

Low Residential Study (LRS)

Phase 1 – Introductory Briefing

Long Range Planning Committee (LRPC) Meeting
Arlington County Planning Commission

October 29, 2025



Overview



What is the Low Residential Study?



Why is the County doing the Low Residential Study?



What do we know about low residential areas?



Where can I learn more, and how can I participate in LRS?



What's ahead in Phase 2?

What is the Low Residential Study?

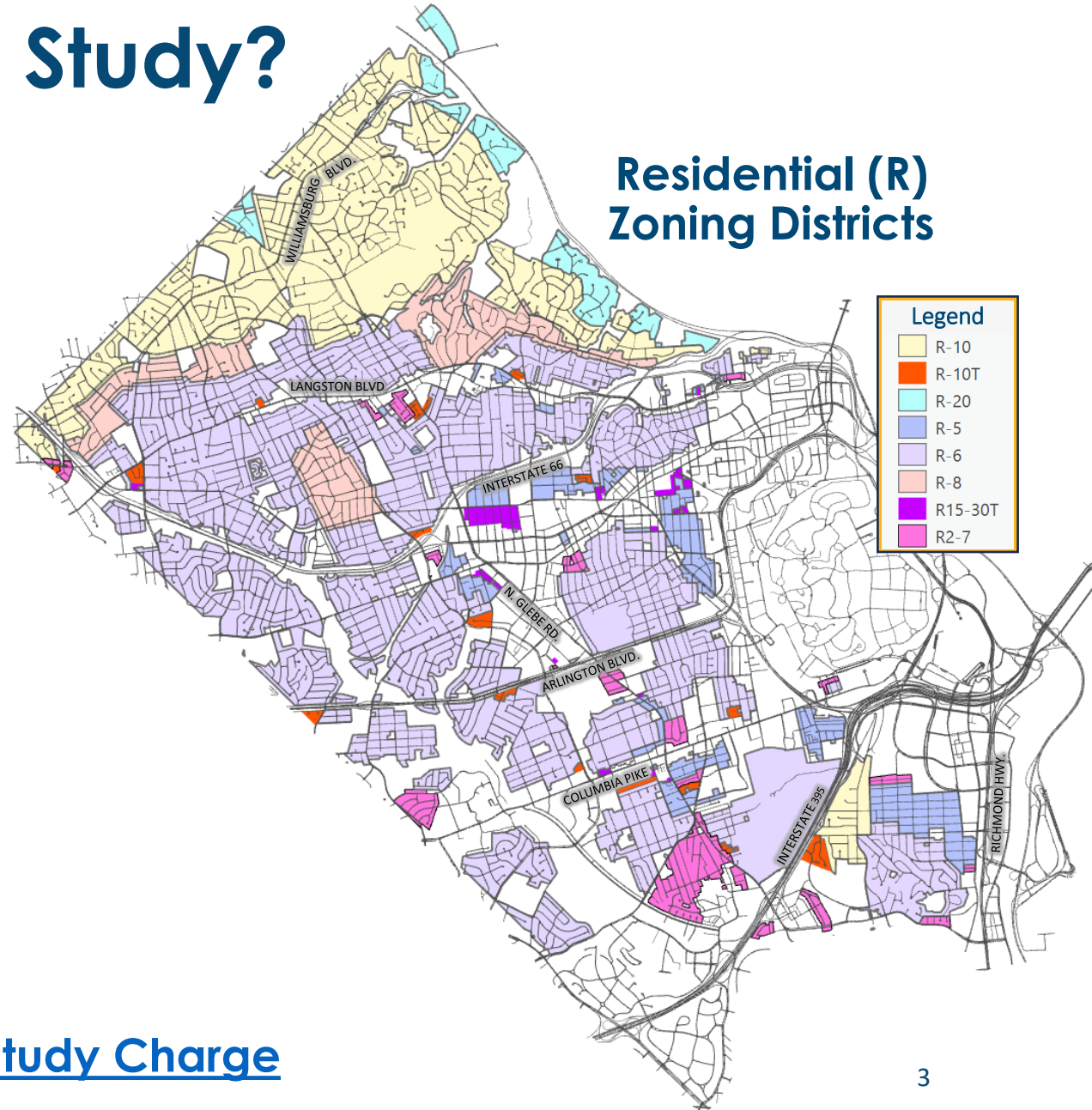
Board Charge – February 25, 2025

County Board Charge/Scope:

Conduct a study to set limits on how much of a lot can be covered by impervious surfaces

Objective:

Consider potential Zoning Ordinance amendments to support better stormwater and tree canopy outcomes



[Read the LRS Study Charge](#)

What is the Low Residential Study?

Scope of Work

Consider whether to:

1. Keep lot coverage requirements alongside new impervious area limits
2. Include minimum (contiguous) plantable area requirements
3. Adjust yard and setback requirements to allow for increased tree conservation and planting
4. Establish impervious area limit based on lot size or zoning district



What is the Low Residential Study?

Board Charge – February 25, 2025

Recommendations will be informed by and address:

- Benefits for stormwater and tree canopy
- Impacts to property owners and use
- Dynamics for older and newer homes
- Equity
- Administration and enforcement

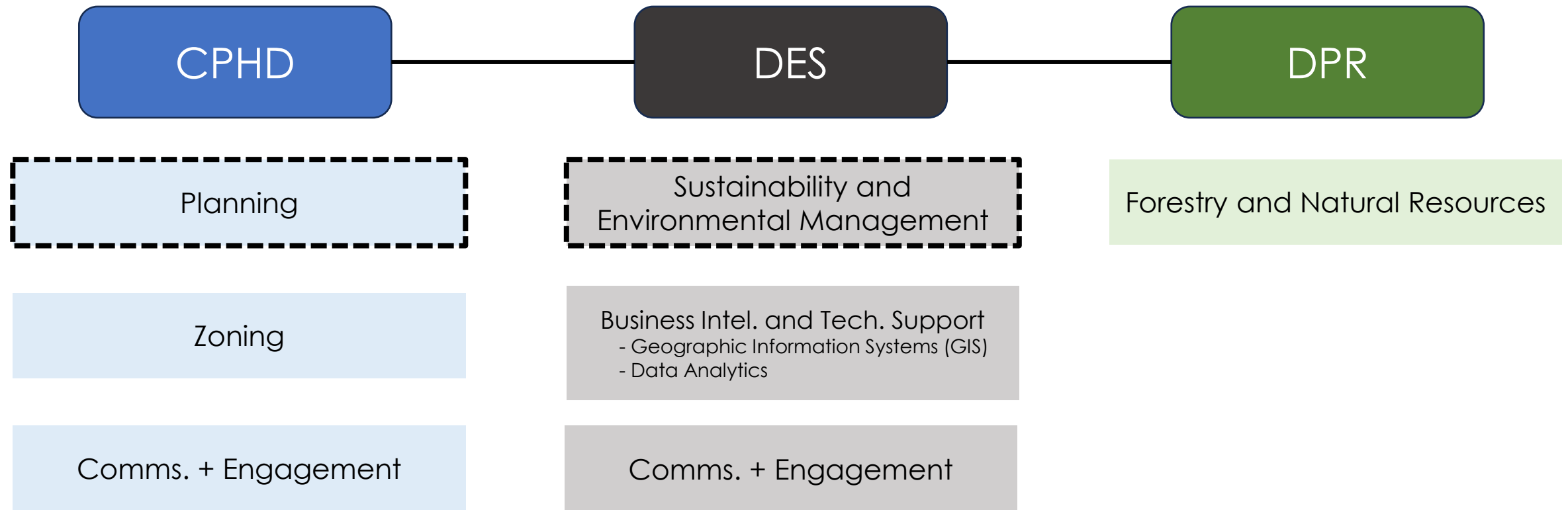
X

The Board's charge specified that the study will not:

- Recommend changes to existing ACZO standards for:
 - **Maximum main building footprint limits;** or,
 - **Maximum building height limits**
- Set **absolute total square footage limits** for lot coverage
- Consider any potential changes to the ACZO's **definition of lot coverage**

Who is leading the Low Residential Study?

Inter-Departmental Team Composition



NOTE: [Dashed Box] = Co-leading Divisions

What are the phases of the study?

What is the timeframe for the study?



[Read the LRS Project Plan](#)

What is the Low Residential Study?

Key Terms

Impervious surface/area:

- Any surface material that significantly **impedes or prevents** the ground from absorbing water

Lot coverage:

- A zoning regulation which limits how much of a lot can be covered by certain structures and surface materials

Plantable area:

- A space of sufficient square feet and soil depth, free of major conflicts with utilities, buildings, and other impervious surfaces, that is suitable for the growth of mature trees

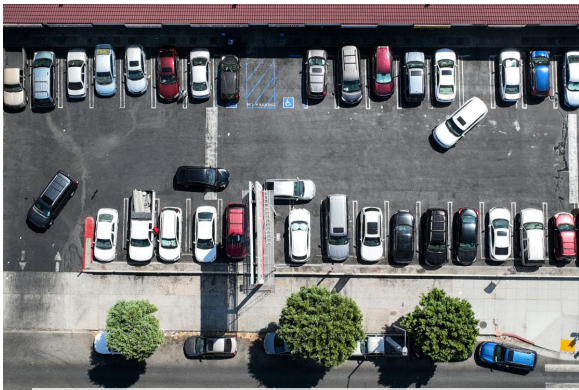


Photo Source: [Qian Weizhong/VCG/Getty Images](#)



Photo Source: [Southwest Boulder & Stone](#)



What is impervious surface/area?

- Any surface material that significantly **impedes** **or prevents** the ground from absorbing water*
- Examples:
 - roofs
 - buildings
 - streets
 - parking areas
 - concrete
 - asphalt
 - compacted gravel
 - compacted dirt

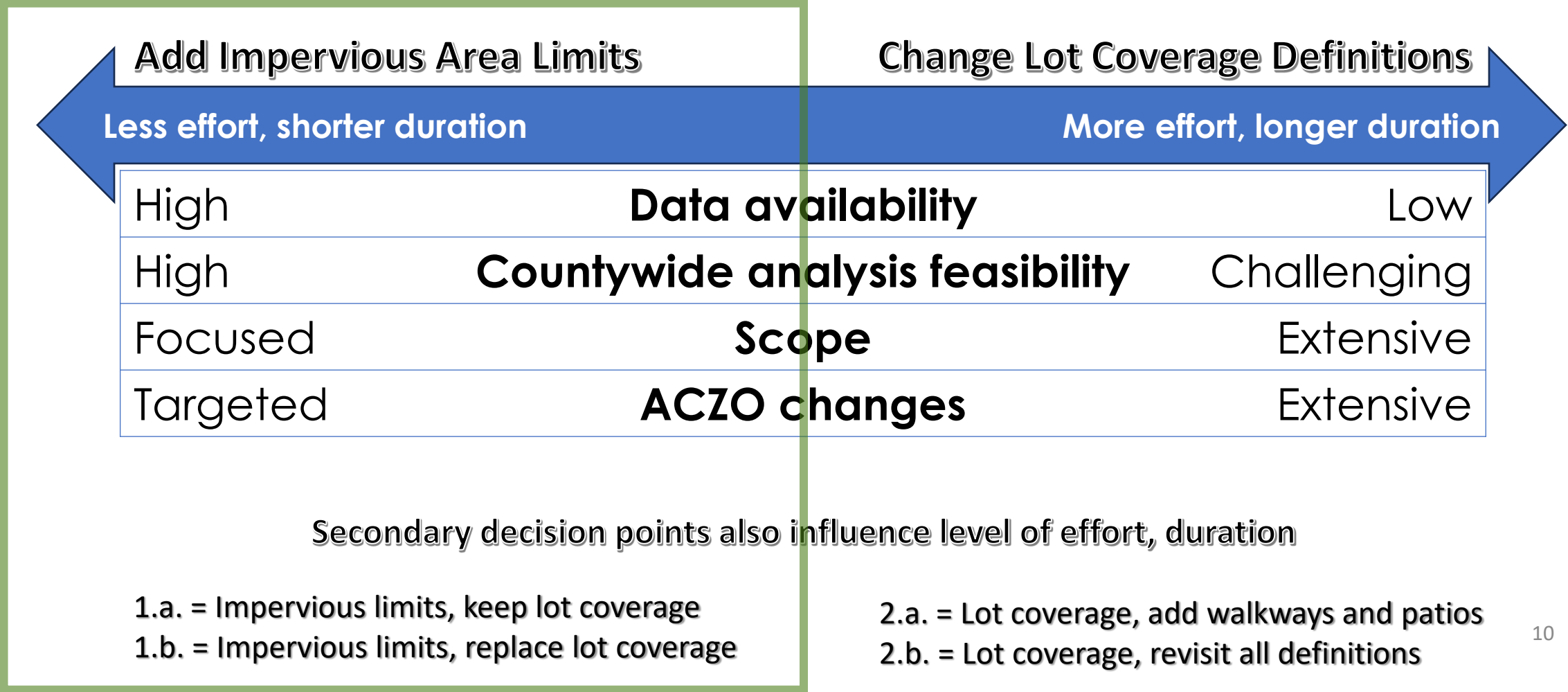
*Pervious paving materials are

- Regulated as impervious area under Arlington County Code Ch. 60
- Counted towards impervious area for the Stormwater Utility Fee
- Eligible for credits available under both programs when certain requirements/standards are met

Photo Source: [cbreim.com](#)

County Board Direction

Evaluation of Anticipated Level of Effort / Duration of Study



County Board Direction

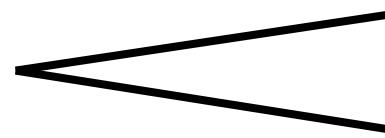
Board Charge – February 25, 2025

Two Potential Primary Pathways of Study

County Board Direction to Staff

1.

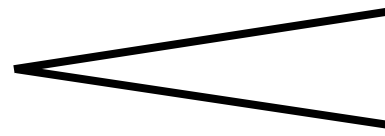
Add New Impervious Area
Limits in ACZO



- a. Keep lot coverage standards
- b. Remove lot coverage standards

2.

Change the ACZO
Definition of Lot Coverage



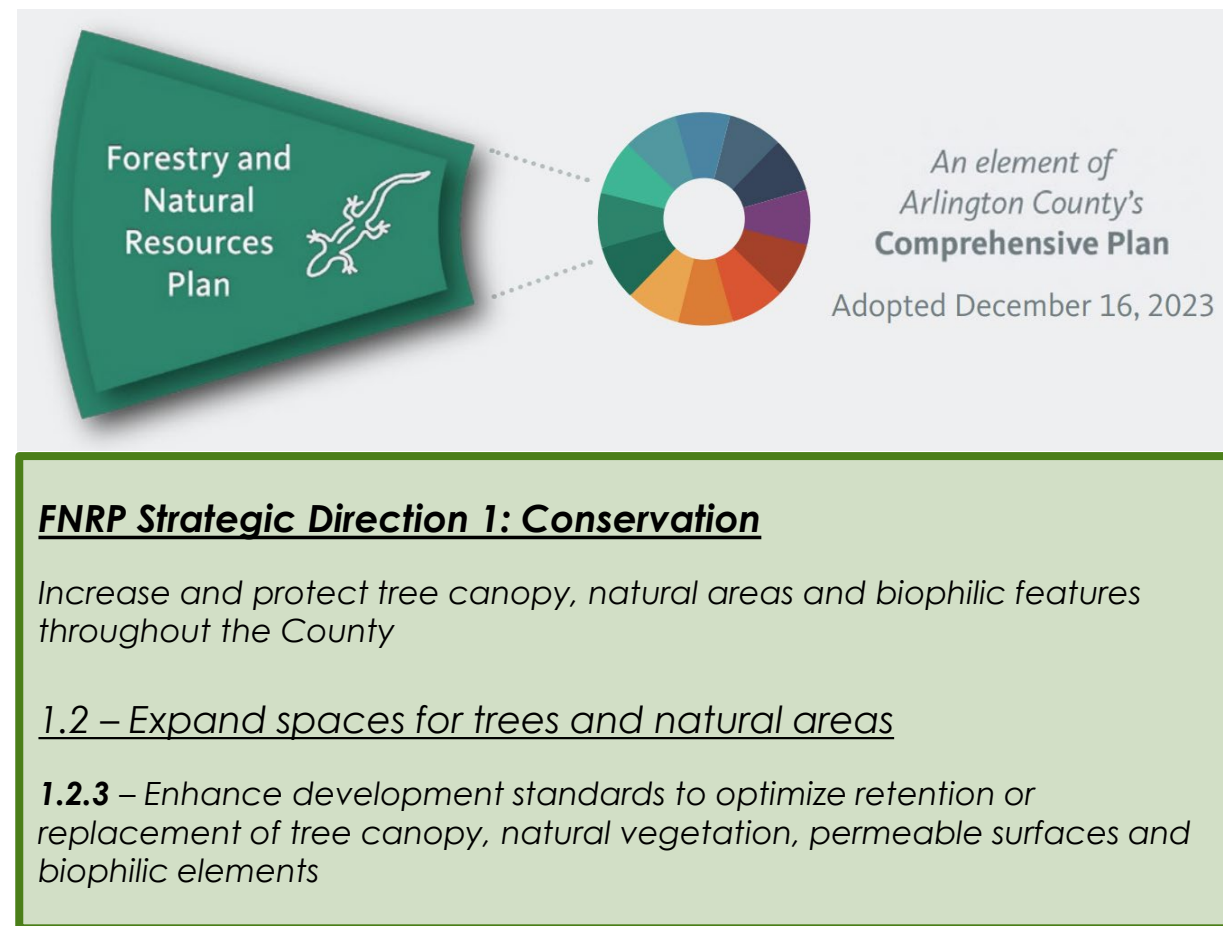
- a. Only add walkways and patios
- b. Fully review / revise lot coverage definition

Why is the County doing the Low Residential Study?

To implement the 2023 Forestry and Natural Resources Plan (FNRP)

Board's LRS Charge

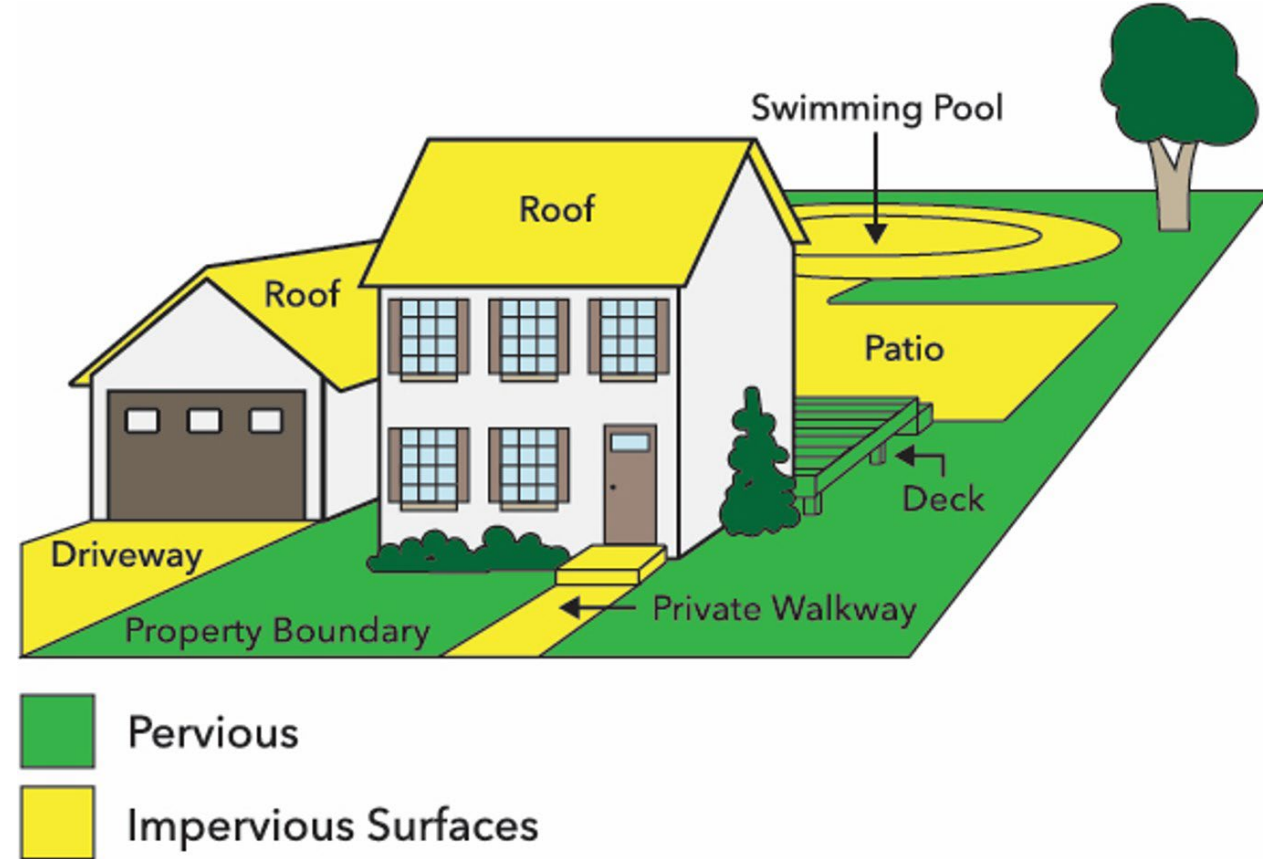
"Recent updates to [the FNRP] have called for review and adjustment of how the County regulates by right development activity. The primary goal of these recommendations is achieving better environmental outcomes."



Why is the County doing the Low Residential Study?

Existing regulations do not effectively limit new impervious area

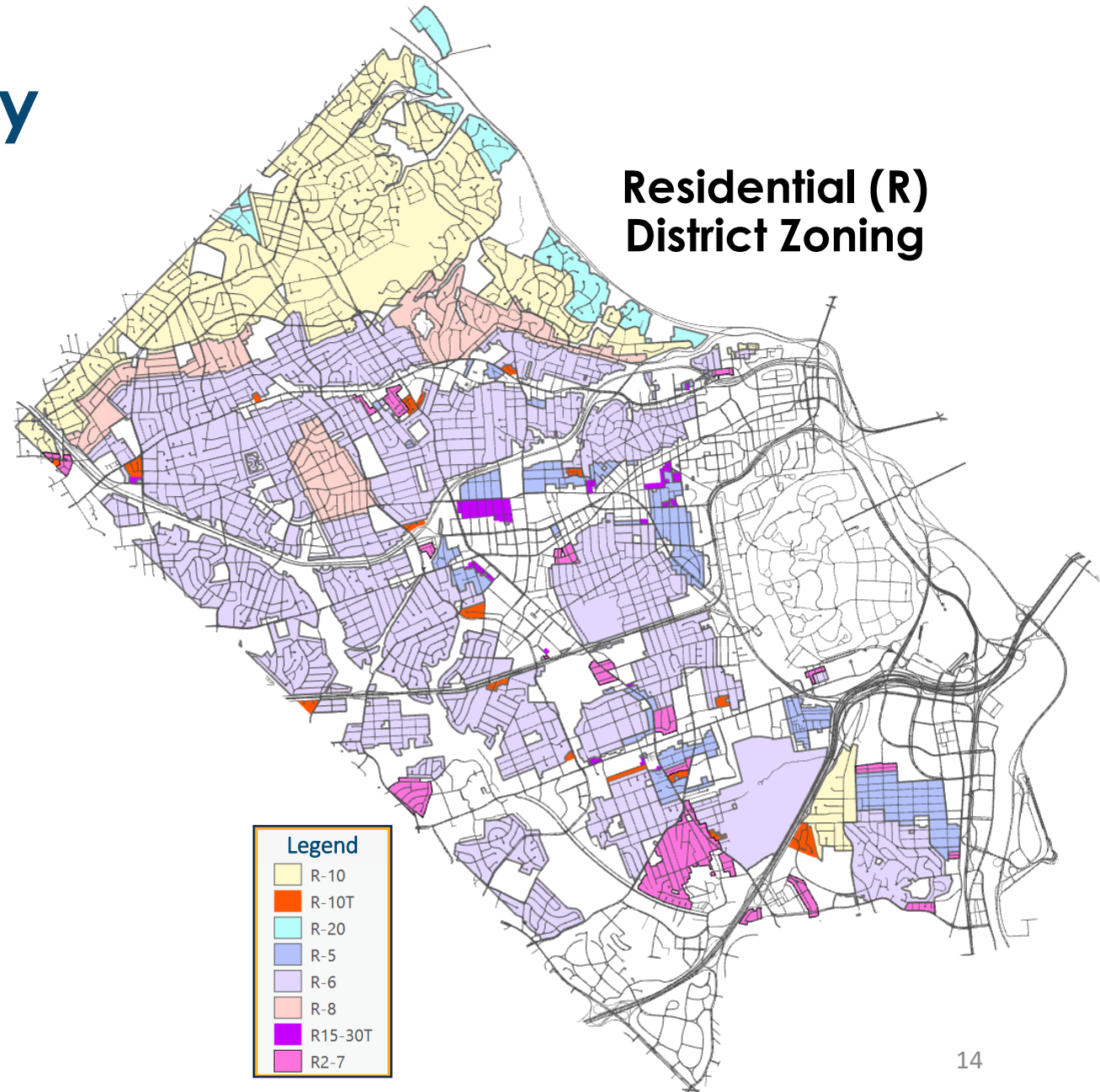
- During redevelopment, stormwater treatment is only required for new impervious area
- Limited only to construction projects that disturb more than 2,500 sq. ft. of land
- “Lot coverage” requirements exclude most walkways and patios



Why focus on lower density residential areas?

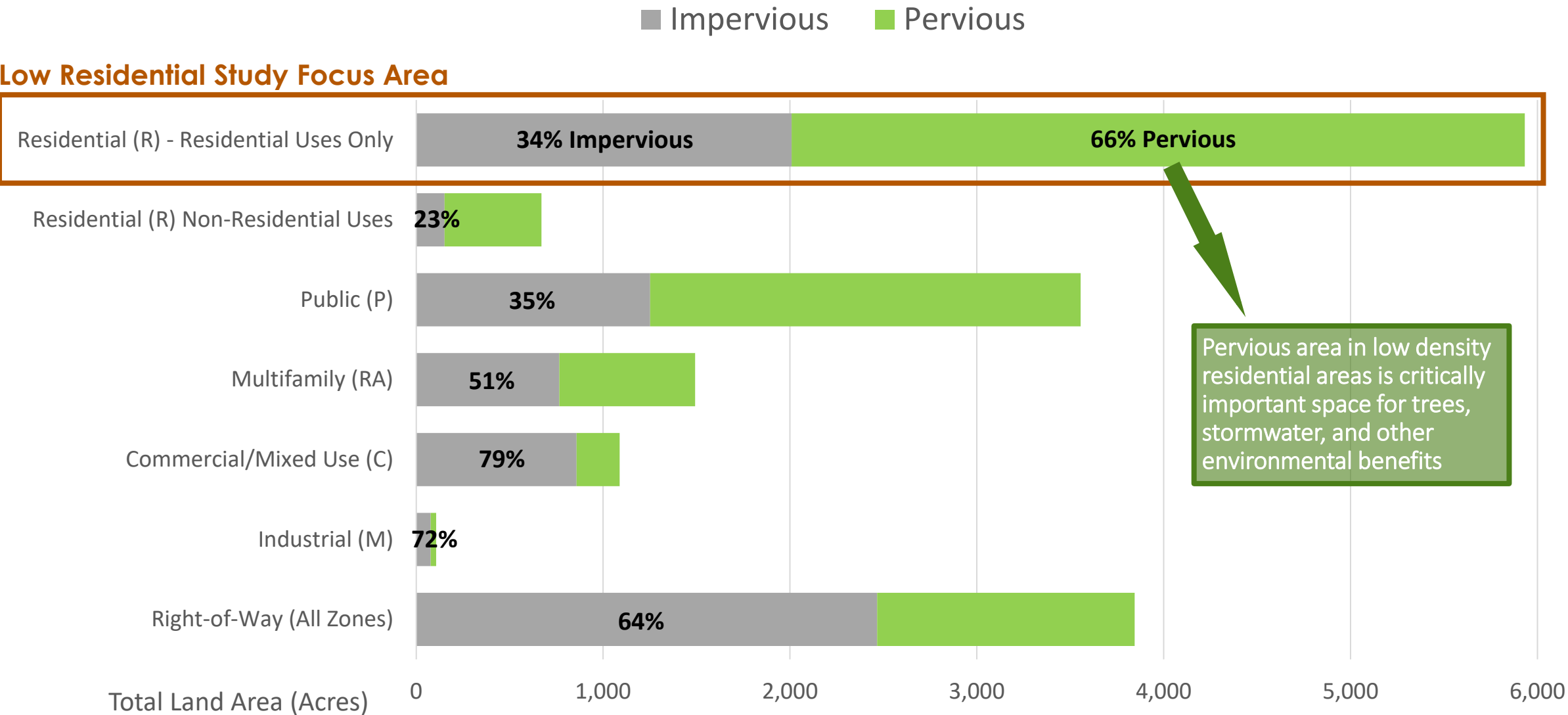
- Accounts for approx. **49%** of Arlington
- Impervious area increase occurring mostly in these areas
- Property owners have experienced stormwater damage and tree canopy loss

The County's ability to effectively manage stormwater and grow its tree canopy **must** account for development trends in lower density residential areas.

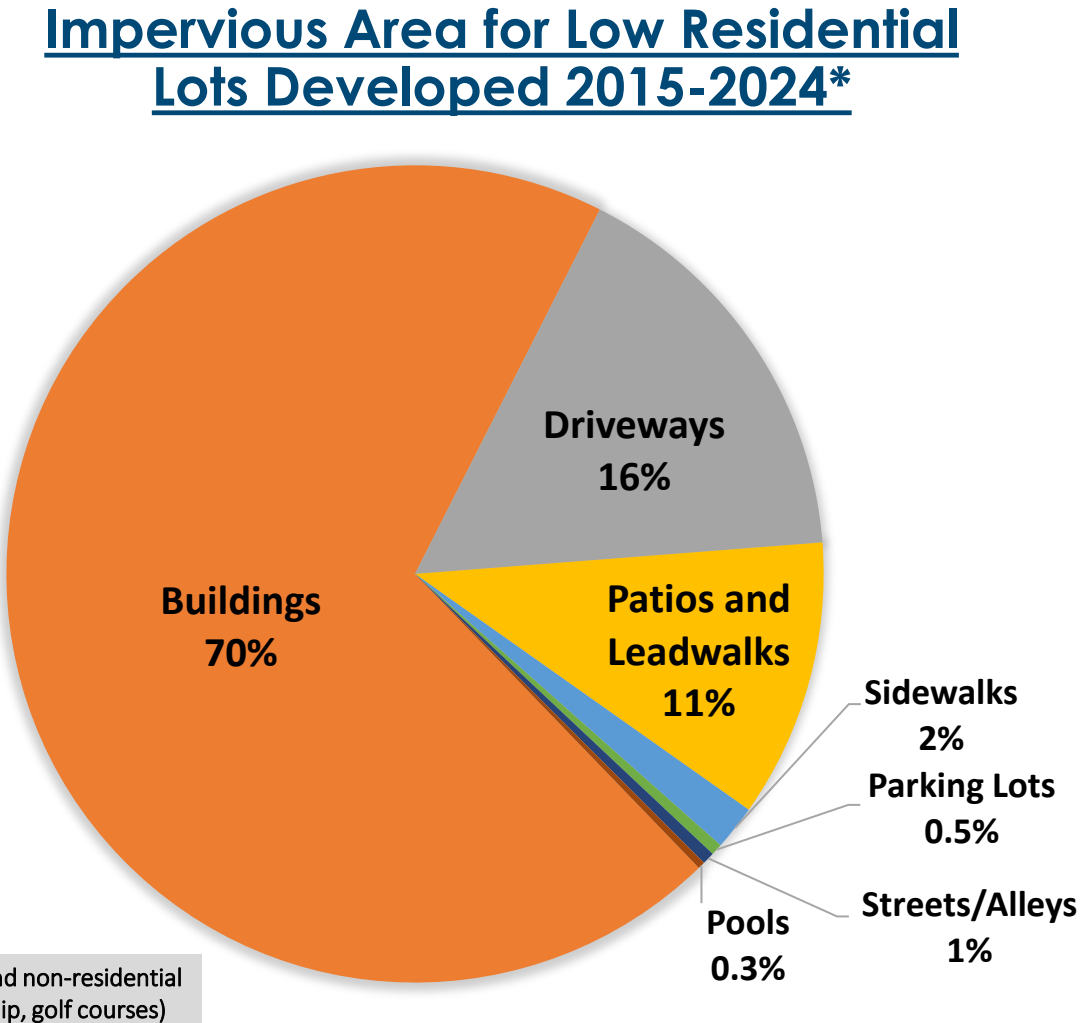
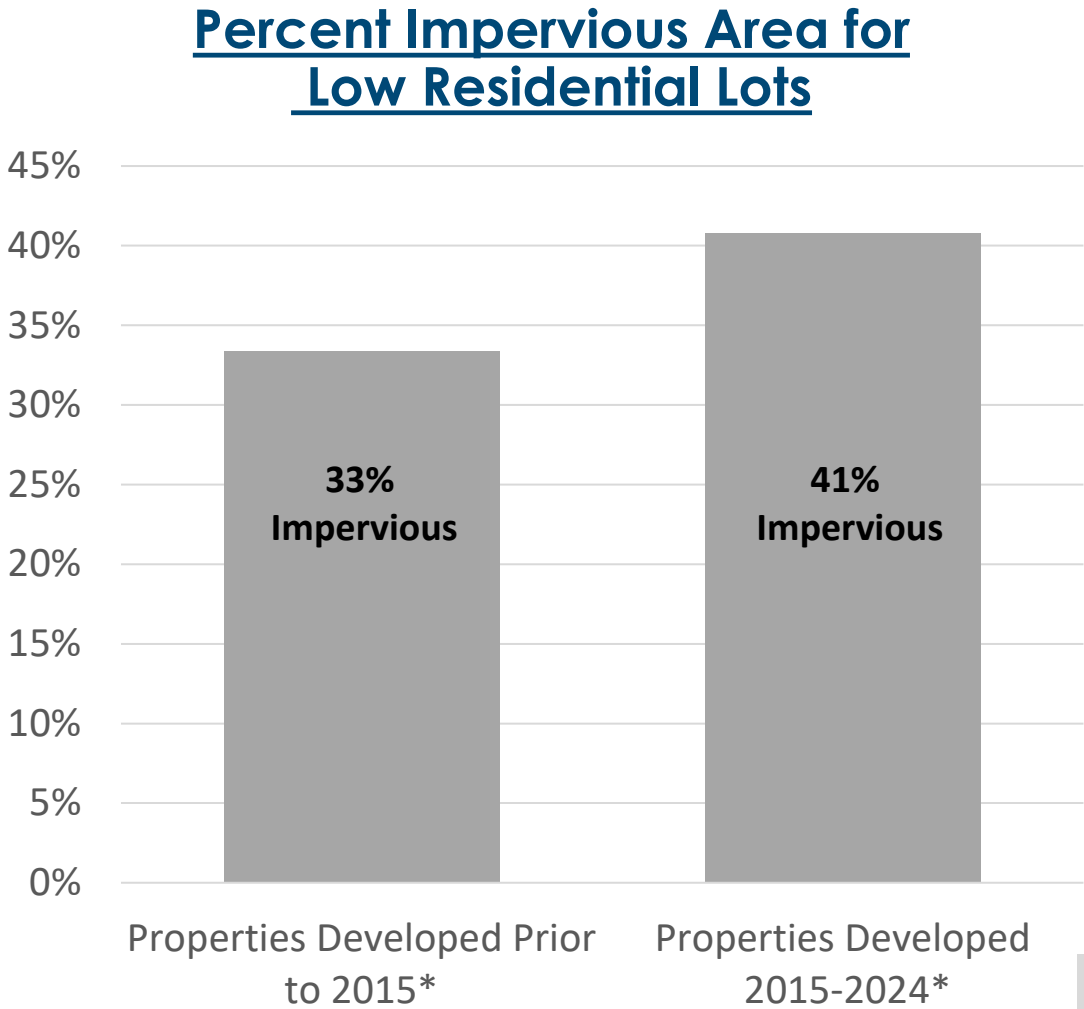


Arlington's Impervious Area by Zoning Category

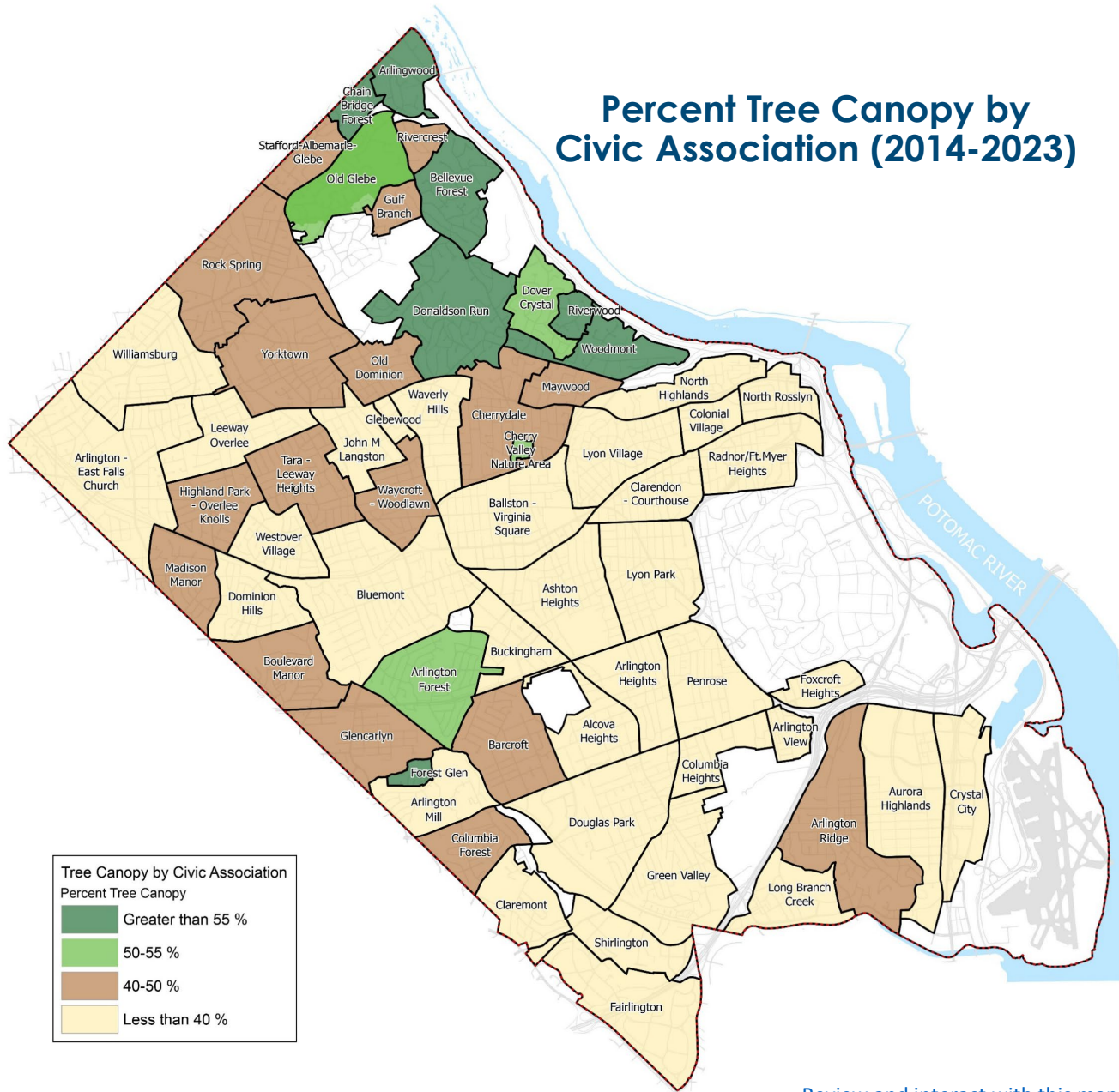
Learning about Low Residential Areas



Low Residential Development Built in the Last Ten Years Has More Impervious Area



Percent Tree Canopy by Civic Association (2014-2023)



[Review and interact with this map's data on the County's website](#)

Low density residential areas' importance in achieving 40% tree canopy Countywide

50-55% Tree Canopy: Metropolitan Washington Council of Governments (MWCOC) recommendation for low to medium density residential areas

- Certain areas and land uses have limited space to support 40% canopy coverage, including denser Metro corridors, federal facilities and Reagan National Airport.
- Others, like low density residential areas, have existing tree canopy and plantable space in excess of 40% and contribute more to Arlington's overall canopy coverage.

Key Takeaway: Existing lots will need to **conserve** existing trees and **plant** new ones.

The importance of pervious areas for trees

- In our region, tree roots grow primarily in the top 2-3 ft. of soil, with most roots in the top 6 in.
- Tree roots cover an extensive area. These roots often grow far beyond the edge of the canopy (the dripline).
- Large mature trees need **at least 400 square feet** of soil to grow to maturity, with soil at 3 ft. depth
- Not all pervious space on a lot can support trees. This space often gets broken up with paths, buildings, sheds, and patios, which limit a lot's potential to grow tree canopy.
- Trees must be planted 10 ft from buildings, and 5 ft from pavement

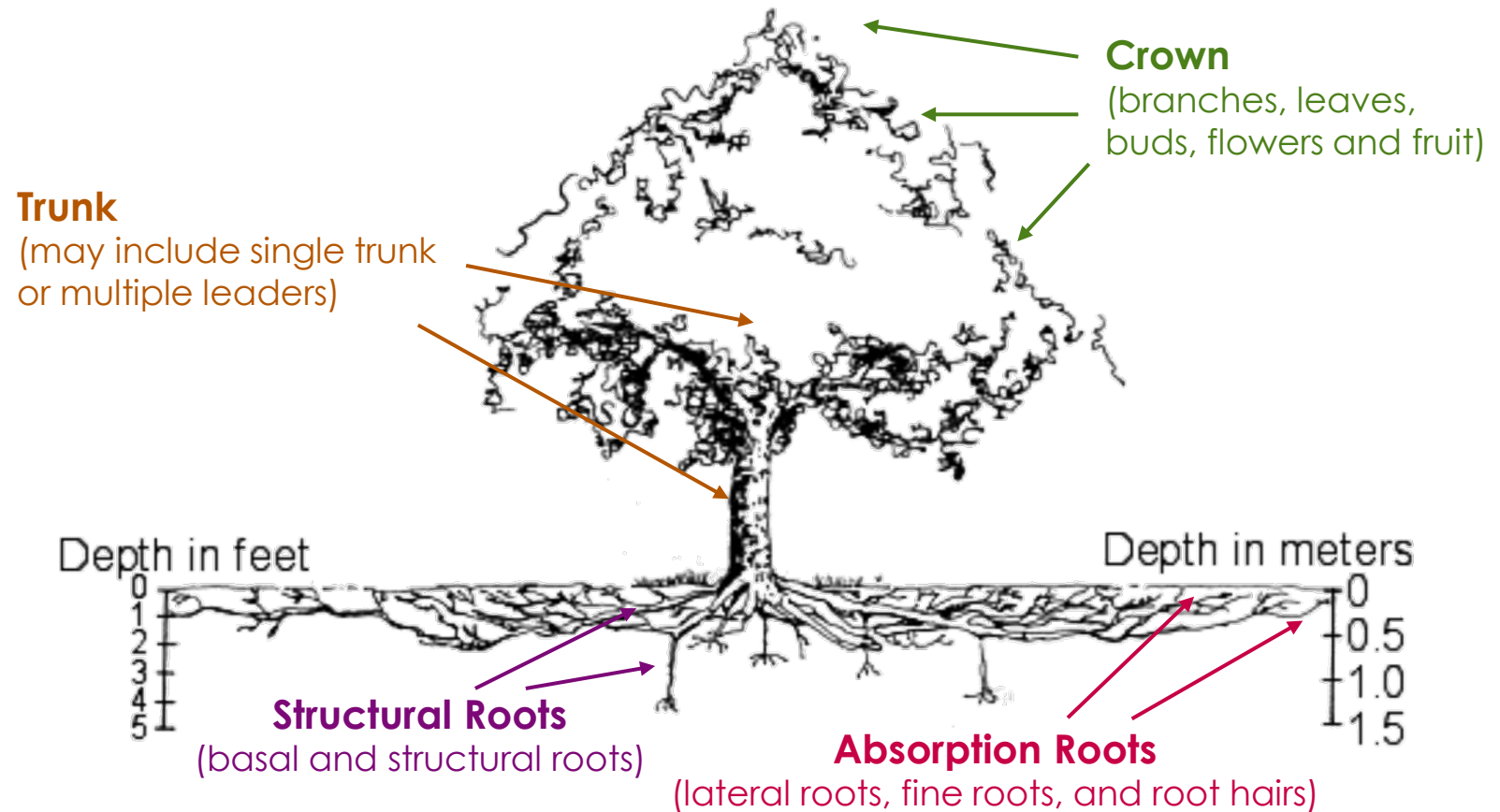


Figure 1. Diagram of a 'typical' root system

Get the **LOW DOWN** on the **LOW RESIDENTIAL STUDY**

Arlington County is evaluating how to limit impervious surfaces on lots in low density residential neighborhoods to support better stormwater and tree canopy outcomes.

Why Impervious Area Limits?

Despite Arlington's existing lot coverage and stormwater management regulations, impervious area is increasing Countywide. The majority of this increase is happening in low density residential neighborhoods in Arlington.

Why it Matters

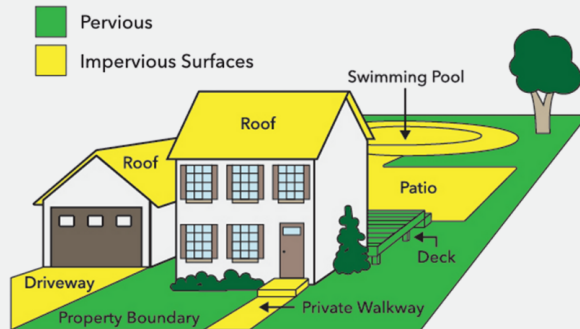
Impervious area increases the risk of flooding and extreme heat, which are the two most dangerous weather threats facing Arlington today. Increased impervious cover reduces space for tree planting, making it difficult to meet Arlington's 40% tree canopy goal.

County Goals

To help mitigate these risks and improve climate resilience, Arlington's County Board is considering the adoption of a maximum impervious area requirement in lower density, residentially zoned areas.

This would help support Arlington's goals to:

- Improve stormwater management
- Expand Arlington's tree canopy



The timeframe for the study is fall 2025 through winter 2026. We hope to see you at one of the community events, online sessions or in-person events to learn more about the study and provide your feedback!

Where can I learn more about LRS? How can I participate?

- Attend the upcoming [Open House](#) on **November 13**
 - DPR Trades Center Conference Room
 - 2700 S. Taylor St. | Arlington, VA 22206
- More community events to be announced in 2026
- Review the Board's charge and Project Plan on the [Low Residential Study website](#)
- Subscribe to either of these e-newsletters
 - [Planning + Building eNews](#)
 - [Stormwater Utility Updates](#)



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Learn more at
arlingtonva.us/lowresidentialstudy
or scan the QR code:



LRS Phase 1 Engagement

Involve level

Communicate, Consult & **Involve**

Share how concerns/views were reflected in analyses and/or solutions and designs developed; share how inputs influenced the final decision or project.

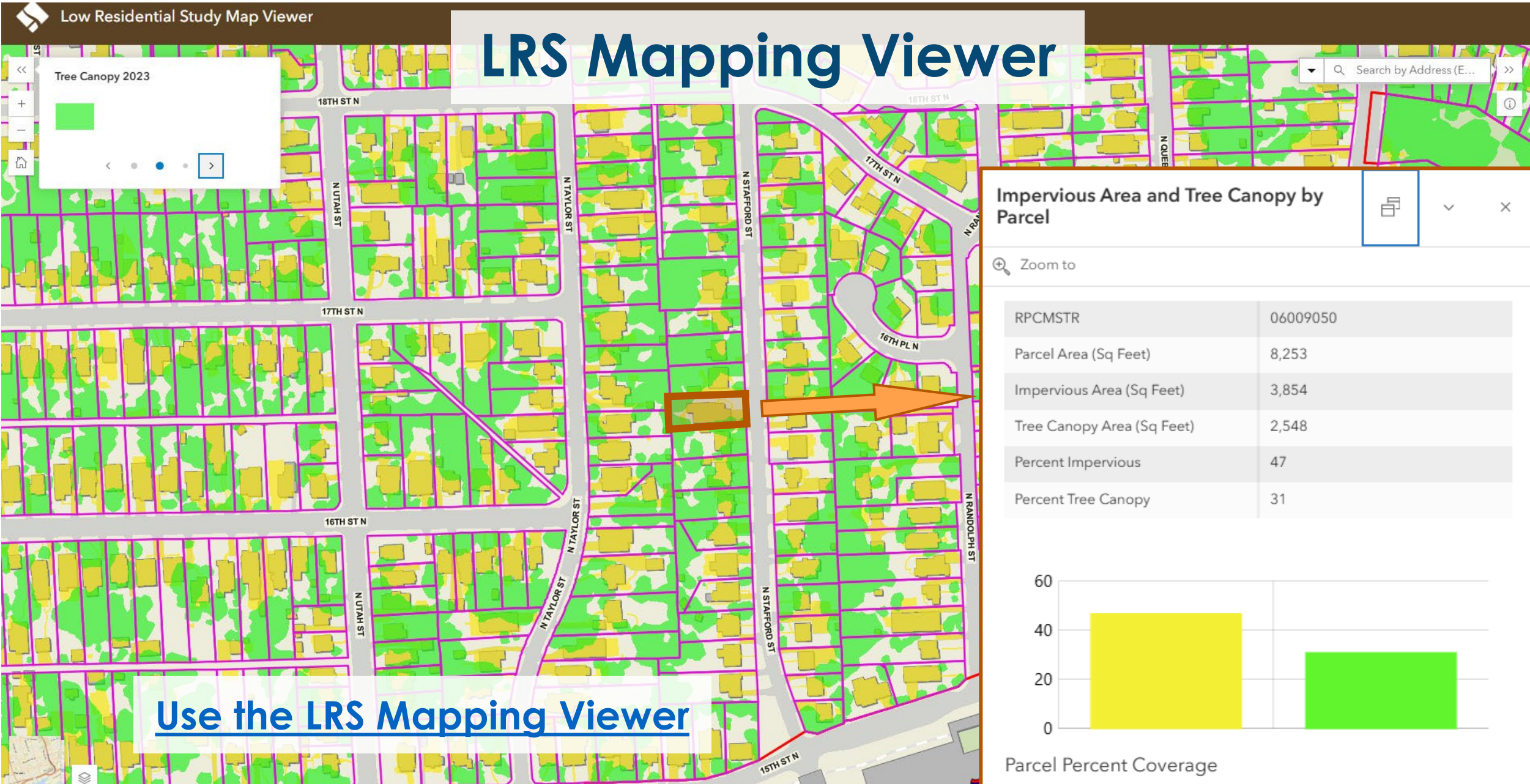


- ✓ Aug. 15-17 – Poster at County Fair
- ✓ Sept. 5 – Virtual Q&A
- ✓ Sept. 13 – Booth at Rock N Recycle Open House
- ✓ Sept. 14 – Booth at Green Community Garden Tour
- ✓ Sept. 16 – Briefing at County Board Recessed Meeting
- ✓ Sept. 19 – Virtual Q&A
- ✓ Sept. 20 – Booth at Green Valley Day
- ✓ Oct. 4 – Booth at Westover Day
- ✓ Oct. 20 – Open House (Lubber Run CC – Oak Room)
- ✓ Oct. 29 – Long Range Planning Committee (LRPC) + FNRC/C2E2 liaisons
- **Nov. 13 – Open House** (DPR Trades Center Conf. Room)
- Online version of open house





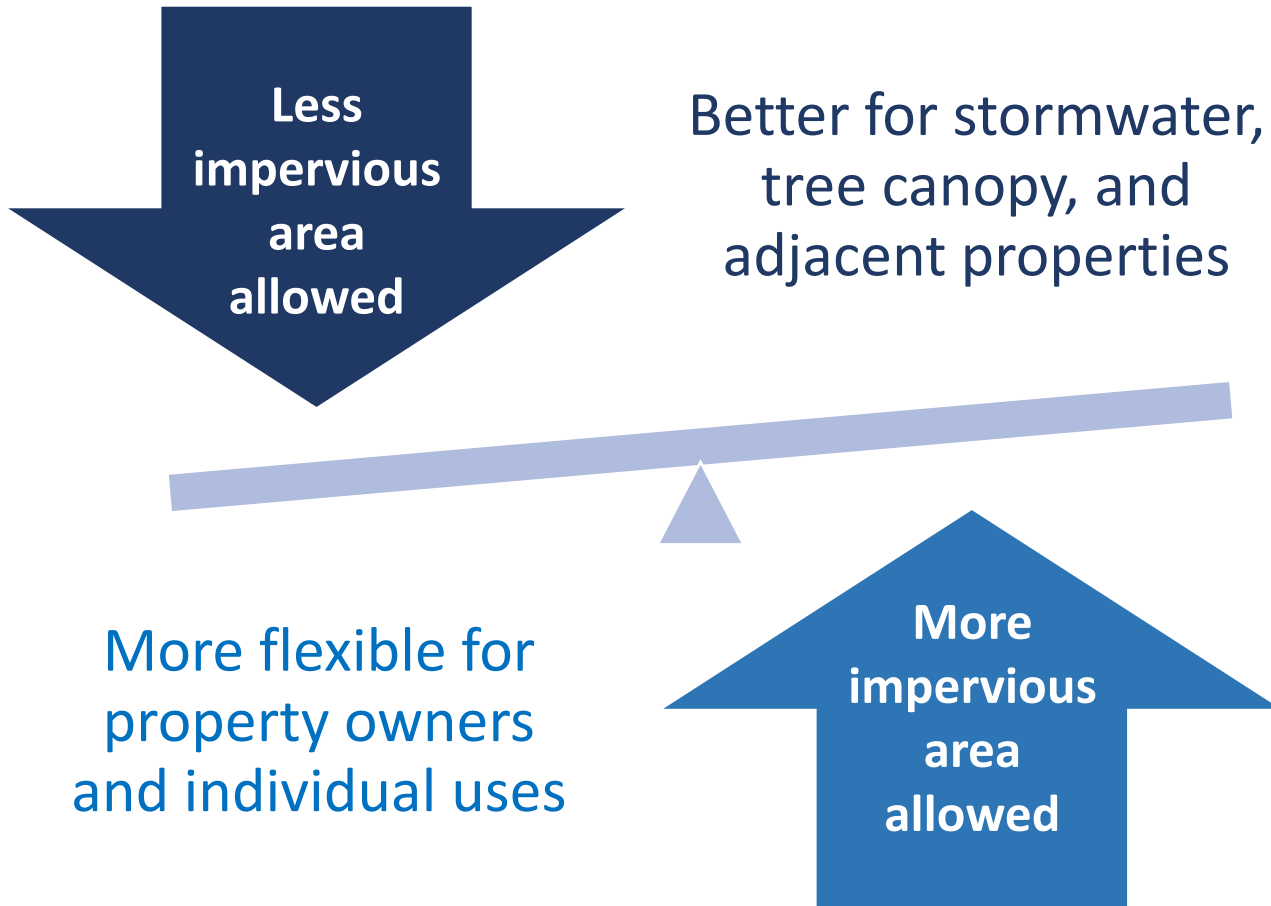
LRS Mapping Viewer



Use the LRS Mapping Viewer

Balancing Two Primary Considerations

Looking ahead to Phase 2



- Project team will develop options for max. IA limits and consider plantable area minimums
- Project team **and** the public will compare the options
 - Comparison will be rooted in criteria from Board's charge
 - Multiple public engagement opportunities will occur in Phase 2
- Options will be presented to LRPC with C2E2/FNRC designees
 - Project team will also brief C2E2 and FNRC

Phase 2 Anticipated Outcome

- **County Board determines preferred approach to be advanced into Phase 3**

Questions?



2023 Forestry and Natural Resources Plan (FNRP)

FNRP Strategic Direction 1: CONSERVATION

INCREASE AND PROTECT TREE CANOPY, NATURAL AREAS AND BIOPHILIC FEATURES THROUGHOUT THE COUNTY

1.2 – EXPAND SPACES FOR TREES AND NATURAL AREAS

1.2.3* – Enhance development standards to optimize retention or replacement of tree canopy, natural vegetation, permeable surfaces and biophilic elements

○ 1.2.3.1 BY RIGHT DEVELOPMENT

• Actions

- Continue efforts underway (e.g., through the new LDA 2.0 stormwater maintenance agreement provisions) to address the impacts of new impervious surfaces added after completion of LDA permits. This includes but is not limited to:
 - Requiring permits for new impervious surfaces
 - Updated lot coverage definitions (more below)

• For lot coverage, re-evaluate:

- What does and does not count as lot coverage from today's perspective and policy priorities, including stormwater management and maximizing plantable space. Additional considerations of this analysis should include:
 1. Whether to set a square footage cap on lot coverage in addition to the percentage cap.
 2. Whether to tie lot coverage regulations to a lot size rather than its zoning district

* Designated as one of the FNRP's Priority Actions

Remains in FNRP, but
excluded from the Board's
LRS charge

2023 Forestry and Natural Resources
Plan (FNRP) Countywide Goal

40%

Total Tree Canopy within Arlington
County (2023)

35.2%



An element of
Arlington County's
Comprehensive Plan
Adopted December 16, 2023



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What is lot coverage?

Lot coverage is a zoning regulation which limits how much of a lot can be covered by certain structures and surface materials.

$$\frac{\text{Covered lot area}}{\text{Total lot area}} = \text{Maximum lot coverage (\%)}$$

How lot coverage works

For one-family dwellings ([§3.2.5.A.](#))

- Two requirements must be met:
 1. A maximum coverage limit for the entire lot; and,
 2. A separate maximum coverage limit for the lot's main building footprint that's included in the lot's total coverage calculation
- **“Main building footprint”** includes all parts that rest on the ground, such as:
 - Attached garages
 - Bay and oriel windows with floor space
 - Chimneys
 - Porches
 - Decks with floor heights $\geq 4'$ above finished grade
 - Balconies with $\geq 4'$ horizontal projections
 - Covered breezeways connected to a main building

For other residential lots ([§3.2.5.B.](#))

- 56% max. lot coverage
- No separate limit for the main building

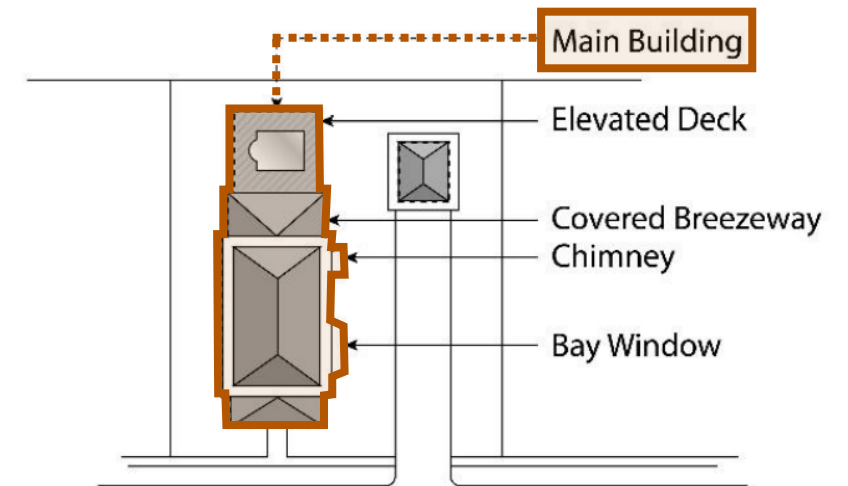
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Maximum Coverage Limits (\$3.2.5.A.)	R-5 R15-30T	R-6 R2-7 RA C M	R-8	R-10 R-10T	R-20
For the entire lot					
No porch, no detached garage	45%	40%	35%	32%	25%
Has a ≥60 sq. ft. porch on the front elevation (exclusive of any wrap around or side portion)	48%	43%	38%	35%	28%
Has a detached garage in the rear yard	50%	45%	40%	37%	30%
Has both a porch <i>and</i> detached garage	53%	48%	43%	40%	33%
For the main building footprint					
No porch	34% -or- 2,380 sq. ft.	30% -or- 2,520 sq. ft.	25% -or- 2,800 sq. ft.	25% -or- 3,500 sq. ft.	16% -or- 4,480 sq. ft.
Has a ≥60 sq. ft. porch on the front elevation (exclusive of any wrap around or side portion)	37% -or- 2,590 sq. ft.	33% -or- 2,772 sq. ft.	28% -or- 3,136 sq. ft.	28% -or- 3,920 sq. ft.	19% -or- 5,320 sq. ft.

Main Building Footprint Coverage Example



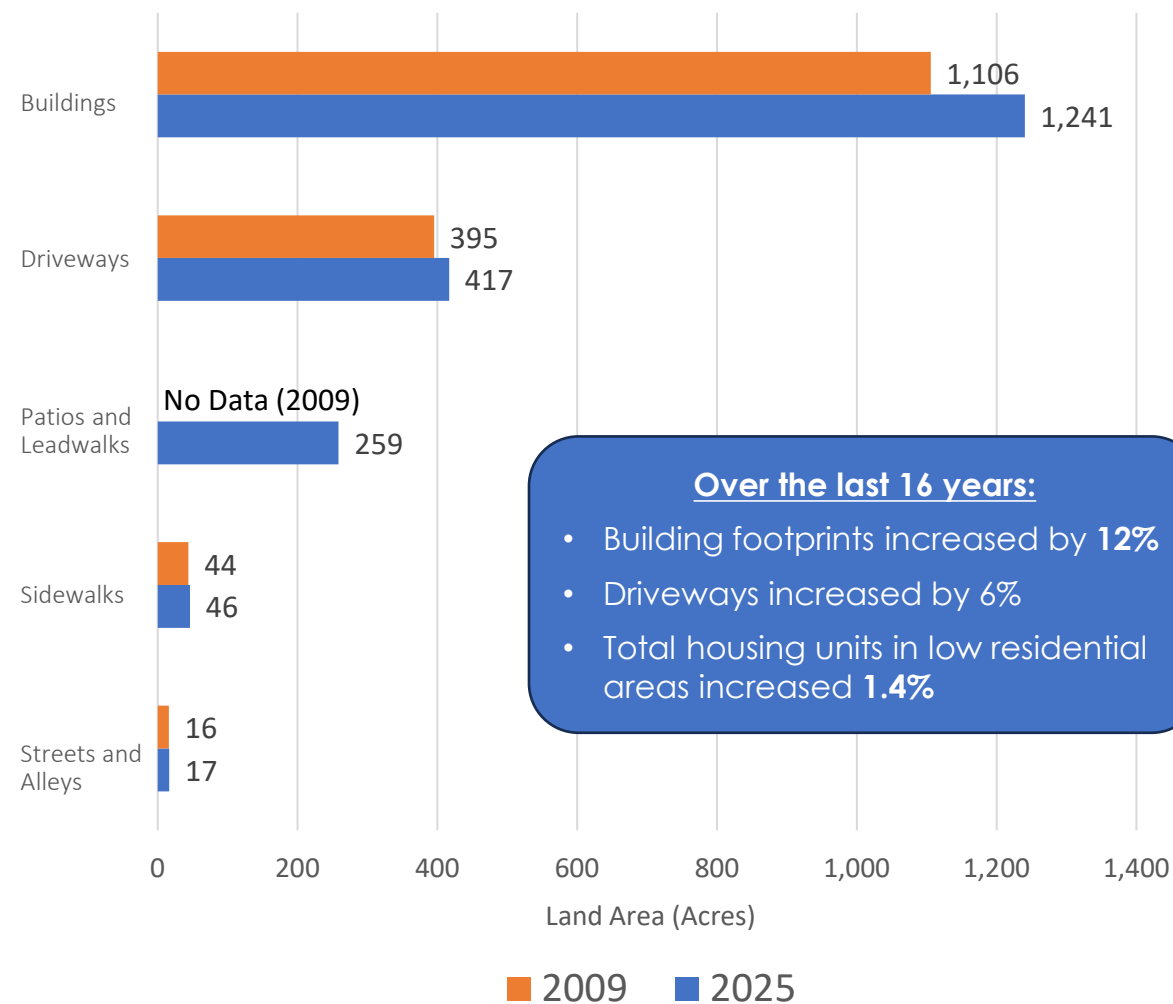
The County Board directed staff to **not** recommend changes to existing maximum main building footprint limits.

Thus, staff will **not** be recommending the removal of or any amendments to these regulations.

Trends in Impervious Area for Arlington's Low Density Residential Neighborhoods

*Excludes right-of-way and non-residential uses (e.g. places of worship, golf courses)

Impervious Area Change* (2009-2025)



Impervious Area* in Selected Zoning Districts (2025)

