



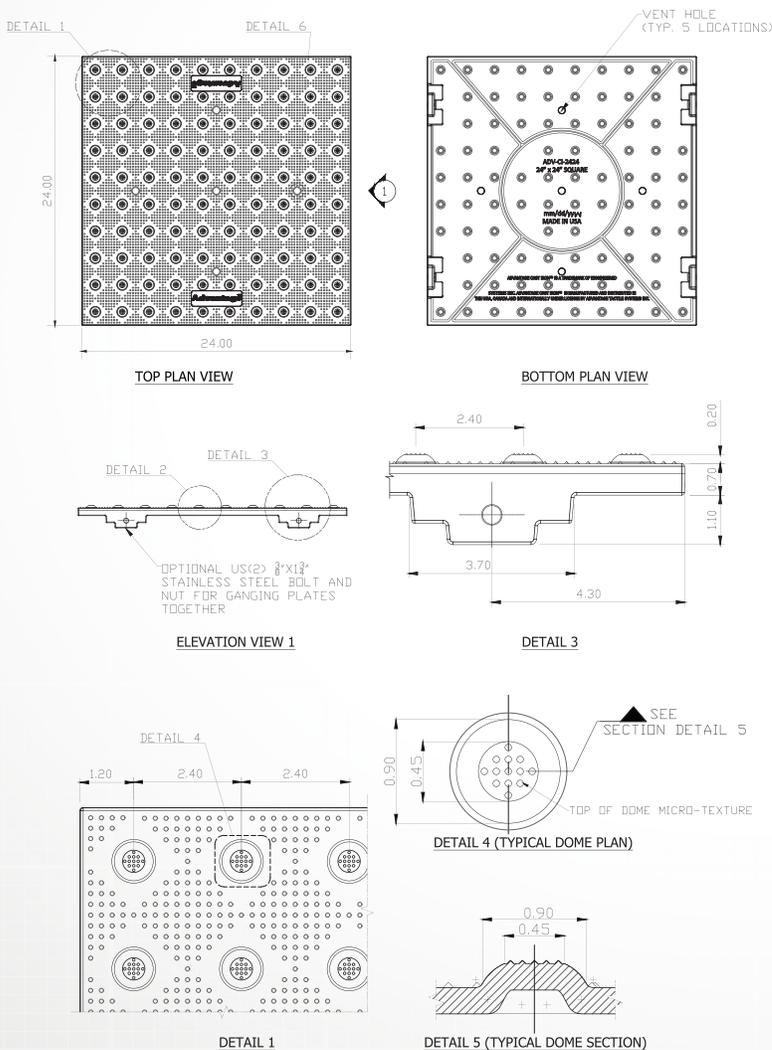
**Advantage**<sup>®</sup>  
Cast Iron

**CAST IRON TACTILE WALKING SURFACE PLATES**





## TACTILE WALKING SURFACE INDICATOR (TWSI) WITH TRUNCATED DOMES



## STANDARD COLOR



**Uncoated Natural Patina**  
Code: UN

## OPTIONAL COLORS



**Federal Yellow**  
Code: YW



**Brick Red**  
Code: RD



**Dark Grey**  
Code: DG



**Onyx Black**  
Code: BK

## STANDARD ADVANTAGE CAST IRON SIZES

STANDARD SIZE	PRODUCT CODE
18" x 24" (457 x 610 mm)	ADV-CI-1824
24" x 24" (610 x 610 mm)	ADV-CI-2424
30" x 24" (762 x 610 mm)	ADV-CI-3024
RADIAL SIZE	PRODUCT CODE
10' (3,048 mm)	ADV-CI-24-10R
15' (4,572 mm)	ADV-CI-24-15R
17'5" (5,334 mm)	ADV-CI-24-17.5R
20' (6,096 mm)	ADV-CI-24-20R
25' (7,620 mm)	ADV-CI-24-25R
30' (9,144 mm)	ADV-CI-24-30R
35' (10,668 mm)	ADV-CI-24-35R

## APPLICATIONS

### TWSI Truncated Domes

- Curb ramps and blended transitions at pedestrian street crossings
- Pedestrian refuge islands
- Pedestrian at-grade rail crossings not located within a street or highway
- Boarding platforms at transit stops for buses and rail vehicles where the edges of the boarding platform are not protected by screens or guards
- Boarding and alighting areas at sidewalk or street level transit stops for rail vehicles where the side of the boarding and alighting areas facing the rail vehicles is not protected by screens or guards.



## CAST IRON

### *Engineered for Ultimate Strength™*

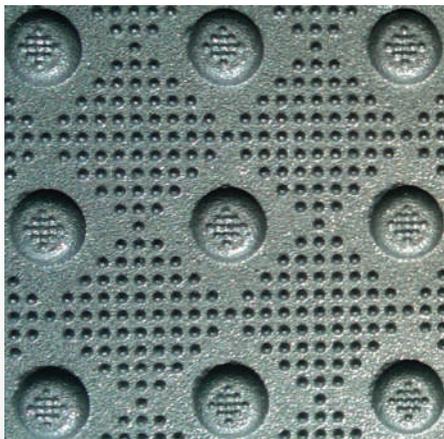
Advantage® Cast Iron Tactile Walking Surface Indicator (TWSI) plates are manufactured in strict accordance with ASTM A-48, Class 35B Grey Cast Iron. The Advantage Cast in Place System is lightweight with exceptional high strength and utilizes the most advanced metallurgical Engineering Science and Technology to meet and exceed the most stringent municipal standards. Advantage Cast Iron is aesthetically pleasing, has exceptional longevity, and incorporates integral texture for a permanent slip-resistant surface.

Tactile Walking Surface Indicators (TWSI) products for the following and many more applications:

- Curb Ramps
- Pedestrian Crossings
- Vehicular Passage Ways
- Parking Areas
- Top of Stair Landings / Wheelchair Ramps

### PRODUCT FEATURES

- Lightweight and easy to install
- Bolted connection allows for easy connection between two or more plates
- Available in various sizes and radii
- Engineered to endure the toughest conditions such as snowplows, overweight vehicular loads, and heavy pedestrian traffic
- Maintenance-free natural patina
- ASTM A48, Class 35B Grey Cast Iron
- Can be recycled after its lifecycle
- Largest selection of standard and radius sizes
- 10-year manufacturer's warranty



**ADVANTAGE**  
RADIUS CALCULATOR

go to <https://new.advantagetactile.com>



## DIRECTIONAL PLATES

### *High Durability*

Advantage® Cast Iron Premier Tactile Walking Surface Indicator (TWSI) directional plates are manufactured in strict accordance with ASTM A-48, Class 35B Grey Cast Iron. The Advantage Cast in Place System is lightweight with exceptional high strength and utilizes the most advanced metallurgical Engineering Science and Technology to meet and exceed the most stringent municipal standards. Advantage Cast Iron is aesthetically pleasing, has exceptional longevity, and incorporates integral texture for a permanent slip-resistant surface.

Tactile Walking Surface Indicators (TWSI) products for the following and many more applications:

- Curb Ramps
- Pedestrian Crossings
- Vehicular Passage Ways
- Parking Areas
- Transit Platforms
- Top of Stair Landings / Wheelchair Ramps

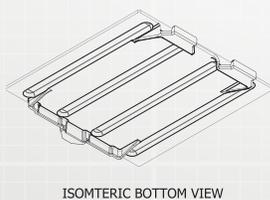
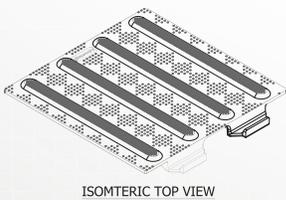
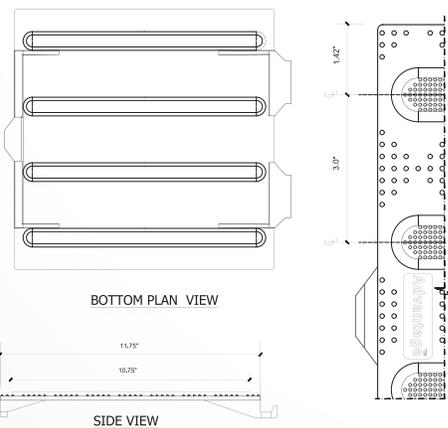
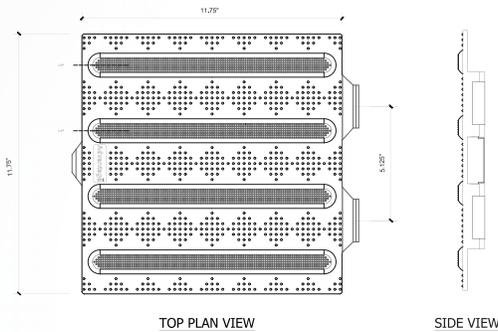
### PRODUCT FEATURES

- Lightweight and easy to install
- Anchors are integral to the part
- Product allows installation to achieve shallow curves
- Engineered to endure the toughest conditions such as snowplows, overweight vehicular loads, and heavy pedestrian traffic
- Maintenance-free natural patina
- ASTM A48, Class 35B Grey Cast Iron
- Can be recycled after its lifecycle
- 10-year manufacturer's warranty





## TACTILE WALKING SURFACE INDICATOR (TWSI) WITH WAYFINDING BARS



## STANDARD COLOR



**Uncoated Natural Patina**  
Code: UN

## OPTIONAL COLORS



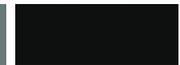
**Federal Yellow**  
Code: YW



**Brick Red**  
Code: RD



**Dark Grey**  
Code: DG



**Onyx Black**  
Code: BK

## STANDARD ADVANTAGE CAST IRON SIZES

STANDARD SIZE

PRODUCT CODE

12" x 12" (305 x 305 mm)

**ADV-CIB-1212**

## APPLICATIONS

### TWSI Wayfinding Bars

- Tactile direction indicators should be located in large open floors areas, such as shopping malls or transportation terminals, to facilitate wayfinding by indicating the primary route of travel.
- The indicated route should lead from the entrance to major destinations, such as an information kiosk, registration desk, stairway, elevator, or to store and service doors.



## **CAST IRON DETECTABLE/TACTILE WARNING SURFACE INDICATOR PLATE**

### **PART 1 GENERAL**

#### **1.01 RELATED DOCUMENTS**

- A. Drawings and general provisions of Contract, including General and Special Conditions and Division 1 Specifications Section, apply to this Section.

#### **1.02 DESCRIPTION**

- A. This Section specifies furnishing and installing Gray Cast Iron Detectable/Tactile Warning Surface Indicator Plates where indicated.

#### **1.03 SUBMITTALS**

- A. Product Data: Submit manufacturer's literature describing products, installation procedures and routine maintenance.
- B. Samples for Verification Purposes: Submit one plate sample that shows dome size and spacing.
- C. Shop drawings are required for products specified showing fabrication details, fastener and anchor locations, plans of plate placement including joints, and material to be used as well as outlining installation materials and procedure.
- D. Material Test Reports: Submit complete test reports from qualified accredited independent testing laboratories to qualify that materials proposed for use are in compliance with requirements and meet or exceed the properties indicated on the specifications. All tests shall be conducted on a Cast Iron Detectable/Tactile Warning Surface Indicator Plate (or approved equal) as certified by a qualified independent testing laboratory.
- E. Maintenance Instructions: Submit copies of manufacturer's specified installation and maintenance practices for each type of Detectable/Tactile Warning Surface Indicator Plate and accessory as required.

#### **1.04 QUALITY ASSURANCE**

- A. Provide Cast Iron Detectable/Tactile Warning Surface Indicator Plates and accessories by a single supplier with a minimum of three (3) years' experience in the supply of Cast Iron Detectable/Tactile Warning Surface Indicator Plates.
- B. Installer's Qualifications: Engage an experienced installer certified in writing by Cast Iron Detectable/Tactile Warning Surface Indicator Plate supplier as qualified for installation, who has successfully completed installations similar in material, design, and extent to that indicated for the project.
- C. Provide Cast Iron Detectable/Tactile Warning Surface Indicator Plates which are in compliance with the following standards (or most recent):

- a. Americans with Disabilities Act (Title III Regulations, 28 CFR Part 36 ADA STANDARDS FOR ACCESSIBLE DESIGN, Appendix A, Section 4.29.2 DETECTABLE WARNINGS ON WALKING SURFACES).
  - b. California Code of Regulations (CCR): Provide only approved DSAAC detectable warning products as provided in the California Code of Regulations (CCR) Title 24, Chapter 2, Section 202 definition of "Detectable Warning". Section 11B-247 and 11B-705 "Detectable Warnings And Detectable Directional Texture"
- D. Gray Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall be according to ASTM A 48M, Class 35B, and shall be bare and not coated with paint or other coatings or substances. Castings shall be sound, free from pouring faults, cracks, blowholes and other defects.
- E. Dimensions: The plate shall incorporate an in-line pattern of truncated domes measuring nominal 0.2" height, 0.90" base diameter, 0.45" top diameter spaced center-to-center 2.35" (+/- 0.05) For wheelchair safety the field area shall consist of a series of micro texture 0.06" high. Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall be held within the following dimensions and tolerances:

Part No.	Size (Width x Height)	Radius	Weight (lbs)
ADV-CI-1824	18" (W) x 24" (H)	None	35
ADV-CI-2424	24"(W) x 24"(H)	None	42
ADV-CI-3024	30"(W)x24"(H)	None	54
ADV-CI-24-10R	24"(H)	10 Ft.	41
ADV-CI-24-15R	24"(H)	15 ft.	39
ADV-CI-24-17.5R	24"(H)	17.5 ft.	39
ADV-CI-24-20R	24"(H)	20 ft.	38
ADV-CI-24-25R	24"(H)	25 ft.	39
ADV-CI-24-30R	24"(H)	30 ft.	43
ADV-CI-24-35R	24"(H)	35 ft.	43

- F. Product Data: Gray Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall meet or exceed the following test criteria:

ASTM Reference	Test Description	Value
ASTM C 1028	Static Coefficient of Friction	≥ 1.0 wet/dry
ASTM A 327	Impact Resistance	No damage @ 54 J
ASTM A 48	Standard Specification for Gray Iron Castings	
ASTM D695	Compressive Strength	114,000 psi
ASTM D638	Tensile Strength	35,000 psi
ASTM C 501	Abrasive Wear Index	≥ 8800

#### 1.05 DELIVERY, STORAGE AND HANDLING

- A. Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall be suitably packaged or crated to prevent damage in shipment and handling. Detectable/Tactile Warning Surface Indicator plate type shall be identified by part number
- B. Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall be delivered to location at building site for storage prior to installation.

#### 1.06 SITE CONDITIONS

- A. Environmental Conditions and Protection: Maintain minimum temperature of 41°F in spaces to receive Cast Iron Detectable/Tactile Warning Surface Indicator Plates for at least 24 hours prior to installation, during installation, and for not less than 24 hours after installation.
- B. The use of water for work, cleaning or dust control, etc. shall be contained and controlled and shall not be allowed to come into contact with the general public. Provide barricades or screens to protect the general public.

#### 1.07 MANUFACTURER'S WARRANTY

- A. Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall be warranted in writing for a period of ten (10) years from date of substantial completion. The warranty includes factory defects, breakage, and deformation.

#### 1.08 INSTALLATION WARRANTY

- A. Cast Iron Detectable/Tactile Warning Surface Indicator Plate installation shall be warranted in writing for a period of two (2) years. Alternate products approved during

the tendering process must be guaranteed for an additional three (3) years. Product must be guaranteed from defective work.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. The Gray Cast Iron Detectable/Tactile Warning Surface Indicator Plate specified is based on Advantage Cast Iron Tactile [www.advantagetactile.com](http://www.advantagetactile.com). Existing engineered and field tested products, which have been in successful service for a period of three (3) years are subject to compliance with requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics.

### **2.02 MATERIALS**

- A. Optional fasteners required if plates are assembled together prior to installation: Corrosion resistant, hex head bolt, 3/8" diameter x 1-3/4" long. Min. two per Detectable/Tactile Warning Surface Indicator plate connection.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

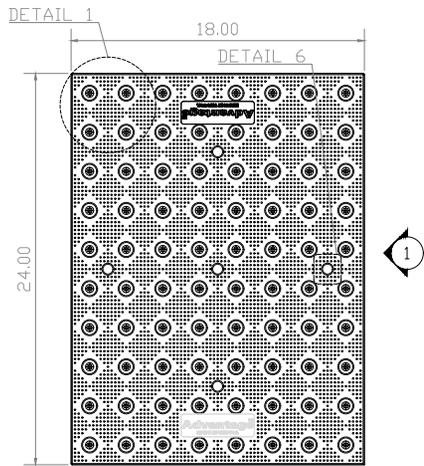
- A. During all surface preparation and installation procedures, ensure adequate safety guidelines are in place and that they are in accordance with the applicable industry and government standards.
- B. The specifications and related materials shall be in strict accordance with the contract documents and the guidelines set by their respective manufacturers. Contact manufacturer for asphalt applications.
- C. Coordinate with the Contractor or Engineer to ensure that the surfaces being prepared and fabricated to receive the plates are constructed correctly and adequately for plate installation. Review manufacturer and contract drawings with the Contractor prior to the construction and refer any and all discrepancies to the Engineer.
- D. The physical characteristics of the concrete shall be consistent with the contract specifications while maintaining a slump range of 3-4 inches to permit solid placement of the Cast Iron Detectable/Tactile Warning Surface Indicator Plates.
- E. When preparing to set the plate, ensure that the area to receive the plates has been finished to its final elevation. The concrete shall be poured and finished true and smooth to the required dimensions and slope prior to the plate placement. Vents in the plate allow air and displaced concrete to escape during the installation process.

- F. Lift the Detectable/Tactile Warning Surface Indicator plate and gently place into position onto the wet concrete. The plate shall be placed true and square to the curb edge in accordance with the contract drawings. Press into the concrete. The Cast Iron Detectable/Tactile Warning Surface Indicator Plates shall be tamped into the fresh concrete to ensure that the field level of the plate is flush to the adjacent concrete surface.
- G. Immediately after placement, the plate elevation is to be checked to adjacent concrete, and the concrete around the perimeter of the tile should be finished. The elevation and slope should be set consistent with contract drawings to permit water drainage to curb as the design dictates. Ensure that the field surface of the plate is flush with the surrounding concrete and back of curb so that no ponding is possible on the plate at the back side of curb, and to eliminate tripping hazards between adjacent finishes.
- H. While concrete is workable, create a 1/4" concrete-free recess around the perimeter of the plate. Use a 3/8" radius edging tool to create a finished edge of concrete, then a steel trowel shall be used to finish the concrete around the plate's perimeter, flush to the field level of the plate.
- I. Clean the surface of the tile of any concrete that has protruded from the vent holes.
- J. During and after the Detectable/Tactile Warning Surface Indicator Plate installation and the concrete curing stage, it is imperative that there is no walking, leaning or external force placed on the plate that may rock the plate causing a void between the underside of Detectable/Tactile Warning Surface Indicator Plate and concrete.
- K. Following Detectable/Tactile Warning Surface Indicator Plate placement, review installation tolerances to contract drawings and adjust plate before the concrete sets.
- L. Following the concrete curing stage, a soft brass wire brush will clean the residue without damage to the plate surface.

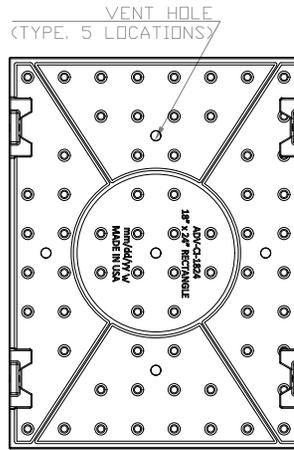
### **3.02 PROTECTION AND MAINTENANCE**

- A. Protect plates against damage during construction period to comply with Detectable/Tactile Warning Surface Indicator plate manufacturer's specification.
- B. Protect plates against damage from rolling loads following installation by covering with plywood or hardwood.
- C. Comply with manufacturer's maintenance manual for cleaning and maintaining plate surface. It is recommended to perform annual inspections for safety and plate integrity.

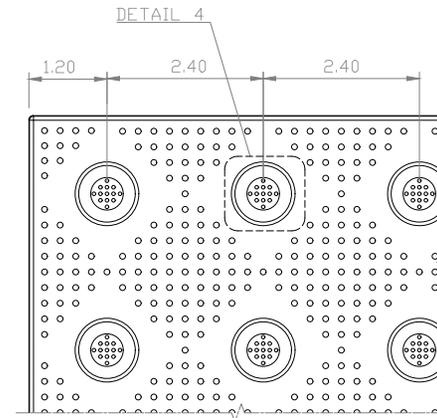
### **END OF SECTION**



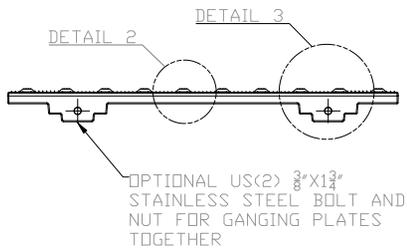
TOP PLAN VIEW



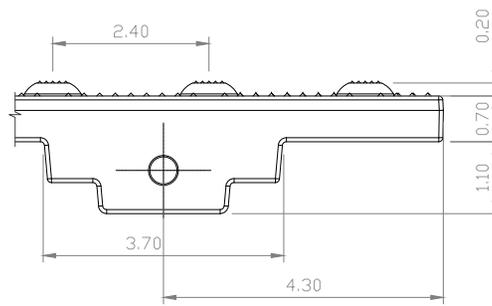
BOTTOM PLAN VIEW



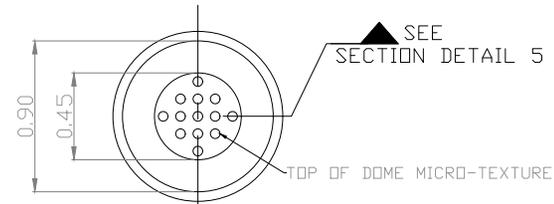
DETAIL 1



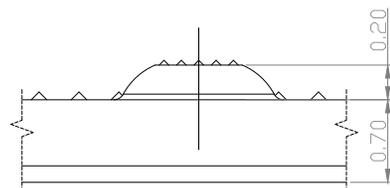
ELEVATION VIEW 1



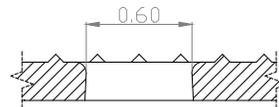
DETAIL 3



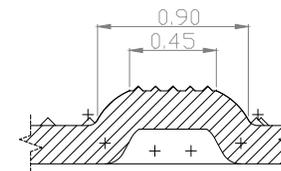
DETAIL 4 (TYPICAL DOME PLAN)



DETAIL 2 (TYPICAL DOME)



DETAIL 6



DETAIL 5 (TYPICAL DOME SECTION)

MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	18X24 CAST IRON TWSI PLATE	ADV-CI-1824	1
2			
3			
4			
5			

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

WEIGHT: 35.2 lbmass

TOLERANCES:

- LENGTH/WIDTH = 3.175mm [0.125"]
- THICKNESS = 1.52mm [0.060"]
- DOME HT = 0.64mm [0.025"]
- DOME Ø = 0.64mm [0.025"]
- WARPAGE = 3.175mm [0.125"]
- TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APP.

SCALE: N.T.S.

DESIGNED BY	K.S.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

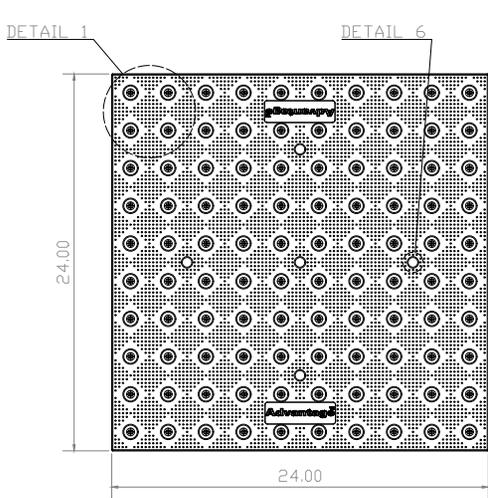
PROJECT MANAGER	
TRABE	TWSI
PART NO.	ADV-CI-1824

MATERIAL: GRAY CAST IRON/ASTM A48 CLASS 35B.  
SUBJECT:

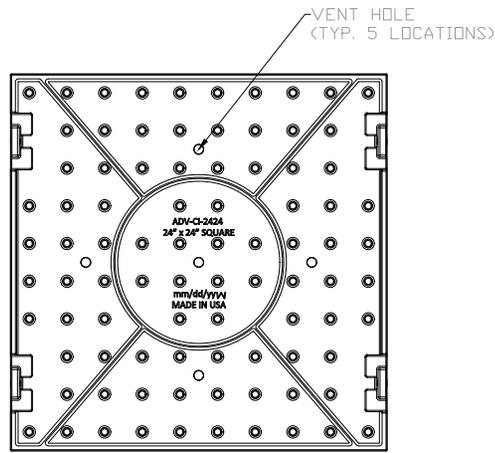
TACTILE TILE  
DETECTABLE WARNING  
SURFACE SYSTEM

PROJECT: ADVANTAGE CAST IRON  
TACTILE WALKING SURFACE  
INDICATOR PLATE  
18"X24"

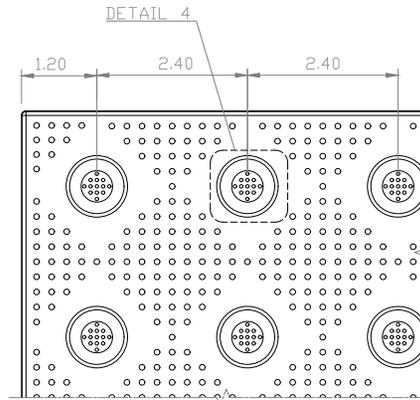
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-1824-MKT	0	01



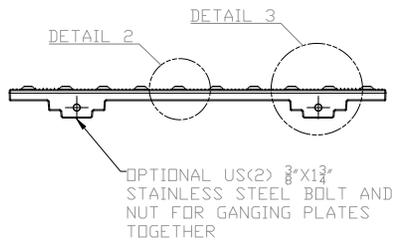
TOP PLAN VIEW



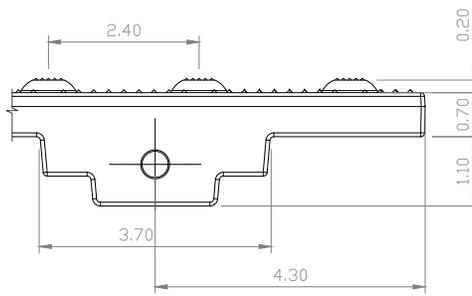
BOTTOM PLAN VIEW



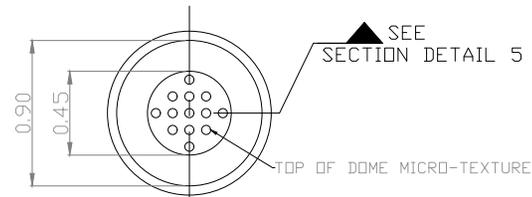
DETAIL 1



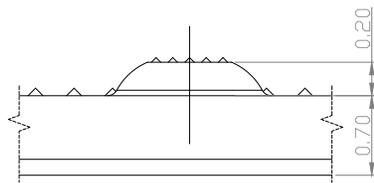
ELEVATION VIEW 1



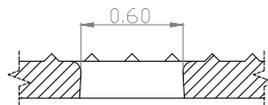
DETAIL 3



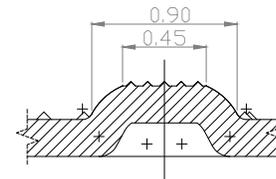
DETAIL 4 (TYPICAL DOME PLAN)



DETAIL 2 (TYPICAL DOME)



DETAIL 6



DETAIL 5 (TYPICAL DOME SECTION)

MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	24X24 CAST IRON TWSI PLATE	ADV-CI-2424	1
2			
3			
4			
5			

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

ESTIMATED WEIGHT: 37 LBS  
 COMPLIES WITH: CSA B651  
 ISO 23599 & AODA

No.	DATE	REVISION	APPR.

SCALE: N.T.S.

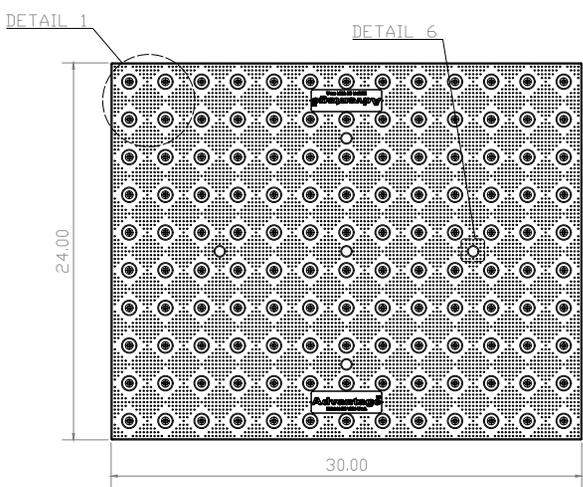
DESIGNED BY	K.S.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

PROJECT MANAGER	
TRADE	TWSI
PART NO.	ADV-CI-2424
MATERIAL	GREY CAST IRON/ASTM A48 CLASS 35B.
SUBJECT	

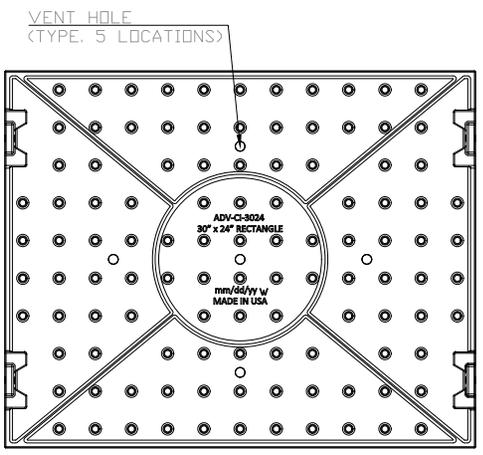
TACTILE TILE  
 DETECTABLE WARNING  
 SURFACE SYSTEM

PROJECT  
 ADVANTAGE CAST IRON  
 TACTILE WALKING SURFACE  
 INDICATOR PLATE  
 24"X24"

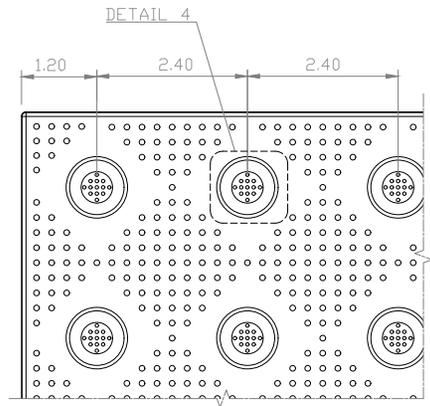
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-USA TILES	0	01



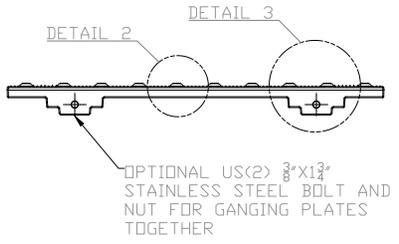
**TOP PLAN VIEW**



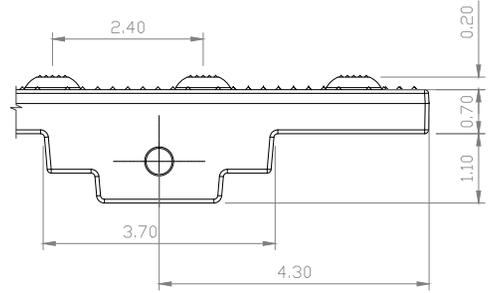
**BOTTOM PLAN VIEW**



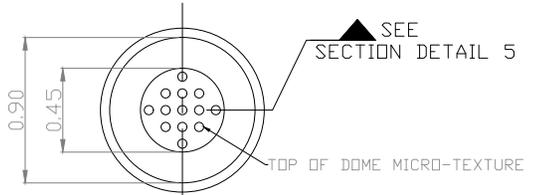
**DETAIL 1**



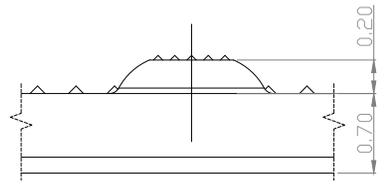
**ELEVATION VIEW 1**



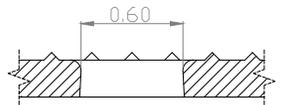
**DETAIL 3**



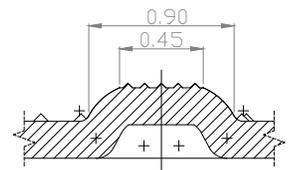
**DETAIL 4 (TYPICAL DOME PLAN)**



**DETAIL 2 (TYPICAL DOME)**



**DETAIL 6**



**DETAIL 5 (TYPICAL DOME SECTION)**

**MATERIAL LIST**

ITEM	DESCRIPTION	PART NO.	QTY
1	24X30 CAST IRON TWSI PLATE	ADV-CI-3024	1
2			
3			
4			
5			

**REFERENCE DRAWINGS**

DWG. NO.	DESCRIPTION

WEIGHT: 54.39 lbmass  
 TOLERANCES:  
 · LENGTH/WIDTH = 3.175mm [0.125"]  
 · THICKNESS = 1.52mm [0.060"]  
 · DOME HT = 0.64mm [0.025"]  
 · DOME Ø = 0.64mm [0.025"]  
 · WARPAGE = 3.175mm [0.125"]  
 · TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

NO.	DATE	REVISION	APP.

SCALE: N.T.S.

DESIGNED BY	K.N.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

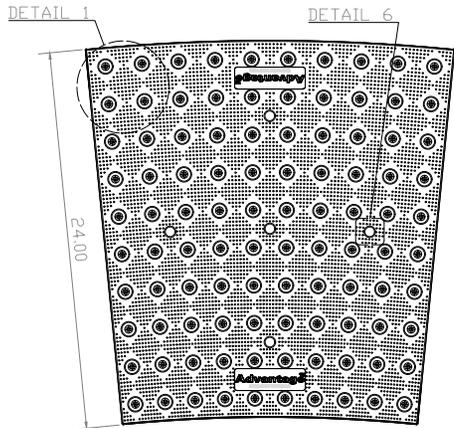
PROJECT MANAGER	PART NO. ADV-CI-3024
TRADE TWSI	

MATERIAL: GRAY CAST IRON/ASTM A48 CLASS 35B.

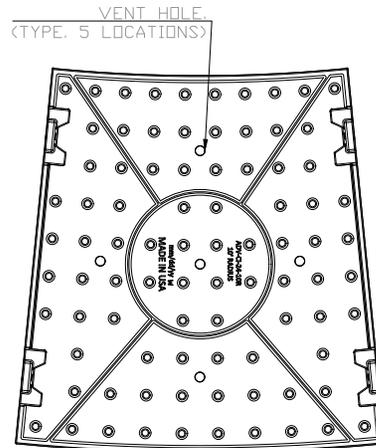
SUBJECT: TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

PROJECT: ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 30'X24'

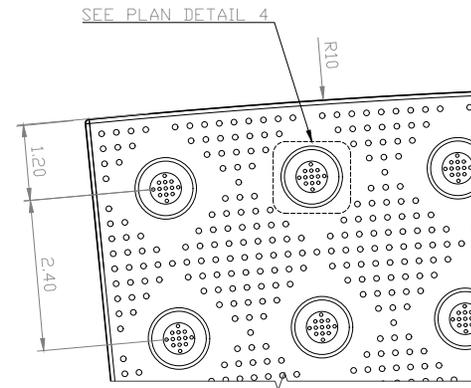
DRAWING NO. ADV-CI-3024-MKT	SHT. NO. 0	REV. NO. 01
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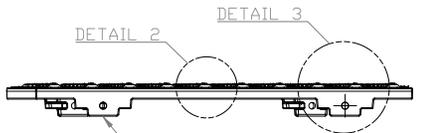
TOP PLAN VIEW



BOTTOM PLAN VIEW

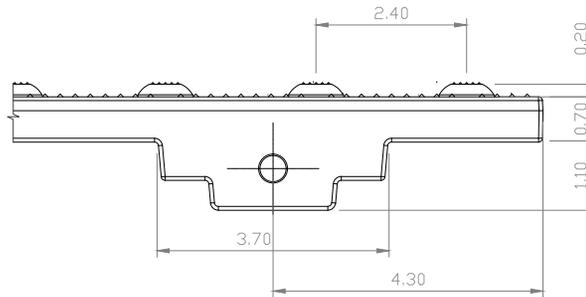


DETAIL 1

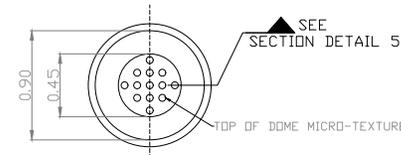


OPTIONAL US(2) 3/8"x1 1/4" STAINLESS STEEL BOLT AND NUT FOR GANGING PLATES TOGETHER

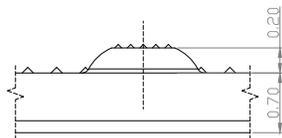
ELEVATION VIEW 1



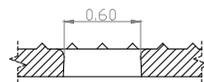
DETAIL 3



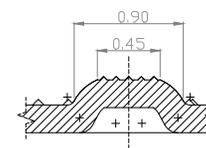
DETAIL 4 (TYPICAL DOME PLAN)



DETAIL 2 (TYPICAL DOME)



DETAIL 6



DETAIL 5 (TYPICAL DOME SECTION)

MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	R10 CAST IRON TWSI PLATE	ADV-CI-2410R	1
2			
3			
4			
5			

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

WEIGHT: 40.6 lbmass  
 TOLERANCES:  
 · LENGTH/WIDTH = 3.175mm [0.125"]  
 · THICKNESS = 1.52mm [0.060"]  
 · DOME HT = 0.64mm [0.025"]  
 · DOME Ø = 0.64mm [0.025"]  
 · WARPAGE = 3.175mm [0.125"]  
 · TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APP.

SCALE: N.T.S.

DESIGNED BY	K.S.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

PROJECT MANAGER

TRADE	TWSI	PART NO.	ADV-CI-2410R
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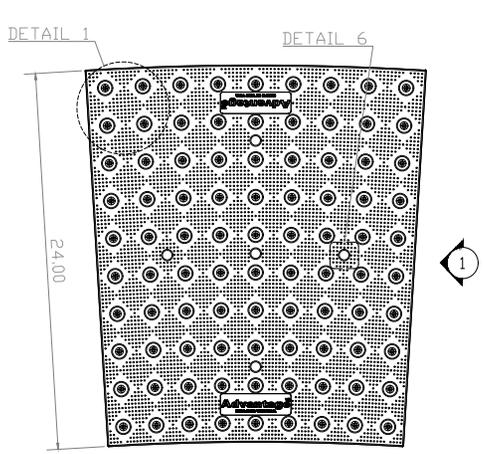
MATERIAL: GRAY CAST IRON/ASTM A48 CLASS 35B

SUBJECT: TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

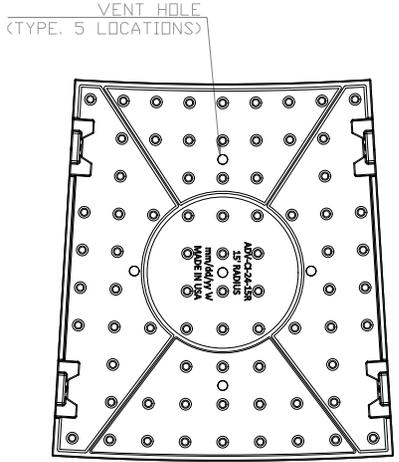
TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

PROJECT: ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 2410R

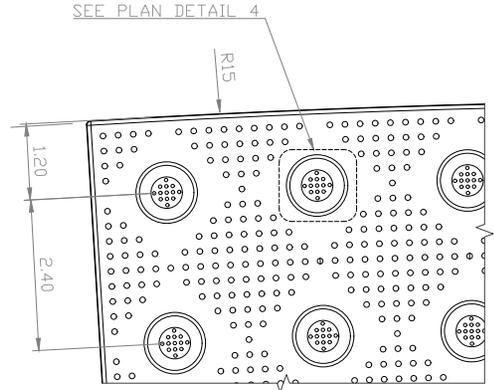
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-2410R-MKT	0	01



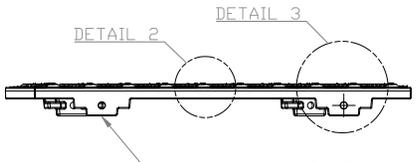
TOP PLAN VIEW



BOTTOM PLAN VIEW

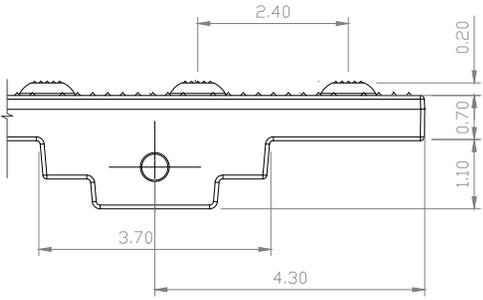


DETAIL 1

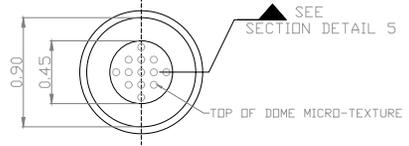


OPTIONAL US(2) 3/8"x1 1/2" STAINLESS STEEL BOLT AND NUT FOR GANGING PLATES TOGETHER

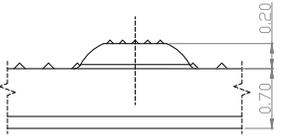
ELEVATION VIEW 1



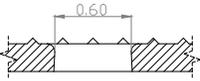
DETAIL 3



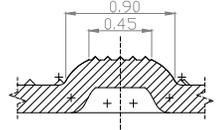
DETAIL 4 (TYPICAL DOME PLAN)



DETAIL 2 (TYPICAL DOME)



DETAIL 6



DETAIL 5 (TYPICAL DOME SECTION)

MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	R10 CAST IRON TWSI PLATE	ADV-CI-2415R	1
2			
3			
4			
5			

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

WEIGHT: 39.14 lb/moss  
 TOLERANCES:  
 · LENGTH/WIDTH = 3.175mm [0.125"]  
 · THICKNESS = 1.52mm [0.060"]  
 · DOME HT = 0.64mm [0.025"]  
 · DOME Ø = 0.64mm [0.025"]  
 · WARPAGE = 3.175mm [0.125"]  
 · TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APPR.

SCALE AS NOTED

DESIGNED BY	K.S.	DATE	
DRAWN BY	M.T.	DATE	07/15/2024
CHECKED BY	DD	DATE	

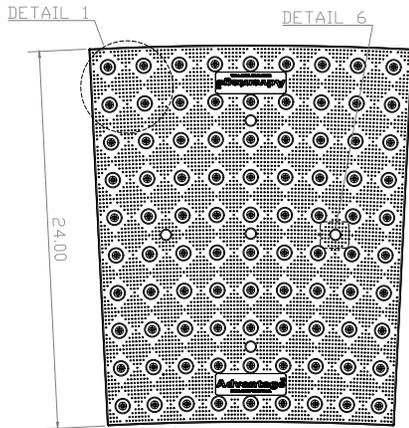
PROJECT MANAGER	
TRADE	TWSI
PART NO.	ADV-CI-2415R

MATERIAL GREY CAST IRON/ASTM A48 CLASS 35B

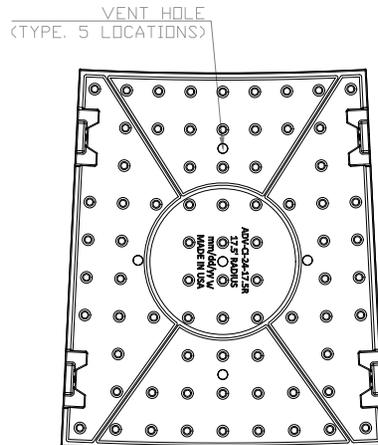
SUBJECT TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

PROJECT ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 2415R

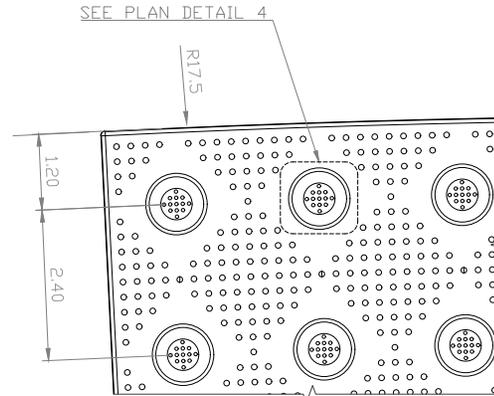
DRAWING NO.	ADV-CI-2415R-MKT	SHT. NO.	0	REV. NO.	01
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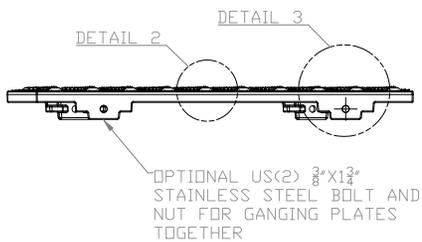
TOP PLAN VIEW



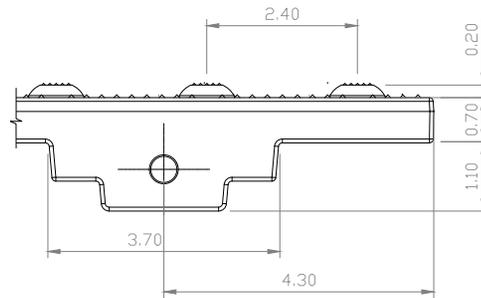
BOTTOM PLAN VIEW



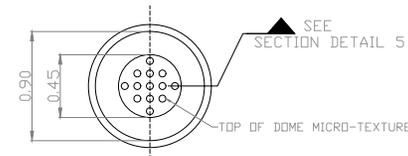
DETAIL 1



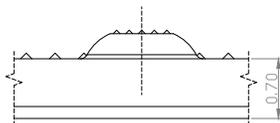
ELEVATION VIEW 1



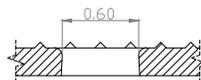
DETAIL 3



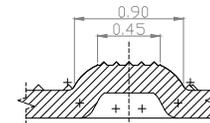
DETAIL 4 (TYPICAL DOME PLAN)



DETAIL 2 (TYPICAL DOME)



DETAIL 6



DETAIL 5 (TYPICAL DOME SECTION)

MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	R10 CAST IRON TWSI PLATE	ADV-CI-2417.5R	1
2			
3			
4			
5			

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

WEIGHT: 39.0 lbmass.  
 TOLERANCES:  
 · LENGTH/WIDTH = 3.175mm [0.125"]  
 · THICKNESS = 1.52mm [0.060"]  
 · DOME HT = 0.64mm [0.025"]  
 · DOME Ø = 0.64mm [0.025"]  
 · WARPAGE = 3.175mm [0.125"]  
 · TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APPR.

SCALE AS NOTED

DESIGNED BY	K.S.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

PROJECT MANAGER

TRADE	PART NO.
TWSI	ADV-CI-2417.5R

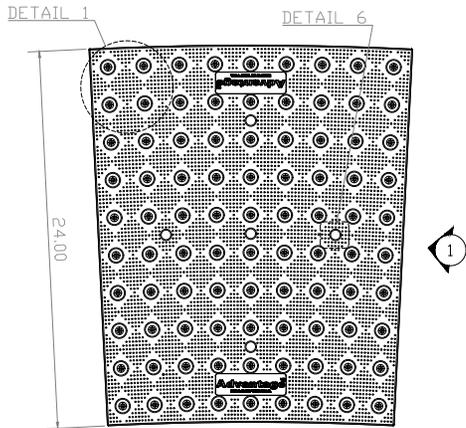
MATERIAL GREY CAST IRON/ASTM A48 CLASS 35B.

SUBJECT TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

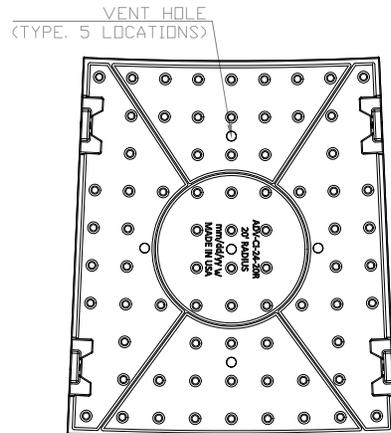
PROJECT ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 2417.5R

PROJECT ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 2417.5R

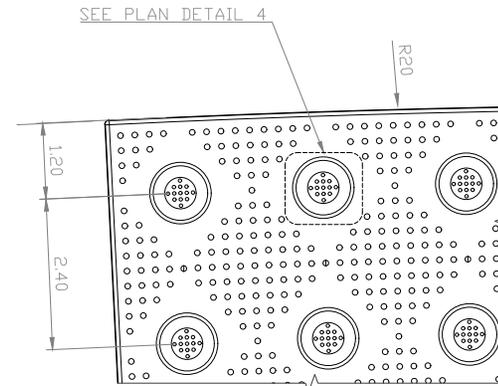
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-2417.5R-MKT	0	01



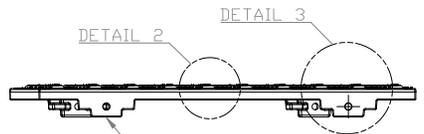
TOP PLAN VIEW



BOTTOM PLAN VIEW

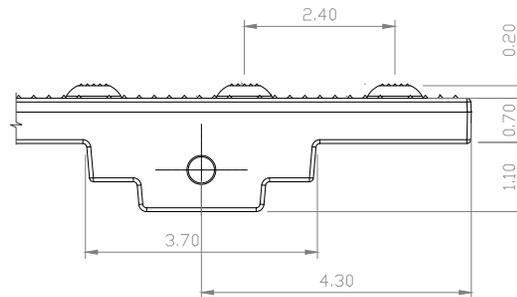


DETAIL 1

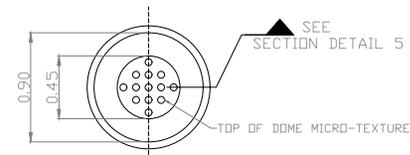


OPTIONAL US(2) 3/8"x1 1/4" STAINLESS STEEL BOLT AND NUT FOR GANGING PLATES TOGETHER

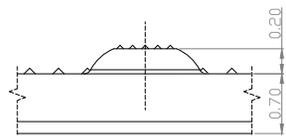
ELEVATION VIEW 1



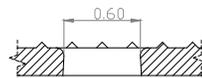
DETAIL 3



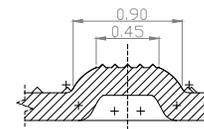
DETAIL 4 (TYPICAL DOME PLAN)



DETAIL 2 (TYPICAL DOME)



DETAIL 6



DETAIL 5 (TYPICAL DOME SECTION)

MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	R10 CAST IRON TWSI PLATE	ADV-CI-2420R	1
2			
3			
4			
5			

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

WEIGHT: 38.46 lbmass

- TOLERANCES:
- LENGTH/WIDTH = 3.175mm [0.125"]
  - THICKNESS = 1.52mm [0.060"]
  - DOME HT = 0.64mm [0.025"]
  - DOME Ø = 0.64mm [0.025"]
  - WARPAGE = 3.175mm [0.125"]
  - TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APPR.

SCALE: N.T.S.

DESIGNED BY	K.S.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

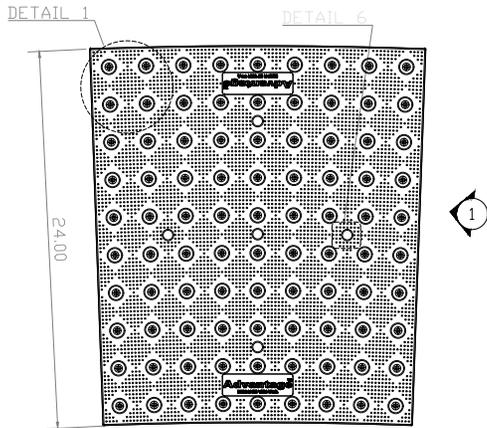
PROJECT MANAGER	
TRADE	TWSI
PART NO.	ADV-CI-2420R

MATERIAL: GREY CAST IRON/ASTM A48 CLASS 35B.

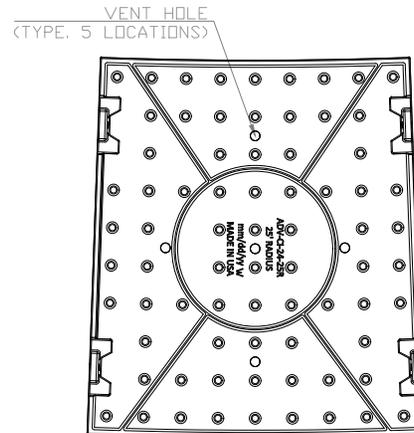
SUBJECT: TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

PROJECT: ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 2420R

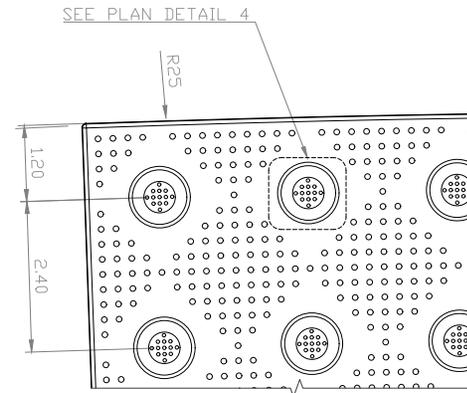
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-2420R-MKT	0	01



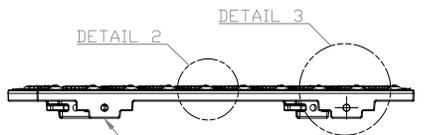
**TOP PLAN VIEW**



**BOTTOM PLAN VIEW**

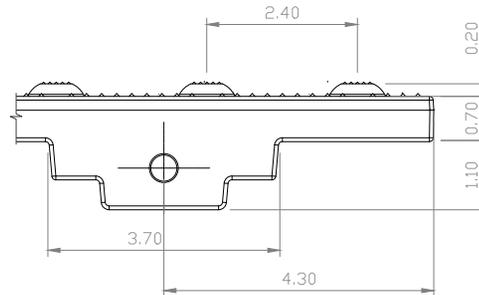


**DETAIL 1**

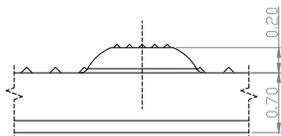


OPTIONAL US(2) 3/8"x1 1/2" STAINLESS STEEL BOLT AND NUT FOR GANGING PLATES TOGETHER

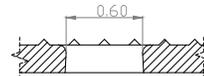
**ELEVATION VIEW 1**



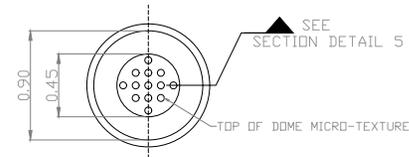
**DETAIL 3**



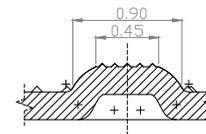
**DETAIL 2 (TYPICAL DOME)**



**DETAIL 6**



**DETAIL 4 (TYPICAL DOME PLAN)**



**DETAIL 5 (TYPICAL DOME SECTION)**

**MATERIAL LIST**

ITEM	DESCRIPTION	PART NO.	QTY
1	R10 CAST IRON TWSI PLATE	ADV-CI-2425R	1
2			
3			
4			
5			

**REFERENCE DRAWINGS**

DWG. NO.	DESCRIPTION

WEIGHT: 39.49 lbmass  
 TOLERANCES:  
 · LENGTH/WIDTH = 3.175mm [0.125"]  
 · THICKNESS = 1.52mm [0.060"]  
 · DOME HT = 0.64mm [0.025"]  
 · DOME Ø = 0.64mm [0.025"]  
 · WARPAGE = 3.175mm [0.125"]  
 · TILES ABUTTING EACH OTHER SHOULD BE  
 · LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APPR.

SCALE: AS NOTED

DESIGNED BY	K.S.	DATE
DRAWN BY	M.T.	DATE 07/15/2024
CHECKED BY	DD	DATE

PROJECT MANAGER

TRADE	TWSI	PART NO.	ADV-CI-2425R
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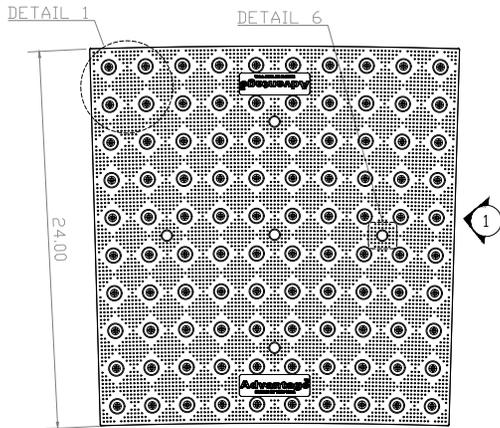
MATERIAL: GRAY CAST IRON/ASTM A48 CLASS 35B.

SUBJECT: TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

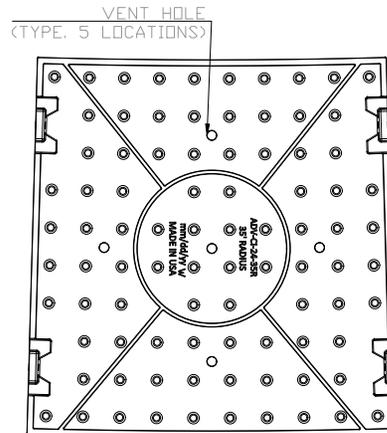
TACTILE TILE DETECTABLE WARNING SURFACE SYSTEM

PROJECT: ADVANTAGE CAST IRON TACTILE WALKING SURFACE INDICATOR PLATE 2425R

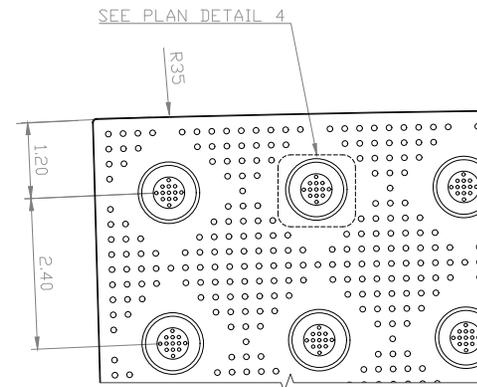
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-2425R-MKT	0	01



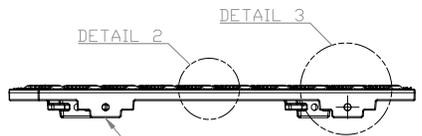
**TOP PLAN VIEW**



**BOTTOM PLAN VIEW**

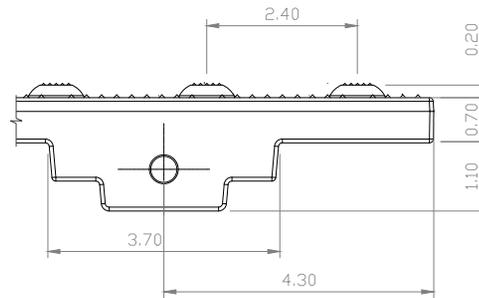


**DETAIL 1**

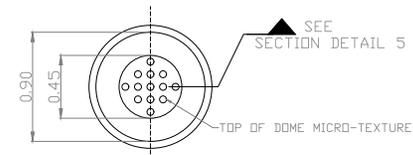


OPTIONAL US(2) 3/8" X 1 1/2" STAINLESS STEEL BOLT AND NUT FOR GANGING PLATES TOGETHER

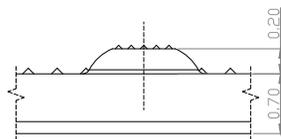
**ELEVATION VIEW 1**



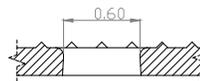
**DETAIL 3**



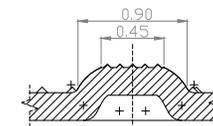
**DETAIL 4 (TYPICAL DOME PLAN)**



**DETAIL 2 (TYPICAL DOME)**



**DETAIL 6**



**DETAIL 5 (TYPICAL DOME SECTION)**

**MATERIAL LIST**

ITEM	DESCRIPTION	PART NO.	QTY
1	R10 CAST IRON TWSI PLATE	ADV-CI-2435R	1
2			
3			
4			
5			

**REFERENCE DRAWINGS**

DWG. NO.	DESCRIPTION

WEIGHT: 43.19 lbmass

TOLERANCES:

- LENGTH/WIDTH = 3.175mm [0.125"]
- THICKNESS = 1.52mm [0.060"]
- DOME HT = 0.64mm [0.025"]
- DOME Ø = 0.64mm [0.025"]
- WARPAGE = 3.175mm [0.125"]
- TILES ABUTTING EACH OTHER SHOULD BE LEVELED TO WITHIN 3.175mm [0.125"]

No.	DATE	REVISION	APP.

SCALE

N.T.S.

DESIGNED BY	K.S.	DATE	
DRAWN BY	M.T.	DATE	07/15/2024
CHECKED BY	DD	DATE	

PROJECT MANAGER

TRADE	TWSI	PART NO.	ADV-CI-2435R
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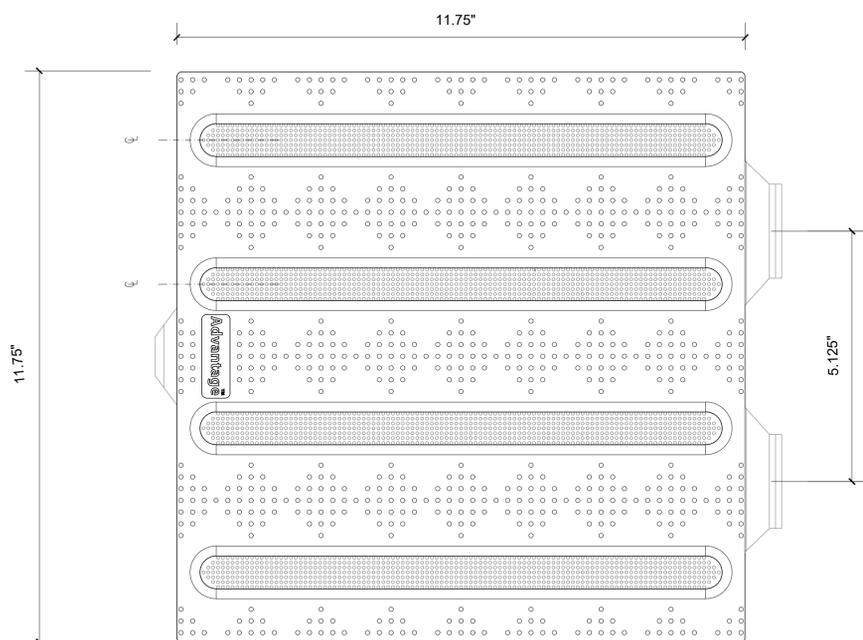
MATERIAL  
GRAY CAST IRON/ASTM A48 CLASS 35B.

SUBJECT

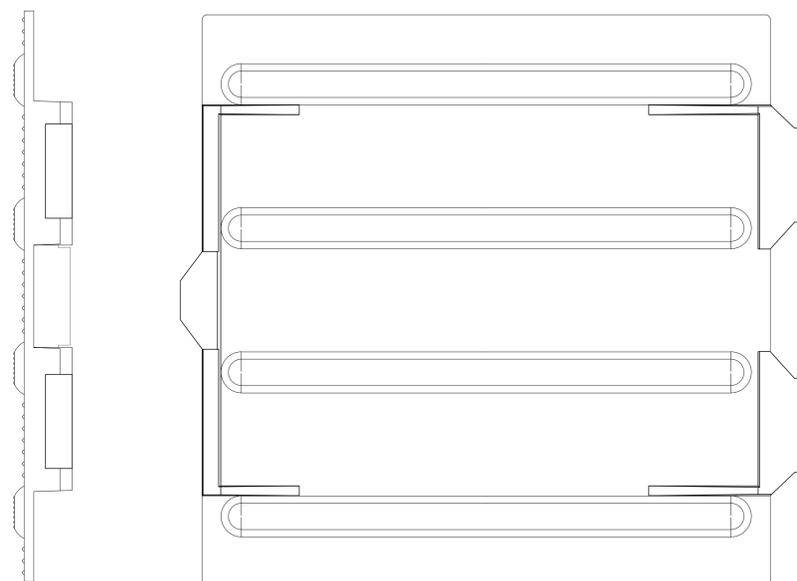
TACTILE TILE  
DETECTABLE WARNING  
SURFACE SYSTEM

PROJECT  
ADVANTAGE CAST IRON  
TACTILE WALKING SURFACE  
INDICATOR PLATE  
2435R

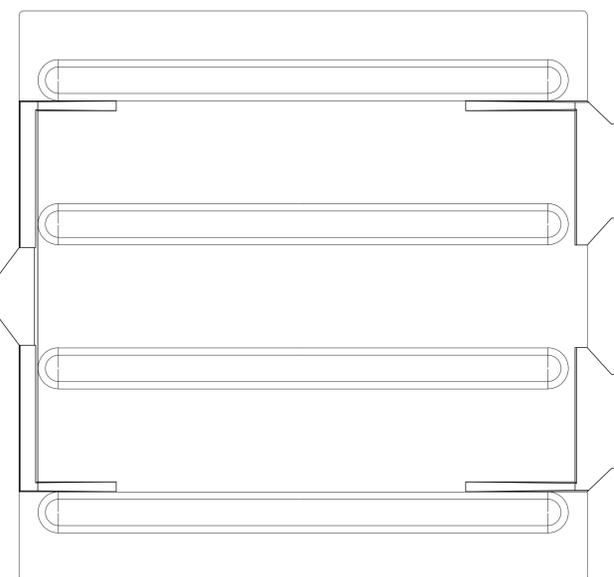
DRAWING NO.	SHT. NO.	REV. NO.
ADV-CI-2435R-MKT	0	01



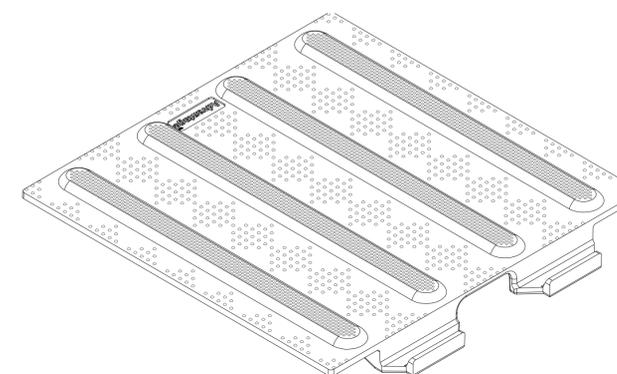
**TOP PLAN VIEW**



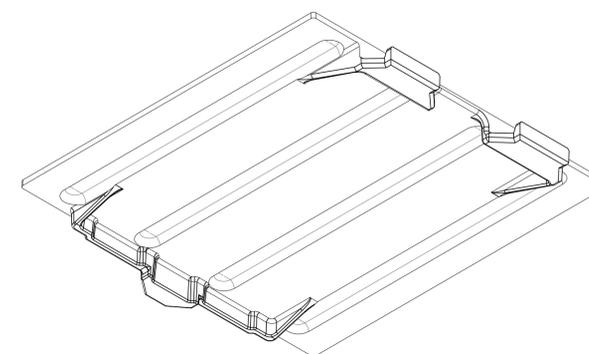
**SIDE VIEW**



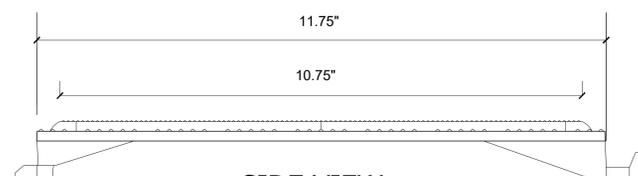
**BOTTOM PLAN VIEW**



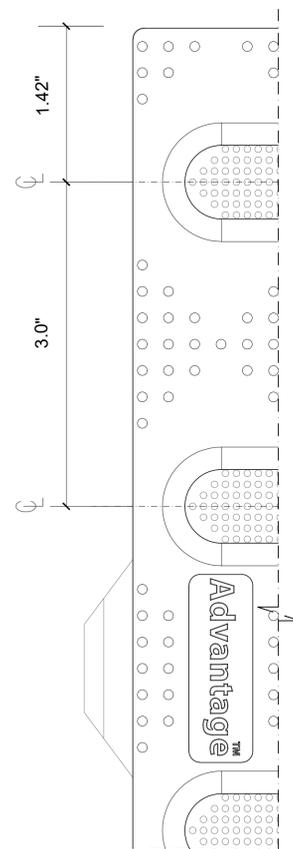
**ISOMTERIC TOP VIEW**



**ISOMTERIC BOTTOM VIEW**



**SIDE VIEW**



ITEM	DESCRIPTION	PART NO.	QTY
1	CAST IRON BAR TWSI PLATE	ADV-CIB-12X12	1

REFERENCE DRAWINGS

DWG. NO.	DESCRIPTION

3			
2			
1			
0			
NO.	DATE	REVISION	APPR.

SCALE  
N.T.S.

DESIGNED \_\_\_\_\_ DATE \_\_\_\_\_

DRAWN \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

PROJECT MANAGER \_\_\_\_\_

TRADE TWSI PART NO. ADV-CIB-12X12

MATERIAL GREY CAST IRON / ASTM A48 CLASS 35B

SUBJECT

**Advantage<sup>®</sup>**

PROJECT  
ADVANTAGE BAR CAST IRON  
TACTILE WALKING SURFACE INDICATOR PLATE  
295mm [12"] x 295mm [12"]

DRAWING NO. ADV-CIB-12X12 REV. NO. 0

## CAST IRON PLATES

### *Installation Instructions*

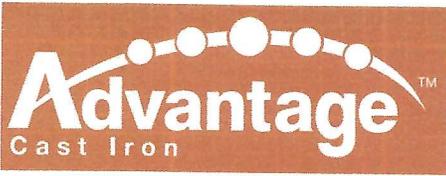
1. The physical characteristics of the concrete shall be consistent with the contract specifications while maintaining a slump range of 3-4 to permit solid placement of the Cast Iron TWSI Plates.
2. Connect multiple plates with 3/8" x 1-3/4" bolts as needed.
3. Without removing any concrete, gently lift and set the plate into the wet concrete. The plate will be placed true and square to the curb edge per the owner's specifications.
4. Tap the plate in a grid pattern with a rubber mallet until concrete pushes through vents.
5. Using a straight edge, ensure that plate is flush with surrounding concrete.
6. While concrete is workable, create a 6 mm (1/4") concrete-free recess around the perimeter of the plate. Use a 9 mm (3/8") radius edging tool to create a finished edge of the concrete; then, a steel trowel shall be used to finish the concrete around the perimeter of the plate, flush to the field level of the plate.
7. Clean the plate and ensure no debris on the surface.



## **PREMIER CAST IRON PLATES**

### *Installation Instructions*

1. During all surface preparation and installation procedures, ensure adequate safety guidelines are in place and in accordance with the applicable industry and government standards.
2. The specifications and related materials shall strictly follow the contract documents and the guidelines set by their respective manufacturers. Not recommended for asphalt applications.
3. Coordinate with the Contractor or Engineer to ensure that the surfaces prepared and fabricated to receive the plates are constructed correctly and adequately for plate installation. Review manufacturer and contract drawings with the Contractor before the construction and refer any discrepancies to the Engineer.
4. The physical characteristics of the concrete shall be consistent with the contract specifications while maintaining a slump range of 3-4 to permit solid placement of the Cast Iron TWSI Plates.
5. When preparing to set the plate, ensure the area to receive the plates has been finished to its final elevation. The concrete shall be poured and finished true and smooth to the required dimensions and slope prior to the plate placement.
6. Lift the TWSI plate and gently place it into position on the wet concrete. The plate shall be placed true and square to the curb edge in accordance with the contract drawings. Press into the concrete. The Cast Iron TWSI Plates shall be tamped or vibrated into the fresh concrete to ensure that the field level of the plate is flush to the adjacent concrete surface.
7. Immediately after placement, the plate elevation is to be checked to adjacent concrete, and the concrete around the perimeter of the tile should be finished. The elevation and slope should be set consistent with contract drawings to permit water drainage to the curb as the design dictates. Ensure that the field surface of the plate is flush with the surrounding concrete and back of the curb so that no ponding is possible on the plate at the back side of the curb, and to eliminate tripping hazards between adjacent finishes.
8. While concrete is workable, create a 6mm concrete-free recess around the perimeter of the plate. Use a 9mm radius edging tool to create a finished edge of the concrete; then a steel trowel shall be used to finish the concrete around the plate's perimeter, flush to the field level of the plate.
9. Clean the surface of the tile of any concrete.
10. During and after the TWSI Plate installation and the concrete curing stage, it is imperative that there is no walking, leaning, or external force placed on the plate that may rock the plate, causing a void between the underside of the TWSI Plate and concrete.
11. Following TWSI Plate placement, review installation tolerances to contract drawings and adjust the plate before the concrete sets.
12. Following the concrete curing stage, a soft brass wire brush will clean the residue without damage to the plate surface.



# Certificate of Compliance for Build America, Buy America Act

August 1, 2024

SureWerx certifies that within the meaning of the Infrastructure Investment and Jobs Act ("IIJA"), Pub. L. No. 117-58, which includes the Build America, Buy America Act ("the Act"). Pub. L. No. 117-58, §§ 70901-52, the products identified below are all manufactured in the United States and greater than 55 percent of the cost of components is sourced domestically:

- **Advantage** cast iron detectable warning surface plates
- **Advantage Premiere** cast iron detectable warning surface plates

Additionally, the products identified above qualify under The Buy American Preferences under 49 U.S.C. § 50101 which require that all steel and manufactured goods be produced in the United States.

Sincerely,

A handwritten signature in black ink, appearing to read "John Stieby", with a long horizontal line extending to the right.

John Stieby  
Director of End User Sales and Product Development



A SureWerx Brand

## 10 YEAR PRODUCT WARRANTY

SureWerx warrants to the Project Owner and Project Purchaser that the Advantage Cast Iron tactile walking surface indicators (TWSI) product are free from defects in material including deformation for a period of Ten (10) Years from the date of substantial completion of the Project. The warranty is valid only upon completion of the installation, proper maintenance of the cast iron TWSI product, and payment in full to SureWerx. Warranty becomes effective 24 hours after the date of installation.

*EXCLUSIVE REMEDIES: SureWerx, at its cost, will repair or replace any defective material promptly reported during the warranty period to SureWerx.*

*All cast iron TWSI products manufactured by SureWerx are hereby warranted to comply fully with ADA Accessibility Guidelines (ADAAG) and the Public Rights of Way Accessibility Guidelines (PROWAG).*

*WARRANTY LIMITATIONS: SureWerx warranty does not apply to conditions resulting from improper use, improper installation, external causes, acts of God, intentional misuse, abuse, neglected or improper annual maintenance, vandalism, modifications to the cast iron TWSI product.*

*DISCLAIMER OF WARRANTY: The above warranty is the Owner's and Purchaser's exclusive warranty. No other warranty expressed or implied shall apply. SureWerx specifically makes no warranty of merchantability and/or fitness for a particular purpose. (In no event will SureWerx be liable for any damages, lost profit, consequential or economic damages).*

Issued Date: 00/00/2024

Effective Date: 00/00/2024

Project: Name/Identifier

Issued to: Contractor Name  
Address  
City, ST 00000

Owner: Owner Name  
Address  
City, ST 00000

Manufacturer: **Advantage Tactile, a SureWerx Brand**  
Product: Cast-In-Place Detectable Warning Plates

Issued by:

John Stieby  
Name

Director of End User Sales  
Title

00/00/2024  
Date



325 Corporate Drive  
Elgin, IL 60123  
USA

**US Customer Service**  
Tel: 1-844-697-2920 | Fax: 1-833-652-1547  
Email: [orders.ci.usa@surewerx.com](mailto:orders.ci.usa@surewerx.com)

[www.surewerx.com](http://www.surewerx.com)