

November 26, 2019

Mr. Leo Cosentini
California State Water Resources Control Board
Division of Water Quality
P.O. Box 100
Sacramento, CA 95812-0100

RE: Amended Application for Oldcastle Precast® Stormwater Solutions FloGard® Catchbasin
Outlet Trash Screen Insert – Connector Pipe Screen

Dear Mr. Cosentini,

Oldcastle Infrastructure™ is pleased to submit this amended application for the FloGard®
Connector Pipe Screen for certification as a Full Capture System – Trash Treatment Control
Device. The enclosed application has been compiled in conformance with the Trash Treatment
Control Device Application Requirements and includes the following:

1. Cover Letter
2. Table of Contents
3. Physical Description
4. Installation Information
5. Operations and Maintenance Information
6. Reliability Information
7. Field/Lab Testing Information and Analysis

Thank you for your consideration of this application. If any additional information is needed,
please contact Laraine Sanfilippo per information provided below.

Respectfully,

Oldcastle Infrastructure™, A CRH Company

Laraine Sanfilippo

Laraine Sanfilippo

Southwest Region Regulatory Manager

laraine.sanfilippo@oldcastle.com

(619) 481-0608

1. Cover Letter

A. General Description of Device

The FloGard® Connector Pipe Screen is an engineered device, custom manufactured to meet Trash Capture regulations and requirements. The screen design location within a catch basin is at the mouth of the discharge pipe. The Connector Pipe Screen allows for particles no larger than 4.9mm to pass with an optional bypass allowance at a project specified height.

B. Applicant's Contact Information and Location

Application Representative: Laraine Sanfilippo
Regulatory Manager, Southwest Region

Representative Mailing Address: 10441 Vine Street
Lakeside, CA 92040

Representative Telephone: 619-481-0608

Representative Email: laraine.sanfilippo@oldcastle.com

C. Device's Manufacturing Location

Manufacturer Name: Oldcastle Infrastructure™

Manufacturer Address: 7100 Longe Street
Stockton, CA 95304

Manufacturer Phone: 800-579-8819

Manufacturer Representative: Gary Jones
888-950-8826

D. Brief Summary of Field/Lab Testing Results

FloGard® Connector Pipe Screens have been utilized throughout California. All trash and debris for designed storm event is captured within catch basin due to the screen's full capture maximum 4.9mm perforations.

E. Brief Summary of Device Limitations, and Operational, Sizing, and Maintenance Considerations

FloGard® Connector Pipe Screen is a versatile device designed for ease of use and compatibility with most catch basin and pipe configurations. Standard sizes are available and custom units will be considered as unusual or challenging projects arise. Please contact an Oldcastle Infrastructure™ representative for sizing assistance.

Maintenance on any connector pipe screen is mandatory. FloGard® Connector Pipe Screen operates optimally when maintained at 50-60% capacity regularly. The schedule of maintenance will depend on site conditions and should be determined during the first year of operation by assessing capacity levels after large storm events. Once a schedule is determined, maintenance is most easily conducted through use of a vacuum truck, but alternatives can be considered depending on catch basin and site conditions.

F. Description, or List of Locations, where Device has been installed

FloGard® Connector Pipe Screens have been installed throughout California and nationally to meet trash capture demands. A few notable California locations include San Francisco, County of Alameda, County of Solana, City of Livermore, City of Brisbane, City of Poway, and City of San Diego. Please contact an Oldcastle Infrastructure™ representative for more detailed information.

G. Certification

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons that manage the system or those persons directly responsible for gathering the information, to the best of my knowledge and belief, the information submitted is, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.



Laraine Sanfilippo
Southwest Region Regulatory Manager
laraine.sanfilippo@oldcastle.com
(619) 481-0608

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3. Physical Description

A. Description of Device

The FloGard® Connector Pipe Screen is configured with openings less than 4.9mm to ensure trash capture regulations and requirements are met. The screen design location within a catch basin is at the mouth of the discharge pipe ensuring all flows exiting the catch basin will be treated. The Connector Pipe Screen sizing is dependent on catch basin and discharge pipe sizes with bypass flows accounted for on all required designs.

B. Design Drawings for Device

Refer to **Appendix A** for design drawings of all standard device sizes including dimensions and alternative configurations. Custom alternatives will be considered on an individual basis.

C. Device Bypass Design

The FloGard® Connector Pipe Screen (CPS) enters bypass only when the device is hydraulically overloaded or the device is at maximum capacity. The FloGard® CPS is designed for a specified flow rate or design storm event and may become hydraulically overloaded if the storm event is larger than the design was intended to process. The FloGard® CPS should be maintained regularly based on specific site criteria and loading to ensure maximum capacity is not attained.

D. Engineering Plans/Diagrams for Typical Installation

Refer to **Section 4: Installation Information** for detailed instructions regarding typical installations.

E. Device Photographic Installation Examples



Figure 1. City of Poway - Location 1;
1 month post installation.



Figure 2. City of Poway - Location 1;
1 month post installation.



Figure 3. City of Livermore - Location 2;
3 months post installation.



Figure 4. City of Livermore - Location 2;
3 months post installation.

F. Device Maximum Trash Capture Capacity

FloGard® Connector Pipe Screen - Capacities							
Model Number	Drawing Number	Outlet Pipe Size (in)	Screen Area (in ²)	Height of Screen (in)	Hydraulic Capacity		Storage Capacity*
					Filtered Flow (cfs)	Bypass Flow (cfs)	3' x 3' Catch Basin (cf)
FG-OTS12	SK-0955-12	12	382	15	5.15	9.32	9.63
FG-OTS15	SK-0955-15	15	616	18	9.1	11.59	11.35
FG-OTS18	SK-0955-18	18	1036	24	17.67	13.86	12.55
FG-OTS24	SK-0955-24	24	1396	30	34.55	14.54	14.71
FG-OTS30	SK-0955-30	30	1812	36	44.67	15.42	16.40

*Storage Capacity based on Catch Basin Size, Screen Area and Screen Height. Due to the flexibility of FloGard® Connector Pipe Screen, multiple configurations in varying catch basins can be designed. Please speak with an Oldcastle Infrastructure representative for more detailed information.

G. Device Hydraulic Capacity at Maximum Trash Capture Capacity

Refer to *FloGard® Connector Pipe Screen – Capacities* chart in **Section 3F. Device Maximum Trash Capture Capacity** for Hydraulic Capacity during bypass flow (i.e. maximum capacity).

H. Device Required Material and Material Grade

The FloGard® Connector Pipe Screen is constructed of high strength, durable materials and hardware components to ensure a long service life for each device. The following list details material types and grades for each component.

Material Type & Grade

- Screen: Screen is manufactured from 304 Stainless Steel with openings equal to or less than 4.9mm.
- Screen Frame and Brackets: Screen frames and mounting brackets are manufactured from Type 304 Stainless Steel and are 11GA and 14GA respectively.

I. Conditions Device Re-introduces Previously Captured Trash

The FloGard® Connector Pipe Screen has been designed to retain all trash and debris over 4.9mm. Conditions under which said device may reintroduce previously captured trash are listed below:

- Device has achieved maximum capacity. Oldcastle Infrastructure™ recommends regular maintenance, cycles are site dependent but no less than three (3) cleanings per year. Ideal maintenance ensures device remains at 50-60% capacity or below.
- Damage caused to screens, mounting frames, or hardware could cause an adverse effect that might reintroduce trash contaminates into the storm flow stream and storm sewer system. Visual inspection during routine maintenance should ensure structural stability during storm events.

J. Estimated Design Life of Device

The estimated design life for the FloGard® Connector Pipe Screen is 20+ years. Design life span of devices is dependent on the proper care and maintenance of said device.

4. Installation Information

A. Installation Considerations

An Oldcastle Infrastructure™ representative will assist during design to ensure the appropriate FloGard® Connector Pipe Screen is selected for the project.

Prior to installation:

1. Clear all debris from catch basin.
2. Conduct a thorough inspection for any defects in the catch basin.
3. Clean all mounting surfaces.

Please follow **Section 4B. Device Installation Procedures** and **Section 4C. Methods for Diagnosing and Correcting Installation Errors** for further instructions.

B. Device Installation Procedures

Installation procedures outlined below are applicable to all FloGard® Connector Pipe Screen models and sizes. Lid assembly instructions are optional and only applicable to units requiring overhead trash capture.

FloGard® Connector Pipe Screen

1. Clean area around and on top of grate.
2. Remove grate.
3. Clean catch basin floor.
4. Lower outlet screen into catch basin.
5. Center outlet screen on outlet pipe.
6. Mark mounting hole locations with marker.
7. Drill mounting holes using appropriate bit for 3/8" x 2 1/2" stainless steel anchor bolts.
8. Install anchor bolts.
9. Attach outlet screen to face of wall with anchor bolts.
10. Secure using nuts and washers for anchor bolts.

Optional Lid Assembly Instructions:

11. Center lid assembly (lid and two mounting brackets) above outlet screen at required height.
12. Mark mounting hole locations with marker.
13. Drill mounting holes using appropriate bit for anchor bolts.
14. Install 3/8" x 2 1/2" stainless steel anchor bolts.
15. Attach lid assembly to face of wall with anchor bolts.
16. Secure using nuts and washers for anchor bolts.
17. Re-install grate.

FloGard® Connector Pipe Screen – Quick Release Option

1. Clean area around and on top of grate.
2. Remove grate.
3. Clean catch basin floor.
4. Lower outlet screen with mounting bracket into catch basin.
5. Center outlet screen on outlet pipe.
6. Mark mounting hole locations of bracket onto catch basin wall.
7. Drill mounting holes using appropriate bit for 3/8" x 2 1/2" stainless steel anchor bolts.
8. Install anchor bolts.
9. Attach mounting bracket to catch basin wall.
10. Secure using nuts and washers for anchor bolts.
11. Attach outlet screen to brackets by placing screen against bracket while raised approximately 1/2" above the bottom of the wall bracket. When screen mounting tabs are aligned with bracket slots, slide screen down 3" to secure in place.

Optional Lid Assembly Instructions:

12. Center lid assembly (lid and two mounting brackets) above outlet screen at required height.
13. Mark mounting hole locations with marker.
14. Drill mounting holes using appropriate bit for 3/8" x 2 1/2" stainless steel anchor bolts.
15. Install anchor bolts.
16. Attach lid assembly to face of wall with anchor bolts.
17. Secure using nuts and washers for anchor bolts.
18. Re-install grate.

C. Methods for Diagnosing and Correcting Installation Errors

Oldcastle Infrastructure™ FloGard® Connector Pipe Screen are designed for quick and easy installation. Once installed, ensure a proper fit by performing a visual inspection of configuration and all parts. If screen is not fit securely to wall, remove and reinstall by following **Section 4B. Device Installation Procedures**. If questions during or after installation, please contact Oldcastle Infrastructure™ for project specific assistance.

5. Operation and Maintenance Information

A. Device Inspection

Oldcastle Infrastructure™ recommends that installed FloGard® Connector Pipe Screen be serviced on a recurring basis. Ultimately, the frequency depends on the amount of runoff, pollutant loading and interference from debris (leaves, vegetation, cans, paper, etc.); however, it is recommended that each installation be serviced a minimum of three times per year.

Guidelines for the timing of inspection/service are as follows:

1. For areas with a definite rainy season: Prior to, during and following the rainy season.
2. For areas subject to year-round rainfall: On a recurring basis (at least three times per year).
3. For areas with winter snow and summer rain: Prior to and just after the snow season and during the summer rain season.
4. For installed devices not subject to the elements (wash racks, parking garages, etc.): On a recurring basis (no less than three times per year).

B. Device Maintenance

Federal, State and Local Clean Water Act regulations and those of insurance carriers require that stormwater filtration systems be maintained and serviced on a recurring basis. The intent of the regulations is to ensure that the systems, on a continuing basis, efficiently remove pollutants from stormwater runoff thereby preventing pollution of the nation's water resources. These specifications apply to the FloGard® Connector Pipe Screen.

Guidelines for maintenance service procedures are as follows:

1. The service will commence with the collection and removal of sediment and debris (litter, leaves, papers, cans, etc.).
2. The screen and frame shall be visually inspected for defects. Minor damage or defects found shall be corrected on-the-spot and a notation made on the Maintenance Record. More extensive deficiencies that affect the efficiency of the filter, if approved by the customer representative, will be corrected and an invoice submitted to the representative along with the Maintenance Record.
3. If removed, the filter device (frame and screen) shall be replaced.

C. Effects of Delayed Maintenance

As with all Best Management Practices (BMPs), delayed maintenance can lead to numerous complications not accounted for in the original design. In cases where maintenance is delayed overlong, debris build-up can alter hydrology, create odors, and affect treatment capabilities. Inspection and maintenance are key functions that keep BMPs performing at optimal design capacities.

D. Vector Control Accessibility

1. Date of Application Submittal to Mosquito Vector Control Association

Application for FloGard® Connector Pipe Screen submitted to Mosquito and Vector Control Association of California (MVCAC) on November 26, 2019. Submitted concurrently with California Water Boards Trash Treatment Control Device Application.

2. Description of Access for Vector Control Personnel

Vector Control Access for FloGard® Connector Pipe Screen is simple and user friendly. Once the catch basin manhole has been removed, the FloGard® Connector Pipe Screen is accessible on the trash capture and discharge side of the screen. A typical unit does not have a lid; therefore, both sides of the unit are accessible from above without any impediments to block inspection or treatment.

The FloGard® Connector Pipe Screen shown below includes the optional hinged lid. Circumstances that warrant use of the optional hinged lid include any projects in which the connector pipe is below a trash inlet (i.e. grated catch basin, high elevation inlet pipe from unknown source, etc.). The optional hinged lid eliminates the possibility of trash and debris falling into the discharge side of the screen.

Vector Control access to units installed with the optional hinged lid was designed for ease of use. Once the grate has been lifted off the catch basin (at street level), the grate lifting tool or vector control issued scooper can be used to catch the edge of the lid and lift. The lid swings easily on 2 stainless steel hinges and rotates over 90° to remain open during inspections and closes manually at user's discretion.



Figure 5. Optional lid due to grate inlet



Figure 6. Lid lifted for access.

3. Letter of Verification from Mosquito Vector Control Association

Due to concurrent application submittals at California Water Boards and MVCAC, a letter of verification has not been produced at the time of this submittal.

E. Device Repair Procedures

See installation instruction per **Section 4B. Device Installation Procedures** and **Section 4C. Methods for Diagnosing and Correcting Installation Errors**.

6. Reliability Information

A. Estimated Design Life of Device Components before Major Overhaul

Assuming standard operating conditions, the estimated design life for the FloGard® Connector Pipe Screen is 20+ years. Design life span of devices is dependent on the proper care and maintenance of said device.

B. Device Sensitivities to Loadings other than Trash

FloGard® Connector Pipe Screen loading sensitivity is based on size, not type, of debris. The screen will capture all particles over 4.9mm regardless of category or classification of debris.

C. Warranty Information

Oldcastle Infrastructure™ warranties FloGard® Connector Pipe Screen to be free from manufacturing defects for a period of five (5) years from the date of purchase. Abusive treatment, neglect or improper use of the FloGard® Connector Pipe Screen will not be covered by this warranty.

D. Customer Support Information

Please contact the following representative for general support:

Drainage Protection Systems, Oldcastle Infrastructure™

Director of Field Operations

7100 Longe Street, Suite 100

Stockton, CA 95206

888-950-8826

[https://oldcastleinfrastructure.com/product/drainage-protection-systems/
gary.jones@oldcastle.com](https://oldcastleinfrastructure.com/product/drainage-protection-systems/gary.jones@oldcastle.com)

D. Customer Support Information Continued

Please contact the following regional representative:

Northern California:

Gary Jones
Drainage Protection Systems
Oldcastle Infrastructure™
Director of Field Operations
7100 Longe Street, Suite 100
Stockton, CA 95206
888-950-8826
gary.jones@oldcastle.com

Southern California:

Dave Schlomer
Oldcastle Infrastructure™
Inside Sales
10441 Vine Street
Lakeside, CA 92040
619-240-8026
dave.schlomer@oldcastle.com

7. Field/Lab Testing Information and Analysis

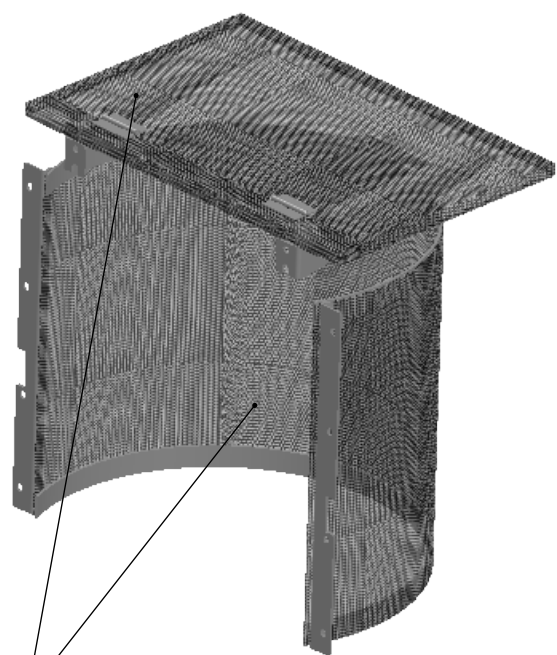
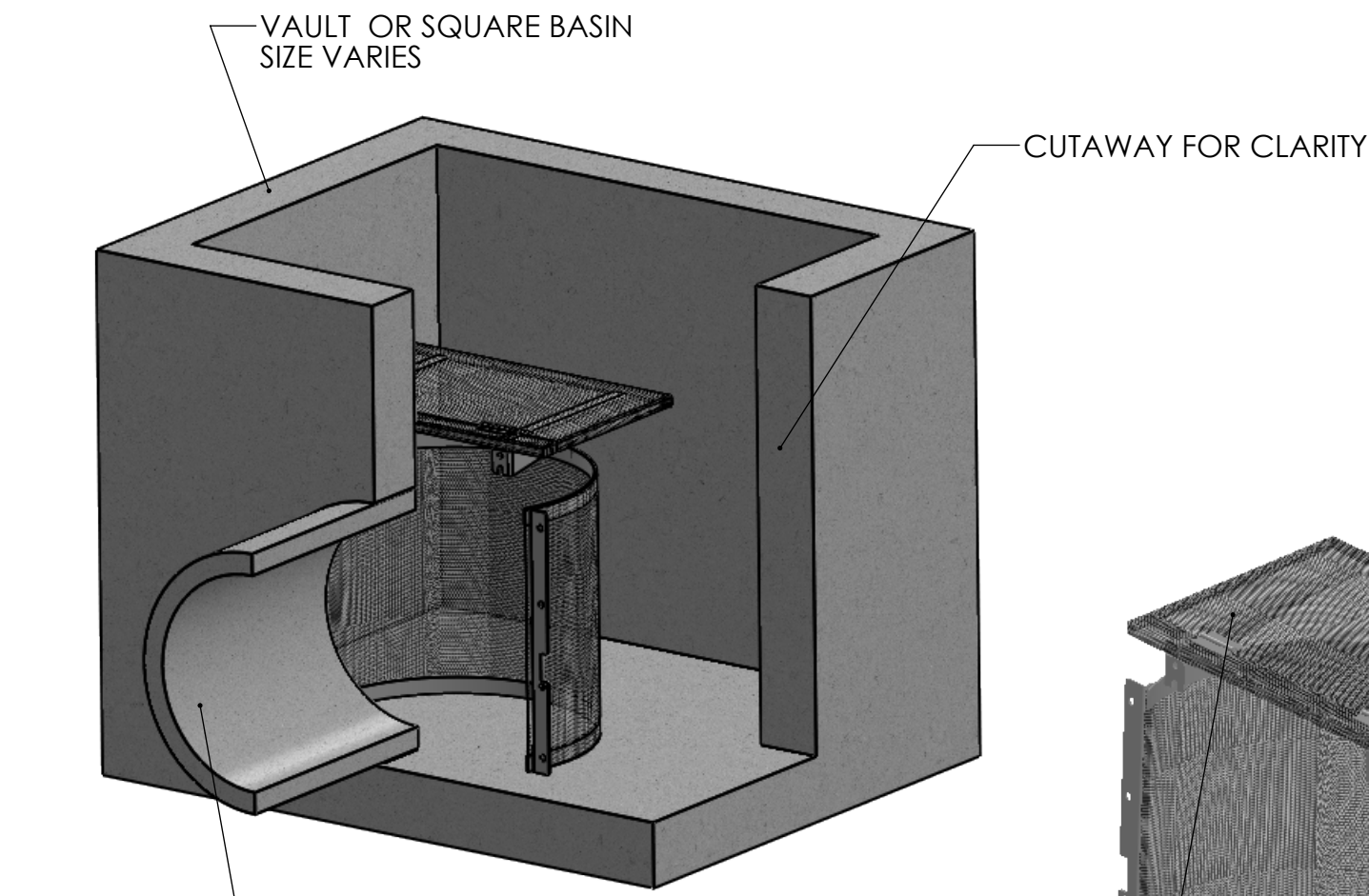
FloGard® Connector Pipe Screen units have been installed nationally and have been observed to capture all trash and debris larger than 4.9mm due to the screen aperture size. With regular cleaning and maintenance, units that have been in the field over 7 years are still working at optimal levels. Please contact an Oldcastle Infrastructure™ representative for more information.

APPENDIX A

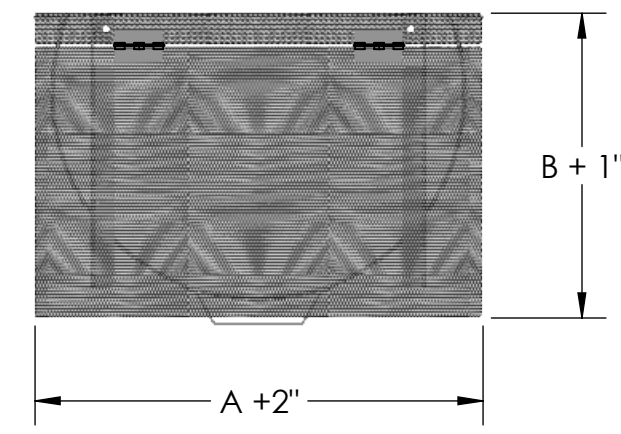
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D
C
B
A

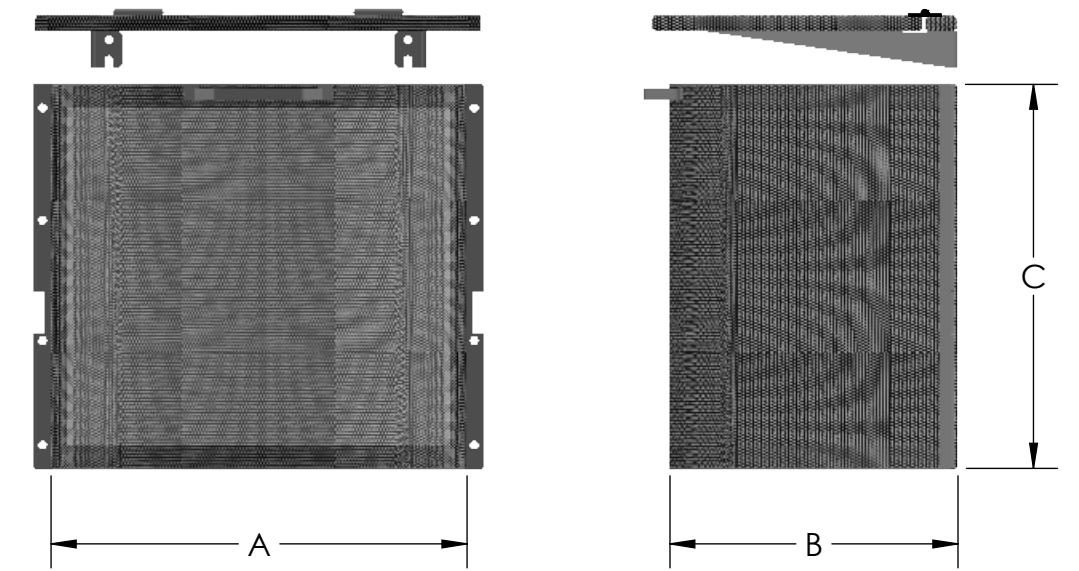
D
C
B
A



SCREEN MATERIAL
14ga PERFORATED STAINLESS STEEL
Ø 3/16" THROUGH, 1/4" STAGGERED
53% OPEN



*SEE MOUNTING DETAILS ON SHEET 2



Unit	Max Outlet Pipe Size	A (Screen Width)	B (Screen Depth)	C (Screen Height)
SK-0955-12	12"	18"	12"	15"
SK-0955-15	15"	21"	15"	18"
SK-0955-18	18"	24"	18"	24"
SK-0955-24	24"	30"	18"	30"
SK-0955-30	30"	36"	18"	36"

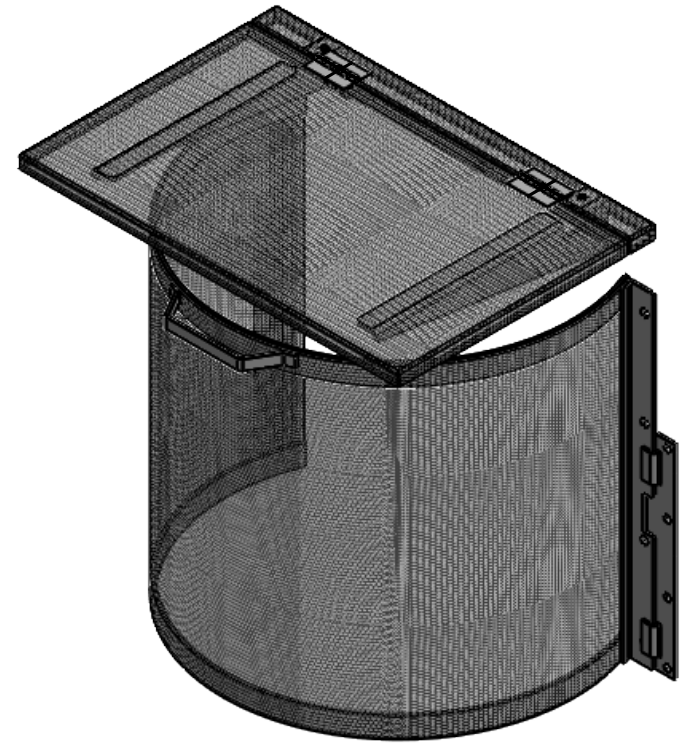
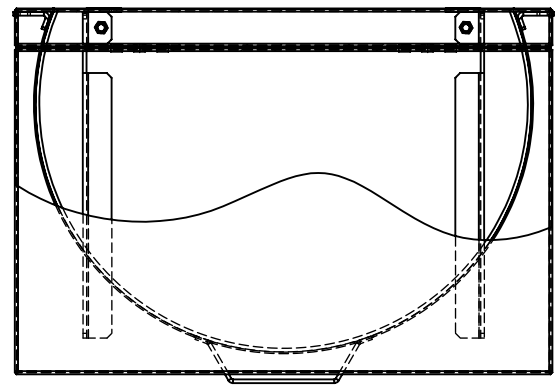
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	<small>CUSTOMER:</small> <small>UNLESS OTHERWISE SPECIFIED:</small> <small>DIMENSIONS ARE IN INCHES</small> <small>TOLERANCES:</small> <small>FRACTIONAL: ± 1/32</small> <small>ANGULAR: ± 1.0 DEG</small> <small>HOLE: ± .003</small> <small>.X : .060</small> <small>.XX : .030</small> <small>.XXX : .020</small>	<small>DESIGN</small> - - <small>DRAWN</small> JLM 10/25/18 <small>APPROVED</small> - - <small>MATERIAL:</small> <small>FINISH:</small>	
DO NOT SCALE DRAWING		<small>SCALE: 1:14</small> <small>WEIGHT:</small>	<small>SHEET 1 OF 2</small>

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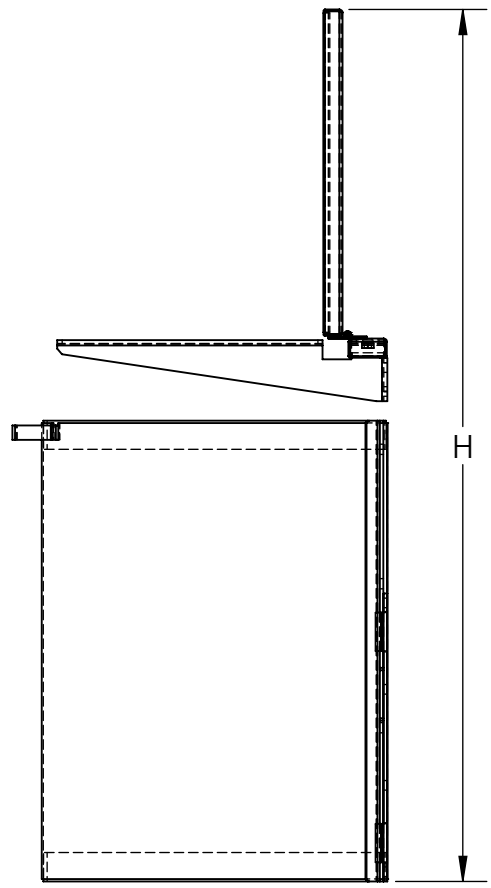
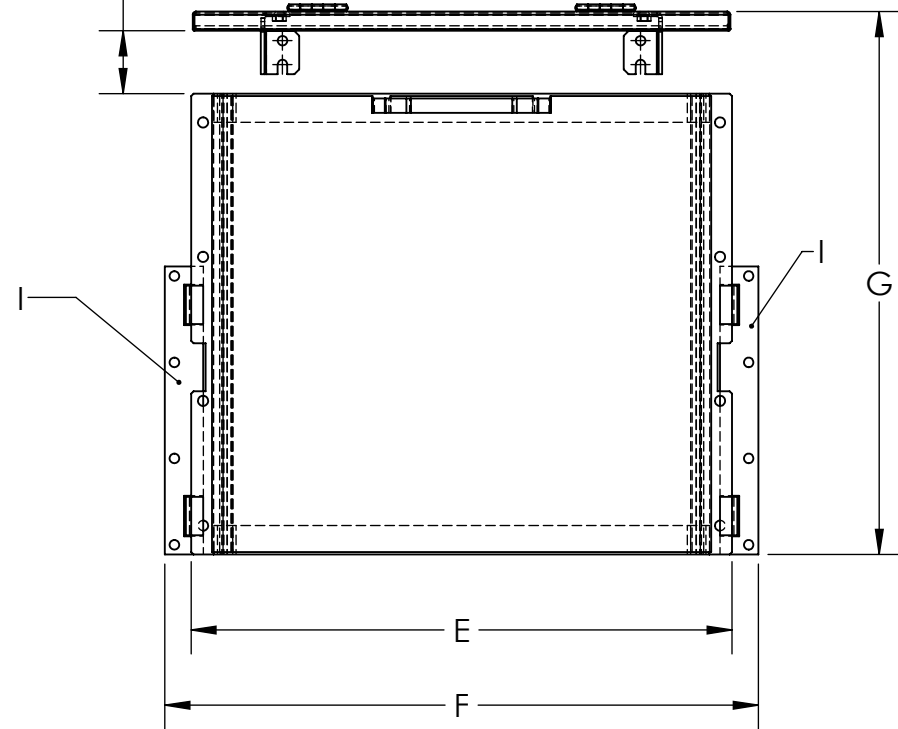
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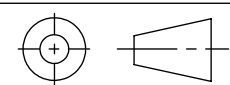


4.3"
MIN CLEARANCE



UNIT	E (SCREEN WIDTH - DIRECT MOUNT)	F (SCREEN w/ BRACKET WIDTH)	G (LID CLOSED OVERALL HEIGHT)	H (LID OPEN OVERALL HEIGHT)	I (MOUNTING BRACKET PART #)
SK-0955-12	22.25"	25"	15.7"	27"	SK-0956
SK-0955-15	25.25"	28"	18.2"	32.25"	SK-0956
SK-0955-18	28.25"	31"	19.7"	37"	SK-0956
SK-0955-24	34.25"	37"	23.7"	41"	SK-0957
SK-0955-30	40.25"	43"	27.6"	44.75"	SK-0957

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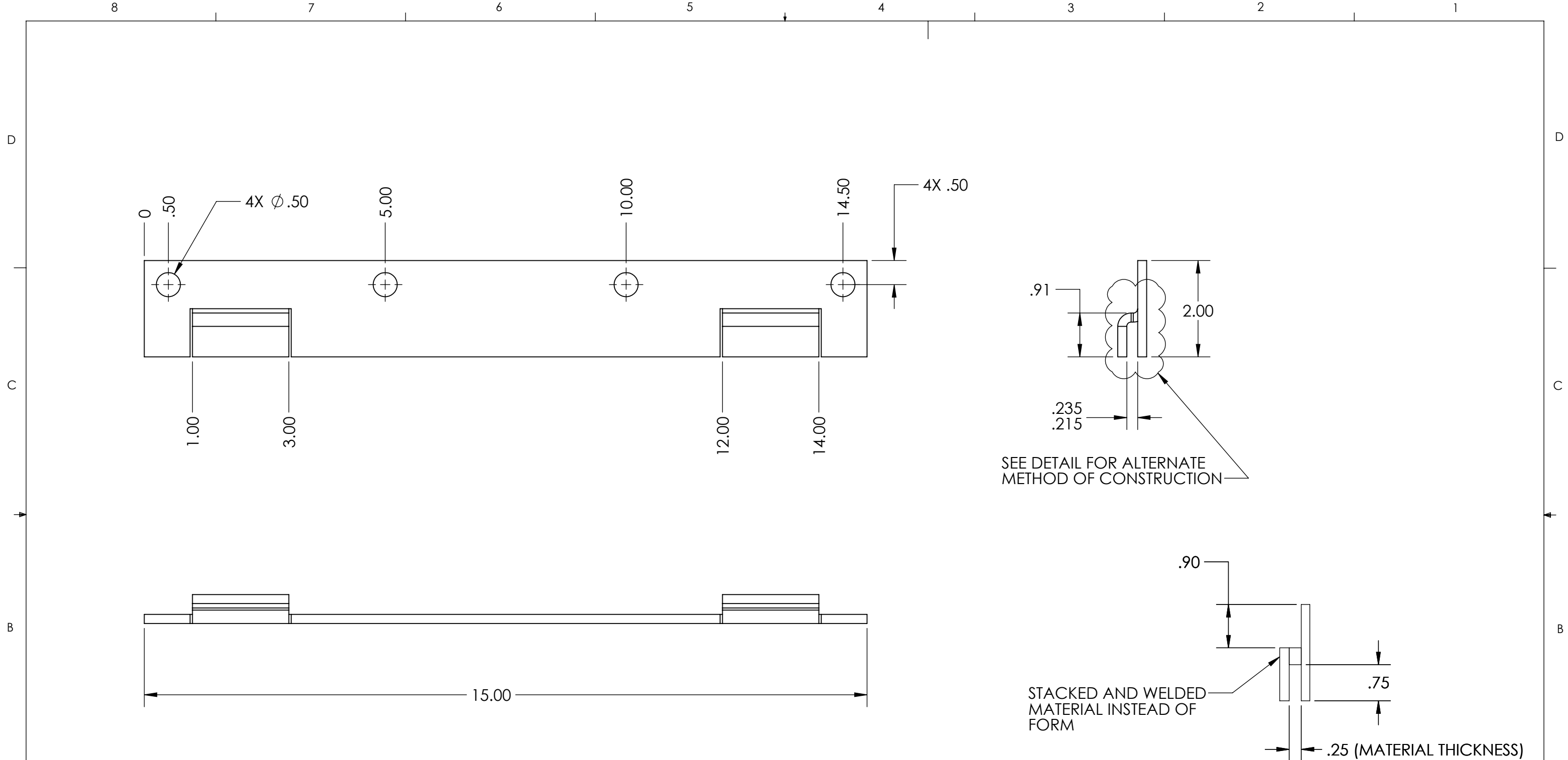


CUSTOMER:
UNLESS OTHERWISE SPECIFIED:
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONAL: ± 1/32
ANGULAR: ± 1.0 DEG
HOLE: ± .003
.X : .060
.XX : .030
.XXX : .020

DESIGN	-	-
DRAWN		
APPROVED	-	-
MATERIAL:		
FINISH:		
DO NOT SCALE DRAWING		

DESCRIPTION: ARC STYLE GENERIC DETAIL FLOGARD OUTLET TRASH SCREEN		
PART NUMBER: SK-0955	REV 0	
SCALE: 1:10	WEIGHT:	SHEET 2 OF 2

7 6 5 4 3 2 1

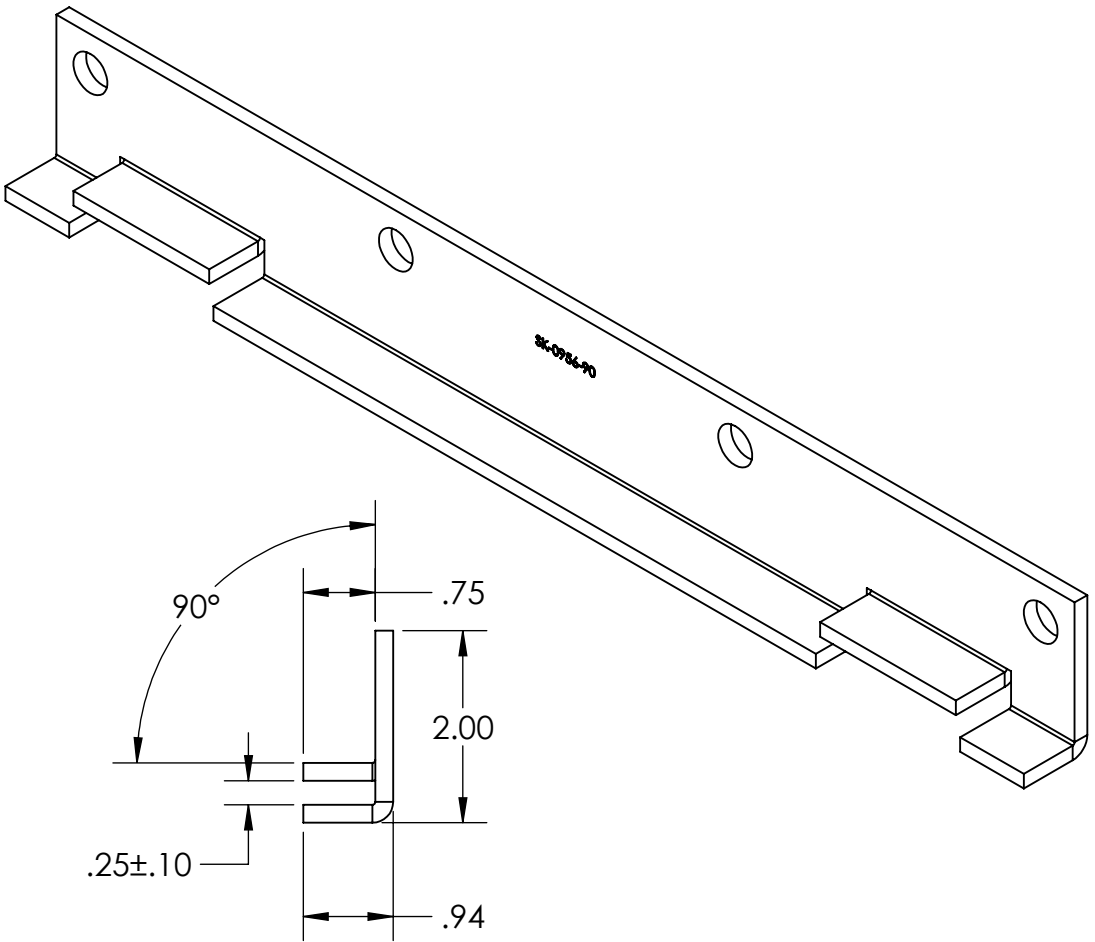
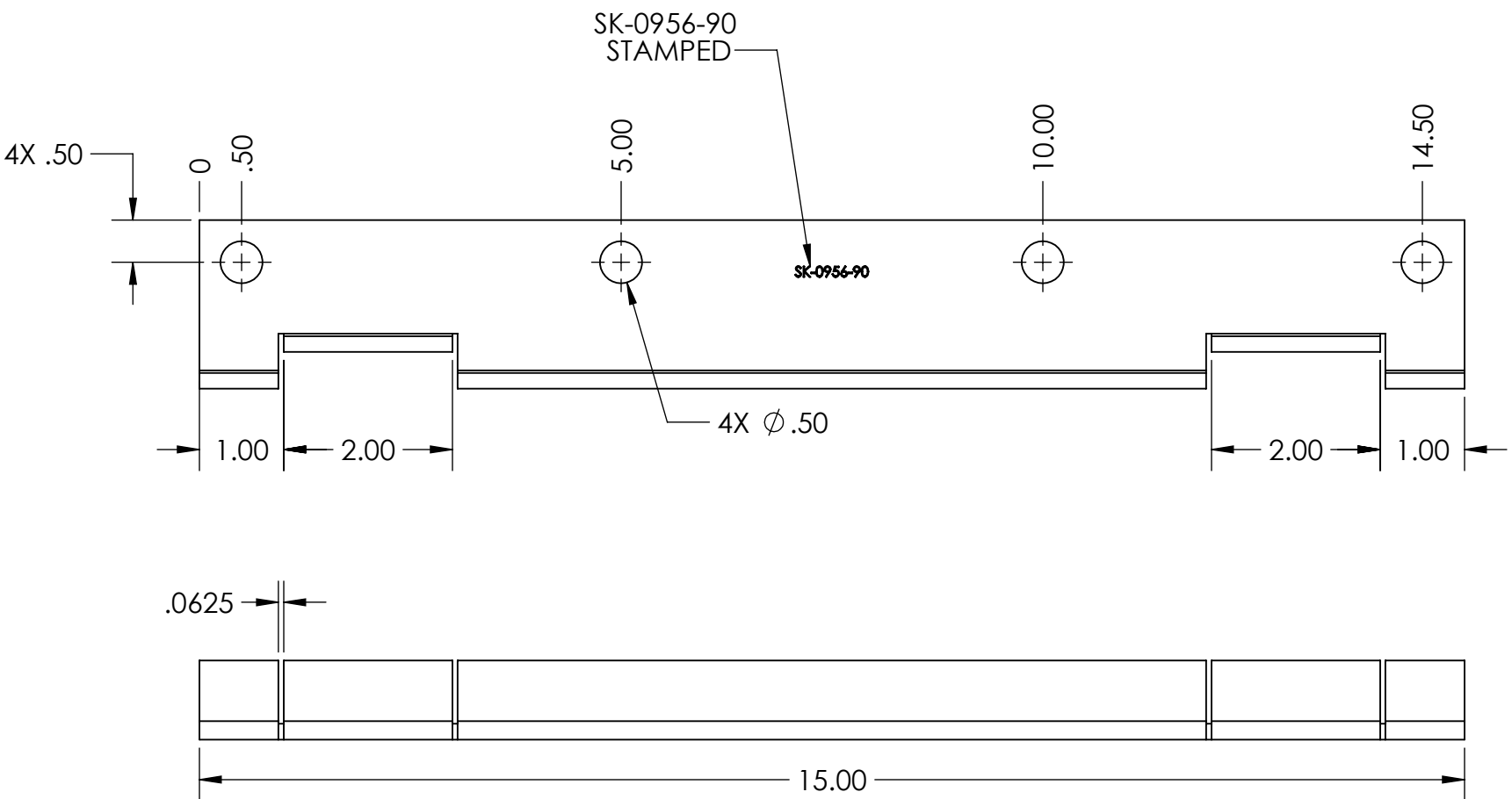


NOTES U.O.N.

1. USE MINIMUM BEND RADIUS.
2. USE MINIMUM BEND RELIEF.
3. DIMENSIONS O.D. APEX INTERSECTION U.O.N.
4. REMOVE BURRS AND SHARP EDGES.


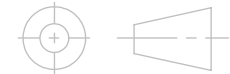
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	<small>CUSTOMER:</small> <small>UNLESS OTHERWISE SPECIFIED:</small>		
<small>DIMENSIONS ARE IN INCHES</small> <small>TOLERANCES:</small> <small>FRACTIONAL: ± 1/32</small> <small>ANGULAR: ± 1.0 DEG</small> <small>HOLE: ± .003</small> <small>.X : .060</small> <small>.XX : .030</small> <small>.XXX : .020</small>	<small>DESIGN</small> - - <small>DRAWN</small> JLM 10/22/2018 <small>APPROVED</small> - -	<small>MATERIAL:</small> .187 THICK 304 SS	<small>PART NUMBER:</small> SK-0956
	<small>DO NOT SCALE DRAWING</small>	<small>SCALE:</small> 1:2	<small>WEIGHT:</small>
	<small>SHEET 1 OF 1</small>		<small>REV</small> 0

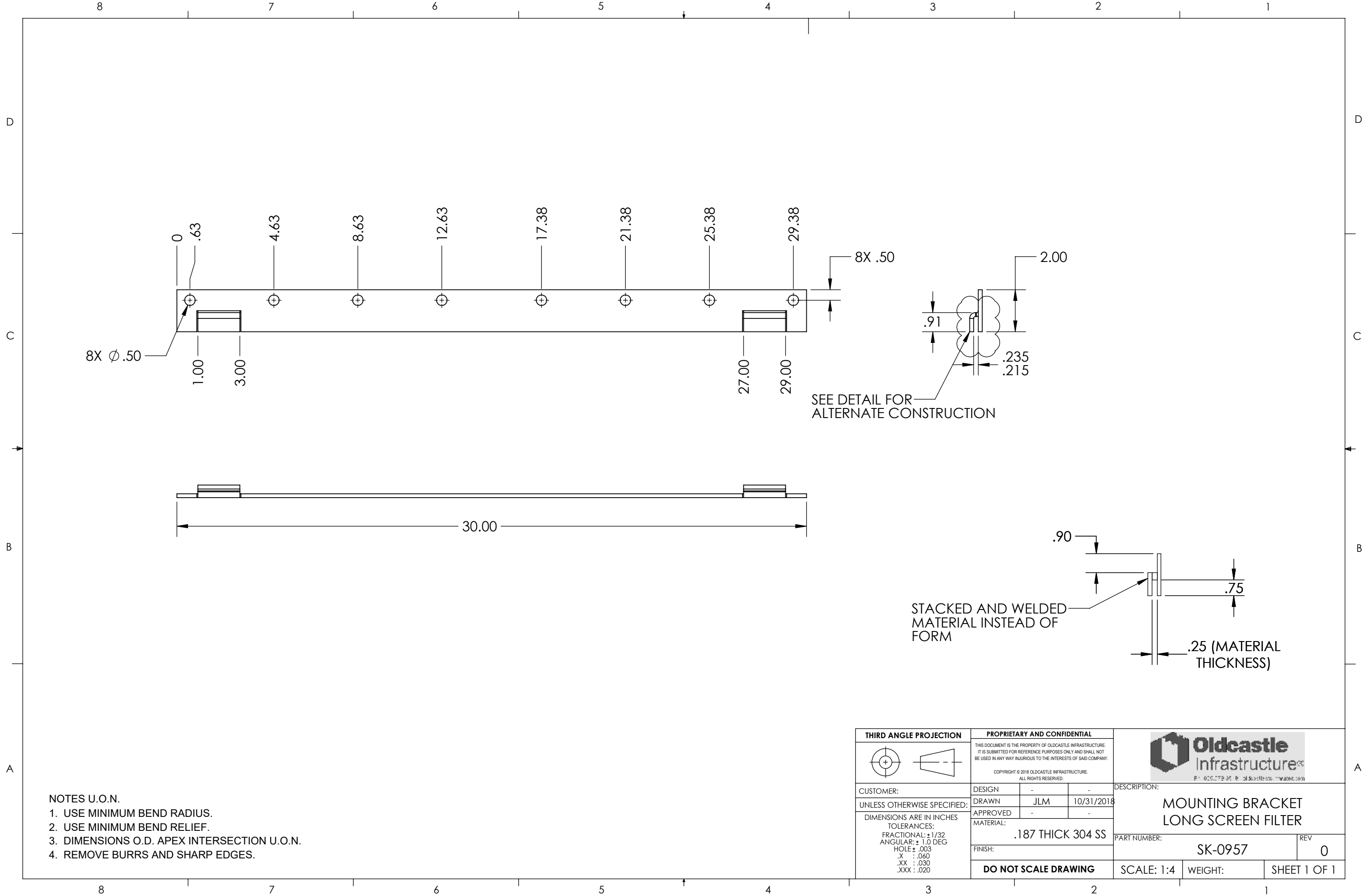
ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SK-0956-90	MOUNTING BRACKET SHORT SCREEN FILTER 15"	1



NOTES:
 1. MINIMUM BEND RELIEF & RADIUS TYPICAL
 2. REMOVE ALL BURRS AND SHARP EDGES

REVISIONS			
REV	DESCRIPTION	DATE	BY
0	INITIAL DRAWING		

THIRD ANGLE PROJECTION	PROPRIETARY AND CONFIDENTIAL		 <p>Oldcastle Infrastructure® Ph: 800.579.8819 oldcastlestormwater.com</p>
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CUSTOMER:	DESIGN	EVAN 11/16/2018	
UNLESS OTHERWISE SPECIFIED:	DRAWN	EVAN 11/16/2018	
DIMENSIONS ARE IN INCHES		APPROVED	-
TOLERANCES:		MATERIAL:	AISI 304 STAINLESS STEEL
FRACTIONAL: ± 1/32		7 GAUGE (.187)	
ANGULAR: ± 1.0 DEG		FINISH:	
HOLE: ± .003		DO NOT SCALE DRAWING	
.X : .060		SCALE: 1:2	WEIGHT: 2.03
.XX : .030		SHEET 1 OF 1	
.XXX : .020			



SEE DETAIL FOR ALTERNATE CONSTRUCTION

STACKED AND WELDED MATERIAL INSTEAD OF FORM

- NOTES U.O.N.
1. USE MINIMUM BEND RADIUS.
 2. USE MINIMUM BEND RELIEF.
 3. DIMENSIONS O.D. APEX INTERSECTION U.O.N.
 4. REMOVE BURRS AND SHARP EDGES.

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	CUSTOMER: UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± 1/32 ANGULAR: ± 1.0 DEG HOLE: ± .003 .X : .060 .XX : .030 .XXX : .020	DESIGN: - - DRAWN: JLM 10/31/2018 APPROVED: - - MATERIAL: .187 THICK 304 SS FINISH:		DESCRIPTION: MOUNTING BRACKET LONG SCREEN FILTER PART NUMBER: SK-0957 REV: 0
DO NOT SCALE DRAWING		SCALE: 1:4	WEIGHT:	SHEET 1 OF 1

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	SK-0957-90	MOUNTING BRACKET LONG SCREEN FILTER 30"	1

D

D

C

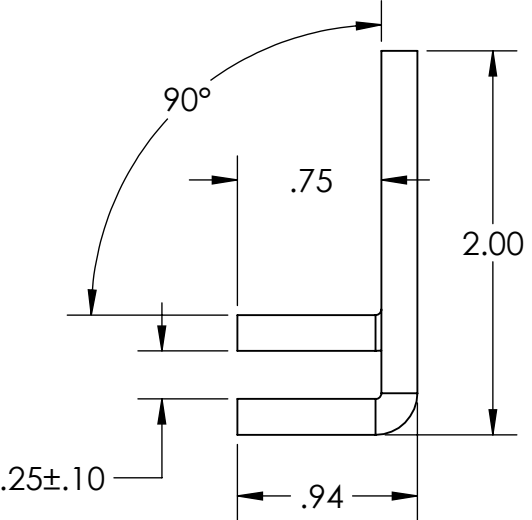
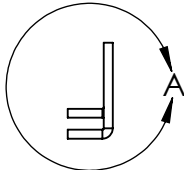
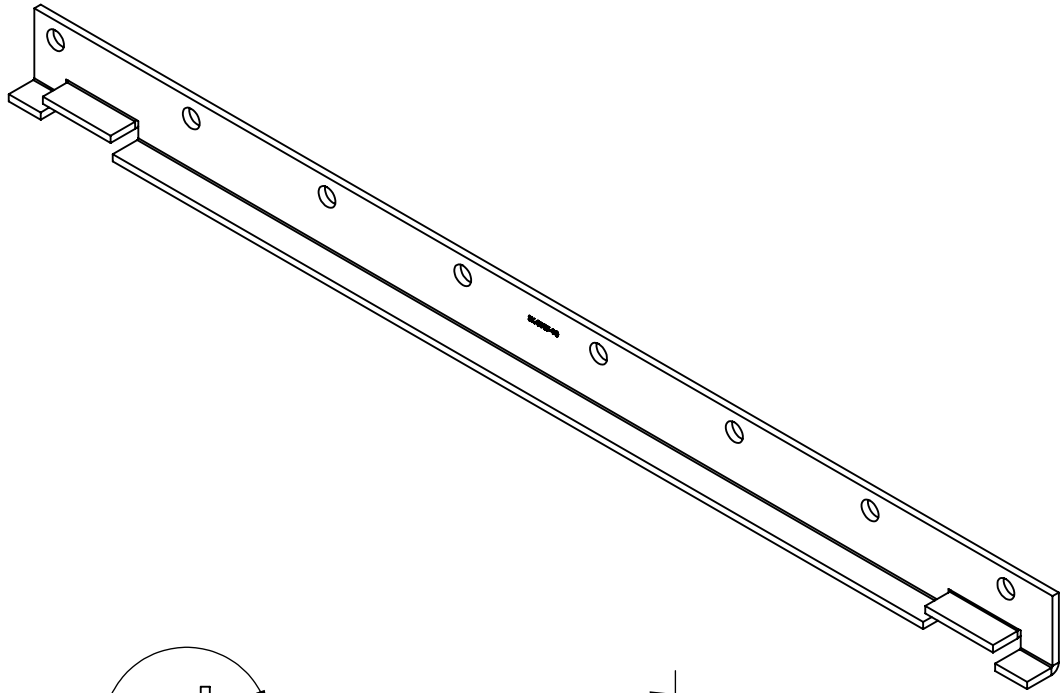
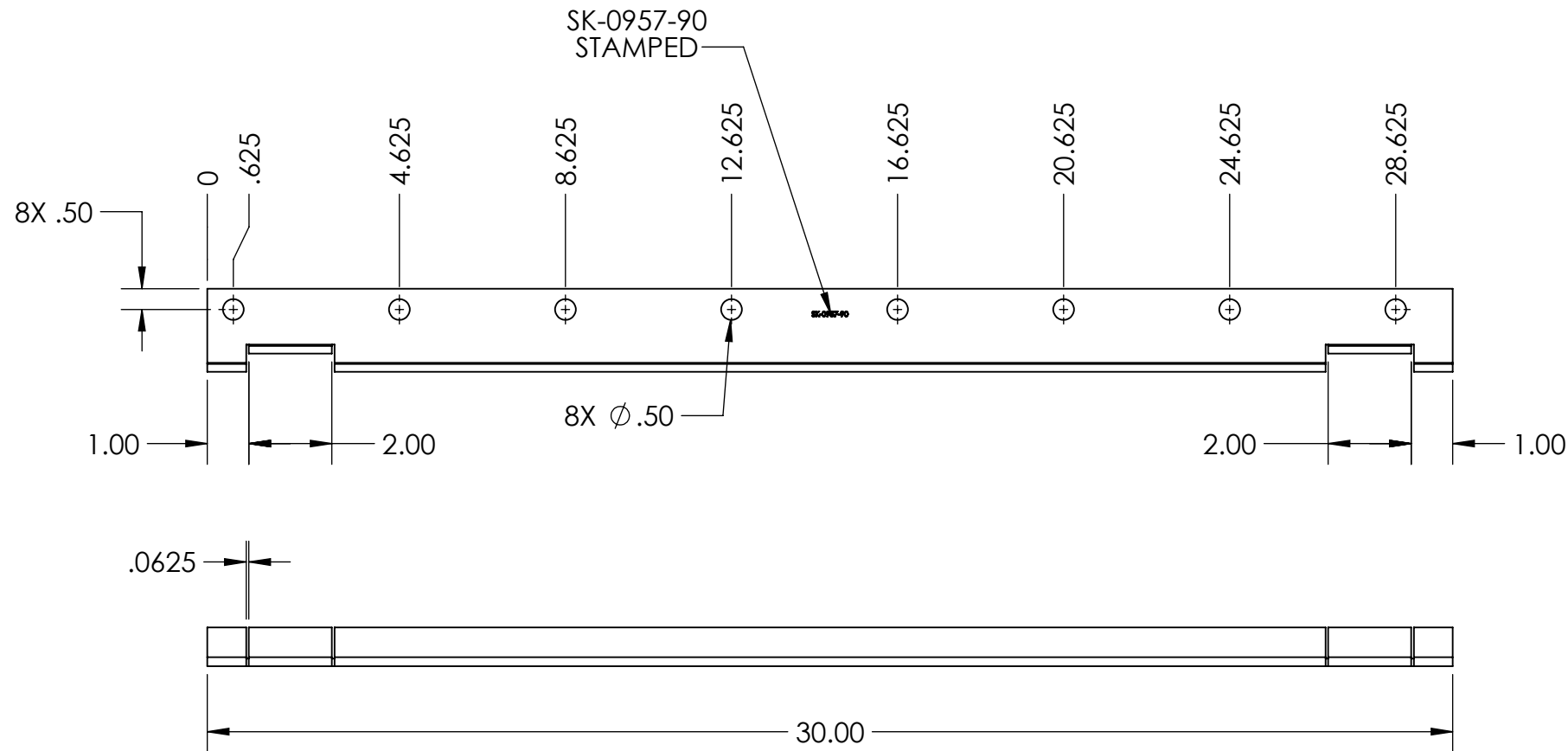
C

B

B

A

A

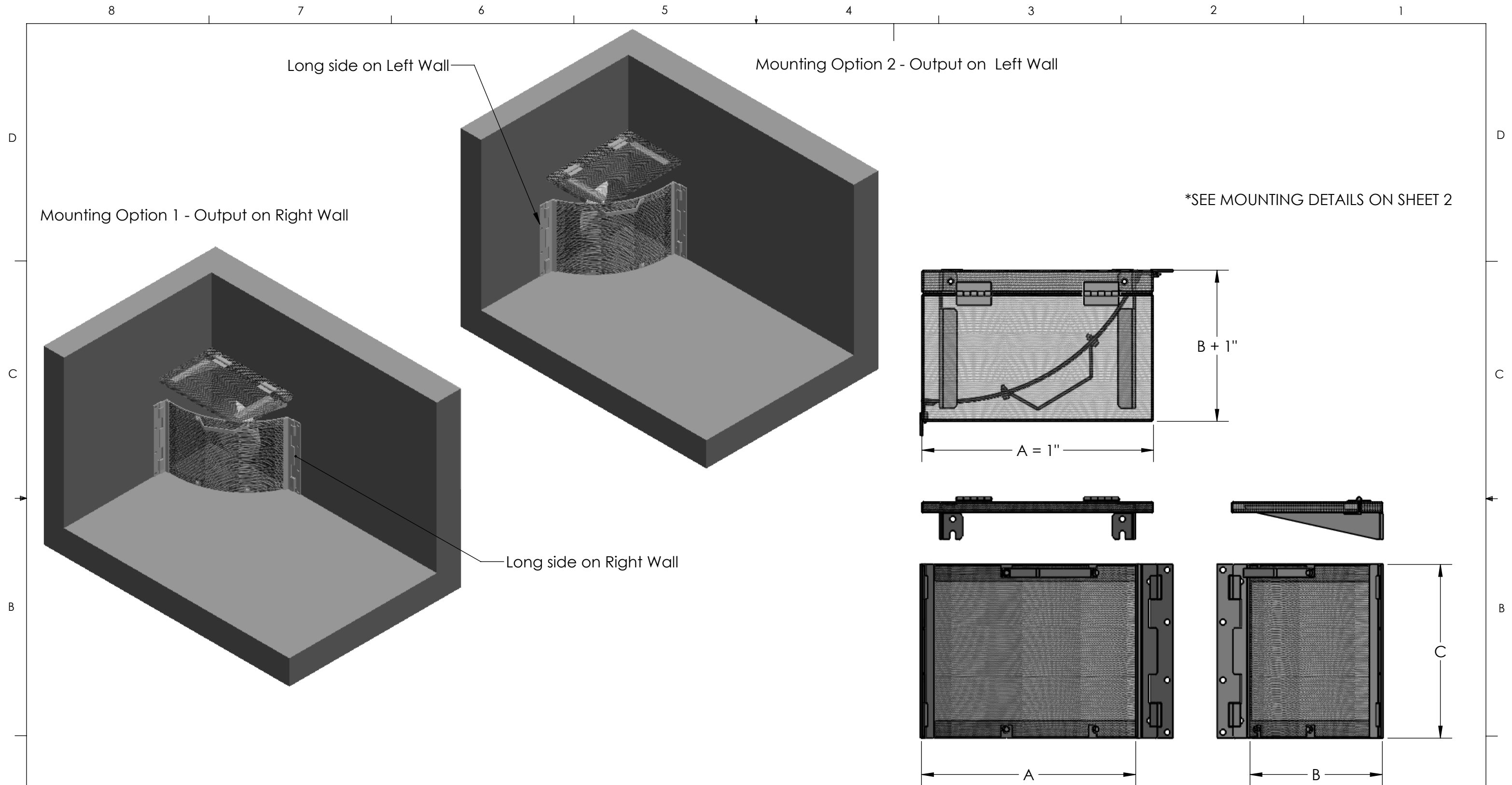


DETAIL A
SCALE 1 : 1

NOTES:
1. MINIMUM BEND RELIEF & RADIUS TYPICAL
2. REMOVE ALL BURRS AND SHARP EDGES

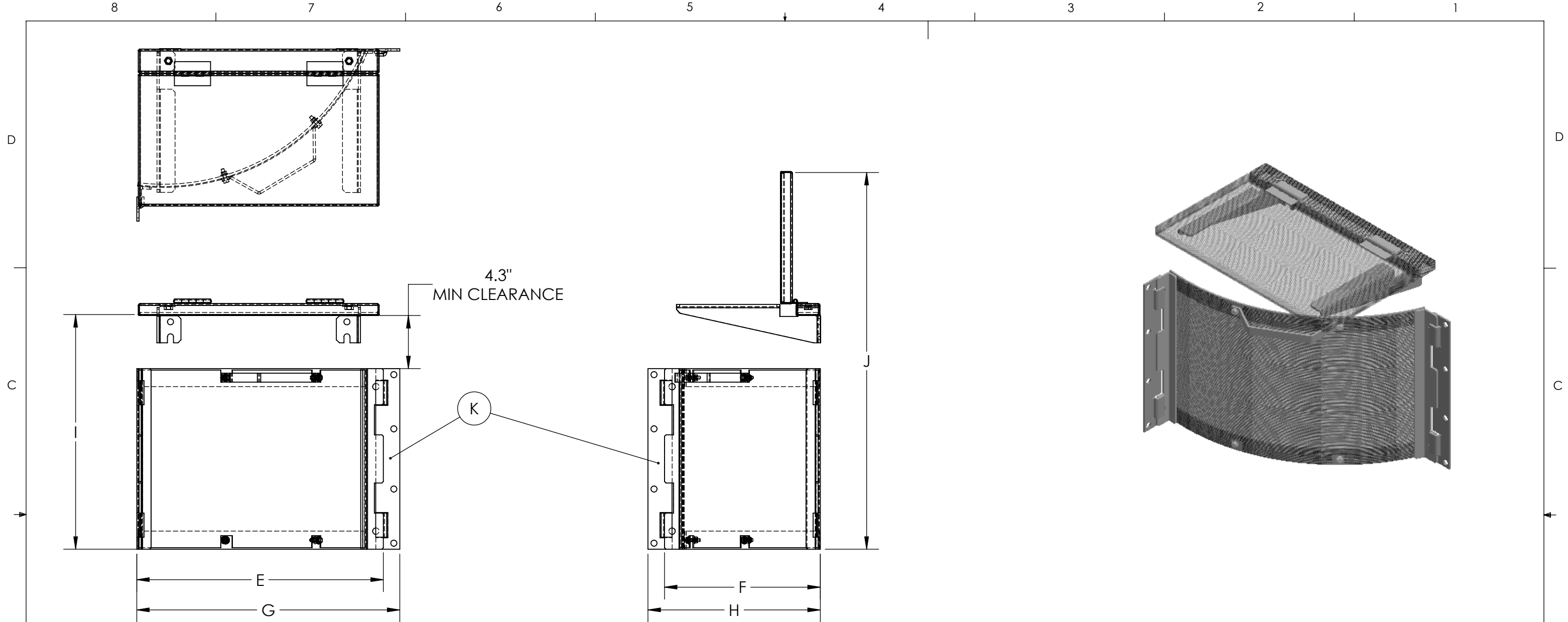
REVISIONS			
REV	DESCRIPTION	DATE	BY
0	INITIAL DRAWING		

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CUSTOMER:	DESIGN: EVAN	11/16/2018	DESCRIPTION:
UNLESS OTHERWISE SPECIFIED:	DRAWN: EVAN	11/16/2018	MOUNTING BRACKET LONG SCREEN FILTER 30"
DIMENSIONS ARE IN INCHES	APPROVED: -	-	PART NUMBER: SK-0957-90
TOLERANCES:	MATERIAL: AISI 304 STAINLESS STEEL		REV: 0
FRACTIONAL: ± 1/32	7 GAUGE (.187)		
ANGULAR: ± 1.0 DEG	FINISH:		
HOLE: ± .003	DO NOT SCALE DRAWING	SCALE: 1:4	WEIGHT: 4.18
.X : .060			SHEET 1 OF 1
.XX : .030			
.XXX : .020			



Unit	Max Outlet Pipe Size	A (Screen Long Side)	B (Screen Short Side)	C (Screen Height)	Lid P/N
SK-0958-8	8"	12.75"	7.75"	14"	SK-0958-8-LID
SK-0958-12	12"	18.75"	11.50"	15"	SK-0955-12-LID
SK-0958-18	18"	23.75"	14.75"	18"	SK-0955-15-LID
SK-0958-24	24"	29.75"	16.75"	29"	SK-0955-24-LID

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	<small>CUSTOMER:</small> <small>UNLESS OTHERWISE SPECIFIED:</small> <small>DIMENSIONS ARE IN INCHES</small> <small>TOLERANCES:</small> <small>FRACTIONAL: ± 1/32</small> <small>ANGULAR: ± 1.0 DEG</small> <small>HOLE: ± .003</small> <small>.X : .060</small> <small>.XX : .030</small> <small>.XXX : .020</small>	<small>DESIGN</small> - - <small>DRAWN</small> JLM 12/14/18 <small>APPROVED</small> - - <small>MATERIAL:</small> <small>FINISH:</small>	
DO NOT SCALE DRAWING		<small>SCALE:</small> 1:16 <small>WEIGHT:</small>	<small>SHEET</small> 1 OF 2

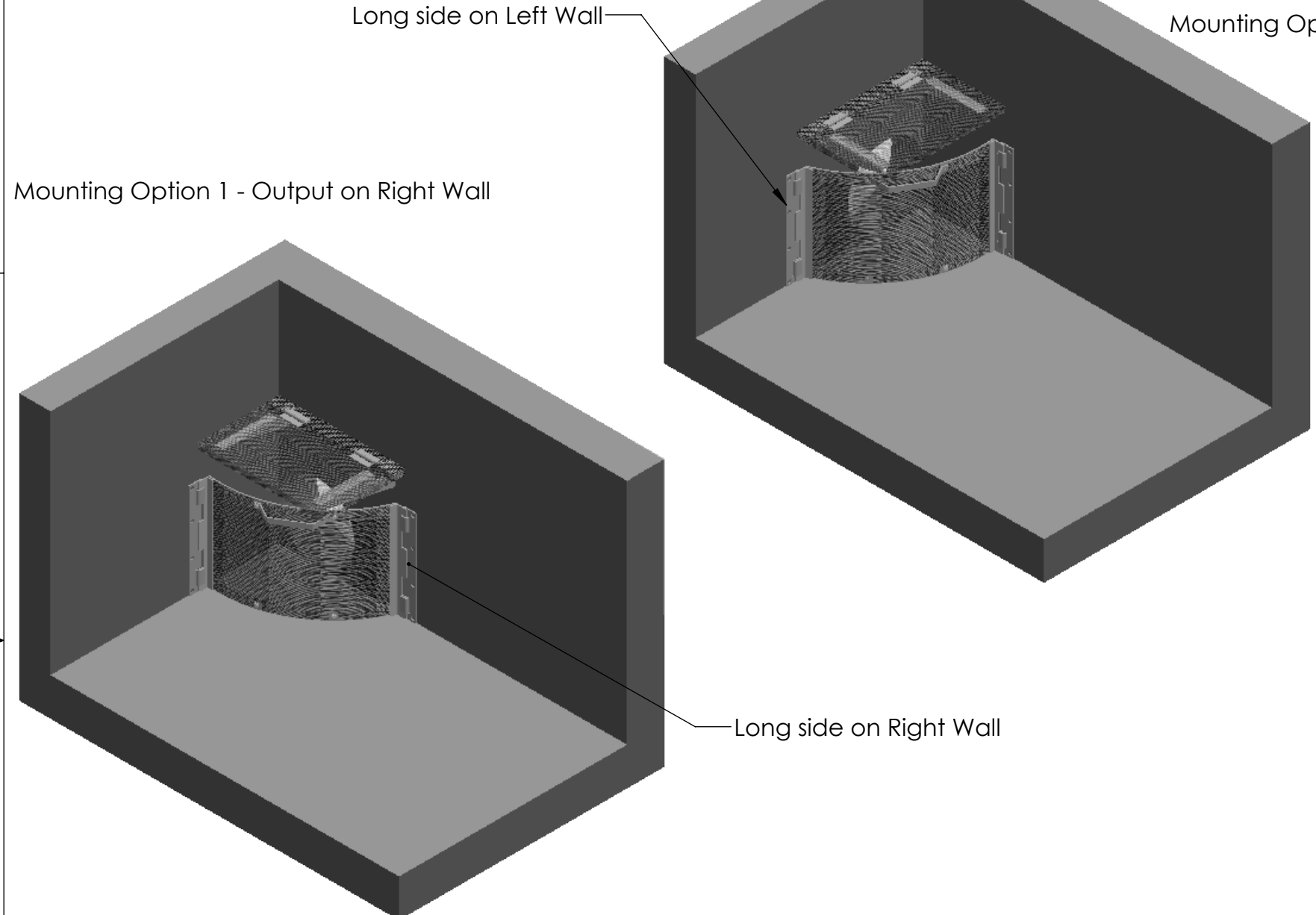


UNIT	E (SCREEN LONG SIDE-DIRECT MOUNT)	F (SCREEN SHORT SIDE-DIRECT MOUNT)	G (SCREEN w/ BRACKET LONG SIDE)	H (SCREEN w/ BRACKET SHORT SIDE)	I (LID CLOSED OVERALL HEIGHT)	J (LID OPEN OVERALL HEIGHT)	K (MOUNTING BRACKET PART #)
SK-0958-8	14.25"	9.5"	15.5"	11"	19.5"	27"	SK-0956
SK-0958-12	20.5"	13"	22"	14.5"	20.5"	31.5"	SK-0956
SK-0958-18	25.25"	16.25"	26.5"	17.75"	26.5"	40.5"	SK-0956
SK-0958-24	31"	18.5"	32.5"	20"	34.5"	51.25"	SK-0957

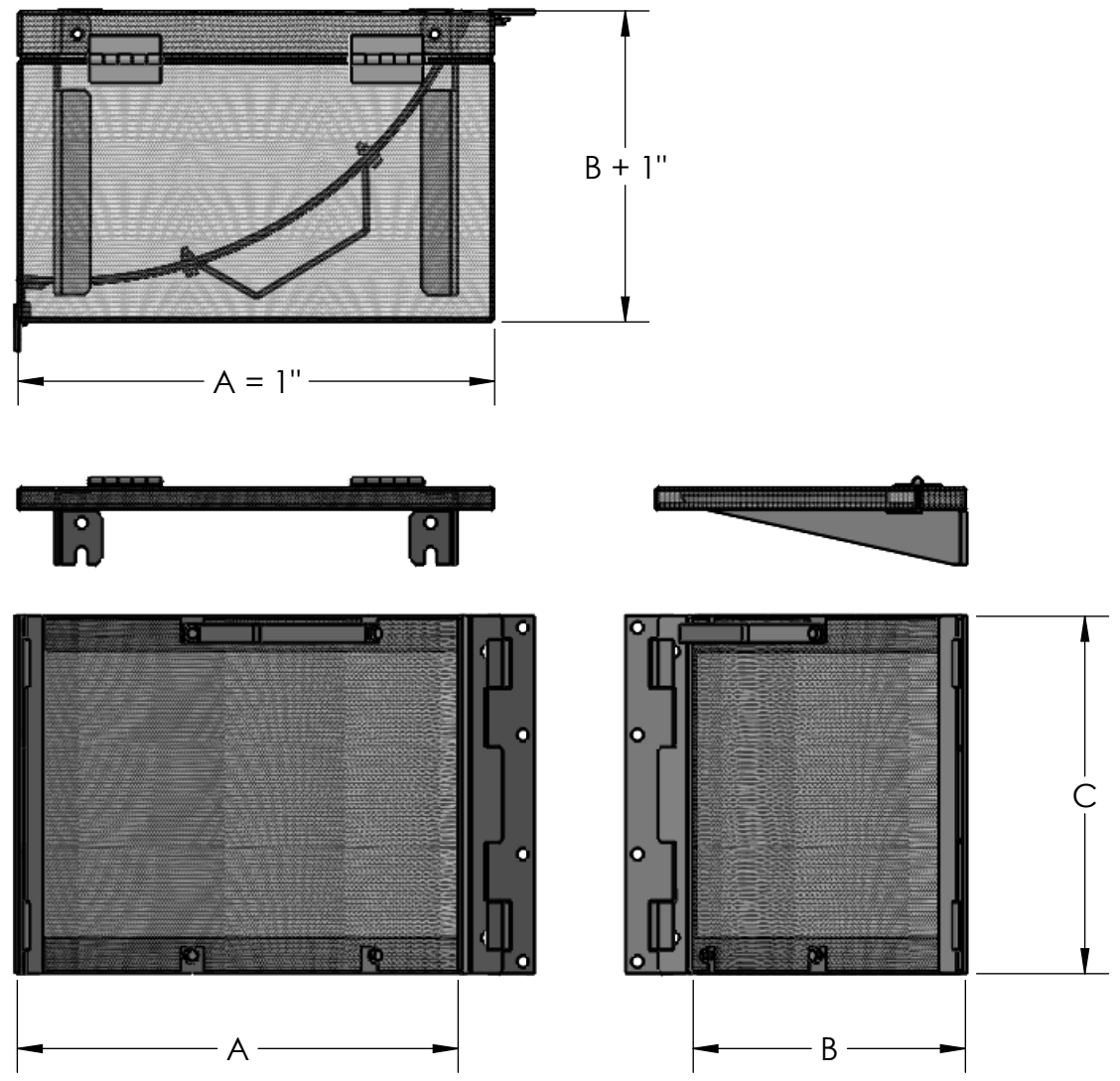
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	CUSTOMER: UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± 1/32 ANGULAR: ± 1.0 DEG HOLE: ± .003 .X : .060 .XX : .030 .XXX : .020	DESIGN: - - DRAWN: APPROVED: - - MATERIAL: FINISH: DO NOT SCALE DRAWING	

8 7 6 5 4 3 2 1

REVISIONS			
REV.	DESCRIPTION	DATE	DRAWN/APPROVED
1	CORRECTED SIZING IN UNIT TABLE	1/30/2019	JLM/CRD



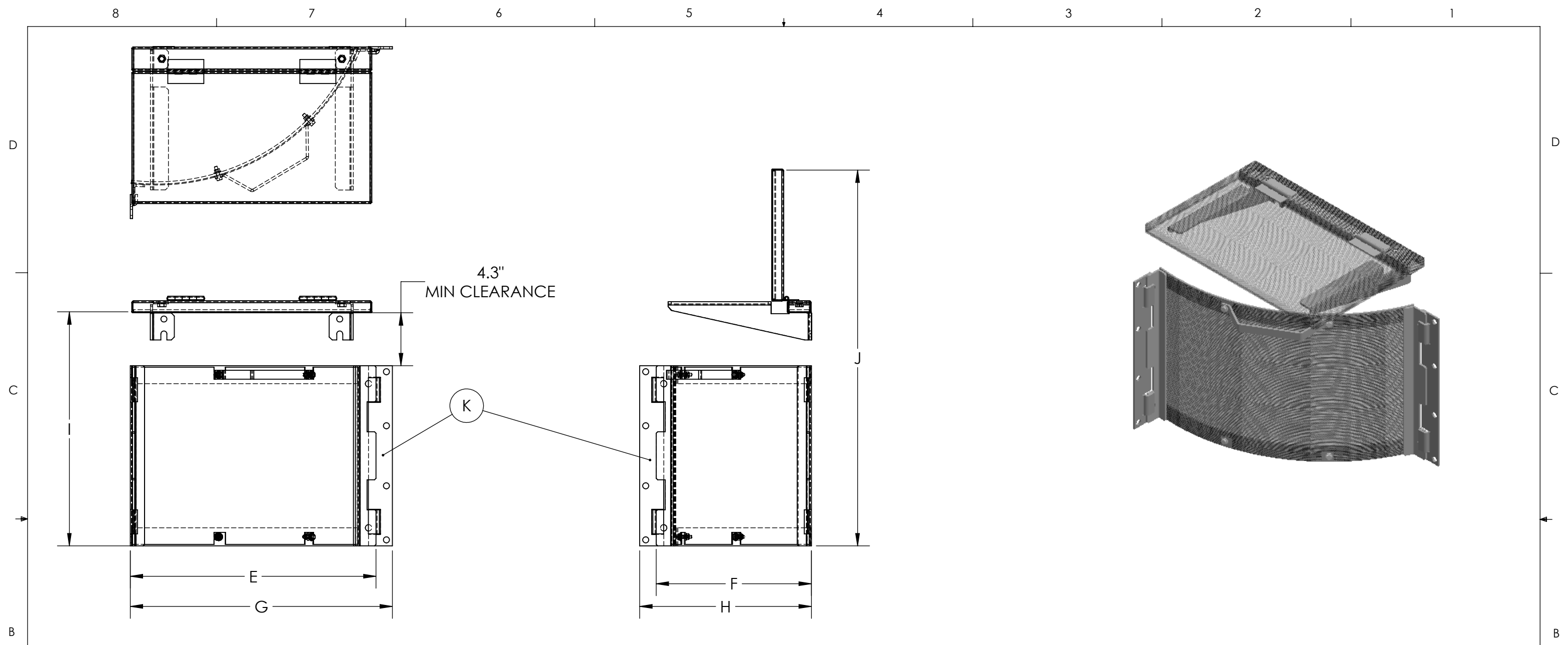
*SEE MOUNTING DETAILS ON SHEET 2



Unit	Max Outlet Pipe Size	A (Screen Long Side)	B (Screen Short Side)	C (Screen Height)	Lid P/N
SK-0958-8	8"	12.75"	7.75"	14"	SK-0958-8-LID
SK-0958-12	12"	18.75"	11.50"	15"	SK-0955-12-LID
SK-0958-18	18"	23.75"	14.75"	21"	SK-0955-15-LID
SK-0958-24	24"	29.75"	16.75"	29"	SK-0955-24-LID

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	CUSTOMER: UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± 1/32 ANGULAR: ± 1.0 DEG HOLE: ± .003 .X : .060 .XX : .030 .XXX : .020	DESIGN DRAWN: JLM 12/14/18 APPROVED MATERIAL: FINISH:	
DO NOT SCALE DRAWING		SCALE: 1:16 WEIGHT:	SHEET 1 OF 2

8 7 6 5 4 3 2 1



UNIT	E (SCREEN LONG SIDE-DIRECT MOUNT)	F (SCREEN SHORT SIDE-DIRECT MOUNT)	G (SCREEN w/ BRACKET LONG SIDE)	H (SCREEN w/ BRACKET SHORT SIDE)	I (LID CLOSED OVERALL HEIGHT)	J (LID OPEN OVERALL HEIGHT)	K (MOUNTING BRACKET PART #)
SK-0958-8	14.25"	9.5"	15.5"	11"	19.5"	27"	SK-0956
SK-0958-12	20.5"	13"	22"	14.5"	20.5"	31.5"	SK-0956
SK-0958-18	25.25"	16.25"	26.5"	17.75"	26.5"	40.5"	SK-0956
SK-0958-24	31"	18.5"	32.5"	20"	34.5"	51.25"	SK-0957

- NOTES U.O.N.
1. USE MINIMUM BEND RADIUS.
 2. USE MINIMUM BEND RELIEF.
 3. DIMENSIONS O.D. APEX INTERSECTION U.O.N.
 4. REMOVE BURRS AND SHARP EDGES.

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	CUSTOMER: UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONAL: ± 1/32 ANGULAR: ± 1.0 DEG HOLE: ± .003 .X : .060 .XX : .030 .XXX : .020	DESIGN DRAWN APPROVED MATERIAL: FINISH: DO NOT SCALE DRAWING	