



Stainless Steel Domes & Bars Submittal Specification



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Stainless Steel Dome/Bar Tactile Walking Surface Indicators

SECTION 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.
- B. ISO 23599:2019 - Assistive Products for Blind and Vision-Impaired Persons - Tactile Walking Surface Indicators.
- C. ISO 21542:2011 - Building Construction - Accessibility and Usability of the Built Environment.
- D. CSA B651-18 - Accessible Design for the Built Environment.
- E. Accessibility for Ontarians With Disabilities Act (AODA), 2005 - O. Reg. 413/12: Integrated Accessibility Standards Regulation (IASR) 191/11 – Sections 80.25 to 80.29
- F. National Building Code of Canada

1.02 DESCRIPTION

- A. This Section includes Specifications for furnishing and installing Stainless Steel Domes/Bars Tactile Walking Surface Indicator with an in-line truncated dome pattern retrofitted onto all public spaces at the locations and to the dimensions shown on the Drawings, by the Contract Documents and as directed by the Engineer/Architect. (*Stainless Steel TWSI is also known as Tactile Warning Domes/Bars or Retrofit Tactile Warning Domes/Bars*).

1.03 SUBMITTALS

- A. **Product Data Sheet:** Submit ADA Solutions, LLC. literature describing products, installation procedures and routine maintenance.
- B. **Samples for Verification Purposes:** Submit two (2) tactile walking surface indicators domes/bars. Samples shall be properly labelled and shall contain the following information: Name of Project, Submitted by Date of Submittal, and Manufacturer's Name.
- C. **Shop Drawings:** Submit Standard Manufacturer Shop Drawings showing all pertinent characteristics of the Stainless Steel Tactile Walking Surface Indicator domes/bars, including profile, and material to be used as well as outlining installation materials and procedures.
- D. **Material Test Reports:** Submit all complete current test reports from qualified, accredited independent testing laboratories by ASTM and UL/Canada guidelines and indicating that materials proposed for use are in compliance with specification requirements and meet or exceed the properties indicated on these specifications. All tests conducted on a stainless steel TWSI panel.
- E. **Maintenance Instructions:** Submit copies of the manufacturer's specified installation and maintenance practices for each type of TWSI panel and accessories as required.

1.04 QUALITY ASSURANCE

- A. Provide Stainless Steel Domes/Bars TWSI and accessories as produced by a single manufacturer with a minimum of five (5) years' experience in the manufacturing of Stainless Steel Domes/Bars TWSI.
- B. **Installer's Qualifications:** Engage an experienced installer certified in writing by Stainless Steel Domes/Bars TWSI manufacturer as qualified for installation, who has completed

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installations similar in material, design, and extent to that indicated for the Stainless Steel Domes/Bars TWSIs shall be manufactured from grade 316 stainless steel and have an integral non-slip surface on the top of the TWSI.

- C. Stainless Steel Domes/Bars TWSI material shall meet the following ASTM specifications: A182, A193, A276, A313, A314, A320, A479, A493 and A580.
1. Chemical properties shall be:
 - a) C 0.08%
 - b) Cr 17%
 - c) Fe 65%
 - d) Mn 2%
 - e) Mo 2.5%
 - f) Ni 12%
 - g) P 0.045%
 - h) S 0.03%
 - i) Si 1%.
 2. Mechanical properties shall be:
 - a) Tensile Strength >550 Mpa (> 79,800 psi)
 - b) Yield Strength >240 Mpa (>34,800 psi)
 - c) Elongation at Break in 50 mm > 60%
 - d) Rockwell B Hardness < 80
 - e) Brinell Hardness < 149
 - f) Izod Impact >13 m-Kg (> 95.1 Ft-lb.)
- D. Slip Resistance when tested by ASTM C 1028-96 the combined Wet and Dry Static Co- Efficient of Friction not to be less than 0.80 on top of domes/bars.
- E. 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.
- F. 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 1.45 Kg (3.2 lb.) Average wear depth shall not exceed 1mm (0.04”) abrasion cycles when measured on the top surface of the dome/bar representing the average of three measurement locations per sample.
- G. Abrasive Wear when tested by Taber Tester ASTM C 501-84 and US Specifications SS-T- 308b with H22 coarse Calibrate 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.
- H. Salt and Spray Performance when tested to ASTM B 117-03 not to show any deterioration or other defects after 100 hours of exposure.
- I. AASHTO HB-17 single wheel HS20-44 loading “Standard Specifications for Highways and Bridges”. The Stainless Steel TWSI Domes/Bars shall be mounted on a platform then subjected to the specified maximum load of 4,717 Kg (10,400 lbs.), corresponding to an 3,628 Kg (8,000 lb) individual wheel load and a 30% impact factor. The TWSI shall exhibit no visible damage at the maximum load of 4,717 Kg (10,400 lbs.)

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1.05 DELIVERY, STORAGE AND HANDLING

- A. ADA Solutions, LLC. Stainless Steel Domes/Bars TWSI shall be reasonably packaged to prevent damage in shipment or handling.
- B. Stainless Steel Domes/Bars TWSI shall be delivered to a location at the building site for storage before installation. Store Stainless Steel Domes/Bars in an area that is within an acceptable temperature range 4°C - 32°C (40°F - 90°F) and maintain the storage facility in a clean, dry condition to prevent contamination or damage to Stainless Steel Domes/Bars.

1.06 SITE CONDITIONS

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

- A. ADA Solutions, LLC. Stainless Steel Domes/Bars TWSI 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.

1.08 INSTALLATION WARRANTY

- A. Stainless Steel Domes/Bars TWSI installation shall be warranted in writing for two (2) years by the installer. Alternate products not approved before the tendering phase must be guaranteed for three (3) years by the installer. Products must be guaranteed from defective work and loosening of domes/bars.

SECTION 2 PRODUCTS

2.01 MANUFACTURERS

- A. 316 Stainless Steel Domes/Bars TWSI by ADA Solutions, LLC. 323 Andover Street, Suite 3, Wilmington, MA 01887 – Toll-Free: (800) 372-0519, spinto@surewerx.com, www.adatale.com.
- B. Existing engineered and field-tested products, which have been in successful service for five (5) years are subject to compliance with requirements, may be incorporated in the work and shall meet or exceed the specified test criteria and characteristics. Requests for Approved Equal Status must be submitted and approved by the Owner before the Tender Phase of the Project
- C. Substitutions: Substitutions shall be made only under provisions of the contract and must meet all applicable standards for compliance with CSA, AODA, and ISO 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.
- D. Colour: Colour shall be matte stainless steel throughout the domes/bars.

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2.02 EQUIPMENT

- A. Contractor shall provide all tools, equipment and services required for satisfactory installation. The following tools and accessories:
- Black felt markers or carpenter's pencils for drilling template
 - Shop Vac, Blower or Air compressor
 - Acetone (appropriate amount for installation)
 - Cleaning rags for cleaning flooring
 - Rotary hammer drill + 6.35mm (1/4") drill bit 127mm (5") long
 - Safety cones to prevent pedestrian traffic on the stainless steel domes/bars
 - Power Tool (Drill) with security fastener bit

SECTION 3 EXECUTION

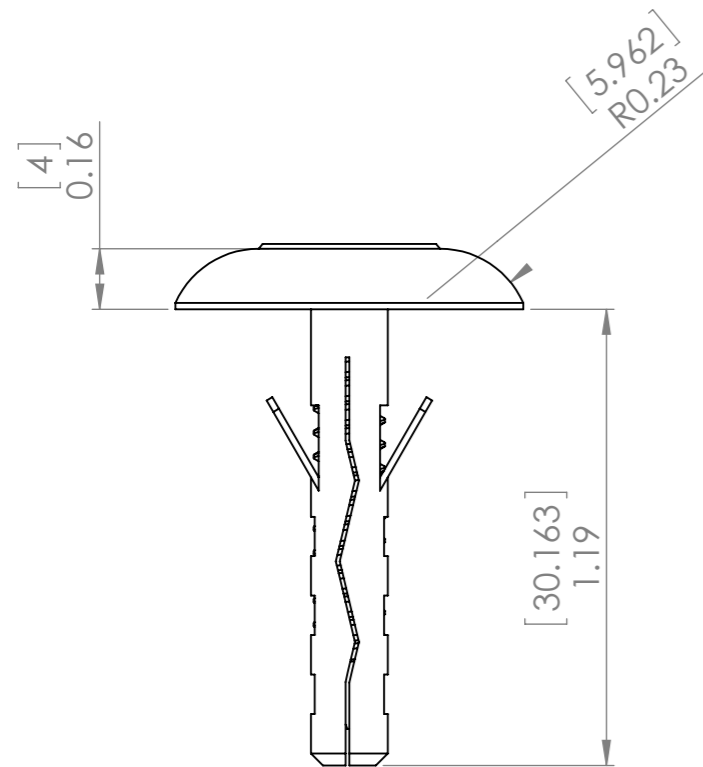
3.01 INSTALLATION

- A. Select correct drill bit size for stainless steel security fastener 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 fastener length. **DO NOT MEASURE FROM TIP OF DRILL BIT.** This will allow dome hole to be slightly deeper than the length of the fastener.
- B. Lay the template down on working floor surface. Check alignment of holes, holes/TWSI 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. Insert anchor sleeve into drilled holes, followed by dome/bar & stainless steel security fastener.

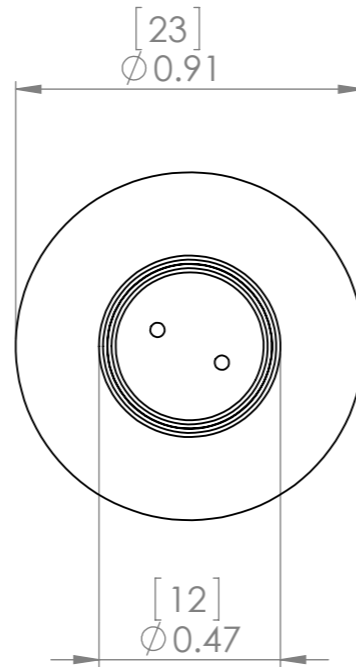
3.03 CLEANING AND PROTECTING

- A. Protect Stainless Steel Domes/Bars against damage during the construction period to comply with TWSI domes/bars manufacturer's specifications.
- B. Protect Stainless Steel Domes/Bars against damage from rolling loads following installation by covering with plywood or hardwood.
- C. If requested by the Project Manager, clean Stainless Steel Domes/Bars TWSI not more than four (4) days before the date scheduled for inspection intended to establish the date of substantial completion in each area of the project. Clean Stainless Steel Domes/Bars TWSI by the method specified by ADA Solutions, LLC.
- D. Comply with ADA Solutions, LLC. maintenance manual for cleaning and maintaining Stainless Steel Domes/Bars. It is recommended to perform annual inspections for safety and TWSI integrity.

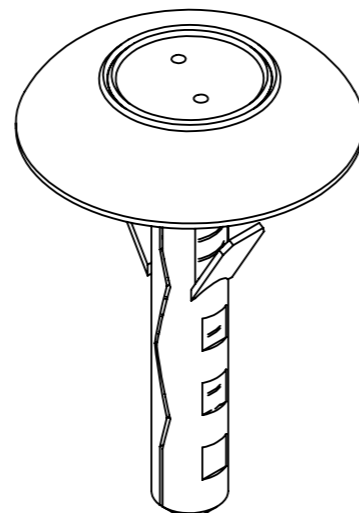
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Updated 01/10/2020



ELEVATION

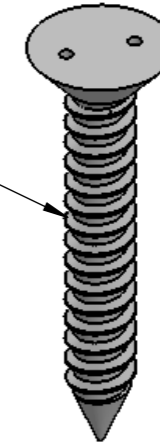


TOP VIEW



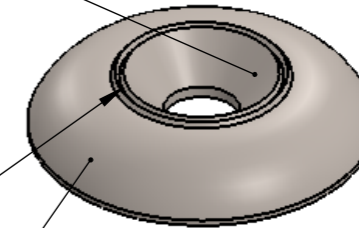
ISOMETRIC VIEW

#10X1.25" STAINLESS STEEL SECURITY SCREW

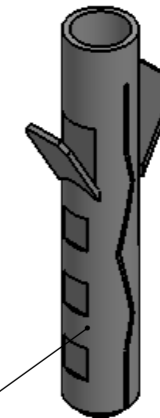


COUNTER SUNK THRU HOLE TO RECEIVE SECURITY SCREW

CONCENTRIC TRACTION MICRO PYRAMIDS x2



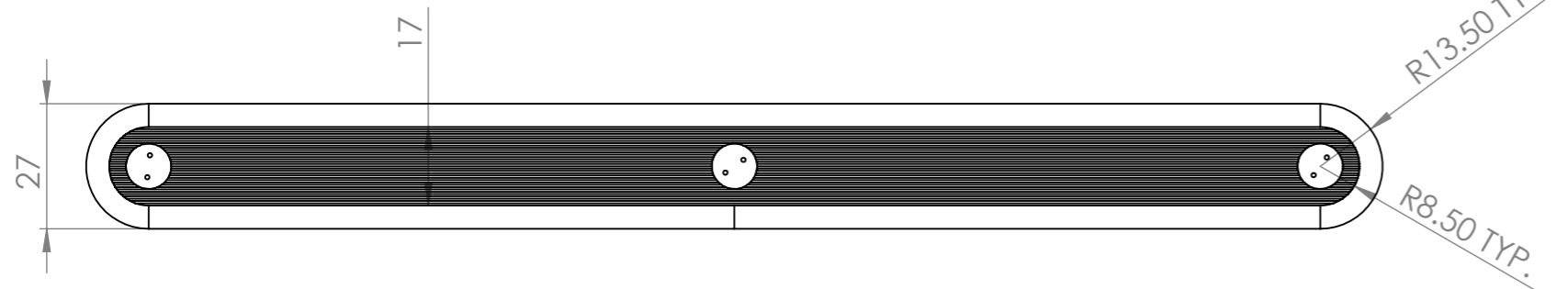
STAINLESS STEEL DOME



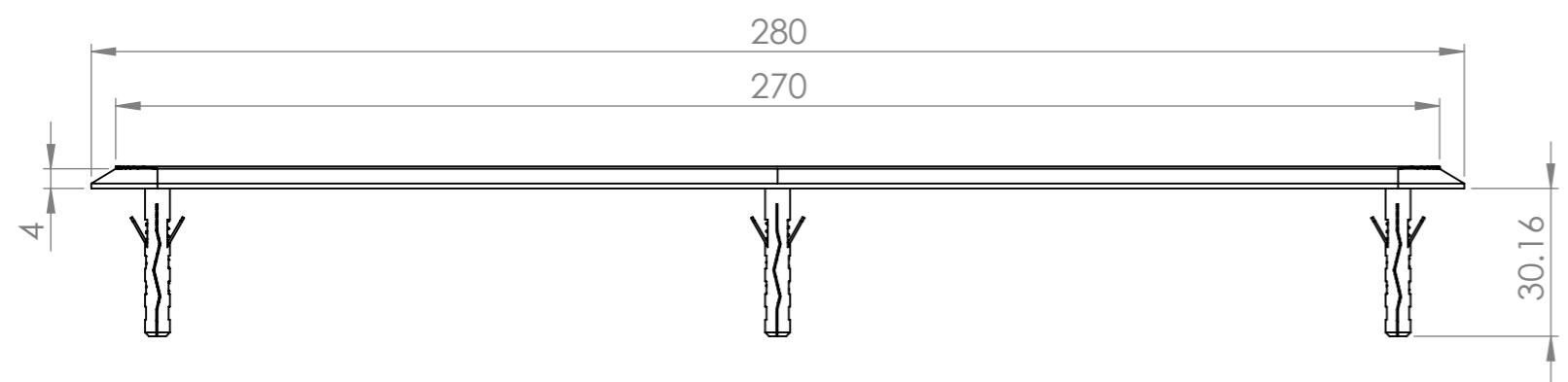
NYLON CONCRETE ANCHOR

EXPLODED VIEW

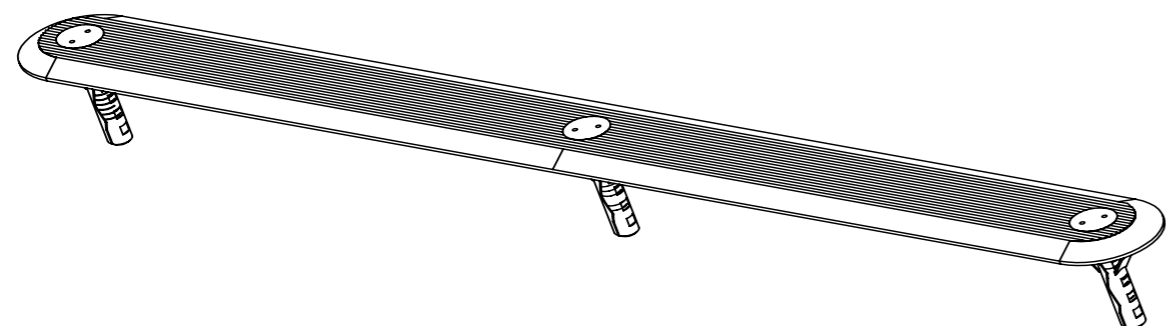
UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: A TYPE TOLERANCES: LINEAR: ANGULAR:				FINISH: DOME IS MACHINE FINISHED		DO NOT SCALE DRAWING		REVISION 04	
DRAWN	PW	SIGNATURE	DATE	2019-01-03	TITLE: ADA SOLUTIONS PEGLESS SS DOME & ANCHOR ASSY				
CHK'D					PRODUCT NO. ADA-SSSD				
APPV'D									
MFG									
Q.A									
DESIGN	SP		DATE	2019-01-03	MATERIAL: 316 STAINLESS STEEL NYLON		SCALE:2:1		A3
				WEIGHT:		SHEET 1 OF 1			



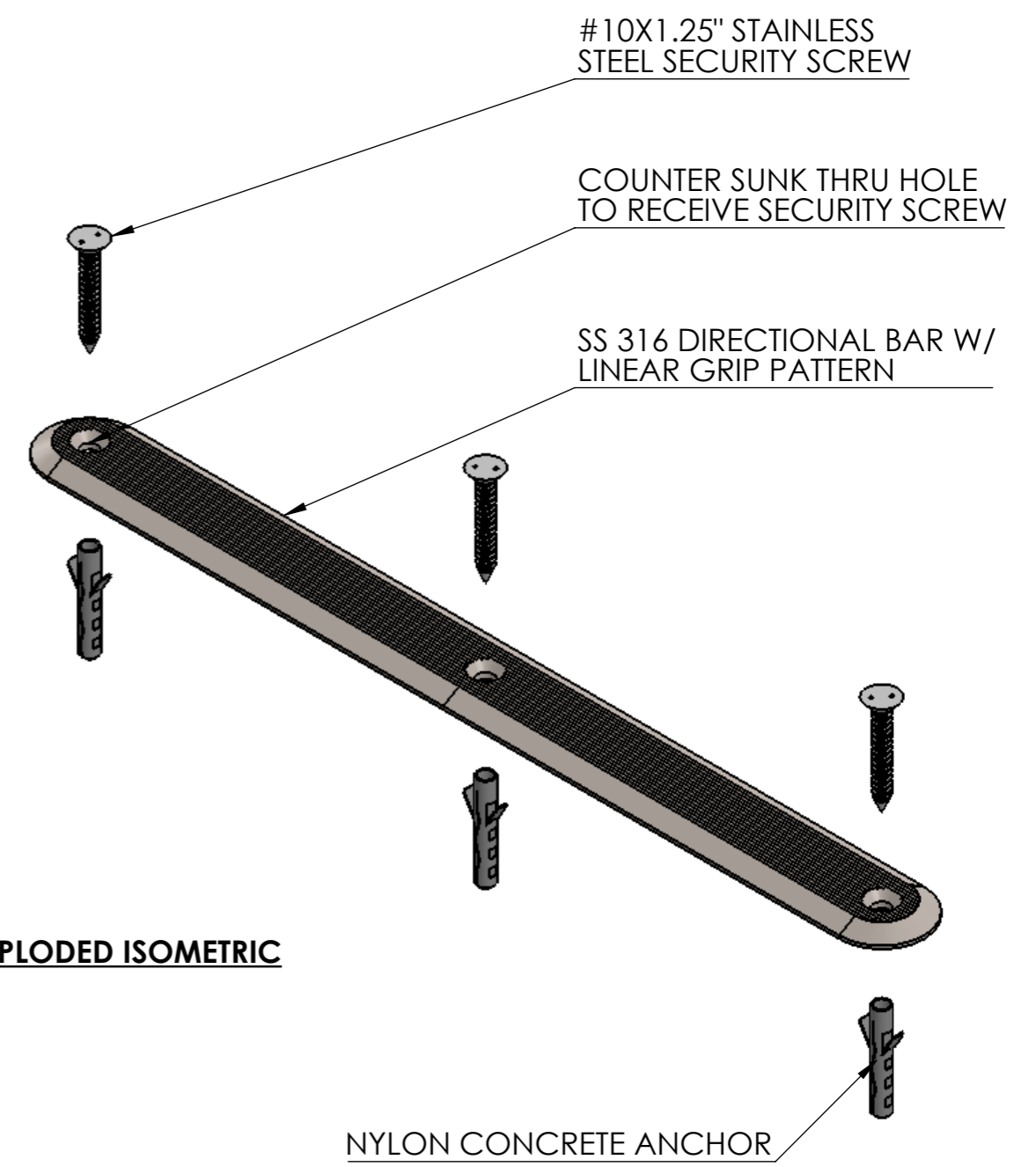
TOP VIEW



ELEVATION



ISOMETRIC



EXPLODED ISOMETRIC

UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: ANGULAR:				FINISH: MACHINE FINISH		DEBURR AND BREAK SHARP EDGES		DO NOT SCALE DRAWING		REVISION	
DRAWN	NAME PW	SIGNATURE	DATE 2019-03-31					TITLE: ADA SOLUTIONS PEGLESS SS DIRECTIONAL BAR W/ LINEAR GRIP PATTERN & ANCHOR ASSEMBLY			
CHK'D											
APPV'D											
MFG											
Q.A				MATERIAL: STAINLESS STEEL, NYLON		DWG NO. ADA - SSSB		SCALE: NTS		SHEET 1 OF 1	
				WEIGHT:						A3	