 3/8	1400

Note: all dimensions are in inches.

\*\* Ductile Iron Extra Heavy Duty Grate    † Vane Grate    ‡ ADA Compliant Grate    (2P) 2 Piece (2 frames/2 covers/2 grates)    (DI) Ductile Iron  
 • Improved grate design. See page 202 for details.

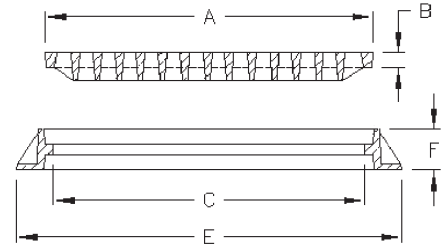
## V-5600 REVERSIBLE FRAMES & GRATES (CONTINUED)

Heavy duty  
Reversible unit  
Special lettered grates

Options  
ADA compliant grates  
Extra heavy duty grates  
Vane grates



V-5630 assembly



### V-5600 Reversible Frame and Grate Options

Frame Series Number	Grate Series Number	Cover Series Number	A Grate Size	B Grate Thickness	C Clear Opening	E Flange Dimension	F Frame Height	Open Area Sq. In.
V-5660	V-5660 (DI)•	V-6660	23 3/4 x 35 3/4	1 1/2	21 15/16 x 34	29 1/2 x 41 1/2	4	408
	V-5660-80‡		23 3/4 x 35 3/4	1 1/2	21 15/16 x 34	29 1/2 x 41 1/2	4	260
V-5662	V-5662	No cover	25 5/8 x 31 3/4	1 1/2	24 3/16 x 30 1/8	31 3/8 x 37 3/8	4	390
	V-5662-1 (DI)		25 1/2 x 31 9/16	1 1/2	24 3/16 x 30 1/8	31 3/8 x 37 3/8	4	426
V-5662-2	V-5662-1 (2P)(DI)	No cover	31 9/16 x 51 1/4	1 1/2	30 1/8 x 49 7/8	37 1/2 x 57 1/8	4	852
V-5665	V-5665	V-6665	25 3/4 x 37 3/4	1 1/2	24 1/8 x 36 1/8	31 1/2 x 43 1/2	4	463
V-5667	V-5667 (2P)	V-6667 (2P)	25 3/4 x 49 3/4	1 1/2	24 x 48	31 1/2 x 55 1/2	4	598
	V-5667 (2P)**		25 3/4 x 49 3/4	1 1/2	24 x 48	31 1/2 x 55 1/2	4	598
V-5667 (DI)					24 x 48	31 1/2 x 55 1/2	4	
V-5668	V-5668	V-6668	31 3/4 x 37 3/4	2	29 7/8 x 36	38 1/4 x 44 1/4	5	562
	V-5668**		31 3/4 x 37 3/4	2	29 7/8 x 36	38 1/4 x 44 1/4	5	562
V-5668 (DI)					29 7/8 x 36	38 1/4 x 44 1/4	5	
V-5669	V-5669 (2P)	No cover	31 3/4 x 49 3/4	1 1/2	30 1/8 x 48 1/8	37 1/2 x 55 1/2	4	724
	V-5669 (2P)**		31 3/4 x 49 3/4	1 1/2	30 1/8 x 48 1/8	37 1/2 x 55 1/2	4	724
V-5670 (2P)	V-5670 (2P)	V-6670 (2P)	37 3/4 x 49 3/4	1 1/2	38 x 48	43 1/2 x 55 5/8	4	708
	V-5670 (2P)**		37 3/4 x 49 3/4	1 1/2	38 x 48	43 1/2 x 55 5/8	4	708

Note: all dimensions are in inches.

\*\* Ductile Iron Extra Heavy Duty Grate

† Vane Grate

‡ ADA Compliant Grate

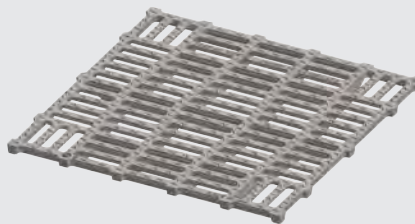
(2P) 2 Piece (2 frames/2 covers/2 grates)

(DI) Ductile Iron

• Improved grate design. See below for details.

### Improved grate designs

Now in ductile iron, the design allows for an increase in open area and improved ergonomics.



Illustrating V-5636 ductile iron grate

Catalog Number	Part Number
V-5622	45622050
V-5636	45636030
V-5660	45660050
V-5726	45726030
V-5732	45732050
V-5736	45736030

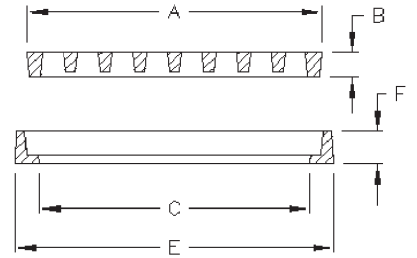
### V-5700 FRAME & GRATE SERIES

Heavy duty  
 ADA compliant grates available  
 Special lettered grates

Options  
 ADA compliant grates  
 Extra heavy duty grates  
 Vane grates



V-5724 assembly



V-5700 Reversible Frame and Grate Options

Frame Series Number	Grate Series Number	Cover Series Number	A Grate Size	B Grate Thk.	C Clear Opening	E Frame Size	F Frame Height	Open Area Sq. In.		
<b>Square</b>										
V-5708	V-5708	No Cover	9 3/8	1	7 3/4	11	1 1/2	33		
V-5712	V-5712	V-6712	12	7/8	10 1/2	13 7/16	1 1/4	66		
	V-5712†		12	7/8	10 1/2	13 7/16	1 1/4	43		
V-5713	V-5713	V-6713	13 3/8	1 9/16	11 5/8	15 3/8	2 1/8	55		
V-5714	V-5714	V-6714	14 1/2	1	13 1/4	16	1 9/16	76		
No Frame	V-5715†	No cover	14 3/4	1 3/16				58		
V-5716	V-5716	No cover	15 7/8	1 1/8	14 1/4	17 1/2	1 3/4	90		
V-5718	V-5718	V-6718	18	1 1/2	16 3/8	19 1/2	2	152		
	V-5720		V-5720	V-6720	19 3/4	1 1/2	18 1/4	21 1/4	2	175
	V-5720**		19 3/4	1 1/2	18 1/4	21 1/4	2	175		
	V-5720-80†		19 3/4	1 1/2	18 1/4	21 1/4	2	105		
V-5724	V-5724-1	V-6724	24	1 7/8	22 1/4	25 7/8	2 5/8	268		
	V-5724-2		24	1 7/8	22 1/4	25 7/8	2 5/8	212		
	V-5724-4 (DI)		24	1 7/8	22 1/4	25 7/8	2 5/8	336		
	V-5724-80†		24	1 7/8	22 1/4	25 7/8	2 5/8	164		
V-5724-1 (w/flange)					22 1/8	30	2 5/8			
V-5726-1	V-5726 (DI)•	V-6726	25 3/4	2	24 1/4	27 7/8	2 3/4	318		
	V-5726**		25 3/4	2	24 1/4	27 7/8	2 3/4	321		
	V-5726-80†		25 3/4	2	24 1/4	27 7/8	2 3/4	194		
V-5626-1 (DI)				24 1/4	27 7/8	2 3/4				
V-5728	V-5728	No cover	28	2	25 7/8	30 1/8	2 3/4	370		
V-5732	V-5732 (DI)•	V-6732	31 7/8	2	30 1/4	33 3/4	2 3/4	507		
	V-5732**		31 7/8	2	30 1/4	33 3/4	2 3/4	478		
	V-5732-80†		31 7/8	2	30 1/4	33 3/4	2 3/4	283		
V-5736	V-5736 (DI)•	V-6736	38 1/4	2	36 1/2	40 3/8	2 3/4	673		
	V-5736**		38 1/4	2	36 1/2	40 3/8	2 3/4	625		
	V-5736-80†		38 1/4	2	36 1/2	40 3/8	2 3/4	356		
V-5736 (DI)				36 1/2	40 3/8	2 3/4				
V-5742	V-5742 (2P)	V-6642 (2P)	43 7/8	2	42 1/8	45 7/8	2 3/4	868		
	V-5742 (2P)**		43 7/8	2	42 1/8	45 7/8	2 3/4	868		
V-5748 (non-traffic) (steel angle frame)	V-5648 (2P)	V-6648	50 5/8	1 5/8	48	51 1/2	1 3/4	1360		
	V-5648 (2P)**		50 5/8	1 5/8	48	51 1/2	1 3/4	1400		

Note: all dimensions are in inches.

† Vane Grate

\*\* Ductile Iron Extra Heavy Duty Grate

• Improved grate design. See page 204 for details.

† ADA Compliant Grate

(2P) 2 Piece (2 frames/2 covers/2 grates)

(DG) Diagonal Grate

(CG) Concave Grate

(DI) Ductile Iron

(S) Sinusoidal Grate

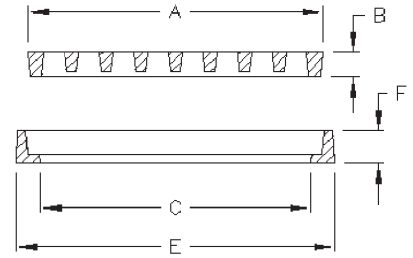
## V-5700 FRAME & GRATE SERIES (CONTINUED)

Heavy duty  
 ADA compliant grates available  
 Special lettered grates

Options  
 ADA compliant grates  
 Extra heavy duty grates  
 Vane grates



V-5724 assembly



### V-5700 Reversible Frame and Grate Options

Frame Series Number	Grate Series Number	Cover Series Number	A Grate Size	B Grate Thk.	C Clear Opening	E Frame Size	F Frame Height	Open Area Sq. In.
<b>Rectangular</b>								
V-5751	V-5751	V-6751	13 7/8 x 25 7/8	1	12 x 24	15 5/16 x 27 3/8	1 1/2	158
V-5752	V-5752	No cover	18 x 23 3/4	1 3/8	16 1/4 x 22	19 3/8 x 25 1/8	2	188
V-5754	V-5754-1	No cover	17 7/8 x 35 7/8	2	15 5/8 x 33 5/8	20 1/4 x 38 1/4	2 3/4	245
V-5760 (w/ flange)	V-5760	No cover	24 x 36	2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	413
	V-5760**		24 x 36	2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	413
	7510 M3†		23 7/8 x 35 3/4	2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	446
	7510 M4		23 7/8 x 35 3/4	2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	324
	7510 M1 (DG)		23 5/8 x 35 5/8	2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	410
	7510 M2 (S)		23 3/4 x 35 3/4	2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	340
V-5763	V-5763	No cover	25 7/8 x 31 7/8	1 3/4	24 5/8 x 30 3/8	27 7/8 x 33 7/8	2 3/8	402
V-5766	V-5666	V-6666	25 7/8 x 37 7/8	2	24 3/8 x 36 3/8	28 x 40	3	397
V-5770	V-5670 (2P)	V-6670 (2P)	37 3/4 x 49 3/4	1 1/2	36 x 48	39 3/4 x 51 3/4	2 1/4	708
	V-5670 (2P)**		37 3/4 x 49 3/4	1 1/2	36 x 48	39 3/4 x 51 3/4	2 1/4	708

Note: all dimensions are in inches.

† Vane Grate

\*\* Ductile Iron Extra Heavy Duty Grate

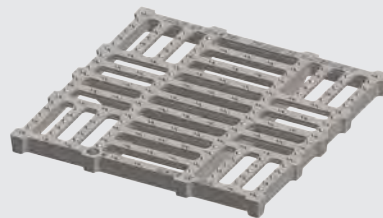
‡ ADA Compliant Grate  
 (2P) 2 Piece (2 frames/2 covers/2 grates)

(DG) Diagonal Grate  
 (CG) Concave Grate

(DI) Ductile Iron  
 (S) Sinusoidal Grate

### Improved grate designs

Now in ductile iron, the design allows for an increase in open area and improved ergonomics.

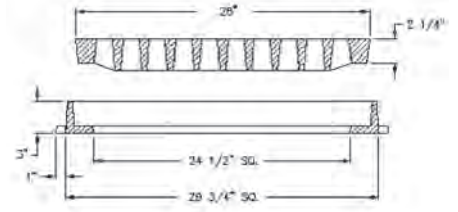


Illustrating V-5726 ductile iron grate

Catalog Number	Part Number
V-5622	45622050
V-5636	45636030
V-5660	45660050
V-5726	45726030
V-5732	45732050
V-5736	45736030

### V-5775 FRAME & GRATE

Heavy duty  
Approximate 326 sq. in. open area



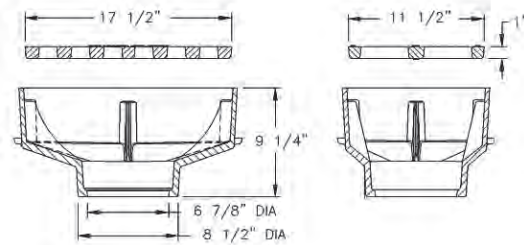
### 5810 CATCH BASIN INLET

Heavy duty  
Approximate 52 sq. in. open area

Options  
Ductile iron  
Special lettered covers



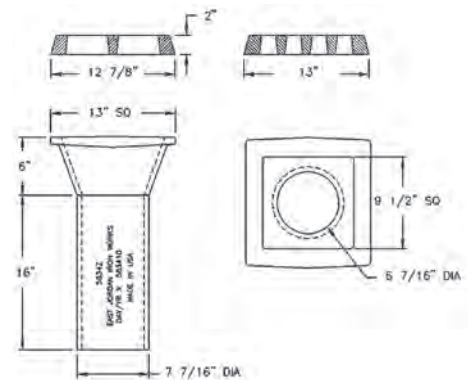
Section view of inlet



### 5834 ELEVATED & BRIDGE DRAIN INLET

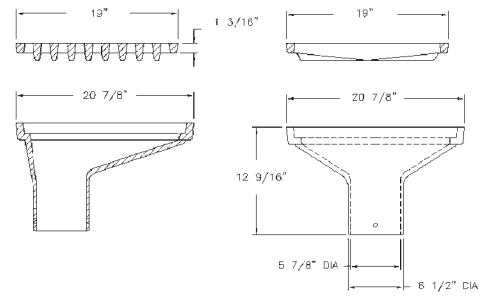
Heavy duty  
Bridge drain  
With 5826 grate  
Approximate 48 sq. in. open area

Options  
Available with 4 – 1/2" x 13" tapped holes  
furnished 2" up from bottom



### 5840 ELEVATED & BRIDGE DRAIN INLET

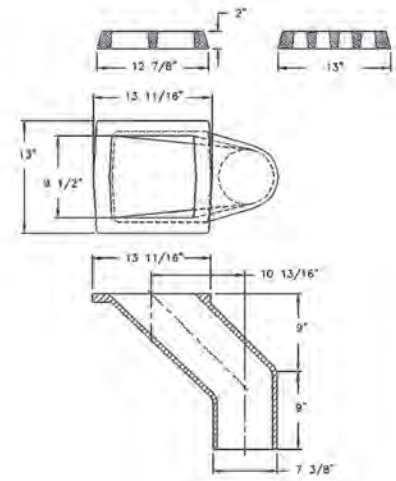
Medium duty  
 Approximate 154 sq. in. open area



### 5844 ELEVATED & BRIDGE DRAIN INLET

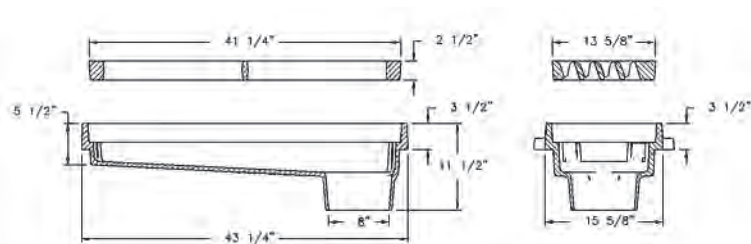
Heavy duty  
 Bridge drain with 5826 grate  
 Approximate 48 sq. in. open area

Options  
 Available with 6 — 1/2" x 13" tapped holes  
 furnished 2" up from bottom



### 5845 ELEVATED & BRIDGE DRAIN INLET

Heavy duty  
 Approximate 306 sq. in. open area  
 Bolted assembly



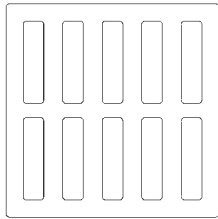
### 5890 ELEVATED & BRIDGE DRAIN INLET

Heavy duty

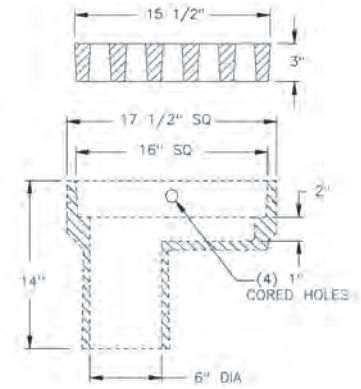
5890M grate has approximate 95 sq. in. open area

Options

5890M2 grate has approximate 75 sq. in. open area



M2 Grate

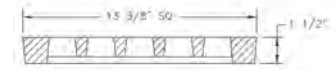


### V-5913-1 GRATE

Heavy duty

Approximate 52 sq. in. open area

EJ recommends the use of iron frames providing support to entire bearing surface

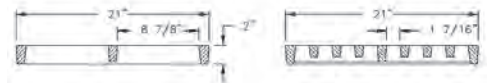


### V-5921-2 GRATE

Light duty (Non-traffic)

Approximate 205 sq. in. open area

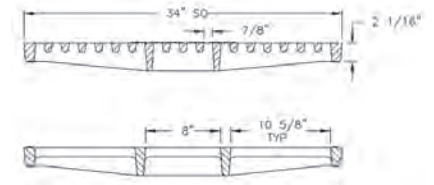
EJ recommends the use of iron frames providing support to entire bearing surface



### V-5934-1 GRATE

Heavy duty  
 Approximate 451 sq. in. open area  
 34" square grate for precast

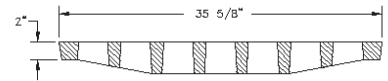
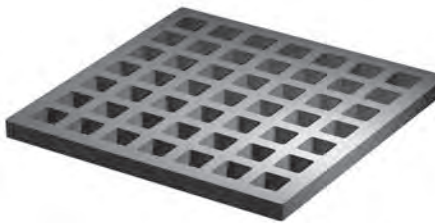
EJ recommends the use of steel or iron frames providing support to entire bearing surface



### V-5935 GRATE

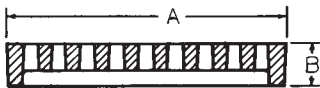
Heavy duty  
 Approximate 517 sq. in. open area

EJ recommends the use of steel or iron frames providing support to entire bearing surface



### 6004 — 6027 SEWER PIPE GRATE & COVER

For concrete or clay sewer pipe bells



6004 — 6027 Sewer Pipe Grate & Cover

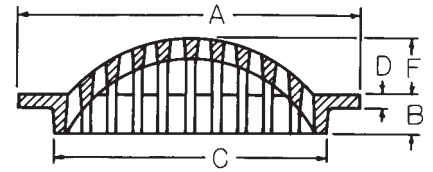
Catalog Number	Pipe Size*	A Diameter	B Height	Approx. Sq. In. Opening
6004	4	5 1/2	1 5/8	7
6006	6	8	2 1/8	17
6008	8	10 1/4	2 3/8	25
6010	10	12 1/2	2 1/2	43
6012	12	14 7/8	2 1/2	75
6015	15	18 1/4	2 1/4	95
6018	18	22	2 1/2	166
6021	21	25 3/8	3 1/4	237
6023M1	24	26 7/8	2 3/4	195
6023M2	24	27 1/2	3	235
6024M1	24	29	3 1/4	306
6024M2	24	29	3 1/4	272
6027	27	32 5/8	3 3/8	382

Note: All dimensions are in inches.

\*These Types of pipe are manufactured under a variety of specifications and dimensions. Measure the size of your pipe and match with the corresponding dimensions.

### 6104 — 6124 DRAINAGE GRATES

Fits into concrete or clay sewer pipe bells & corrugated pipe  
Frames available



6104 — 6124 Drainage Grates

Catalog Number	Pipe ID*	A Diameter	B Height	C Diameter	D Flange	F Profile Height	Approx. Sq. In. Opening
6104N	6	7 3/4	1 1/4	5 1/2	5/16	1	13
6106N	8	10	1 5/8	8	3/8	1 1/2	19
6108N	10	12 1/2	2	9 1/2	3/8	1 1/2	27
6110N	12	15 1/8	1 7/8	11 5/8	5/8	2	45
6112N	15	18 1/4	1/2	13 7/8	1/2	2	75
6112-O	15	18 1/4	1/2	13 11/16	1/2	6	68
6115N	18	20 1/4	1 1/2	17 1/4	5/8	2 1/2	120
6118N	21	25	2 1/2	20 1/2	1/2	3 3/8	160
6121N	24	25 3/4	2 3/4	23 1/2	3/4	3 3/4	155
6124N	30	34	2	27 1/2	5/8	2 3/4	214
6124-O	30	33 11/16	2 1/2	27 1/4	11/16	6	270

Note: All dimensions are in inches.

\*These Types of pipe are manufactured under a variety of specifications and dimensions. Measure the size of your pipe and match with the corresponding dimensions.

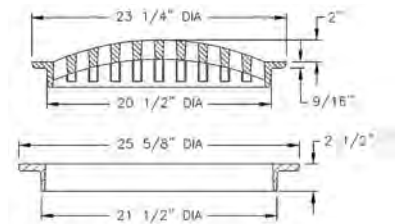
N = lowEr profile beehive (see "F" dimension)

O = higher profile beehive (see "F" dimension)

### 6140 DRAINAGE GRATE

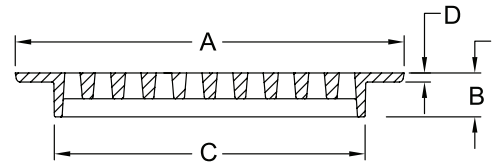
Heavy duty  
Approximate 150 sq. in. open area

Options  
Uses 6118 frame



### 6204 — 6224 DRAINAGE GRATES

Fits into corrugated plastic pipe  
 Flat style grates  
 Frames available — 6104-6124 series



6204 — 6224 Drainage Grates

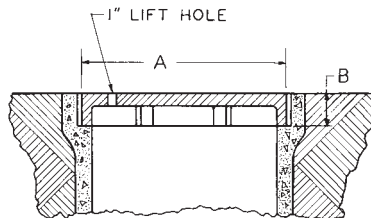
Catalog Number	*Pipe ID	A Diameter	B Height	C Diameter	D Flange	Approx. Sq. In. Opening Area	Duty Rating
6204	6	7	1 1/2	5 1/2	1/4	10	Light
6206	8	10 3/8	1 1/2	7 3/4	3/8	18	Medium
6208	10	12 3/4	1 1/2	9 1/2	3/8	30	Heavy
6210 ADA	12	14 1/4	1 3/4	11 3/4	3/8	33	Heavy
6210M2	12	14 1/4	1 3/4	11 3/4	3/8	45	Heavy
6212 DNW	15	18	2 1/8	13 7/8	1/2	65	Medium
6215	18	22	2 3/8	17 1/4	1/2	72	Medium
6215M2	18	22	2 3/8	17 1/4	1/2	105	Medium
6218	21	25 1/2	2 7/8	20 3/8	5/8	132	Heavy
6221 DNW	24	29 7/8	3 3/16	23 1/2	11/16	192	Heavy
6224 DNW	30	34	2 1/8	27 1/2	1/2	286	Heavy

Note: All dimensions are in inches.

\*These types of pipe are manufactured under a variety of specifications and dimensions. Measure the size of your pipe and match with the corresponding dimensions.

### 6304 — 6324 SEWER PIPE COVER

Medium duty  
 For concrete or clay sewer pipe bells



6304 — 6324 Sewer Pipe Cover

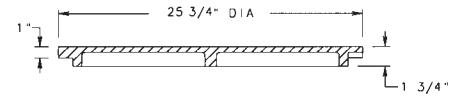
Catalog Number	Pipe Size	A Dia.	B Height
6304	4	5 1/2	1 1/2
6306	6	8	2
6308	8	10 1/4	2 1/4
6310	10	12 1/2	2 1/2
6315	15	18 1/4	2 5/8
6318	18	21 1/2	2 3/4
6324	24	29	3

Note: All dimensions are in inches.

\*These Types of pipe are manufactured under a variety of specifications and dimensions. Measure the size of your pipe and match with the corresponding dimensions.

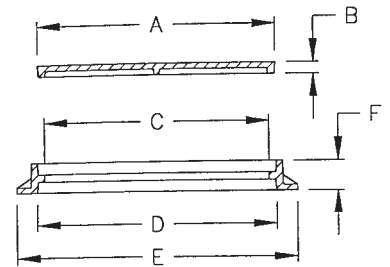
### 6340 SEWER PIPE COVER

Light duty (Non-traffic)



### V-6400 WATERTITE ACCESS HATCH

Heavy duty  
Watertite assembly  
Bolted and gasketed  
Reversible frame



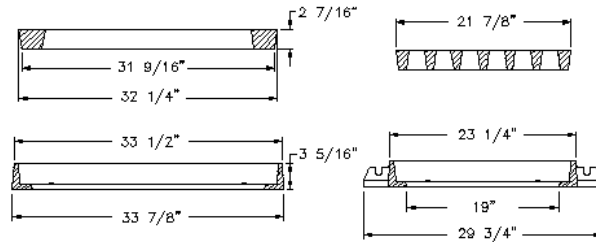
V-6400 Watertite Access Hatch

Catalog Number	A Cover Size	B Cover Thk.	C Clear Opning	D Frame Inside	E Flange Size	F Frame Ht.
<b>Square</b>						
V-6436	37 3/4	1 3/8	34 1/4	37 13/16	43 1/4	4
V-6442	43 3/4	1 7/8	41	44	50 1/8	5
<b>Rectangular</b>						
V-6465	23 x 35	1 3/8	23 x 35	26 x 38	31 1/2 x 43 1/2	4
V-6468	31 7/8 x 37 3/4	1 7/8	29 x 35	32 1/8 x 38	38 1/4 x 44 1/4	5
V-6469	31 3/4 x 49 3/4	1 3/8	28 5/8 x 46 5/8	32 x 50	37 1/2 x 55 1/2	4

Note: All dimensions are in inches.

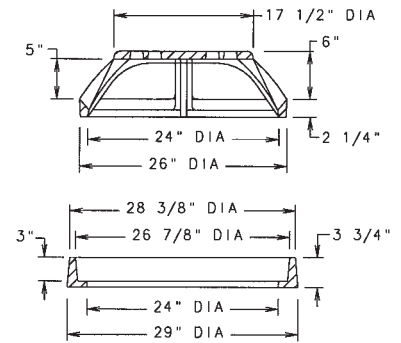
### 6407 INLET BOX

Heavy duty  
 Two frames and grates required per unit  
 Confirm frame and grate dimensions  
 before installation



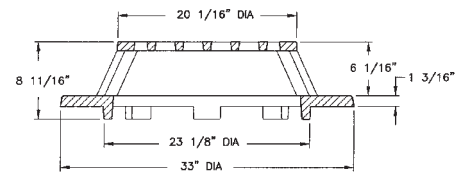
### 6487 BEEHIVE DITCH GRATE

Heavy duty  
 Approximate 430 sq. in. open area  
 Grate is ductile iron



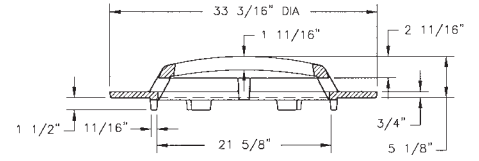
### 6488 BEEHIVE DITCH GRATE

Heavy duty  
 Approximate 520 sq. in. open area



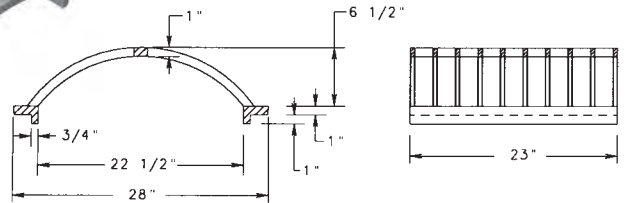
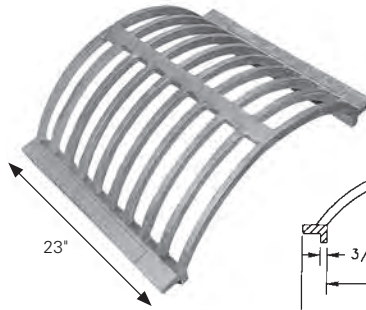
### 6489 BEEHIVE DITCH GRATE

Heavy duty  
 Approximate 220 sq. in. open area  
 "DUMP NO WASTE!" lettering



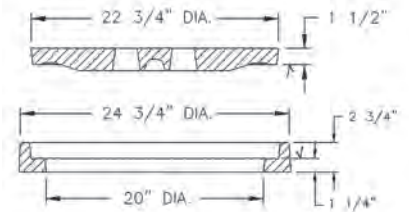
### 6490 BEEHIVE DITCH GRATE

Heavy duty  
 Approximate 470 sq. in. open area  
 23" long



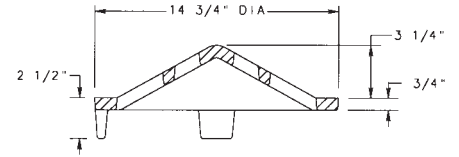
### 6492 DITCH GRATE

Heavy duty  
 Approximate 124 sq. in. open area  
 "DUMP NO WASTE!" lettering



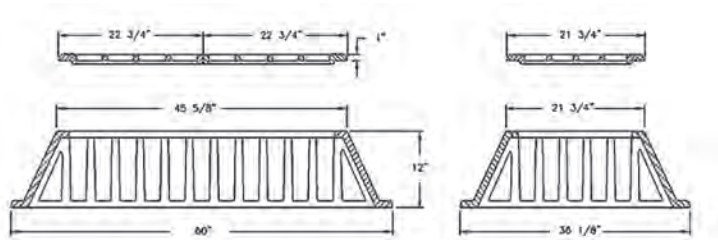
### 6495 BEEHIVE DITCH GRATE

Heavy duty  
 Fits 12" bell & spigot pipe  
 Approximate 60 sq. in. open area  
 "DUMP NO WASTE!" lettering



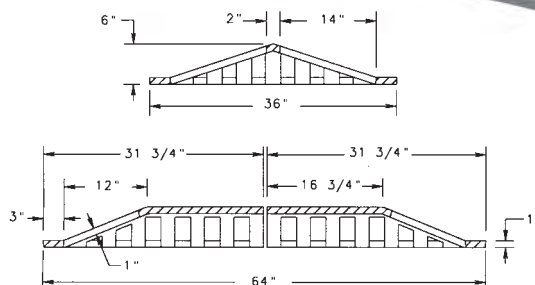
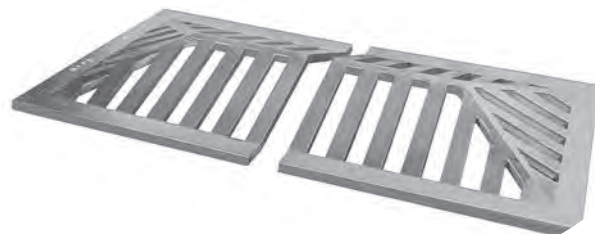
### 6496 BEEHIVE DITCH GRATE

Heavy duty  
 Approximate 1386 sq. in. open area  
 "DUMP NO WASTE!" lettering



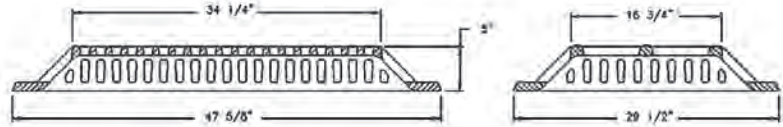
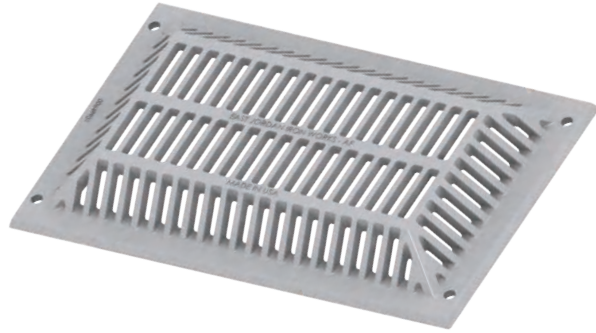
### 6498 BEEHIVE DITCH GRATE

Heavy duty  
 Note: Grate is made in two pieces  
 Approximate 680 sq. in. open area



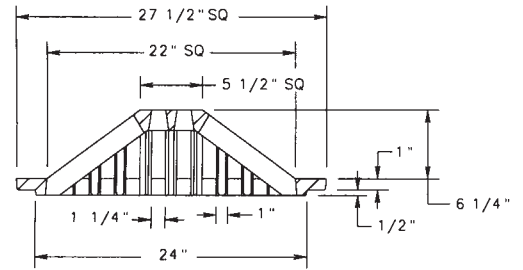
### 6499 BEEHIVE DITCH GRATE

Light duty (Non-traffic)  
 Approximate 212 sq. in. open area



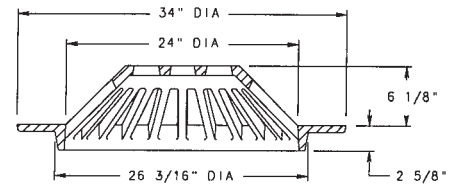
### 6500 BEEHIVE DITCH GRATE

Heavy duty  
 Approximate 280 sq. in. open area  
 "DUMP NO WASTE!" lettering



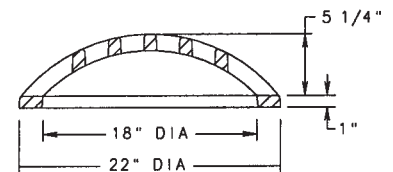
### 6508 BEEHIVE DITCH GRATE

Heavy duty  
 Fits 24" sewer pipe bell  
 Approximate 280 sq. in. open area  
 "DUMP NO WASTE!" lettering



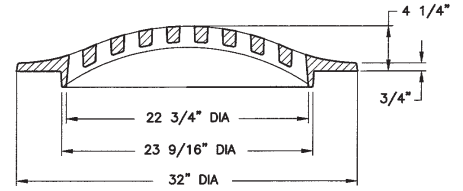
### 6509 BEEHIVE DITCH GRATE

Heavy duty  
 Fits 18" sewer pipe bell  
 Approximate 166 sq. in. open area  
 "DUMP NO WASTE!" lettering



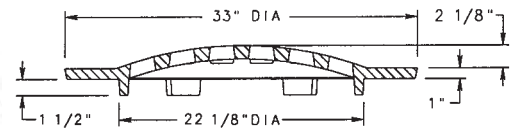
**6517 DITCH GRATE**

Heavy duty  
Approximate 190 sq. in. open area



**6527 DITCH GRATE**

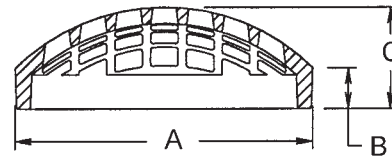
Heavy duty  
Fits 24" sewer pipe bell  
Approximate 160 sq. in. open area



Options  
"DUMP NO WASTE!" lettering

**6532 — 6536 BEEHIVE DITCH GRATES**

Heavy duty  
For sewer pipe bells



6532 — 6536 beehive Ditch Grates

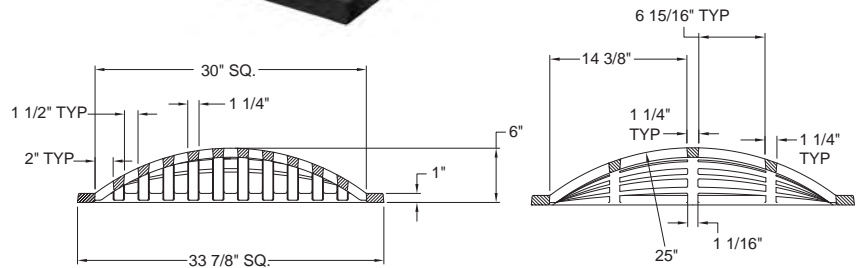
Catalog Number	Pipe Size	A Dia.	B Height	C Grate Ht.	Approx. Sq. In. Opening
6532	12	14 3/4	2 1/2	5 1/2	60
6533	15	18 1/4	2 1/2	6 1/4	100
6534	18	22	3	7 1/2	140
6536	24	29	3	9	245

Note: All dimensions are in inches.

**6610 BEEHIVE DITCH GRATE**

Heavy duty  
Approximate 430 sq. in. open area

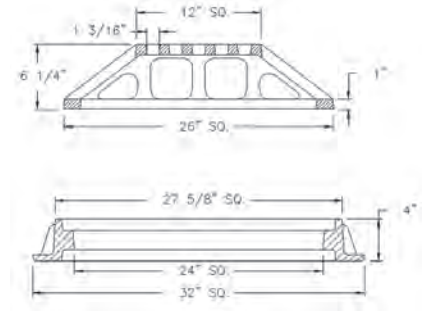
Options  
"DUMP NO WASTE!"  
lettering and fish image



### 6626 BEEHIVE DITCH GRATE

Heavy duty  
 Machined bearing surfaces  
 Approximate 292 sq. in. open area

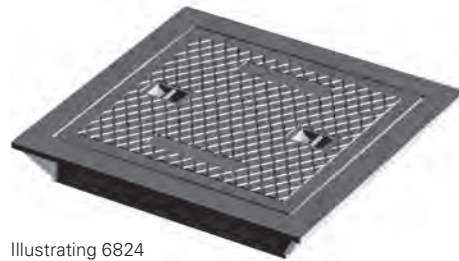
Options  
 Reversible frame



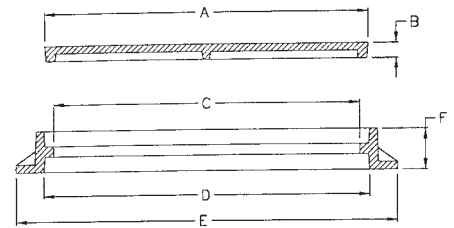
### V-6600/V-6700 SQUARE AND RECTANGULAR FRAME & COVER SERIES

Heavy duty  
 Reversible unit, specify top flange or bottom flange

Options  
 See grates V-5600 & V-5700 series  
 Additional covers available in V-5700 series  
 For available watertite options, see table on page 324



Illustrating 6824



V-6600/V-6700 Rectangular Frame & Cover Series

Cover Number	Frame Number	Grate Number	A Cover Size Sq. In.	B Cover Thk.	C Clear Opening Sq. In.	D Frame Size Sq. In.	E Flange Size Sq. In.	F Frame Height
Rectangular								
V-6660	V-5660	V-5660	23 3/4 x 35 3/4	1 1/2	22 x 34	24 x 36	29 1/2 x 41 1/2	4
		V-5660†	23 3/4 x 35 3/4	1 1/2	22 x 34	24 x 36	29 1/2 x 41 1/2	4
V-6665	V-5665	V-5665	25 3/4 x 37 3/4	1 1/2	24 1/8 x 36 1/8	26 x 38	31 1/2 x 43 1/2	4
V-6667 (2P)	V-5667	V-5667 (2P)	25 3/4 x 49 3/4	1 1/2	24 x 48	26 x 50	31 1/2 x 55 1/2	4
		V-5667 (2P)**	25 3/4 x 49 3/4	1 1/2	24 x 48	26 x 50	31 1/2 x 55 1/2	4
		V-5667 (DI)			24 x 48	26 x 50	31 1/2 x 55 1/2	4
V-6668	V-5668	V-5668	31 3/4 x 37 3/4	2	30 x 36	32 x 38	38 1/4 x 44 1/4	5
		V-5668**	31 3/4 x 37 3/4	2	30 x 36	32 x 38	38 1/4 x 44 1/4	5
		V-5668 (DI)			30 x 36	32 x 38	38 1/4 x 44 1/4	5
V-6670 (2P)	V-5670	V-5670 (2P)	37 3/4 x 49 3/4	1 1/2	36 x 48	38 x 50 1/4	46 1/4 x 55 1/2	4
		V-5670 (2P)**	37 3/4 x 49 3/4	1 1/2	36 x 48	38 x 50 1/4	46 1/4 x 55 1/2	4

† Vane Grate  
 \*\* Ductile Iron Extra Heavy Duty Grate

‡ ADA Compliant Grate  
 (2P) 2 Piece (2 frames/2 covers/2 grates)

(DI) Ductile Iron  
 § Special Operations

Note: all dimensions are in inches.

## V-6600/V-6700 SQUARE AND RECTANGULAR FRAME & COVER SERIES (CONTINUED)

Heavy duty

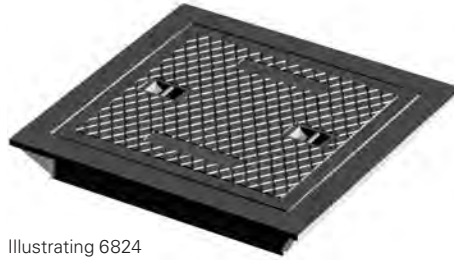
Reversible unit, specify top flange or bottom flange

Options

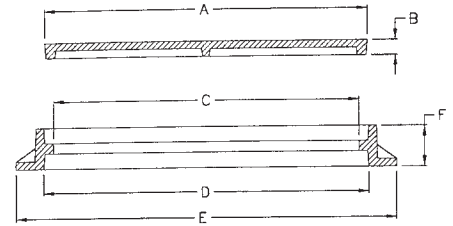
See grates V-5600 & V-5700 series

Additional covers available in V-5700 series

For available watertite options, see table on page 324



Illustrating 6824



V-6600/V-6700 Square Frame & Cover Series

Cover Number	Frame Number	Grate Number	A Cover Size Sq. In.	B Cover Thk.	C Clear Opening Sq. In.	D Frame Size Sq. In.	E Flange Size Sq. In.	F Frame Height
<b>Square</b>								
V-6713	V-5613	V-5713	13 3/8	1 9/16	11 5/8	13 5/8	19 1/8	4
V-6720	V-5620	V-5720	19 3/4	1 1/2	18	20	25 1/2	4
	V-5720	V-5720-80†	19 3/4	1 1/2	18 1/4	20	21 1/4	2
V-6622	V-5622	V-5622	23 3/4	1 1/2	22	24	29 1/4	4
		V-5622**	23 3/4	1 1/2	22	24	29 1/4	4
		V-5622-2†	23 3/4	1 1/2	22	24	29 1/4	4
		V-5622-80‡	23 3/4	1 1/2	22	24	29 1/4	4
		V-5622-5§	23 3/4	1 1/2	22	24	29 1/4	4
	V-5622-1				22	26 1/4	32	5
V-6624	V-5624	V-5624	25 3/4	1 1/2	24	26	31 3/8	4
		V-5624-80‡	25 3/4	1 1/2	24	26	31 3/8	4
		V-5624**	25 3/4	1 1/2	24	26	31 3/8	4
V-6726	V-5626-1	V-5726	25 3/4	2	24	26	32	5
		V-5726**	25 3/4	2	24	26	32	5
		V-5726-80‡	25 3/4	2	24	26	32	5
	V-5626-2			24	26	32	6	
V-6630	V5630	V-5630	31 3/4	1 1/2	30 1/8	32	37 1/2	4
		V-5630**	31 3/4	1 1/2	30 1/8	32	37 1/2	4
		V-5630-80‡	31 7/8	1 1/2	30 1/8	32	37 1/2	4
V-6732	V5632	V-5732	31 7/8	2	30	32 1/8	38 1/8	5
		V-5732‡	31 7/8	2	30	32 1/8	38 1/8	5
		V-5732-80	31 7/8	2	30	32 1/8	38 1/8	5
V-6636	V-5636	V-5636	37 1/2	1 1/2	36	37 3/4	43 1/4	4
		V-5636**	37 1/2	1 1/2	36	37 3/4	43 1/4	4
		V-5636‡	37 1/2	1 1/2	36	37 3/4	43 1/4	4
	V-5636 (DI)			36	37 3/4	43 1/4	4	
V-6642 (2P)	V-5642 (2P)	V-5742 (2P)	43 7/8	2	42	44 1/4	49 3/4	5
		V-5742 (2P)**			42	44 1/4	49 3/4	5
V-6648 (2P)	V-5648 (2P)	V-5648 (2P)	50 5/8	1 5/8	48 5/8	51	58 3/4	4 3/8
		V-5648 (2P)**	50 5/8	1 5/8	48 5/8	51	58 3/4	4 3/8

† Vane Grate

\*\* Ductile Iron Extra Heavy Duty Grate

‡ ADA Compliant Grate

(2P) 2 Piece (2 frames/2 covers/2 grates)

(DI) Ductile Iron

§ Special Operations

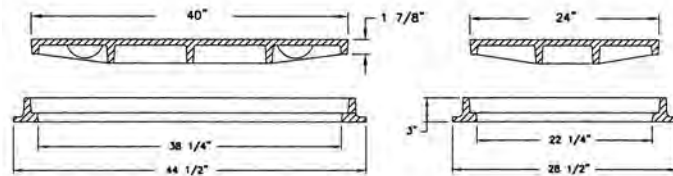
Note: all dimensions are in inches.

### V-6780 FRAME & COVER

Heavy duty

Options

Special lettered covers



### 7000 CATCH BASIN CURB INLET

Heavy duty

With Type M1 grate and T1 back

Approximate 135 sq. in. open area

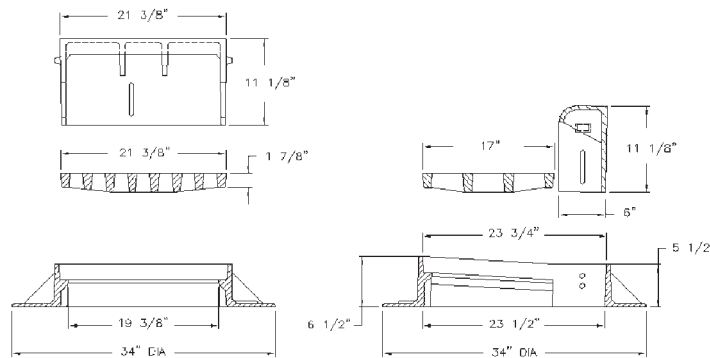
Curb back height adjusts from 3" to 9"

"DUMP NO WASTE!" lettering  
and fish image on back



Options

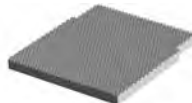
Height adjustable



**Type M2 Sinusoidal Grate**  
Approx. 150 sq. in. open area



**Type M3 Flat Grate**  
Approx. 195 sq. in. open area  
To be used without curb back



**Type M4 Restricted Grate**  
Approx. 6 sq. in. open area per knockout



**Type T2 Back**  
No Adjustment



**Type T3 Strainer Back**  
2" Curb Radius Height  
Adjusts 3" to 9"

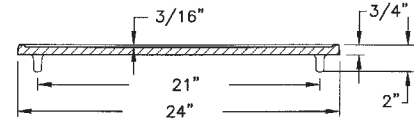
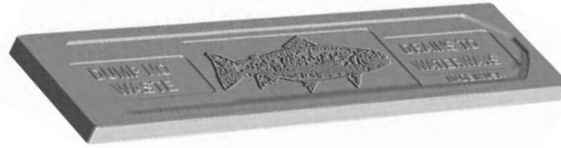


**Type T4 Back**  
4" Curb Radius height  
Adjusts 3 3/4" to 8 1/4"

### 7003 CURB PLATE

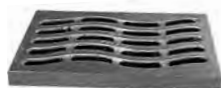
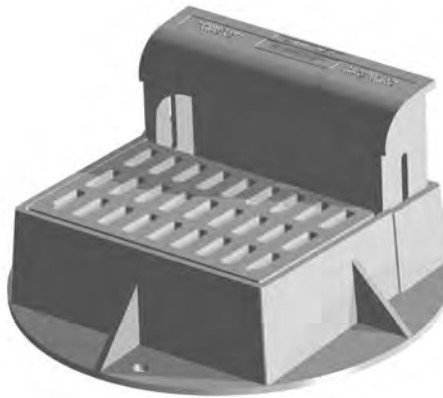
Used in sidewalk above a gutter inlet  
 Embed into concrete during construction  
 7001 — 5" width  
 7003 — 3" width

Options  
 Special lettering  
 "DUMP NO WASTE!" lettering  
 and fish image



### 7010 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate and T1 back  
 Approximate 130 sq. in. open area  
 Curb back ht. adjusts from 3 1/2" to 8"  
 "DUMP NO WASTE!" lettering and  
 fish image on back



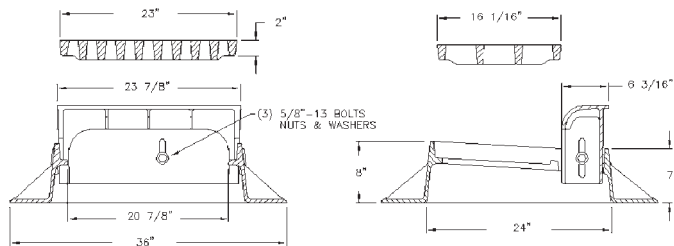
**Type M3 Sinusoidal Grate**  
 Approx. 140 sq. in.  
 open area



**Type M4 Vane Grate**  
 Approx. 125 sq. in.  
 open area



**Type M5 Diagonal Bar Grate**  
 Approx. 160 sq. in.  
 open area



**Type T2 Back**  
 Height Adjusts 2" to  
 3 1/2"



**Type T4 Curb Plate With Trout Image**

### 7020 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 Grate and T1 Back  
 Approximate 195 sq. in. open area  
 Curb back ht. adjusts from 5 1/2" to 8 1/2"  
 "DUMP NO WASTE!" lettering and fish  
 image on back



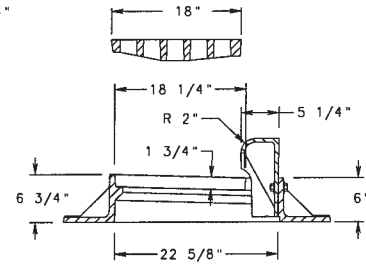
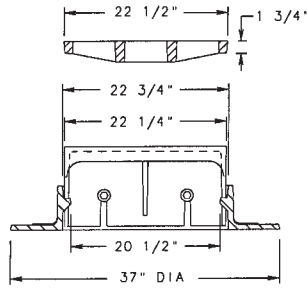
**Type M2 Sinusoidal Grate**

Approx. 140 sq. in. open area



**Type M3 Sinusoidal Grate**

Approx. 170 sq. in. open area.  
 Grate has break-off section so curb back can be added when curb is installed



**Type T2 Back**

6" Curb radius  
 Height adjusts 5 1/2" to 8"

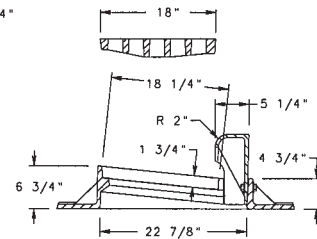
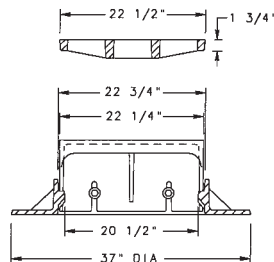


**Type T4 Back**

10" curb radius  
 Height adjusts 3" to 7"

### 7022 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate and T1 back  
 Approximate 195 sq. in. open area  
 Curb back height adjusts from 5 1/2" to 8 1/2"  
 Accepts 7020 grates and backs



## 7030 CATCH BASIN CURB INLET

Heavy duty

With Type M2 grate and T1 back

260 sq. in. open area

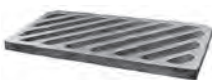
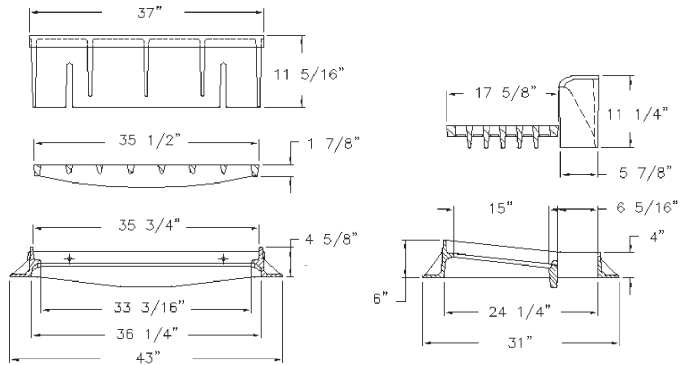
Curb back height adjusts from 3 1/4" to 9"

"DUMP NO WASTE!" lettering and fish image

Drive over curb inlet frame — 7030Z2



7030Z2 Drive Over Curb Inlet Frame



**Type M3 Diagonal Bar Grate**

Approx. 315 sq. in. open area  
2 1/8" wide opening between bars



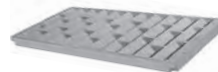
**Type M4 Vane Grate**

Approx. 260 sq. in. open area



**Type M5 Diagonal Bar Grate**

Approx. 231 sq. in. open area  
1 1/4" wide opening between bars



**Type M6 Vane Grate**

Approx. 260 sq. in. open area



**Type M10 ADA Grate**

Approx. 140 sq. in. open area  
"DUMP NO WASTE!" lettering and fish image



**Type T2 Back**

12" curb radius,  
Height adjusts 4" to 9"



**Type T3 Back**

12" concave curb radius  
No curb Adjustment



**Type T4 Back**

3" curb Radius  
Height adjusts 6" to 11"  
"DUMP NO WASTE!" lettering and fish image



**Type T5 Back**

No curb radius  
Height adjusts 4 1/2" to 8"



**Type T6**

3" curb radius  
Height adjusts 6" to 10"  
"DUMP NO WASTE!" lettering and fish image



**Type T7 Back**

Roll curb no curb adjustment

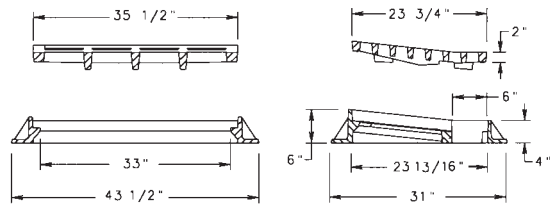
### 7031 — 7032 CATCH BASIN CURB INLET

Heavy duty  
 Double and triple 7030 unit  
 With Type M2 grate and T1 back  
 "DUMP NO WASTE!" lettering and fish image  
 Frames bolt together  
 Accepts 7030 grates and backs



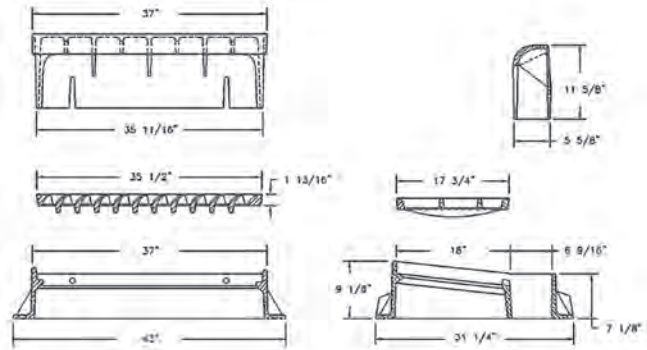
### 7034 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 380 sq. in. open area  
 Special lettering  
 "DUMP NO WASTE!" lettering and fish image  
 End to end double unit available



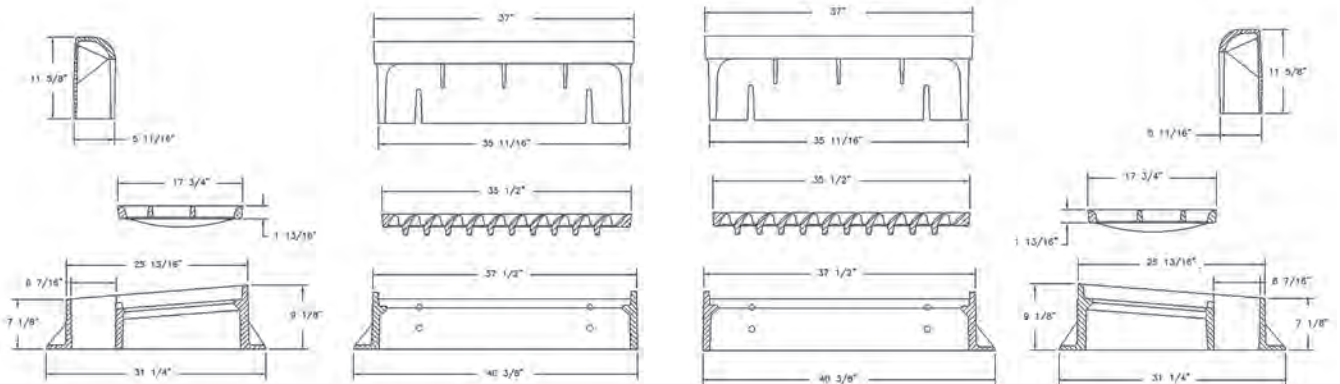
### 7035 CATCH BASIN CURB INLET

Heavy duty  
 With Type M6 Grate and T6 Back.  
 260 sq. in. open area  
 Curb back height adjusts from 3 1/4" to 9"  
 "DUMP NO WASTE!" lettering and fish image  
 Accepts 7030 grates and backs  
 Double unit available — 7036



### 7036 CATCH BASIN CURB INLET

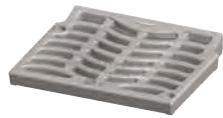
Heavy duty  
 Double 7035  
 With 7030 Type M vane grate and T6 back  
 520 sq. in. open area  
 Curb back height adjusts from 6" to 10"  
 Accepts 7030 grates and backs  
 "DUMP NO WASTE!" lettering and fish image on all 7030 backs



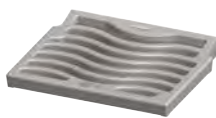
### 7045 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate and 7050 T1 back.  
 "DUMP NO WASTE!" lettering and fish image  
 Approximate 160 sq. in. open area  
 Curb back height adjusts from 4" to 10"

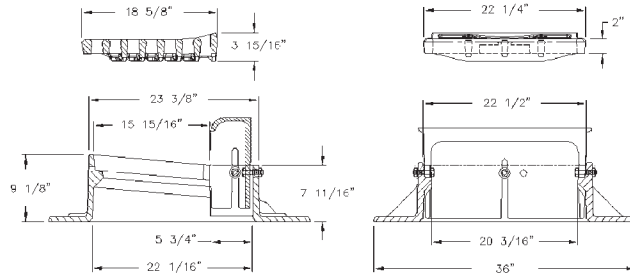
Options  
 Special lettered grates  
 Adjusting frames  
 Accepts 7040 grates



**Type M2 Adjusting Grate**  
 For increase of 1 1/2" in pavement grade  
 Approx. 160 sq. in. open area



**Type M3 Sinusoidal Grate**  
 Expressway use only  
 Approx. 180 sq. in. open area



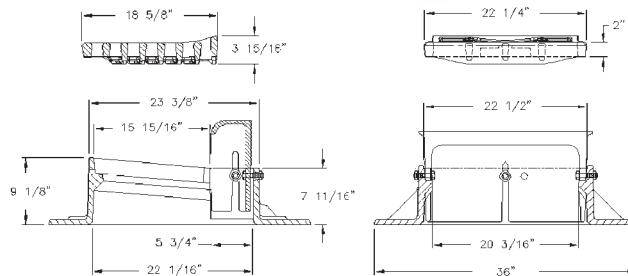
**Type M4 Vane Style Curb Inlet Grate**  
 Approx. 233 sq. in. open area



7066 frame with 7045M4 vane style curb inlet grate

### 7050 CATCH BASIN CURB INLET

Heavy duty  
 With front split frame  
 With 7040 Type M1 grate and 7050 T1 back  
 Approximate 160 sq. in. open area  
 Curb back height adjusts from 5" to 9"  
 "DUMP NO WASTE!" lettering and fish image on T1 back

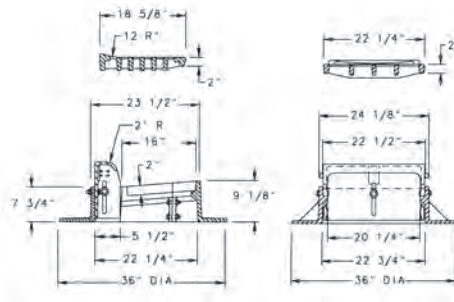


### 7055 CATCH BASIN CURB INLET

Heavy duty  
 Front split frame  
 With Type 7045 M1 grate and 7050 T1 back  
 Approximate 160 sq. in. open area  
 Curb adjustment from 5" to 9"  
 "DUMP NO WASTE!" lettering and  
 fish image on T1 back  
 Accepts 7045 grates



Note:  
 The small section of this unit is to be pre-set before pavement is placed. The large section is set after the pavement form is removed and then bolted to the small section.

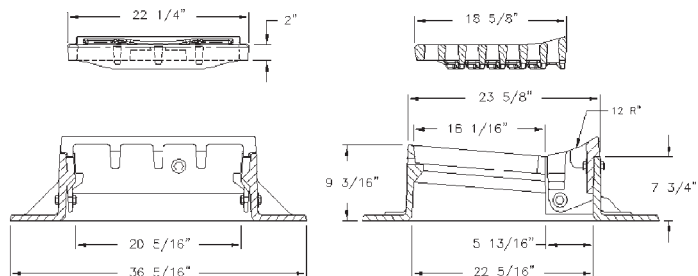


### 7056 CATCH BASIN CURB INLET

Heavy duty  
 With back split frame  
 With 7045 Type M1 grate and 7056 T1 back  
 Approximate 160 sq. in. open area  
 Accepts 7045 grates  
 Curb back height adjusts from 5" to 9"

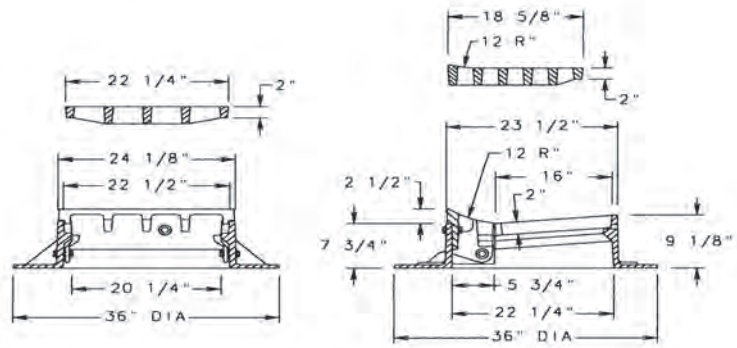


Note:  
 The large section of this unit is to be pre-set before pavement is placed. The small section is set after the pavement form is removed and then bolted to the large section.



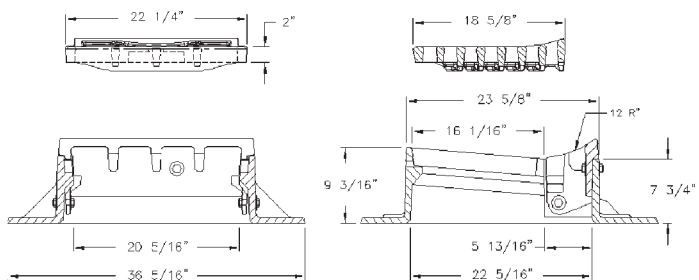
### 7060 CATCH BASIN CURB INLET

Heavy duty  
 With Type 7040 M1 grate and 7060 T1 back  
 Special lettered grate  
 "DUMP NO WASTE!" lettering  
 and fish image  
 Approximate 195 sq. in. open area



### 7065 CATCH BASIN CURB INLET

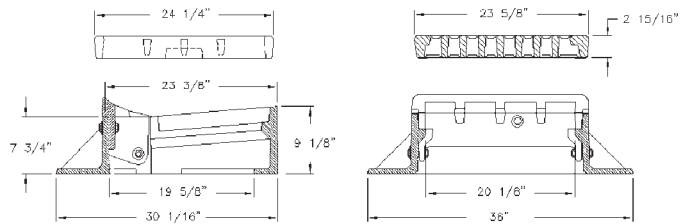
Heavy duty  
 With 7045 Type M1 grate and 7060 T1 back  
 Approximate 195 sq. in. open area  
 Accepts 7045 grates  
 Special lettered grate  
 "DUMP NO WASTE!" lettering  
 and fish image



### 7066 CATCH BASIN CURB INLET

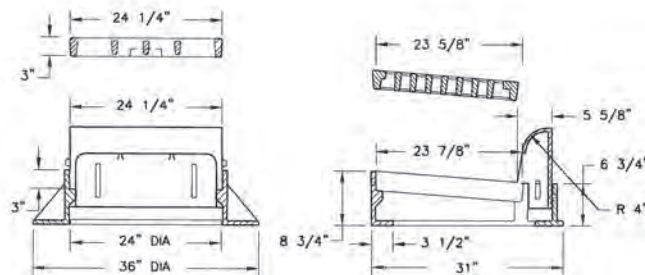
Heavy duty  
 With 7045 Type M1 grate and 7060 T1 back  
 Approximate 195 sq. in. open area  
 Accepts 7045 grates  
 Special lettered grate  
 "DUMP NO WASTE!" lettering  
 and fish image

Options  
 Accepts 7050 backs



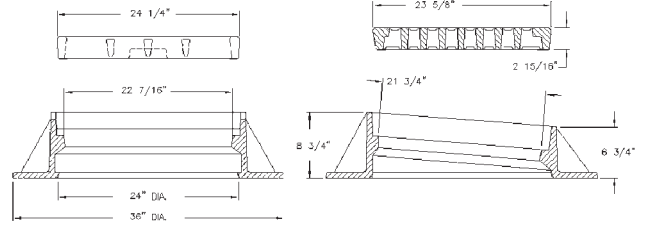
### 7075 CATCH BASIN CURB INLET

Heavy duty  
 With Type 7075 M1 grate  
 Approximate 240 sq. in. open area  
 With 7070 frame & back  
 Accepts 7076 grates



### 7076 CATCH BASIN CURB INLET

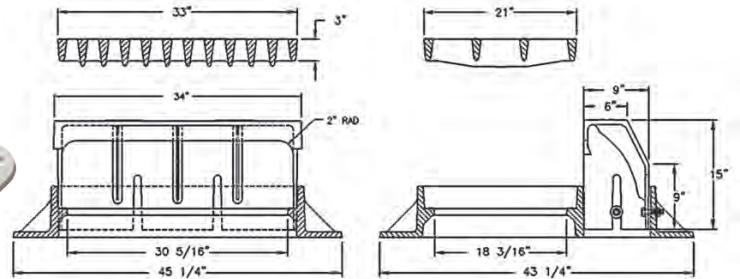
Heavy duty  
 With 7075 Type M1 grate  
 Approximate 220 sq. in.  
 open area



**7075 Type M2  
 Sinusoidal Grate**  
 Expressway use only  
 Approx. 240 sq. in.  
 open area

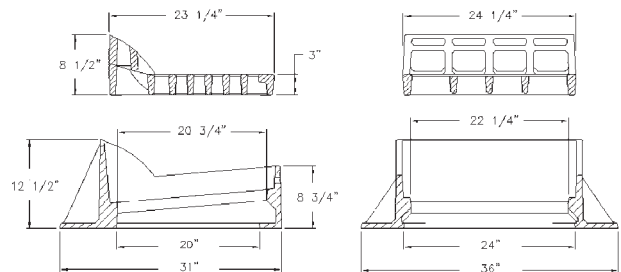
### 7080 CATCH BASIN CURB INLET

Heavy duty  
 Uses 5352M grate  
 Approximate 262 sq. in. open area  
 "DUMP NO WASTE!" lettering



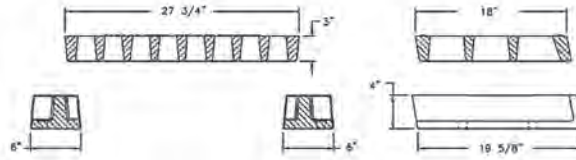
### 7085 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate  
 Approximate 220 sq. in.  
 open area



### 7091 CATCH BASIN INLET

Heavy duty  
 3-piece unit  
 Approximate 175 sq. in. open area  
 "DUMP NO WASTE!" lettering and fish image



### 7140 CATCH BASIN CURB INLET

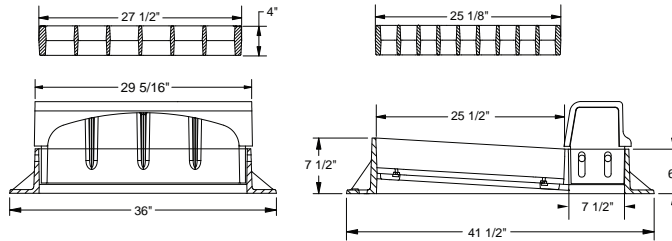
Heavy duty  
 With M1 ductile iron grate and  
 Type T1 unmountable back  
 Curb back height adjusts 6" to 10"  
 NY State DOT — Type F1, G1, CU1 & CM1



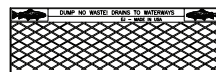
**Type M1 Grate (G1)**  
 Approx. 412 sq. in.  
 open area



**Galvanized Steel Reticuline Grate (G1)**



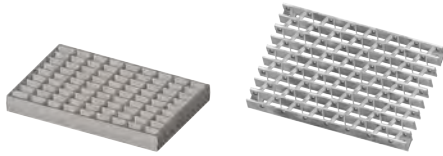
**Type T1 Back**  
 Unmountable back (CU1)  
 with "DUMP NO  
 WASTE!" lettering and  
 fish image



**Type T2**  
 Mountable back (CM1)

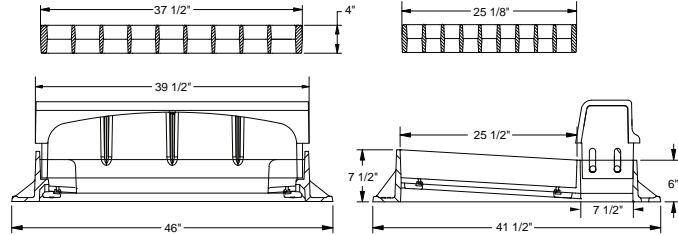
### 7150 CATCH BASIN CURB INLET

Heavy duty  
 With M1 ductile iron grate and  
 Type T1 unmountable back  
 Curb back height adjusts 6" to 10"  
 7150Z1 frame with 7 1/2" height front  
 and 6" height back  
 NY State DOT — Type F2, G2, CU2 & CM2

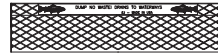


**Type M1 Grate (G2)**  
 Approx. 558 sq. in.  
 open area

**Galvanized Steel  
 Reticuline Grate (G2)**



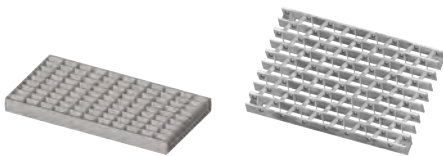
**Type T1 Back**  
 Unmountable back (CU2)  
 with "DUMP NO  
 WASTE!" lettering and  
 fish image



**Type T2 Back**  
 Mountable back (CM2)

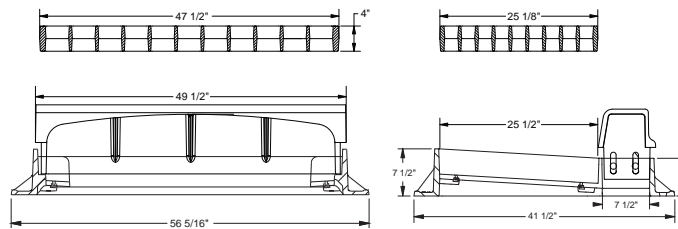
### 7155 CATCH BASIN CURB INLET

Heavy duty  
 With M1 ductile iron grate and  
 Type T1 unmountable back (CU3)  
 Curb back height adjusts 6" to 10"  
 NY State DOT — Type F3, G3, CU3 & CM3  
 Parallel bar grate

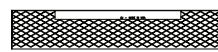


**Type M1 Grate (G3)**  
 Approx. 724 sq. in.  
 open area

**Galvanized Steel  
 Reticuline Grate (G3)**



**Type T1 Back**  
 Unmountable back (CU3)  
 with "DUMP NO  
 WASTE!" lettering and  
 fish image

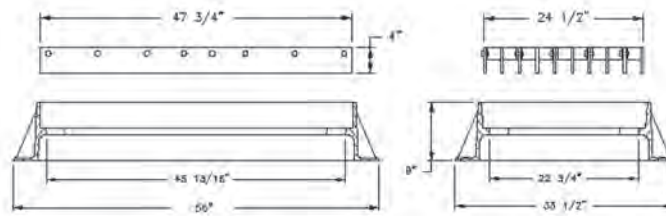


**Type T2 Back**  
 Mountable back (CM3)

### 7156 INLET FRAME & GRATE

Heavy duty  
 Uses 7158 galvanized reticuline steel grate

- Options  
 Bolted assembly  
 Iron grates  
 Adjusting frames



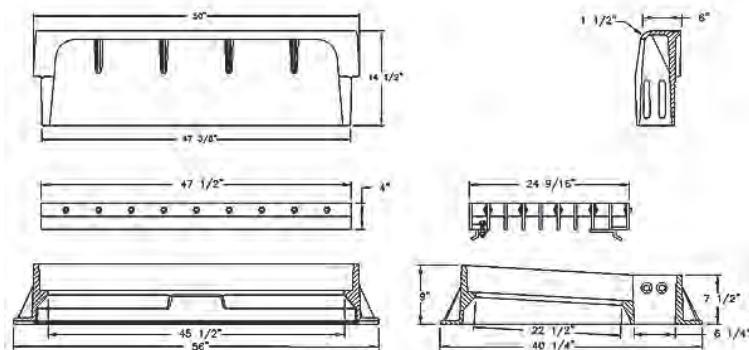
### 7158 CURB & GUTTER INLET

Heavy duty  
 Uses galvanized reticuline steel grate

- Options  
 Bolted assembly  
 T1 low profile back  
 "DUMP NO WASTE!" lettering  
 Iron grate  
 Adjusting frame



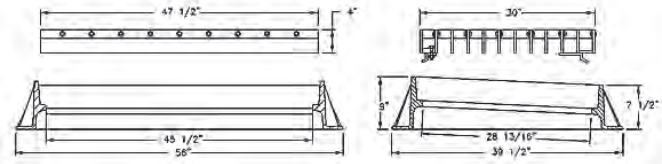
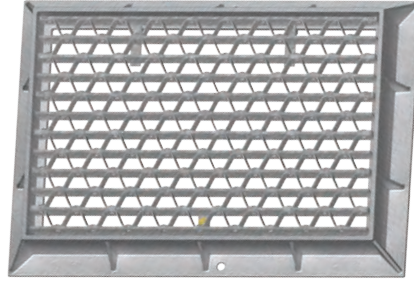
Illustrating 7158 with T1 back and steel reticuline grate



### 7159 INLET FRAME & GRATE

Heavy duty  
 Uses galvanized reticuline steel grate

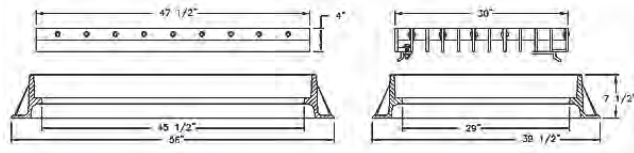
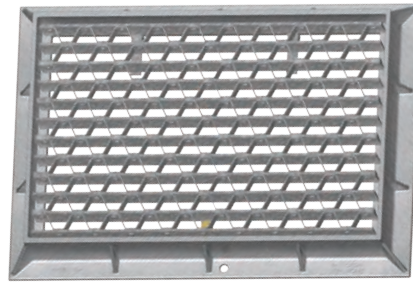
Options  
 Bolted assembly  
 Iron grates  
 Adjusting risers available — 7160



### 7160 INLET FRAME & GRATE

Heavy duty  
 Uses 7159 galvanized reticuline steel grate

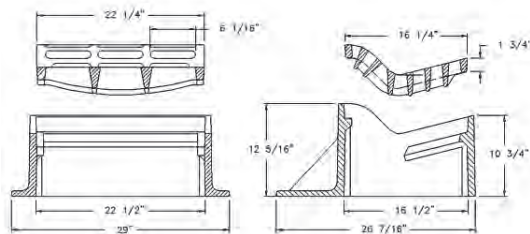
Options  
 Bolted assembly  
 Iron grates  
 Adjusting risers available



### 7170 CATCH BASIN CURB INLET

Heavy duty  
 M1 grate has approximate 185 sq. in.  
 open area

Options  
 M2 grate has approximate 140 sq. in.  
 open area

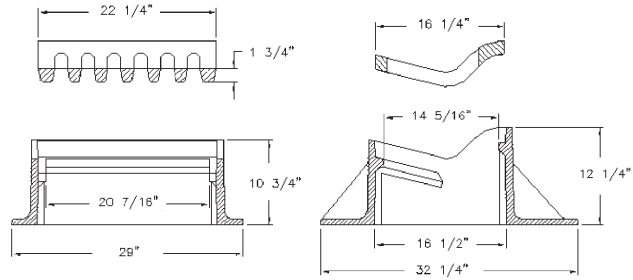


### 7171 CATCH BASIN CURB INLET

Heavy duty  
 With 7170 Type M2 grate  
 Approximate 140 sq. in. open area  
 Available without front flange — 7170



**Type M1 Grate**  
 Approx. 185 sq. in.  
 open area

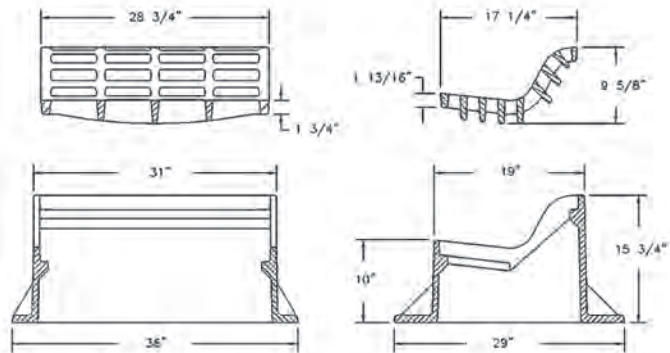


### 7180 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate  
 Approximate 270 sq. in. open area

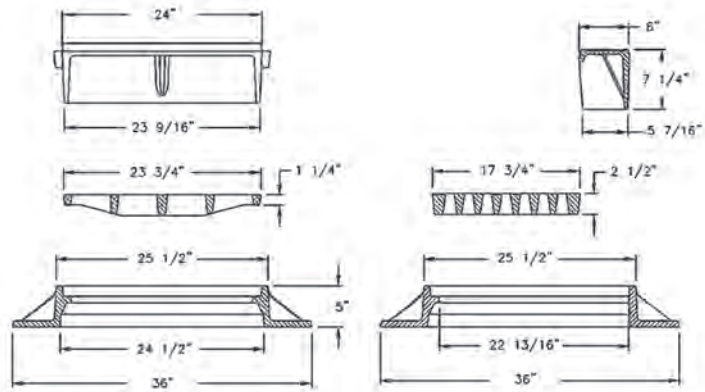


**Type M2 Grate**  
 Approx. 215 sq. in.  
 open area



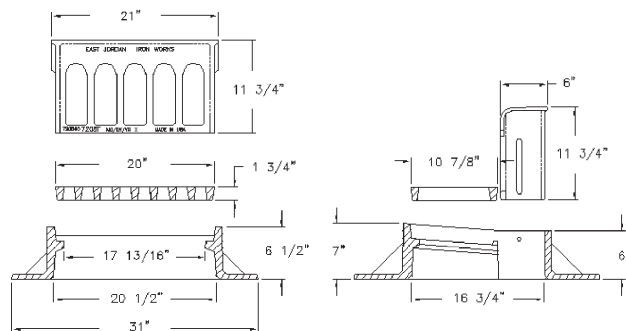
### 7191 CATCH BASIN INLET

Heavy duty  
 Type M grate  
 Approximate 123 sq. in. open area  
 "DUMP NO WASTE!" lettering and  
 fish image on grate and curb back



### 7205 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate  
 Approximate 100 sq. in. open area



### 7210 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 Grate and T1 Back  
 Approximate 130 sq. in. open area  
 Curb back height adjusts from 4 1/2" to 9"  
 "DUMP NO WASTE!" lettering and  
 fish image on back  
 Square flange frame available



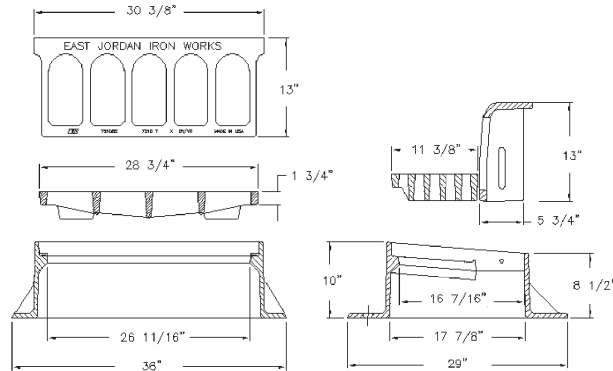
**Type M2 Grate**  
 Approx. 135 sq. in.  
 open area



**Type M3 Grate**  
 Approx. 230 sq. in.  
 open area  
 To be used without  
 curb back



**Type M4 Vane Grate**  
 Approx. 85 sq. in.  
 open area



### 7220 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 Grate and T1 Back  
 Approximate 165 sq. in. open area  
 Curb back height adjusts from 5 1/4" to 9"  
 "DUMP NO WASTE!"  
 lettering and fish image on back



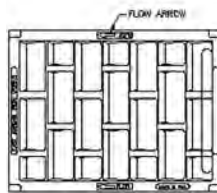
Options  
 Type M5 ADA grate available



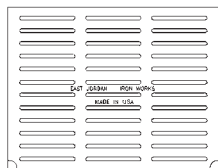
**Type M2 Grate**  
 Approx. 145 sq. in.  
 open area



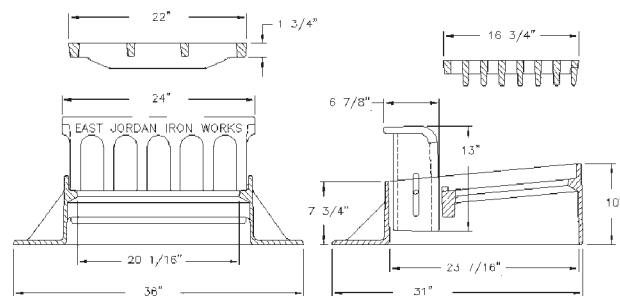
**Type M3 Sinusoidal Grate**  
 Approx. 145 sq. in.  
 open area



**Type M4 Vane Grate**  
 Approx. 100 sq. in.  
 open area

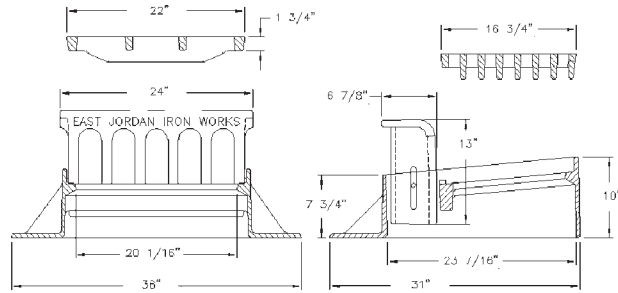


**Type 5 ADA Grate**  
 Approx. 76 sq. in.  
 open area



### 7221 CATCH BASIN CURB INLET

Heavy duty  
 With 7220 Type M1 Grate and T1 Back  
 Approximate 165 sq. in. open area  
 Uses 7220 back and grates

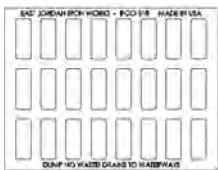


### 7222 ROUND BASE CURB & GUTTER INLET

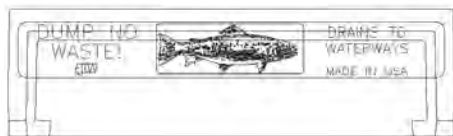
Heavy duty  
 Uses 7220 back  
 Specify grate style when ordering  
 Grate & back have "DUMP NO WASTE!"  
 lettering & fish image  
 Shown with Type M1 vane grate  
 Approximate 101 sq. in. open area



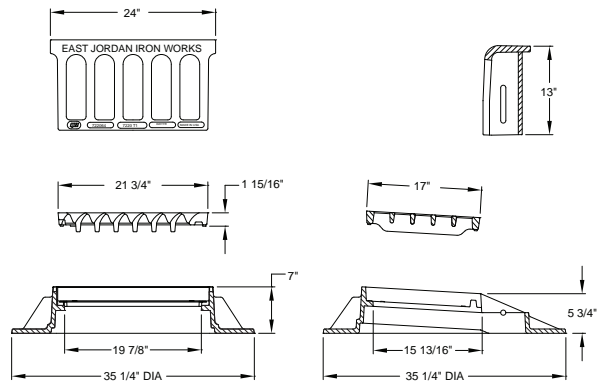
Options  
 Diagonal style grates



**Type M2 Grate**  
 Approx. 152 Sq. In. open area



**Type T1 Adjustable Curb Inlet Hood**  
 With with "DUMP NO WASTE!" lettering and fish image

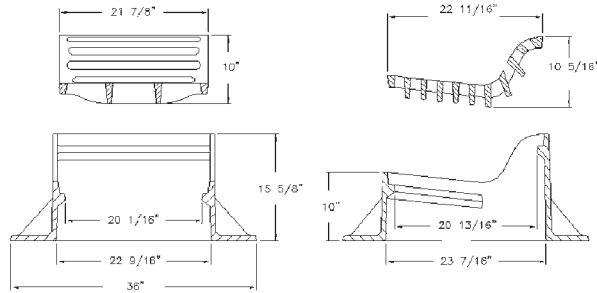


### 7235 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate  
 Approximate 250 sq. in. open area

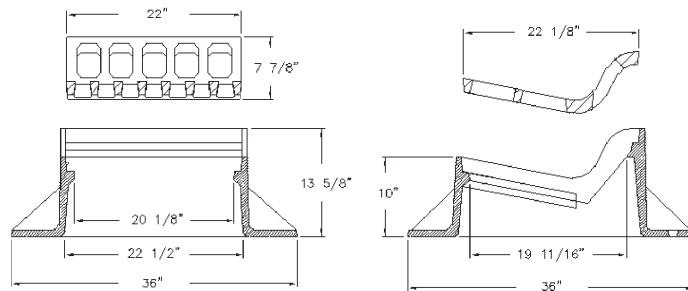


**Type M2 Grate**  
 Approx. 250 sq. in.  
 open area



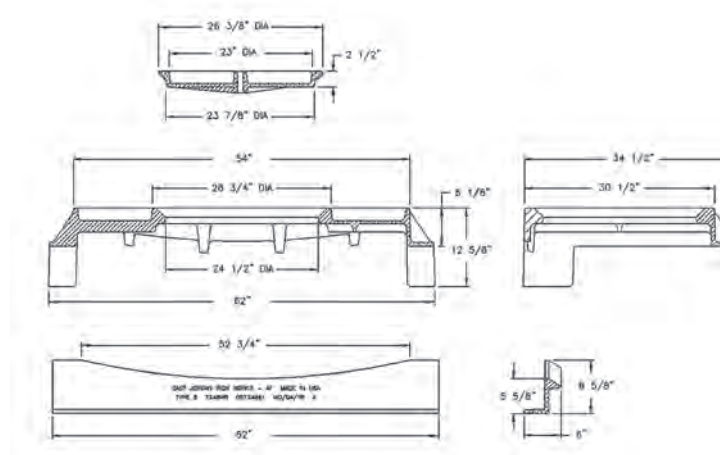
### 7236 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate  
 Approximate 215 sq. in. open area



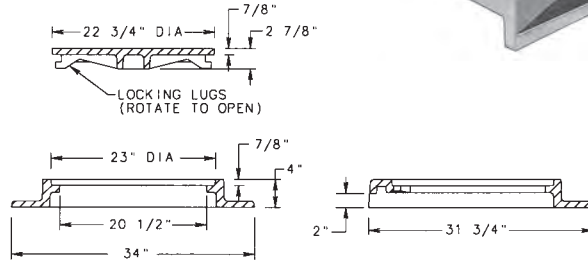
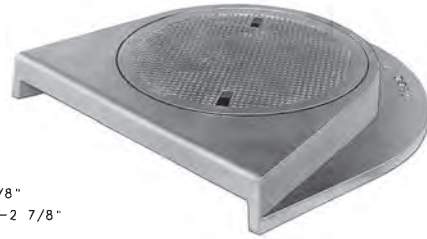
### 7248 CATCH BASIN INLET

Heavy duty  
3 piece unit  
Concrete filled



### 7260 CATCH BASIN CURB INLET

Heavy duty  
Cover has locking lugs



### 7262 CURB OUTLET

Heavy duty  
Storm water curb

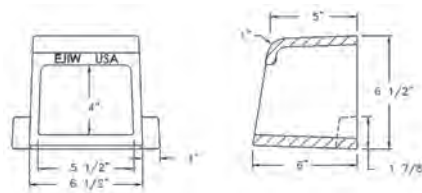
Options  
4" outlet — 7262T1



7262T curb outlet illustrated

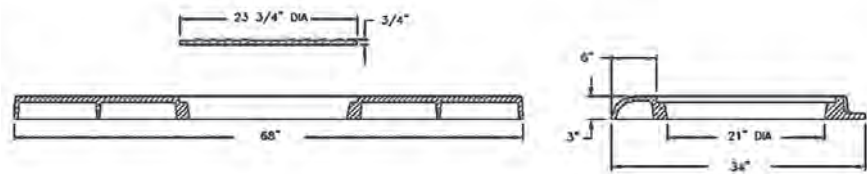


7262T1 with 4" outlet



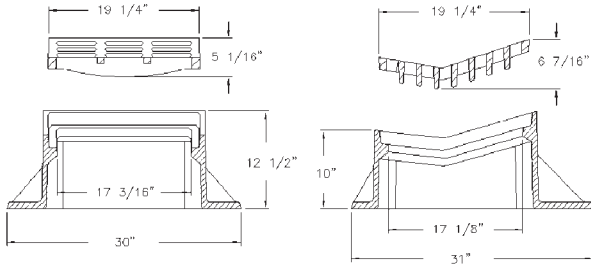
### 7266 CATCH BASIN CURB INLET

Heavy duty  
Specify if cast iron  
support beam required  
Concrete filled  
"DUMP NO WASTE!" lettering  
and fish image



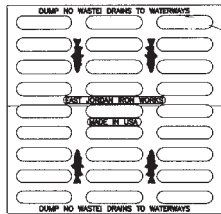
### 7281 CATCH BASIN CURB INLET

Heavy duty  
 Uses 7280 grate  
 Approximate 175 sq. in. open area  
 Frame with front flange removed — 7280

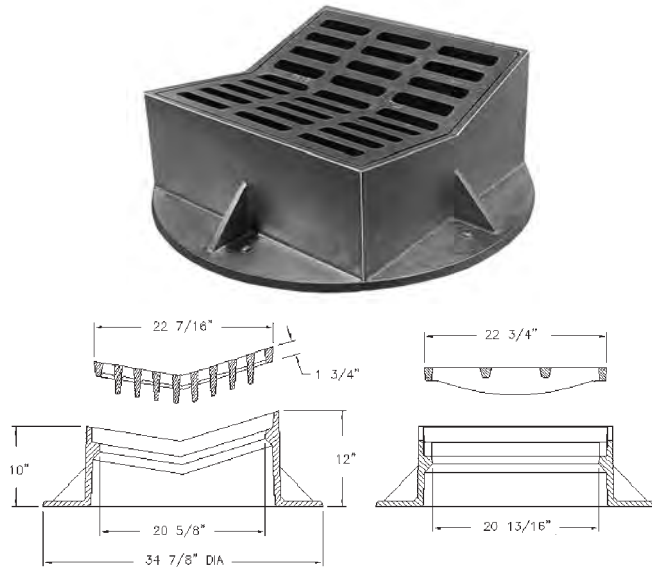


### 7300 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 220 sq. in. open area

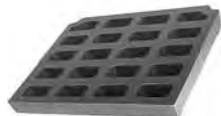


**7300 M Grate**  
 "DUMP NO WASTE!"  
 lettering and fish  
 image

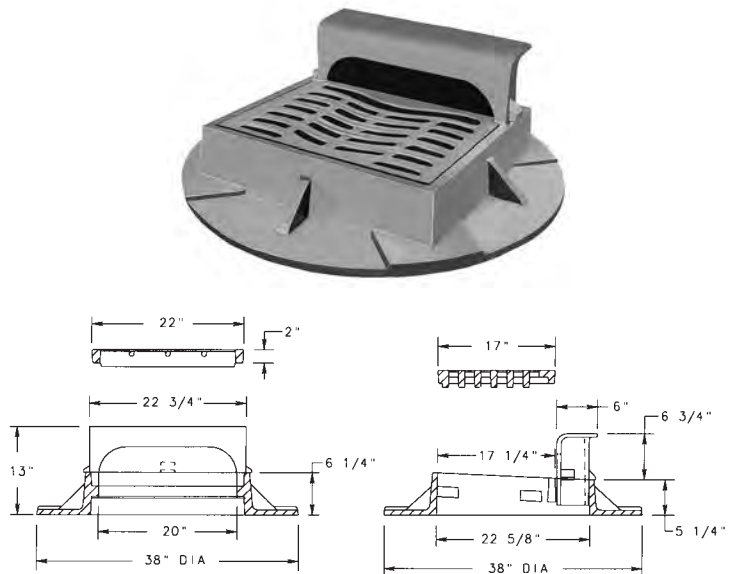


### 7310 CATCH BASIN CURB INLET

Heavy duty  
 With Type M2 grate  
 Approximate 140 sq. in. open area

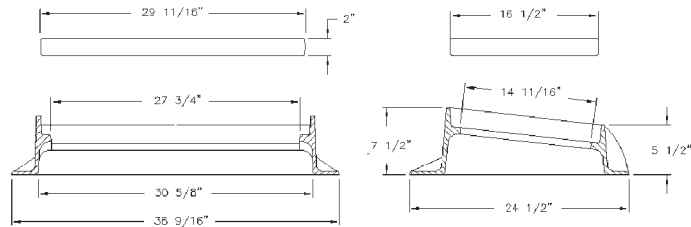
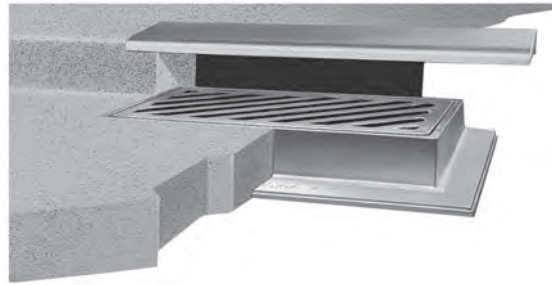


**Type M1 Grate**  
 Approx. 170 sq. in.  
 open area



### 7350 CATCH BASIN CURB INLET

Heavy duty  
 With Type M2 diagonal bar grate  
 Approximate 195 sq. in. open area  
 Specify I-beam if required



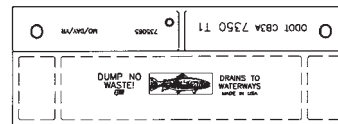
**Type M3 Grate**  
 Approx. 212 sq. in. open area



**Type M4 Grate**  
 Approx. 229 sq. in. open area.  
 "DUMP NO WASTE!" lettering and fish image



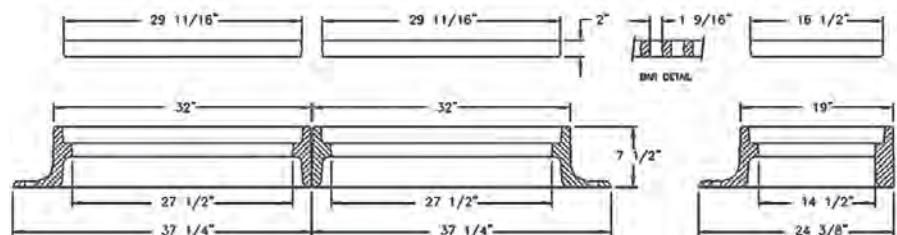
**Type M5 ADA Grate**  
 Approx. 104 sq. in. open area  
 "DUMP NO WASTE!" lettering and fish image



7350 T1 Back  
 "DUMP NO WASTE!" lettering and fish image

### 7351 CATCH BASIN CURB INLET

Heavy duty  
 Double Inlet shown with 7350 Type2 diagonal grate  
 Approximate 195 sq. in. open area  
 Accepts 7350 grates and backs  
 Specify I-beam if required  
 Single frame available



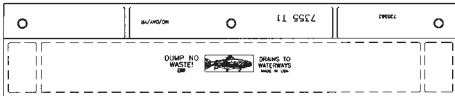
### 7355 CATCH BASIN CURB INLET

Heavy duty  
 Multiple 7350 curb inlet with Type M3 grate  
 Approximate 424 sq. in. open area  
 Specify I-beam if required

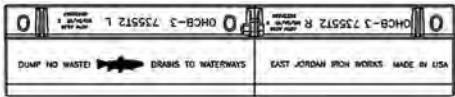
Options  
 2 piece back available  
 Grates — Uses 7350 grates



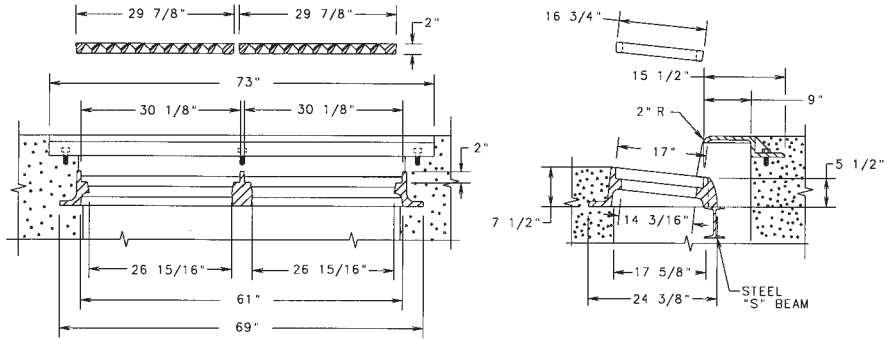
**Type M2 Grate**  
 Approx. 195 sq. in. open area



**7355 T1 Back**  
 "DUMP NO WASTE!" lettering and fish image

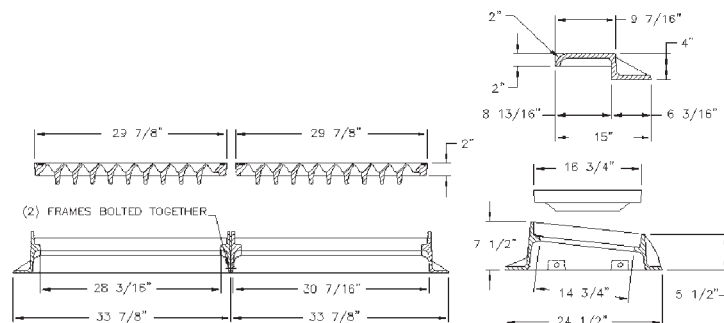
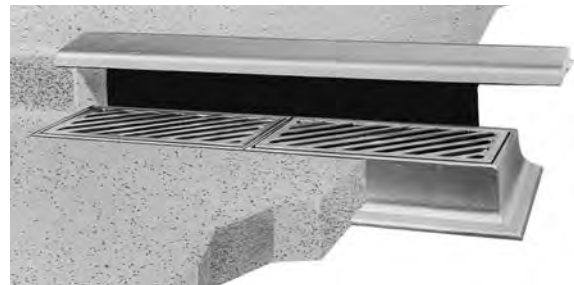


**7355 T2 Back**  
 "DUMP NO WASTE!" lettering and fish image



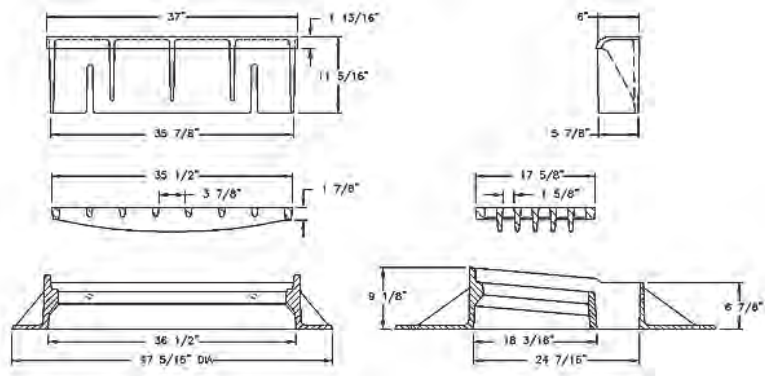
### 7358 CATCH BASIN CURB INLET

Heavy duty  
 Multiple 7350 curb inlet with 7355 back  
 Frame is 2 pieces, bolted together with Type M2 diagonal bar grate  
 Accepts 7350 grates  
 Approximate 390 sq. in. open area  
 Back is 2 pieces, bolted together  
 Specify I-beam if required



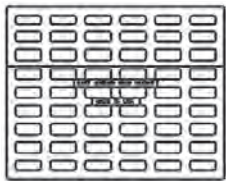
### 7360 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 250 sq. in. open area  
 "DUMP NO WASTE!" lettering  
 and fish image  
 Accepts 7030 backs  
 Curb back height adjusts from 4" to 9"

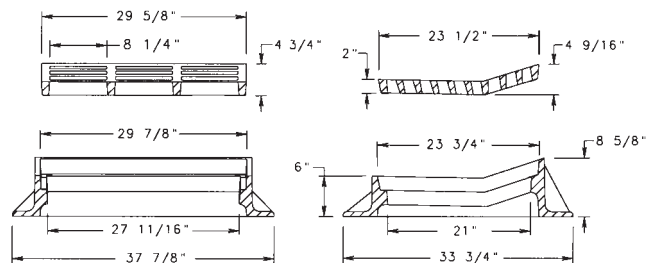


### 7370 — 7371 CATCH BASIN CURB INLET

Heavy duty  
 With Type M grate  
 Approximate 305 sq. in. open area  
 Double unit available — 7371 uses  
 two 7370M grates approximate  
 610 sq. in. open area

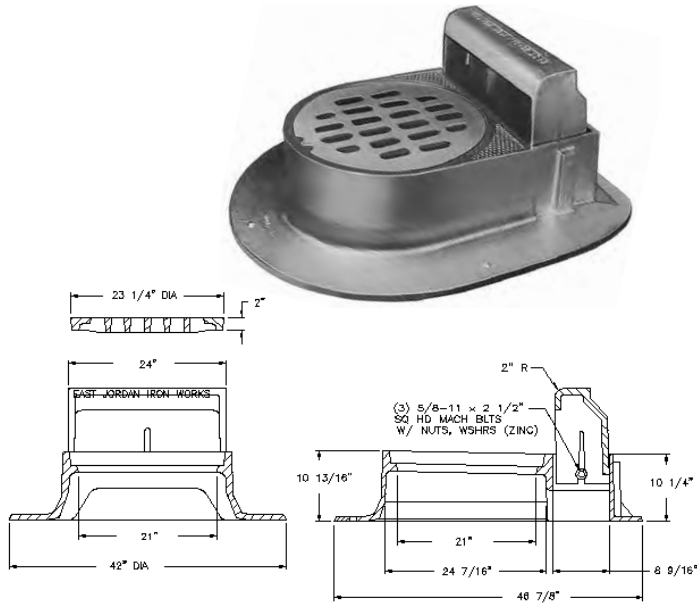


**Type M1 Grate**  
 Approx. 280 sq. in.  
 open area



### 7380 CATCH BASIN CURB INLET

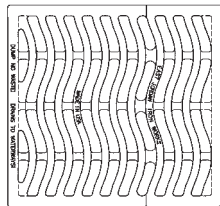
Heavy duty  
Approximate 160 sq. in. open area



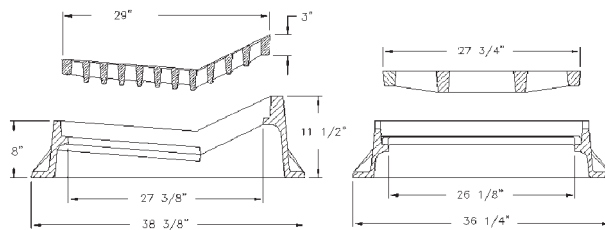
### 7390 CATCH BASIN CURB INLET

Heavy duty  
"DUMP NO WASTE!" with Type M2 grate  
Approximate 330 sq. in. open area

Options  
Round flange frame — 7395

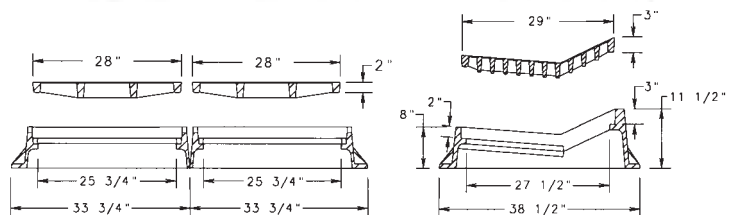


**Type M3 "S" Grate**  
Approx. 340 sq. in.  
open area  
"DUMP NO WASTE!"  
lettering



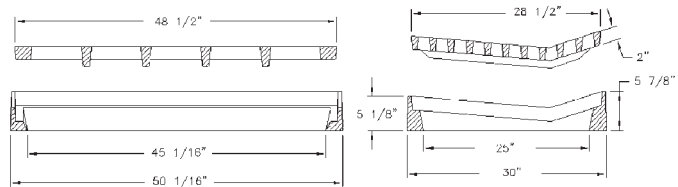
### 7391 CATCH BASIN CURB INLET

Heavy duty  
Multiple 7390 curb inlet  
"DUMP NO WASTE!" with Type M2 grate  
Approximate 660 sq. in. open area



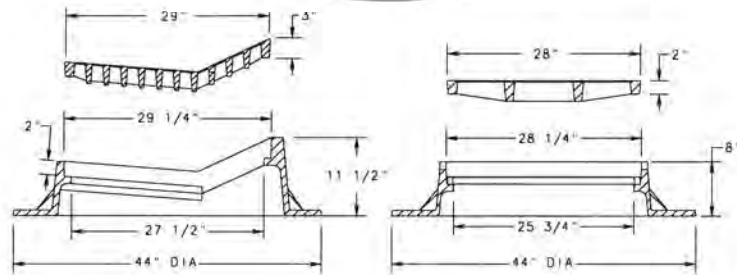
### 7392 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 700 sq. in. open area



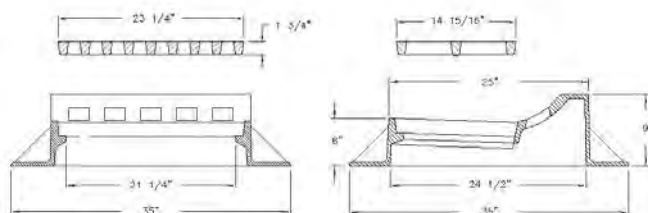
### 7395 CATCH BASIN CURB INLET

Heavy duty  
 With 7390 Type M2 grate  
 Approximate 360 sq. in. open area  
 "DUMP NO WASTE!"  
 lettering



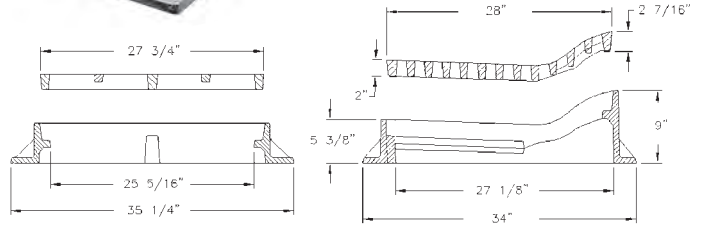
### 7420 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 175 sq. in. open area  
 "DUMP NO WASTE!" lettering and fish image



### 7430 CATCH BASIN CURB INLET

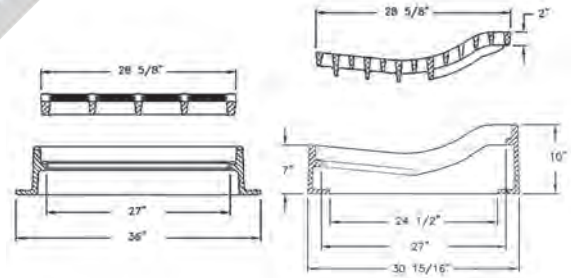
Heavy duty  
 Approximate 315 sq. in. open area



### 7432 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 400 sq. in. open area  
 "DUMP NO WASTE!" lettering and fish image

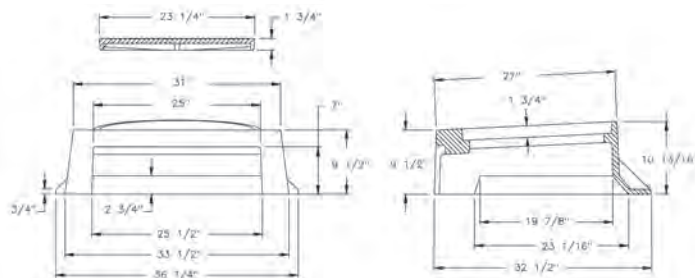
Options  
 Two sided flange — 7432Z1  
 Three sided flange — 7432Z



### 7460 CATCH BASIN CURB INLET

Heavy duty  
 Light duty cover  
 This unit can be installed in curb combination with 7411

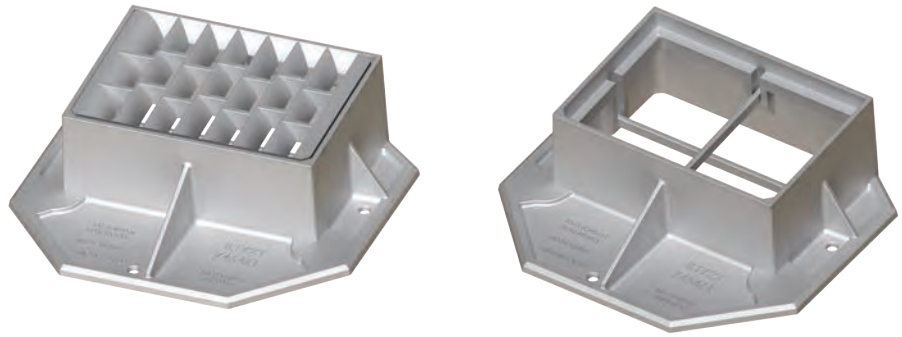
Options  
 Special lettered covers



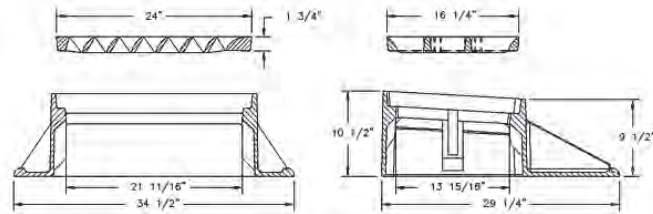
### 7464 CATCH BASIN CURB INLET

Heavy duty  
 With 7463 Type M2 grate  
 Approximate 130 sq. in. open area

Options  
 Ductile iron safety bar



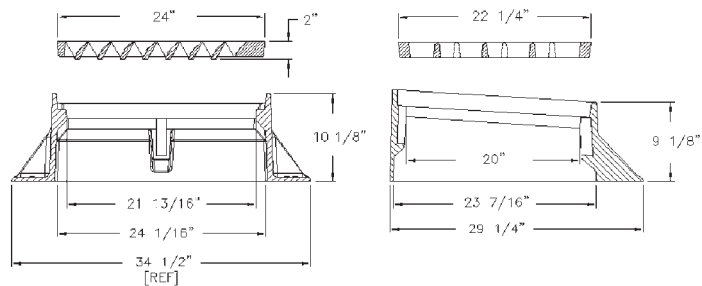
Illustrating safety bar



### 7467 CATCH BASIN CURB INLET

Heavy duty  
 With 7466 Type M2 grate  
 Approximate 225 sq. in. open area

Options  
 Four flange frame — 7466  
 Ductile iron safety bar



### 7485 CATCH BASIN CURB INLET

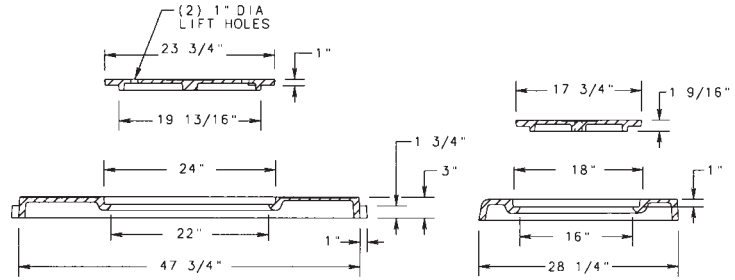
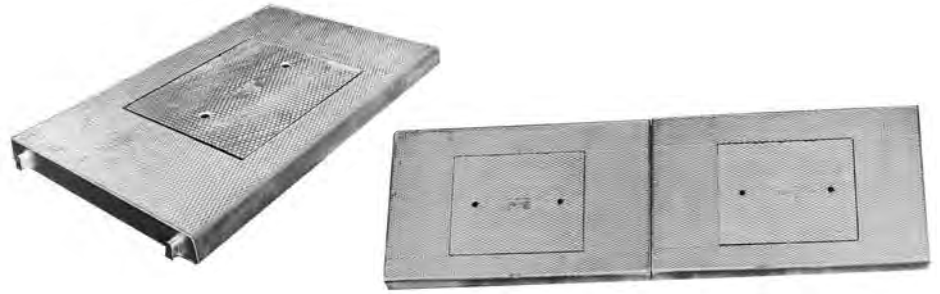
Heavy duty

Options

Solid curb edge

Frame — 7484

Double unit — 7486



### 7488 CATCH BASIN CURB INLET

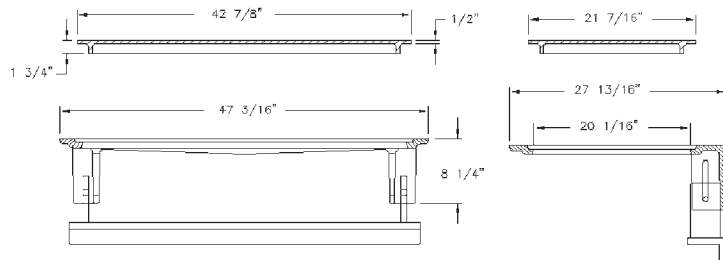
Light duty

3 piece catch basin

Options

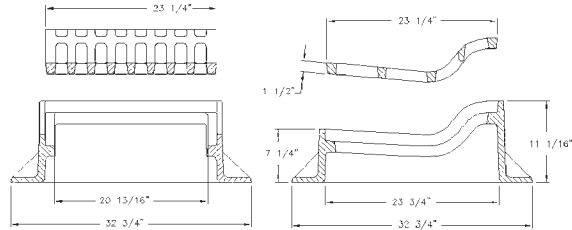
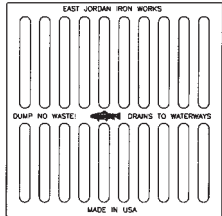
Special lettered covers

Custom logo covers



### 7490 CATCH BASIN CURB INLET

Heavy duty  
 With Type M3 grate  
 Approximate 230 sq. in. open area  
 "DUMP NO WASTE!"  
 lettering and fish image



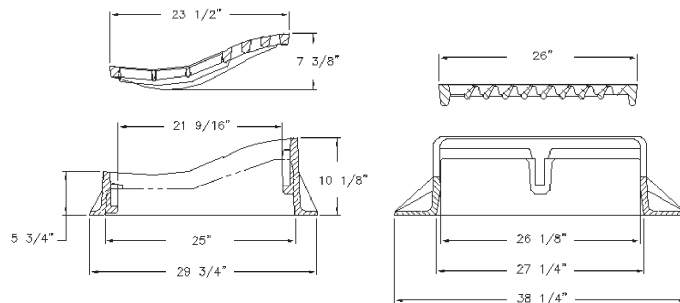
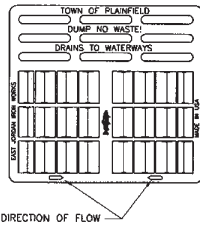
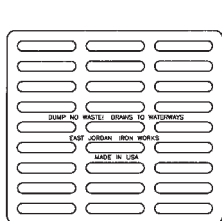
**Type M1 Grate**  
 Approx. 220 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering and fish  
 image

### 7495 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 right hand grate  
 (M2 left hand)  
 Approximate 250 sq. in. open area  
 "DUMP NO WASTE!" lettering and fish image



Options  
 Safety bar — 5235  
 Round flange frame



**Type M3 Grate**  
 Approx. 227 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering

**Type M4 Bidirectional Grate**  
 Approx. 185 sq. in.  
 open area  
 "DUMP NO WASTE!"  
 lettering and fish  
 image

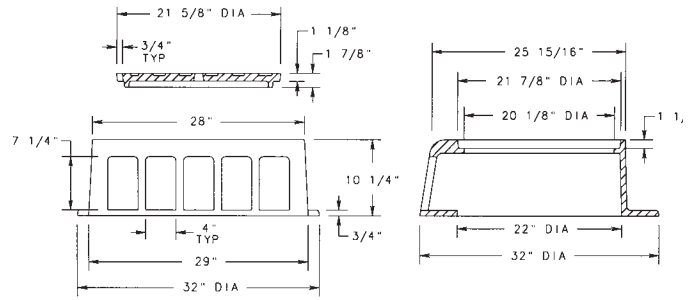
### 7500 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 145 sq. in. open area  
 Accepts 1060 covers

Options  
 Special lettered covers  
 Custom logo covers

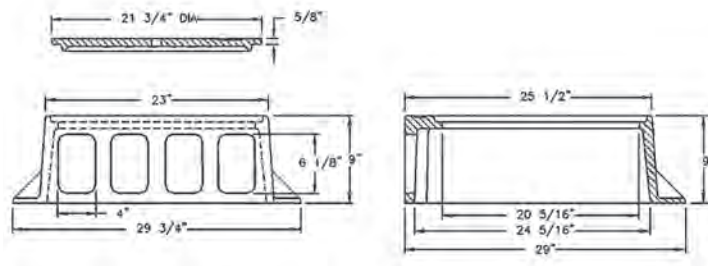
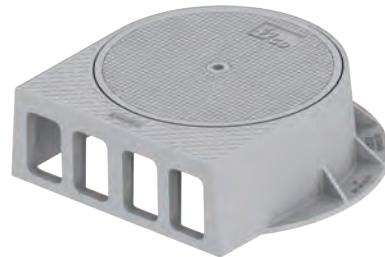


**1060 Cover**  
 "DUMP NO WASTE!"  
 lettering and fish  
 image



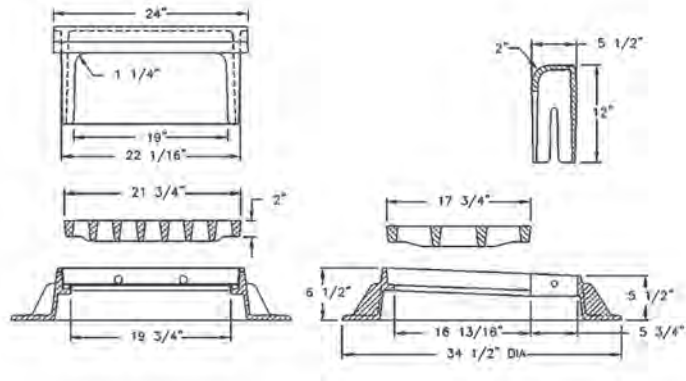
### 7501 CATCH BASIN CURB INLET

Light duty (Non-traffic)  
 Bolted down assembly



### 7504 CATCH BASIN CURB INLET

Heavy duty  
 Ductile iron  
 Type M grate with 7504T Back  
 "DUMP NO WASTE" lettering and  
 fish image on back and grate  
 M2 Vane grate with "DUMP NO WASTE"  
 lettering and fish image



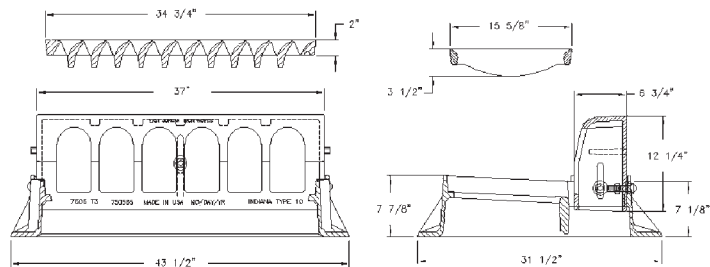
### 7505 CATCH BASIN CURB INLET

Heavy duty  
 With Type M3 Vane Grate and T4 Back  
 Approximate 400 sq. in. open area  
 Curb back height adjusts from 5 1/4" to 8 3/4"  
 "DUMP NO WASTE!" lettering and fish  
 image on backs



#### Type M1 Flat Bar Grate

Approx. 190 sq. in.  
 open area  
 Available in gray or  
 ductile iron



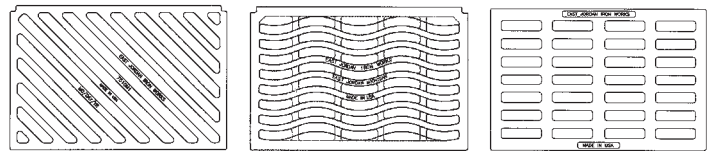
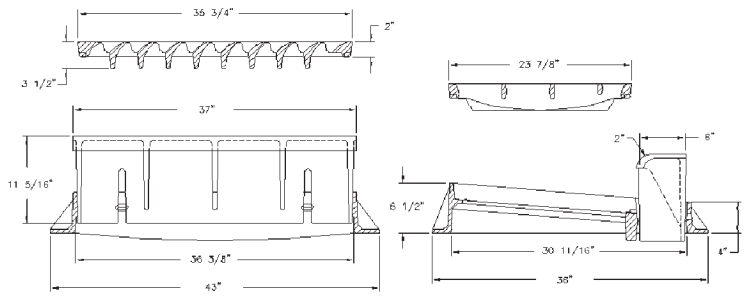
### 7510 CATCH BASIN CURB INLET

Heavy duty  
 Accepts 7030 backs  
 With Type M3 grate and 7030 T1 back  
 Curb back height adjusts from 3 1/4" to 9"  
 "DUMP NO WASTE!" lettering on backs



7510 Catch Basin Grates

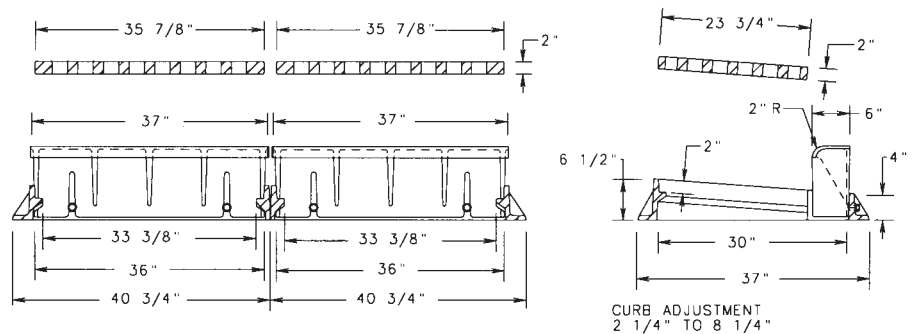
Grate Type	Sq In. Open Area
M1 Diagonal	410
M2 "S"	340
M3 Vane	446
M4 Fiat	324



Type M1 Grate      Type M2 "S" Grate      Type M4 Flat Grate

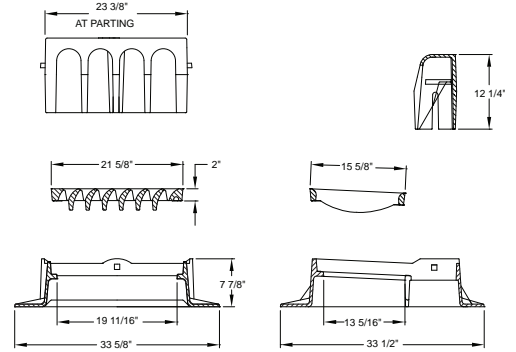
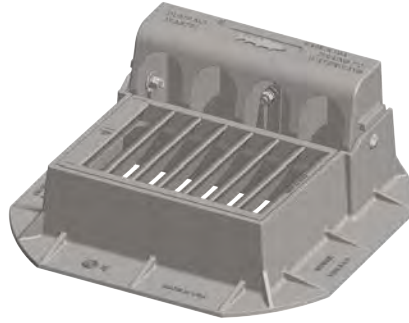
### 7511 CATCH BASIN CURB INLET

Heavy duty  
 Multiple curb inlet  
 Accepts 7030 backs  
 Type M1 grate and 7030 T1 back  
 Curb back height adjusts from 3 1/4" to 9"  
 Center frame available  
 "DUMP NO WASTE!" lettering on backs



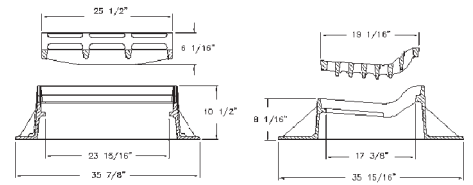
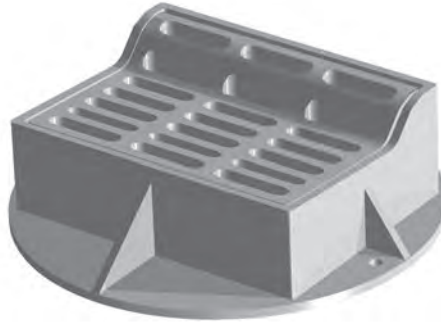
### 7520 CATCH BASIN CURB INLET

Heavy duty  
 With Type M2 grate and T2 back  
 Approximate 145 sq. in. open area  
 Curb back height adjusts from 5 1/4" to 8 3/4"  
 "DUMP NO WASTE!" lettering and fish image on back



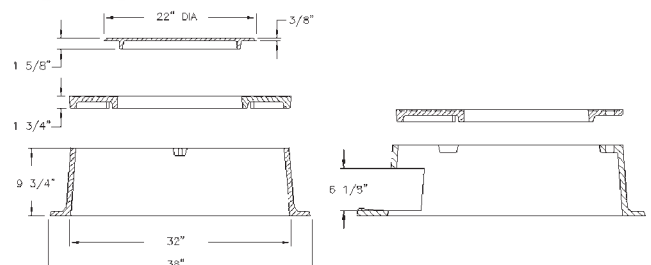
### 7525 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 220 sq. in. open area  
 "DUMP NO WASTE!" lettering and fish image



### 7530 CATCH BASIN CURB INLET

Heavy duty  
 With straight face curb  
 "DUMP NO WASTE!" lettering on top cover



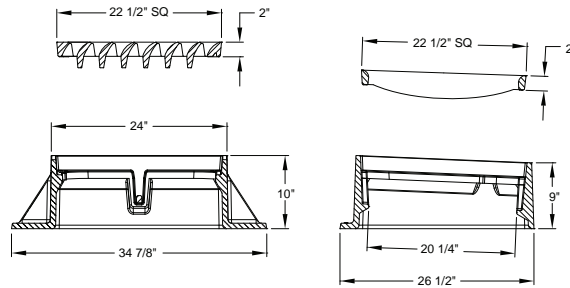
### 7535 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 220 sq. in. open area  
 Designed for use along barrier wall  
 Unit has ductile iron safety bar  
 Double unit available — 7536  
 Uses the 5425M2 Grate



Illustrating 7535Z1PT bolted curb inlet assembly with 5425M2 vane grate and safety bar

7536Z frames with 7535M grates and safety bar

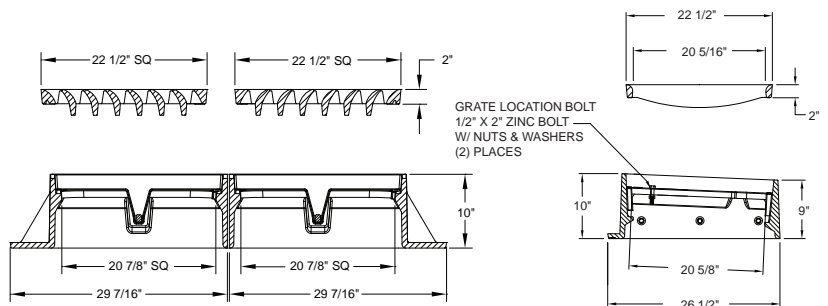


### 7536 CATCH BASIN CURB INLET

Heavy duty  
 Multiple curb inlet  
 Uses the 5425M2 grate  
 Approximate 110 sq. in. open area



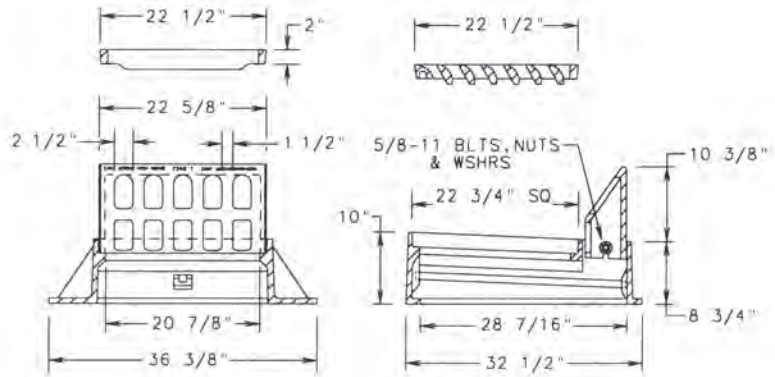
Illustrating safety bars in frame



### 7540 CATCH BASIN CURB INLET

Heavy duty  
 Uses the 5425M2 grate  
 Approximate 110 sq. in. open area

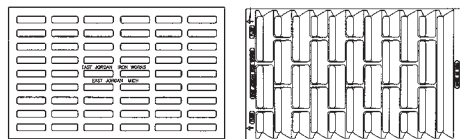
Options  
 Bolted assembly



### 7555 CATCH BASIN CURB INLET

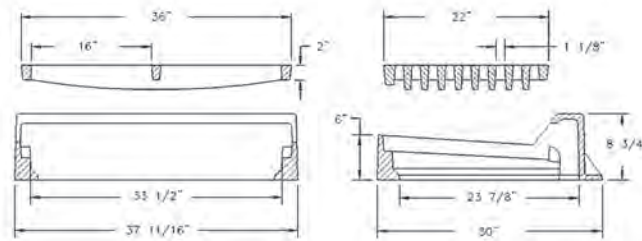
Heavy duty  
 Type M1 grate  
 Approximate 320 sq. in. open area

Options  
 7560 frame with 6" height front  
 and 11 3/4" height back



**Type M2 Grate**  
 Approx. 290 sq. in.  
 open area

**Type M3 Vane Grate**  
 Approx. 330 sq. in.  
 open area



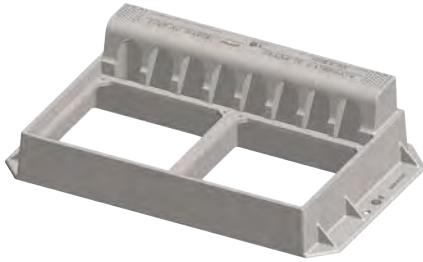
### 7565 CATCH BASIN CURB INLET

Heavy duty  
 With Type 5425 M2 grate and T3 Back 2"  
 curb radius  
 Approximate 440 sq. in. open area

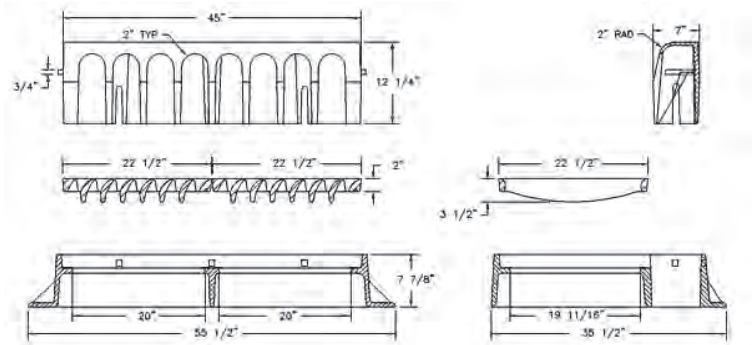
Options  
 Type T1 back with "DUMP NO WASTE!"  
 lettering and fish image  
 Monolithic frame — 7565Z1



Illustrating 7565ZPT frame with 5425M2 bolted right hand vane grates and adjustable T3 back



7565Z1 monolithic 1 piece frame



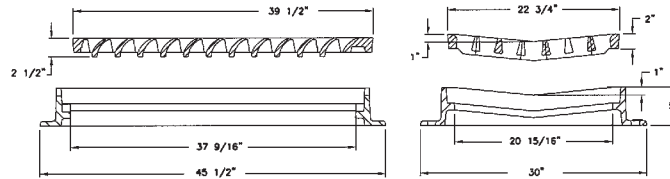
## 7568 CATCH BASIN CURB INLE

Heavy duty  
Specify grate Type

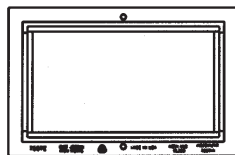
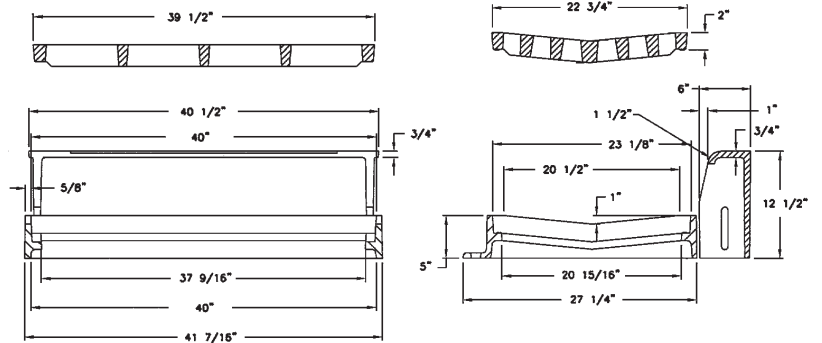
Options  
Back for curb inlet  
"DUMP NO WASTE!" lettering and  
fish image  
Multiple frame combinations



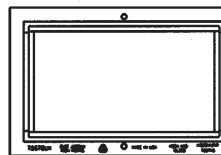
Heavy duty Standard frame, 7567M vane grate, approx. 340 sq. in open area



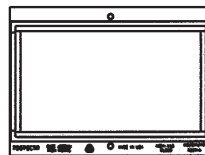
Heavy duty Center frame, 7567M2 grate,  
7568 T1 back  
Approx. 370 sq. in open area



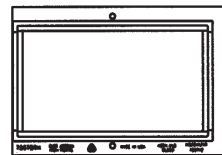
Standard Frame



CH/LH Frame



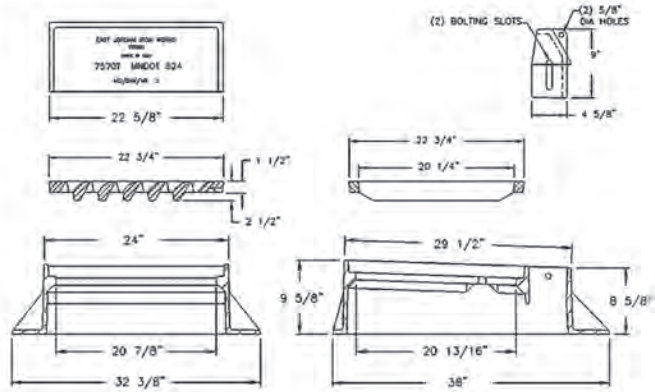
Center Frame



CH/RH Frame

### 7570 CATCH BASIN CURB INLET

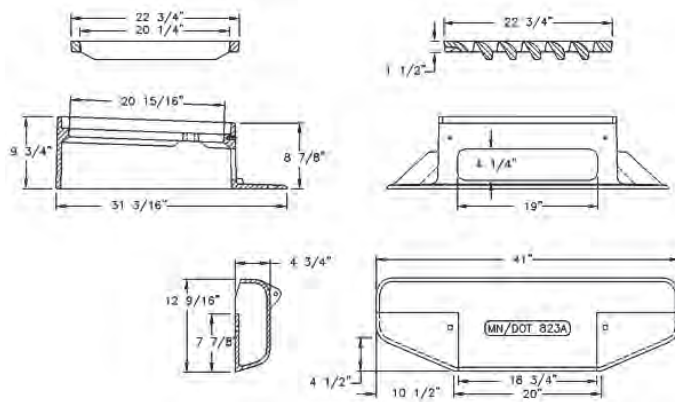
Heavy duty  
 Type M1 grate  
 Approximate 190 sq. in open area



### 7571 CATCH BASIN CURB INLET

Heavy duty  
 Approximate 190 sq. in. open area  
 Uses 7570 grates

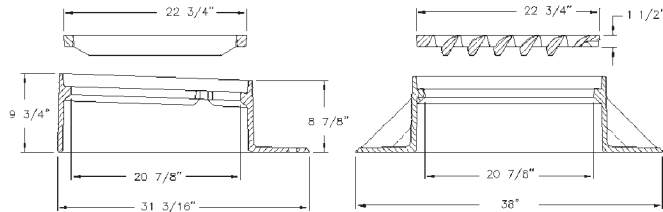
Options  
 Frame with cut-off front flange  
 Frame with 36" dia. full flange and cut flange



### 7582 CATCH BASIN INLET

Heavy duty  
 With 7570 Type M1 grate  
 Approximate 190 sq. in. open area  
 Uses 7570 grates

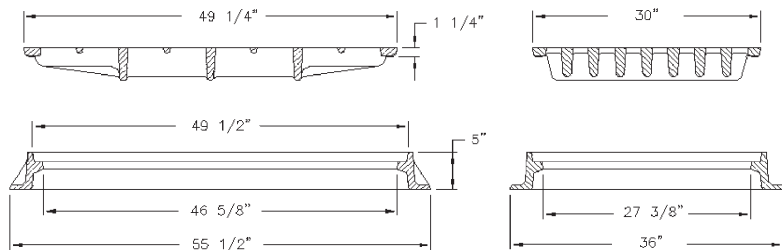
Options  
 Frame with full flange  
 Frame with 36" dia. full flange and cut flange



### 7585 CATCH BASIN INLET

Heavy duty  
 With Type M grate  
 Approximate 575 sq. in. open area

Options  
 Extra heavy duty airport

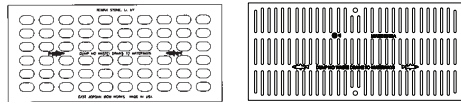


## 7590 CATCH BASIN INLET

Heavy duty  
 Type M grate and T2 Type NS 8" height  
 Approximate 415 sq. in. open area

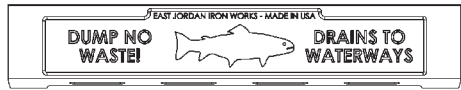
**Options**

- 4", 6" 8" and 10" backs available
- "DUMP NO WASTE!" lettering and fish image
- Adjusting risers
- T10 mountable curb
- 7590M2 ADA grate
- Type M1 grate

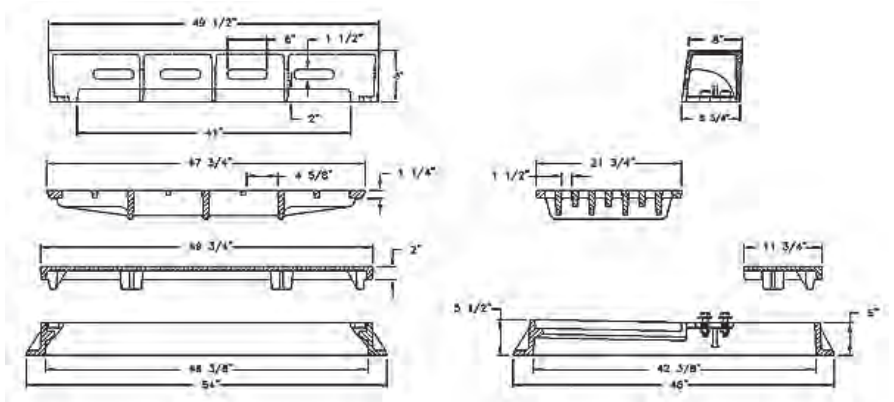


**Type M1 Grate**  
 Approx. 338 sq. in. open area

**Type M2 ADA Grate**  
 Heavy duty  
 Approx. 244 sq. in. open area



**T2 Back**



7590 Catch Basin Inlet

Back Type	Back Height
T5	Curb Inlet
T6	4
T7, T11	6
T8, T12	8
T9	10

Note: All dimensions are in inches.

### 7591 CATCH BASIN INLET

Heavy duty  
 7590 Type M grate and T8 back  
 Approximate 415 sq. in. open area  
 Uses 7590 grates and backs

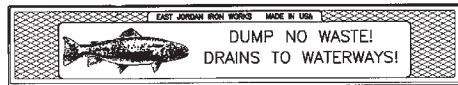
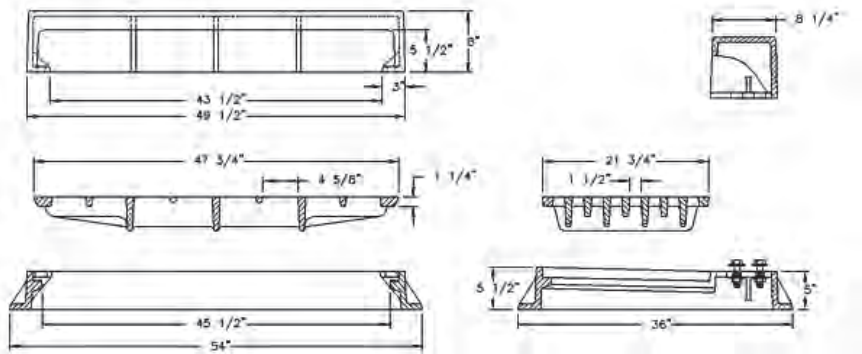
Options  
 7590M2 ADA grate  
 7590 Type M1 grate



7591 Catch Basin Inlet

Back Type	Back Height
T5	Curb Inlet
T6	4
T7, T11	6
T8, T12	8
T9	10

Note: All dimensions are in inches.

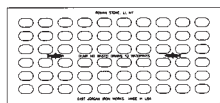
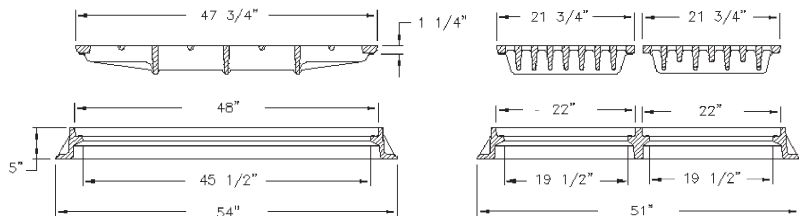
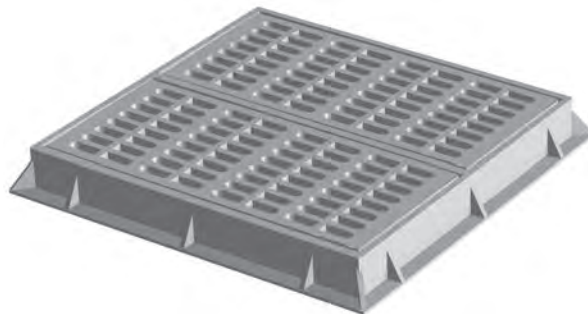


T8 Back

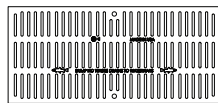
### 7592 CATCH BASIN INLET

Heavy duty  
 With two 7590 Type M grate  
 Approximate 830 sq. in. open area  
 Uses 7590 grates

Options  
 Adjusting risers  
 7590 M2 ADA grate  
 7590 Type M1 grate



**Type M1 Grate**  
 Approx. 338 sq. in.  
 open area

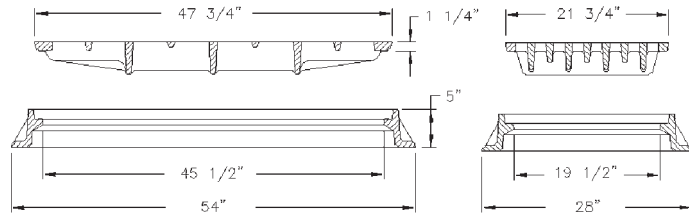
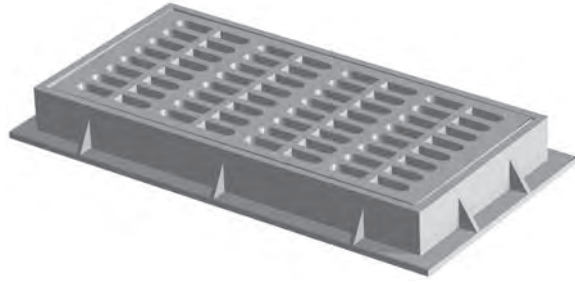


**Type M2 ADA Grate**  
 Heavy duty  
 Approx. 244 sq. in.  
 open area

### 7593 CATCH BASIN INLET

Heavy duty  
 With 7590 Type M grate  
 Approximate 415 sq. in. open area  
 Uses 7590 grates

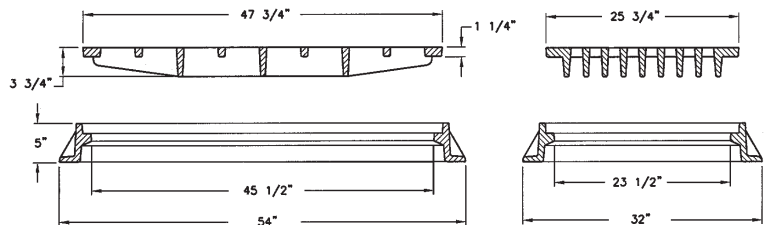
Options  
 Adjusting risers  
 7590 M2 ADA grate  
 7590 Type M1 grate



### 7595 INLET FRAME & GRATE

Heavy duty  
 Approximate 415 sq. in. open area

Options  
 ADA grate  
 9" height frame — 7595Z1  
 "DUMP NO WASTE!" lettering  
 Scupper frame with bolt holes



**7595M2 ADA Grate**  
 Approx. 244 sq. in. open area

## 7596 CURB & GUTTER INLET

Heavy duty  
 Approximate 415 sq. in. open area  
 Uses 7595 grate

### Options

ADA grate  
 6" height back with "DUMP NO WASTE!"  
 lettering and fish image — 7595T1  
 8" height back with "DUMP NO WASTE!"  
 lettering and fish image — 7595T2

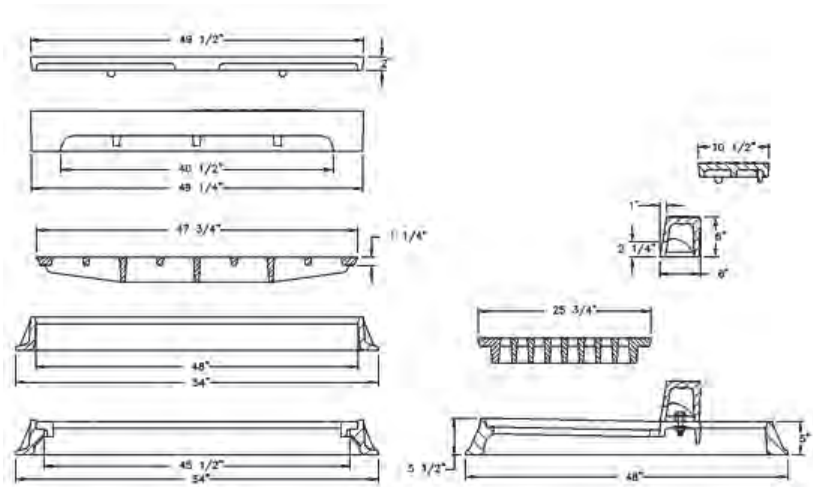


Illustrating 7596 with T1 back,  
 7595M1 grate and curb plate



### 7595M2 ADA Grate

Approx. 244 sq. in. open area



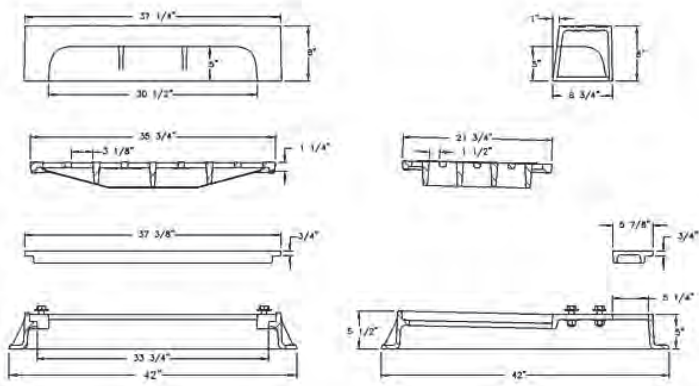
### 7597 CURB & GUTTER INLET

Heavy duty  
 Approximate 283 sq. in. open area  
 "DUMP NO WASTE!"  
 lettering and fish image

Options  
 6" height back — T2  
 8" height back — T1



Illustrating 7597 with T1 back, M1 grate and curb plate



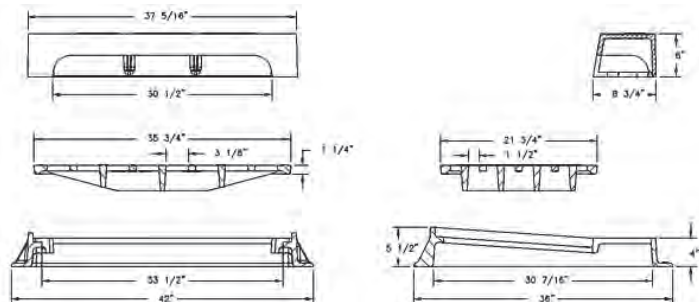
### 7598 CURB & GUTTER INLET

Heavy duty  
 Uses 7597 grates  
 Approximate 283 sq. in. open area  
 "DUMP NO WASTE!"  
 lettering and fish image

Options  
 6" height back — T2  
 8" height back — T1



Illustrating 7598Z1 frame, T2 back and 7597M1 grate



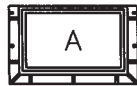
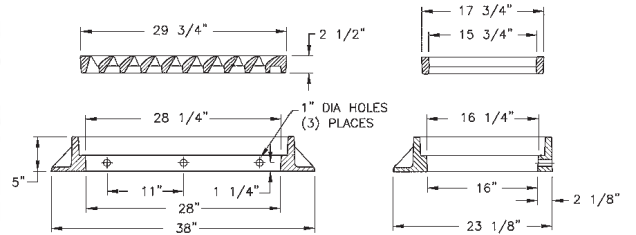
## 7600 CATCH BASIN SERIES, A-D

Options

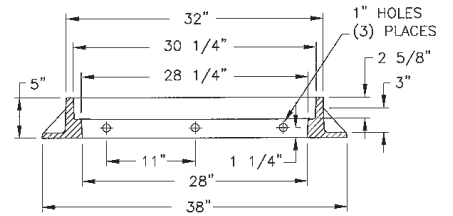
4", 6" mountable & 6", 8" barrier curbs



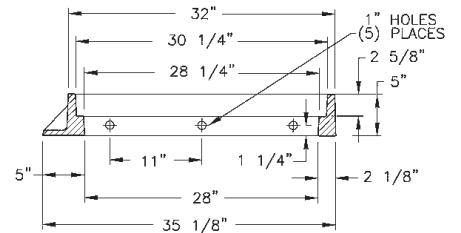
FRAME TYPES AVAILABLE



Oklahoma  
Type A frame



Oklahoma  
Type B left frame



### 7600 CATCH BASIN SERIES, A-D

Options

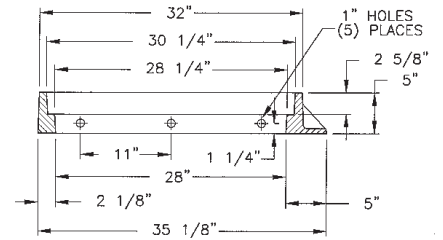
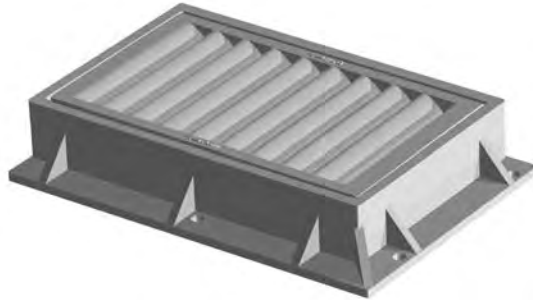
4", 6" mountable & 6", 8" barrier curbs



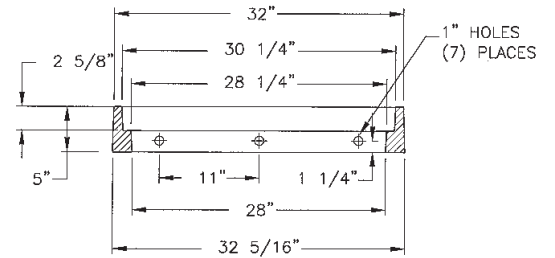
FRAME TYPES AVAILABLE



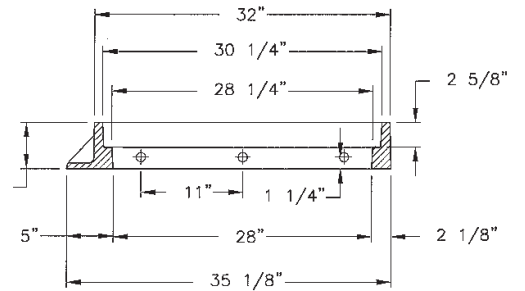
Oklahoma  
Type B right frame



Oklahoma  
Type C frame



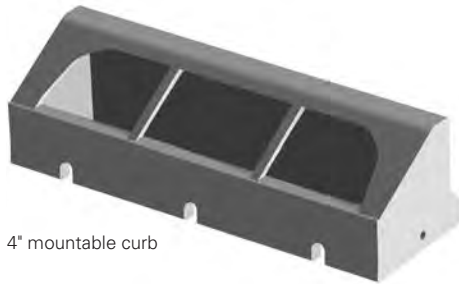
Oklahoma  
Type D frame



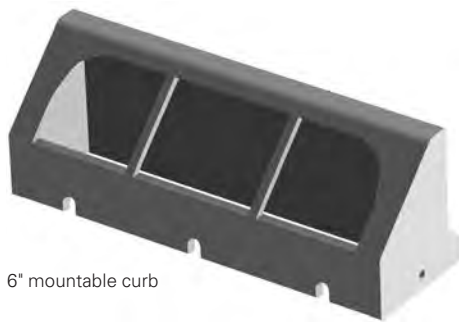
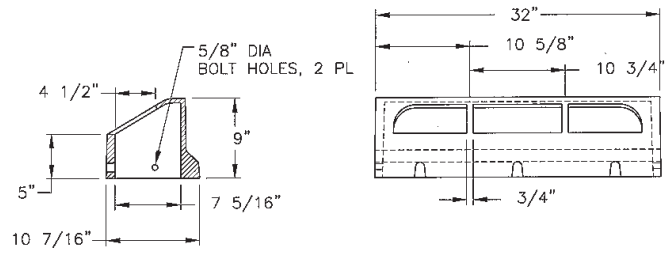
## 7600 CATCH BASIN SERIES, A-D

Options

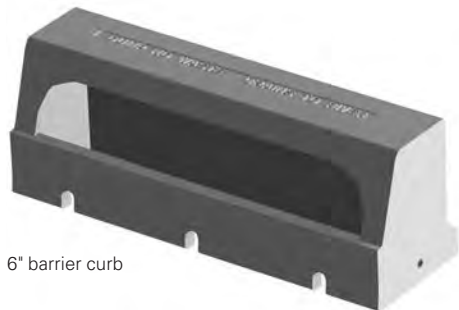
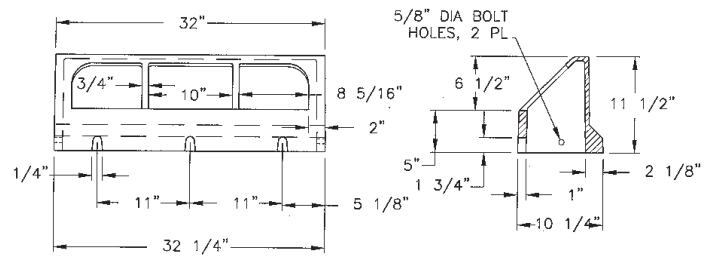
4", 6" mountable & 6", 8" barrier curbs



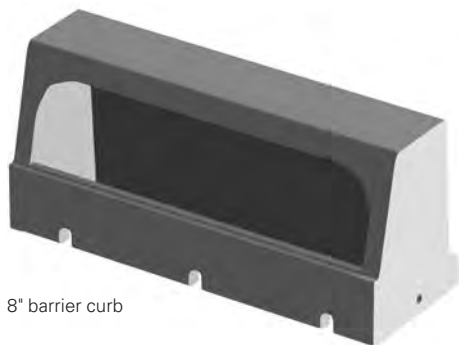
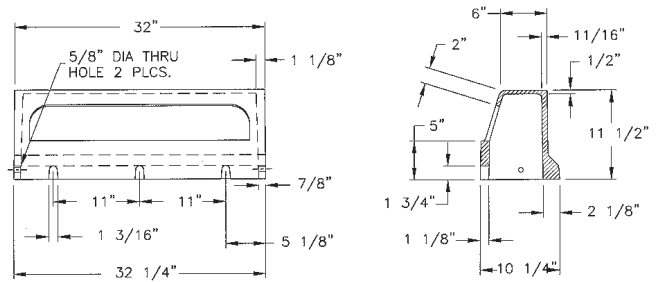
4" mountable curb



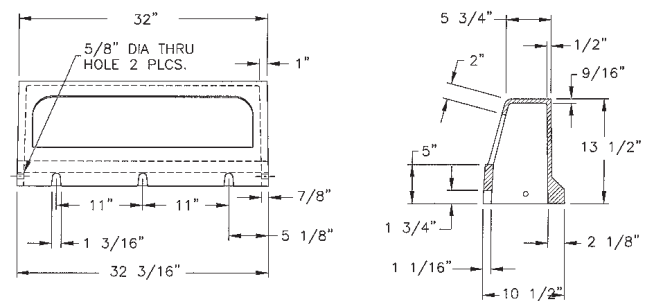
6" mountable curb



6" barrier curb



8" barrier curb

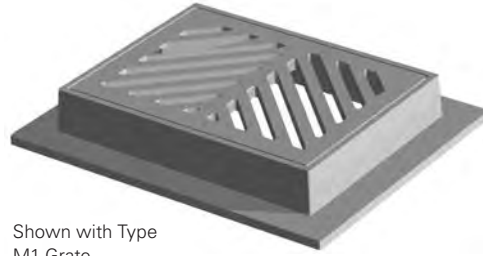


### 7700 CATCH BASIN INLET

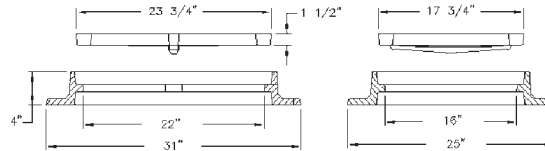
Heavy duty  
Reversible frame, specify BF or TF

**Options**

- Solid cover
- Special lettering
- Ductile iron grates and covers
- Diagonal and center bolting
- Adjusting risers
- ADA grates

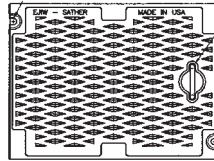


Shown with Type M1 Grate

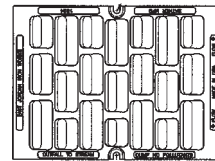


7700 Catch Basin Inlet

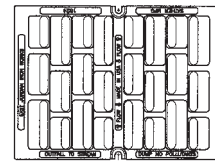
Grate Type	Open Area
M	128 sq. in.
M2 Vane	100 sq. in.
M3 Vane Bi-directional	100 sq. in.
M4 ADA	135 sq. in.
Solid Cover	N/A



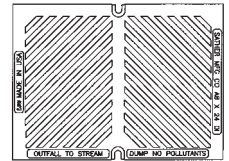
Type A Solid Cover



Type M2 Vane Grate



Type M3 Bi-directional Grate



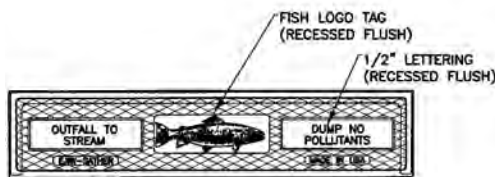
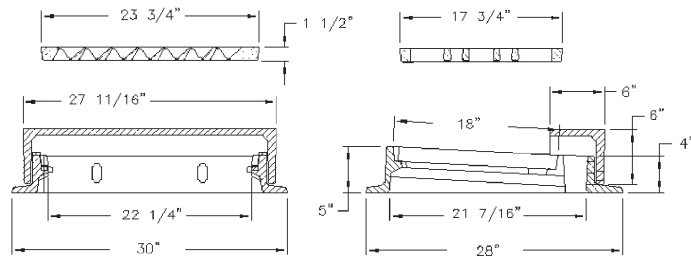
Type M4 ADA Grate

### 7701 CATCH BASIN CURB INLET

Heavy duty  
Uses 7700 grates  
Shown with Type M2 vane grate and Type T2 6" back

**Options**

- T1 9" & T2 6" backs
- "OUTFALL TO STREAM DUMP NO POLLUTANTS" lettering with fish image
- Ductile iron grate and cover
- Diagonal and center bolting

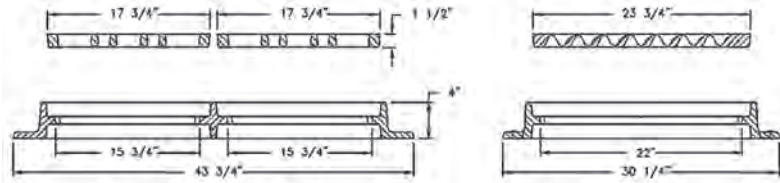


T2 Back

### 7705 CATCH BASIN INLET

Heavy duty  
 Double unit  
 Uses 7700 series grates  
 Reversible frame

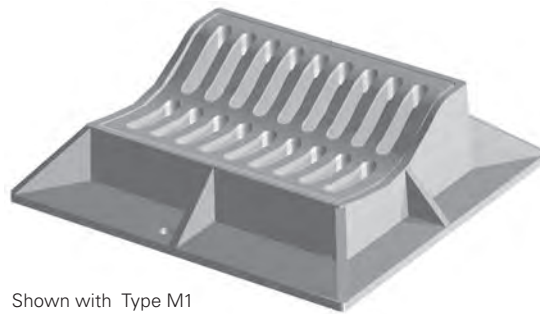
Options  
 Special lettering



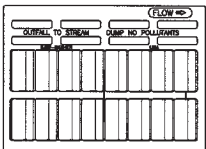
### 7711 ROLLED CURB FRAME & GRATE

Heavy duty  
 With M1 grate  
 Approximate 189 sq. in. open area

Options  
 Special lettering  
 LH or RH rolled vane grate  
 "OUTFALL TO STREAM DUMP  
 NO POLLUTANTS" lettering

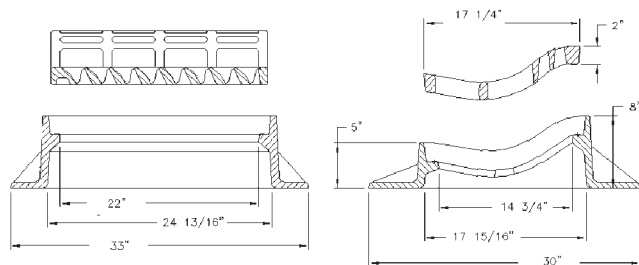


Shown with Type M1 Grate



#### Type M3 Rolled Vane Grate

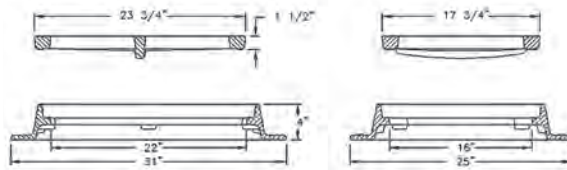
Right hand shown  
 Approx. 165 sq. in. open area



### 7715 CATCH BASIN INLET

Heavy duty  
Uses 7700 series grates

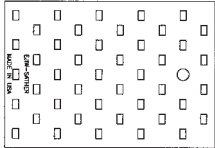
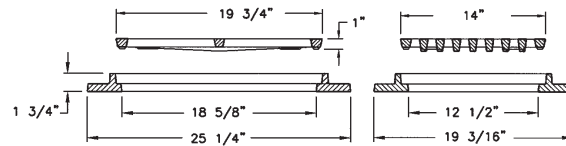
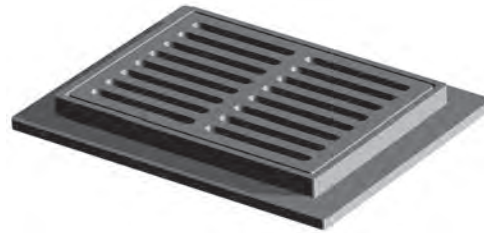
Options  
Special lettering  
Adjusting risers



### 7720 FRAME & GRATE

Light duty  
Approximate 100 sq. in. open area

Options  
Plain cover, drain lettering  
Bolted assembly

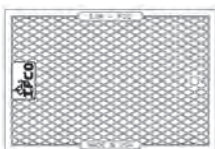
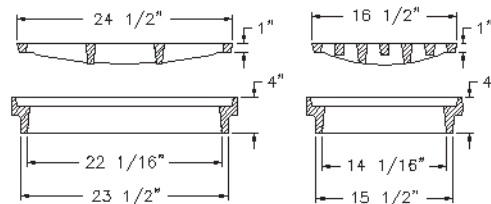


Plain Cover

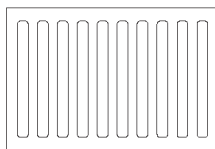
### 7737 CATCH BASIN

Heavy duty  
Shown with Type M2 grate  
Approximate 167 sq. in. open area

Options  
Solid covers  
Vane grate



Solid cover

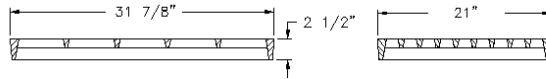


Type M1 Grate  
Approx. 167 sq. in. open area

### 7738 RECTANGULAR INLET GRATE

Heavy Duty  
Grate only  
Approximate 345 sq. in. open area

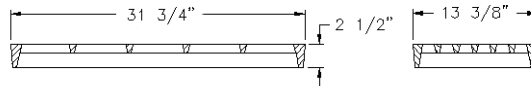
EJ recommends the use of iron frames  
providing support to entire bearing surface



### 7739 RECTANGULAR INLET GRATE

Heavy duty  
Grate only  
Approximate 196 sq. in. open area

EJ recommends the use of iron frames  
providing support to entire bearing surface



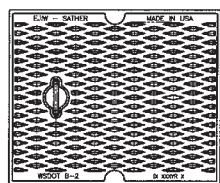
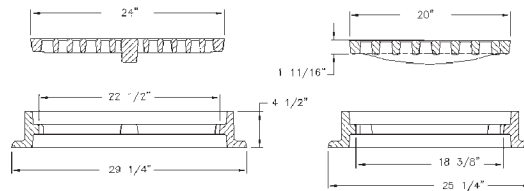
### 7750 FRAME & GRATE

Heavy duty  
Ductile iron grates  
Reversible frame

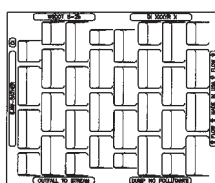
Options  
Ductile iron cover  
Drop handle  
Diagonal and center bolting  
Adjusting risers  
ADA grate



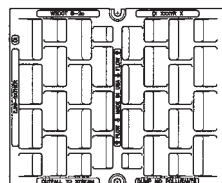
Shown with  
Type M1 Grate  
Approx. 185 sq. in. open area



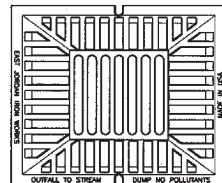
Type A Solid Cover



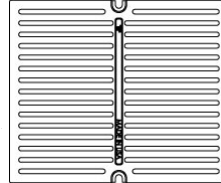
Type M2 Vane Grate  
Approx. 216 sq. in.  
open area



Type M3 Bi-directional  
Grate  
Approx. 216 sq. in.  
open area



Type O Beehive Grate  
Approx. 229 sq. in.  
open area

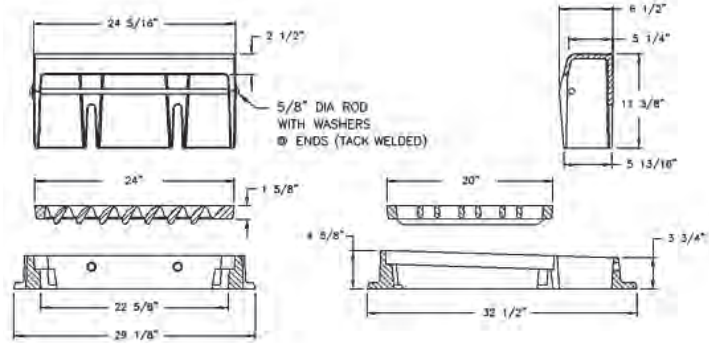


Type M5 ADA Grate  
Approx. 152 sq. in.  
open area

### 7752 CURB & GUTTER INLET

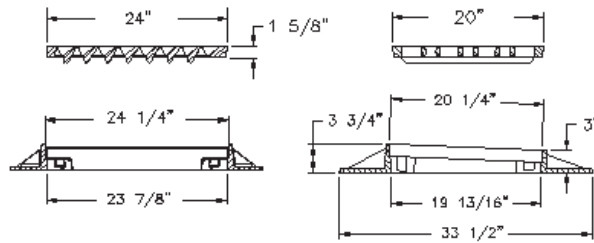
Heavy duty  
 Shown with Type M grate  
 Uses 7750 grates, ductile or gray iron

Options  
 Grate guard



### 7753 ROUND BASE CATCH BASIN

Heavy duty  
 Uses 7750 grates, ductile or gray iron  
 Shown with Type M1 grate



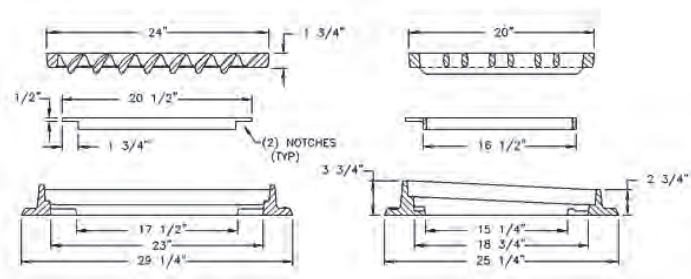
### 7756 CATCH BASIN FRAME

Heavy duty  
 Uses EJ 7750 grates, ductile or gray Iron  
 Shown with Type M1 grate

Options  
 Grate guard



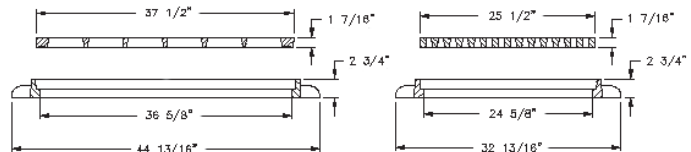
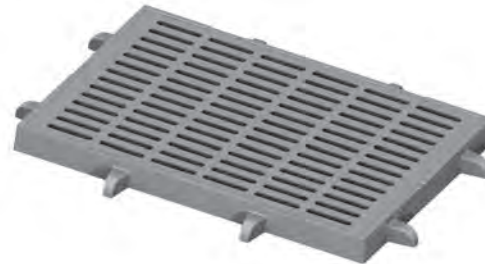
Grate Guard



### 7761 CURB & GUTTER INLET

Heavy Duty  
 Approximate 315 sq. in. open area

Options  
 Gray or ductile iron grate  
 "DUMP NO WASTE!" lettering

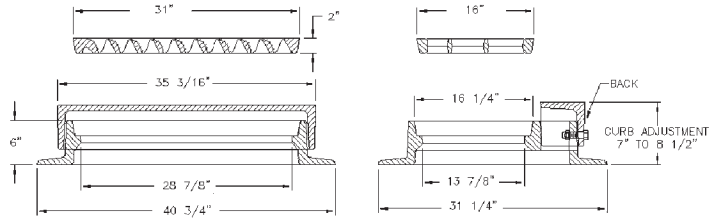


### 7765 CURB & GUTTER INLET

Heavy duty  
 Ductile iron grate  
 Fish image on 6" T1 back  
 Approximate 163 sq. in. open area

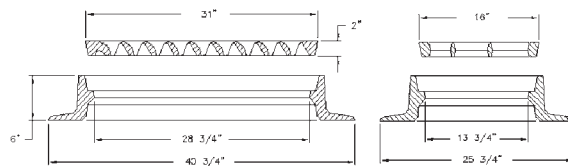


T1 Back



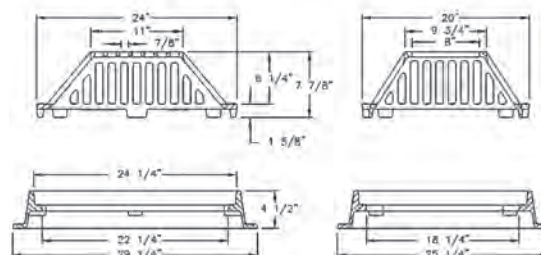
### 7766 CURB & GUTTER INLET

Heavy duty  
 Ductile iron grate — 7765  
 Approximate 163 sq. in. open area



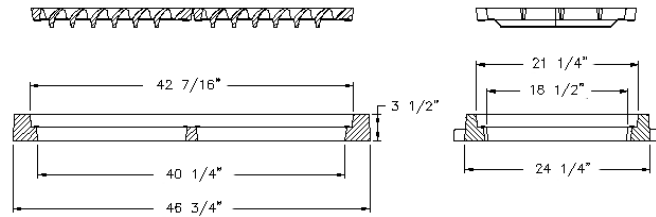
### 7770 CATCH BASIN

Heavy duty  
 Machined bearing surfaces



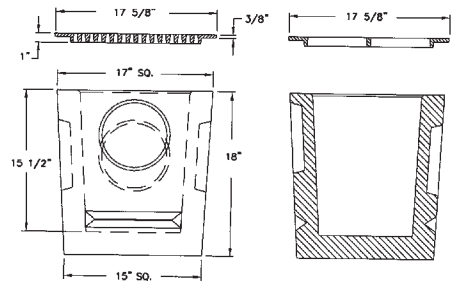
### 7775 CURB & GUTTER INLET

Heavy duty  
 Bolted assembly  
 Approximate 260 sq. in. open area



### 7780 CATCH BASIN

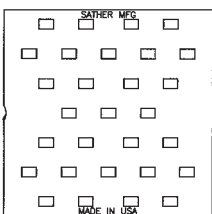
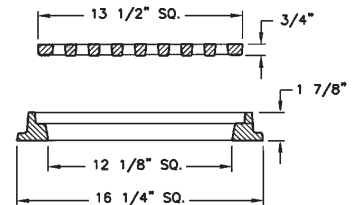
Light duty (Non-traffic)  
 Approximate 163 sq. in. open area



### 7797 FRAME & GRATE

Light duty (Non-traffic)  
 Approximate 70 sq. in. open area

Options  
 Solid cover  
 Bolted assembly



Solid Cover



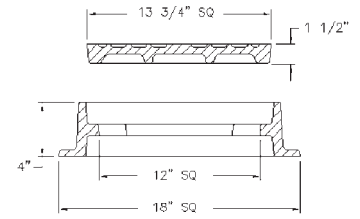
# Miscellaneous Products



### 8001 JUNCTION BOX FRAME & COVER

Medium duty  
Reversible frame

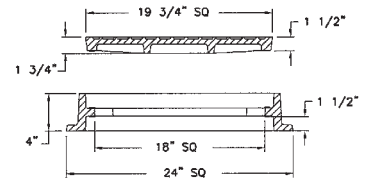
Options  
Special lettered covers  
Watertite assembly



### 8004 JUNCTION BOX FRAME & COVER

Heavy duty  
Reversible frame  
Watertite assembly  
Lift ring  
Pick bars

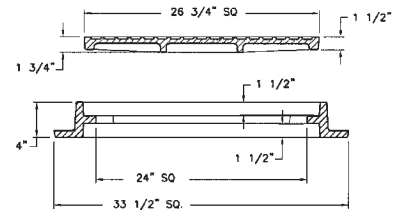
Options  
Special lettered covers



### 8008 JUNCTION BOX FRAME & COVER

Heavy duty  
Reversible frame  
Watertite assembly  
Lift ring  
Pick bars

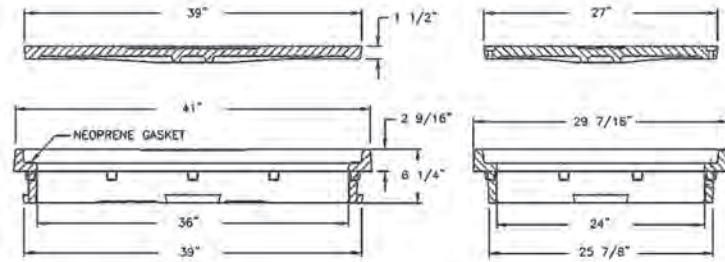
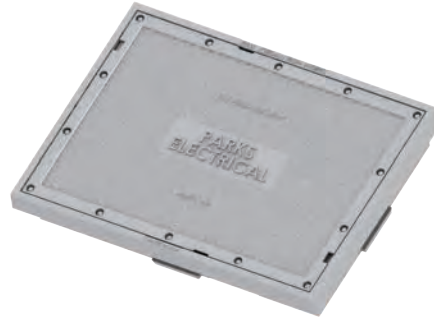
Options  
Special lettered covers



### 8014 JUNCTION BOX FRAME & COVER

- Heavy duty
- Galvanized
- Pick hole
- Watertite assembly
- Ductile iron cover
- Bolting

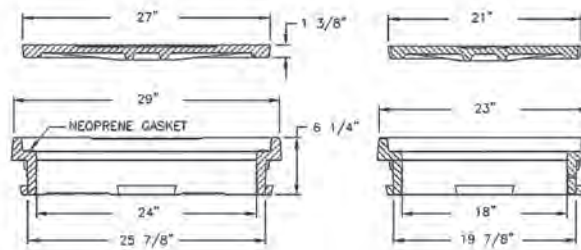
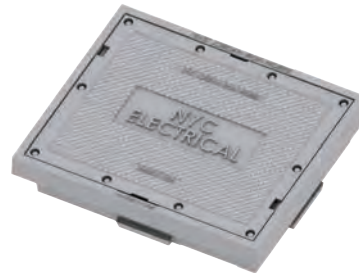
- Options
- Special lettered covers



### 8015 JUNCTION BOX FRAME & COVER

- Heavy duty
- Galvanized
- Watertite assembly
- Bolting

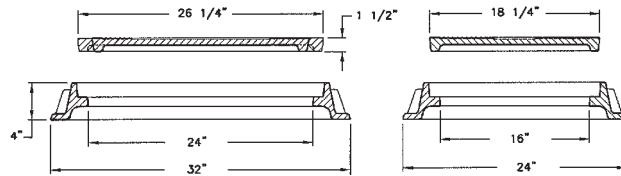
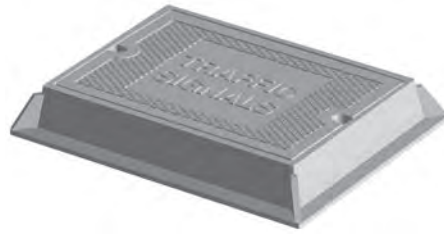
- Options
- Special lettered covers



### 8016 JUNCTION BOX FRAME & COVER

Heavy duty  
Stackable frames

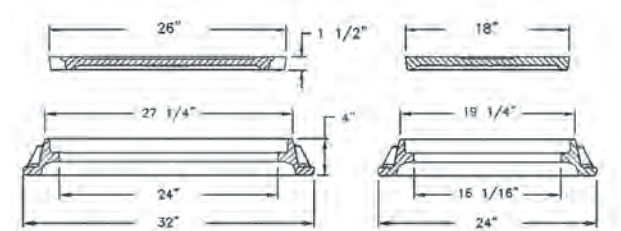
Options  
Special lettered covers



### 8018 JUNCTION BOX FRAME & COVER

Heavy duty  
Pick hole  
Stackable frames

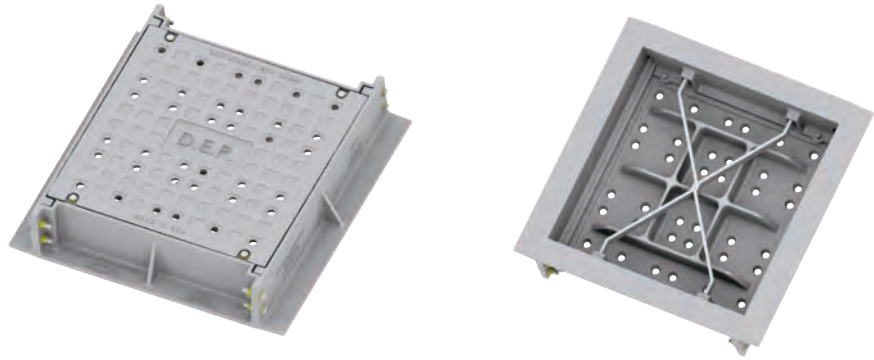
Options  
Special lettered covers



### 8023 CATCH BASIN CURB INLET

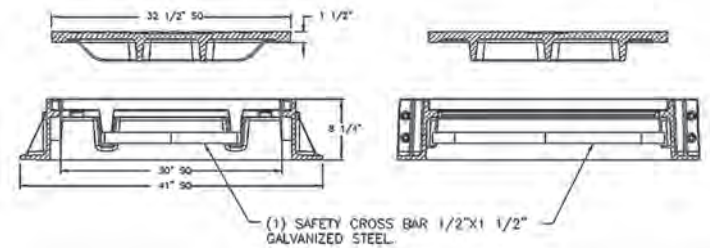
Heavy duty  
Bolted down assembly

Options  
Two or three cover unit  
Continuous assemblies available



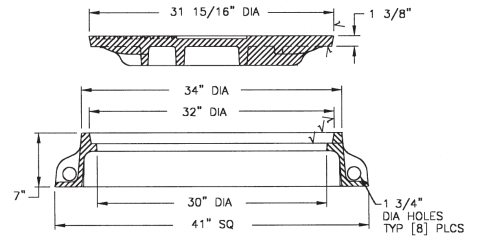
Top View

Bottom View



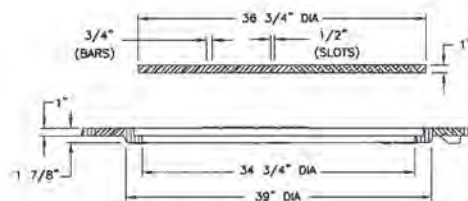
### 8027 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces



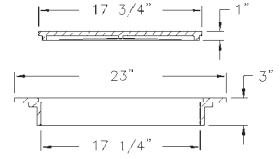
### 8032 FRAME & GRATE

Light duty (Non-traffic)  
Adapter frame grate  
Approximate 1729 sq. in. open area



### 8040 METER FRAME & COVER

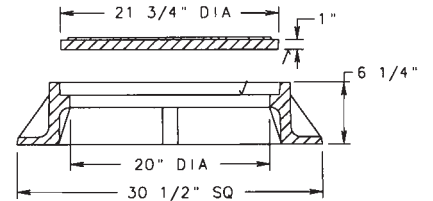
Light duty (Non-traffic)  
Meter frame and cover



### 8045 FRAME & COVER

Heavy duty  
Machined bearing surfaces  
Uses 8035 covers

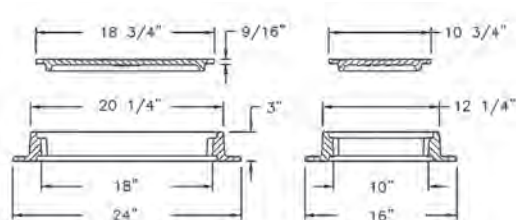
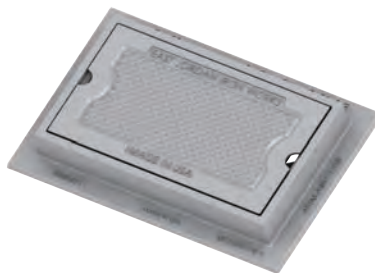
Options  
Special lettered covers



### 8047 JUNCTION BOX FRAME & COVER

Medium duty  
Ground strap  
Pick bar

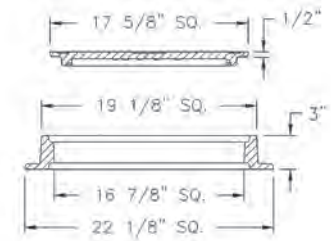
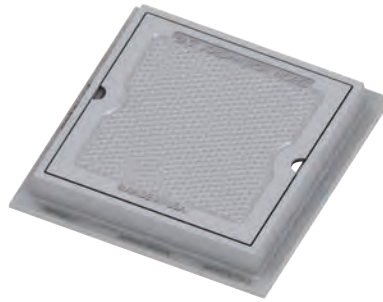
Options  
Special lettered covers  
Bolted assembly



### 8048 JUNCTION BOX FRAME & COVER

Light duty  
Reversible frame  
Pick holes

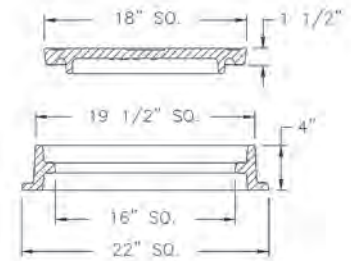
Options  
Special lettered covers



### 8049 JUNCTION BOX FRAME & COVER

Heavy duty  
Reversible frame  
Pick holes

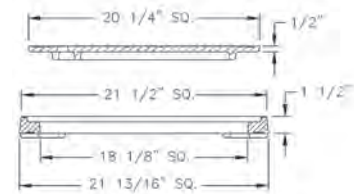
Options  
Special lettered covers



### 8052 JUNCTION BOX FRAME & COVER

Light duty (Non-traffic)  
Pick hole  
Bolting

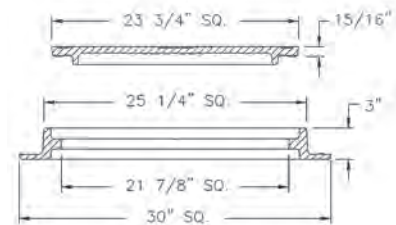
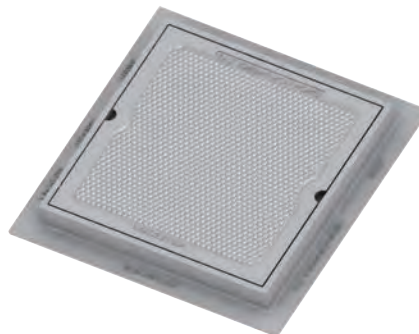
Options  
Special lettered covers



### 8053 JUNCTION BOX FRAME & COVER

Light duty (Non-traffic)  
Reversible frame  
Pick holes

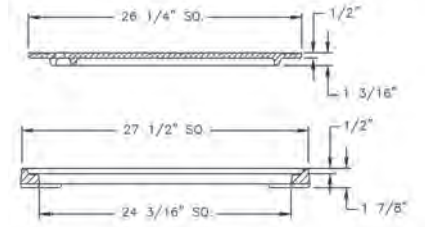
Options  
Special lettered covers  
Medium duty  
Pick bar  
Bolted assembly  
Ground strap  
Handle pick hole



### 8054 JUNCTION BOX FRAME & COVER

Light duty (Non-traffic)  
 Pick hole  
 Bolting

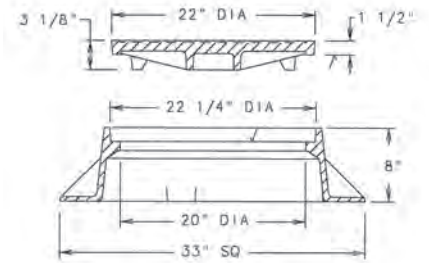
Options  
 Special lettered covers



### 8055 FRAME & COVER

Heavy duty  
 Machined bearing surfaces

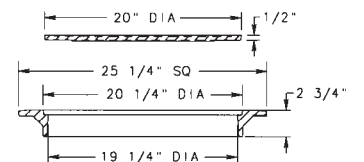
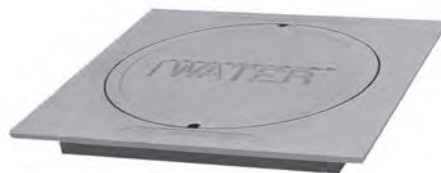
Options  
 Extra heavy duty ductile iron covers  
 Special lettered covers  
 Gasket seal covers



### 8065 WATER METER FRAME & COVER

Light duty (Non-traffic)

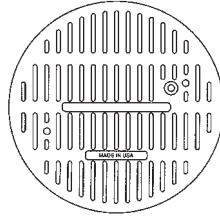
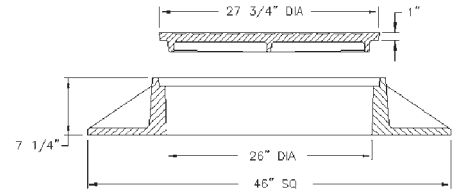
Options  
 Special lettered covers



### 8075 FRAME & COVER

Heavy duty  
Vertical and horizontal machined surfaces

Options  
Grate

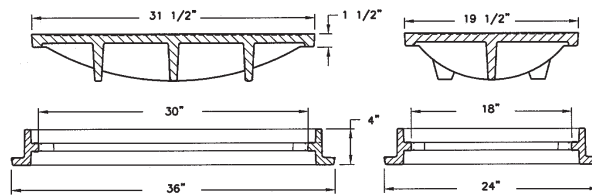


Type M Grate  
Approx. 128 sq. in. open area

### 8083 FRAME & COVER

Extra heavy duty  
Reversible frame  
Ductile iron cover  
Watertite assembly  
Drop handles

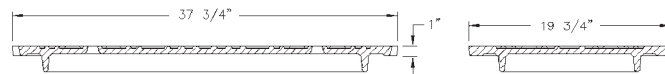
Options:  
Special lettered covers  
Recessed SS hex head bolts or special security bolts



### 8100 COVER

Medium duty  
Steel frame required

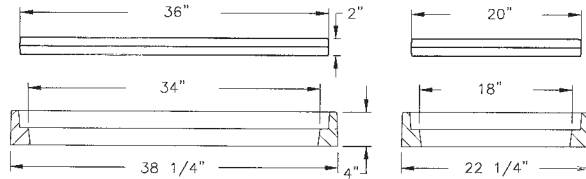
Options  
Special lettered covers



### 8105 CATCH BASIN CURB INLET

Heavy duty  
 With Type M1 grate  
 Approximate 320 sq. in. open area  
 "ONLY RAIN DOWN  
 THE STORM DRAIN" lettering

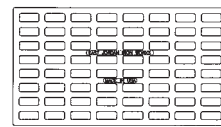
Options  
 Solid cover



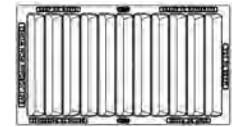
**Solid Cover Heavy Duty**



**Type M2 Grate**  
 Approx. 370 sq. in.  
 open area



**Type M3 Grate**  
 Approx. 295 sq. in.  
 open area

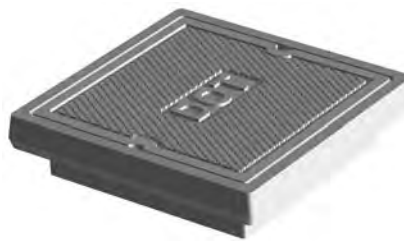


**Type M4 Grate**  
 Heavy duty  
 Approx. 312 sq. in.  
 open area

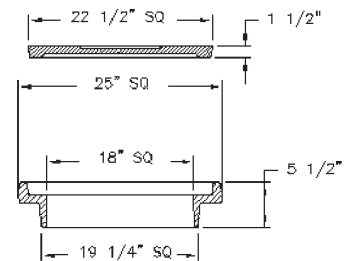
### 8106 JUNCTION BOX FRAME & COVER

Heavy duty  
 Double unit available — 8107

Options  
 Special lettered covers



Illustrating 8106

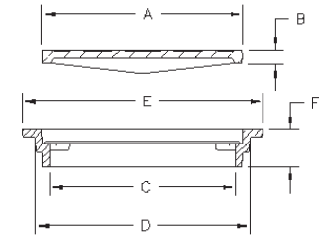
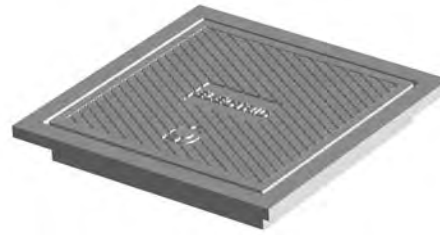


Illustrating 8107

## 8201 — 8233 SQUARE & RECTANGULAR COVERS & GRATES

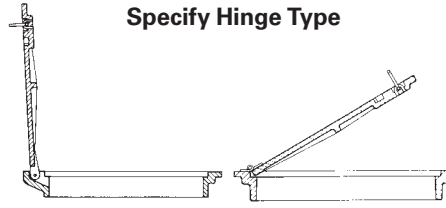
Heavy duty  
Specify cover or grate  
Type 2 lift ring

Options  
Special lettered covers  
Hinged assembly with  
safety bar — specify Type  
Bolted assembly  
Hasp lock



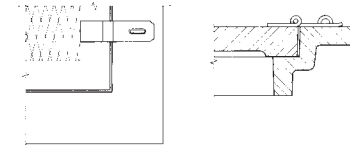
NOTE: Safety bar comes on hinged units

### Specify Hinge Type



Concealed hinge

Heavy duty stainless steel hinge



Heavy duty hasp available

### 8201 — 8233 Square & Rectangular Covers & Grates

Catalog Number	A Cover Grate Size	B Cover Height	C Clear Opening	D Frame Outside	E Flange Size	F Frame Height	Open Area Sq. In.
<b>Square Manholes</b>							
8201	13 5/8	1 1/2	12	14 7/8	18	4	50
8204	20	1 1/2	18	22	24 1/4	4	NA
8205	21 1/2	1 1/2	20	23 1/4	26	4	155
8206	23 1/2	1 1/2	22	25	28	4	220
8208	25 3/4	1 1/2	23 1/2	27 1/2	30	4	270
8213	31 3/4	1 1/2	30	33 5/16	36 5/8	4	430
<b>Rectangular Manholes</b>							
8222	19 x 25	1 1/2	18 x 24	21 5/16 x 27 3/8	24 x 30	4	185
8228	25 1/2 x 31 1/2	1 1/2	24 x 30	27 1/4 x 33 1/4	30 x 36	4	350
8233*	32 x 50	1 1/2	30 x 48	34 1/4 x 52 1/4	38 x 54	4	640

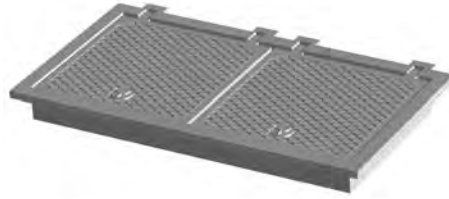
Note: All dimensions are in inches.  
Type 2 lift ring will be furnished unless otherwise specified.  
\*Two piece cover or two piece grate

## 8244 — 8283 SQUARE & RECTANGULAR MANHOLE FRAME & COVER

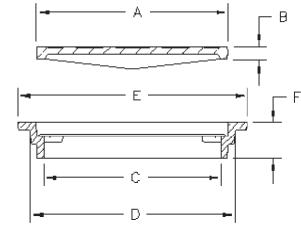
Light duty (Non-traffic)  
Type 2 lift ring

**Options**

- Special lettered covers
- Hinged assembly with safety bar — specify type, page 279
- Bolted assembly
- Hasp lock, page 279



Illustrating 8273 with concealed hinges



**NOTE:**

Safety bar comes with hinged units.  
Type 2 lift ring will be furnished unless otherwise specified.

8244 — 8283 Square & Rectangular Manhole frame & Cover

Catalog Number	A Cover Size	B Cover Thickness	C Clear Opening	D Frame Outside	F Frame Height	E Flange Size
<b>Square Manholes</b>						
8244	19 3/4 sq.	11/16	18 3/4 sq.	21 11/16 sq.	4	24 sq.
8247	25 1/4 sq.	11/16	24 sq.	28 sq.	4	30 sq.
8249	31 3/4 sq.	3/4	30 sq.	32 5/8 sq.	4	37 sq.
<b>Rectangular Manholes</b>						
8270	25 3/4 x 31 3/4	11/16	24 x 30	28 x 34	4	30 x 36
8271	25 3/4 x 37 3/4	5/8	23 7/8 x 35 7/8	26 3/4 x 38 3/4	4	30 x 42
8273*	25 5/8 x 51 1/4	3/4	24 x 49	27 x 52 1/2	4	30 x 55 1/2

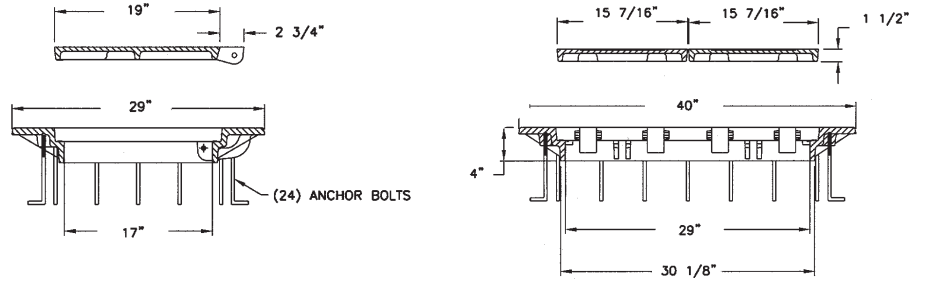
Note: All dimensions are in inches.

\*Two Piece Cover

## 8267 FRAME & COVER

- Heavy duty
- Ductile iron covers
- Lift rings
- Anchor bolts on frame
- Ductile iron safety arm

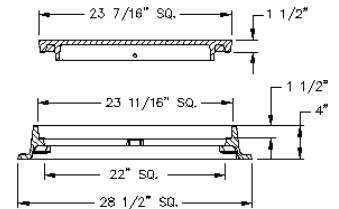
- Options
- Special lettered covers



## 8297 SQUARE JUNCTION BOX

Heavy duty

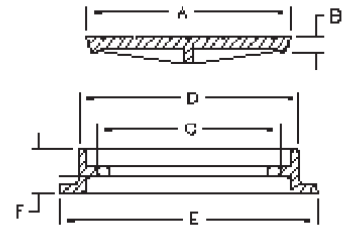
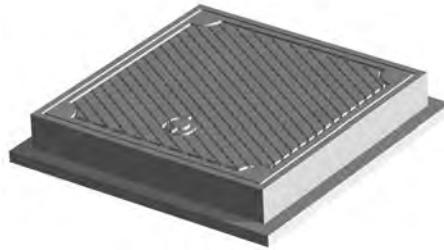
- Options
- Special lettered covers



### 8301 — 8333 SQUARE & RECTANGULAR FRAME & COVER

Heavy duty  
 Reversible frame  
 Type 2 lift ring

Options  
 Watertite bolted assembly  
 Grates



NOTE: Type 2 lift ring will be furnished unless otherwise specified.

8301 — 8333 Square & Rectangular frame & Cover

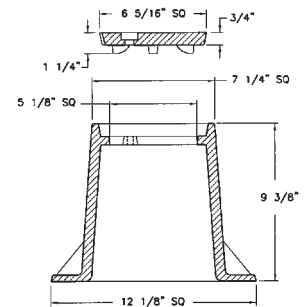
Catalog Number	A Cover Grate Size	B Cover Height	C Clear Opening	D Frame Outside	E Flange Size	F Frame Height	Open Area Sq. In.
<b>Square Manholes</b>							
8301	13 5/8 sq.	1 1/2	12	15 1/8 sq.	18 sq.	4	50
8304	20 sq.	1 1/2	18	21 1/4 sq.	24 sq.	4	NA
8305	21 3/4 sq.	1 1/2	20	23 1/8 sq.	26 sq.	4	155
8306	23 1/2	1 1/2	22	24 15/16 sq.	28 sq.	4	215.
8308	25 3/4	1 1/2	24	26 7/8 sq.	30 sq.	4	270
8313	31 3/4 sq.	1 1/2	30	33 1/4 sq.	36 sq.	4	425
8315	37 5/16 sq.	1 1/2	35 5/16	38 7/8 sq.	41 5/8 sq.	4	500
<b>Rectangular Manholes</b>							
8322	19 x 25	1 1/2	18 x 24	20 5/8 x 26 9/16	24 x 30	4	190
8328	25 1/2 x 31 1/2	1 1/2	24 x 30	27 x 33	30 x 36	4	350
8333*	32 x 50	1 1/2	30 x 48	33 3/4 x 51 7/8	38 x 54	4	640

Note: All dimensions are in inches.  
 \* Two Piece Cover or Two Piece Grate

### 8340 METER BOX & COVER

Heavy duty  
 Bolted assembly

Options  
 Special lettered covers  
 Adjusting risers



### 8350 SQUARE FRAME & COVER

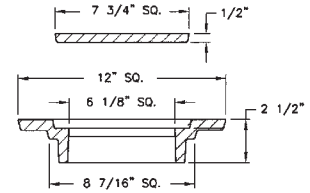
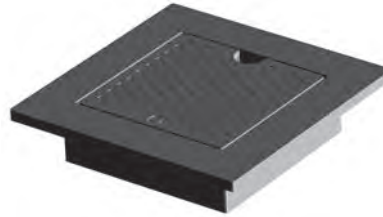
Extra heavy duty  
 Bolted assembly recommended  
 Due to small size, 9" x 9" loading  
 not applicable

**Options**

Recessed stainless steel hex  
 bolts or special security bolts  
 Special lettered covers

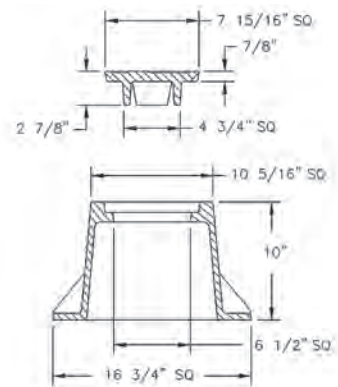
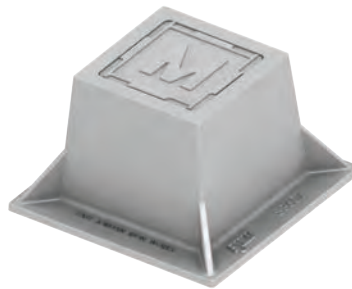
**MATERIAL SPECIFICATIONS**

Frame - Gray Iron ASTM A48, Class 35B  
 Cover - Gray Iron ASTM A48, Class 35B



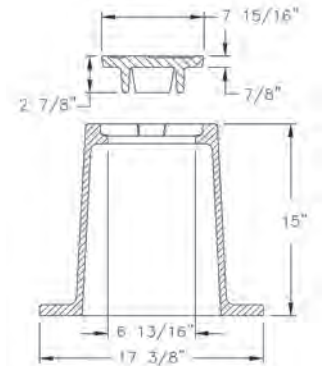
### 8360 MONUMENT BOX

Heavy duty  
 Special lettered covers  
 Adjustment risers available  
 15" height frame — 8365



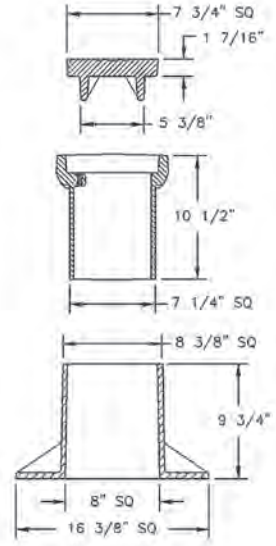
### 8365 MONUMENT BOX

Heavy duty  
 Special lettered covers  
 Adjustment risers available  
 10" height frame — 8360



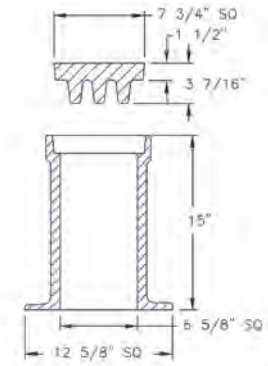
### 8371 MONUMENT BOX

Heavy duty  
 3 piece unit  
 Special lettered covers  
 Adjustable frame



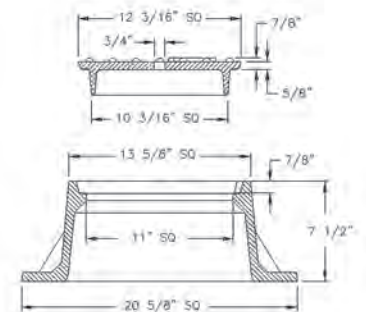
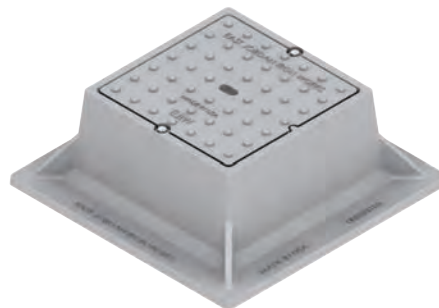
### 8375 MONUMENT BOX

Heavy duty  
 2 piece unit  
 Special lettered covers  
 Bolted and unbolted



### 8380 MONUMENT BOX

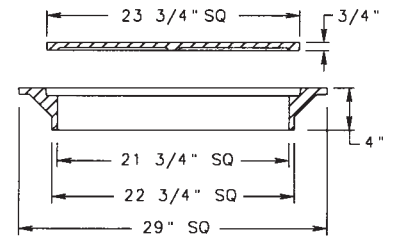
Heavy duty  
 Bolted and unbolted



### 8390 SQUARE FRAME & COVER

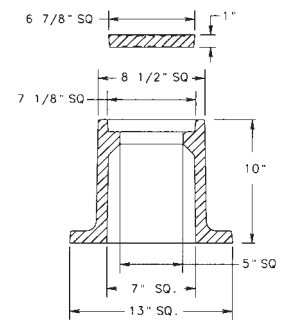
Heavy duty

Options  
Special lettered covers



### 8396 MONUMENT BOX

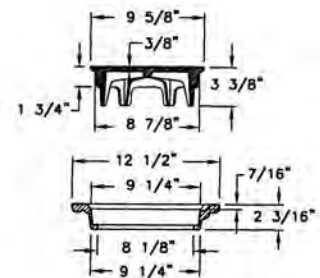
Heavy duty  
Monument box



### 8425 VALVE BOX FRAME & COVER

Heavy duty

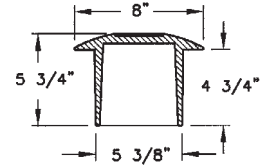
Options  
Special lettered covers



### V- 8457-1 MUSHROOM COVER

Heavy duty  
Fits inside 6" ID pipe

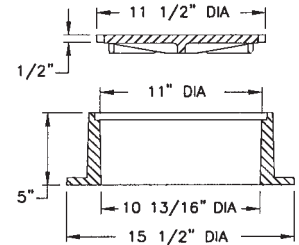
Options  
"S" or "G" marking



### V-8502 CLEANOUT FRAME & COVER

Light duty (Non-traffic)

Options  
Special lettered covers



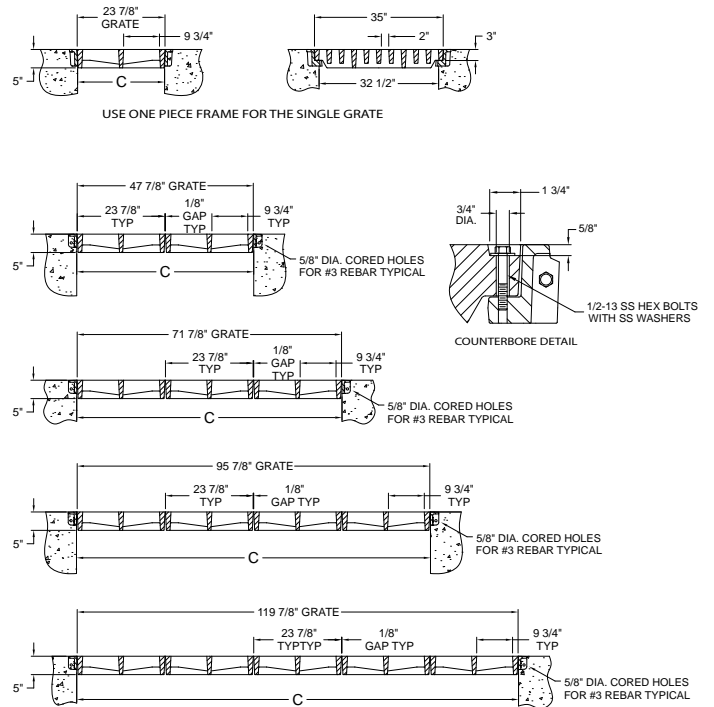


ej

## Linear Trench Grates



## 5436 TRENCH GRATE, FRAME, AND COVER SERIES

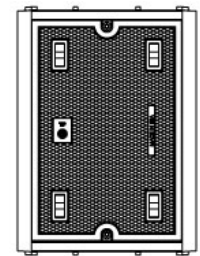


Caution: Do not disassemble bolted grates before setting sections in concrete

Features	Solid Covers	Grate	Frame Series	Lock Type	Other
Airport Extra Heavy Duty Solid covers available	Ductile iron Available for 1, 2, 3 and 4 grate	Ductile iron 385 sq. in. of open area per grate	Ductile iron <b>Top Flange—One Piece</b> Single grate or cover 5436Z5 <b>Top Flange—Two Piece</b> Double grate or cover 5436Z6 <b>Top Flange—Modular/Expandable</b> Multiple grate/cover assemblies 5436Z1—Load bearing support side frame (with 1 1/2" thick support area) 5436Z2—End side frame	Hex bolts Pent head bolting	Custom badging/lettering on cover available  Monolithic frame available for single and double assemblies for ease of assembly

5436 Standard Drainage Inlet, Frame and Grate Assembly Series

Series Number	Grates	Grate Width	Seat Depth	Trench Clear Opening Width	Trench Opening Length	Open Area Sq. In
00543633B03	1 Grate*	23 7/8	3	23 3/4	32	385
00543632B03	2 Grate*	48 1/8	3	47 7/8	32 1/2	769
00543606	3 Grate*	72 1/8	3	71 7/8	32 1/2	1155
00543608	4 Grate*	96 1/4	3	95 7/8	32 1/2	1538
00543734B01	5 Grate	120 1/8	3	119 7/8	38 7/8	1930



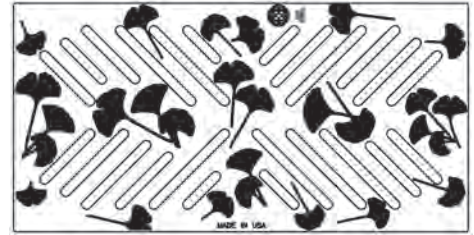
00543601 Cover

Note: All dimensions are in inches.

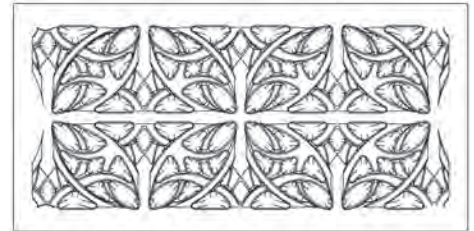
\*Solid covers available

## ARTISTIC TRENCH GRATES

Surface drainage for dynamic public spaces require a unique solution. Make an impression with our cast iron ADA designer trench grates. Patterns that coordinate with our exclusive tree grates are cast in 24" lengths, 1-1/2" seat. Optional 6950 cast iron frames are available in 24", 36" and 48" lengths. For security, bolted trench grate units are assembled in 24" sections using stainless steel 1/2" hex bolts and special lock washers.



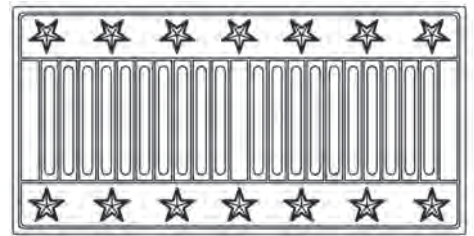
6883 Ginkgo 12" x 24"



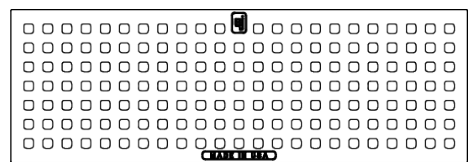
6873 Garland 12" x 24"

### Designer and Pedestrian Trench Drainage Series

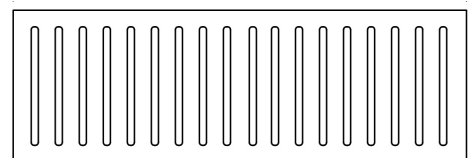
Series Name	Series Number	Size	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft	Load Rating
Ginkgo	6883*	12 x 24	12	1 1/2	10	25	Heavy duty
Garland	6873*	12 x 24	12	1 1/2	10	13	Medium duty
Garland	6874*	14 x 24	14	1 1/2	12	13	Medium duty
Patriot	6893*	12 x 24	12	1 1/2	10	28	Heavy duty
Manhattan	6896	4 x 24	4	1	2	16	Non-traffic
Manhattan	6897	6 x 24	6	1	4	27 1/4	Non-traffic
Manhattan	6898	8 x 24	8	1 1/2	6	37	Non-traffic
Pedestrian	V7381*	8 x 24	8	1 1/2	6	21	Heavy duty
Pedestrian	V7382*	10 x 24	10	1 1/2	8	28	Heavy duty
Pedestrian	V7383*	12 x 24	12	1 1/2	10	29	Heavy duty
Pedestrian	V7384*	14 x 24	14	2	12	39	Heavy duty
Pedestrian	V7385*	17 x 24	17	2	15	48	Heavy duty
Pedestrian	V7386*	20 x 24	20	2	18	58	Heavy duty
Pedestrian	6861*	8 x 48	8	1	6	33 1/2	Heavy duty
Pedestrian	6932*	9 x 36	9	1 1/4	7	20	Heavy duty
Pedestrian	6954*	14 x 24	14	1 1/2	12	56	Extra HD



6893 Patriot 12" x 24"



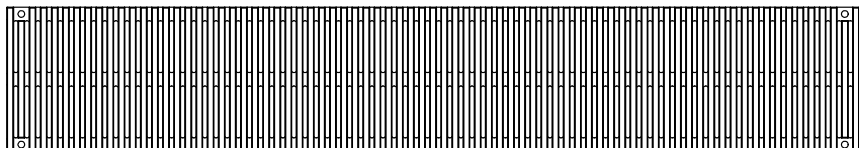
6898 Manhattan 8" x 24"



V7381 Trench Grate 8" x 24"

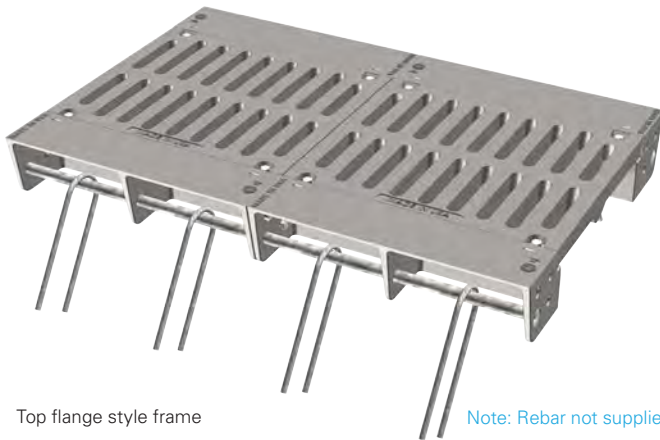
Note: All dimensions are in inches.

\*Bolting available



6861M Trench Grate 8" x 48"

## 6900 LINEAR TRENCH DRAINAGE SERIES



Top flange style frame

Note: Rebar not supplied



Angle style frame

Note: Rebar (not supplied) to be installed in all trench frames per engineer or designer's direction

Features	Grate	Frame Series	Lock Type	Other
Airport extra heavy duty Holes in rail for rebar Also available in standard heavy duty Solid covers available	Ductile or gray iron	<b>Top Flange</b> Gray iron, 24" lengths: 6900Z4 (6-11/16" wide) 6900Z5 (5" wide)  <b>Angle Style</b> Gray iron or ductile iron 24": 6900Z1 48": 6900Z2	Hex bolts Pent head bolts	End cap for 10", 24" and 36" wide trench 45 degree turns—18", 48" wide trenches 90 degree turns—18", 24" wide trenches 90 degree tee—18", 24" wide trenches 90 degree cross intersection—18", 24" wide trenches

Caution: Do not disassemble bolted grates before setting sections in concrete

6900 Top Flange Trench Frame and Grate Series

Series Number	Grate Width	Seat Depth	Trench Width	Open Area Sq. In./Ft
6901	8	2	6	29
6902*	10	2	8	33
6903	12	2	10	40
6904*	14	2	12	49
6905	17	2	15	66
6906*	20	2	18	90
6907	23	2	21	92
6908*	26	2	24	102
6909	32	2	30	254
6910	34	2	32	138
6912	51	2	48	248

Note: All dimensions are in inches.  
\*Solid covers available

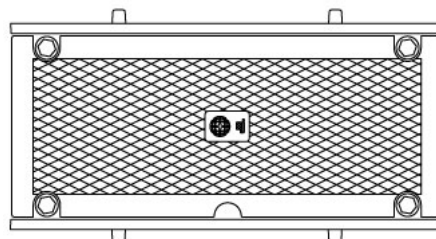
### Trench frame and grate with EON LOCK® security feature



EON LOCK® square nut out horizontally

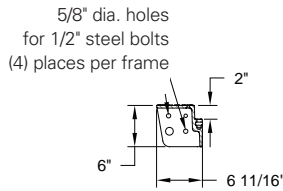
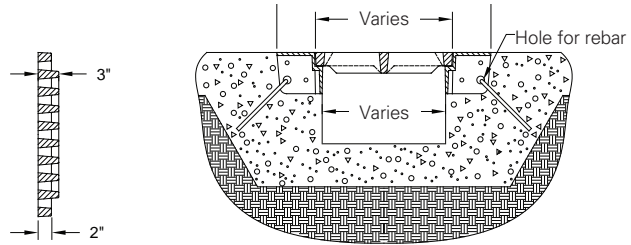
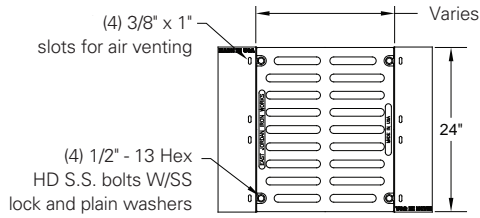


EON LOCK® square nut in horizontally

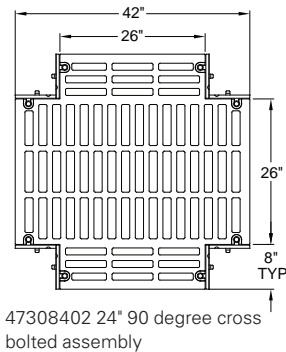
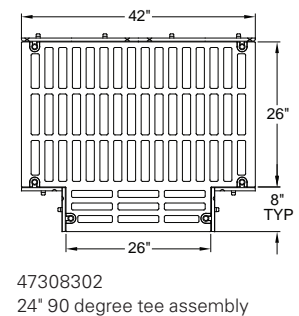
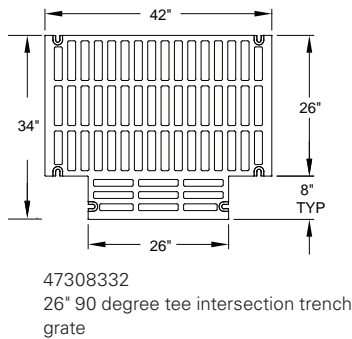
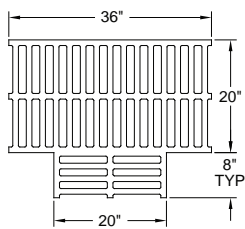
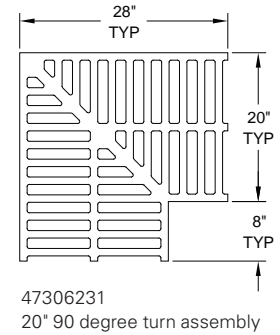
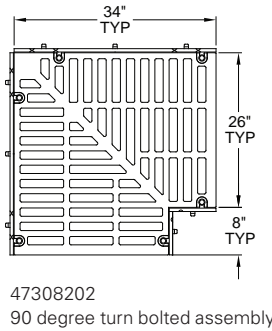
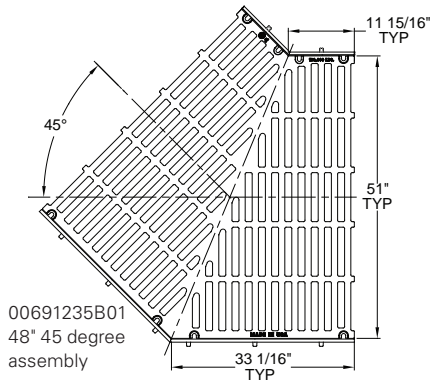
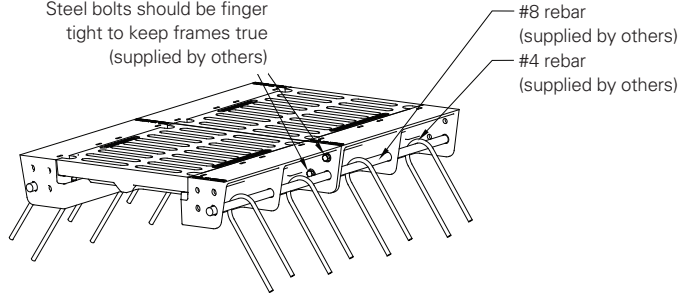


00690222B01 Cover

# 6900 LINEAR TRENCH DRAINAGE SERIES (CONTINUED)



Steel bolts should be finger tight to keep frames true (supplied by others)



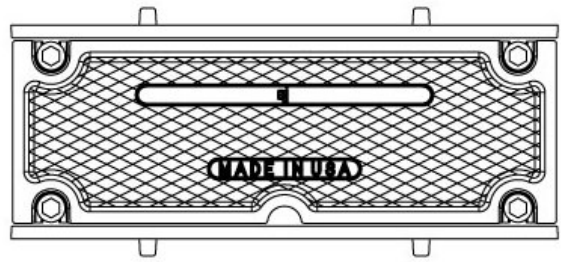
## 6950 TRENCH GRATE, FRAME AND COVER SERIES

Heavy Duty, Type A

Bolted or unbolted (standard)



6950 Type A Bolted 24" Assembly



00695123B01 Cover

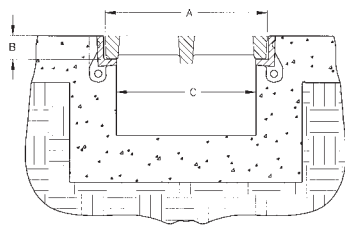
Features	Grate	Frame Series	Lock Type	Other
Heavy Duty, Type A Holes in frame for rebar Bolted or unbolted Standard 24" lengths Also available in extra heavy duty Type C cross drainage slot style available Solid colors available	Ductile or gray iron	Angle style (bolted or unbolted) Gray or ductile iron  24" - 6950Z1 36" - 6950Z3 48" - 6950Z2	Stainless steel 1/2" hex bolts	Caution: Do not disassemble bolted grates or covers before setting sections in concrete.

### 6950 Series, Angle Style Frame and Grate Series

Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft
6951	8	1 1/2	6	23
6952	10	1 1/2	8	34
6953*	12	1 1/2	10	45
6954*	14	1 1/2	12	56
6955*	17	1 1/2	15	73
6956	20	1 1/2	18	89
6957	23	1 1/2	21	106
6958*	26	1 1/2	24	122

Note: All dimensions are in inches.

\*Ductile Iron extra heavy duty available. See product drawings for load ratings.



6950 Series



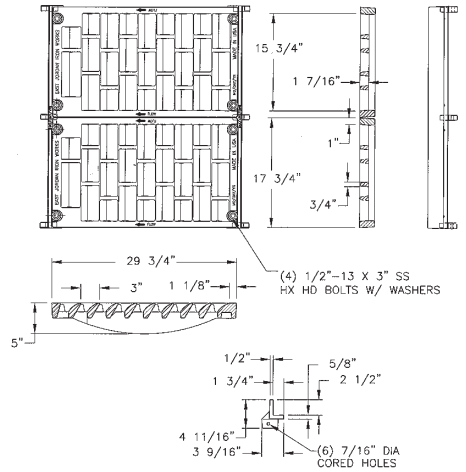
### 6970 BOLTED VANE STYLE TRENCH GRATE, FRAME AND COVER SERIES

Heavy Duty  
 Available in 18" and 36" assemblies  
 Riser frame available

6970 Bolted Vane Style Trench Grate Series

Assembly Length	Open Area per Assembly/Sq. In.
18	186
36	372

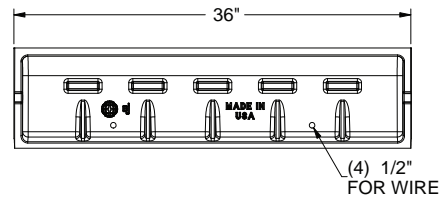
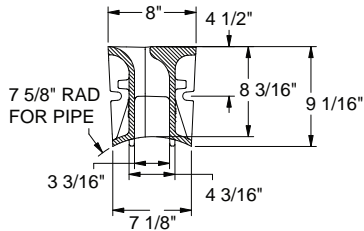
Note: All dimensions are in inches.



### 6979 LINEAR SLOTTED DRAIN VANE GRATE

Airport Extra Heavy Duty  
 9" tall  
 Vane style grate  
 Fits into slot cut into pipe  
 Allows for capture of surface water between catch basins

For alternative slot drain product offerings also see the V-7950 series on page 15.



Cross section view



Linear slotted drain vane grate during installation

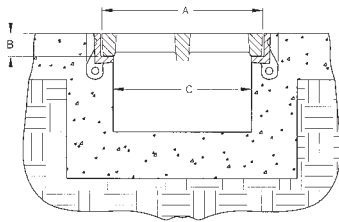


View inside PVC pipe

### V-7300 TRENCH GRATE AND FRAME SERIES

Heavy Duty, Type A  
 Standard trench grates are furnished in 23 7/8" lengths  
 Frames are available in 24", 36" and 48" lengths  
 Trench frame ends available

Extra heavy duty available



V-7300

V-7300 Trench Grate & Frame Series

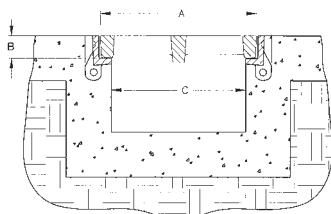
Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft	Angle Frame Series
V-7301	8	1 1/2	6	42	24" - 6950Z1
V-7302	10	1 1/2	8	57	36" - 6950Z3
V-7303	12	1 1/2	10	64	48" - 6950Z2
V-7304*	14	2	12	78	
V-7305	17	2	15	99	24" - 6900Z1
V-7306	20	2	18	120	36" - 6900Z3
V-7307	23	2	21	133	48" - 6900Z2
V-7308*	26	2	24	154	
V-7309	30	2 1/2	27	182	
V-7310	33	2 1/2	30	190	
V-7311	36	2 1/2	33	211	
V-7312	39	2 1/2	36	232	
V-7313	45	2 1/2	42	266	
V-7314	51	2 1/2	48	305	

Note: All dimensions are in inches.  
 \*Extra heavy duty available

### V-7320 BOLTED TRENCH GRATE AND FRAME SERIES

Heavy Duty, Type A  
 Bolted trench grate units are assembled in 24" sections only  
 using stainless steel 5/8" hex bolts and flat washers  
 Trench frame ends available

Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



V-7320

V-7320 Bolted Trench Grate & Frame Series

Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft	Angle Frame Series
V-7322	11	1 1/2	8	63	24" - V-7320-1
V-7332	39	2 1/2	36	231	
V-7334	51	2 1/2	48	305	24" - V-7320-3

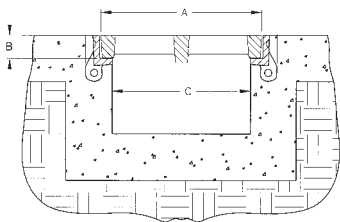
Note: All dimensions are in inches.

## V-7340 CROSS DRAINAGE TRENCH GRATE AND FRAME SERIES

Heavy Duty, Type C

Designed for cross-street drainage with slot openings perpendicular to traffic

Standard trench grates are furnished in 23 7/8" lengths  
Frames are available in 24", 36" and 48" lengths



V-7340

V-7340 Cross Drainage Trench Grate & Frame Series

Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft	Angle Frame Series
V-7341	8	1 1/2	6	40	24" - 6950Z1
V-7342	10	1 1/2	8	50	36" - 6950Z3
V-7343	12	1 1/2	10	64	48" - 6950Z2
V-7344	14	2	12	80	
V-7345	17	2	15	93	24" - 6900Z1
V-7346	20	2	18	115	36" - 6900Z3
V-7347	23	2	21	124	48" - 6900Z2
V-7348	26	2	24	154	
V-7349	30	2 1/2	27	162	
V-7350	33	2 1/2	30	183	
V-7352	39	2 1/2	36	216	24", 48" - V7300-3
V-7354	51	2 1/2	48	290	

Note: All dimensions are in inches.

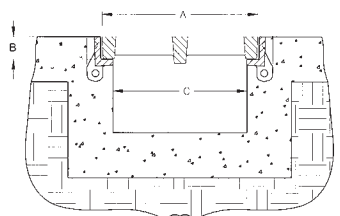
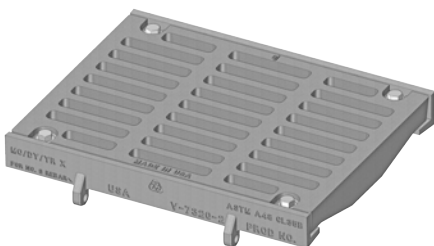
## V-7360 CROSS DRAINAGE BOLTED TRENCH GRATE AND FRAME SERIES

Heavy Duty, Type C

Designed for cross-street drainage with slot openings perpendicular to traffic

Bolted trench grate units are assembled in 24" sections using stainless steel 5/8" hex bolts and flat washers

Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



V-7360

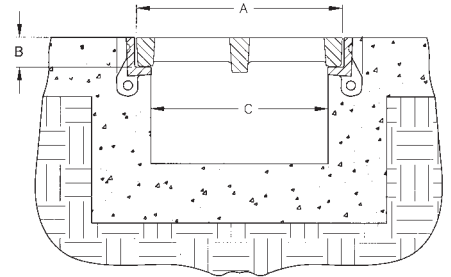
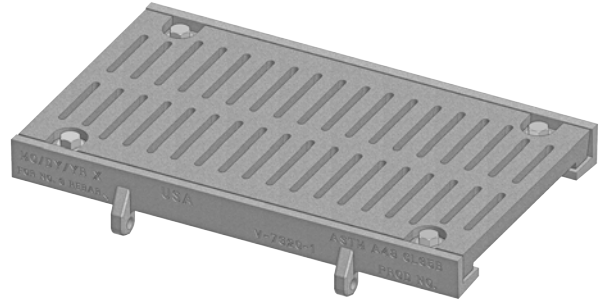
V-7360 Cross Drainage Bolted Trench Grate & Frame Series

Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft.	Angle Frame Series
V-7363	13	1 1/2	10	73	24" - V7320-1
V-7364	15	2	12	87	
V-7365	18	2	15	101	24" - V7320-2
V-7366	21	2	18	120	
V-7367	24	2	21	138	
V-7368	27	2	24	160	
V-7369	30	2 1/2	27	162	
V-7370	33	2 1/2	30	183	24" - V7320-3
V-7373	45	2 1/2	42	250	

Note: All dimensions are in inches.

### V-7380 ADA TRENCH GRATE AND FRAME SERIES

Heavy Duty, Type P  
 ADA compliant  
 Available bolted or unbolted (standard)  
 Designed with 3/8" slot openings  
 Standard trench grates are furnished in 23 7/8" lengths  
 Frames are available in 24", 36" and 48" lengths  
 Bolted trench grate units are assembled in 24" sections only using stainless steel 5/8" hex bolts and flat washers



V-7380

V-7380 ADA Assemblies

Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft.	Angle Frame Series
V-7381	8	1 1/2	6	21	24" - 6950Z1
V-7382	10	1 1/2	8	28	36" - 6950Z3
V-7383	12	1 1/2	10	29	48" - 6950Z2
V-7384	14	2	12	39	24" - 6900Z1
V-7385	17	2	15	48	36" - 6900Z3
V-7386	20	2	18	58	48" - 6900Z2

Note: All dimensions are in inches.

V-7380 ADA Bolted Assemblies

Series Number	A Grate Width	B Seat Depth	C Trench Width	Open Area Sq. In/Ft.	Angle Frame Series
V-7381-20	9	1 1/2	6	21	24" - V-7320-1
V-7382-20	11	1 1/2	8	28	
V-7383-20	13	1 1/2	10	32	
V-7384-20	15	2	12	36	24" - V-7320-2
V-7385-20	18	2	15	48	
V-7386-20	21	2	18	58	

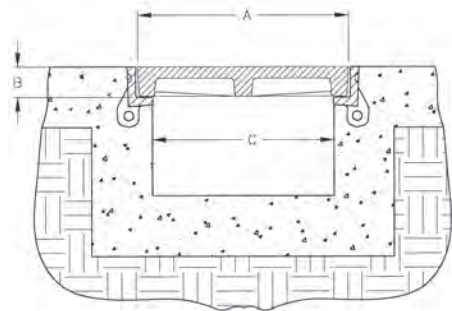
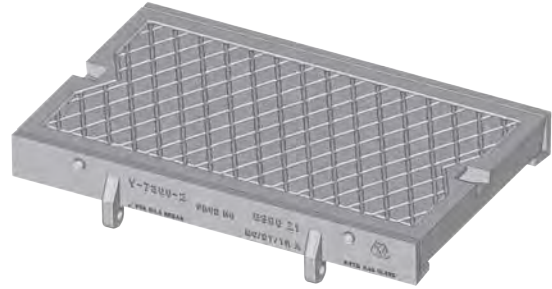
Note: All dimensions are in inches.

### V-7500 TRENCH COVER AND FRAME SERIES

Heavy Duty, Type D

Standard trench covers are furnished in 23 7/8" lengths

Frames are available in 24", 36" and 48" lengths



V-7500

V-7500 Trench Cover & Frame Series

Series Number	A Grate Width	B Seat Depth	C Trench Width	Pick Type	Angle Frame Series
V-7504	14	2	12	Pick Hole	24" - 6900Z1
V-7508	26	2	24	Pick Bar	36" - 6900Z3 48" - 6900Z2
V-7509	30	2 1/2	27	Pick Bar	24", 48" - V-7300-3
V-7510	33	2 1/2	30	Pick Bar	
V-7512	39	2 1/2	36	Pick Bar	
V-7513	45	2 1/2	42	Pick Bar	
V-7514	51	2 1/2	48	Pick Bar	

Note: All dimensions are in inches.

### V-7520 BOLTED TRENCH COVER AND FRAME SERIES

Heavy Duty, Type D

Bolted trench cover units are assembled in 24" sections using stainless steel 5/8" hex bolts and flat washers

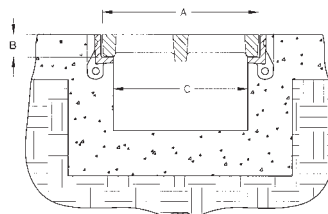
Caution: Do not disassemble bolted grates before setting frame/grate sections in concrete.



V-7520 Bolted Trench Cover & Frame Series

Series Number	A Grate Width	B Seat Depth	C Trench Width	Pick Type	Angle Frame Series
V-7530	33	2 1/2	30	Pick Bar	24" - V7320-3
V-7532	39	2 1/2	36	Pick Bar	
V-7533	45	2 1/2	42	Pick Bar	
V-7534	51	2 1/2	48	Pick Bar	

Note: All dimensions are in inches.



V-7520

### V-7600 30" TRENCH GRATE SERIES

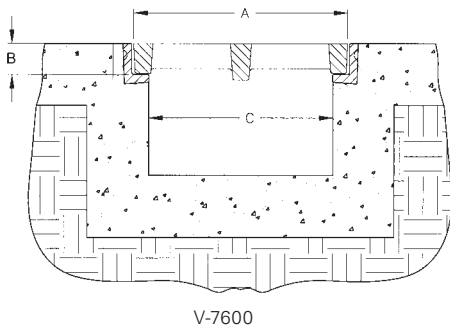
Heavy duty

Trench grates are furnished in 30" lengths

Grates are designed to fit popular steel angle sizes

Build your trench using trench width and steel angle iron frame per dimensions shown. Maintain dimension "C" and the opening between the top of the frames will be dimension "A" + 1/4". The extra 1/4" width at top represents necessary tolerance for proper grate fit.

Specify trench length and part number of desired trench width (dimension "C")



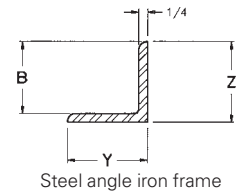
V-7600 30" Trench Grate Series

Catalog Number	A Grate Width	B Seat Depth	C Trench Width	Grate Length
V-7601	8 3/4	1 1/2	6	30
V-7602	10 3/4	1 1/2	8	30
V-7603	12 3/4	1 1/2	10	30
V-7604	15 1/4	1 3/4	12	30
V-7605	18 1/4	1 3/4	15	30
V-7607	24 1/4	1 3/4	21	30
V-7608	27 1/4	1 3/4	24	30

Note: All dimensions are in inches.

Steel Angle Frame

B	Y	Z
1 1/2	1 3/4	1 3/4
1 3/4	2	2
2 3/4	2	3



Note: All dimensions are in inches.

### 7001 CURB PLATE

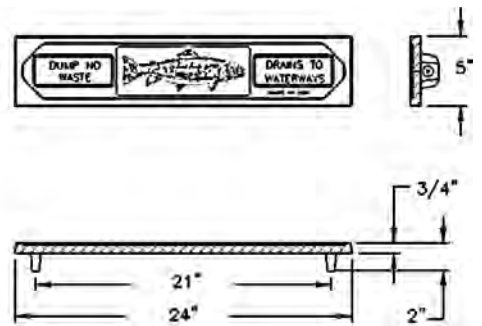
Used in sidewalk above a trench grate

Embedded into concrete during construction

Customized messages available



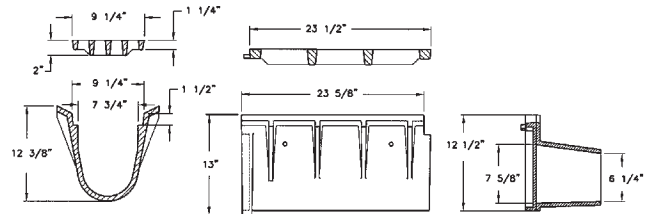
Rebar can be installed on underside to secure into concrete



### 7743 GUTTER INLET WITH END OUTLET

Heavy duty  
 Approximate 94 sq. in. open area  
 Expandable to any length

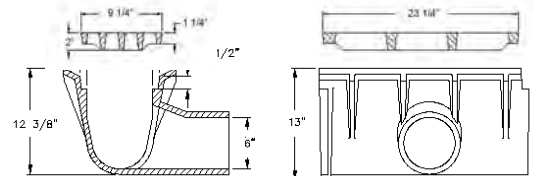
Options  
 Adjusting risers  
 Optional end caps



### 7744 GUTTER INLET WITH SIDE OUTLET

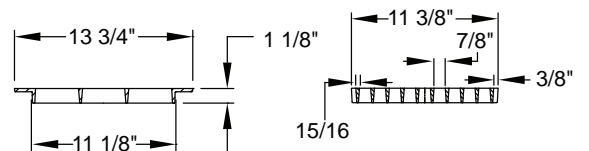
Heavy duty  
 Accepts 7743 grate  
 Expandable to any length

Options  
 Adjusting risers  
 Optional end caps



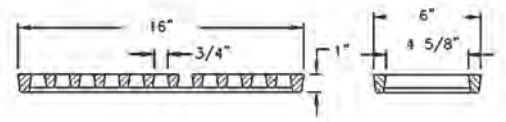
### 7796 TRENCH GRATE

Non-traffic



### 7799 TRENCH GRATE

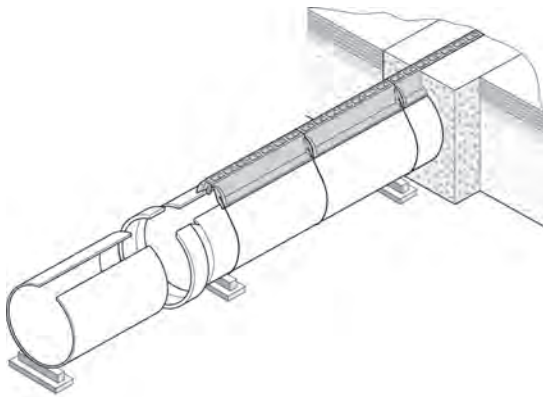
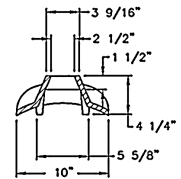
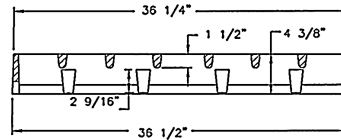
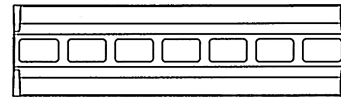
Heavy duty



### V-7950 SLOTTED GRATE FOR PIPE

Heavy Duty

For alternative slot drain product offerings also see the 6979 series on page 26.

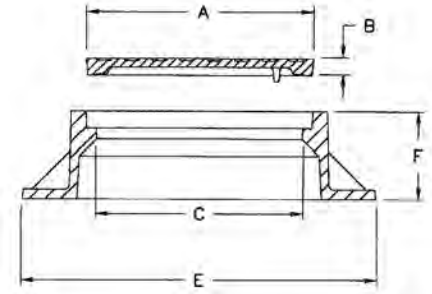


# Master Tables of Casting Dimensions



## ROUND MANHOLE BASE FLANGE

EJ is continually adding new construction castings and drainage grates to our product offering. Please consult with your EJ representative or email us at [us.sales@ejco.com](mailto:us.sales@ejco.com) to request a sales drawing not shown in this catalog.



A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
6 1/2	1 1/2	5 1/16	7 3/8	6 5/16	2960
6 1/8	9/16	5 1/4	10	6	1567
7 3/8	1 1/8	6 1/2	12 1/2	6	1571
8	1	6 1/2	11 1/2	10	2966
7 3/4	1	6 3/4	11 3/8	2	3691
8	1	6 3/4	13 1/4	7	1570
8 7/8	11/16	7 1/2	15 5/8	8	1574
8 13/16	5/8	8 1/8	15	4	3675
9	1 1/2	7 7/8	19 1/2	10	1575
9 3/8	2	7 7/8	18	4	1445
9 1/4	3/4	8	11 9/16	9	3695
9 5/8	3/4	8	12 1/2	2 5/16	2885 Rev
10	1/2	8	16	8	1576
10 1/4	1 1/2	8 1/2	14 1/2	4	V-1610-1 Rev
10 1/2	2	9	16	8	1565
10	1	9 1/4	16	8	1566
11 5/8	1	10 1/2	18	4	3661
11 13/16	1 1/8	10 5/8	18	8	1564
11 1/4	1 5/16	9 3/4	20	8	1578
11 1/2	1/2	10 13/16	15 1/2	5	V-8502
13 1/4	1	11 1/4	14 7/8	5	1150
13	1 1/2	11 1/4	20	4	1562
13 1/4	1 1/2	11 1/2	17 5/8	4	V-1610-2 Rev
13 3/4	1 1/8	13	20	6	1572
16	1 1/2	14 1/4	23	4	1563
16 1/4	1 1/2	14 3/8	20 1/2	4	V-1610-3 Rev
18	1	16 1/2	22 3/4	3	2912 Rev
17 3/4	1 1/2	16 7/8	28	6	1740
18	1	17	25	4 1/2	1680
20	2 3/16	18	29	4	1525
19 1/4	1 1/2	18 1/8	21	2 1/2	V-1700-1
19 1/4	1 1/2	18 1/8	24	4	V-1600-1 Rev
19 9/16	1 5/8	18 1/8	22 1/8	4 1/2	3005
20 1/4	1 3/4	18 3/16	34 3/8	9 1/8	3718Z2

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

<b>A</b> Cover Dim.	<b>B</b> Cover Thk.	<b>C</b> Clear Opening	<b>E</b> Flange Dia.	<b>F</b> Frame Ht.	<b>Catalog Number</b>
19 3/4	1 1/2	18 3/8	24	4 1/2	V-1887
19 7/8	9/16	18 3/8	27 1/2	4	1495
20 1/4	3/4	18 1/2	22	5	1160
20 13/16	1	19	29	5	1085
20 1/4	1 3/8	19	21 3/4	1 7/8	3033
20	1 3/8	19 3/8	21 1/8	1 3/4	V-1701
21 5/16	1 3/16	19 11/16	32	7 1/2	2005
21 3/4	1	20	40	5	1190
21 3/4	1 1/8	20	34 1/4	5	1180
22 1/8	1 1/2	20	26 1/2	2 3/8	V-1610-4
22 3/4	1 1/2	19 3/4	37 7/8	10	1641
21 3/4	1 1/4	19 7/8	30 1/2 SQ	6 1/4	8045
22 1/4	1 1/2	19 3/4	32	11	1670
24	1 1/2	19 7/8	33 7/8	7	1123
21 3/4	1 1/8	19 7/8	27 3/4	5	1170
21 3/4	1 1/8	20	26	5	1171
21 3/4	1 1/8	20	33	6 1/2	1030
21 3/4	1 1/8	20	36	8 1/2	1060
21 3/4	1 1/4	20 1/16	34	8	1945
21 3/4	1 3/8	20	30	9 3/4	1837
22	1 1/2	20	28 1/4	6	1140
22	1 1/2	20	31	4	1135 Rev
22	1 1/2	20	33	8	1125
22 3/4	1 3/4	20	36	7 7/8	V-1476
23	1 1/4	20	32 1/4	7	1010
22	1 1/2	20	27 7/8	4	1130
21 3/4	1	20 1/4	33	9 1/2	1955
21 7/8	1 1/2	20 1/4	26 5/8	4	V-1610-4 Rev
22	1	20 1/4	23 3/4	4	1285
22	1	20 1/4	32	8	1535
22 3/4	1 1/8	20 1/4	36 1/2	8	1075
23	1 1/4	20 1/4	32 1/4	7	1000
23	1 1/4	20 1/4	32 1/4	7	1002
23 1/2	2 1/4	20 3/8	30 1/2	4 7/8	V-1438
23	1 1/4	20 7/16	34 13/16	7 1/4	1070
22	1 1/2	20 1/2	28	4	1490
22	1 1/2	20 1/2	26 1/2	4	1490Z2 Rev
22 1/4	1	20 5/8	30	9 3/4	1661
22 3/4	1 1/2	20 1/2	36	7	V-1345-1
22 3/4	1 3/4	20 1/2	34	8	1550

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
22 3/4	2	20 1/2	36	7	V-1344
23 3/4	1 5/8	20 5/8	27 1/2	6	V-1866-3
22 1/4	1	20 11/16	28 1/2	4 3/4	1660
22 1/4	1	20 3/4	24 7/8	4	1505
22 3/4	1 3/4	20 3/4	36	7	1875Z2
22 3/4	1 3/4	20 3/4	36	7	1875Z3
22 3/4	1 3/4	20 13/16	36	9	1051Z2
22 3/4	1 3/4	20 13/16	34	9	1051Z3
23	1 1/2	20 7/8	36	9	1058
22 3/4	1 3/4	21	34	4	1037
22 3/4	1 3/4	21	36	4	1077
22 3/4	1 3/4	21	32 1/2	4	1880
22 3/4	1 3/4	21	34	4 1/2	2996 Rev
22 3/4	1 3/4	21	34	6	1020
22 3/4	1 3/4	21	34	7	1023
22 3/4	1 3/4	21	34	7	1024
22 3/4	1 3/4	21	34	9	1050
22 3/4	1 3/4	21	36	5 1/2	1559
22 3/4	1 3/4	21	36	7	1076
22 3/4	1 3/4	21	35 3/4	7 1/8	1022
23 3/4	1 1/2	21	37 5/8	9	1260
22 3/4	1 3/4	21	36	9	1560
23	1 3/4	21	35 3/4	9	1920
23 1/4	1 1/4	21 3/8	32	4	V-1383-1
23 1/4	1 1/4	21 1/4	34 1/2	8 1/4	V-1383
23 3/4	1 1/4	21 1/4	37	7	1771
23 1/4	1	21	35 5/8	7 3/4	1850
23 3/4	1 1/2	21 3/8	35 5/16	7 7/16	1620
23 1/4	1	21 7/16	33	9	2015Z1
23 3/4	1	21 7/16	36 7/8	7 1/8	2045
23	3/4	21 1/2	28	4	2910Z1
23 1/4	1	21 5/8	33	9	2015
23 3/4	1	21 1/2	38	7	1665
23 3/4	1	21 1/2	38	9	1450
23 3/4	1	21 1/2	33 13/16	9	1450Z1
23 13/16	3	21 1/2	31 1/2	4	1834
23 13/16	3	21 1/2	31 1/2	7	1835Z1
24	2	21 3/4	31	2 3/4	V-1140
23 1/4	1	21 3/4	32 3/8	4 1/2	V-1406
23 3/4	1 1/4	21 7/8	30	2 1/2	V-1136

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
23 3/4	1 5/16	21 3/4	39	8	2060
23 3/4	1 3/4	21 3/4	33 1/4	7	1925
23 3/4	1 3/4	21 3/4	33 1/4	11	1928
23 13/16	3	21 3/4	31 3/8	7 1/4	1835
23 13/16	3	21 3/4	31 3/8	7 1/4	1840
26	1 1/2	21 3/4	25 3/4	9	1290
23 1/2	1	21 13/16	33 1/4	7 1/2	V-1384
23 3/4	1	21 13/16	35	7	1775
23 3/4	1 5/8	21 13/16	30	4 1/2	V-1866 Rev
23 1/2	1 1/2	21 3/4	28 1/2	4	V-1600-2 Rev
23 3/4	2	21 3/4	32	5	2023
23 1/4	1	21 7/8	29 1/8	5	1622 Rev
23 1/4	1	21 7/8	32 1/4	6 3/8	V-1403
23 1/4	1	21 7/8	33 1/4	6 3/8	V-1503
23 1/4	1	21 7/8	36	5	1622Z1 Rev
23 1/4	1	21 7/8	40 1/2	9	V-1501
24	1 1/2	21 7/8	30 3/4	4 1/8	3100
23 3/4	2 1/2	21 7/8	31 1/2	8	1960
23 1/4	1	22	30	4	2132Z1 Rev
23 1/4	1	22	29 1/2	4 7/8	V-1105
23 1/4	1	22	33 1/2	8	2132
23 1/2	1	22	26	1 1/2	3110
23 1/2	1	22	31	6	V-1384-2
23 1/2	1 1/2	22	25 3/4	2 1/2	V-1700-2
23 1/2	1 1/2	22	31 3/4	4	V-1481
23 1/2	1 1/2	22	32 1/4	4 1/2	V-1418-2
23 1/2	1 1/2	22	32	5 3/4	1348
23 1/2	1 1/2	22	32 1/4	6	V-1480-10
23 1/2	1 1/2	22	33 1/4	8 1/2	V-1418-1
23 3/4	1	22	32	6	1251
23 3/4	1	22	37 1/2	10 1/2	2020
23 3/4	1	22	36	11	2035
23 3/4	1 1/8	22	36 3/8	8 1/2	1410
23 3/4	1 3/16	22	32 1/2	6	V-1327
23 3/4	1 3/16	22	34	8	V-1326
23 3/4	2	22	31 3/4	5	V-1317
23 3/4	2	22	30	7 1/4	V-1243
23 3/4	2	22	36	9	1715
23 3/4	2 1/2	22	32	5	1202
23 7/8	1	22	30	4	2425 Rev

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
23 3/4	2	22 1/16	34 7/8	8	1710
23 1/2	1	22 1/8	31	6	V-1284-3
24	1	22 1/4	33 1/2	4	1267Z Rev
24	1	22	34	7	1122
24 1/4	1	22	32	6 3/4	V-1482-2
24	1 3/16	22	34	7	1325
24	1 1/2	22	34	7	1119
24	1 1/2	22	36	7	1120
24	1 5/8	22	30	6	1606
24	3	22	32	7 1/2	1272
24 7/8	2	22	32	6	1733 Adj.
26 1/4	1 1/2	22	32	6	V-1339
23 3/4	1 3/8	22 1/16	33 5/8	7 1/8	1590
23 3/4	2	22 1/16	32	5	2022 Rev
23 7/8	1	22 1/8	34 1/16	4	2410
23 7/8	1	22 1/8	34 1/16	6	2430
23 7/8	1	22 1/8	34 1/16	8	2420
23 7/8	1	22 1/8	34	8	2420Z1
24	2	22 1/8	31 7/8	5	1343
24	2	22 1/8	31 7/8	5	1342
24	2 1/2	22 1/8	31	6	2024
26	1 1/2	22 1/8	38 3/4	7	1044
24	1 1/2	22 1/4	34	4	1118
24	1 1/2	22 1/4	34 3/4	7 1/2	1117
24 1/4	1	22 1/4	31 3/4	7	V-1324
24 3/4	1 1/4	22 1/4	34	4	1433Z3
25	1 1/2	22 1/4	32	6	V-1339
23 1/4	1	22 1/8	34	7 3/8	V-1301
23 3/4	1	22 3/8	36 SQ	7 1/4	287
24	2 1/2	22 3/8	32	5 1/2	2040
24 7/16	2	22 3/8	32 1/4	7	1734
25 3/4	1 1/2	22 7/16	33 1/2	6	3115
24 3/4	1	22 7/16	36	7 1/4	1600
23 1/2	1	22 1/2	33 1/4	7 1/2	V-1304
23 3/4	3/4	22 1/2	34	7	1460
23 3/4	1 1/4	22 1/2	31 1/2	6	1337
23 3/4	2	22 1/2	32	5	V-1168
23 7/8	2 1/8	22 1/2	32	5	2350
24	1 3/8	22 1/2	34	7	1310
24 1/4	1	22 1/2	31 3/4	6	V-1407

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

<b>A</b> Cover Dim.	<b>B</b> Cover Thk.	<b>C</b> Clear Opening	<b>E</b> Flange Dia.	<b>F</b> Frame Ht.	<b>Catalog Number</b>
27	1 7/8	22 1/2	31 3/4	6	3118
23 3/4	1	22 1/2	31 1/4	4 5/8	1690
24	1 5/16	22 9/16	32	5 7/8	1224
23 3/4	1	22 5/8	28 1/2	3	3024
24	1 9/16	22 5/8	31 1/2	4 1/2	1500
24	1 9/16	22 5/8	34	9	1500Z1
24	2 1/4	22 5/8	32	5	1177
24 3/4	7/8	23	31	3	2601
24 3/4	7/8	23	31	6	2600
24 3/4	7/8	23	31	10	2603
24 3/4	15/16	23	32	4	3020 Rev
24 3/4	1 1/4	23	34	8	1433Z2
25 3/8	1 1/4	23	38 5/8	7	2055
25 3/8	2	23	39	8	1212
25 1/2	2	23	38	5	1703
25 1/2	2	23	38	10 1/2	1700
23 11/16	1	23 3/8	31 1/2	3	1510
25 5/8	1	23 3/8	38	7 7/8	1210
26	1 5/8	23 3/8	35 1/2	7	1720
25	1	23 7/16	33 5/8	4	3710 Rev
24 7/8	7/8	23 1/2	34	6	3108
25 1/2	1	23 5/8	36	6	1930
25 1/2	1 5/16	23 5/8	32 7/8	6	3740
25 1/8	1 1/4	23 3/4	36	8	V-1360-1
25 3/8	1	23 3/4	34	6	3736
25 3/8	1 1/2	23 3/4	35 1/4	7	V-1357
25 13/16	2 1/2	23 3/4	32	8	1548
26 5/16	1 3/4	23 7/8	34	6 1/16	3767
25	1	23 7/8	34 1/8	6	3700
25 3/4	1 1/2	23 7/8	35 1/4	8	V-1312
25 1/4	1 1/4	23 15/16	41 3/4	4	1530
25 1/4	1 1/2	24	35 1/4	6	1520
25 3/8	1 1/2	24	27	2 1/2	V-1700-3
25 3/8	1 7/16	24	35 1/4	6	1522
25 1/2	1	24	35	3	1975Z1
25 1/2	1	24	36	8	1944
25 1/2	1 5/8	24	29 3/4	4 1/2	V-1890
25 5/8	1	24	32	5	1625 Rev
25 3/4	7/8	24	35 1/2	4	1205Z1
25 3/4	7/8	24	35 1/2	7	1205Z

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
25 3/4	7/8	24	35 1/2	8	1936Z1
25 3/4	7/8	24	51 1/2	8	1936Z2
25 3/4	7/8	24	35 1/2	8	1936Z3
25 3/4	1	24	34	8	V-1358
26	1	24	34	6	3725
26 3/16	1	24	34	4	3726
26 1/4	1 1/8	24	32	3 1/2	3180
25 3/4	1 3/8	24	39	4	1203Z1
25 3/4	1 3/8	24	34	6	1405
25 3/4	1 3/8	24	39	8	1203Z2
25 3/4	1 3/8	24	36	8	1207
25 1/4	1 1/2	24	32 1/8	4	V-1600-3 Rev
25 3/4	2	24	35	7	1227
25 3/4	2 1/4	24	28	2 3/4	2222
25 3/4	2 1/2	24	34	4	1543
25 3/4	2 1/2	24	36	7	1970
25 3/4	2 1/2	24	35	7	1970Z1
25 13/16	2 1/2	24	34	9	1545Z1
26	1 1/4	24	35 3/4	7 1/4	V-1550
26	1 3/8	24	34	4	2026
26	1 1/2	24	36	4	1046
26	1 1/2	24	34	5	2450 Rev
26	1 1/2	24	32 1/2	4	1080
26	1 1/2	24	36	6	V-1380-1
26	1 1/2	24	36	6	V-1424-2
26	1 1/2	24	39	7	1040
26	1 1/2	24	36	7	1045
26	1 1/2	24	36	7	1045Z1
26	1 1/2	24	39	7	2025
26	1 1/2	24	36	8	1047
26	1 1/2	24	36	9	1048
26	1 1/2	24	36	10	1049
26	2	24	39	5 1/2	1271 Rev
26	3	24	29	3 3/4	6487
26 1/8	1 3/16	24	33 3/4	3 9/16	2224
26 1/8	1 3/16	24	31	4	2224Z1 Rev
26 1/8	1 3/8	24	35	7 3/8	V-1355
26 1/4	1 3/4	24	34	7	3730
26 3/4	1 1/4	24	35 1/2	7	V-1349
27	2 1/2	24	36	9	1900

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

<b>A</b> Cover Dim.	<b>B</b> Cover Thk.	<b>C</b> Clear Opening	<b>E</b> Flange Dia.	<b>F</b> Frame Ht.	<b>Catalog Number</b>
27 1/8	1 1/2	24	32 1/2	6	3162
28 3/4	1 1/4	24	36	4	1935
29	3 3/4	24	37	5 1/2	2830
26	1 1/8	24	36	7 5/8	V-1570
26	1 3/8	24	34	7 1/2	2027
26	1 1/8	24	34	7	1154Z2
25 1/2	1	24 1/8	35	9	1975
26 3/4	1 5/8	24 1/8	38	7	1965
25 5/8	1 1/2	24 3/16	32	4	1854 Rev
25 3/4	1 1/4	24 3/16	43 1/4	11 1/2	1705
25 3/4	1 1/4	24 3/16	43 1/4	11 1/2	1706
25 1/2	1/2	24 1/4	31	4	1155 Rev
25 5/8	7/8	24 5/16	34	6	1731
28 3/4	1 3/8	24 1/2	37 1/2	7	1893
25 5/8	7/8	24 5/8	35 1/2	10	1730
26 1/4	1 1/8	25	35 3/4	7	V-1115
27 7/16	2 7/16	25 1/8	35 7/8	7	2080
27 7/8	2 1/8	25 3/8	40 1/4	4	3761-4
25 3/4	1 3/8	25 3/8	34 1/2	6 1/2	1208 Adj.
27 7/8	2 1/8	25 1/2	40	9 1/4	3761-9
27 3/4	1	26	46 SQ	3 1/2	288
27 3/4	1	26	46 SQ	7 1/4	8075
27 7/8	1 3/8	26	38 1/4	4 3/8	2100 Rev
28	1	26	33 7/8	4	1250
27 7/8	1 3/8	26	38 1/4	4 3/8	2101 Rev
27 7/8	1 1/2	26 3/8	32 1/2	4 1/8	V-1610-5 Rev
28 3/4	1 3/8	26 7/8	37 1/4	7	1890Z1
28 3/4	1 3/8	26 3/4	37 1/4	3 1/8	1891Z1
29	1 3/8	27	46	5 5/8	1802
29	1 3/8	27	46	10	1805
30 1/8	1 1/2	28 1/4	37	6	3164
33 1/8	1 1/2	27	40 1/4	6	3163Z1
29 5/8	1 1/2	28	36	4	1892
29 7/8	1 1/16	28	41 5/16	7 1/4	1470
29 5/8	7/8	28 1/2	36 1/2	5	2760
31 1/2	1 1/2	29 1/4	56	10 1/2	425
31 1/2	1 1/8	29 9/16	44 7/8	7 7/8	1220
31 1/2	1 1/2	29 5/8	37 1/2	4	2230Z1 Rev
31 5/8	1 3/4	29 5/8	38 3/4	6	2010
31 9/16	1 1/8	29 11/16	44 1/2	7 3/4	1266

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE BASE FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
31 1/2	1 1/2	29 3/4	39	5 1/4	2295
31 1/2	1 1/2	30	39 1/8	5 1/4	2230
31 1/2	1 1/2	30	44 1/4	6	2232
31 3/4	1 3/8	30	41	4	1230
31 3/4	1 3/8	30	41	6 1/2	1232
31 3/4	1 3/8	30	41 1/2	7 1/2	1370
31 3/4	1 3/8	30	41	8	1234
31 7/8	1 3/8	30	34 7/8	2 3/8	V-1700-4
31 7/8	1 3/8	30	38	4	V-1600-4 Rev
31 7/8	1 3/8	30	40 1/4	6 7/8	V-7032
31 7/8	1 1/2	30	40 3/4	4 1/2	V-1420/1480Z1
31 7/8	1 1/2	30	40 3/4	6	V-1420
32	1 3/8	30	46	5 5/8	1820
32	1 3/8	30	49	5 5/8	1822
32	1 3/8	30	41 SQ	7	8027
32	1 3/8	30	48 3/4	10	1810
32	1 1/2	30	38	4	1480 Rev
32	1 1/2	30	40 1/4	4 7/8	V-1432
32	1 1/2	30	46	6 1/2	1320
32 1/8	3/4	30	34	1 1/2	1136
33 1/8	1 1/2	30	38 1/2	6	3163
37 7/16	1 1/2	30	45 SQ	11 13/16	1830
32	1 3/8	30	46	10	1825
32 1/2	2	30	41 3/4	9	1895
32	1 1/2	30 1/4	40	6 1/2	1322
32	1 1/2	30 9/16	42	8 1/2	V-1419
34 1/8	1 1/2	31 9/16	40 1/2	4	1161Z1
34 1/8	1 1/2	31 3/4	40 1/2	4	1161
33 3/4	1 3/8	32	46 SQ	5	V-7069-1
34 1/4	1 1/2	32	40	4	1475Z1
34 1/4	1 1/2	32 3/16	38 1/2	4	1475 Rev
34	1 1/2	32 1/4	38 1/2	4	V-1610-6 Rev
34 3/4	1	33	41 SQ	4	V-7070
35	2	33	44	6	1330
38	1 1/4	33 1/8	48 1/2	6	3166
35 3/4	1 1/8	34	45	5 1/4	2455
36	1 1/8	34	45	7 1/2	2228
36	1 1/2	34	45	4 1/2	1586
36	1 1/2	34	45	8 1/2	1585
36 3/4	2 7/16	34	45	4	1990

Note: All dimensions are in inches. Rev = Reversible

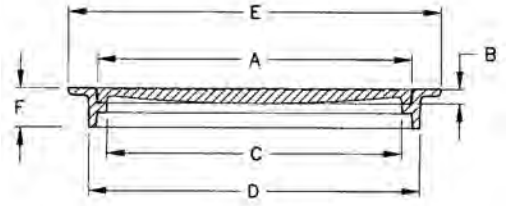
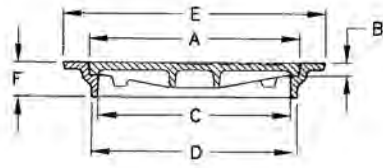
## ROUND MANHOLE BASE FLANGE (CONTINUED)

<b>A</b> Cover Dim.	<b>B</b> Cover Thk.	<b>C</b> Clear Opening	<b>E</b> Flange Dia.	<b>F</b> Frame Ht.	<b>Catalog Number</b>
38 5/16	1 1/2	34	45	10 1/8	1583
37	2 9/16	34 1/4	46 3/4	6	1588
37	2	35	47 SQ	8	V-7068
37 1/4	1 5/8	35 1/4	44 SQ	5	V-7067
37 1/2	1 1/2	35 3/8	46	8	1995
38	2	35 3/4	46	6	V-1600-5 Rev
37 3/4	1 1/2	36	52 SQ	10	1833
37 7/8	1 1/2	36	46	10	1812Z2
38	1 1/4	36	44	6	3106
38 1/4	1 5/8	36	44	6	3144
38 5/16	1 1/2	36	46	4 1/2	1581 Rev
39 1/8	1 1/2	36	44 1/2	6	3165
38	2	36	46	6	V-7058
38	2	36 1/8	40 5/8	3	V-1700-5
39 13/16	3	38	46 SQ	7 1/4	289
39 5/8	1 1/2	38 1/4	44 1/2	4	V-1610-7 Rev
40 5/8	1 3/4	39 1/8	50 1/8	4	430
44 1/8	2 1/2	41 13/16	61 x 50	4	8025
44 1/4	2	41 3/4	51 3/4	4	1843
44 1/8	2 1/2	42	62 x 50	6	8026
44 1/4	1 1/2	42	55	8	1986
44 1/4	2	42 1/4	51 1/2	4 1/8	1845Z1
45 3/4	1 1/2	43 3/4	50 1/2	4	V-1610-8 Rev
45 3/4	7/8	44 1/8	53 1/4	5 3/4	3109
50	2	48	59	10	1985
50 1/4	2	48	52 1/2	3	V-1700-6
50 1/4	2	48	56 1/2	6	V-1600-6 Rev
50 1/2	2	48	62	10	V-7048

Note: All dimensions are in inches. Rev = Reversible

### ROUND MANHOLE TOP FLANGE

EJ is continually adding new construction castings and drainage grates to our product offering. Please consult with your EJ representative or email us at [us.sales@ejco.com](mailto:us.sales@ejco.com) to request a sales drawing not shown in this catalog.



A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Siv. OD	E Flange Dia.	F Frame Ht.	Catalog Number
6 1/4	5/8	5 1/2	6 5/16	8	1	2820
7	1	6	6 13/16	15 1/4	3	440
7 1/4	11/16	6	6 3/4	10 1/8	2 1/2	2790
7 7/8	1	6 1/2	8	9 5/8	10	2965
8 5/16	1	6 3/4	9	9 3/4	10	2967
8 1/4	3/4	7 1/8	7 3/4	9 7/16	6 1/4	2970
10 1/4	1 1/2	7 1/2	11 1/2	14 1/2	4	V-2610-1 Rev
8 1/2	11/16	7 5/8	8 3/8	10 3/16	1 11/16	2840
9 5/8	13/16	8	10 5/16	12 1/2	2 5/16	2885 Rev
10	1/2	8	10	17	8	1576
9 5/8	3/4	8 3/8	9	10 5/8	7 1/2	2975
10 1/2	7/16	8 3/8	9 1/2	11 3/8	3 1/4	3670
9 3/4	9/16	8 7/16	9 3/8	14 1/4	2 1/4	2790-8"
10 1/4	1 1/2	8 1/2	11 1/2	14 1/2	4	V-1610-1 Rev
13 1/4	1 1/2	11 1/2	14 1/2	17 5/8	4	V-1610-2 Rev
14 3/8	5/8	13 7/16	14 3/16	17 15/16	3	2790-12"
16 1/4	1 1/2	14 3/8	17 1/2	20 1/2	4	V-1610-3 Rev
16 3/4	3/4	15 5/16	17 7/8	20 5/8	2 3/8	2890
17 1/4	1 1/4	15 13/16	18	21 7/8	3	2982
18	1	16 1/2	19 1/2	22 3/4	3	2912 Rev
18 7/8	7/8	16 1/2	18 3/4	22	3 13/16	102L
19 7/16	7/8	16 1/2	18 3/4	22 1/8	3 13/16	3034
17 7/8	1	16 5/8	18 1/4	19 7/8	4 1/2	1846Z3
20	1 1/4	17 1/8	20 15/16	23 3/16	3	V-1815
19 1/4	1	17 2/3	19 1/2	38	3 1/2	1110
20	1	17 3/4	21 3/4	29	3 5/8	2982
20 1/2	5/8	18	21	24	3 1/2	3015
19 1/4	1 1/2	18 1/8	20 1/2	24	4	V-1600-1 Rev
19 13/16	5/8	18 1/4	21	24	3 1/4	2900
20	1	18 1/2	21 1/16	29	5 3/8	2990
20 1/2	1 1/2	18 3/4	19 1/2	21 7/16	4	3010
21 3/4	1/2	19	21 1/2	24 3/4	1 1/2	2955
20	5/8	19 1/4	20 1/4	25 1/4 SQ	2 3/4	8065
22 9/16	3/4	19 7/8	21 3/4	24 1/2	4	V-1867

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE TOP FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Siv. OD	E Flange Dia.	F Frame Ht.	Catalog Number
21 3/4	1 1/8	19 13/16	23 1/2	34	4	2850
22	1 1/2	20	23 1/4	31	4	1135 Rev
22	1 1/2	20	23	28	4	2935
21 7/8	1 1/2	20 1/4	23 5/8	26 5/8	4	V-1610-4 Rev
22 3/4	1 3/4	20 3/8	23 3/4	34	4	2995
21 3/4	1	20 1/2	21 7/8	28	3 1/4	2755
22	1 1/2	20 1/2	23 1/4	26 1/2	4	1490Z2 Rev
23 5/16	3/4	20 1/2	22 3/4	26 3/8	4	106-4L
23 3/8	3/4	20 1/2	22 3/4	26 3/8	6	106-6L
23 3/8	3/4	20 1/2	22 3/4	26 3/8	8	106-8L
22 3/4	1 3/4	21	24	34	4 1/2	2996 Rev
23	7/8	21 9/16	23	28	4	2915
23 1/4	1	21 3/4	23 3/8	25 1/2	6	V-1886
23 1/2	1 7/16	21 3/4	24 3/4	28 1/2	4	V-2800-2
23 7/8	1	21 3/4	23 1/2	29 1/4	4	2416
23	3/4	21 13/16	23 7/8	27 5/8	3	2910
23 1/2	1	21 13/16	24 1/2	26 7/8	6	V-1883
23 1/4	1	21 7/8	25 1/8	36	5	1622 Rev
23 1/2	1 1/2	21 3/4	24 3/4	28 1/2	4	V-1600-2
23 1/4	1	21 7/8	24 1/2	36	5	1622Z1 Rev
23 3/4	1	21 7/8	23 3/4	30	4	2925
23 1/4	1	22	24 3/4	30	4	2132Z1 Rev
23 1/2	1 1/2	22	24 3/4	30	6	V-1814
23 5/8	7/8	22	23 1/2	28 1/2	5 1/2	1851Z2
23 5/8	7/8	22	24	33 1/2	6	1851Z1
23 5/8	7/8	22	23 3/8	28 1/2	6	1851Z3
23 3/4	2	22	25	30	4 3/4	2982
24	3/4	22	25 1/2	30	4	3000
24	1 1/2	22	23 7/16	30	4	2860
24	2	22	25 1/4	32	5	1842
24	3	22	26	32	7 1/2	1272 Rev
24 1/4	3/4	22	23 13/16	29	3 1/2	1855
23 3/4	7/8	22 1/8	24 1/2	28 1/2	4	2790-21
24	2 3/4	22 1/8	23 2/3	28 1/2	6	V-1874
23 5/8	1/2	22 1/4	24 1/2	28	4	V-1865
23 3/4	1 1/4	22 3/8	23 3/4	31 1/2	4	2855
24	2 1/4	22 3/8	26 1/2	32	5	2141
23 3/4	3/4	22 1/2	24 13/16	29 3/8	4	G1860
23 3/4	3/4	22 1/2	25	29 3/8	4	V-1860
24	1 5/8	22 1/2	23 7/8	31	6	2750

Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE TOP FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Siv. OD	E Flange Dia.	F Frame Ht.	Catalog Number
23 3/4	1 5/8	22 13/16	25 1/2	30	4 1/2	V-1866 Rev
24	1/2	23	25 1/4	29 1/4	4	1515
25	1	23 7/16	26 2/3	33 5/8	4	3710 Rev
25 1/4	1 1/2	23 1/2	26 3/4	29 1/2	4	2932 Rev
27 1/4	2 1/2	23 5/8	26	33 3/8	5	2870
26	1 1/2	23 7/8	25 1/2	33 1/2	4	2800
25 1/4	1	24	26 3/8	32	6	1847
25 1/4	1 1/2	24	26 1/2	32 1/8	4	V-1600-3 Rev
25 1/4	1 1/2	24	26 3/4	29 1/2	4	V-1624 Rev
25 5/8	1	24	27 3/8	32	5	1625 Rev
25 7/8	3/4	24	27	31	3 1/4	2920
26	1 3/8	24	27 3/8	34	4	2026
26	1 1/2	24	27 7/8	34	5	2450 Rev
26	1 1/2	24	27 1/4	34	4	2800Z1
26	2	24	27 5/8	39	5 1/2	1271 Rev
26 1/8	1 3/16	24	27 3/8	31	4	2224Z1 Rev
26	1	24 1/8	27 13/16	32 1/2	3 1/2	1154Z1
25 5/8	1 1/2	24 3/16	27 3/8	32	4	1854 Rev
25 1/2	1/2	24 1/4	26 5/8	31	4	1155 Rev
27 1/8	7/8	25 3/4	28	34 1/8	3 5/8	2790
27 7/8	1 3/8	26	29 3/4	38 1/4	4 3/8	2100 Rev
27 7/8	1 3/8	26	29 3/4	38 1/4	4 3/8	2101 Rev
27 7/8	1 1/2	26 3/8	29 5/8	32 1/2	4 1/8	V-1610-5
28 3/4	1 3/8	27	30 1/2	36	6	V-1827
30 3/4	1 1/2	28 1/4	32 1/8	34	2 1/4	2805
31 1/2	1 1/2	29 5/8	32 3/4	37 1/2	4	2230Z1 Rev
31 7/8	1 3/8	30	33 1/8	38	4	V-1600-4 Rev
31 7/8	1 3/8	30	32	36 5/8	6	V-1830-2
32	1 1/2	30	33 5/8	40 3/4	4 1/2	V-1816
32	1 1/2	30	33 2/3	38	4	1480 Rev
32	1 1/2	30	33 2/3	38	4	2810
32 3/4	2	30 1/8	32 1/4	39 1/2	6	2880
34	1 1/2	32 1/4	35 1/2	38 1/2	4	V-1610-6 Rev
34 1/4	1 1/2	32 3/16	35 9/16	38 1/2	4	1475 Rev
38	2	35 3/4	39 3/4	46	6	V-1600-5 Rev
38	1 1/2	36	37 7/8	46	4 1/2	2812
38 5/16	1 1/2	36	39 7/8	46	4 1/2	1581 Rev
38 5/16	1 1/2	36	39 7/8	46	4 1/2	2815
39 5/8	1 1/2	38 1/4	41 1/2	44 1/2	4	V-1610-7 Rev
44 1/4	2	41 3/4	46 1/4	52 1/2	4	1843Z2

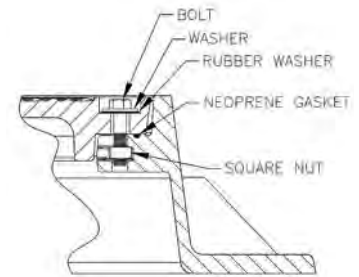
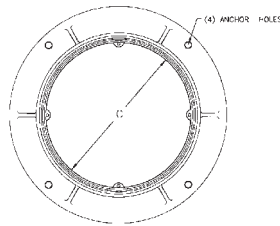
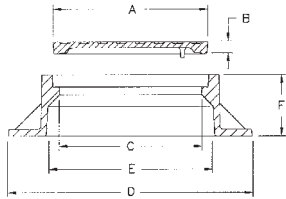
Note: All dimensions are in inches. Rev = Reversible

## ROUND MANHOLE TOP FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Siv. OD	E Flange Dia.	F Frame Ht.	Catalog Number
45 3/4	1 1/2	43 3/4	47 3/4	50 1/2	4	V-1610-8 Rev
50 1/4	2	48	52	56 1/2	6	V-1600-6 Rev

Note: All dimensions are in inches. Rev = Reversible

## WATERTITE BASE FLANGE



A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Dia.	E Flange ID	F Frame Ht.	Catalog Number
10 1/4	1 1/2	7 1/2	14 1/2	10 1/2	4	V-2610-1 Rev
8 13/16	5/8	8 1/8	15	7 3/4	4	3675
13 1/4	1 3/8	9 2/3	17 5/8	13 1/2	4	V-2610-2 Rev
11 1/4	1 5/16	9 3/4	20	13	8	1578
11 5/8	1	10 1/2	18	13 5/8	4	3661
11 13/16	1 1/8	10 5/8	18	13 7/8	8	1564
15	1 1/4	13 2/3	19	15 3/16	4 1/8	3678
16 1/4	1 1/2	14 3/8	20 1/2	16 1/2	4	1755
20 1/8	1 3/4	17 7/8	29 3/8	20 3/8	4 5/16	3718
20 1/8	1 3/4	17 7/8	29 3/8	20 3/8	4 5/16	3718 Rev
21 7/8	1 1/2	18 1/4	26 3/4	22 1/8	4	V-2610-4 Rev
23	1 1/4	20	32 1/4	20	7	1010
24	1	20	33 1/2	25 1/4	4	1267
21 1/2	1 1/4	20 1/8	32	22 13/16	4	1915
23 1/2	1 1/2	20 1/4	32 1/4	25 1/2	4 1/2	V-2418-2
24	1 1/2	20 1/4	32	24 1/4	5	2134
24	1 1/2	20 1/4	31	24 1/4	6	V-2386
23 1/2	2 1/4	20 3/8	30 1/2	23 5/8	4 7/8	V-2438
23 3/4	1 1/8	20 3/8	32 1/2	26 1/4	6	V-2327
22	1 1/2	20 1/2	28	22 1/4	4	1490 Rev

Note: All dimensions are in inches. Rev = Reversible

## WATERTITE BASE FLANGE (CONTINUED)

<b>A</b> Cover Dim.	<b>B</b> Cover Thk.	<b>C</b> Clear Opening	<b>D</b> Flange Dia.	<b>E</b> Flange ID	<b>F</b> Frame Ht.	<b>Catalog Number</b>
22 3/4	1 3/4	20 1/2	34	24 3/4	8	1550
23 1/2	1 1/2	20 1/2	32 1/4	24 7/16	6	V-2480
23 3/4	1 1/8	20 1/2	34	26	8	V-2326
23 3/4	1 3/16	20 1/4	32 1/2	25 15/16	5	V-2328
22 3/4	1 3/4	20 13/16	36	24 1/2	9	1051Z1
22 3/4	1 3/4	21	32 3/16	23 3/4	4	1885
22 3/4	1 3/4	21	34	25 1/8	7	1022Z1
22 3/4	1 3/4	21	34	25	4	1037
22 3/4	1 3/4	21	34	25 1/8	6	1020
22 3/4	1 3/4	21	34	25 1/8	7	1022Z2
22 3/4	1 3/4	21	35 3/4	24 3/4	7 1/8	1022Z3
22 3/4	1 3/4	21	34	24 13/16	9	1050
23	1 1/2	21	36	24 1/2	9	1058
24 1/4	1 3/4	21	36	24 5/8	9	1561
23 3/4	1	21 1/2	38	23 3/4	7	1665
23 1/2	1 7/16	21 3/4	28 1/2	23 3/4	4	V-2600-2
23 3/4	1	21 3/4	37 7/8	25 7/16	7	1665Z1
23 3/4	1 5/16	21 3/4	39	26	8	2060
24	1 1/2	21 3/4	31	26 1/4	7	1325
25 1/4	1 1/2	21 7/8	32 1/8	25 1/2	4	V-2600-3 Rev
23 3/4	2	22	31 3/4	25 15/16	5	V-1317
24	1 1/2	22	34	25 7/8	7	1119
24	1 1/2	22	36	26 3/16	7	1120Z1
24	1 1/2	22	36	24 7/16	7	1120
26 1/4	1 1/2	22	32	26 5/8	6	V-2339
24	2	22	31 7/8	24 7/8	5	1342Z1
24	2	22 1/8	31 7/8	25 7/8	5	1342Z2
23 7/8	1	22 1/8	34 1/16	26 3/16	8	2420Z1
26	1 1/2	22 1/8	38 3/4	22 1/8	7	1044
24	1 1/2	22 1/4	34	25 15/16	4	1118
24 3/4	1	22 3/8	36	26	7 1/4	1600
24 3/4	1	22 7/16	36	27 5/16	7 1/4	1600Z1
23 3/4	1 1/4	22 1/2	31 1/2	26 3/8	6	1337
24	1 3/8	22 1/2	34	26 1/4	7	1310
24	1 5/16	22 9/16	32	24 5/8	5 7/8	1224
25 3/8	2	23	39	31 1/4	8	1212Z1
25 3/8	2	23	39	31	8	1212
24 3/4	7/8	23	31	23	6	2600
24 3/4	7/8	23	31	23	5 1/2	2601
24 3/4	7/8	23	31	23	10	2603

Note: All dimensions are in inches. Rev = Reversible

## WATERTITE BASE FLANGE (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Dia.	E Flange ID	F Frame Ht.	Catalog Number
25	1	23 7/16	33 5/8	25 1/4	4	3710 Rev
25	1	23 3/8	34 1/8	27 5/16	6	3715
25	1	23 1/2	33	23 1/2	6 1/8	3705
25 1/4	1 1/2	23 1/2	29 1/2	25 1/2	4	2932 Rev
25 1/2	1 3/8	23 1/2	36	26 9/16	8	1950
26 1/2	1 5/8	23 1/2	36	27	6	V-2357
25 3/8	1	23 3/4	34	23 3/4	6	3736
26 5/16	1 3/4	23 7/8	34	26	6 1/16	3767
25	1	23 7/8	34 1/8	26 3/4	6	3700
25	1	24	33 3/4	24 3/4	6	3717
25 1/4	1	24	32	27 5/16	6	1847
25 1/4	1	24	32	27 3/16	4	1848
25 1/4	1 1/2	24	35 1/4	25 1/4	6	1520
25 1/2	1	24	36	26 3/8	8	1944
25 3/4	1	24	36	28 9/16	8	2028
25 3/4	1 3/8	24	39	30	8	1203Z2
26	1	24	34 1/8	26 3/4	6	3725
26	1 1/2	24	36	28	4	1046
26	1 1/2	24	39	28 7/16	7	1040
26	1 1/2	24	36	28 3/8	7	1045
26	1 1/2	24	34	28 7/16	7	1045Z2
26	1 1/2	24	36	28 9/16	8	1047
26	1 1/2	24	36	27 3/8	9	1048
26	1 1/2	24	36	27 3/8	10	1049
26 1/8	1 3/8	24	35	26 3/4	7 3/8	V-2355
27	2 1/2	24	36	24	9	1900
28 3/4	1 1/4	24	36	28 1/2	4	1935
25 5/8	7/8	24 5/16	34	24 5/16	6	1731
25 5/8	7/8	24 5/8	35 1/2	24 5/8	10	1730
27 7/8	1 1/2	25 1/8	32 1/2	28 1/8	4	V-2610-5 Rev
32	1 1/2	28	40 1/4	33 5/8	4 7/8	V-2432
31 5/8	1 3/4	29 5/8	38 3/4	32 9/16	6	2010
31 1/2	1 1/2	29 3/4	46	37	5 3/4	1821
31 7/8	1 5/16	29 3/4	44	34	8	2070
33 7/8	1 1/2	29 3/4	38 1/2	31 1/8	4	V-2610-6 Rev
31 1/2	1 1/2	30	39 1/8	31 11/16	5 1/4	2230
31 7/8	1 1/2	30	40 3/4	32 3/8	4 1/2	V-1420/1480
32	1 3/8	30	46	37	5 5/8	1820
32	1 1/2	30	38	32 1/4	4	1480
32 1/2	2	30	41 3/4	30	9	1895

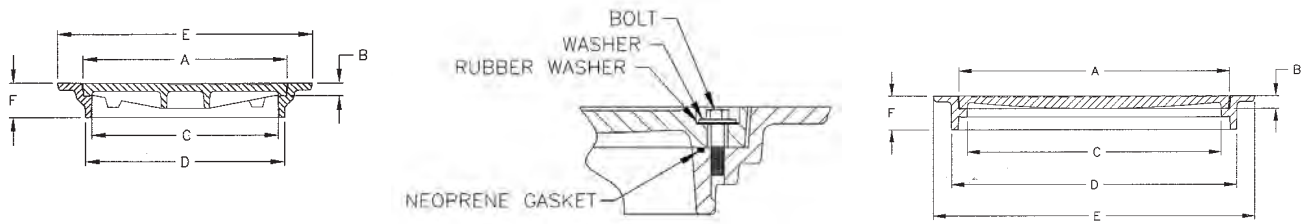
Note: All dimensions are in inches. Rev = Reversible

**WATERTITE BASE FLANGE (CONTINUED)**

<b>A</b> Cover Dim.	<b>B</b> Cover Thk.	<b>C</b> Clear Opening	<b>D</b> Flange Dia.	<b>E</b> Flange ID	<b>F</b> Frame Ht.	<b>Catalog Number</b>
34	1	30	35 1/4	30	2	1106
32	1 3/8	30 1/16	46	38	10	1825
31 15/16	1 3/8	30 3/16	40	32 3/16	5 3/4	3790 Rev
32	1 1/2	30 1/4	40	34	6 1/2	1322
36	1 1/8	34	45	37	7 1/2	2228
36	1 1/2	34	45	36	8 1/2	1585
38	2	34 3/8	46	38 1/4	6	V-2600-5 Rev
37 3/4	1 5/16	35 3/4	50	40	8	2075
38 1/2	1 1/2	36	46	38 3/4	4 1/2	1581 Rev
38 1/2	1 1/2	36	48	40 3/8	7	2688
39 3/4	1 1/4	37 3/4	52	37 3/4	8	1225-40
39 5/8	1 1/2	38 1/4	44 1/2	39 7/8	4	V-2610-7
44 1/4	2	42	51 1/2	42	4 1/8	1843Z1
45 3/4	1 1/2	42 3/8	50 1/2	46	4	V-2610-8 Rev
50 1/4	2	48	56 1/2	50 1/2	6	V-2600-6 Rev

Note: All dimensions are in inches. Rev = Reversible

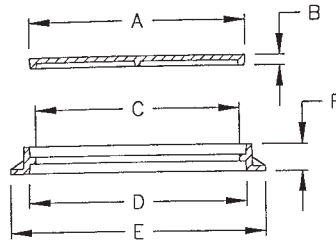
## WATERTITE TOP FLANGE



A Cover Dim.	B Cover Thk.	C Clear Opening	D Flange Siv. OD	E Flange Dia.	F Frame Ht.	Catalog Number
10 1/4	1 1/2	7 1/2	11 1/2	14 1/2	4	V-2610-1 Rev
13 1/4	1 3/8	9 2/3	14 1/2	17 5/8	4	V-2610-2 Rev
14	1 1/4	12	13	18	3	1716
16 1/4	1 1/2	14 3/8	17 1/2	20 1/2	4	2905 Rev
20 1/8	1 3/4	17 7/8	22	29 3/8	4 5/16	3718
21 7/8	1 1/2	18 1/4	23 5/8	26 5/8	4	V-2610-4 Rev
22	1 1/2	19 7/8	23 3/8	27 3/4	4	1490Z1 Rev
24	1	20	25 1/4	33 1/2	4	1267
22	1 1/2	20 1/2	23 1/4	26 1/2	4	1490Z2 Rev
22 3/4	1 3/4	20 3/8	23 3/4	34	4	2995
23 1/2	1 7/16	21 3/4	24 3/4	28 1/2	4	V-2800-2
25 1/4	1 1/2	21 7/8	26 1/2	32 1/8	4	V-2600-3 Rev
24 1/4	1 1/2	22	23 1/4	30	4	2860
25	1	23 7/16	26 11/16	33 5/8	4	3710 Rev
25 1/4	1 1/2	23 1/2	26 1/2	29 1/2	4	2932 Rev
25 1/4	1	23 13/16	34	25 1/2	4	1849 Rev
27 7/8	1 1/2	25 1/8	29 3/8	32 1/2	4	V-2610-5 Rev
33 7/8	1 1/2	29 3/4	35 1/2	38 1/2	4	V-2610-6 Rev
32	1 1/2	30	33 2/3	38	4	2810
38 1/2	1 1/2	36	39 7/8	46	4 1/2	1581 Rev
38 5/16	1 1/2	36	39 7/8	46	4 1/2	2815
40	1 1/2	38 1/2	41 3/4	45	4	1484
44 1/4	2	41 3/4	46 1/4	52 1/2	4	1843Z2
45 3/4	1 1/2	42 3/8	47 3/4	50 1/2	4	V-2610-8 Rev

Note: All dimensions are in inches. Rev = Reversible

## WATERTITE HATCH



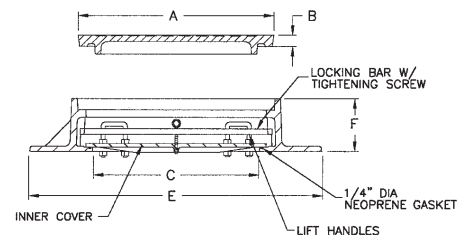
A Cover Dim.	B Cover Thk.	C Clear Opening	D Frame Inside	E Flange Size	F Frame Ht.	Catalog Number
<b>Square</b>						
13 3/4 SQ	1 1/2	12 SQ	14 SQ	18 SQ	4	8001
13 5/8 SQ	1 1/2	12 1/8 SQ	13 7/8 SQ	18 SQ	4	8301
19 3/4 SQ	1 1/2	18 SQ	20 SQ	24 SQ	4	8004
20 SQ	1 1/2	18 1/4 SQ	20 1/4 SQ	24 SQ	4	8304
21 3/4 SQ	1 1/2	20 SQ	22 SQ	26 SQ	4	8305
23 1/2 SQ	1 1/2	21 7/8 SQ	23 3/4 SQ	28 SQ	4	8306
25 3/4 SQ	1 1/2	24 SQ	26 SQ	29 15/16 SQ	4	8308
26 3/4 SQ	1 1/2	24 SQ	27 SQ	33 1/2 SQ	4	8008
31 3/4 SQ	1 1/2	29 15/16 SQ	32 SQ	33 1/4 SQ	4	8313
37 3/4 SQ	1 3/8	34 1/4 SQ	37 13/16 SQ	43 1/4 SQ	4	V-6436
43 3/4 SQ	1 7/8	41 SQ	44 SQ	50 1/8 SQ	5	V-6442
<b>Rectangular</b>						
19 x 24 3/4	1 1/2	17 x 23 1/16	19 3/16 x 25 1/8	24 x 30	4	8322
25 1/2 x 31 1/2	1 1/2	24 x 30	25 7/8 x 31 7/8	30 x 36	4	8328
23 x 35	1 3/8	23 x 35	26 x 38	31 1/2 x 43 1/2	4	V-6465
31 7/8 x 37 3/4	1 7/8	29 x 35	32 1/8 x 38	38 1/4 x 44 1/4	5	V-6468
31 3/4 x 49 3/4	1 3/8	28 5/8 x 46 5/8	32 x 50	37 1/2 x 55 1/2	4	V-6469

Note: All dimensions are in inches.

## FROST PROOF

A Cover Dim.	B Cover Thk.	C Clear Opening	E Flange Dia.	F Frame Ht.	Catalog Number
24	1 1/2	19 7/8	33 7/8	7	1123
26	1 1/2	22 1/8	38 3/4	7	1044
25 3/4	1 1/4	22 1/16	43 1/4	11 1/2	1706
26	1 1/2	22 1/8	38 3/4	7	1044
28 3/4	1 3/8	24 1/2	37 1/2	7	1893
31 3/4	1 3/8	28	40	7	1233
32	1 1/2	28	40	6.5	1323
38 1/2	1 1/2	34	45	10 1/8	1583

Note: All dimensions are in inches.



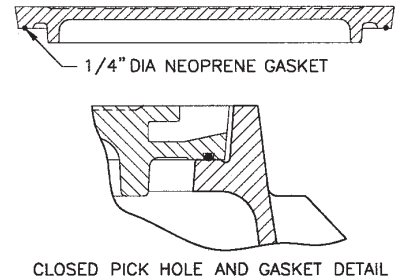
## GASKET SEAL

EJ can supply a Gasket Seal Cover to fit most existing manhole frames. The EJ Gasket Seal Cover design features a machined bearing surface and a machined dovetail groove with a factory installed gasket and closed pick holes.

Historically, older sanitary manhole covers were produced with large open pick holes plus vent holes to facilitate the dispersal of sewer gases. These large openings allowed storm water to enter into the sanitary system.

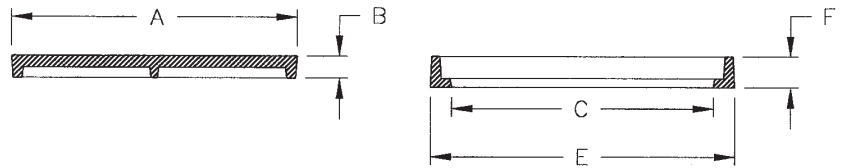
Current civil engineering practices dictate that sanitary collection systems are designed to allow only sanitary sewage flow in the pipelines, for a more cost efficient sewage treatment system. Communities are now mandated to reduce storm water infiltration into their existing systems through manhole rehabilitation projects.

Using EJ Gasket Seal Covers for rehab projects is a practical and cost effective way to help reduce surface water infiltration into the sanitary collection systems and are recommended when it is cost prohibitive to replace the complete unit with an EJ watertight frame and cover.



## SQUARE AND RECTANGULAR COVERS

EJ is continually adding new construction castings and drainage grates to our product offering. Please consult with your EJ representative or email us at [us.sales@EJ.com](mailto:us.sales@EJ.com) to request a sales drawing not shown in this catalog.



A Cover Dim.	B Cover Thk.	C Clear Opening	D Frame Opening	E Flange Size	F Frame Ht.	Catalog Number
6 5/16 x 6 5/16	3/4	5 1/8 x 5 1/8	7 3/8 x 7 3/8	12 1/8 x 12 1/8	9 3/8	8340
7 3/4 x 7 3/4	1 1/2	6 9/16 x 6 9/16	8 x 8	16 1/2 x 16 1/2	9 3/4	8371
7 15/16 x 7 15/16	15/16	6 13/16 x 6 13/16	11 1/8 x 11 1/8	17 3/8 x 17 3/8	15	8365
7 15/16 x 7 15/16	7/8	6 1/2 x 6 1/2	11 1/8 x 11 1/8	16 3/4 x 16 3/4	10	8360
7 3/4 x 7 3/4	1 1/2	6 5/8 x 6 5/8	6 5/8 x 6 5/8	12 5/8 x 12 5/8	15	8375
7 3/4 x 7 3/4	1 1/2	6 5/8 x 6 5/8	6 5/8 x 6 5/8	15 x 15	12 1/4	8370
11 x 26 1/2	1 1/2	9 1/4 x 24	9 1/4 x 24	14 1/4 x 33 1/4	5	8650
11 3/4 x 11 3/4	1	10 x 10	10 x 10	13 1/4 x 13 1/4	1 1/2	8111
12 x 12	7/8	10 1/2 x 10 1/2	10 1/2 x 10 1/2	13 7/16 x 13 7/16	1 1/4	V-6712
12 3/16 x 12 3/16	7/8	11 x 11	13 13/16 x 13 13/16	20 5/8 x 20 5/8	7 1/2	8380
13 3/8 x 13 3/8	1 5/8	11 5/8 x 11 5/8	11 5/8 x 11 5/8	15 3/8 x 15 3/8	2 1/8	V-6713
13 5/8 x 13 5/8	1 1/2	12 1/8 x 12 1/8	13 7/8 x 13 7/8	18 x 18	4	8301 Rev
13 3/4 x 13 3/4	1	12 x 12	12 x 12	15 1/8 x 15 1/8	1 1/2	8115
13 3/4 x 13 3/4	1 1/2	12 x 12	14 x 14	18 x 18	4	8001
13 7/8 x 25 7/8	1	12 x 24	12 x 24	15 1/8 x 27 1/8	1 1/2	V-6751
13 5/8 x 13 5/8	1 1/2	12 1/16 x 12 1/16	13 3/8 x 13 3/8	18 x 18	4	8201 TF
14 3/8 x 14 3/8	1	12 7/8 x 12 7/8	12 7/8 x 12 7/8	15 7/8 x 15 7/8	1 1/2	V-6714
15 7/8 x 15 7/8	1 1/4	14 1/4 x 14 1/4	14 1/4 x 14 1/4	17 1/4 x 17 1/4	1 3/4	8117

Note: All dimensions are in inches. Rev = Reversible TF = Top Flange

## SQUARE AND RECTANGULAR COVERS (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	D Frame Opening	E Flange Size	F Frame Ht.	Catalog Number
17 3/4 x 17 3/4	1 9/16	16 x 16	16 x 16	19 1/4 x 19 1/4	2	8120
18 1/4 x 26 1/4	1 1/2	16 x 24	20 1/16 x 28 1/16	24 x 32	4	8016
18 1/8 x 18 1/8	1 1/2	16 3/8 x 16 3/8	16 3/8 x 16 3/8	19 1/4 x 19 1/4	2	V-6718
19 x 24 3/4	1 1/2	17 x 23 1/16	19 1/4 x 25 1/4	24 x 30	4	8322 Rev
17 3/4 x 21 3/4	1/2	17 1/4 x 21 1/4	17 1/4 x 21 1/4	23 x 27	3	8040 TF
22 1/2 x 45 Dbl	1 9/16	17 7/8 x 40 1/2	18 1/8 x 40 3/4	24 1/2 x 46 7/8	5 1/2	8107 TF
19 3/4 x 19 3/4	1 1/2	18 x 18	20 x 20	24 x 24	4	8004
19 3/4 x 19 3/4	1 1/2	18 x 18	20 x 20	25 1/2 x 25 1/2	4	V-6875-2
19 3/4 x 19 3/4	1 1/2	18 x 18	18 x 18	21 1/4 x 21 1/4	2	V-6720
20 x 20	1 1/2	18 1/4 x 18 1/4	20 1/4 x 20 1/4	24 x 24	4	8304 Rev
20 x 20	1 1/2	18 1/16 x 18 1/16	18 3/8 x 18 3/8	24 1/4 x 24 1/4	4	8204 TF
18 3/4 x 24 3/4	1 1/2	18 x 24	18 x 24	24 x 30 1/8	4	8222 TF
20 x 36	2	18 x 34	18 x 34	22 5/16 x 38 5/16	4	8105
19 3/4 x 19 3/4	11/16	18 11/16 x 18 11/16	18 3/4 x 18 3/4	24 1/16 x 24 1/16	4	8244 TF
19 7/8 x 19 7/8	3/8	18 7/8 x 18 7/8	20 x 20	24 x 24	4	8050
21 3/4 x 21 3/4	1 1/2	20 x 20	22 x 22	26 x 26	4	8305 Rev
21 9/16 x 21 9/16	1 1/2	20 1/8 x 20 1/8	20 1/8 x 20 1/8	26 x 26	4	8205 TF
23 3/4 x 23 3/4	3/4	21 3/4 x 21 3/4	21 3/4 x 21 3/4	28 15/16 x 28 15/16	4	8390 TF
23 3/4 x 23 3/4	1 1/2	22 x 22	24 x 24	29 1/2 x 29 1/2	4	V-6875-3
23 3/4 x 23 3/4	1 1/2	22 x 22	24 x 24	29 1/2 x 29 1/2	4	V-6622
23 1/2 x 23 1/2	1 1/2	21 7/8 x 21 7/8	23 3/4 x 23 3/4	28 x 28	4	8306 Rev
23 1/2 x 23 1/2	1 1/2	22 x 22	22 x 22	28 x 28	4	8206 TF
23 3/4 x 35 3/4	1 1/2	22 x 34	24 x 36	29 1/2 x 41 1/2	4	V-6660
24 1/8 x 24 1/8	1 3/4	22 1/4 x 22 1/4	22 1/4 x 22 1/4	25 7/8 x 25 7/8	2 5/8	V-6724
25 3/4 x 31 3/4	1 3/8	23 x 29	26 x 32	31 1/2 x 37 1/2	4	V-6482
25 3/4 x 37 3/4	1 3/8	23 x 35	26 x 38	31 1/2 x 43 1/2	4	V-6465
25 3/4 x 25 3/4	1 1/2	23 1/2 x 23 1/2	23 1/2 x 23 1/2	30 x 30	4	8208 TF
25 3/4 x 31 3/4	11/16	23 13/16 x 29 15/16	24 3/16 x 30 3/16	30 x 36	4	8270 TF
25 11/16 x 37 11/16	5/8	23 7/8 x 35 7/8	26 3/4 x 38 3/4	30 x 42	4	8271 TF
25 3/4 x 25 3/4	2	24 x 24	24 x 24	27 3/4 x 27 3/4	3	V-6726
25 3/4 x 25 3/4	2	24 x 24	26 1/4 x 26 1/4	32 x 32	6	V-6726-2 Rev
25 3/4 x 25 3/4	2	24 x 24	26 x 26	34 x 34	5	V-6726-1 Rev
25 3/4 x 25 3/4	1 1/2	24 x 24	26 x 26	31 1/2 x 31 1/2	4	V-6624 Rev
25 3/4 x 25 3/4	1 1/2	24 x 24	26 x 26	29 15/16 x 29 15/16	4	8308 Rev
25 1/4 x 25 1/4	11/16	24 x 24	24 x 24	30 x 30	4	8247 TF
26 x 26	1	24 x 24	24 x 24	27 1/8 x 27 1/8	1 1/2	8132
26 3/4 x 26 3/4	1 1/2	24 x 24	27 x 27	33 1/2 x 33 1/2	4	8008
25 1/2 x 31 1/2	1 1/2	24 x 30	25 3/4 x 31 3/4	30 x 36	4	8328 Rev
25 1/2 x 31 1/2	1 1/2	24 x 30	24 x 30	30 x 36	4	8228 TF
25 3/4 x 49 3/4	1 1/2	24 x 48	26 x 50	31 1/2 x 55 1/2	4	V-6875-17

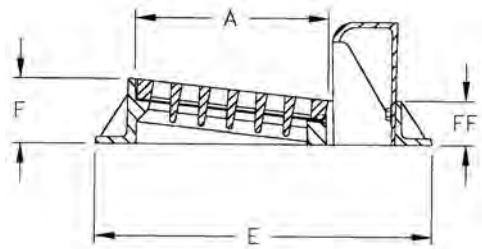
Note: All dimensions are in inches. Rev = Reversible TF = Top Flange

## SQUARE AND RECTANGULAR COVERS (CONTINUED)

A Cover Dim.	B Cover Thk.	C Clear Opening	D Frame Opening	E Flange Size	F Frame Ht.	Catalog Number
25 3/4 x 49 3/4	1 1/2	24 x 48	26 x 50	31 1/2 x 55 1/2	4	V-6667
25 5/8 x 51 1/4	3/4	24 x 49	24 x 49	30 x 55 1/2	4 1/8	8273 TF
25 3/4 x 37 3/4	1 1/2	24 1/8 x 36 1/8	26 x 38	31 1/2 x 43 1/2	4	V-6665
27 x 33	1 3/8	24 3/4 x 29	24 3/4 x 29	44 x 50	11 1/2	8395
31 3/4 x 49 3/4	1 1/2	28 5/8 x 46 5/8	32 x 50	37 1/2 x 55 1/2	4	V-6469
31 7/8 x 37 3/4	2	29 x 35	32 x 38	38 1/8 x 44 1/8	5	V-6468
32 x 50 dbl	1 1/2	29 7/8 x 48	30 1/8 x 50 5/16	36 x 54 1/8	4	8333 Rev
31 3/4 x 31 3/4	1 1/2	30 x 30	32 x 32	36 x 36	4	8313 Rev
31 3/4 x 31 3/4	9/16	30 x 30	30 x 30	36 15/16 x 36 15/16	4	8249 TF
31 7/8 x 37 3/4	2	30 x 36	32 1/8 x 38	38 1/4 x 44 1/4	5	V-6668
31 3/4 x 49 3/4	1 1/2	30 x 48	32 x 50	37 1/2 x 55 1/2	4	V-6875-19
32 x 50 dbl	1 1/2	30 x 48	34 1/4 x 52 1/4	38 x 54	4	8233 TF
31 3/4 x 31 3/4	1 1/2	30 1/8 x 30 1/8	30 5/16 x 30 5/16	36 5/8 x 36 5/8	4	8213 TF
31 3/4 x 31 3/4	1 1/2	30 1/8 x 30 1/8	32 x 32	37 1/2 x 37 1/2	4	V-6630
31 7/8 x 31 7/8	2	30 1/4 x 30 1/4	30 1/4 x 30 1/4	33 7/16 x 33 7/16	2 3/4	V-6732
36 x 60 dbl	2	33 7/8 x 58	33 7/8 x 58	47 7/8 x 72	6	8020
37 3/4 x 49 3/4	1 3/8	34 7/8 x 47	38 x 50	43 1/2 x 55 1/2	4	V-6470
37 3/4 x 37 3/4	1 1/2	35 x 35	38 x 38	43 1/2 x 43 1/2	4	V-6436
37 1/2 x 37 1/2	1 1/2	35 5/16 x 35 5/16	37 5/8 x 37 5/8	41 5/8 x 41 5/8	4	8315 Rev
37 3/4 x 37 3/4	1 1/2	36 1/8 x 36 1/8	38 x 38	43 1/2 x 43 1/2	4	V-6636
37 3/4 x 49 3/4	1 1/2	36 1/8 x 48 1/8	38 x 49 7/8	43 1/2 x 55 3/8	4	V-6875-20
37 3/4 x 49 3/4	1 1/2	36 1/8 x 48 1/8	38 x 49 7/8	43 1/2 x 55 3/8	4	V-6670
38 1/2 x 38 1/2	2	36 1/2 x 36 1/2	36 1/2 x 36 1/2	40 3/8 x 40 3/8	2 3/4	V-6736
43 3/4 x 43 3/4	2	41 x 41	44 x 44	50 1/8 x 50 1/8	5	V-6442
43 7/8 x 43 7/8	2	41 3/4 x 41 3/4	44 1/4 x 44 1/4	50 1/8 x 50 1/8	5	V-6875-9
43 7/8 x 43 7/8	2	41 3/4 x 41 3/4	44 1/4 x 44 1/4	50 1/8 x 50 1/8	5	V-6642
50 5/8 x 50 5/8	1 5/8	48 5/8 x 48 5/8	51 x 51	58 3/4 x 58 3/4	4 3/8	V-6875-10
50 5/8 x 50 5/8	1 1/2	48 5/8 x 48 5/8	51 x 51	58 3/4 x 58 3/4	4 3/8	V-6648

Note: All dimensions are in inches. Rev = Reversible TF = Top Flange

## CURB INLETS



Grate Dimension Width length	Base Flange width length	Frame Ht. F	Frame Ht. FF	Square In. Open	Grate Style	Frame Series
11 3/8 x 28 3/4	29 x 36	10	8 1/2	85	7210M4 Vane	7210
10 7/8 x 20	31 x 31	7	6	100	7205M1	7205
16 5/8 x 21 7/8	36 x 34 7/8	10	7 3/4	100	7220M4 Vane	7220
17 3/4 x 23 3/4	28 x 30	5	4	100	7700M2 Vane	7701
17 3/4 x 23 3/4	28 x 30	5	4	100	7700M3 Bidirect.	7701
24 x 13 5/8	33 1/4 x 36	6	9 3/4	110	7545M2 Vane	7545
16 x 23	36 x 36	8	7	125	7010M4 Vane	7010
17 3/4 x 23 3/4	28 x 30	5	4	128	7700M1	7701
16 1/16 x 23	36 x 36	8	7	130	7010M1	7010
11 3/8 x 28 3/4	29 x 36	10	8 1/2	130	7210M1	7210
16 1/4 x 24	34 1/2 x 34 1/2	9 3/8	10 1/2	130	7463M2*	7463
16 1/4 x 24	29 1/4 x 34 1/2	9 1/2	10 1/2	130	7463M2*	7464
17 x 21 3/8	34 x 34	6 1/2	5 1/2	135	7000M1	7000
11 1/4 x 28 11/16	29 x 36	10	8 1/2	135	7210M2	7210
17 3/4 x 23 3/4	28 x 30	5	4	135	7700M4 ADA	7701
17 x 21 3/8	27 1/4 x 34 3/8	6 3/4	5 1/2	135	7000M1*	7290
18 x 22 1/2	37 x 37	6 3/4	6 1/4	140	7010M2 Sinusoidal	7020
18 x 22 1/2	37 x 37	6 3/4	4 3/4	140	7010M2 Sinusoidal	7022
16 x 23	36 x 36	8	7	140	7010M3 Sinusoidal	7010
16 1/4 x 22 1/4	26 7/16 x 29	12 15/16	10 3/4	140	7170M2	7170
16 1/4 x 22 1/4	29 1/2 x 32 1/4	10 5/8	12 3/8	140	7170M2	7171
17 x 22	38 x 38	6 1/4	5 1/4	140	7310M2	7310
19 7/8 x 22 7/8	26 3/4 x 32 11/16	7	7	142	V-4091-2	V-4091
16 7/8 x 22	36 x 31	10	7 3/4	145	7220M2	7220
16 7/8 x 22	36 x 31	10	7 3/4	145	7220M3 Sinusoidal	7220
20 1/8 x 21 5/8	32 x 32	10 1/4	10 1/4	145	7500 Cover	7500
15 5/8 x 21 5/8	33 5/8 x 33 3/8	7 7/8	7 7/8	145	7520M2	7520
17 x 21 3/8	34 x 34	6 1/2	5 1/2	150	7000M2 Sinusoidal	7000
19 7/8 x 22 7/8	26 3/4 x 32 11/16	7	7	156	V-4091-1	V-4091
19 7/8 x 22 7/8	26 3/4 x 32 11/16	7	7	156	V-4091 Vane	V-4091
16 x 23	36 x 36	8	7	160	7010M5 Diagonal	7010
18 5/8 x 22 1/4	36 x 36	9 1/8	7 3/4	160	7040M1	7045
18 11/16 x 22 1/4	36 x 36	9 1/8	7 11/16	160	7040M1	7050
18 5/8 x 22 1/4	36 5/16 x 36 5/16	9 1/8	7 3/4	160	7045M1	7056

Note: All dimensions are in inches. \* Other style grates available \*\* Double Inlet

## CURB INLETS (CONTINUED)

Grate Dimension Width length	Base Flange width length	Frame Ht. F	Frame Ht. FF	Square In. Open	Grate Style	Frame Series
18 5/8 x 22 1/4	36 x 36	9 1/8	7 3/4	160	7045M1	7065
18 5/8 x 22 1/4	36 x 36	9 1/8	7 3/4	160	M1 Sinusoidal	7045
18 5/8 x 22 1/4	36 x 36	9 1/8	7 3/4	160	M2 Adj. Sinusoidal	7045
16 7/8 x 21 7/8	36 x 34 7/8	10	7 3/4	165	7220M1	7220
16 7/8 x 22	31 x 36	10	7 3/4	165	7221M1	7221
24 x 20 1/8	33 1/4 x 36	6	9 3/4	165	7545M1 Vane	7545
17 1/4 x 24	30 x 33	5	8	165	7711M3 Vane LH & RH	7711
18 x 22 1/2	37 x 37	6 3/4	6 1/4	170	7010M3 Sinusoidal	7020
18 x 22 1/2	37 x 37	6 3/4	4 3/4	170	7010M3 Sinusoidal	7022
17 x 22	38 x 38	6 1/4	5 1/4	170	7310M1	7310
22 3/4 x 22 3/4	31 3/16 x 38	9 3/4	8 7/8	170	7570M3 Vane	7570
19 1/4 x 19 1/4	28 1/4 x 30	10	12 1/2	175	7280M	7280
19 1/4 x 19 1/4	30 x 31	10	12 1/2	175	7280M	7281
15 x 23	35 x 35	9	6	175	7420M	7420
18 5/8 x 22 1/4	36 x 36	7 2/3	9 1/8	180	M3 Sinusoidal	7045
16 1/4 x 22 1/4	26 7/16 x 29	10 5/8	12 3/8	185	7170M1	7170
16 1/4 x 22 1/4	29 x 32 1/4	10 5/8	12 3/8	185	7170M1	7171
23 1/2 x 26	29 3/4 x 38	5 3/4	10 1/8	185	7495M4 Bidirect.	7495
17 1/4 x 24 1/4	30 x 33	5	8	189	7711M1	7711
16 x 31	25 3/4 x 40 3/4	6	6	189	7765M Vane	7765
18 1/2 x 21 7/8	23 5/8 x 23 5/8	9	16 1/2	190	7411M	7411
15 5/8 x 34 3/4	31 1/2 x 43 1/2	7 7/8	7 1/8	190	7505M1	7505
22 3/4 x 22 3/4	31 13/16 x 38	9 3/4	8 7/8	190	7570M1 Vane	7570
22 3/4 x 22 3/4	31 3/16 x 38	9 3/4	8 7/8	190	7570M1 Vane*	7571
22 3/4 x 22 3/4	31 3/16 x 38	8 7/8	9 3/4	190	7570M1 Vane*	7582
22 3/4 x 22 3/4	31 13/16 x 38	9 3/4	8 7/8	192	7570M2 Diagonal	7570
17 x 21 3/8	34 x 34	6 1/2	5 1/2	195	7000M3	7000
18 x 22 1/2	37 x 37	6 3/4	6 1/4	195	7020M1	7020
18 x 22 1/2	37 x 37	6 3/4	4 3/4	195	7020M1	7022
18 5/8 x 22 1/4	30 1/16 x 36	9 1/8	7 3/4	195	7045M1	7066
16 3/4 x 29 7/8	24 1/2 x 36 9/16	7 1/2	5 1/2	195	7350M2 Bar grate	7350
16 3/4 x 29 7/8	24 1/2 x 36 9/16	7 1/2	5 1/2	212	7350M3 Vane	7350
25 3/4 x 25 3/4	33 1/2 x 33 1/2	10 7/8	10	213	7550M RH & LH	7550
17 1/4 x 28 3/4	29 x 36	10	15 3/4	215	7180M2	7180
22 x 22 1/8	36 x 36	10	13 5/8	215	7236M2	7236
23 5/8 x 24 1/4	36 x 36	6 3/4	8 3/4	220	7075M1	7076
23 1/4 x 24 1/4	31 x 36	8 3/4	12 1/2	220	7085M1	7085
22 3/4 x 22 3/4	34 7/8 x 34 7/8	10	12	220	7300 DNW	7300
23 1/4 x 23 1/4	32 3/4 x 32 3/4	7 1/4	11 1/8	220	7490M1	7490
17 3/4 x 35 1/2	31 x 43	6	4	231	7030M5 Diagonal	7030

Note: All dimensions are in inches. \* Other style grates available \*\* Double Inlet

## CURB INLETS (CONTINUED)

Grate Dimension Width length	Base Flange width length	Frame Ht. F	Frame Ht. FF	Square In. Open	Grate Style	Frame Series
22 1/4 x 24	29 1/4 x 34 1/2	10 1/2	9	225	7466M2 Vane	7467
19 1/16 x 25 1/2	36 x 35 7/8	8	10 1/2	225	7525M	7525
23 9/16 x 26	29 3/4 x 38	5 3/4	10 1/8	227	7495M3	7495
11 3/8 x 28 3/4	29 x 36	10	8 1/2	230	7210M3	7210
23 1/4 x 23 1/4	32 3/4 x 32 3/4	7 1/4	11 1/8	230	7490M3	7490
16 7/8 x 38	23 3/16 x 41 3/8	5 1/2	5 1/2	230	V-4092 Vane (1/2)	V-4092
23 5/8 x 24 1/4	31 x 36	8 3/4	6 3/4	240	7075M1	7070
23 5/8 x 24 1/4	36 x 36	6 3/4	8 3/4	240	7075M2 Sinusoidal	7076
21 3/8 x 22 11/16	36 x 36	10	15 5/8	250	7235M1	7235
22 x 22 3/4	36 x 36	10	15 5/8	250	7235M2	7235
17 5/8 x 35 3/8	47 5/16 x 47 5/16	9 1/8	6 7/8	250	7360M1	7360
23 1/2 x 26	29 3/4 x 38	5 3/4	10 1/8	250	7495M1 & M2	7495
22 1/2 x 22 1/2	26 1/2 x 34 7/8	9	10	250	7535M	7535
22 1/2 x 22 1/2	32 1/2 x 35 1/8	10	8 3/4	250	7535M	7540
17 3/4 x 35 1/2	31 x 43	6	4	260	7030M2	7030
17 3/4 x 35 1/2	31 x 43	6	4	260	7030M4 Vane	7030
17 3/4 x 35 1/2	31 1/4 x 43	9 1/8	7 1/8	260	7030M2*	7035
17 3/4 x 35 1/2	31 x 43	6	4	260	7030M6 Vane	7030
21 1/8 x 31 1/2	33 7/8 x 35 1/4	6	6	266	V-4285-3 Vane	V-4078
21 1/8 x 31 1/2	24 5/8 x 36 3/4	6	6	266	V-4285-3 Vane	V-4078
17 1/4 x 28 3/4	29 x 36	10 5/16	16	270	7180M1	7180
21 1/8 x 31 1/2	24 5/8 x 36 3/4	6	6	273	V-4285-1	V-4078
21 1/8 x 31 1/2	24 5/8 x 36 3/4	6	6	273	V-4285-1	V-4078
22 x 36	30 x 37 11/16	6	8 3/4	290	7555M2	7555
21 1/8 x 31 1/2	24 5/8 x 36 3/4	6	6	300	V-4285-2	V-4078
21 1/8 x 31 1/2	24 5/8 x 36 3/4	6	6	300	V-4285-2	V-4078
23 1/2 x 29 5/8	33 3/4 x 37 7/8	6	8 11/16	305	7370M	7370
18 x 36	25 1/8 x 47 5/8	6	6	312	V-4070	V-4070
17 3/4 x 35 1/2	31 x 43	6	4	315	7030M3 Diagonal	7030
17 3/4 x 35 1/2	46 9/16 x 46 9/16	9 1/8	7 1/8	315	7030M3 Diagonal*	7037
27 3/4 x 28	34 x 35 1/4	5 3/8	9	316	7430M1	7430
23 3/4 x 35 7/8	36 x 43	6 1/2	4	324	7510M4	7510
22 x 36	30 x 37 11/16	6	8 3/4	325	7555M1	7555
22 x 36	30 x 37 11/16	6	11 3/4	325	7555M1*	7560
27 3/4 x 29	36 1/4 x 38 3/8	8	11 1/2	330	7390M2	7390
22 x 36	30 x 37 11/16	6	8 3/4	330	7555M3 Vane	7555
27 3/4 x 29	44 x 44	11 1/2	8	330	7390M2*	7395
21 3/4 x 47 3/4	48 x 54	5 1/2	5	338	7590M1	7590
21 3/4 x 47 3/4	36 x 54	5 1/2	5	338	7590M1	7591

Note: All dimensions are in inches. \* Other style grates available \*\* Double Inlet

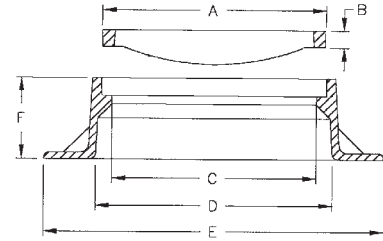
## CURB INLETS (CONTINUED)

Grate Dimension Width length	Base Flange width length	Frame Ht. F	Frame Ht. FF	Square In. Open	Grate Style	Frame Series
27 3/4 x 29	36 1/4 x 38 3/8	8	11 1/2	340	7390M3 Sinusoidal	7390
23 3/4 x 35 7/8	36 x 43	6 1/2	4	340	7510M2 Sinusoidal	7510
22 3/4 x 39 1/2	30 x 40 1/2	5	5	340	7567M Vane	7568
21 3/4 x 36 1/4	24 1/4 x 44 1/2	5	5	359	V-4071 Vane	V-4074
23 3/4 x 35 3/4	28 3/4 x 43 3/4	7	7	368	V-4067-3	V-4067
22 3/4 x 39 1/2	30 x 40 1/2	5	5	370	7567M2	7568
23 3/4 x 35 3/4	31 1/4 x 43	7	4	370	V-4066-3 Diagonal	V-4066
23 3/4 x 35 3/4	31 1/4 x 43	7	4	370	V-4066-4 Diagonal	V-4066
23 3/4 x 35 1/2	31 x 43 1/2	6	4	380	7034M Flat	7034
24 3/8 x 36 1/2	45 1/16 x 45 1/16	8	6 5/8	382	V-4069-1	V-4069
23 3/4 x 35 3/4	28 3/4 x 43 3/4	7	7	383	V-4067-1	V-4067
16 3/4 x 29 7/8	24 3/4 x 67	7 1/2	5 1/2	390**	7350M2 Bar grate	7355
16 3/4 x 29 7/8	24 1/2 x 69	7 1/2	5 1/2	390**	7350M2 Bar grate	7358
15 5/8 x 34 3/4	31 1/2 x 43 1/2	7 7/8	7 1/8	400	7505M3 Vane	7505
28 x 36	31 5/8 x 41	4 1/4	3	400	V-4842	V-4140
23 3/4 x 35 7/8	36 x 43	6 1/2	4	410	7510M1 Diagonal	7510
28 x 36	31 5/8 x 41	4 1/4	3	410	V-4843	V-4140
28 x 36	31 5/8 x 41	4 1/4	3	410	V-4844	V-4140
21 3/4 x 47 3/4	48 x 54	5 1/2	5	415	7590M	7590
21 3/4 x 47 3/4	36 x 54	5 1/2	5	415	7590M	7591
16 3/4 x 29 7/8	24 3/4 x 67	7 1/2	5 1/2	424**	7350M3 Vane	7355
16 3/4 x 29 7/8	24 1/2 x 69	7 1/2	5 1/2	424**	7350M3 Vane	7358
23 3/4 x 35 13/16	31 1/4 x 43	7	4	435	V-4066-1	V-4066
23 3/4 x 35 3/4	31 1/4 x 43	7	4	435	V-4066-2	V-4066
22 1/2 x 22 1/2	35 1/2 x 55 1/2	7 7/8	7 7/8	440	5425M2 Vane	7565
23 3/4 x 35 7/8	36 x 43	6 1/2	4	446	7510M3 Vane	7510
28 x 36	31 5/8 x 41	4 1/4	3	460	V-4840	V-4140
22 1/2 x 45	24 11/16 x 60 3/16	9	10	500	7535M	7536
17 3/4 x 35 1/2	31 x 80	6	4	520	7030M2 Double*	7031
35 3/4 x 17 3/4	31 1/4 x 80 3/4	9 1/8	7 1/8	520	7030M2 Double*	7036
23 1/2 x 59 3/8	33 3/4 x 69 3/4	6	8 11/16	610**	7370M	7371
28 x 29	38 1/2 x 67 1/2	8	11 1/2	660**	7390M2	7391
28 x 29	38 1/2 x 67 1/2	8	11 1/2	680**	7390M3 Sinusoidal	7391
17 3/4 x 35 1/2	31 x 117	6	4	780	7030M2 Triple*	7032
23 3/4 x 35 7/8	37 x 81 1/2	6 1/2	4	820**	7510M1 Diagonal	7511
22 x 22	38 Diameter	9 3/4	9 3/4	NA	7530A	7530
22 3/4 x 22 3/4	34 x 34	4	4	NA	Solid cover	7260
21 x 28 3/4	23 3/8 x 31 1/8	3 1/4	3 1/4	NA	Bar grate	V-4275
24 1/2 x 27 3/4	36 x 41 3/4	9	7 1/2	NA	Steel grate	7140
24 1/2 x 37 1/2	46 x 41 3/4	9	7 1/2	NA	Steel grate	7150
24 1/2 x 47 1/2	56 x 41 3/4	9	7 1/2	NA	Steel grate	7155

Note: All dimensions are in inches. \* Other style grates available \*\* Double Inlet

## CATCH BASINS

EJ is continually adding new construction castings and drainage grates to our product offering. Please consult with your EJ representative or email us at [us.sales@ejco.com](mailto:us.sales@ejco.com) to request a sales drawing not shown in this catalog.



A Grate Dimension	B Grate Thk.	C Clear Opening	D Frame Opening	E Base Flange	F Frame Ht.	Sq. In. Open.	Catalog Number
5 3/4 x 35 3/4	2	4 3/4 x 32 1/2	4 3/4 x 32 1/2	9 3/4 x 36 3/4	5 3/4	75	5310
9 1/2 x 9 1/2	1	8 x 8	8 x 8	10 3/4 x 10 3/4	1 1/2	33	V-5708
12 x 12	1	10 x 10	10 x 10	13 1/4 x 13 1/4	1 1/2	56	8111
12 x 12	7/8	10 1/2 x 10 1/2	10 1/2 x 10 1/2	13 7/16 x 13 7/16	1 1/4	66	V-5712
11 7/8 x 11 7/8	1	10 5/8 x 16 5/8	10 5/8 x 16 5/8	13 5/8 x 19 5/8	1 1/2	93	V-5750-1
13 3/8 x 13 3/8	1 5/8	11 5/8 x 11 5/8	11 5/8 x 11 5/8	15 3/8 x 15 3/8	1 1/8	55	V-5713
13 1/4 x 27 1/4	2	11 3/4 x 25 3/4	11 3/4 x 25 3/4	16 x 30	4	77	V-4274
13 1/2 x 13 1/2	1	12 x 12	12 x 12	15 1/8 x 15 1/8	1 1/2	Solid Cover	8115
13 7/8 x 25 3/8	1 7/8	12 x 23 1/2	12 x 23 1/2	22 x 33 1/2	3	130	V-5104
13 5/8 x 13 5/8	1 1/2	12 1/8 x 12 1/8	12 1/8 x 12 1/8	18 x 18	4	50	8201 TF
13 5/8 x 13 5/8	1 1/2	12 1/8 x 12 1/8	12 1/8 x 12 1/8	18 x 18	4	50	8301 Rev
14 x 19 3/4	1	12 1/2 x 18 5/8	12 1/2 x 18 5/8	19 13/16 x 25 1/4	1 3/4	100	7720
14 1/2 x 14 1/2	1	13 1/4 x 13 1/4	13 1/4 x 13 1/4	16 x 16	1 9/16	77	V-5714
14 3/4 x 21 3/4	2	13 1/16 x 20	13 15/16 x 21 13/16	20 x 30 1/8	10 1/2	131	5150
14 1/2 x 29 1/2	2	13 3/16 x 28	15 7/16 x 30 5/8	22 x 37	7	155	5190
14 1/2 x 29 1/2	2	13 1/2 x 28 1/2	15 x 30	22 x 34 7/16	7	300	5191
14 1/2 x 29 1/2	2	13 3/16 x 28	15 7/16 x 30 5/8	37 x 19 1/2	7	300	5192
15 x 38	1 1/4	13 7/8 x 38 5/16	16 1/2 x 40	23 x 46	7 1/4	NA	5410
15 3/4 x 15 3/4	1 1/8	14 1/4 x 14 1/4	14 1/4 x 14 1/4	17 1/2 x 17 1/2	1 3/4	90	V-5716
16 x 34	1 1/2	14 1/4 x 32 1/2	16 x 34 1/4	22 1/4 x 40 1/2	4	260	V-5434
16 3/16 x 22 1/8	2 1/4	14 1/2 x 20	16 1/2 x 22 3/8	36 1/4 x 36 1/4	7 7/8 x 8 7/8	148	5120
16 3/4 x 29 3/4	2	14 1/2 x 27 1/2	17 x 29 7/8	29 1/4 x 42 1/4	7 1/2	200	5335
14 1/2 x 20 3/8	1 3/4	14 5/8 x 20 1/2	14 5/8 x 20 1/2	23 x 29	7	128	5060
16 5/8 x 29 5/8	1 3/8	15 1/4 x 28 3/8	17 5/16 x 30 5/8	21 7/8 x 38	6	Cover	V-4241
20 3/4 x 22 7/8	1 3/4	15 1/4 x 20 3/4	15 5/8 x 20 3/4	23 5/16 x 50 1/2	7	350	5280
20 3/4 x 22 7/8	1 3/4	15 1/2 x 20 3/4	15 1/2 x 20 3/4	23 1/2 x 50 1/2	7	350	5281
20 3/4 x 35 1/2	1 3/4	15 1/2 x 30 1/2	15 1/2 x 30 1/2	23 1/2 x 38 1/2	7	255	5285
20 3/4 x 35 1/2	1 3/4	15 1/2 x 30 1/2	15 1/2 x 30 1/2	23 1/2 x 38 1/2	7	255	5286
17 3/4 x 23 3/4	1 1/2	16 x 22	18 x 24	25 x 31	4	128*	7700
18 1/8 x 30 1/8	2 9/16	16 x 28	18 1/4 x 30	26 x 38	5	250	V-4230
17 3/4 x 35 3/4	2	16 x 34	19 1/2 x 37 1/2	28 x 46	7	210	5245
18 x 18	1 1/2	16 1/4 x 16 1/4	18 3/8 x 18 3/8	30 x 30	6	140	5090
18 x 23 3/4	1 3/8	16 1/4 x 22	16 1/4 x 22	19 3/8 x 25 1/8	2	188	V-5752

\* Other style grates available    Note: All dimensions are in inches.    Rev = Reversible    TF = Top Flange

## CATCH BASINS (CONTINUED)

A Grate Dimension	B Grate Thk.	C Clear Opening	D Frame Opening	E Base Flange	F Frame Ht.	Sq. In. Open.	Catalog Number
18 x 18	1 1/2	16 3/8 x 16 3/8	16 3/8 x 16 3/8	19 1/2 x 19 1/2	2	152	V-5718
19 x 24 3/4	1 1/2	17 x 23 1/16	19 1/4 x 25 1/4	24 x 30	4	185	8322 Rev
16 7/8 x 21 7/8	1 3/4	17 1/8 x 22 1/8	17 1/8 x 22 1/8	25 x 30	5 1/4	140	5031
17 3/4 x 22 3/4	1 3/4	17 1/4 x 20 3/4	17 1/4 x 20 3/4	34	6 3/4	160*	5080
19 3/4 x 26 3/4	2	17 1/4 x 24 1/2	20 1/4 x 27 1/4	38 x 38	8 3/8	215	5130
17 1/8 x 22	1 3/4	17 3/8 x 22 3/8	17 3/8 x 22 3/8	25 1/8 x 29 1/8	5 1/8	140	5030
19 3/4 x 19 3/4	1 1/2	18 1/4 x 18 1/4	18 1/4 x 18 1/4	21 1/4 x 21 1/4	2	175*	V-5720
17 3/4 x 22 3/4	1 3/4	18 x 22 3/4	18 x 22 3/4	23 3/4 x 31 3/4	6 3/4	160*	5000
17 3/4 x 22 3/4	1 3/4	17 3/4 x 22 13/16	17 3/4 x 22 13/16	21 11/16 x 32 1/16	6 3/4	160*	5020
18 3/4 x 24 3/4	1 1/2	18 x 24	18 x 24	24 x 30 1/8	4	185	8222 TF
19 3/4 x 25 3/4	1 1/2	18 x 24	20 x 26	25 1/2 x 31 1/2	4	220	V-5654
17 7/8 x 29 7/8	2 1/2	18 x 30	18 x 30	26 x 38	5	195*	V-4230-1
19 13/16 x 31 5/8	1 1/2	18 x 30	20 x 32	25 1/2 x 37 1/2	4	300	V-5655
19 3/4 x 37 3/4	1 1/2	18 x 35 3/4	20 x 38	25 1/4 x 43	4	376	V-5656
20 x 36	2	18 x 34	18 x 34	22 5/16 x 38 5/16	4	320*	8105
21 x 28 3/4	2 9/16	18 3/4 x 26 1/2	18 3/4 x 26 1/2	23 3/8 x 31 1/8	3 1/4	220	V-4275
20 x 24	1 5/8	18 3/8 x 22 1/2	20 1/4 x 24 1/4	25 1/4 x 29 1/4	4 1/2	185	7750
20 x 30	2					270	5421
22 1/2 x 22 1/2	2	19 1/2 x 20 11/16	22 1/2 x 45	29 11/16 x 57	8	440	5425
21 1/8 x 31 1/2	2	19 1/2 x 29 7/8	19 1/2 x 29 7/8	24 1/2 x 36 1/2	6	303	V-4285-2
21 3/4 x 47 3/4	1 1/4	19 1/2 x 45 1/2	22 1/2 x 48 3/8	28 x 54	5	415	7593
21 3/4 x 21 3/4	1	19 9/16 x 19 9/16	22 x 22	33 3/4 x 33 3/4	8	185	5340
22 x 30	2	19 3/4 x 25 3/4	22 x 30	33 1/4 x 41 1/4	7 1/4	280	5385
21 3/4 x 33 3/4	2 3/4	19 3/4 x 31 3/4	20 3/4 x 31 3/4	24 x 36	2 3/4	361	V-4280-1
21 5/8 x 33 3/4	2 3/4	19 5/8 x 31 9/16	19 5/8 x 31 9/16	248 x 36	2 3/4	255	V-4280-2
21 5/8 x 33 3/4	2 3/4	19 3/4 x 31 3/4	20 3/4 x 31 3/4	23 5/8 x 35 5/8	2 3/4	363	V-4280-3
22 1/4 x 22 1/4	2 1/2	19 7/8 x 19 7/8	22 7/8 x 22 7/8	36 x 36	8 1/8	175	5100
21 3/4 x 21 3/4	1 1/2	20 x 20	22 x 22	26 x 26	4	155	8305 Rev
22 1/8 x 22 1/8	2 1/2	20 x 20	24 1/2 x 24 1/2	36 x 36	10	175	5125
22 1/4 x 34 1/4	2	20 x 32	20 x 32	30 1/2 x 42 1/2	4 1/4	345	V-5134
21 3/4 x 21 3/4	1 1/2	20 x 20	22 x 22	26 x 26	4	155	8205 TF
22 1/2 x 22 1/2	2	20 3/8 x 20 1/2	22 5/8 x 23 7/8	34 1/2 x 48	8	500	5375
22 1/2 x 22 1/2	2	20 3/8 x 20 3/8	23 23	34 1/2 x 47 7/8	8	500	5376
21 1/2 x 21 1/2	1 3/4	20 1/2 x 20 1/2	20 1/2 x 20 1/2	28 x 28	6	220	V-5150
22 1/2 x 22 1/2	2	20 3/8 x 21	23 7/8 x 23 7/8	25 3/8 x 34 1/2	8	250	5380
23 3/4 x 23 3/4	2	21 x 21 1/2	23 x 23 1/4	31 1/8 x 60	9 1/2	350	5344
23 1/2 x 23 1/2	2	21 x 23 9/16	21 x 23 9/16	28 1/2 x 29 1/4	4	180	5391 Sgl
47 x 23 1/2	2	21 x 49	21 x 49	29 1/2 x 52	4	360	5391 Dbl
22 3/4 x 39 1/2	2	21 x 37 9/16	23 1/2 x 39 3/16	30 x 45 1/2	5	370*	7568
23 3/4 x 23 3/4	2	21 1/8 x 21 1/8	24 x 24	31 x 36	9 1/2	175	5342

Note: All dimensions are in inches. Rev = Reversible TF = Top Flange

## CATCH BASINS (CONTINUED)

A Grate Dimension	B Grate Thk.	C Clear Opening	D Frame Opening	E Base Flange	F Frame Ht.	Sq. In. Open.	Catalog Number
22 x 26	1	21 1/8 x 25	24 1/2 x 27 7/8	33 7/8 x 36	8 5/8	245	5220
22 1/2 x 36 3/8	1 3/4	21 1/8 x 35	21 1/8 x 35	27 3/8 x 41 1/4	3	260	5395
24 x 36	2	21 1/2 x 33 1/2	21 1/2 x 33 1/2	28 x 40 1/4	2 3/4	413	V-5760
24 x 36	2	21 1/2 x 33 1/2	24 1/4 x 36 1/4	28 x 40 1/4	2 3/4	413	V-5760
23 3/4 x 23 3/4	2	21 3/4 x 21 3/4	24 x 24	32 1/2 x 32 1/2	6	215	5370
23 1/2 x 23 1/2	1 1/2	21 7/8 x 21 7/8	23 3/4 x 23 3/4	28 x 28	4	215	8306 Rev
23 1/2 x 23 1/2	1 1/2	22 x 22	22 x 22	28 x 28	4	220	8206 TF
23 5/8 x 23 5/8	1 1/2	22 x 22	24 1/8 x 24 1/8	34 x 34	8	220	5235
23 5/8 x 23 5/8	1 1/2	22 x 22	23 15/16 x 23 15/16	34 x 29 11/16	8	440	5236
23 3/4 x 23 3/4	1 1/2	22 x 22	24 x 24	29 1/4 x 29 1/4	4	266	V-5622-4
23 3/4 x 35 3/4	1 1/2	22 x 34	24 x 36	29 1/2 x 41 1/2	4	390	V-5660
21 1/2 x 47	3	22 x 42 1/4	23 x 42 1/4	25 3/4 x 48 1/4	6	396	V-4210-1
23 5/8 x 23 5/8	1 1/2	22 x 22	25 7/16 x 25 7/16	32 3/4 x 32 3/4	6	220	5250
24 x 24	2 15/16	22 1/4 x 22 1/4	25 7/8 x 25 7/8	37 7/8 x 37 7/8	7 5/8	300	5230
24 x 24	1 7/8	22 1/8 x 22 1/8	22 1/8 x 22 1/8	30 x 30	2 5/8	268	V-5724-1
24 x 24	1 7/8	22 1/4 x 22 1/4	22 1/4 x 22 1/4	25 7/8 x 25 7/8	2 5/8	212	V-5724-2
23 7/8 x 39	1 3/4	22 3/8 x 37 1/2	22 3/8 x 37 1/2	25 7/8 x 41	2 3/4	392	V-5759-1
24 x 24	2	22 1/2 x 22 1/2	25 13/16 x 25 13/16	32 x 32	6 1/4	243	V-5324-1
24 x 36	2	22 1/2 x 34 1/2	25 13/16 x 37 13/16	32 x 44	6 1/4	405	V-5360-1
26 x 26	1 1/2	23 x 23	28 13/16 x 28 13/16	33 x 33	3	245	5050
28 5/8 x 45 1/4	2	23 7/16 x 40	23 7/16 x 40	37 7/16 x 54	2 1/2	750	5400
23 7/8 x 26	2 1/2	23 1/16 x 24	23 1/16 x 24	24 3/4 x 32	1 1/2	240	V-4821
25 1/4 x 47 3/4	4	22 15/16 x 45 13/16	26 1/16 x 48 9/16	33 1/2 x 56	9	Steel grate	7156
26 x 52	2	23 1/8 x 23 9/16	25 3/4 x 25	32 1/4 x 64 1/2	9 1/2	300	5350
25 3/4 x 25 3/4	1 1/2	23 1/2 x 23 1/2	23 1/2 x 23 1/2	30 x 30	4	270	8208 TF
25 3/4 x 25 3/4	1 1/2	23 1/2 x 23 1/2	23 1/2 x 23 1/2	30 x 30	4	270	8308 Rev
25 3/4 x 25 3/4	1 1/2	23 1/2 x 23 1/2	23 1/2 x 23 1/2	30 x 30	4	270	8308
25 3/4 x 25 3/4	1 1/2	24 x 24	26 x 26	31 3/8 x 31 3/8	4	295	V-5624
25 3/4 x 25 3/4	2	24 x 24	26 x 26	32 x 32	5	321	V-5626
25 1/2 x 31 3/4	1 1/2	24 x 30	27 1/4 x 33 1/4	30 x 36	4	350	8228 TF
25 1/2 x 31 1/2	1 1/2	24 x 30	25 3/4 x 31 3/4	30 x 36	4	350	8328 Rev
26 1/2 x 47 3/4	2 9/16	24 x 45 1/4	24 x 45 1/4	32 x 53 1/4	3 1/4	470*	5355
25 3/4 x 31 3/4	1 1/2	24 x 30	26 x 32	31 3/8 x 37 3/8	4	390	V-5662
25 3/4 x 49 3/4	1 1/2	24 x 48	26 x 50	31 1/2 x 55 1/2	4	600	V-5667
26 1/4 x 50 1/4	1	24 x 48	24 x 48	32 x 56	4	520	V-4195-1
25 3/4 x 37 3/4	1 1/2	24 1/8 x 36 1/8	26 x 38	31 1/2 x 43 1/2	4	463	V-5665
25 7/8 x 37 7/8	2	24 3/8 x 36	26 x 38	31 1/2 x 43 1/2	5	397	V-5666
25 3/4 x 25 3/4	2	24 1/4 x 24 1/4	24 1/4 x 24 1/4	27 7/8 x 27 7/8	2 3/4	321	V-5726
28 x 28	2 1/4	24 1/2 x 24 1/2	24 1/2 x 24 1/2	29 3/4 x 29 3/4	3	326	V-5775
25 7/8 x 31 7/8	1 3/4	24 1/2 x 30 3/8	24 1/2 x 30 3/8	27 7/8 x 33 7/8	2 3/8	402	V-5763

Note: All dimensions are in inches. Rev = Reversible TF = Top Flange

## CATCH BASINS (CONTINUED)

A Grate Dimension	B Grate Thk.	C Clear Opening	D Frame Opening	E Base Flange	F Frame Ht.	Sq. In. Open.	Catalog Number
28 1/4 x 40	2 1/4	24 1/2 x 36	24 1/2 x 36	31 x 41	2 1/2	Steel	V-4290
27 x 27	2	25 x 25	25 x 25	28 11/16 x 28 11/16	2 1/2	390*	5115
27 x 27	2	25 x 25	25 x 25	30 x 30	2 1/2	300*	5116
27 1/2 x 27 1/2	1 1/16	25 1/2 x 25 1/2	25 1/2 x 25 1/2	29 x 29	1 9/16	360*	5110
28 x 36	2	25 3/4 x 33 3/4	25 3/4 x 33 3/4	33 1/4 x 41 1/4	3 5/8	460	V-4840
27 5/8 x 27 5/8	2	25 7/8 x 25 7/8	25 7/8 x 25 7/8	33 1/4 x 33 1/4	6	336	V-5155
28 x 28	2	25 7/8 x 25 7/8	25 7/8 x 25 7/8	30 1/8 x 30 1/8	2 3/4	370	V-5728
32 x 32	1 9/16	29 11/16 x 32 1/2	32 11/16 x 32 3/16	41 x 41	7 5/8	425	5225
31 3/4 x 31 3/4	1 1/2	29 15/16 x 29 15/16	32 x 32	36 x 36	4	426	8313 Rev
31 3/4 x 31 3/4	1 1/2	29 15/16 x 29 15/16	32 x 32	36 x 36	4	426	8213 TF
30 x 36	2 1/8	30 1/16 x 33	29 7/8 x 36 3/4	37 x 43 1/8	6 1/2	510	5240
31 7/8 x 31 7/8	2	30 1/4 x 30 3/4	30 1/4 x 30 1/4	33 3/4 x 33 3/4	2 3/4	490	V-5732
31 7/8 x 31 7/8	2	30 x 30	32 1/8 x 32 1/8	38 1/8 x 38 1/8	5	490	V-5632
31 3/4 x 37 3/4	2	30 x 36	32 1/8 x 38	38 1/4 x 44 1/4	5	562	V-5668
32 x 50 dbl	1 1/2	30 x 48	32 1/4 x 50 3/8	36 x 54	4	640	8333 Rev
31 15/16 x 49 7/8	1 1/2	30 x 48	30 x 48	38 x 54	4	640	8233 TF
31 3/4 x 31 3/4	1 1/2	30 1/8 x 30 1/8	32 x 32	37 1/2 x 37 1/2	4	474	V-5630
31 3/4 x 49 3/4	1 1/2	30 1/8 x 48 1/8	32 x 50	37 1/2 x 55 1/2	4	724	V-5669
29 7/8 x 32 3/8	3 1/4	30 7/8 x 30 1/8	30 7/8 x 30 1/8	36 15/16 x 76 3/8	4 1/8	1040	5418
29 7/8 x 32 3/8	3 1/8	30 7/8 x 31 3/16	30 7/8 x 31 3/16	39 1/2 x 41 1/4	4 1/8	520	5416
29 7/8 x 32 3/8	3 1/8	30 7/8 x 31 3/16	30 7/8 x 31 3/16	39 1/2 x 76 7/16	4 1/8	1085	5417
37 1/2 x 37 1/2	1 1/2	35 1/4 x 35 1/4	37 5/8 x 37 5/8	41 5/8 x 41 5/8	4	500	8315 Rev
41 1/8 x 41 1/8	3 1/2	36 x 36	36 x 36	46 x 46	4	780	5390
37 3/4 x 37 3/4	1 1/2	36 x 36	37 3/4 x 37 3/4	44 1/4 x 44 1/4	4	651	V-5636
37 3/4 x 49 3/4	1 1/2	36 1/8 x 48 1/8	38 x 49 7/8	43 1/2 x 55 3/8	4	900	V-5670
38 1/2 x 38 1/2	2	36 1/2 x 36 1/2	36 1/2 x 36 1/2	40 3/4 x 40 3/4	2 3/4	651	V-5736
21 3/4 x 47 3/4	1 1/4	39 x 45 1/2	48 x 48 3/8	51 x 54	5	830	7592
30 x 30	2	Steel Frame Available		Steel Frame Available		335	5420

Note: All dimensions are in inches. Rev = Reversible TF = Top Flange

## DRAINAGE TABLES — ROUND GRATES

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Grate Option	Manhole Grate Dia.	Catch Basin Grate Thk.	Sq. In. Opening	Grate Wier Perimeter	Grate Description	Frame Series
V-3610-1	10 1/4	1 1/2	33	32		V-1610-1
3660M	11 5/8	1 1/16	36	37	Light duty (Non-traffic)	3660Z
3660M2	11 5/8	1 1/16	33	37	ADA	3660Z
V-8501	13	3/4	35	41		V-8501
1150M	13 1/4	1	44	42	Medium duty	1150
1150N	13 1/4	1	50	42	Oval, Medium duty	1150
V-3610-2	13 1/4	1 1/2	54	42		V-1610-2
1750M	13 3/4	2	50	43		1750
V-3610-3	16 1/4	1 1/2	73	51		V-1610-3
1740M	17 3/4	1 1/2	50	56		1740
V-3600-1	19 1/4	1 1/2	110	60		V-1600-1, V-1700-1
1160N	20	3/4	105	63	Oval, Medium duty	1160
1160M	20 1/8	3/4	89	63	Medium duty	1160
3719M	20 1/4	1 1/2	121	64		3719
1060-01	21 3/4	1 1/8	135	68	Beehive	1030, 1060, 1170, 1171, 1180, 2850
1060-02	21 3/4	1 1/2	135	68	Beehive	1030, 1060, 1170, 1171, 1180, 2850
1060M1	21 3/4	1	115	68	Medium duty	1030, 1060, 1170, 1171, 1180, 2850
1060M2	21 3/4	1	145	68		1030, 1060, 1170, 1171, 1180, 2850
1060N	21 3/4	1 1/8	135	68	Oval	1030, 1060, 1170, 1171, 1180, 2850
V-3610-4	21 7/8	1 1/2	159	69		V-1610-4
1130-01	22	1 1/2	135	69	Beehive	1125, 1130, 1135, 1140, 1490
1130-02	22	1 1/2	135	69	Beehive	1125, 1130, 1135, 1140, 1490
1130M1	22	1 1/2	115	69	Medium duty	1125, 1130, 1135, 1140, 1490
1130M2	22	1 1/2	145	69		1125, 1130, 1135, 1140, 1490
1130M3	22	1 1/2	170	69	Medium duty	1125, 1130, 1135, 1140, 1490
1130N	22	1 1/2	135	69	Oval	1125, 1130, 1135, 1140, 1490
1660M	22 1/4	1	120	70		1660, 1661
1640M	22 5/8	1 1/2	132	71		1641
1020P	22 11/16	1 3/4	159	71	Concave	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996
1020-01	22 3/4	1 3/4	115	71	Beehive	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996
1020-02	22 3/4	1 3/4	150	71	Beehive	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996
1020M1	22 3/4	1 3/4	120	71	DNW	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996

Note: All dimensions are in inches.

## DRAINAGE TABLES — ROUND GRATES (CONTINUED)

Grate Option	Manhole Grate Dia.	Catch Basin Grate Thk.	Sq. In. Opening	Grate Wier Perimeter	Grate Description	Frame Series
1020M2	22 3/4	1 3/4	150	71	DNW	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996
1020M3	22 3/4	1 3/4	87	71	ADA, DNW	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996
1020N	22 3/4	1 3/4	135	71	Oval	1020, 1022, 1037, 1050, 1051, 1510, 1550, 1880, 2996
1075M	22 3/4	1 1/8	140	71		1075
1000-01	23	1 1/4	140	72	Beehive, DNW	1000, 1010, 1070
1000-02	23	1 1/4	145	72	Beehive	1000, 1010, 1070
1000-03	23	1 1/4	130	72	Beehive	1000, 1010, 1070
1000M	23	1 1/4	140	72		1000, 1010, 1070
1000N	23	1 1/4	115	72	Oval, DNW	1000, 1010, 1070
1058M1	23	1 1/2	120	72		1058
1058M2	23	1 1/2	120	72	DNW	1058
1850M	23 1/4	1	105	73		1850, 1622
V-3501	23 1/4	1	137	73		1622, 2132, V-1105, V-1402, V-1403, V-1406, V-1501, V-1503
V-3384	23 1/2	1	159	74		V-1384
V-3418-1	23 1/2	1 1/2	166	74		V-1418, V-1480, V-1481, V-1600-2, V-1700-2
1202M	23 3/4	2 1/2	117	75	DNW	1202
1251M	23 3/4	1	148	75		1251
1450M	23 3/4	1	110	75		1450, 1690, 2020, 2035, 2410, 2415, 2416, 2420, 2425, 2430, 2925
1460M	23 3/4	3/4	140	75	Heavy duty	1460
1590M	23 3/4	1 3/8	140	75		1590
1665M	23 3/4	1	175	75		1665
1710M	23 3/4	2	115	75		1710, 1715, 2022, 2023, V-1140, V-1168, V-1243, V-1317
1710-O	23 3/4	2	140	75	Beehive	1710, 1715, 2022, 2023, V-1140, V-1168, V-1243, V-1317
1410M	23 13/16	1 1/8	170	75		1410
1120M	24	1 1/2	125	75		1120
1177M	24	2 1/4	192	76		1177Z
1855M	24 1/4	3/4	62	76	Non-Traffic, ADA, DNW, Logo	1855
1733M	24 7/16	2	161	77	DNW	1733, 2734
3770M	24 1/2	1	156	77		3770
1433M	24 3/4	1 1/4	100	78		1433
1600M	24 3/4	1	175	78		1600
2603M	24 3/4	7/8	185	78		2600, 2601, 2603, 2615, 2640
2603M2	24 3/4	7/8	152	78	ADA	2603, 2625TF, 2615Z, 3020Z

Note: All dimensions are in inches.

**DRAINAGE TABLES — ROUND GRATES (CONTINUED)**

<b>Grate Option</b>	<b>Manhole Grate Dia.</b>	<b>Catch Basin Grate Thk.</b>	<b>Sq. In. Opening</b>	<b>Grate Wier Perimeter</b>	<b>Grate Description</b>	<b>Frame Series</b>
3777	24 3/4	1	153	78	ADA	
2640P	24 3/4	7/8	136	78	Concave	2600, 2601, 2603, 2615, 2640
3700-O	24 13/16	7/8	117	78	Beehive	3700, 3705, 3710
3700M	25	1	152	79	DNW	3700, 3705, 3710
3700M2	25	1	152	79	ADA	3700Z, 3705Z, 3710Z
V-3600-3	25 3/8	1 1/2	180	80		V-1357, V-1600-3, V-1624, V-1700-3
1700M	25 1/2	2	120	80		1700, 1703
1975M	25 1/2	1	125	80		1975Z
1203M	25 3/4	1 3/8	159	81		1203, 1207, 1405
1205-02	25 3/4	7/8	185	81	Beehive	1203, 1204, 1205, 1207, 1405 1936
1205M	25 3/4	7/8	200	81	DNW	1203, 1204, 1205, 1207, 1405 1936
V-3312	25 3/4	1 1/2	215	81		V-1312
3772M	25 3/4	1	164	81	DNW	
1040-02	26	1 1/2	185	82	Beehive	1040, 1045, 1046, 1047, 1048, 1049, 1080, 2800
1040M1	26	1 1/2	190	82	DNW	1040, 1045, 1046, 1047, 1048, 1049, 1080, 2800
1040M2	26	1 1/2	170	82	DNW	1040, 1045, 1046, 1047, 1048, 1049, 1080, 2800
1040M3	26	1 1/2	130	82	ADA, DNW	1040, 1045, 1046, 1047, 1048, 1049, 1080, 2800
1040N	26	1 1/2	140	82	Oval	1040, 1045, 1046, 1047, 1048, 1049, 1080, 2800
1040N1	26	1 1/2	232	82	Oval	1040, 1045, 1046, 1047, 1048, 1049, 1080, 2800
1720N	26	1 5/8	140	82	Oval	1720
1720P	26	1 9/16	180	82	Concave	1720
3730M	26	1 3/4	170	82		3730
3726M	26 3/16	1	142	82		3725
2870M	27	2 1/2	236	85	Catch basin grate	2870Z
8075MVH	27 3/4	1	124	87	ADA	
2100M	27 7/8	1 3/8	205	88	DNW	2100, 2101
V-3610-5	27 7/8	1 1/2	243	88	DNW	V-1610-5
1890M	28 3/4	1 3/8	244	90		1890, 1891
266M	31 9/16	1 1/8	182	99		1266
1811M	31 2/3	1 5/16	240	100		1230, 1232, 1234, 1820, 1825, V-1600-4, V-1700-4, V-7032
V-3600-4	31 7/8	1 3/8	350	100		1230, 1232, 1234, 1820, 1825, V-1600-4, V-1700-4, V-7032
8025MVH	32	1 3/8	209	100	ADA	8027
1480M1	32	1 1/2	262	101	ADA, DNW	1320, 1322, 1480, 2810, V-1419, V-1420, V-1432
1320M	32	1 1/2	360	101	Cross bar	1320, 1322, 1480, 2810, V-1419, V-1420, V-1432
1322M	32	1 1/2	240	101		1320
1480M	32	1 1/2	275	101	Non-Traffic	1320, 1322, 1480, 2810, V-1419, V-1420, V-1432
8028MVH	32 1/4	1 3/8	209	101	ADA	8027
2880M	32 3/4	2	2419	103		2880Z TF

Note: All dimensions are in inches.

**DRAINAGE TABLES — ROUND GRATES (CONTINUED)**

<b>Grate Option</b>	<b>Manhole Grate Dia.</b>	<b>Catch Basin Grate Thk.</b>	<b>Sq. In. Opening</b>	<b>Grate Wier Perimeter</b>	<b>Grate Description</b>	<b>Frame Series</b>
V-7069	33 3/4	1 3/8	236	106	ADA	V-7069-1
V-3610-6	33 7/8	1 1/2	350	106		V-1610-6
1330M	35	2	375	110		1330
1585M	36	1 1/2	400	113		1585, 1586
8029MVH	37 1/4	1 1/2	308	117	ADA	
V-3600-5	38	2	480	119		V-1600-5, V-1700-5
1580M	38 1/2	1 1/2	468	121	Heavy duty & Extra Heavy duty	1581, 1821, 2815
1580M2	38 1/2	1 1/2	304	121	ADA	1581, 1821, 2815
V-3610-7	39 5/8	1 1/2	516	125		V-1610-7
1843M1	44 1/8	2	639	139		1843, 1845
V-3610-8	45 5/8	1 1/2	810	143		V-1610-8
V-3600-6	50 1/4	2	760	158		V-1600-6, V-1700-6

Note: All dimensions are in inches.

## DRAINAGE TABLES — CATCH BASIN GRATES

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Grate Option	Sq In. Opening	3-Sided Perimeter	4-sided Perimeter	Grate Description	Frame Option
5000M3	10	58	81	Restricted Flow, DNW	5000, 5020, 5080
V-5708	33	28	38		V-5708
8201M	50	41	55	ADA	8201, 8301
5100M2	50	66 3/8	88 1/2	Restricted Flow (variable)	5100, 5125
V-5713	55	40	54		V-5613, V-5713
V-5712	66	36	48		V-5712
7797M	70	41	54		7797
V-5714	76	44	58		V-5714
V-5716	90	48	64		V-5716
7720M	100	48	68		7720
7700M2*	100	59	83	Vane, DNW	7700
7700M3*	100	59	83	Bi-directional Vane, DNW	7700
V-5720-80	105	59	79	ADA	V-5620, V-5720
5800M1	112	51	73		5150
7700M1	128	59	83	Diagonal, DNW	7700
5800M2	130	51	73		5150
7463M2*	130	57	81	Vane	7464
7700M4	135	59	83	ADA, Diagonal, DNW	7700
5031M	140	56	78	Concave	5030, 5031
5030M	140	56	79	Concave,	5030
5090M	144	54	72		5090
5120M	148	54	77		5120
5110M5	148	83	110	ADA	5110
5190M2	150	59	89	Sinusoidal, two grate unit available	5190, 5191, 5192, 5193
V-5718	152	54	72		V-5718
V-4274	155	54	81		V-4274
8205M	155	65	86		8205, 8305
V-5622-80	156	71	95	ADA, DNW, Two grate unit available	5235, 5236, 5250, V-4875, V-5622
V-5751	158	54	80		V-5751
5000M1	160	58	81	DNW	5000, 5020, 5080
5000M2	160	58	81	Sinusoidal, DNW	5000, 5020, 5080
V-5724-80	164	72	96	ADA	V-5724
V-5720	175	59	79		V-5620, V-5720
5105M1	175	66	89	Sinusoidal, DNW	5100, 5125
5344M*	175	71	95	Vane	5342, 5344, 5370, V-5324-1
V-4410	195	66	88	Valley Gutter	V-4410-1, V-4410-2, V-4410-3
5391M	180	71	94		5391
8222M	185	62	87		8222, 8322

Note: All dimensions are in inches.

\* 2-sided perimeter suggested for vane grate calculation

**DRAINAGE TABLES — CATCH BASIN GRATES (CONTINUED)**

<b>Grate Option</b>	<b>Sq In. Opening</b>	<b>3-Sided Perimeter</b>	<b>4-sided Perimeter</b>	<b>Grate Description</b>	<b>Frame Option</b>
7750M1	185	64	88	Herringbone, DNW	7750
5340M	185	65	87	DNW	5340
V-5752	188	60	84		V-5752
7765M*	189	63	94	Vane	7765, 7766
V-5726-80	194	77	103	ADA	V-5626, V-5726
V-5624-80	194	77	103	ADA, DNW	V-5624
V-4873-1	195	86	123	ADA	V-4873
V-4230-2*	195	66	97	Vane	V-4230, V-4231
5335M	200	63	93	Concave	5335
V-4246	200	66	96	DNW	V-4246
5250M	200	71	95	DNW	5250, 5235, V-4875, V-5622
7569M1	205	67	94		7569
7569M2	205	67	94	Concave	7569
5245M	210	71	107	DNW	5245
5370M	215	71	95		5370
7750M2*	216	64	88	Vane, DNW	7750
7750M3*	216	64	88	Bi-directional Vane, DNW	7750
7600M*	220	65	95	Vane, DNW	7600, 5460
8206M	220	71	94		8206, 8306
V-4275	220	71	100		V-4275
7075M1	220	72	96	Sinusoidal	7076
7466M2*	225	69	93	Vane	7466, 7467
7030M5	231	71	107	Diagonal	5245, 7030, 7031, 7032, 7035, 7037
7750-0	229	64	88	Beehive	7750
5130M1	235	66	93		5130
7535M*	235	68	90	Vane, Two grate unit available	7535
5410M	239	69	107	Concave	5410
V-4243-1	240	63	93	DNW	V-4240, V-4241, V-4854
5130M3	240	66	93	Diagonal	5130
V-5324	243	72	96	Concave	V-5324
5050M	245	78	104		5050
5380M*	250	68	90	Vane	5380
V-4435	251	78	108	Valley Gutter — Slight	V-4435
V-4280-2*	255	77	111	Vane	V-4280
5360M	256	68	104	Sloped	5360
V-4230-1	260	66	97	DNW	V-4230, V-4231
7030M2	260	71	106		5245, 7030, 7031, 7032, 7035, 7037
7030M6*	260	71	107	Vane	5245, 7030, 7031, 7032, 7035, 7037
5395M1	260	81	117		5395
V-5660-80	260	83	119	ADA, DNW	V-5660

Note: All dimensions are in inches.

\* 2-sided perimeter suggested for vane grate calculation

**DRAINAGE TABLES — CATCH BASIN GRATES (CONTINUED)**

<b>Grate Option</b>	<b>Sq In. Opening</b>	<b>3-Sided Perimeter</b>	<b>4-sided Perimeter</b>	<b>Grate Description</b>	<b>Frame Option</b>
V-4430	265	78	108	Valley Gutter	V-4430
V-5622	266	71	95	DNW, Two grate unit available	5250, 5235, V-4875, V-5622
7075M2	266	72	96	Sinusoidal, Expressway use	7076
V-5724-1	268	72	96	DNW	V-5724
V-5622-5	269	71	95	Two grate unit available	5250, 5235, V-4875, V-5622
8208M	270	77	103		8208, 8308
V-4530	272	76	98	Valley Gutter — Sloped, DNW	V-4530-1, V-4530-2
7030M4*	272	71	107	Vane	5245, 7030, 7031, 7032, 7035, 7037
5345M1	276	78	104	Parallel Bar, Two grate unit available	5345, V-5626
5055M2	280	71	106		5055
5385M	280	74	104		5385
5055M	283	71	106	M1	5055
V-4880	283	89	119	ADA, Two grate unit available	4595, V-4880
V-5732-80	283	96	128	ADA	V-5632, V-5732
V-5630-80	283	96	128	ADA	V-5630
V-4410	290	88	132	Two grate unit, Valley Gutter	V-4410-2
V-5655	293	71	103		V-5655
8105M3	295	76	112	DNW	8105
V-5624	295	77	103		V-5624
5110M4	295	83	110	Medium duty, DNW	5110
5355M6	298	101	149	ADA, Non-slip, 1/2 grate	5355, 5356, 5357
5230M	300	72	96		5230
5115M2	300	81	108	DNW	5115
5110M3	300	83	110	Sinusoidal, DNW	5110
V-5664	300	83	115		V-5664
5190M2	300	89	148	Two grate unit, Sinusoidal	5191, 5192
V-4510-1	310	83	119	Valley Gutter, DNW	V-4510
V-5622-80	312	95	142	Two grate unit, ADA, DNW	5236L & 5236R
7030M3	315	71	107	Diagonal, Medium duty	5245
8105M1	320	76	112	Diagonal	8105
5345M2	320	78	104	Two grate unit available	5345, 5346
V-5726	321	77	103		V-5626, V-5726
V-5775	326	84	112		V-5775
8228M	328	83	114		8228, 8328
V-4855-1	332	72	110	High Capacity	V-4855
5450M	335	77	107		5450
5420M	335	90	120	Steel angle frame, DNW	5420
7590M1	338	91	139	DNW, Two grate unit available	7593
7567M	340	85	125	Vane, Two and three grate units available	7568

Note: All dimensions are in inches.

\* 2-sided perimeter suggested for vane grate calculation

**DRAINAGE TABLES — CATCH BASIN GRATES (CONTINUED)**

<b>Grate Option</b>	<b>Sq In. Opening</b>	<b>3-Sided Perimeter</b>	<b>4-sided Perimeter</b>	<b>Grate Description</b>	<b>Frame Option</b>
5110M2	350	83	110	DNW	5110
5344M	350	95	143	Two grate unit, Vane	5344
V-4880-4	350	89	119	Two grate unit available	4595, V-4880
V-5736-80	356	115	153	ADA	V-5736
V-4280-1	361	77	111		V-4280
V-4280-3	363	77	111		V-4280
5416M3*	365	93	126	Vane, DNW, Two grate unit available	5416
8105M2	370	76	112	Parallel Bar	8105
V-5728	370	84	112		V-5728
7567M2	370	85	125	Concave, DNW, Two & three grate unit available	7568
5110M1	375	83	110	Non-Traffic, DNW	5110
7034M	380	83	119	Sloped, two grate unit available	7034
V-4067-1	383	83	119		V-4867-1
5115M1	390	81	108		5115, 5116
V-5662	390	83	115		V-5662
V-5660	390	83	119	DNW	V-5660
V-4230-2*	390	97	157	Two grate unit, Vane	V-4232L & V-4232R
V-5666	397	90	128		V-5666
5250M	400	95	142	Two grate unit, DNW	5236L & 5236R
V-5763	402	84	116		V-5763
V-5360	405	84	120	Concave	V-5360-1
7590M	415	91	139	DNW, Two grate unit available	7593
7595M	415	99	147		7595
5355M3	416	101	149	DNW, 1/2 grate	5355, 5356, 5357
V-5760	413	84	120		V-5760
8213M	426	95	127		8213, 8313
5425M2*	440	90	135	Two grate unit, Vane	5425
7600M*	440	97	158	Two grate unit, Vane, DNW	7600L & 7600R
V-4880-3	442	89	119	Two grate unit available	4595, V-4880
V-4520-1	458	89	125	Valley Gutter	V-4520
V-5665	463	89	127		V-5665
5355M1	465	101	149	Diagonal	5355, 5356, 5357
7535M*	470	90	135	Two grate unit, Vane, barrier wall	7536
V-4880-1	473	89	119	DNW, two grate unit available	4595, V-4880
V-5630	474	95	127	DNW	V-5630
V-4243-1	480	93	152	Two grate unit, DNW	V-4243L & V-4243R
5416M1	490	93	126	Sinusoidal, two grate unit available	5416
V-5732	490	96	128		V-5632, V-5732
V-4873	492	86	123		V-4873

Note: All dimensions are in inches.

\* 2-sided perimeter suggested for vane grate calculation

**DRAINAGE TABLES — CATCH BASIN GRATES (CONTINUED)**

<b>Grate Option</b>	<b>Sq In. Opening</b>	<b>3-Sided Perimeter</b>	<b>4-sided Perimeter</b>	<b>Grate Description</b>	<b>Frame Option</b>
5355M5*	514	101	149	Vane, 1/2 grate	5355, 5356, 5357
V-4230-1	520	97	157	Two grate unit, DNW	V-4232L & V-4232R
5380M*	500	90	135	Two grate unit, Vane	5375, 5376
8315M	500	112	150	Two grate unit	8315
5240M	510	96	132	DNW	5240
5416M2	520	92	125	Two grate unit available	5416
V-4410	585	110	176	Three grate unit, Valley Gutter	V-4410-3
V-5622	536	96	143	Two grate unit, DNW	5236L & 5236R
V-5622-5	538	96	143	Two grate unit,	5236L & 5236R
V-4880-6	540	89	119	Two grate unit available	4595, V-4880
5355M4	540	101	149	Diagonal, 1/2 grate	5355, 5356, 5357
V-4530	544	98	151	Two grate unit, Sloped grate	V-4530-2
5345M1	552	104	156	Two grate unit, Parallel Bar	5350
V-5668	562	101	139		V-5668, V-5768
V-4880	566	119	179	Two grate unit, ADA	V-4883
7585M	575	109	159	DNW	7585
V-4230-2*	585	127	217	Three grate unit, Vane	V-4232L & V-4232R & V-4233C
V-5667	598	101	151	1/2 frame & grate unit	V-5667, V-5767
V-4880-2	630	89	119	Non-Traffic, two grate unit available	4595, V-4880
5345M2	640	104	156	Two grate unit	5350
8233M	640	114	164	Two grate unit	8233, 8333
V-5636	651	113	150	DNW	V-5636
V-5736	652	115	153		V-5736
7600M*	660	303	393	Three grate unit, Vane, DNW	7600L & 7600R & 7600C
7590M1	676	135	183	Two grate unit, DNW	7592
7567M*	680	125	204	Two grate unit, Vane	7568L & 7568R
V-4880-4	700	119	179	Two grate unit	V-4883
V-5669	724	113	163		V-5669, V-5769
5416M3*	730	126	192	Two grate unit, Vane, DNW	5417, 5418
7567M2	740	125	204	Two grate unit, Concave, DNW	7568L & 7568R
5400M	750	103	148	Two grate unit available	5400
7034M	760	119	190	Two grate unit, Sloped	7034L & 7034R
V-4230-2*	780	132	192	Four grate unit, Vane	(2) V-4232L & (2) V-4232R
V-4230-1	780	126	216	Three grate unit	V-4232L & V-4232R & V-4233C
7590M	830	135	183	Two grate unit, DNW	7592
V-5742	868	131	175	1/2 grate assy	V-5642, V-5742
V-4880-3	884	119	179	Two grate unit	V-4883
V-5670	708	125	174	1/2 frame & grate unit	V-5670, V-5770
V-4880-1	946	119	179	Two grate unit, DNW	V-4883

Note: All dimensions are in inches.

\* 2-sided perimeter suggested for vane grate calculation

## DRAINAGE TABLES — CATCH BASIN GRATES (CONTINUED)

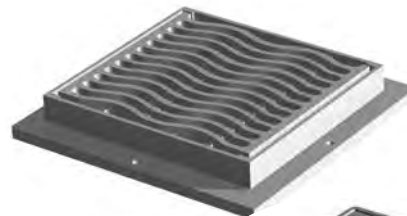
Grate Option	Sq In. Opening	3-Sided Perimeter	4-sided Perimeter	Grate Description	Frame Option
5390M	908	121	161	One piece frame with two piece grate	5390
5416M1	980	126	192	Two grate unit, Sinusoidal	5417, 5418
7567M*	1020	164	283	Three grate unit, Vane, Concave	7568L & 7568R & 7568C
V-4230-1	1040	132	192	Four grate unit	(2) V-4232L & (2) V-4232R
5416M2	1040	126	192	Two grate unit	5417, 5418
V-4880-6	1080	119	179	Two grate unit	V-4880
7567M2	1110	164	283	Three grate unit, Concave, DNW	7568L & 7568R & 7568C
V-5648	1176	152	202	1/2 grate assy	V-5758
V-4880-2	1260	119	179	Two grate unit, Non-traffic-Heavy duty	V-4883
5400M	1500	148	238	Two grate unit	5405

Note: All dimensions are in inches.

\* 2-sided perimeter suggested for vane grate calculation

## SINUSOIDAL AND VANE GRATE FLOW CHARACTERISTICS

It is generally accepted that sinusoidal and vane grates are more efficient than standard bar grates when capturing water that is moving across them. Sinusoidal and vane grates have greater efficiency due to better directional flow characteristics. Sinusoidal and vane grates typically allow less water to bypass the grate. Please note that if a vane grate is installed improperly (i.e. backwards) the grate could have poor flow characteristics, while sinusoidal grates accept water equally in either direction. See page 28 for calculating flow capacities of inlet grates.



Illustrating 5416



Illustrating 7467M2



Illustrating V-5622

## CROSS REFERENCE GUIDE

EJ provides this partial list for your reference only and recommends that you compare actual prints and/or castings when interchangeability is necessary or when writing specifications. Please contact our sales office for additional cross reference assistance.

Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-1049	1049	R-1553	1311	R-1640-A	1204
R-1120	1490	R-1554	1310	R-1640-B	1805
R-1255	1825	R-1555	1310	R-1640-B1	1805
R-1272	2010	R-1557	1232	R-1640-C	1810
R-1275	1820	R-1557-A	1322	R-1640-C1	1810
R-1290	1805	R-1557-A4	1322	R-1640-C1	1822
R-1290-A	1802	R-1558	1234	R-1640-C1S	1820
R-1404-A	1700	R-1560	1212	R-1640-CS	1820
R-1411-A	2055	R-1566	1525	R-1640-D	1812
R-1412-A	1690	R-1568	1555	R-1642	1045
fR-4990	1590	R-1569	1555	R-1642-1	1625
R-1418	2020	R-1570	1000	R-1642-1S	1625
R-1420	1410	R-1570-A	1000	R-1642-A	2450
R-1422-B	1620	R-1572	3115	R-1643	V-1312
R-1422-C	1665	R-1573	3108	R-1645	1020
R-1422-D	1850	R-1574	3160	R-1645-A	3010
R-1423	1450	R-1575	3162	R-1646	1020
R-1433-B	1835	R-1576	3164	R-1647-A	1020
R-1437-B	1660	R-1578	V-1600-5	R-1648	1246
R-1455	1955	R-1579	3110	R-1648	1337
R-1466	1010	R-1580	1140	R-1649	V-1326
R-1466-2	1000	R-1581-A	1136	R-1653-A	1965
R-1466-A	1670	R-1582	3115	R-1653-D	1965
R-1467	1641	R-1582	1322	R-1653-E	1965
R-1500	1125	R-1582	1480	R-1653-F	1965
R-1510-A	1030	R-1582-A	1322	R-1654	1850
R-1530	1020	R-1583	3118	R-1656	1925
R-1534-A	1500	R-1585	1118	R-1657-1	1122
R-1535-A	1500	R-1586	3144	R-1657-1	1325
R-1535-C	1500	R-1590	1205	R-1658	1122
R-1536	V-1383	R-1593	3771	R-1660	1641
R-1537	1501	R-1595	2224	R-1661	1641
R-1538	V-1383-1	R-1596	1202	R-1664	1665
R-1540	1078	R-1597	2222	R-1664-A	1665
R-1550	1050	R-1598	1251	R-1668	1590
R-1550-A	1058	R-1599-A	1224	R-1669-A1	1325
R-1551	1060	R-1600	3725/3726	R-1669-B	V-1326
R-1552	1315	R-1635	3730	R-1670-A	1117

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**CROSS REFERENCE GUIDE (CONTINUED)**

Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-1670-A	1119	R-1714	1925	R-1750-0067	1810
R-1671	1600	R-1715	1020	R-1750-0068	1820
R-1672	1020	R-1720	2110	R-1750-0090	1810
R-1673-A	2030	R-1720-A	2111	R-1750-A	2027
R-1673-B	1040	R-1722	1010	R-1750-B	1805
R-1673-C	1090	R-1722-AVH	1875	R-1750-B1	1802
R-1673-C	1795	R-1722-B	1000	R-1750-B2	1802
R-1676-A	V-1304	R-1723	1268	R-1750-C	1810
R-1677	1559	R-1726-A	1117	R-1750-C1	1820
R-1677	1560	R-1727-A	V-1438	R-1750-C1S	1810
R-1677-A	1020	R-1728	1210	R-1750-C1S	1820
R-1677-A	1559	R-1728-B	1210	R-1750-CS	1810
R-1677-A	1560	R-1729	1700	R-1751-A	1323
R-1678-A	1775	R-1729-1	1703	R-1751-C	1830
R-1680	V-1344	R-1733	1205	R-1753-A	1890
R-1682	2101	R-1733-B	1205	R-1753-ALM	1890
R-1682-1	2101	R-1734-B	1734	R-1753-B	1891
R-1684	1970	R-1735	1975	R-1754-A	1892
R-1688	1342	R-1736-A	V-1383	R-1755-B	1120
R-1689	1078	R-1737	1501	R-1755-B	1123
R-1690	1490	R-1739-A	2287	R-1755-C	1123
R-1690-A	1490	R-1740-B	1320	R-1755-E	1044
R-1691-B	1490	R-1740-D	1812	R-1755-F	1893
R-1693	1660	R-1740-D2	1580	R-1755-F2	1890
R-1695	3119	R-1740-D2	1581	R-1755-G	1480
R-1696	1030	R-1740-E	1843	R-1755-G	1323
R-1697	2205	R-1740-E	1986	R-1755-G1	1323
R-1700-A	1140	R-1740-F	V-7048	R-1757-G	1893
R-1703	V-1326	R-1741-D	1581	R-1758-E	1044
R-1705	1837	R-1741-D	V-1600-5	R-1758-E1	1706
R-1706	2420	R-1741-E	1843	R-1758-G	1323
R-1706-1	2425	R-1741-E	1986	R-1761	1140
R-1706-1S	2425	R-1741-E1	1843EZ	R-1762	1661
R-1707	1661	R-1741-F	1985	R-1762-A	1660
R-1710	1125	R-1741-F1	V-1600-6	R-1763	1620
R-1711-A	1130	R-1743	2006	R-1763-B	1040
R-1711-B	1130	R-1743-LM	ERGO XL 30	R-1764	1120
R-1712	1020	R-1749-A	V-1700-3	R-1765	1670
R-1712-B	1051	R-1749-B	1136	R-1769-A	1520
R-1713	1020	R-1749-B1	1136	R-1771	2020

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## CROSS REFERENCE GUIDE (CONTINUED)

Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-1772	1020	R-1797	2132	R-1878-B8G	V-5667
R-1772-A	1022	R-1798	2508	R-1878-B8L	V-5667
R-1772-B	1022	R-1798-1	2510	R-1878-B9G	V-5668
R-1772-C	1022	R-1799-E	V-1700-1	R-1878-B9L	V-5668
R-1772-CVH	1875	R-1799-H	1020	R-1879-A10G	V-5636
R-1775	1771	R-1799-O	V-1700-4	R-1879-A10L	V-5636
R-1776	V-1480-1	R-1800-C	5520	R-1879-A1G	V-5613
R-1777	V-1407	R-1804	1622	R-1879-A1L	V-5613
R-1779	1995	R-1833-A	V-5660/ V-6660	R-1879-A4G	8205
R-1780-A	1342	R-1863	7750	R-1879-A4L	8205
R-1781	1342	R-1868	8445	R-1879-A5G	V-5622
R-1784	1060	R-1871	8395	R-1879-A5L	V-5622
R-1785	1450	R-1873-P1	8395	R-1879-A6G	V-5624
R-1786	1460	R-1877-E1	V-5667	R-1879-A6L	V-5624
R-1787	1690	R-1878-A10G	V-5636	R-1879-A9G	V-5630
R-1788-A	1835	R-1878-A10L	V-5636	R-1879-A9L	V-5630
R-1788-A1	1835	R-1878-A1G	V-5613	R-1879-B10G	V-5669
R-1788-B	1835	R-1878-A1L	V-5613	R-1879-B10L	V-5669
R-1792-AG	V-3610-1	R-1878-A3G	8304	R-1879-B6G	V-5662
R-1792-AL	V-1610-1	R-1878-A3L	8304	R-1879-B6L	V-5662
R-1792-BG	V-3610-2	R-1878-A4G	8205	R-1879-B7G	V-5665
R-1792-BL	V-1610-2	R-1878-A4L	8205	R-1879-B7L	V-5665
R-1792-CG	V-3610-3	R-1878-A5G	V-5622	R-1879-B8G	V-5667
R-1792-CL	V-1610-3	R-1878-A5L	V-5622	R-1879-B8L	V-5667
R-1792-DG	V-3600-1	R-1878-A6	8308	R-1879-B9L	V-5668
R-1792-DL	V-1600-1	R-1878-A6G	V-5624	R-1883-B1MA	8012
R-1792-EL	1130	R-1878-A6L	V-5624	R-1883-B3	V-6712
R-1792-FG	V-3600-3	R-1878-A9G	V-5630	R-1883-C1	V-6714
R-1792-FL	V-1600-3	R-1878-A9L	V-5630	R-1883-E1	V-5720
R-1792-GG	V-3610-5	R-1878-B10	8333	R-1883-E4	V-6724
R-1792-GL	V-1610-5	R-1878-B10L	V-5669	R-1883-G1	V-6724
R-1792-HG	V-1610-6	R-1878-B11G	V-5670	R-1883-G2	V-6724
R-1792-HL	V-1610-6	R-1878-B11L	V-6670	R-1883-G2A	V-6726
R-1792-JG	V-1610-7	R-1878-B3G	8222	R-1883-G3	V-6726
R-1792-JL	V-1610-7	R-1878-B3L	8322	R-1883-J2	V-6732
R-1792-KG	V-3610-8	R-1878-B6	8328	R-1883-K	V-6736
R-1792-KL	V-1610-8	R-1878-B6G	V-5662	R-1889	2055
R-1794-EB	V-7069-1	R-1878-B6L	V-5662	R-1892	2990
R-1795-F	V-7071	R-1878-B7G	V-5665	R-1896	8065
R-1796-F	1320	R-1878-B7L	V-5665	R-1896	8065

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## CROSS REFERENCE GUIDE (CONTINUED)

Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-1897	8035	R-1978	8396	R-2502-B	1022
R-1899-1	8400	R-1978-A2	8375	R-2502-D	1020
R-1901	BH1225	R-1978-A3	8360	R-2504	1020
R-1911-B	1430/1440	R-1978-B	8380	R-2504 TYPE C	1050
R-1912-A1	8035	R-1978-B10G	V-5669	R-2504 TYPE D	1050
R-1912-B	8249	R-1979-B9G	V-5668	R-2504 TYPE G	1020
R-1912-B1	8270	R-2014	1020	R-2510 TYPE C	1130
R-1913	6800	R-2050	1050	R-2510-A	1130
R-1913-7100	8500	R-2060 TYPE C	1130	R-2533	1125
R-1913-7150	8500	R-2077-A	1022	R-2533 TYPE C	1130
R-1915-G	1040	R-2077-B	1022	R-2534	1000
R-1915-G2	1040	R-2077-C	1022	R-2535 TYPE C	1130
R-1915-S1	1915	R-2080	1020	R-2535-A TYPE C	1130
R-1916	1040	R-2090 TYPE C	1130	R-2540	1020
R-1916-C	1058	R-2100	1550	R-2548	1205
R-1916-C2	1561	R-2100 TYPE C	1130	R-2549	1020
R-1916-D	V-2384	R-2110 TYPE C	1130	R-2556	1045
R-1916-E	1040	R-2112	1140	R-2556-A	1205
R-1916-F	1040	R-2112 TYPE C	1130	R-2557	1322
R-1916-H	1324	R-2120 TYPE C	1130	R-2557-A	1322
R-1916-K	2812	R-2270	1320	R-2557-A4	1322
R-1917	REVOLUTION	R-2290-B	1890	R-2560-C1	1130
R-1919	1020	R-2404	1700	R-2560-C2	1130
R-1924	V-1418-2	R-2410 TYPE C	1130	R-2560-D1	1130
R-1924-A	V-1480-1	R-2412-A	1690	R-2560-D2	1130
R-1924-AB	V-2480	R-2412-A4	1590	R-2560-D3	1130
R-1925	1410	R-2418	1251	R-2560-E1	1205
R-1927	1020	R-2422-A1	1251	R-2560-E10	1205
R-1955-1	3025	R-2422-C	1251	R-2560-E2	1205
R-1960	1020	R-2423	1251	R-2560-E5	1205
R-1960-A	1040	R-2437	1880	R-2560-E6	1205
R-1964	V-1384-3	R-2437-B	1660	R-2560-E7	1205
R-1964-R	8625	R-2461-A TYPE C	1130	R-2560-E8	1205
R-1964-S	8630	R-2464	1078	R-2560-EA	1205
R-1968	8370/8371	R-2467	1641	R-2560-EB	1205
R-1971	2966	R-2475 TYPE C	1130	R-2560-G	1324
R-1973-1	1570	R-2501	1045	R-2561	1205
R-1973-A	1574	R-2502	1020	R-2561-A	1205
R-1974-A	1574	R-2502 TYPE G	1020	R-2563	1130
R-1976	1578	R-2502-A	1022	R-2564	1130
				R-2565-C	2860

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Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-2565-E	2800	R-3037-A	7070	R-3174	7700
R-2565-F	2870	R-3038-A	7085	R-3191-CM1	7140
R-2565-G	2870	R-3039-A	7045	R-3191-CU1	7140
R-2565-J	2880	R-3040	7010	R-3192-CM2	7150
R-2572	1205	R-3065	7015	R-3192-CU2	7150
R-2573	1205	R-3065-L	7015	R-3193-CM3	7155
R-2573-1	1205	R-3065-V	7015	R-3193-CU3	7155
R-2573-A	1205	R-3067	7030	R-3203-A	V-5720
R-2573-B	1205	R-3067 TYPE C	7030	R-3205	5030
R-2573-C	1205	R-3067 TYPE R	7030	R-3210-A	V-5324-1
R-2577	1205	R-3067-C	7030	R-3210-L	5344
R-2577-B	1205	R-3067-L	7030	R-3210-Q	5424
R-2577-F	1205	R-3067-V	7030	R-3222-C	7562
R-2578	1205	R-3067-VB	7030	R-3222-LA	7562
R-2580-A	1320	R-3069	7010	R-3223	5850-12
R-2586-D	V-1700-1	R-3070	7000	R-3223-A	5850-12
R-2586-E	V-1700-1	R-3070	7001	R-3223-B	5850-12
R-2586-F	V-1700-1	R-3076	7600	R-3235	7015
R-2586-M	V-1700-3	R-3076-4M	7600	R-3236	7050
R-2586-O	V-1700-4	R-3076-6B	7600	R-3236-1	7050
R-2586-P	V-1700-5	R-3076-6M	7600	R-3236-A	7050
R-2588-C	2830	R-3076-8B	7600	R-3236-B	7050
R-2595	1880	R-3077	7600	R-3237	7060
R-2595-A	1020	R-3077-L	7600	R-3237-1	7060
R-2600	1720	R-3077-R	7600	R-3237-A	7050
R-2650	1700	R-3078	7600	R-3237-B	7050
R-2668	1590	R-3079	7600	R-3238	5100
R-2680	1665	R-3079-L	V-4230-2	R-3239-A	7340
R-2682	2100	R-3080	7000	R-3240	7070
R-2750	1820	R-3081	7000	R-3240-A	7085
R-3010	7010	R-3157	V-4091	R-3246	7030
R-3015	7010	R-3157-1	V-4091	R-3246 TYPE C	7030
R-3030	7010	R-3157-2	V-4091	R-3246 TYPE V	7030
R-3031-B	7045	R-3157-A	V-4091-2	R-3246-A	7510
R-3032-B	7045	R-3157-AL	V-4091	R-3246-A TYPE R	7510
R-3033-A	7056	R-3159-A	7020	R-3246-AL	7510
R-3033-B	7056	R-3161	7310	R-3246-AM	7510
R-3034-B	7045	R-3165	7504	R-3246-CC	7030
R-3035-A	7045	R-3169	7205	R-3246-CC TYPE C	7030
R-3036-B	5100	R-3170	7205	R-3246-CC TYPE R	7030

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Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-3246-CL	7030	R-3278-A TYPE L	7220	R-3295-2 TYPE V	7031
R-3246-D	7035	R-3278-AL	7221	R-3295-2L	7030
R-3246-E	7030	R-3278-AR	7222	R-3295-3	7030
R-3246-F	7360	R-3281-A	7210	R-3295-3 TYPE R	7030
R-3247-2D	5355	R-3281-AL	7210	R-3295-3L	7030
R-3247-2L	5355	R-3283	7600	R-3295L	7030
R-3247-2Q	5355	R-3286-8V	7520	R-3296-B	7032
R-3250	7550	R-3286-9V	7520	R-3297-1	5193
R-3250-1	7550	R-3287	5380	R-3297-1 TYPE C	5193
R-3250A	7550	R-3287-10V	7505	R-3297-1 TYPE L	580J/5193
R-3250-A	7550	R-3287-15	7565	R-3303	7501
R-3250-B	7571	R-3287-5	5375	R-3305	7500
R-3250-BSP	7570	R-3287-SB10	7505	R-3308	7500
R-3250-CB	7570	R-3288	7350	R-3312-A	7485
R-3250-CL	7570	R-3288-E2	7350	R-3312-B	7486
R-3250-CL	7571	R-3288-HV	7355/7350/7358	R-3313	7488
R-3250-CV	7570	R-3288-HV2	7350	R-3326	7265
R-3250-DV	7570	R-3289	7350	R-3326A	7265
R-3250-DVSP	7571	R-3289-C	7350	R-3331	7260
R-3250-EV	7570	R-3289-HV	7350	R-3334-F	7460
R-3251	5000	R-3290	7030	R-3335-1	7092
R-3252-A	7570	R-3290 TYPE C	7030	R-3336	5050
R-3254	7380	R-3290 TYPE L	7030	R-3337-A	5150
R-3256	7530	R-3290 TYPE R	7030	R-3338-F	5260
R-3261-A	7700	R-3290 TYPE V	7030	R-3338-G	5260
R-3262	7262	R-3290-A	7034	R-3339	5130
R-3264	7502	R-3290-B	7034	R-3339-1	5130
R-3266	5470	R-3290-C	5240	R-3339-B	5230
R-3270	7420	R-3290-C	7034	R-3345	5030
R-3273-A	7310	R-3290-VB	7030	R-3346	5410
R-3274	7020	R-3293	7510	R-3347	5220
R-3274-A	7020	R-3295	7030	R-3349-A	V-4430
R-3274-B	7022	R-3295 TYPE C	7030	R-3350	5225
R-3275	7220	R-3295 TYPE L	7031	R-3351	5225
R-3277-A	7220	R-3295 TYPE R	7030	R-3352	5225
R-3277-A TYPE L	7220	R-3295 TYPE V	7030	R-3356-A	5100
R-3277-AC	7220	R-3295-2	7030	R-3357-A	5385
R-3277-AL	7220	R-3295-2 TYPE C	7031	R-3360-A	5335
R-3277-AR	7222	R-3295-2 TYPE L	7031	R-3362	7568
R-3278-A	7220	R-3295-2 TYPE R	7030		

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Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-3362-1	7568	R-3455-C	V-5360-1	R-3492-A	1895
R-3362-L	7567	R-3456-B	V-5360	R-3492-A1	1895
R-3363	7568	R-3457-C2	V-5670	R-3492-B	2812
R-3363-1	7568	R-3460-A	5800	R-3492-BG	2812
R-3382	7567	R-3460-D	5150	R-3492-C	1812
R-3382	7568	R-3461	V-4246	R-3492-CG	1812
R-3387	V-4091-2	R-3464-F	7411	R-3493-A	1770/1771
R-3393	5360	R-3465	5800	R-3495	8080
R-3396	V-4410-2	R-3467	5800	R-3497-A	8083
R-3397	V-4091	R-3470	5358	R-3498	8350
R-3403-F	V-5140-1	R-3470-2	5358	R-3498-J3S	8092
R-3405	5250	R-3472	5340	R-3498-K2S	8195
R-3406	5395	R-3475	5430	R-3498-P2S	8196
R-3408	5190	R-3475-1	5430	R-3498-R2GS	8197
R-3408-AL	5190	R-3475-3	5440	R-3498-R2S	8197
R-3408-AL	5192	R-3475-A	5435	R-3498-R3S	8197
R-3408-BL	5190	R-3475-E	5436	R-3498-T2S	8198
R-3408-BL	5192	R-3475-F	5436	R-3499	V-5648
R-3408-L	5190	R-3475-G	5436	R-3499	8198
R-3408-L	5192	R-3475-H	5436	R-3499	V-6648
R-3413	5245	R-3477-A	V-5668	R-3501	7510
R-3420	6861	R-3480	5440	R-3501-D2A	7170
R-3425-A	V-4091-2	R-3480-A	V-5626-1	R-3501-E2	7250
R-3425-A TYPE L	V-4092	R-3480-A	V-5626-2	R-3501-H4	7430
R-3425-B	V-4091-2	R-3480-A	V-5726	R-3501-HL	7430
R-3429-A	5090	R-3481	V-5636	R-3501-L1A	7420
R-3433	5100	R-3485-B	1130	R-3501-L2	7495
R-3443-B	5150	R-3486	8350	R-3501-N	7490
R-3448-B	5000	R-3487	2965	R-3501-P	7525
R-3448-C	5080	R-3490	5993	R-3501-PL	7525
R-3448-D	5080	R-3490-A	5996	R-3501-PR	7525
R-3451	5245	R-3490-B	5999	R-3501-R	7432
R-3451-B	5130	R-3491-AG	V-3600-1	R-3501-TL	7495
R-3451-D	5130	R-3491-GG	2870	R-3501-TR	7495
R-3454-B	V-5360-1	R-3491-GL	2870	R-3501-U	7545
R-3454-B	7510	R-3491-JG	2880	R-3502-A	7235
R-3454-BL	V-5360-1	R-3491-JL	2880	R-3502-B	7236
R-3454-C	V-5360-1	R-3492	1900	R-3502-D2	7235
R-3455-A	V-5360-1	R-3492-1	1900	R-3503-A	7180
R-3455-A	7510	R-3492-1	2870	R-3503-B	7180

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## CROSS REFERENCE GUIDE (CONTINUED)

Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-3504-F	V-4520-2	R-3573-2D	5356	R-3701-15	5954
R-3506	6411	R-3573-2L	5355	R-3701-8	5954
R-3506-A2	7280	R-3573-2L	5356	R-3705-12	5944
R-3508	6411	R-3573-2Q	5355	R-3705-6	5944
R-3508-A2	7300	R-3573-2Q	5356	R-3705-8	5944
R-3510	7030	R-3574	5355	R-3707-12	5964
R-3514-F	7390	R-3574-2D	5355	R-3707-15	5964
R-3516	V-4530	R-3574-2L	5355	R-3712	5980
R-3516-1	V-4530	R-3574-2Q	5355	R-3801	6412
R-3525-L	7463	R-3575	V-4280	R-3805	6411
R-3526-L	7466	R-3576	8105	R-3806	6411
R-3527-M	5375	R-3577	7590	R-3807	5390
R-3527-V	7535	R-3578	V-5360-1	R-3808-1	5400
R-3528-V	7535	R-3580	V-4230-2	R-3808-2	5400
R-3529-V	7536	R-3580	7600	R-3900-B	5358
R-3531	7595	R-3580-1	V-4230-2	R-3900-C	5358
R-3531-E	5550	R-3580-1	7600	R-3936-A	Miscellaneous
R-3540	5416	R-3581	V-4280	R-3952	5840
R-3540-2	5416	R-3588	5520	R-3961	5890
R-3540-2	5417	R-3588-A	5524	R-4003	5800
R-3541	5413	R-3588-A	5370	R-4003-B	5800
R-3541-2	5413	R-3588-LL	5520	R-4005-A2	5833
R-3541-A	5413	R-3588-LL4	5525	R-4007	5820
R-3550-2	7592	R-3588-LL4	V-5324-1	R-4007-A6	5844
R-3555	5595	R-3588-LR	5520	R-4014-B1	5845
R-3560	5423	R-3589	5520	R-4014-C1	5845
R-3561	5419	R-3589	5370	R-4014-T	5845
R-3562	5050	R-3589-A	5520	R-4014-TL	5845
R-3563-HB	7750	R-3589-A	5342	R-4016-K	5840
R-3563-L	7750	R-3589-A	5370	R-4030-10	6010
R-3570	5320	R-3589-LL	5520	R-4030-15	6015
R-3570-A	5320	R-3589-LL4	5544	R-4030-18	6018
R-3571	5320	R-3589-LR	5520	R-4030-6	6006
R-3571-A	5320	R-3593	5191	R-4030-8	6008
R-3572	5356	R-3594	7076	R-4040-24	6024
R-3572-2D	5355	R-3599-A	6979	R-4055-10	6310
R-3572-2D	5357	R-3599-B	6979	R-4055-12	6312
R-3572-A	5356	R-3700	5924	R-4055-18	6318
R-3572-A	5357	R-3701-10	5954	R-4055-24	6324
R-3573	5356	R-3701-12	5954	R-4055-6	6306
R-3573-2D	5355				

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R-4055-8	6308	R-4880	V-5728	R-4990-FX TYPE A	6956
R-4215-C	6610	R-4880-C	V-4880-3	R-4990-FX TYPE C	V-7346
R-4216-B	6490	R-4882	V-5934	R-4990-FX TYPE D	6956
R-4216-C	6490	R-4882-A	V-5934-1	R-4990-FX TYPE P	V-7386
R-4217	6498	R-4884-A	V-5736	R-4990-GX A	V-7307
R-4340-A	6508	R-4938-B	6405	R-4990-GX TYPE A	6957
R-4340-B	6527	R-4990 FX TYPE D	6906	R-4990-GX TYPE C	V-7347
R-4341-A	6488	R-4990-AA	6901	R-4990-GX TYPE D	6957
R-4342	6489	R-4990-AX	6951	R-4990-HA	6908
R-4343	V-4810	R-4990-AX A	V-7301	R-4990-HX A	V-7308
R-4344	5850-12	R-4990-AX TYPE C	V-7341	R-4990-HX TYPE A	6958
R-4345	V-5726-1	R-4990-AX TYPE D	6951	R-4990-HX TYPE C	V-7348
R-4346	V-5726-1	R-4990-AX TYPE P	V-7381	R-4990-HX TYPE D	6908
R-4348	V-5736	R-4990-BA	6902	R-4990-JX A	V-7309
R-4349-A	6487	R-4990-BX	6902	R-4990-JX TYPE C	V-7349
R-4349-C	6487	R-4990-BX A	V-7302	R-4990-JX TYPE D	V-7509
R-4350-B	6532	R-4990-BX TYPE A	6952	R-4990-KA2	6910
R-4350-C	6533	R-4990-BX TYPE C	V-7342	R-4990-KX A	V-7310
R-4350-D	6534	R-4990-BX TYPE D	6952	R-4990-KX C	V-7350
R-4350-E	6536	R-4990-BX TYPE P	V-7382	R-4990-KX TYPE D	V-7510
R-4351-B	6495	R-4990-CA	6903	R-4990-LX A	V-7311
R-4351-D	6509	R-4990-CX A	V-7303	R-4990-MX A	V-7312
R-4352	6517	R-4990-CX TYPE A	6953	R-4990-MX TYPE C	V-7352
R-4353	1205	R-4990-CX TYPE C	V-7343	R-4990-MX TYPE D	V-7512
R-4353	3772	R-4990-CX TYPE D	6953	R-4990-NX A	V-7313
R-4360-A	6112	R-4990-CX TYPE P	V-7383	R-4990-NX TYPE D	V-7513
R-4360-B	6115	R-4990-DA	6904	R-4990-OA	6912
R-4360-D	6121	R-4990-DX A	V-7304	R-4990-OX A	V-7314
R-4360-E	6124	R-4990-DX TYPE A	6954	R-4990-OX TYPE C	V-7354
R-4370-13	1130	R-4990-DX TYPE C	V-7344	R-4990-OX TYPE D	V-7514
R-4370-18	1020	R-4990-DX TYPE D	6954	R-4993	6900
R-4370-5	1740	R-4990-DX TYPE P	V-7384	R-4993-AAB	6900
R-4380-17-D	1020	R-4990-EA	6905	R-4993-BAB	6900
R-4850	5115	R-4990-EX A	V-7305	R-4993-CAB	6900
R-4852	5115	R-4990-EX TYPE A	6955	R-4993-CB TYPE A	6953
R-4859	5110	R-4990-EX TYPE C	V-7345	R-4993-DAB	6900
R-4859-C	5110	R-4990-EX TYPE D	6955	R-4993-DAB TYPE A	6904
R-4859-Q	5110	R-4990-EX TYPE P	V-7385	R-4993-EAB	6900
R-4859-S	5110	R-4990-FA	6906	R-4993-EAB TYPE A	6905
R-4871	5110	R-4990-FX A	V-7306	R-4993-FAB	6900

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## CROSS REFERENCE GUIDE (CONTINUED)

Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.	Neenah Cat. No.	EJ Cat. No.
R-4993-FAB TYPE A	6906	R-4999-GX	6907	R-5901-G	V-1610-5
R-4993-FB TYPE A	6956	R-4999-GX TYPE C	V-7367	R-5901-H	V-1610-6
R-4993-HAB	6900	R-4999-GX TYPE D	6957	R-5901-J	V-1610-7
R-4993-HAB TYPE A	6908	R-4999-HX C	V-7368	R-5901-K	V-1610-8
R-4993-HAB TYPE D	6908	R-4999-HX D	6958	R-5901-K	V-3610-8
R-4993-HB TYPE A	6958	R-4999-HX TYPE A	6958	R-5915-C	1563
R-4993-KAB	6900	R-4999-HX TYPE D	6908	R-5915-E	1135
R-4993-KAB TYPE A	6910	R-4999-JX C	V-7369	R-5915-G	3030
R-4993-OAB	6900	R-4999-JX TYPE C	V-7369	R-6008	2890
R-4994	6900	R-4999-JX TYPE D	V-7509	R-6012	3015
R-4994-HALM	6900	R-4999-KX C	V-7370	R-6014	2885
R-4999	6970	R-4999-KX TYPE D	V-7530	R-6016	V-1610-2
R-4999 FX TYPE D	6906	R-4999-L2	6953	R-6016-A	1716
R-4999-AX	6901	R-4999-L6	5358	R-6017	V-1610-3
R-4999-AX TYPE A	6951	R-4999-L6	7700	R-6020	V-1610-4
R-4999-AX TYPE D	6951	R-4999-L6	7750	R-6021	1337
R-4999-AX TYPE P	V-7381-20	R-4999-L7	5358	R-6034	V-1865
R-4999-BX TYPE A	6952	R-4999-L9	6970	R-6040	2910
R-4999-BX TYPE D	6952	R-4999-LX TYPE A	V-7311	R-6041	2860
R-4999-BX TYPE P	V-7382-20	R-4999-MX A	V-7332	R-6041-A	2860
R-4999-BX TYPE P 3	V-7382-20	R-4999-MX TYPE A	V-7332	R-6044-A	V-1600-3
R-4999-CX	6953	R-4999-MX TYPE D	V-7532	R-6052-C	2860
R-4999-CX TYPE A	6953	R-4999-NX TYPE C	V-7373	R-6052-D	2800
R-4999-CX TYPE C	V-7363	R-4999-OX A	V-7334	R-6052-J	2880
R-4999-CX TYPE D	6953	R-4999-OX TYPE A	V-7334	R-6060	1625
R-4999-CX TYPE P	V-7383-20	R-5900-A	V-1610-1	R-6074	V-1610-5
R-4999-DX	6904	R-5900-B	V-1610-2	R-6078	2880
R-4999-DX Q	6954	R-5900-C	V-1610-3	R-6080	V-1610-6
R-4999-DX TYPE A	6954	R-5900-D	2912	R-6095	1580
R-4999-DX TYPE C	V-7364	R-5900-E	V-1610-4	R-6099	V-1600-6
R-4999-DX TYPE D	6954	R-5900-F	2932	R-6113	2860
R-4999-DX TYPE Q	6954	R-5900-G	V-1610-5	R-6114	2800
R-4999-EX	6905	R-5900-H	V-1610-6	R-6115	2870
R-4999-EX D	6955	R-5900-J	V-1610-7	R-6120	V-1600-6
R-4999-EX TYPE A	6955	R-5900-K	V-1610-8	R-6137	V-1610-6
R-4999-EX TYPE P	V-7385-20	R-5901-A	V-1610-1	R-6141	1154
R-4999-FX TYPE A	6956	R-5901-B	V-1610-2	R-6142	V-1874
R-4999-FX TYPE D	6906	R-5901-C	V-1610-3	R-6144	2925
R-4999-FX TYPE E	6906	R-5901-E	V-1610-4	R-6146	2755
R-4999-FX TYPE P	V-7386-20	R-5901F	V-1600-3	R-6147	2850

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R-6229	6224	R-6660-PH	V-5636	R-6663-PP	8236
R-6310-A	2885	R-6660-RP	V-5642	R-6665-1HH	8270
R-6320-E	3015	R-6661-HH	8270	R-6665-1HP	8270
R-6400-AD	V-1610-2	R-6661-HP	V-5662	R-6665-1JH	V-6465
R-6400-AS	V-1610-2	R-6661-JH	8271	R-6665-1JP	V-6465
R-6400-BO	V-1600-1	R-6661-JP	8271	R-6665-2BP	8001
R-6400-BS	V-1600-1	R-6661-LH	8273	R-6665-2EP	8204
R-6400-CO	V-1600-3	R-6661-LP	V-5667	R-6665-2HP	8206
R-6450-AL	2885	R-6661-TH	V-5668	R-6665-2KP	8208
R-6450-DG	2890	R-6661-TP	V-5668	R-6665-2LH	8208
R-6450-DL	2890	R-6661-V1H	8217	R-6665-2LP	8208
R-6450-EG	V-1600-1	R-6661-VP	V-5669	R-6665-2PP	8213
R-6450-EL	V-1600-1	R-6662-2BP	8301	R-6665-2SH	V-6442
R-6450-FG	V-1610-4	R-6662-BP	8201	R-6665-2SP	V-6442
R-6450-GG	V-1600-2	R-6662-CH	V-5718	R-6665-2TH	8198
R-6450-HG	V-1600-3	R-6662-CP	V-5718	R-6665-3CP	8222
R-6450-HL	V-1600-3	R-6662-EH	V-5620	R-6665-3JH	V-6465
R-6450-JG	V-1600-4	R-6662-EH	8204	R-6665-3JP	V-6465
R-6450-JL	V-1600-4	R-6662-EP	8204	R-6665-3JP	V-5665
R-6461-EH	V-2800-1	R-6662-GH	V-6720	R-6665-3KH	V-5667
R-6461-FH	V-2600-2	R-6662-GH	V-5620	R-6665-3KP	V-5667
R-6461-GH	V-2610-5	R-6662-HP	8206	R-6665-3NH	V-5669
R-6461-HH	V-2610-6	R-6662-KP	8208	R-6665-3NP	V-5669
R-6461-JH	V-2610-7	R-6662-PP	8313	R-6665-ORH	V-6442
R-6461-KH	V-2610-8	R-6662-RH	8213	R-6665-ORP	V-6442
R-6462-EH	V-1600-1	R-6662-RP	8315	R-6668-L1	8080
R-6462-FH	V-2600-2	R-6662-TH	V-5648	R-6668-L3	8080
R-6462-GH	V-2610-5	R-6662-TP	V-5648	R-6668-L6	8080
R-6462-HH	V-2610-6	R-6662-TS	8198	R-6668-P1	8080
R-6462-JH	V-2610-7	R-6663-01P	V-6670	R-6668-P3	8080
R-6462-KH	V-2610-8	R-6663-CP	8322	R-6668-P6	8080
R-6470-B	REVOLUTION	R-6663-HP	8228	R-6670-B2	V-5620
R-6660-CP	V-5613	R-6663-JH	8192	R-6670-C	V-5620
R-6660-GP	V-5620	R-6663-KH	V-5667	R-6672-B	8301
R-6660-JH	V-5622	R-6663-KP	V-5667	R-6672-D	8205/8305
R-6660-JP	8390	R-6663-MH	V-5668	R-6672-E	8306
R-6660-KP	V-5624	R-6663-MP	V-5668	R-6672-E	8206
R-6660-KP	8208	R-6663-NH	8233	R-6672-F	8308
R-6660-NH	8249	R-6663-NP	8233	R-6672-K	8213
R-6660-NP	V-5630	R-6663-OH	8217	R-6672-K	V-5630

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**CROSS REFERENCE GUIDE (CONTINUED)**

<b>Neenah Cat. No.</b>	<b>EJ Cat. No.</b>
R-6672-K	V-6630
R-6672-M	8315
R-6672-M	V-5636
R-6673-A	5595
R-6673-B	V-5751
R-6673-C	8222
R-6673-J	8328
R-6673-L	V-5667
R-6673-N	V-5668
R-6673-O	8333
R-6673-Q	V-5670
R-6679-B	2855
R-6680-A	3612
R-6686-D	8106
R-6687-E	8052
R-6687-F	8054
R-6689	8018
R-7500-22	8700
R-7500-44	8700
R-7506-B	3664
R-7506-C	3639
R-7506-C	3664
R-7506-C	3690
R-7506-C	8555
R-7506-D	1576
R-7506-D	3670
R-7506-D	3680
R-7506-D	3690
R-7506-D	3695
R-7506-D	8520
R-7506-E	1576
R-7506-E	8520
R-7506-F	3671
R-7506-F	3673
R-7506-F	3698
R-7514	1621
R-7516	1020

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## Additional Information



## MANHOLE FRAMES AND COVERS



EJ produces street castings to meet ASTM and AASHTO criteria. In addition, our castings meet federal and state DOT specifications, and that of individual customers. Non-traffic, light, medium, heavy, extra heavy-duty, and extra heavy-duty airport are the load designations assigned, which indicate where (on which application) a product should be used.

As a result of continued research and development—the product line is increasingly expanding—and has become more complex and diverse than ever. New features such as ergonomic lift-assist devices; new configurations that are more modular and scalable; new advanced security attributes help prevent theft or mitigate explosions; and applied technology provides capabilities like remote sensing with wireless telemetry.

## DRAINAGE CASTINGS

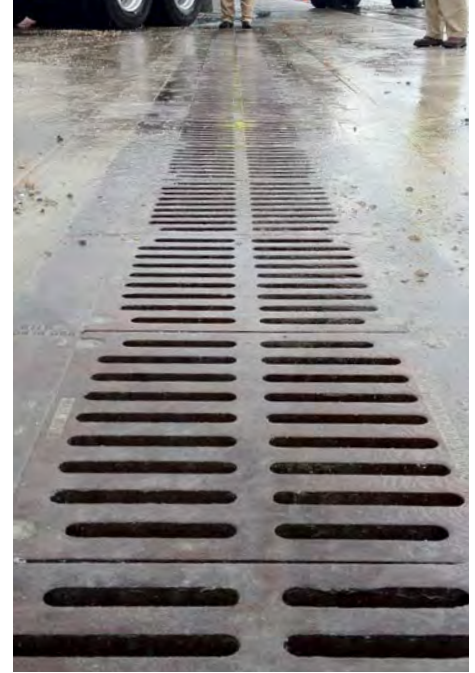


Drainage castings or grates are designed to accept water and can be round, square, or rectangular. They are typically sold with a frame, curb inlet frame, monument box, or bridge drain. Some markets call these slotted covers.

Specifying the appropriate drainage solution is an important part of a storm water management plan. EJ offers a wide array of products designed for storm water drainage including ditch grates, pipe grates, curb and gutter inlets, and catch basins. Drainage castings are available as an assembly or set. EJ also offers bridge drains, scuppers, and ADA grates.

Optional “Dump No Waste! Drains To Waterways” and other permanent cast-in lettering is an effective, low cost, and long-term means to support local environmental initiatives.

## TRENCH GRATES



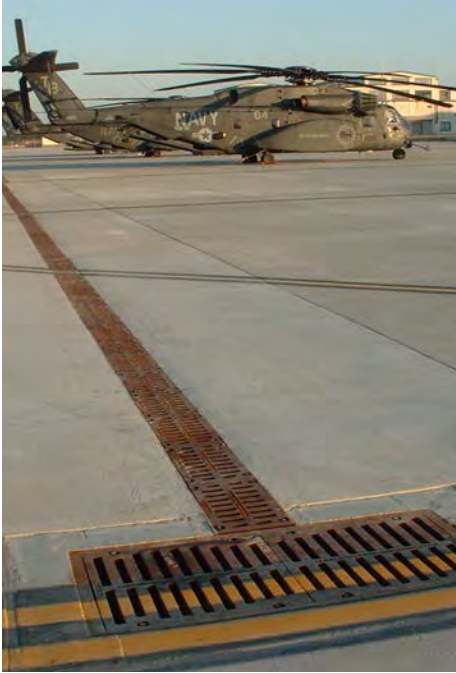
From pedestrian areas to airport loading ramps, EJ has the trench drainage solution to fit your application. With a grate that is designed to be supported on two sides, it is expandable and available in numerous widths.

Grating options include parallel grates, perpendicular cross-street drainage, and ADA styles - available in 24" lengths, and widths from 8" to 51". Frames available in standard 24", 36", and 48" lengths.

Standard heavy duty grates and covers are suitable for general traffic service and AASHTO H-20 loading conditions. Our ADA style trench grating and solid trench covers are available for either general traffic loading or non-traffic applications. Extra heavy duty (EXA) airport trench grating is made with ductile iron and is proof load tested to 200,000 pounds.

For that artistic touch, EJ offers designer trench grates that can stand alone architectural enhancements, or can accompany matching tree grate designs.

## AIRPORT AND PORT AUTHORITY



Environments that undergo excessive load conditions require construction castings specifically designed to meet or exceed heavy duty load rating standards. EJ offers many solutions for these types of applications.

From round or square manhole frames and covers, catch basins, drainage inlets, trench grating, and mooring eyes, EJ has you covered.

All extra heavy duty construction castings are manufactured with gray iron conforming to ASTM A48 Class 35B and ductile iron conforming to ASTM A536. Many of our airport castings can be made-to-order with custom logos and messaging, in most languages, to meet your project specifications.

## UTILITY AND TELECOMM CASTINGS



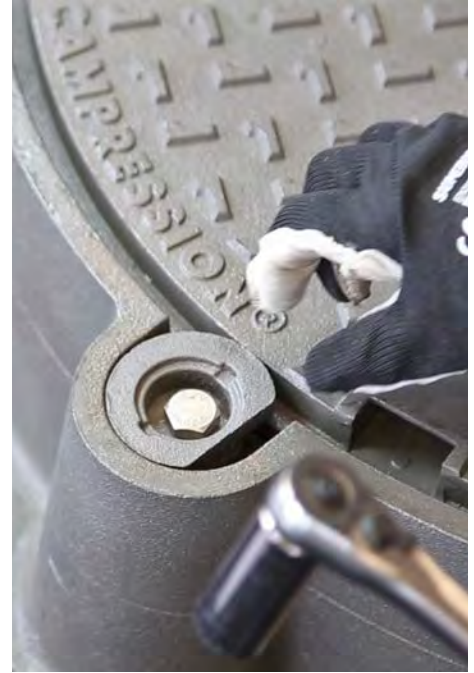
EJ offers a comprehensive line of high quality utility construction casting solutions for specialized applications such as telecommunication, electric, gas, traffic signals, and street lighting.

Utilities are the lifeblood of any facility, and uninterrupted service is crucial. Our product designs offer superior access and unparalleled security for critical infrastructure —available in a variety of sizes, shapes, materials, and load ratings to fit the needs of any project.

EJ is the world leader in telecommunication and utility solutions, offering features and attributes to meet your unique requirements:

- Ergonomic and safety
- Vented covers
- Composite materials
- Wireless monitoring
- Specialty and custom
- Explosion mitigation

## INNOVATIVE ACCESS SOLUTIONS



Innovative access solutions are a classification of products that address issues beyond standard manhole frames and covers. This product series includes ergonomic solutions, advanced locking mechanisms, and products that prolong your infrastructure.

For example, the SELFLEVEL® manhole assembly allows the upper frame cover to adjust with the surface of the roadway; keeping the cover level at all times. This product is ideal for extreme freeze/thaw (frost heave) environments.

INFRA-RISER® adjustment risers prolong structure life by dissipating traffic vibrations.

The mechanical strut on our ductile iron hatch line reduces the lifting force of covers weighing up to 560 pounds to less than 35 pounds.

EJ has taken generations of knowledge and experience and fine-tuned designs to offer you the best innovative access solutions.

## ERMATIC RANGE AND OTHER MODULAR SOLUTIONS



Worldwide, the ERMATIC® modular system is one of the most adaptable product ranges in the industry. This comprehensive and highly engineered range of access covers can be customized to fit any underground vault dimension or cover configuration.

Some of the world's most prestigious infrastructure projects have selected the ERMATIC range as their preferred solution: from airports, docks and tunnels to sewage, telecommunications and other utility networks.

Specifiers, contractors, and end users choose this product because it is reliable, durable and serviced by the most professional technical support teams. EJ provides solutions that lead the industry, act as best-in-class benchmarks, and satisfy the most demanding customer expectation.

Features and options include security locking, various load ratings and standard sizes between 2' x 2' to 10' x 17'. Custom sizes are available to fit your needs. Cover options include solid or recessed for concrete infill or brick pavers. This product is manufactured at our regional facility in France.

## HINGED HATCH ACCESS ASSEMBLIES



Hinged access assemblies offer ergonomic benefits with the strength of ductile iron. The 8190 and 8210 series of hinged hatch access assemblies are typically installed in traffic areas, airports, and ports.

This hatch provides a secure and easy access point to underground utility structures, and the mechanical strut reduces the lifting force of the cover to less than 35 pounds. The pre-assembled unit saves time and money on the job site; just "drop and pour." The cover opens to 105 degrees and removes at 90 degrees, and features a self-engaging safety bar.

## COMPOSITE COVERS AND FRAMES



Field performance has proven that composite manhole covers are ideal for the most challenging environment. Safety for pedestrian traffic and utility workers has driven EJ to develop an advanced solution offering the highest level of safety and performance. Composite manhole covers will conduct neither stray voltage nor high heat, thus shielding pedestrians from the underground environment. The advanced ergonomic aspects of composite manhole covers and frames help to safeguard the municipal workforce from injuries.

Contact your local Sales Representative for the solution that best fits your unique needs: stray voltage, heat transfer, steam covers, ergonomics, radio frequency and cellular transmissions, theft (no scrap value), corrosion, identification (color options), and noise abatement.

Patented design features and advanced fiber reinforced polymer (FRP) material technology make our composite products strong, lightweight, and safe for everyone.

## ALUMINUM ACCESS HATCHES



EJ has a broad offering of access hatch products available in aluminum, steel, and ductile iron.

Our hatches are designed to provide easy and secure access to below ground, and below floor installations. The aluminum SAFE HATCH® safety grate system is available in all hatch series. This additional fall through protection and controlled confined space entry enhances worker safety. Heavy duty stainless steel hinges are standard on all units.

Access hatches are used in areas such as sewer pump stations, water treatment plants, gas valve vaults, water meter pits, water valve vaults, telephone and electric vaults, industrial plant pits, fuel storage pits, de-icing control facilities, storm drains, monitoring wells, and collection pits.

EJ also has a complete line of fabricated steel reticuline and welded type drainage grates.

Our modern manufacturing facilities are capable of producing custom fabrications. Contact our expert design team next time you need a custom solution for your project.

## RISER RINGS



Riser rings are an adjustable solution to bring a manhole or catch basin to grade on your resurfacing projects. They are used in conjunction with a frame to increase its overall height. A typical application would be during pavement overlays.

Avoid unnecessary project costs by eliminating extra labor, equipment and materials. There are reduced traffic disruptions—when the street is paved the job is done and the manhole cover is finished to grade.

- Solid or adjustable styles
- Steel and cast iron risers available to fit all your grade adjustments
- Load tested to ensure dependable strength and long lasting durability
- Large inventory ready for delivery nationwide
- Made to order sizes for custom application
- Sloped risers available
- DOT approved in many states

## ADJUSTMENT RISERS



Maintain the integrity of your infrastructure by reducing traffic vibration damage. Adjust any manhole or catch basin to grade on your resurfacing projects, new installations, or rehabilitation work with INFRA-RISER® rubber composite adjustment risers.

Below ground, the rubber composite adjustment riser reduces traffic vibration damage—prolonging the life of manhole structures and surrounding pavement:

- Protects against load concentration stress
- Dramatically reduces water infiltration
- Perfect grade adjustment in moments with uniform precision
- Will not break, split, rot, crack, or chip
- Made of 92% recycled raw materials
- Round, square, and rectangular designs; flat and tapered risers, select bolt hole patterns
- Custom sizes available

INFRA-RISER adjustment riser is a simple, economic, efficient, and long-lasting solution. It dissipates the energy transferred between the casting and the manhole structure.

## FIRE HYDRANTS



WaterMaster® Fire Hydrants have set the standard for reliability and ease of maintenance. With 2 and 3-nozzle hydrant designs, along with multiple shoe connection options, WaterMaster hydrants offer the right options to meet your standard specifications. All hydrants are compliant with the Reduction of Lead in Drinking Water Act 2011. Computer aided design and analysis, along with ductile iron construction, ensures superior performance. All cast components are made and assembled in the USA.

Each hydrant is pressure tested to twice the rated working pressure. WaterMaster 5CD250 and 5BR250 fire hydrants meet or exceed the requirements of ANSI/AWWA C502 Standard for Dry-Barrel Fire Hydrants, Underwriters Laboratories Standard UL246, and Factory Mutual 1510.

Options include individual hydrants being assembled to your (municipal) specification. Additionally, EJ offers hydrant accessories, including the snow barrel for BR models to keep hydrants accessible for areas with high snowfall, and Storz nozzle connections for quick pumper nozzle attachment.

## GATE VALVES



FlowMaster® Resilient Wedge Gate Valves are designed to control the flow of water in fire hydrant applications—but can also be utilized for other water distribution or sewer system applications. All valves are compliant with the Reduction of Lead in Drinking Water Act 2011.

The valves incorporate quality parts and a simple design. All-ductile iron construction delivers superior strength, impact resistance and reduced weight ensuring long service life. All valve parts are manufactured and assembled in the USA.

Available in 2" through 24" sizes, with multiple end connections, and bevel or spur gear operators for 20" and 24" valves. The valves are available as either an assembly or set.

FlowMaster valves meet or exceed the performance requirements of AWWA C515 and Underwriters Laboratories Standards UL262. The valve body and other ductile iron components are manufactured from material conforming to ASTM A536. The wedge is fully rubber encapsulated to meet ASTM D429 requirements.

## VALVE BOXES



Valve boxes are used to access an underground valve and can be adjustable using multiple pieces with either a screw type or slip type arrangement.

Valve boxes are available to accommodate 4" through 20" valves.

- Natural gray iron or water-based asphaltic coating
- Covers with special lettering and custom logos
- Locking lids
- Valve box risers—raise valve box lid to adapt to a new grade
- Made in the USA

The slip type has interchangeable pieces that allow for overall height adjustment with parts sliding past each other, while the screw type has interchangeable pieces that allow for overall height adjustment with parts threaded into each other. Valve boxes are available as either an assembly or set.

## METER BOXES



The meter box product is specifically intended to cover a water meter. It is typically large enough to allow for inspection and limited access, and is often intended for non-traffic situations.

EJ offers an assortment of meter boxes, covers, and rings to fit your application. Our broad meter box product offering includes customized logo covers to help promote your identity, special lettered covers that clearly identify the access point, and touch read covers.

- Oval meter boxes
- Round meter boxes
- Rectangular meter boxes
- Meter pits
- Meter lids
- Meter box cover accessories including security locking

Meter boxes are available as either an assembly or set.

## TREE GRATES



Style your surroundings with timeless and appealing streetscape products manufactured by EJ. Tree grates are durable, functional, and architecturally appealing, and promote healthy tree growth. Designed for pedestrian traffic; our full line of tree grates provide natural drainage and enhance any urban, campus, or park setting.

The slotted design allows for efficient watering and is ADA compliant for pedestrian safety. The narrow slot of an ADA grate also prohibits litter from collecting in the tree well and minimizes the growth of weeds.

Optional expandable tree openings consist of removable center rings, which are a convenient way to adjust diameter of the grate opening as the tree trunk grows in width. Other options include security bolting features, and light port options.

Cast iron grating is strong and stands up to harsh environmental conditions. As an added value, the tree grates can carry community logos and mottos and are made in the USA.

## DETECTABLE WARNING PLATES



DURALAST® Detectable Warning Plates help warn visually impaired pedestrians of the approaching street. Engineered to outlast the sidewalk, this cast iron plate is a long-lasting streetscape product that can withstand rigorous urban conditions, such as snow plows, street cleaning machines, and vehicular traffic.

Lower your maintenance and product life cycle costs by using DURALAST detectable warnings—your ADA compliant and environmentally friendly solution.

- Long-wearing cast iron (over 500 times more wear resistant than composites\*)
- Withstands vehicular and snow plow traffic
- Corrosion resistant
- Permanently embedded into concrete
- Comply with the latest ADA guidelines regarding pedestrian and vehicular traffic

\*An independent third party laboratory test was conducted to determine the wear index values of DURALAST® Detectable Warning Plates versus a competing composite surface. Test results indicate that DURALAST plates are over 500 times more wear resistant than composites.

## BUY AMERICAN IRON FOUNDRY PRODUCTS PROVISIONS PROMOTE U.S. MADE FOUNDRY PRODUCTS

### The Country of Origin

The country of origin law requires that all products imported into the United States include a mark that “clearly and conspicuously” identifies, in English, where the product was made. As a buyer, specifier, or inspector of municipal castings, you should be aware of the country of origin law. In 1979, the U.S. Customs Service recognized that country of origin markings on manhole covers and frames lacked consistency. Some had the country of origin painted on them; others had no other marking except the U.S. distributor’s name. For uniformity, in 1984 the U.S. Congress legislated specific requirements:

The country of origin must be legibly and permanently marked by die stamping, molding or etching.

The country of origin mark on manhole covers, frames or rings, and assemblies must appear on the top surface of the product (marking other than the top surface is equivalent to no marking at all).

If the name of any city or locality in the U.S. appears on the product, the name of the country of origin, preceded by “Made in” or “Product of” or words of similar meaning, must also appear. This phrase must be of comparable size and placed close to the name of the city or locality. These requirements are enforced by the U.S. Customs Service.

### Introduction

By law, American-made iron foundry products must be used in all federal transportation projects and state and local government projects that use federal transportation dollars. Products covered by the law include manhole frames and covers, catch basin frames and grates, iron and steel inlet grating, and various miscellaneous iron products. The Buy American provisions of the law, known as the Intermodal Surface Transportation Act of 1991, explicitly require that iron castings manufactured in U.S. foundries be used for federal transportation infrastructure projects. Such a provision first appeared in the Surface Transportation Act of 1982. Then, however, the law required that only U.S.-made “steel and manufactured products” could be used in transportation projects funded by the federal government. With the passage of the 1991 legislation, Congress clarified the 1982 legislation by specifically stating that iron products are covered by the Buy American provision. The Department of Transportation’s Buy American provision now reads U.S.- made “steel, iron, and manufactured products.”

### Canadian Products

Note that while the Buy American regulations of certain federal agencies now define Canadian products as domestic (with some restrictions), Canadian products are considered foreign-made under the Buy American regulations of the Departments of Transportation and Energy.

### Penalties

Because the Buy American provisions of the 1991 law explicitly require that iron castings manufactured in U.S. foundries be used for federal transportation infrastructure projects, knowing country of origin is particularly important for purchasing officials who procure iron products for such projects. If a contractor violates the law by using foreign products, the normal remedy is to penalize the contractor by reducing the contract price by an amount equal to the difference between the cost of the foreign material provided and the cost of similar domestic materials. A contractor who falsely certifies that U.S.-made products will be provided may also incur civil penalties under the False Claims Act. Severe penalties exist for a government contractor or subcontractor who deceptively affixes a “Made in the USA” label or intentionally misrepresents the country of origin of a product to be used in a federal highway project. These penalties include placement on the “List of Parties Excluded from Procurement Program” that is circulated to all federal agencies. Moreover, the offending party may be subject to further civil and criminal penalties of up to \$5,000 and/or imprisonment for one year per violation. A construction contractor who fails to comply with the Buy American provisions will be prohibited from receiving any further construction contracts from any federal government agency for a three-year period. The three-year ban also applies to subcontractors or suppliers associated with the contractor.

## SUGGESTED SPECIFICATION FOR CONSTRUCTION AND UTILITY CASTINGS

### General

This specification is applicable for gray and ductile iron construction castings. All castings shall be manufactured in the United States of America by EJ USA, Inc. All manufacturers shall be approved suppliers and be able to demonstrate that there is an acceptable quality control program at the producing foundry, prior to supplying castings.

### Material

Gray iron castings for heavy duty applications shall be manufactured from iron conforming to ASTM A48, Class 35B of AASHTO M306, or as requested by the purchaser. Gray iron castings for sidewalk or pedestrian applications shall be manufactured from iron conforming to ASTM A48, Class 30B or 35B, or as requested by the purchaser. Ductile iron castings shall conform to ASTM A536. The iron material used in products provided shall have a minimum recycled material content of 85%. The recycled materials shall consist of post-consumer material.

### Manufacture

Castings shall be of uniform quality, free from sand holes, gas holes, shrinkage, cracks and other surface defects. Castings shall be ground smooth and well cleaned by shot blasting. For traffic service castings, bearing surfaces between manhole rings and covers or grates and frames shall be cast or machined with such precision to prevent rocking. As-cast dimensions may vary within accepted foundry tolerances as outlined in the Iron Castings Handbook published by the American Foundry Society. Nominally, casting dimensional tolerances shall be +/- 1/16" per foot. All published casting weights are average and approximate values and shall vary +/- 5%. Castings shall be furnished painted or unpainted as specified by the purchaser.

### Proof Load Testing

Traffic service castings shall have a first article proof load test conducted and the results of that proof load shall be made available to the purchaser upon request. The proof load shall be conducted in accordance with the method and procedure that is outlined in AASHTO M306. The casting shall be tested on a suitable and calibrated load testing machine and the casting shall hold a 40,000 pound proof load for one minute without experiencing any cracks or detrimental permanent deformation.

### Inspection

Inspections shall be in accordance with AASHTO M306. Results of these tests shall be furnished to the purchaser upon request. The heat or production date and product numbers shall be cast on the casting. This information shall be used for casting traceability and testing.

### Marking

Each casting shall be identifiable and show, at a minimum, the following: name of the producing foundry, country of manufacture (such as "Made in USA"), ASTM material designation, recycle symbol, individual part number, cast or heat date. Castings shall include all lettering as shown on the specification drawings.

### Sampling

Random checks on the castings may be conducted by the purchaser. These random checks shall be conducted in accordance with AASHTO M306.

### Records

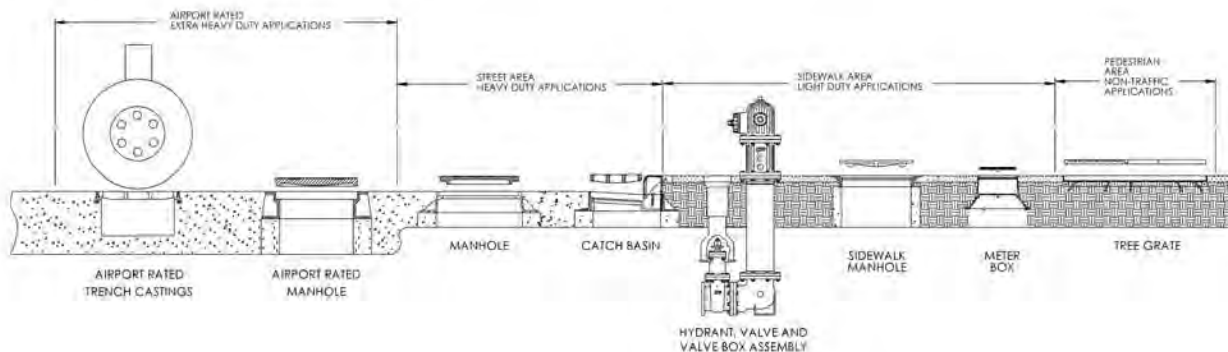
Test results for each lot of castings shall be maintained by the foundry for a minimum of seven years and shall be made available to the purchaser upon request.

### Certification/Standards Compliance

ASTM A48	Material
ASTM A536	Material
AASHTO M306	Product Performance/Quality
ISO 9001:2008	Quality Assurance

### Quality Assurance

System of manufacturing quality assurance must conform to the requirements of ISO 9001:2008 and be certified by a third party.





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8065 Water Meter Frame & Cover	285	6900 Linear Trench Drainage (Continued)	300	Drainage Tables - Round Grates	341-344
8075 Frame & Cover	286	6950 Trench Grate & Frame Series	301	Drainage Tables - Catch Basin Grates	345-350
8083 Frame & Cover	286	6970 Bolted Vane Style Trench Assembly	302	Sinusoidal and Vane Grate Flow Characteristics	350
8100 Cover	286	6979 Linear Slotted Drain Vane Grate	302	Cross Reference Guide	351-362
8105 Catch Basin Curb Inlet	287	V-7300 Trench Grate & Frame Series	303		
8106 Junction Box Frame & Cover	287	V-7320 Bolted Trench Grate & Frame Series	303		
8201 - 8233 Square & Rectangular Covers & Grates	288	V-7340 Cross Drainage Trench Grate & Frame Series	304		
		V-7360 Cross Drainage Trench Grate & Frame Series	304		
		V-7380 ADA Trench Grate & Frame Series	305		

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Featuring a comprehensive product database



## Information for Registered Users

- Quick and easy registration
- PDF sales drawings for download
- Specification information
- Customizable project lists
- Detailed product info

## Up-to-date Product Resources

- Literature
- Videos
- Installation instructions

## Finding your Solution

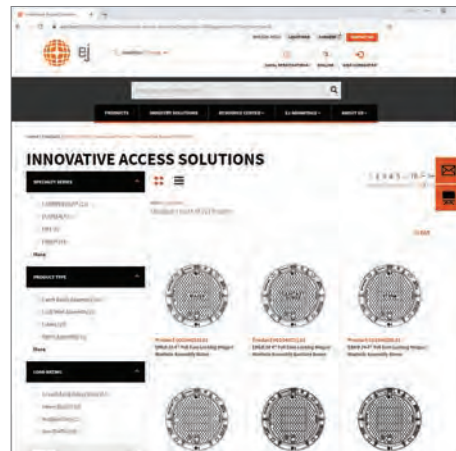
- Search by Product Line
- Search by Project Type
- Search by Regional Specification

## Product Specifications

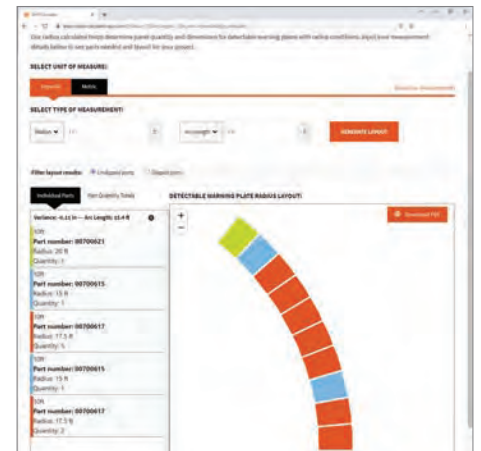
- Available to registered users
- National and international specifications
- Local Standards—City, County, State

## Project Lists

- Simple to create
- Quick access to frequently used products
- Helps manage complex projects
- Request a quote, print project list, email project list



The search results can be narrowed by using the facets and attributes on the left



Our radius calculator helps determine panel quantity and dimensions for detectable warning plates with radius conditions.





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