

7 | 07 18 00
 Traffic
 Coatings

MasterSeal® Pedestrian Traffic 2500 Primerless

High-solids polyurethane waterproofing, traffic-bearing membrane systems for pedestrian areas

PACKAGING

- MASTERSEAL M 270
 – 4.66-gallon (17.64 L) pail
- MASTERSEAL TC 275
 – 4.78-gallon (18.1 L) unitized kit
- MASTERSEAL TC 295 PIGMENTED AND TINT BASE
 – Part A
 1.75 gallons (6.62 L) in 6-gallon (22.71 L) pail
 – Part B
 3.5-gallon (13.25 L) pail
- MASTERSEAL TC 295 CLEAR
 – Part A
 1.33 gallons (5 L) in 3.5-gallon pail
 2 gallons (7.6 L) in 6-gallon pail
 – Part B
 2 gallons (7.6 L) in 2-gallon pail
 3 gallons (11.4 L) in 3-gallon pail
- MASTERSEAL 941 AGGREGATE
 – 50-lb (22.68 KG) bag
- MASTERSEAL 941DR AGGREGATE
 – 50-lb (22.72 KG) bag
- MASTERSEAL 945 AGGREGATE
 – 40-lb (18.14 KG) bag

SHELF LIFE

- MasterSeal M 270: 1 year
 MasterSeal TC 275: 1.25 years
 MasterSeal TC 295: 1 year
 MasterSeal 941: 5 years
 MasterSeal 941DR: 5 years
 MasterSeal 945: 5 years

STORAGE

Store in unopened containers in a cool, clean, dry area

YIELD

See preferred MasterSeal Deck Coating Solution for total system yield.

COLOR

- TC 275: Grey, Charcoal & Black
 TC 295: Grey, Charcoal, Tint Base & Clear

DESCRIPTION

MasterSeal Pedestrian Traffic 2500 Primerless is a fluid-applied polyurethane waterproofing system using a fast-setting, two-component reactive curing mechanism. It has very low odor and is VOC compliant.

MasterSeal Pedestrian Traffic 2500 Primerless is composed of:

- MasterSeal M 270 NP, a two-component, fast-curing polyurethane base coat.
- MasterSeal TC 275 – a two-component fast curing aromatic polyurethane top coat
- MasterSeal TC 295 – a high performance, two-component, aliphatic, polyaspartic-modified, high solids, polyurethane waterproofing coating

For projects requiring aggregate, three options are available:

- MasterSeal 941, a hard-wearing, angular aggregate
- MasterSeal 941DR, an aggregate free of respirable crystalline silica
- MasterSeal 945, an aggregate free of respirable crystalline silica for integrated top coats

PRODUCT HIGHLIGHTS

- Two-component system provides faster setting times, even in cooler climates, to help reduce facility downtime
- MasterSeal 945 aggregate is pre-mixed with MasterSeal top coats to reduce labor and material costs
- MasterSeal 941DR aggregate is free of respirable crystalline silica
- Low odor/high solids allow MasterSeal Traffic 2500 Primerless to be used over or near inhabited structures; Non-flammable and solvent-free
- Seamless waterproof membrane helps protect concrete from freeze/thaw damage
- Excellent chemical and chloride resistance helps protect against common parking deck chemicals including gasoline, diesel fuel, oil, alcohol, ethylene glycol, de-icing salt, bleach and cleaning agents as well as chloride intrusion
- Provides skid resistance to increase safety and offers excellent durability and superior abrasion resistance

- Available in grey, charcoal, tint base and clear for customization with a variety of colors, flake and quartz

INDUSTRIES/APPLICATIONS

- Stadiums
- Balconies
- Commercial Construction
- Building and Restoration
- Plywood Decks/Balconies
- Plaza Decks

VOC CONTENT

When components are mixed, MasterSeal components have the following g/L VOC contents less water and exempt solvents:

- MasterSeal M 270 Part A: 4 g/L
- MasterSeal M 270 Part B: 5 g/L
- MasterSeal TC 275 Part A: 71 g/L
- MasterSeal TC 275 Part B: 13 g/L
- MasterSeal TC 295 Part A: 20 g/L
- MasterSeal TC 295 Part B: 174 g/L


Technical Data

Composition

MasterSeal Pedestrian Traffic 2500 Primerless is a two-component polyurethane membrane.

Compliances

- CSA S413
- ASTM C 957



SEALANT* WATERPROOFING & RESTORATION INSTITUTE

Issued to: Master Builders Solutions
Product: MasterSeal 2500 Primerless

ASTM D 412: Tensile Strength of Top Coat
 MasterSeal TC 275 Top Coat:
 Tensile Strength: 3,014 psi / Elongation: 33% Pass ✓
 MasterSeal TC 295 Top Coat:
 Tensile Strength: 3,584 psi / Elongation: 343%

ASTM D 4541: Adhesion of Base Coat Pass ✓
 MasterSeal M 270 NP
 Pull-off Adhesion: 403 psi +

ASTM D 4060: Abrasion Resistance of Top Coat Pass ✓
 MasterSeal TC 275 Top Coat: Abrasion Resistance:
 65 mgms loss – mgms loss/1,000 cycles
 MasterSeal TC 295 Top Coat: Abrasion Resistance:
 25 mgms loss – mgms loss/1,000 cycles

Validation Date: 06/28/22 – 06/27/27

No. 622–MAS2500 Copyright © 2022

DECK COATING VALIDATION
www.swrionline.org

Test Data

PROPERTY	RESULTS		TEST METHOD
	M 270 NP	TC 275	
Solids			ASTM D 1259
By weight, %	99	99	90
Viscosity, cps	3,400	1,600	2,500–4,000

*Uncured material

Test Data

PROPERTY	RESULTS	SPECIFICATIONS	TEST METHOD
Crack bridging, MasterSeal M 270 NP	Passes	No cracking	ASTM C 957
Adhesion (Pull-off), psi MasterSeal M 270 NP	400	—	ASTM D 4541
Tensile strength, psi (MPa), MasterSeal M 270NP MasterSeal TC 275 MasterSeal TC 295 Pre-pigmented / Tint Base / Clear	3,000 (20.7) 3,000 (20.7) 3,400 (23.4) / 3,000 (20.7) / 3,530 (24.3)	— — — —	ASTM D 412
Elongation, %, MasterSeal M 270NP MasterSeal TC 275 MasterSeal TC 295 Pre-pigmented / Tint Base / Clear	950 30 340 / 390 / 135 —	— — — —	ASTM D 412
Hardness, Shore A MasterSeal TC 275 MasterSeal TC 295 Pre-pigmented / Tint Base / Clear	94 94 / 90 / 89 —	— — —	ASTM D 2240
Taber abrasion resistance, mgms; CS-17 Wheel, 1,000 g load, 1,000 cycles, MasterSeal M 270 NP / TC 275	100	—	ASTM D 4060
Taber abrasion resistance, mgms; CS-17 Wheel, 1,000 g load, 1,000 cycles, MasterSeal M 270 NP / TC 275 / TC 295	47	—	ASTM D 4060

Test results are averages obtained under laboratory conditions. Reasonable variations can be expected.

MASTERSEAL AGGREGATES

PROPERTY	941 RESULTS	941 DR RESULTS	945 RESULTS
Color	Gray	Green to Gray	Green to Gray
Compressive Strength	28,000 psi		
Hardness	6–6.5 Mohns	7 Mohns	7 Mohns
Specific Gravity	2.90 g/cc	3.3 g/cc	3.3 g/cc
Bulk Density	102 pcf	85 to 105 pcf	85 to 105 pcf
US SIEVE SIZE	% RETAINED ON SIEVE		
#6			
#12	71	2–10	
#16	23	10–30	
20	2	20–35	
30	1	20–40	0–3
40	0	7–22	10–25
50		0–5	25–45
70		0–1	15–35
100			8–20
Pan		0–1	0–5

HOW TO APPLY

SURFACE PREPARATION

CONCRETE

- Concrete must be fully cured (28 days), structurally sound, clean and dry (ASTM D 4263). All concrete surfaces (new and old) must be shot blasted to remove previous coatings, laitance and all miscellaneous surface contamination and to provide profile for proper adhesion. Abrasive shot blasting must occur after concrete repair has taken place. Acid-etching is not permitted. Proper profile should be a minimum of ICRI CSP-3 (as described in ICRI document 03732.) For balconies and other pedestrian areas with limited space or access for shot-blasting, alternative mechanical methods can be used to achieve the recommended surface profile.
- Repair voids and delaminated areas with Master Builders Solutions branded cementitious and epoxy patching materials. For application when fastturn repairs are required, MasterSeal 350 can be used to repair patches up to 1.5" in depth when used in aggregate slurry mix. Please refer to the MasterSeal 350 Technical Data Guide for proper application techniques.
- All units must be applied within the specified pot life.

SURFACE PRE-STRIPPING AND DETAILING

- For non-moving joints and cracks less than 1/16" (1.6 mm) wide, apply 25 wet mils (0.6 mm) prestripping of MasterSeal M 270 NP. MasterSeal M 270 NP must be applied to fill and overlap the joint or crack 3" (76 mm) on each side. Feather the edges.
 - Dynamic cracks and joints over 3/16" (1.6 mm) wide must be routed to a minimum of 1/4" by 1/4" (6 by 6 mm) and cleaned. Install bond breaker tape to prevent adhesion to bottom of joint. Prime joint faces only with MasterSeal P 173 and fill with MasterSeal SL 1™ or NP1™. For joints deeper than 1/4" (6 mm), use appropriate backer rod. For cracks, sealant should be flush with the adjacent surface. For expansion joints, sealant should be slightly concave. After the sealant has cured, apply 25–30 wet mils (0.64–0.77 mm) of MasterSeal M 270 NP pre-stripping over the cured sealant, overlap the joint 3" (76 mm) on each side.
- NOTE:** MasterSeal NP2 and MasterSeal SL2 used for deck surface preparation must be coated with MasterSeal P255 primer, prior to the application of the MasterSeal M 270NP

- Sealed joints 1" (25 mm) wide or less can be coated over with the MasterSeal Pedestrian Traffic system. Expansion joints exceeding 1" (25 mm) wide, including the primary wide expansion-joint system, are not to be coated so they can perform independently of the deck coating system.
- Form a sealant cant into the corner at the junction of all horizontal and vertical surfaces (wall sections, curbs, columns) by priming with MasterSeal P 173 and applying a 1" (25 mm) wide bead of MasterSeal NP 1. Tool to form a 45° cant. Apply masking tape to the vertical surfaces 4–5" (102–127 mm) above the sealant cant to provide a clean termination of the vertical detail coat. After the sealant has cured, apply 25 wet mils (0.64 mm) of MasterSeal M 270 NP over the cured cant up to the masking tape and 4" (102 mm) onto deck surface.
- Where the coating system will be terminated and no wall, joint, or other appropriate break exists, cut a 1/4 by 1/4" (6 by 6 mm) keyway into the concrete. Fill and coat keyway during application of MasterSeal M 270 NP.

PLYWOOD

1. All plywood must be smooth-faced, APA-stamped, and exterior grade tongue and groove plywood. Construction must conform to code, but plywood must not be less than $\frac{3}{32}$ " (18 mm) thick. Plywood spacing and deck construction must follow APA guidelines.
2. Surfaces must be free of contaminants. Priming is not necessary on clean, dry plywood.
3. All seams must be caulked with MasterSeal NP 1 (see Form Nos. 1017906 and 1017911). Prestripe 4–6" (102–152 mm) wide with 25 wet mils (0.6 mm) of Base Coat. Reinforce all seams between plywood sheets and between flashing and the plywood deck by embedding MasterSeal 995 into the pre-stripping.
NOTE: MasterSeal NP2 and MasterSeal SL2 used for deck surface preparation must be coated with MasterSeal P255 primer, prior to the application of the MasterSeal M 270NP.

HOW TO APPLY

COLOR – MASTERSEAL TC 295 TINT BASE

1. All of the 40 standard colors from the MasterSeal Color Portfolio require the use of 2 MasterSeal 900 color packs per 5.25-gallon pail of MasterSeal TC 295 Tint Base.
2. A second aesthetic Top Coat of 10–15 wet mils (0.2–0.4 mm) is required with all Tint Base colors to achieve a uniform appearance.

MIXING – MASTERSEAL M 270 NP

1. Precondition both A and B components to a temperature of approximately 70 °F (21 °C).
2. Add entire contents of Part A into Part B. Mix components with a slow-speed drill (400–600) rpm, for a minimum of 3 minutes. Scrape down sides and bottom of mixing vessel, then mix again for 2 minutes. Keep the mixing paddle submerged during mixing to avoid adding air into the mixture

MIXING – MASTERSEAL TC 275 / 295 (PRE-PIGMENTED / CLEAR)

1. Precondition both A and B components to a temperature of approximately 70 °F (21 °C).
2. Add entire contents of Part A into Part B. Mix components with a slow-speed drill (400–600) rpm, for a minimum of 3 minutes. Scrape down sides and bottom of mixing vessel, then mix again for 2 minutes. Keep the mixing paddle submerged during mixing to avoid adding air into the mixture.

MIXING – TC 295 TINT BASE

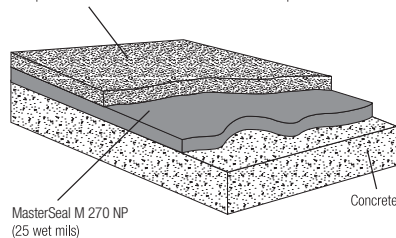
1. Precondition both A and B components to a temperature of approximately 70 °F (21 °C).
2. Add entire contents of Part B into Part A. Mix components with a slow-speed drill (400–600) rpm, for a minimum of 3 minutes.
3. Transfer entire contents of two (2) pigment cans into MasterSeal TC 295 Tint Base mixed kit. Use a spatula or knife to remove all the pigment from the container. The TC 295 Tint Base Top Coat requires two (2) MasterSeal 900 color paks per 5.25-gallon pail.
4. Scrape down sides and bottom of mixing vessel, then mix again for 2–3 minutes. Keep the mixing paddle submerged during mixing to avoid adding air into the mixture.
5. To ensure consistent color throughout the pail, pour contents into separate container and continue mixing until all Tint Base has dispersed.
6. When using multiple units, all units must be boxed to ensure color consistency.

APPLICATION

MasterSeal Pedestrian Traffic 2500 Primerless can be installed in several configurations, depending upon the degree of traffic to which the system is exposed. In areas of extreme traffic (turning lanes, pay booths, entrances and exits), apply the Extra Heavy-Duty Traffic System per the MasterSeal Vehicular Traffic 2500 Primerless technical data guide. The following summary briefly describes the pedestrian configuration. All coverage rates are approximate.

PEDESTRIAN SYSTEM

MasterSeal TC 275 or TC 295 (15–20 wet mils) with MasterSeal 941/941DR or equivalent broadcast and backrolled into the wet top coat



PEDESTRIAN SYSTEM

1. Apply 25 wet mils (0.64 mm) of MasterSeal M 270 NP with proper notched squeegee at the rate of approximately 55–60 ft²/gal (1.35–1.47 m²/L). Allow base coat to cure 3–4 hours.
2. Apply 15–20 wet mils (0.38–0.51 mm) of MasterSeal TC 275/TC 295 at the rate of 80–100 ft²/gal (1.96–2.45 m²/L).

NOTE: If applying a decorative system with MasterSeal TC 295 Clear, follow step 3C and the optional step 4 for proper application with MasterTop DE flake or quartz materials.

- 3A. Immediately broadcast MasterSeal 941 aggregate or 16–30 mesh, rounded silica sand at the rate of 15–20 lbs/100 ft² (0.75–1.0 kg/m²) into TC275/ TC295 and backroll to encapsulate.

3B. INTEGRATED AGGREGATE

After mixing the top coat per instructions, pour half of the mixed material into a second pail. Add 20 lbs of MasterSeal 945 aggregate to one half of the mixed material (2.4 gallons of TC 275 and 2.63 gallons of TC 295). Mix for an additional 3 minutes for uniform consistency. Apply the topcoat at 20 wet mils or 80 sf/gallon with $\frac{1}{8}$ " notch squeegee. Fully saturate the roller. Backroll with $\frac{3}{8}$ " nap roller, roll in a crosshatch pattern for equal distribution of aggregate. Repeat for second half of top coat. For vehicular use, a second coat is required. Pail will need to be remixed for 2 minutes after 10 minutes of idle sitting to redistribute the aggregate.

3C. DECORATIVE FLAKE OR QUARTZ

Immediately broadcast, by hand or mechanical blower, MasterTop DE flake at a rate of 5-7 sf/lb or quartz at a rate of 0.5-1 lb/sf into the wet receiving coat. Broadcast to refusal, making certain the entire surface is saturated, exhibiting a dry appearance. Allow to cure. Once cured, sweep, stone and vacuum the excess flake or quartz.

4. OPTIONAL

If applying a decorative system with MasterSeal TC 295 Clear, apply at a rate of 100–110 ft²/gallon (2.4 m²/L) using a flat squeegee. Immediately backroll with a 3/8" nap roller in a crosshatch pattern.

5. Allow minimum curing time of 24–48 hours before allowing vehicular traffic onto the coating.

IMPORTANT NOTE:

All coverage rates are approximate and may vary due to the application technique used. Coverage rates are affected by substrate texture, choice and distribution of aggregate, intermediate aggregate load and environmental conditions and application methods and are not under the control of Master Builders Solutions. Ensure that an adequate amount of aggregate is utilized to achieve required slip resistance. Exterior applications must utilize MasterSeal TC 295 at the specified coverage rate of 15–20 wet mils.

MOCKUP

1. Provide mockup of at least 100 ft² (9.3 m²) to include surface profile, sealant joint, crack, flashing and juncture details and allow for evaluation of slip resistance and appearance.
2. Install mockup with specified coating types and with other components noted.
3. Locate where directed by architect.
4. Mockup may remain as part of work if acceptable to architect.

CLEAN UP

Clean all tools and equipment immediately after use with MasterSeal 990 or xylene. Cured material must be removed mechanically.

CURING TIME

Allow curing time of 48 hours before pedestrian use. Extend the curing time in cool-weather conditions. To reduce the time period in which MasterSeal Pedestrian Traffic 2530 Primerless might be vulnerable to inclement weather or to reduce the time between coats, use MasterSeal 914.

MAINTENANCE

See MasterSeal Traffic maintenance technical bulletin.

FOR BEST PERFORMANCE

- MasterSeal NP 100 and MasterSeal NP150 should not be used in conjunction with this urethane deck coating system due to potential for curing issues.
- If vapor drive is present or suspected, please consult with your local Master Builders Solutions representative prior to system application.
- MasterSeal M 270 NP and TC 275 or TC 295 have very short working times (20 min ± 5)(at 70 °F 50% RH). Once the material has been mixed, the coating must be poured onto the surface and applied immediately.
- MasterSeal TC 275 will discolor if exposed to UV light. Where UV resistance is required, the application of TC 295 is recommended.
- Minimum application temperature is 40 °F (4 °C).
- If areas of inadequate slip resistance exist, an additional top coat back rolled with aggregate is required.
- Do not apply to concrete that is outgassing.

- Warm temperatures will shorten working time; plan work accordingly.
- Concrete should have a minimum compressive strength of 3,000 psi (21 MPa) and be cured for a minimum of 28 days.
- Do not apply MasterSeal Pedestrian Traffic 2500 Primerless to concrete slabs on grade, unvented metal pan decks or split slab applications with a waterproofing membrane between slabs. Contact Master Builders Solutions Technical Services.
- Be sure to allow for movement in the deck by the proper design and use of expansion and control joints.
- Select the proper type and amount of aggregate to achieve desired slip resistance.
- Contact Technical Service when substrates are over 90 °F (32 °C) or under 40 °F (4 °C) or when applying to decks containing between slab membranes.
- The best method to ensure the proper wet film thickness is the use of a grid system. Divide the surface to be coated into grids and calculate the square footage of each. Refer to the coverage chart to determine the quantity of coating needed for each grid to arrive at the required mil thicknesses. For example, one pail of MasterSeal M 270 NP should cover approximately 255–280 ft² or a minimum grid of 16 x 16 ft at 25 wet mils. Verify via site mockup.
- Avoid application when inclement weather is present or imminent.
- Do not apply to damp, wet, or contaminated surfaces.
- Not suitable for use where chained or metalstudded tires will be used.
- Proper application is the responsibility of the user. Field visits by Master Builders Solutions personnel are for the purpose of making technical recommendations only and not for supervising or providing quality control on the jobsite.
- CAD & PDF deck coatings details are available for download from our website, Master Builders Solutions Customer Support can direct you to the site.
- On steep ramps in excess of 15%, contact your local Master Builders Solutions representative. Do not use self-leveling grade product on slopes greater than 15%. Do not coat expansion joints over 1" (25 mm) wide.

- Do not apply use pre-mixed, integrated MasterSeal 945 aggregate in heavy- or extra heavy-duty vehicular applications.
- MasterSeal TC 295 Clear is sold in two kit sizes. For proper curing and performance, use appropriate Part A and Part B. Small kits are comprised of 1.33 gallons of Part A in a 3.5-gallon pail and 2 gallons of Part B in a 2-gallon pail. Larger kits are comprised of 2 gallons of Part A in a 6-gallon pail and 3 gallons of Part B in a 3-gallon pail.
- Flake and quartz coverage will vary based on the size or grade of the material. Please reference table below for your respective, estimated coverate rate.

FLAKE SIZE	FULL COVERAGE	PARTIAL COVERAGE
1"	8–10 sq ft/lb	25–250 sq ft/lb
1/2"	7–9 sq ft/lb	25–250 sq ft/lb
1/4"	5–7 sq ft/lb	25–250 sq ft/lb
1/8"	4–6 sq ft/lb	25–250 sq ft/lb
1/16"	3–5 sq ft/lb	25–250 sq ft/lb
1/32"	2–4 sq ft/lb	25–250 sq ft/lb

QUARTZ	COVERAGE
40-S	1/2–1 lb/sq ft
25-A	1–2 lb/sq ft

FOR BEST PERFORMANCE: TC 295 TINT BASE ONLY

- Avoid whipping air into Tint Base.
- Mix pigment cans thoroughly into Tint Base.
- Always do a test area to assure acceptable color appearance and slip resistance.
- Do not apply MasterSeal TC 295 Tint Base heavier than the recommended 15–20 mil (0.38–0.51 mm) application.
- Colors exposed to direct sunlight may fade over a period of time. Darker colors potentially fade at an increased rate.
- Aggregate and substrate conditions may affect color and appearance.

HEALTH, SAFETY AND ENVIRONMENTAL

Read, understand and follow all Safety Data Sheets and product label information for this product prior to use. The SDS can be obtained by visiting www.master-builders-solutions.com/en-us, e-mailing your request to mbsbcst@mbcc-group.com or calling 1(800)433-9517. Use only as directed.

IN CASE OF EMERGENCY: Call CHEMTEL +1 (800) 255-3924 or if outside the US or Canada, +1 (813) 248-0585.

LIMITED WARRANTY NOTICE

Master Builders Solutions Construction Systems US, LLC ("Master Builders") warrants this product to be free from manufacturing defects and to meet the technical properties on the current Technical Data Guide, if used as directed within shelf life. Satisfactory results depend not only on quality products but also upon many factors beyond our control. MASTER BUILDERS MAKES NO OTHER WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE WITH RESPECT TO ITS PRODUCTS. The sole and exclusive remedy of Purchaser for any claim concerning this product, including but not limited to, claims alleging breach of warranty, negligence, strict liability or otherwise, is shipment to purchaser of product equal to the amount of product that fails to meet this warranty or refund of the original purchase price of product that fails to meet this warranty, at the sole option of Master Builders. Any claims concerning this product must be received in writing within one (1) year from the date of shipment and any claims not presented within that period are waived by Purchaser. MASTER BUILDERS WILL NOT BE RESPONSIBLE FOR ANY SPECIAL, INCIDENTAL, CONSEQUENTIAL (INCLUDING LOST PROFITS) OR PUNITIVE DAMAGES OF ANY KIND.

Purchaser must determine the suitability of the products for the intended use and assumes all risks and liabilities in connection therewith. This information and all further technical advice are based on Master Builders' present knowledge and experience. However, Master Builders assumes no liability for providing such information and advice including the extent to which such information and advice may relate to existing third party intellectual property rights, especially patent rights, nor shall any legal relationship be created by or arise from the provision of such information and advice. Master Builders reserves the right to make any changes according to technological progress or further developments. The Purchaser of the Product(s) must test the product(s) for suitability for the intended application and purpose before proceeding with a full application of the product(s). Performance of the product described herein should be verified by testing and carried out by qualified experts.

FOR PROFESSIONAL USE ONLY. NOT FOR SALE TO OR USE BY THE GENERAL PUBLIC.