

Technical Brief: Indoor-Outdoor Flow - Designing Homes Around Light, Air, and Land

How floor plans, sliding glass walls, and decks bring natural light and ventilation into a home, what it takes to build those openings so they stay dry, safe, and efficient in Georgia, and how the approach shows up at 56 Cooper Lake in Mableton

Executive summary

The best homes do not stop at the exterior wall. When a floor plan is organized around large openings, covered outdoor rooms, and decks, daylight reaches deeper into the house, breezes move through it, and the landscape becomes part of daily life. That only works when the openings are engineered as carefully as they are designed. A 12-foot sliding glass wall is also the largest hole in the building envelope: it has to shed wind-driven rain, meet safety-glazing and energy rules, and connect to a deck that is structurally tied to the house. This brief explains the design principles behind indoor-outdoor flow, the building details that make it last, and how Ducere applies both at 56 Cooper Lake, a farmhouse-style residence in Mableton set among the Chattahoochee River corridor, the Silver Comet Trail network, and the equestrian character of the 7 Oaks Stables neighborhood.

5,843 SF heated area at 56 Cooper Lake: 6 bedrooms, 6 baths	0.8 acre homesite, per Cobb County tax records	~1.7 mi straight-line to the Silver Comet Trail, per Cobb County GIS	~3.2 mi straight-line to the Chattahoochee River, per Cobb County GIS
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1. Why indoor-outdoor flow matters

1.1 Daylight. Daylight is the cheapest and most flattering light in a home. A useful rule of thumb is that usable daylight reaches about 1.5 to 2.5 times the height of the window or door head into a room. An 8-foot door head pushes good light roughly 12 to 20 feet inside; a taller head or a transom pushes it further. Plans that keep living spaces shallow, or that open on two sides, stay bright without daytime electric lighting.

1.2 Ventilation. Air moves through a house when there is an inlet and an outlet. Openings on opposite or adjacent walls, with the outlet at least as large as the inlet, produce real cross ventilation. Single-sided rooms ventilate poorly no matter how large the door. In practice, cross ventilation works best in rooms no deeper than about five times the ceiling height, which is why open, through-plan living areas outperform deep, closed ones.

1.3 Living area that does not cost heated square footage. Covered porches and decks extend everyday living outdoors for much of the Georgia year. A screened porch, in particular, adds usable space at a fraction of the cost of conditioned area and keeps the indoor-outdoor connection usable in mosquito season.

THE REFRAME

Indoor-outdoor flow is often treated as a finish choice: pick a nicer door. It is actually a planning decision made at the floor plan and site stage. Orientation, room depth, roof overhangs, and deck height are fixed early. The door product comes last. Getting the first four right is what makes the last one perform.

2. Designing for the Georgia sun

Mableton sits at about 33.8 degrees north latitude. That geometry makes south-facing glass easy to control with a simple roof overhang: the summer sun is high and is blocked, while the winter sun is low and comes in to warm the floor. East and west glass are harder, because low morning and afternoon sun gets under any overhang and needs porches, vertical shading, trees, or low solar-gain glass.

SEASON (SOLAR NOON)	SUN ALTITUDE	WHAT A 2-FT OVERHANG DOES ON SOUTH GLASS
Summer solstice (June)	about 80 degrees	Shades roughly 11 ft of wall below it, so a typical door is fully shaded at midday
Equinox (March / September)	about 56 degrees	Shades roughly 3 ft, a partial shade in the shoulder seasons
Winter solstice (December)	about 33 degrees	Shades only about 1.3 ft, so winter sun reaches deep into the room

Values are geometric calculations for 33.8 degrees north at solar noon, before accounting for wall orientation or terrain. Deeper covered porches extend the effect and are the standard tool for west-facing living rooms.

3. Building the openings: what makes large glass last

ELEMENT	WHAT GOOD LOOKS LIKE	WHY IT MATTERS
Door type	Multi-panel sliding, pocketing, or stacking systems sized to the opening; performance-rated for water and air infiltration and design wind pressure	Large panels move more air and frame the view, but the rating, not the brochure, decides whether the door keeps water out in a storm
Rough opening and sill	Sloped sill pan with end dams and a back dam under every door; flashing lapped shingle-style into the water-resistive barrier	Door sills are the most common water-intrusion point in new homes; water that gets past the track must have a path out
Threshold	A slight step-down to the deck, or a flush threshold only with a drained track and a trench drain outside	A true zero-threshold looks seamless but turns the deck into a water source unless drainage is engineered
Glazing	Safety (tempered or laminated) glass, as required for glass in doors under the residential code; U-factor and SHGC meeting the Georgia energy code for Climate Zone 3A	Protects people and keeps a glass wall from becoming the weak point of the energy envelope
Header and structure	Engineered header or beam sized for the span and the load above, with point loads carried to the foundation	Wide openings remove wall that would otherwise carry load; undersized headers sag and bind sliding panels
Screens and security	Integrated sliding or retractable screens; multipoint locks	Ventilation only works if the opening can stay open safely and without insects

4. Decks and outdoor rooms: built as structure, not furniture

4.1 Ledger and lateral connection. A deck attached to the house is only as good as its ledger. The ledger must bolt to the structural rim of the house, never to brick veneer or siding alone, with flashing above and behind it so water cannot rot the band board. The residential code also provides for a lateral load connection that keeps the deck from pulling away from the house. Ledger failure is the leading cause of deck collapse.

4.2 Guards and stairs. Walking surfaces more than 30 inches above grade need guards at least 36 inches high, with openings that will not pass a 4-inch sphere. Stairs need consistent riser and tread dimensions, graspable handrails, and lighting. These are life-safety items and are inspected as such.

4.3 Materials and drainage. Ground-contact rated lumber where framing is close to soil, corrosion-resistant fasteners rated for treated wood, joist tape on framing below decking, and grading that carries water away from posts and the foundation. Composite or hardwood decking over properly spaced joists keeps the surface flat and low-maintenance.

4.4 Comfort. Ceiling fans on covered porches, outdoor-rated lighting, and a screened room on the side that gets afternoon sun make the outdoor space usable from spring through late fall.

CLIMATE NOTE: VENTILATION IN A HUMID CLIMATE

Georgia summers are humid. Natural ventilation is a spring and fall strategy; in peak summer, open doors let in moisture that the air conditioning then has to remove. Good indoor-outdoor homes pair big openings with a right-sized HVAC system (load calculation, not rules of thumb), dedicated dehumidification or a balanced fresh-air system, and controls that the owner actually uses. Openness and a dry, comfortable interior are not in conflict when the mechanical design is done with the plan.

5. Applied: 56 Cooper Lake, Mableton

56 Cooper Lake Road SW is a farmhouse-style residence under construction in Mableton: six bedrooms, six baths, and 5,843 heated square feet on a 0.8-acre homesite. It is a design-build project with Komar Luxe, and its construction progress is documented at 56cooperlake.com. The home is not currently listed for sale. The design organizes everyday living around natural light and the outdoors, with expansive sliding glass doors that open the main living spaces to decks and outdoor rooms, so that the house reads as part of its setting rather than separate from it.

A setting worth opening up to. The homesite sits in a part of Mableton where the landscape still leads. The City of Mableton is bounded by roughly seven miles of the Chattahoochee River. The Chattahoochee RiverLands, a planned 100-mile network of parks and trails along the river led by the Trust for Public Land and local partners (often called the River Line), has its Cobb County gateway in Mableton, with a 2.7-mile showcase trail already built between I-285 and Mableton Parkway. The Mableton Parkway Trail links the RiverLands to the Silver Comet Trail, the 61.5-mile paved rail-trail that runs from Smyrna to the Alabama line. Closer to home, the equestrian character of the 7 Oaks Stables neighborhood gives the area an open, country feel that is increasingly rare inside the Perimeter region.

NEARBY AMENITY	DISTANCE FROM 56 COOPER LAKE*
Mableton Parkway Trail (links RiverLands to the Silver Comet)	about 1.2 miles
Floyd Road Trail	about 1.2 miles
Silver Comet Trail	about 1.7 miles
Chattahoochee River	about 3.2 miles

*Straight-line distances measured from Cobb County GIS parcel and trail data; travel distances are longer.

6. How Ducere delivers indoor-outdoor flow

STAGE	WHAT DUCERE DOES
Site and orientation	Studies sun path, views, prevailing breezes, grade, and trees before the plan is fixed, so large glass faces where it can be shaded and the deck lands at a buildable height
Plan	Keeps living spaces shallow or open on two sides, aligns openings for cross ventilation, and sizes overhangs and porches to the orientation
Structure	Engineers headers, beams, and deck framing for the actual spans; coordinates point loads to the foundation
Envelope	Specifies performance-rated doors, sill pans, and flashing details; inspects them before they are covered
Mechanical	Sizes HVAC from a load calculation and adds dehumidification or balanced ventilation so open doors and a dry interior can coexist
Documentation	Photographs and logs flashing, ledger, and guard details at each stage, so owners and inspectors can see what is inside the walls

7. Key takeaways

#	TAKEAWAY
1	Indoor-outdoor flow starts with orientation and room depth, not the door catalog.
2	In Mableton, a modest south overhang blocks summer sun and admits winter sun; west glass needs porches or shading.
3	Every large door needs a sloped sill pan, proper flashing, safety glazing, and a properly sized header.
4	Decks are structure: bolted ledgers, lateral connections, compliant guards, and drainage.
5	In a humid climate, pair openness with right-sized HVAC and dehumidification.

Sources: 56cooperlake.com (project facts); Cobb County Tax Assessor and Cobb County GIS open data (homesite area and distances); Urbanize Atlanta, "Chattahoochee gateway park scores millions for construction," March 25, 2024 (RiverLands Gateway Park, showcase trail, Mableton Parkway Trail link); Silver Comet Trail length per silvercometga.com. Sun angles are calculated. Code references are general and reflect the residential and energy codes adopted in Georgia; the edition in force at permit governs. This brief is informational and is not a code determination for any specific project.