



# The Town of Leesburg in Virginia

## DESIGN AND CONSTRUCTION STANDARD

### Article # X-XXX.X

#### PART 1 - SUBGRADE PREPARATION

Excavate to subgrade.  
Compact subgrade with plate compactor.

#### PART 2 - SUBBASE / BASE

#57 stone or recycled concrete RC-57, shall be laid under pavement to a minimum depth of 4" for pedestrian use and a minimum of 6" for vehicular use. There is no maximum depth of stone, and it can vary per site conditions.

Place stone on top of geotextile fabric in 4" lifts. Align facets of stone by compacting with plate compactor at least 2 passes.

Ensure stone base extends at least 1 foot wider than finished pavement.

#### PART 3 - SETTING FORMWORK

Set, align, and secure metal, plastic or lumber forms with landscape nails or concrete pins.

Apply form release agent to the form faces which will be in contact with PFP, immediately before placing paving. Form release to be diesel, biodiesel, or vegetable oil.

The vertical face of previously placed pavement may be used as a form.

Protect previously placed pavement from damage.

Do not apply form release agent to previously placed concrete.

Apply liquid urethane bonding agent to face of surfaces when adhesion is desired.

#### PART 4 - PAVING

Stone: Triple-washed & kiln dried 1/8" to 3/8" crushed aggregate per ASTM C 33, bagged, labeled, kept dry and under cover until installation.

Rubber: Recycled passenger tires ground to 1.5mm nominal crumbs with 99.9% of the wire remnants removed and at least 90% of the chord removed.

Binder: Single component elastomeric moisture cured aromatic polyurethane liquid prepolymer based upon Diphenylmethane-Diisocyanate designed for permanently binding stone and rubber with a firm and flexible bond.

Composition is 50% by weight of 1-5mm SBR colored crumb rubber, 50% by weight of 3/8" triple washed and kiln dried crushed

aggregate, and a single component moisture cured elastomeric polyurethane binder.

Batch and mix on site in compliance with mix design. Discharge shall be completed within 1-2 minutes of the introduction of urethane to the dry products. Do not leave material in mixer more than 4 minutes or batch integrity will be compromised. Discard any material that has mixed for more than 5 minutes.

Pavement begins curing within 10-20 minutes of discharge from the mixer. Do not handle, smooth, or otherwise touch pavement after 20 minutes. Manipulation after 30 minutes compromises integrity of material bonds and will lead to future potholes.

Avoid placing PFP if rain, snow, or frost is forecast within 8 hours.

Always protect fresh paving from moisture and freezing.

Avoid placing PFP on wet base material although wet stone base may be dried with a standard propane torch. Wait for stone to cool to the touch before placing PFP on top.

Do not place PFP on frozen or wet subgrade or subbase.

Deposit PFP directly onto the stone base by either mixer chute, wheelbarrow or by material handler, unless otherwise specified.

Deposit PFP between the forms to the specified depth, typically 2" nominal.

Spread the PFP using a come-along, square-ended shovel or asphalt rake.

Use screed bar, wood floats and steel trowels to rough finish the surface.

Final surface of PFP shall be compacted and smoothed with bull float and magnesium trowels to a uniform smooth, tight-grained finish.

When permanent forms are not used, bevel the exposed edges of the pavement to a 45° chamfer.

Ensure a smooth, monolithic, and consistently uniform finish.

Confirm ADA compliant slopes to not exceed 2% side slopes & 5% running slopes.

Create consistently formed 45-degree chamfered edges where pavement does not abut other surfaces.

Ensure construction joints and seams are level, blended and smoothly finished.

Be free from visible surface variations, rough patches and finishing marks.

Bond to adjacent materials with the polyurethane binder in a seamless manner.

Completely cover the paving surface with a minimum 4 mil thick polyethylene sheet only if rain or irrigation sprinklers are imminent within 60 minutes. Cut sheeting to a minimum of a full placement width.

Cover all exposed edges of paving with polyethylene sheet.

Secure curing cover material without using dirt or placing heavy items over sheet.

Cure paving for a minimum of 24 uninterrupted hours, unless otherwise specified. Maintain a protective fence around the pavement until fully cured.

When hot weather is anticipated up to 95 degrees Fahrenheit, no special procedures are necessary. When temperatures are over 95 degrees, pavement working time is reduced by 50%.

In cold weather it is imperative that the polyurethane binder be kept above 45 degrees Fahrenheit until mixed with dry ingredients and placed. This requires heated enclosed trucks or trailers, heated sleeves, or blankets over glue containers, etc. Binder that falls below 45 degrees becomes compromised and should be discarded.

Do not open the paving to pedestrian or light vehicular traffic until the PFP has cured for at least 24 hours during warm weather, and 48-72 hours during cold temperatures. Always check pavement for hardness before opening to traffic.

**Not To Scale**

<b>REVISIONS</b>		<b>POROUS FLEXIBLE PAVING (PFP) SPECIFICATION</b>	<b>DRAWING XX-1</b>
<b>NO.</b>	<b>DATE:</b>		
<b>1</b>	<b>9/2023</b>		
			<b>PAGE XXX</b>