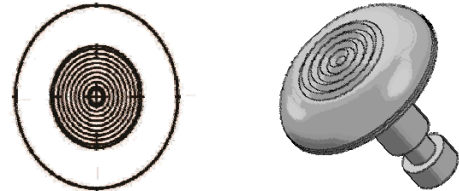


# Advantage One™

Hybrid Tactile System

Advantage One™ Tactile Systems have been designed to be the Ultimate Solution™ in tactile systems. Engineered to meet ODA, CSA, ADA and Title 24 requirements while offering the lowest lifecycle costs and eliminating the need for maintenance.

Advantage One™ is the leading detectable warning and directional tile surface system for construction requirements anywhere the safety of the visually impaired is a concern: curb ramps, shopping malls, transit platforms, parking areas, stairwells, and escalator approaches.



The Advantage One™ Stainless Steel Dome Tactile System incorporates an integral texture in the stainless steel for permanent slip resistance. It has undergone a rigorous series of ASTM tests to develop the leading industry standard for detectable warning products; proven for durability exceeding any detectable warning product on the market. It offers the lowest lifecycle cost, eliminates long term safety concerns and meets guidelines developed by the ODA, CSA, and US Access Board to fulfill the Americans with Disabilities Act (ADA)



# STAINLESS STEEL DETECTABLE WARNING SURFACE DOME/DIRECTIONAL BAR

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## 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 Stainless Steel Detectable Warning Surface Domes/Bars 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 (2) full size sample of the kind proposed for use.
- C. Shop drawings are required for products specified showing product details.
- D. Maintenance Instructions: Submit copies of manufacturer's specified installation and maintenance practices for each type of domes/bars and accessories as required.

### 1.04 QUALITY ASSURANCE

- A. Provide Stainless Steel Detectable Warning Surface Domes/Bars and accessories as produced by a single manufacturer with a minimum of three (3) years' experience.
- B. Installer's Qualifications: Engage an experienced installer who has successfully completed installations similar in material, design, and extent to that indicated for project.
- C. Provide Stainless Steel Detectable Warning Surface Domes/Bars which are in compliance with:
  - 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, Part 2, Section 205 definition of "Detectable Warning". Section 1117A.4 and 1127B.5 for "Curb Ramps" and Section 1133B.8.5 for "Detectable Warnings at Hazardous Vehicular Areas".
- D. Stainless Steel Detectable Warning Surface Domes/Bars shall be manufactured from grade 316 stainless steel and have an integral non-slip surface on the top of the Domes/Bars. The Domes shall have measurements of nominal 0.2 inch in height, 0.9 inch base diameter and 0.45 inch top diameter. The Bars shall have measurements of nominal 0.2 inch in height, 1.0 inch wide and 11.0 inch in length. "Advantage One Tactile Dome/Bar Systems" as manufactured by Advantage Tactile Systems Inc. (1-800-679-4022).
- E. Stainless Steel Detectable Warning Surface Domes/Bars material shall meet the following ASTM specifications:
  - A182, A193, A276, A313, A314, A320, A479, A493 and A580.

# STAINLESS STEEL DETECTABLE WARNING SURFACE DOME/DIRECTIONAL BAR

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1. Chemical properties shall be: C 0.08%, Cr 17%, Fe 65%, Mn 2%, Mo 2.5%, Ni 12%, P 0.045%, S 0.03%, Si 1%.
2. Mechanical properties shall be:
  - A. Tensile Strength > 79,800 psi,
  - B. Yield Strength >34,800 psi,
  - C. Elongation at Break (in 50 mm) > 60%,
  - D. Rockwell B Hardness < 80,
  - E. Brinell Hardness < 149,
  - F. Izod Impact > 95.1 ft-lb.
3. Slip Resistance when tested by ASTM C 1028-96 the combined Wet and Dry Static Co-Efficients of Friction not to be less than 0.80 on top of domes/bars.
4. Chemical Stain Resistance when tested by ASTM D 543-95 (re approved 2001) to withstand without discoloration or staining - saturated calcium chloride, red enamel spray paint, red lipstick, red wax crayon, black liquid ink, chewing gum, mustard, ketchup, urine, coffee, asphalt, tobacco juice, hydraulic oil and used motor oil.
5. Abrasive Wear when tested by BYK – Gardener Tester ASTM D 2486-00 with reciprocating linear motion of 37± cycles per minute over a 10" travel. The abrasive medium, a 40 grit Norton Metallite sand paper, to be fixed and leveled to a holder. The combined mass of sled, weight and wood block is to be 3.2 lb. Average wear depth shall not exceed 0.04" after 1,000 abrasion cycles when measured on the top surface of the dome/bar representing the average of three measurement locations per sample.
6. Abrasive Wear when tested by Taber Tester ASTM C 501-84 and US Specifications SS-T-308b with H22 coarse Calibrade Wheels with each testing coupon weighed to the nearest 0.01 gram. Average wear index shall be a minimum of 480 after 1,000 abrasion cycles with ASTM C 501-84 parameters and 210 with SS-T-308b parameters when measured on the top surface of the dome/bar representing the average of four sample measurements.
7. Salt and Spray Performance when tested to ASTM B 117-03 not to show any deterioration or other defects after 100 hours of exposure.
8. AASHTO HB-17 single wheel HS20-44 loading "Standard Specifications for Highways and Bridges". The Directional Tactile Detectable Warning Tactile Domes and Bars shall be mounted on a platform then subjected to the specified maximum load of 10,400 lbs., corresponding to an 8,000 lb individual wheel load and a 30% impact factor. The Domes/Bars shall exhibit no visible damage at the maximum load of 10,400 lbs.

## 1.05 DELIVERY, STORAGE AND HANDLING

- A. Stainless Steel Detectable Warning Surface Domes/Bars shall be suitably packaged to prevent damage in shipment or handling.

## 1.06 SITE CONDITIONS

- A. Environmental Conditions: Maintain a suitable temperature as per manufacturer's requirements.

## 1.07 GUARANTEE

# STAINLESS STEEL DETECTABLE WARNING SURFACE DOME/DIRECTIONAL BAR

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- A. Stainless Steel Detectable Warning Surface Domes/Bars shall be guaranteed in writing for a period of five (5) years from date of final completion of project. Product is guaranteed from defective material and breakage.
- B. Installer must provide a two (2) year installation warranty. Product must be guaranteed from defective work and loosening of Stainless Steel Detectable Warning Surface Domes/Bars.

## PART 2 PRODUCTS

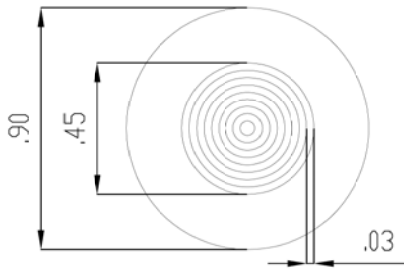
### 2.01 MANUFACTURERS

- A. Stainless Steel Detectable Warning Surface Domes/Bars is based upon "Advantage One Tactile Dome/Bar Systems" as manufactured by Advantage Tactile Systems Inc. (1-800-679-4022).
- B. Existing engineered and field tested products which have been in successful service for a period of three (3) years, and are subject to compliance with requirements, may be incorporated in the work provided they meet or exceed the specified test criteria and characteristics.
- C. Substitutions: Substitutions shall be made only under provisions of the contract and must meet all applicable standards for compliance with ADA and CCR Standards as outlined in section 1.04 (C). Any proposed substitution must meet standards specified in Sections 1.04 and 1.07 and must be equivalent in appearance and function to the product specified herein and installer must provide an additional installation warranty for a period of three (3) years from project completion and an additional two (2) years for product warranty.

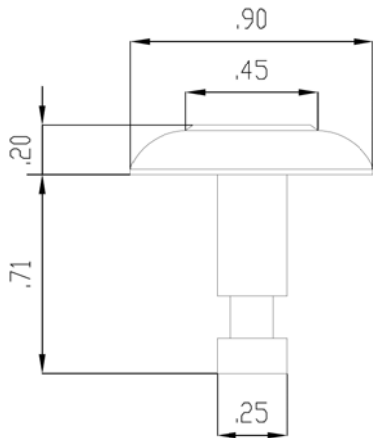
## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Select correct drill bit size for peg diameter of dome/bar. Ensure you use correct drill bit for corresponding surface/substrate. Mark drill bit to gauge depth or add a depth limiter which corresponds to overall peg length. DO NOT MEASURE FROM TIP OF DRILL BIT. This will allow dome hole to be slightly deeper than the length of the peg.
- B. Lay the template down (purchased from manufacture) on working surface. Check alignment of holes, holes/domes/bars placement look best when holes are centered in field of work. Use weights/pressure to help secure template on surface while drilling first hole. Use a dowel and insert in newly drilled hole to secure the template. Repeat same procedure to opposite corner.
- C. Drill out remaining holes in template as needed. Move template through field of work using pegs (more may be needed) to align template with previous drilled holes. (There will be 25 holes per square foot.)
- D. Clean loose debris from holes, using shop vac or similar means that suits your surface/substrate.
- E. Inject adhesive into drilled holes. (Quarter filled should be sufficient.) DO NOT OVER FILL HOLES. Once Stainless Steel Detectable Warning Surface Domes/Bars are inserted and if adhesive spills out, clean immediately with appropriate manufactures recommended cleaning agent.
- F. Refer to the adhesive manufactures installation instructions for correct guidelines for that adhesive.



TOP VIEW  
N.T.S.



SIDE VIEW  
N.T.S.



ISOMETRIC VIEW  
N.T.S.

\*ALL DIMENSIONS ARE SHOWN IN INCHES\*

www.advantagetactile.com



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© KENNETH E. SZEKELY

**MATERIAL LIST**

ITEM	DESCRIPTION	PART NO.	QTY
1	ADVANTAGE ONE TWSI DOME	ADV-D-1281-N	1
2			
3			
4			
5			

**REFERENCE DRAWINGS**

DWG. NO.	DESCRIPTION

Machined Finish

REV.	DATE	REVISION	APPR.
01	01/07/15	Dimensional Changes	VS
00	21/05/13		

SCALE AS NOTED

DESIGNED BY		DATE	09/14/15
DRAWN BY	PW	DATE	09/14/15
CHECKED BY	DD	DATE	09/14/15

PROJECT NUMBER		PART NO.	ADV-B-3281-N
TITLE	TWSI		

MATERIAL  
Stainless Steel 316, Marine Grade

SUBJECT  
TACTILE WALKING SURFACE INDICATORS

PROJECT ADV-D-1281-N  
ADVANTAGE ONE  
TACTILE WALKING SURFACE INDICATORS  
STAINLESS STEEL TRUNCATED DOME ATTENTION  
INDICATOR W/  
CONCENTRIC CIRCLES

DRAWING NO.	REV. NO.	REV. NO.
ADV-D-1281-N	0	0

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 © KENNETH E. SZEKELY

**MATERIAL LIST**

ITEM	DESCRIPTION	PART NO.	QTY
1	Flat Top Elongated Bar	ADV-B-3281-N	1
2			
3			
4			
5			

**REFERENCE DRAWINGS**

DWG. NO.	DESCRIPTION

Machined Finish

NO.	DATE	REVISION	APPR.
01	01/07/15	Dimensional Changes	VS
00	21/05/13		

SCALE AS NOTED

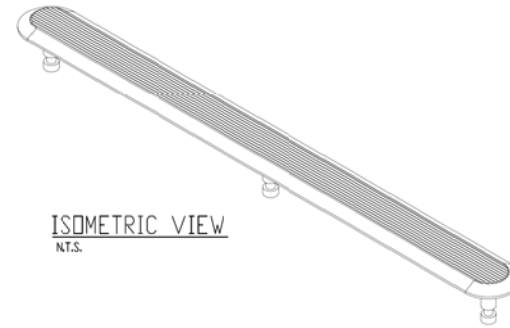
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DRAWN BY	PW	DATE	09/14/15
CHECKED BY	DD	DATE	09/14/15

PROJECT NUMBER	
TITLE	TWSI
PART NO.	ADV-B-3281-N

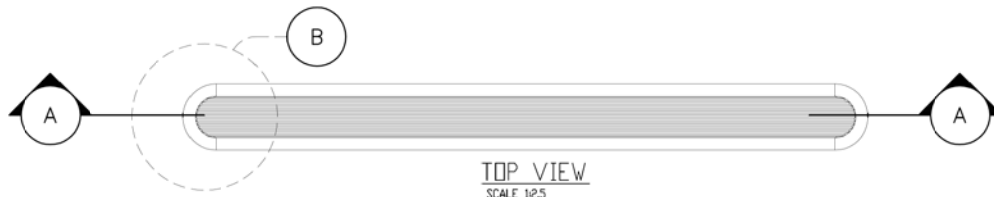
INTERNAL SUBJECT  
 ADVANTAGE ONE TACTILE SURFACE INDICATOR  
 TACTILE DIRECTION INDICATOR  
 GUIDANCE BAR

PROJECT  
 ADV-B-3281-N  
 ADVANTAGE ONE  
 TACTILE WALKING SURFACE INDICATORS  
 STAINLESS FLAT-TOPPED GUIDANCE  
 BAR W/LINEAR GROOVES  
 11.03"X1.06"

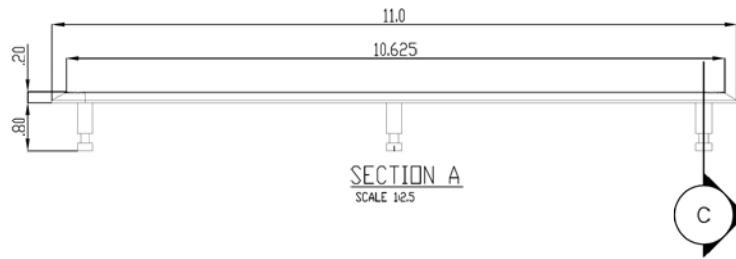
DRAWING NO.	REV. NO.	REV. NO.
ADV-B-3281-N	01	01



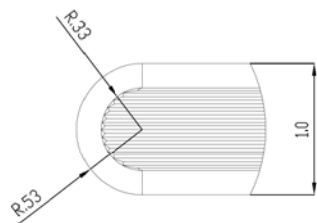
ISOMETRIC VIEW  
 N.T.S.



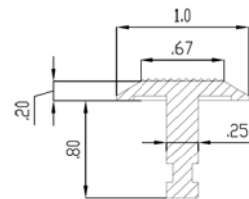
TOP VIEW  
 SCALE 1:2.5



SECTION A  
 SCALE 1:2.5

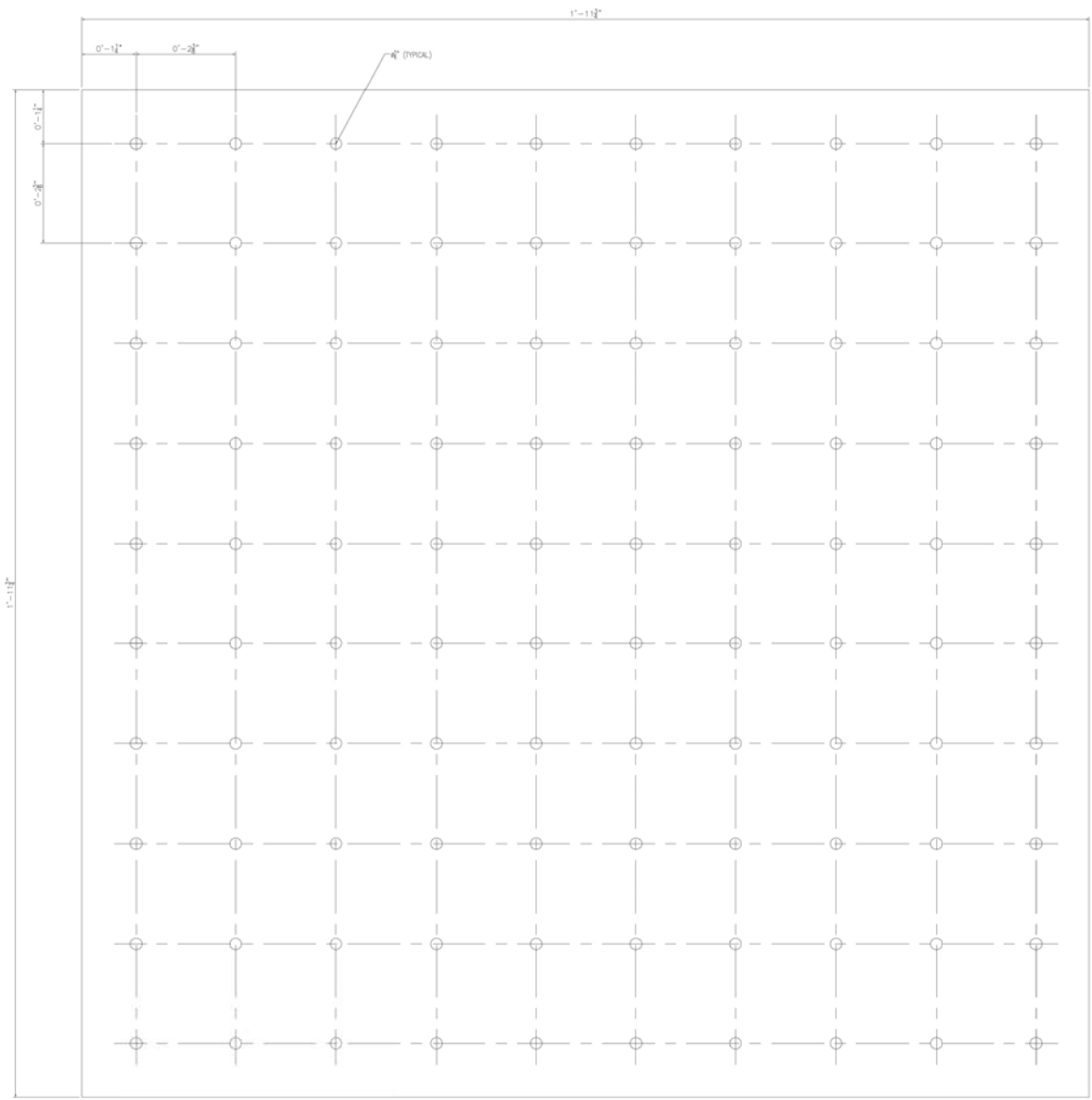


DETAIL B  
 SCALE 1:1



SECTION C  
 SCALE 1:1

"ALL DIMENSIONS ARE SHOWN IN INCHES"



**ADVANTAGE HOLE PATTERN DOME TEMPLATE**  
SCALE: 1'-0"=1'-0"



**MATERIAL LIST**

ITEM	DESCRIPTION	PART NO.	QTY
1	STAINLESS STEEL TEMP.		1

DATE	REVISION	APPR.

0  
SCALE: SCALE AS NOTED

DESIGNED	BY: K.E.S.	DATE: 10/04
DRAWN	J.P.	16/07/15
CHECKED		

PROJECT MANAGER	
TRADE DETECTABLE WARNING SURFACE	PART NO. ATS-
MATERIAL	STAINLESS STEEL



PROJECT  
ADVANTAGE HOLE PATTERN DOME TEMPLATE

DRAWING NO. ATS-C-01	REV. NO. 0
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MATERIAL LIST

ITEM	DESCRIPTION	PART NO.	QTY
1	STAINLESS STEEL TEMP.		1

DATE	REVISION	APPR.

SCALE AS NOTED

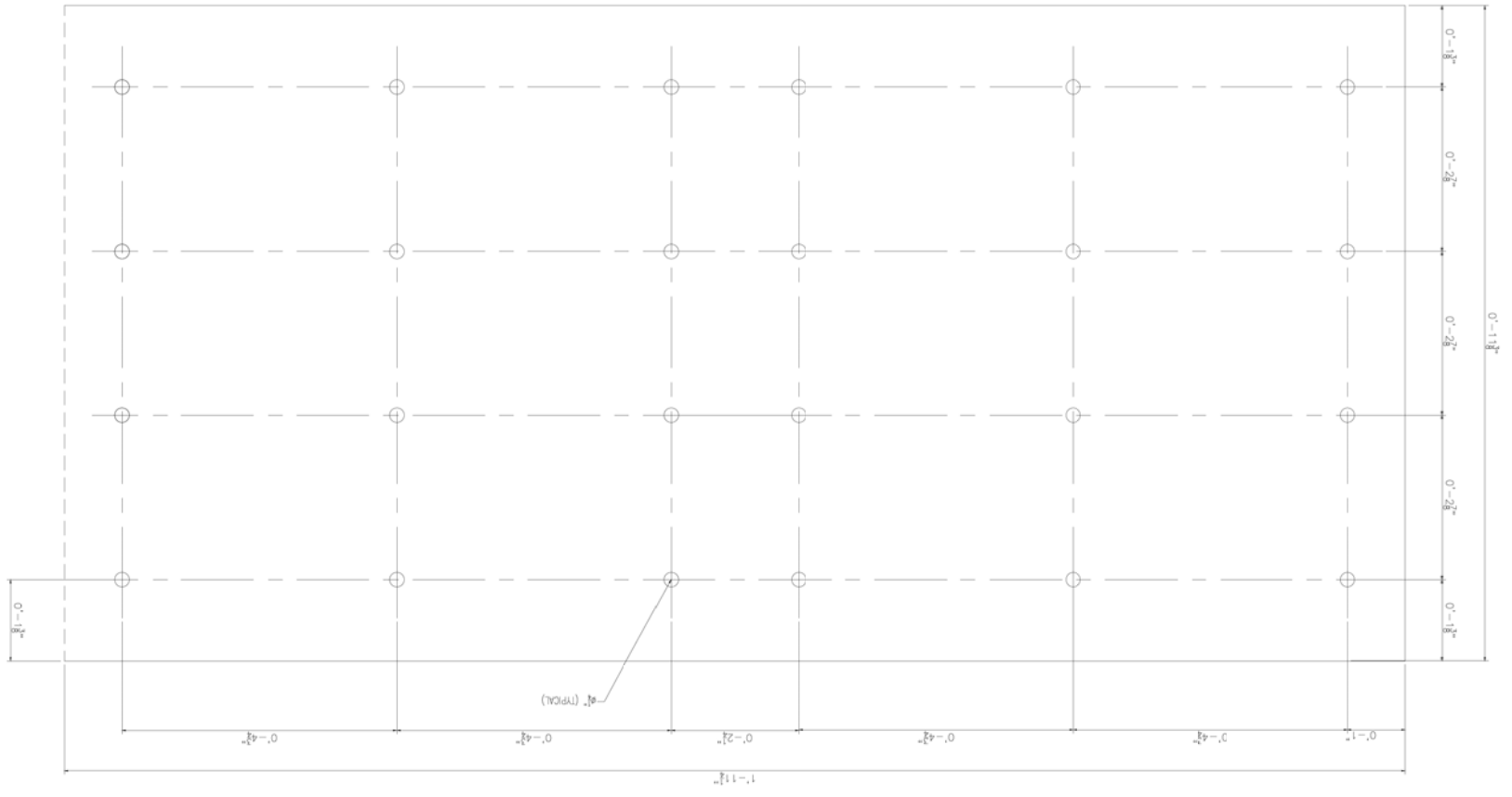
DESIGNED BY	K.E.S.	DATE	10/04
DRAWN BY	J.P.	DATE	16/07/15
CHECKED			

PROJECT MANAGER	
TRADE	DETACHABLE WORKING SURFACE
PART NO.	ATS-
MATERIAL	STAINLESS STEEL



PROJECT	ADVANTAGE STAINLESS STEEL BAR TEMPLATE
DRAWING NO.	ATS-C-01
REV. NO.	0

ADVANTAGE STAINLESS STEEL BAR TEMPLATE  
HOLE PATTERN  
SCALE: 1'-0"=1'-0"







## **CLEANING AND MAINTENANCE MANUAL**

The Advantage One Tactile Detectable Warning Dome/Bar is unique in its visual and tactile properties and requires a slight variation in cleaning procedures. Due to the undulation and texture of the surface, it is necessary to reach the grime that rests on the low parts of the tactile surface. Standard wet mopping will not be completely effective in cleaning these textured surfaces. A major benefit of the stainless steel tactile is that the composition is virtually non-porous, and prevents liquids, dust and grime seeping into the body of the dome/bar. The use of general purpose commercial floor cleaners or machine bristle scrubbing will not harm Advantage One Tactile. However, as these cleaning practices may weaken or dissolve the adjacent floor finish, careful attention must be paid to the selection and application of the cleaning solution. It is advisable to check with the manufacturer of the cleaning solution in order to be certain that the product intended to be used will not harm the Advantage One Tactile tile, grout, or the adjacent floor finish in any way.

### **Regular Maintenance**

Many neutral general purpose cleaners are effective for the regular maintenance and cleaning of Advantage One Tactile. It is important that the cleaner to be used has a non-oil, non-animal fat, non-soap base. Cleaners with these bases may cause problems due to oil-residues which tend to trap dirt in the cleaning process.

Please remember to treat any cleaning product you wish to use on a small, out of the way test area of the tactile surface and adjacent floor area before applying it to the entire Advantage One Tactile surface. This will ensure that it performs as desired, not only on the Advantage One Tactile surface but also on the adjacent floor finish, thus avoiding unexpected problems.

### **Avoid Surface Coatings**

Advantage One Tactile does not require the use of sealants or waxes. Adding surface coatings increases the number of unnecessary steps in maintenance procedures without improving either the appearance of the tile, or the resistance to dirt build-up. In fact, using a surface coating turns a low maintenance polymer coated stainless steel tile into a high maintenance product.

In addition, surface coatings will actually diminish the unique performance characteristics that make Advantage One Tactile exceptional among tactile tiles. Such surface coatings create a thin barrier that may modify the skid resistance and visibility properties, thereby reducing an important safety feature of the flooring

Advantage Tactile Systems Inc.  
241 Main Street, #100  
Buffalo, NY 14203  
Tel: 800-769-4022



## MATERIAL WARRANTY\*

Contract No./Date: (Please Provide) **\*issued on a per project basis**  
Project Description: (Please Provide)  
No. and Type of Tiles: (Please Provide)  
Installer: (Please Provide)  
Owner: (Please Provide)

Advantage Tactile Systems, Inc. warrants to the Owner that the Advantage One Tactile Detectable Warning Dome/Directional Bar is free from defects in workmanship and material including deformation, breakage and delamination for a period of Five (5) years from the date of acceptance of the project.

**EXCLUSIVE REMEDIES.** Advantage Tactile Systems, Inc., at its cost, will repair or replace defective material promptly reported to Advantage Tactile Systems, Inc. during the warranty period. This warranty includes labor costs and cost of removal of product. Repair or replacement will be done on site.

**WARRANTY LIMITATIONS.** Advantage Tactile Systems, Inc. warranty of Advantage Tactile Systems products does not apply to conditions resulting from improper installation, improper use, external causes, intentional misuse or abuse, neglected or improper annual maintenance, vandalism, modifications to the Advantage Tactile Systems products or installation procedures with the exception of the Owner's right to immediately eliminate an unsafe condition.

**DISCLAIMER OF WARRANTIES.** The above warranties are the Owner's exclusive warranties. No other warranty, express or implied, shall apply. Advantage Tactile Systems, Inc. specifically makes no warranty of merchantability and/or fitness for a particular purpose.

**IN NO EVENT WILL ADVANTAGE TACTILE SYSTEMS INC. BE LIABLE FOR ANY DAMAGES, LOST PROFIT, DIRECT, CONSEQUENTIAL OR ECONOMIC DAMAGES.**

**MATERIAL SUPPLIER:**

**Advantage Tactile Systems, Inc.**

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**Authorized Signature**

Name: John Heffner  
Title: Vice President  
Date: \_\_\_\_\_

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The **Ultimate Solution™** in Detectable Warning Systems



Date:

## Certificate of Compliance\*

**\*issued on a per project basis**

Contract No./Date: (Please Provide)  
Project Description: (Please Provide)  
Installer: (Please Provide)  
Owner: (Please Provide)

Advantage Tactile Systems, Inc. certifies that the Advantage One Tactile System and specified installation materials are in compliance with the Americans with Disabilities Act (ADA) Section 4.29.2 and California Title 24 and CalTrans A88A Documents regarding Detectable Warnings on Walking Surfaces.

Advantage Tactile Systems, Inc.

John Heffner  
Vice-President

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241 Main Street, #100  
Buffalo, NY 14203  
Tel: 800-769-4022