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Alachua County Pavement Management Program BoCC Policy Meeting

Determining the impact of weighting project selection to Areas of Inequity

April 4, 2023

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Inequity Area Development

Chris Dawson, AICP
Transportation Planning Manager
Growth Management

April 4, 2023

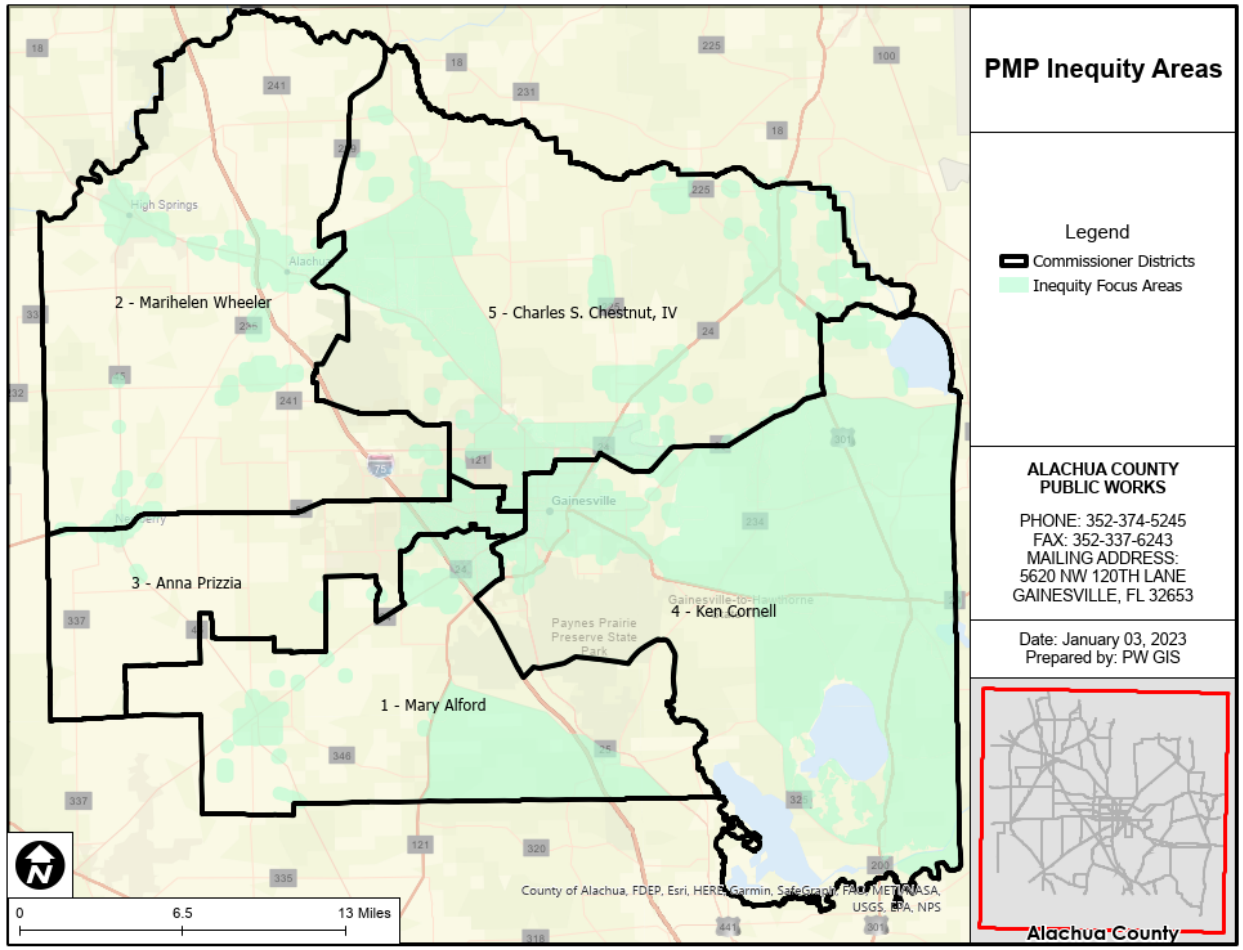
Inequity Area Development

- **Board Direction to develop a metric to evaluate equity in the pavement management program**

- **Staff utilized three metrics to identify Inequity Areas:**
  - U.S. Housing and Urban Development Qualified Census Tracts
    - 50 percent of households with incomes below 60 percent of the Area Median Gross Income (AMGI) OR
    - have a poverty rate of 25 percent or more
  - Census Tracts with Median Income <185% of Federal Poverty Guideline
  - Properties with residential improvement values in the bottom 20% of all values
    - Added a buffer of 1,320 ft.

- **Population in Inequity Area:**
  - 2020 Population is just less than 90,000, or about 1/3 of County Population
  - Includes both incorporated and unincorporated residents

Inequity Focus Area Maps



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Overall Parameters

April 4, 2023

PMP Analysis Overview

Baseline Scenario (Previous)

- Includes CIP Approved Projects for 2023
- Includes NE/NW 53 Avenue (US 441 to SR 24)
- Use the original Area of Inequity map (Properties with residential improvement values in the bottom 20% of all values)
- Use 40% benefit weighting to Inequity Areas
- Includes 3% Cost Inflation each year of the analysis
- No funds analyzed for Residential roads
- Pavement Preservation budgets @ 3% of revenue, capped at $500,000 per year

PMP Analysis Overview

Baseline Scenario (March 7, 2023)

- **All conditions of previous slide.**
- **With $200k Residential Roadways within Areas of Inequity**

Run scenarios with the same total budget but adjust allocations so that:

- **$500k / year increase to Residential Roadways within Areas of Inequity**
- **$750k / year increase to Residential Roadways within Areas of Inequity (Yields the Best Results)**
- **$1M / year increase to Residential Roadways within Areas of Inequity**

PMP Analysis Overview

Run scenarios increasing the total budget by allocating the additional budget to Residential Roadways within Areas of Inequity for:

- **$1M / year increase to Residential Roadways within Areas of Inequity**
- **$3M / year increase to Residential Roadways within Areas of Inequity**
- **Gradient Increase $1M to $5M / year increase to Residential Roadways within Areas of Inequity**
  - **Note: BoCC instructed $500k, $750k & $1M, but no noticeable difference was detected**

Run what-if scenarios setting a target minimum PCI of 53 for the High-Volume roads to determine the funding reallocation needed to the Inequity Area Residentials that maximizes the PCI of those areas given the current total budget amounts.

- **$750k / year increase to Residential Roadways within Areas of Inequity (Yields the Best Results)**

PMP Analysis Overview

Additional Scenarios

- **Allocate additional revenue to overall budget with $750k designated to Residential Roadways within Areas of Inequity:**
  - **$1M / year increase to Residential Roadways within Areas of Inequity**
  - **$3M / year increase to Residential Roadways within Areas of Inequity**
  - **Gradient Increase $1M to $5M / year increase to Residential Roadways within Areas of Inequity**

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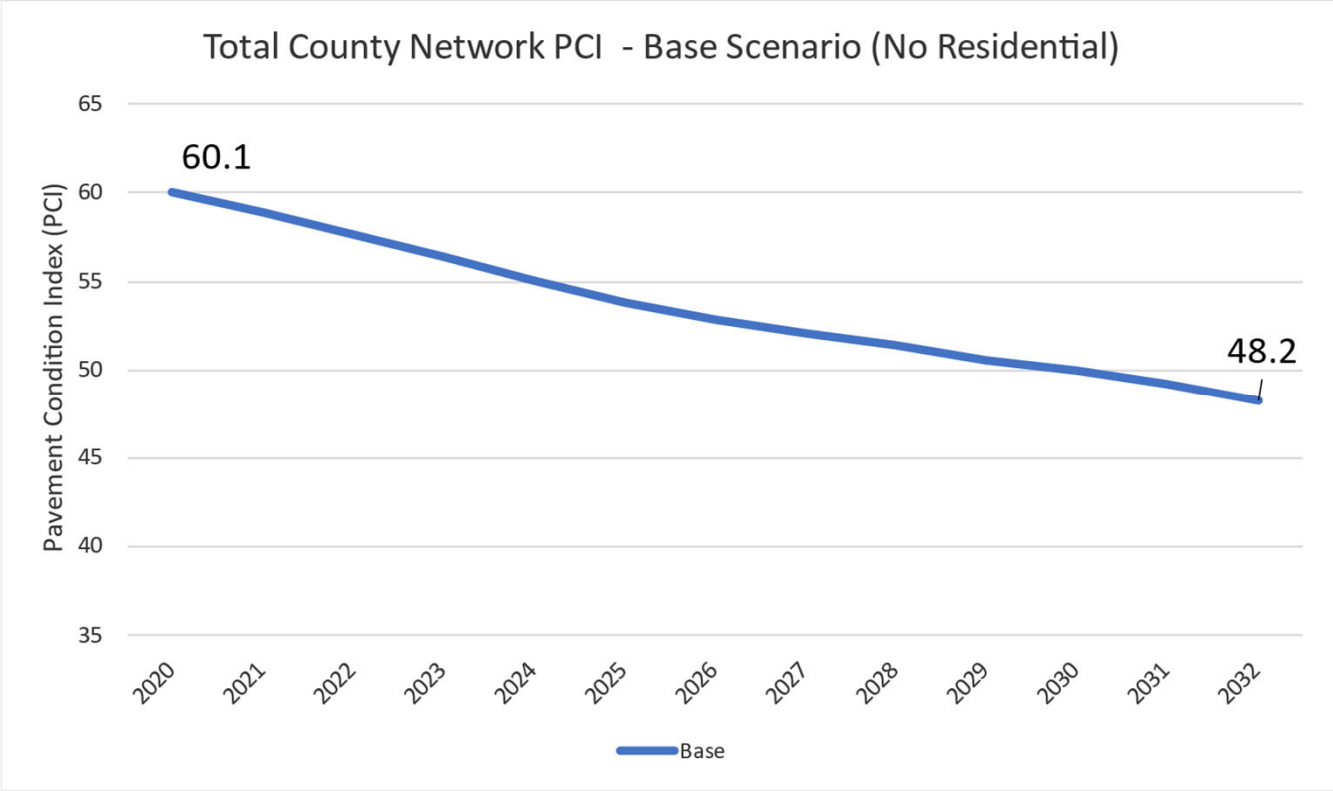
Analysis Results

April 4, 2023

Total County Network PCI

Base Scenario – 40% Inequity <u>No Residential (Low Volume) Funds</u>

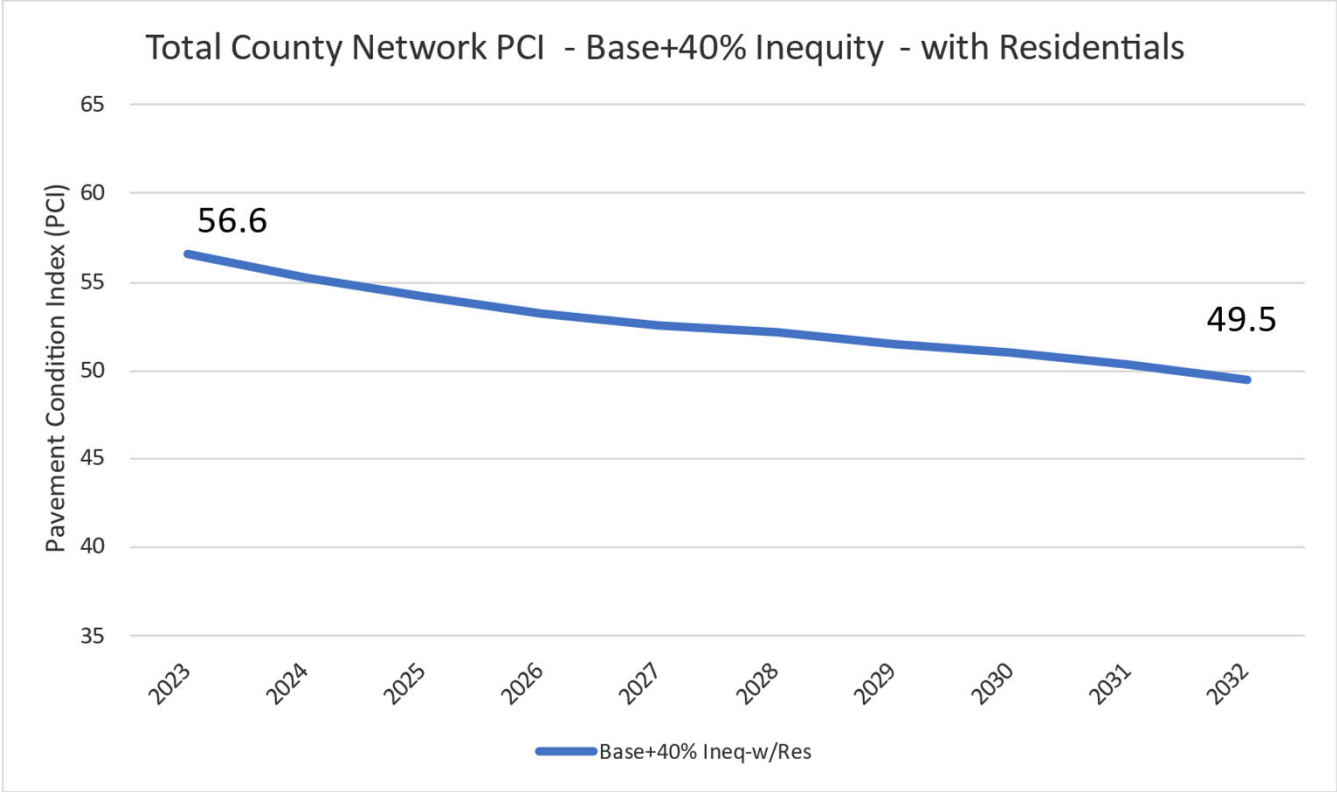


Total County Network PCI

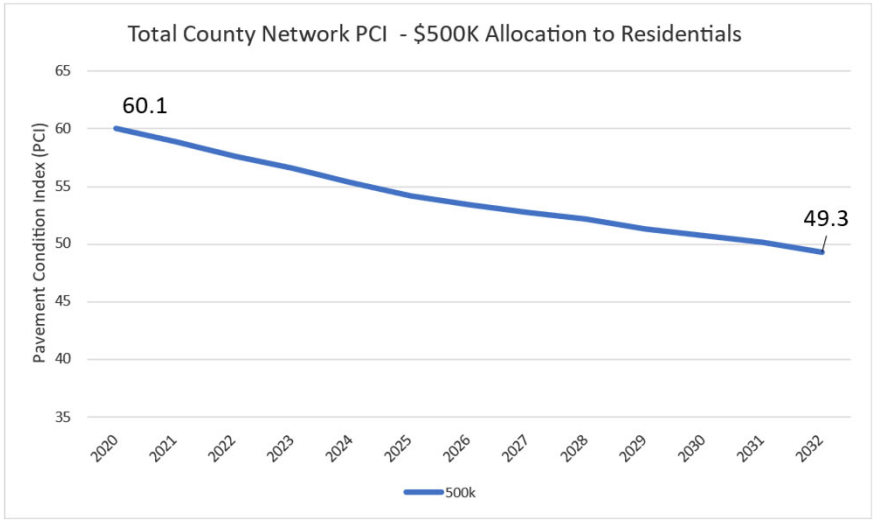
March 7, 2023

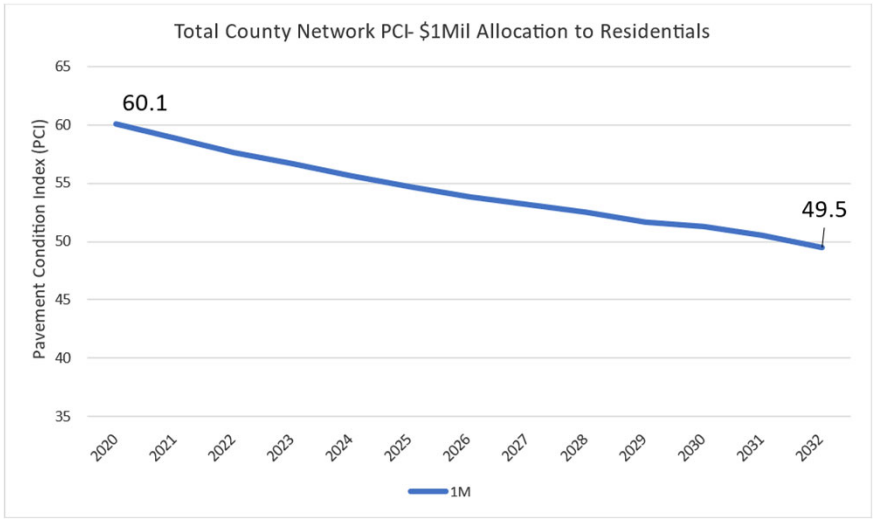
Total County Network PCI – Base + 40% Inequity – with $200k Residential Roads within Areas of Inequity

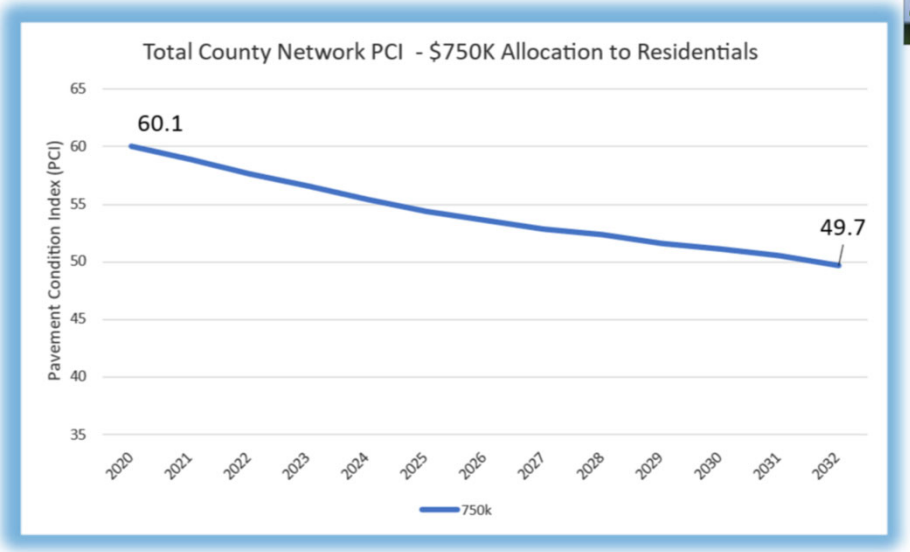
2020 PCI was 60.1



Total County Network PCI (Residential Roads within Areas of Inequity)





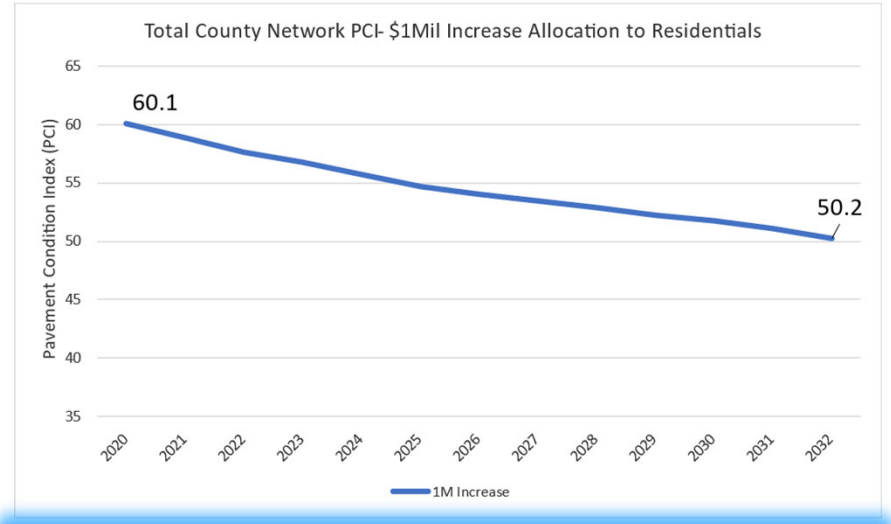


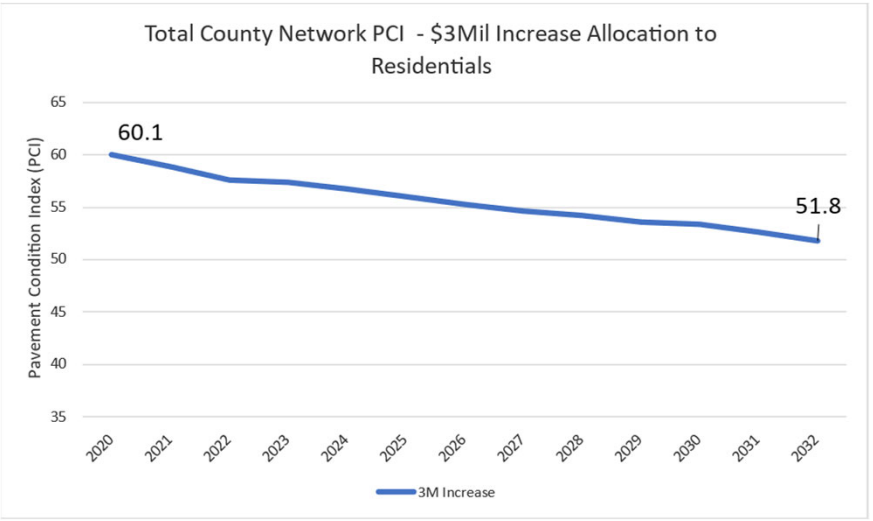
$750k / year increase to Residential Roadways within Areas of Inequity Yields the Best Results

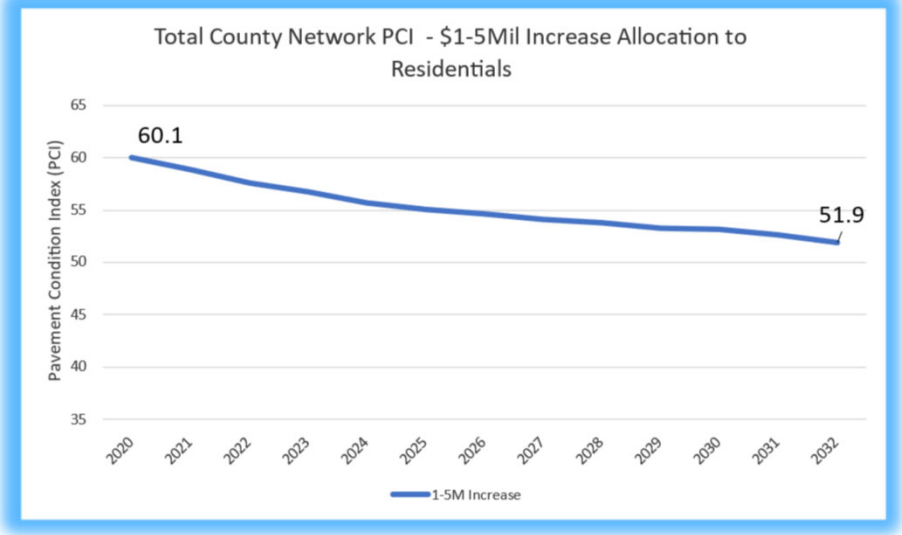
Base + 40% Inequity – with $200k Residential Roads within Areas of Inequity:

- **PCI = 49.5**

Total County Network PCI (Residential Roads within Areas of Inequity)







Full Allocation to Residential Roadways within Areas of Inequity:

- **$1M for 1st 3-Years**
- **$3M for 2nd 3-Years**
- **$5M for Next 4-Years**

Base + 40% Inequity – with $200k Residential Roads within Areas of Inequity:

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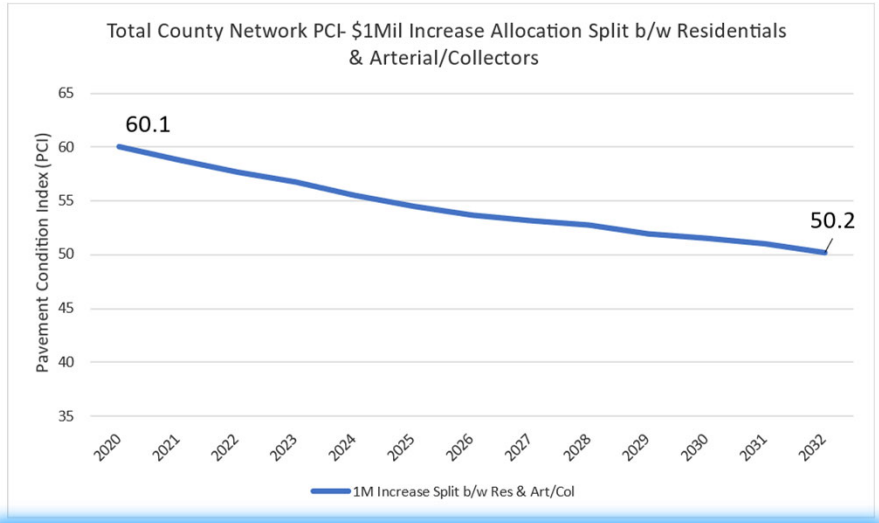
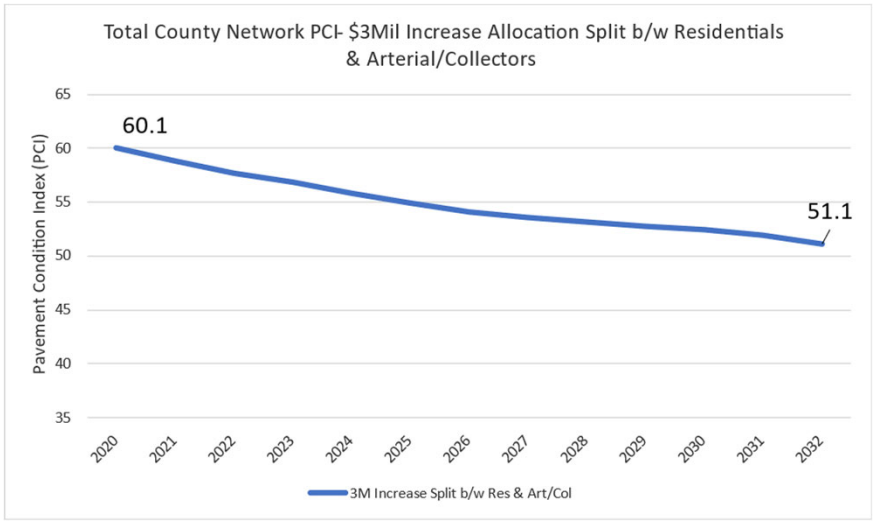
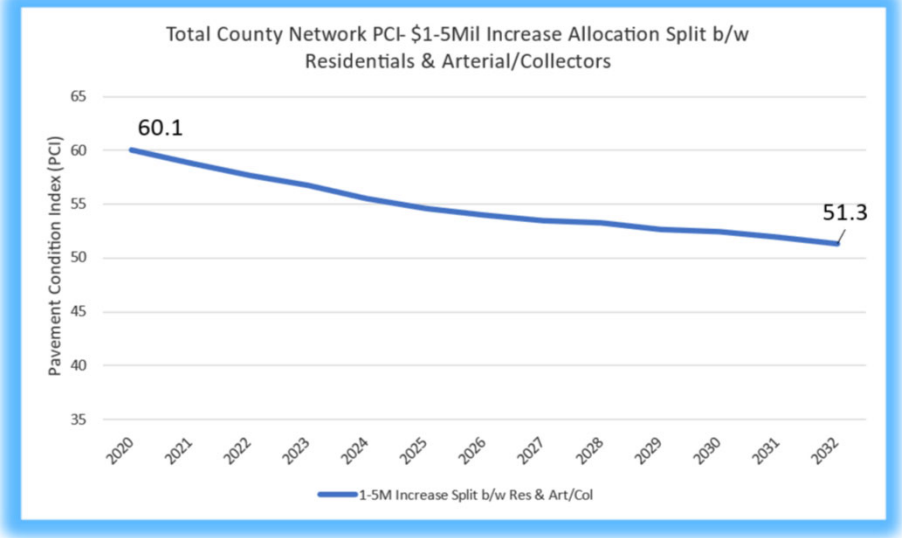
Total County Network PCI (Residential Roads within Areas of Inequity)







Allocate $750K to Residential Roadways within Areas of Inequity and Balance to Collectors / Arterials

- **$1M for 1st 3-Years**
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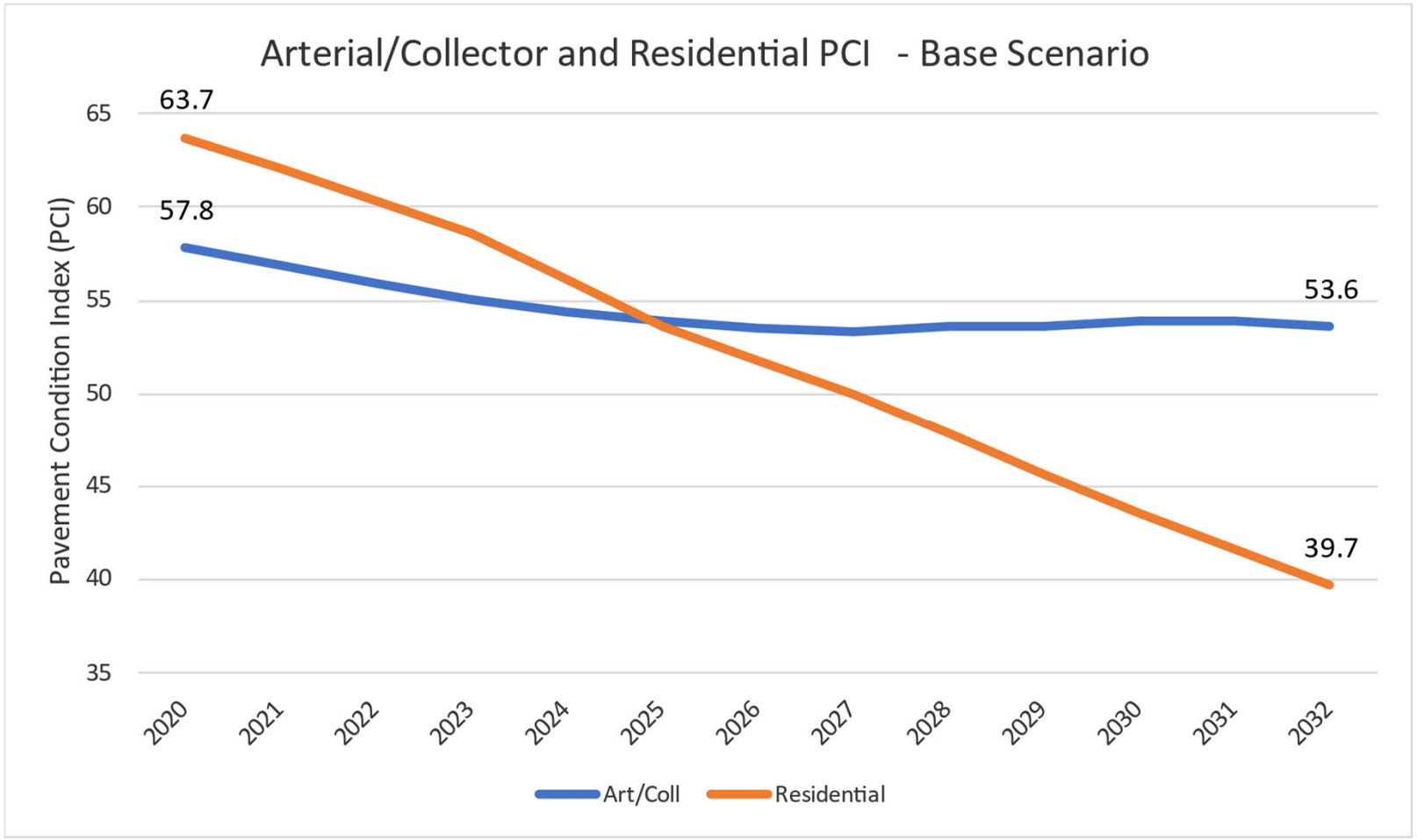
Network Pavement Condition Index (PCI) Results



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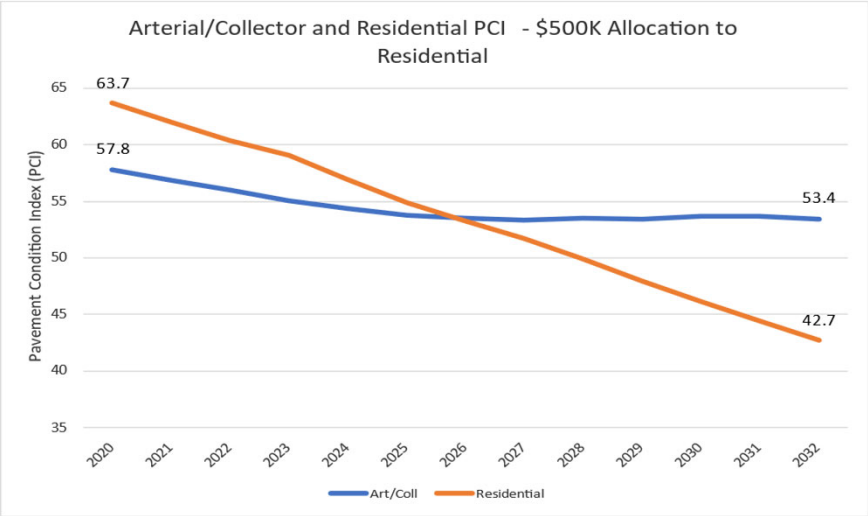
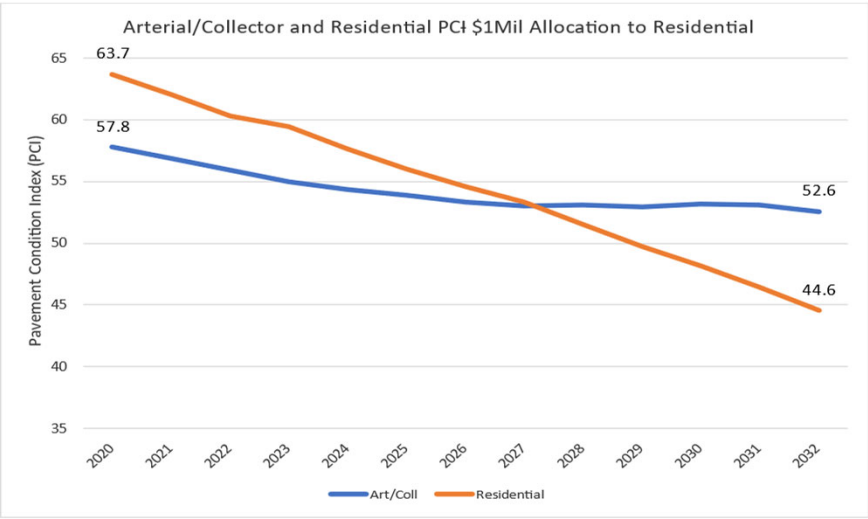
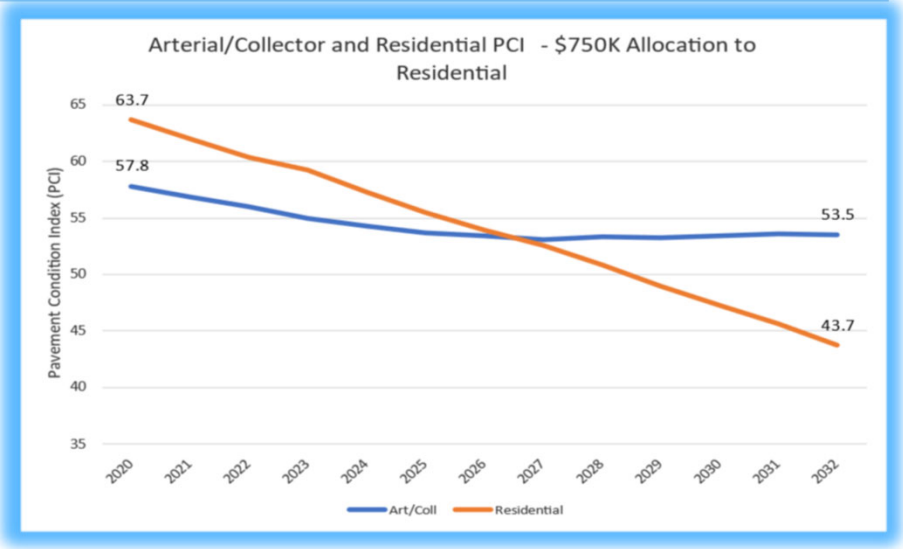
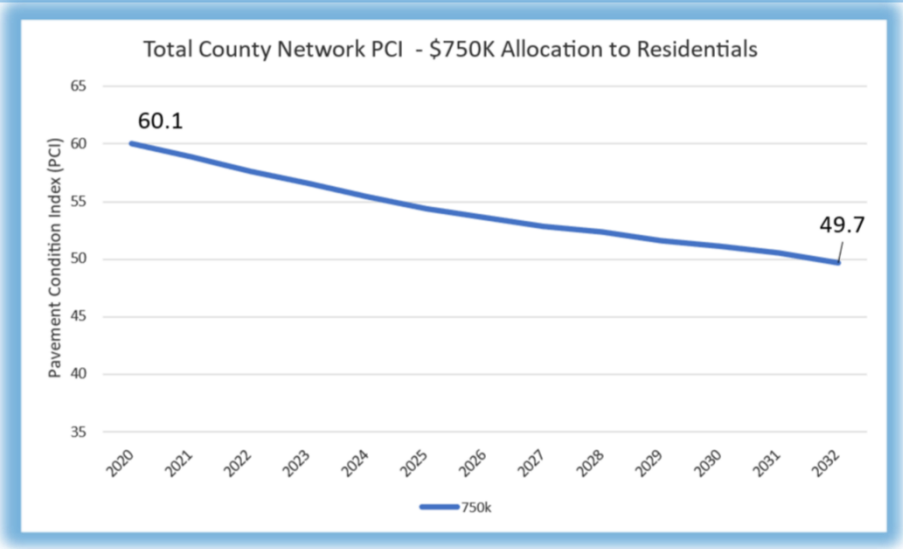






- **$750k / year increase to Residential Roadways within Areas of Inequity Yields the Best Results for Collectors / Arterials**
- **$1M / year increase to Residential Roadways within Areas of Inequity Yields the Best Results for Residential Roadways, but Collectors / Arterials fall below 53.0**

Network Pavement Condition Index Results Current Funding Levels



- **$750k / year increase to Residential Roadways within Areas of Inequity Yields the Best Results for Collectors / Arterials**

Base + 40% Inequity – with $200k Residential Roads within Areas of Inequity:

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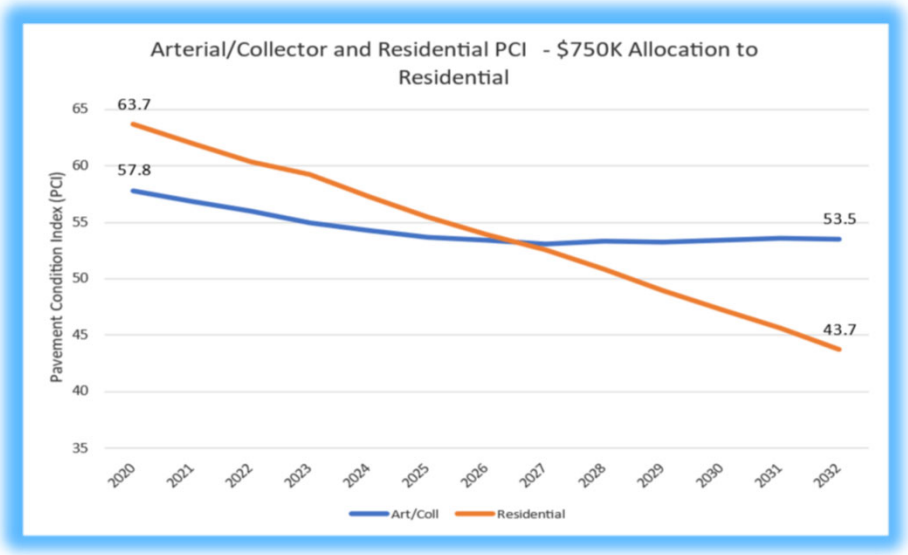

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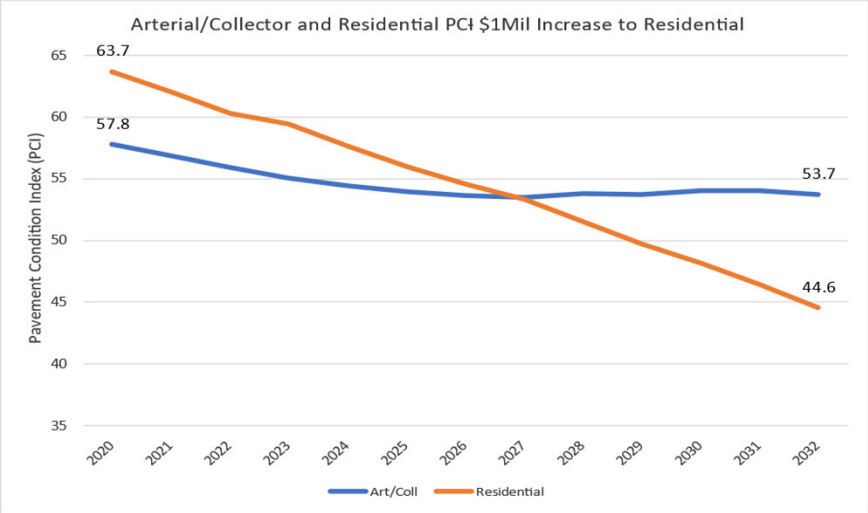

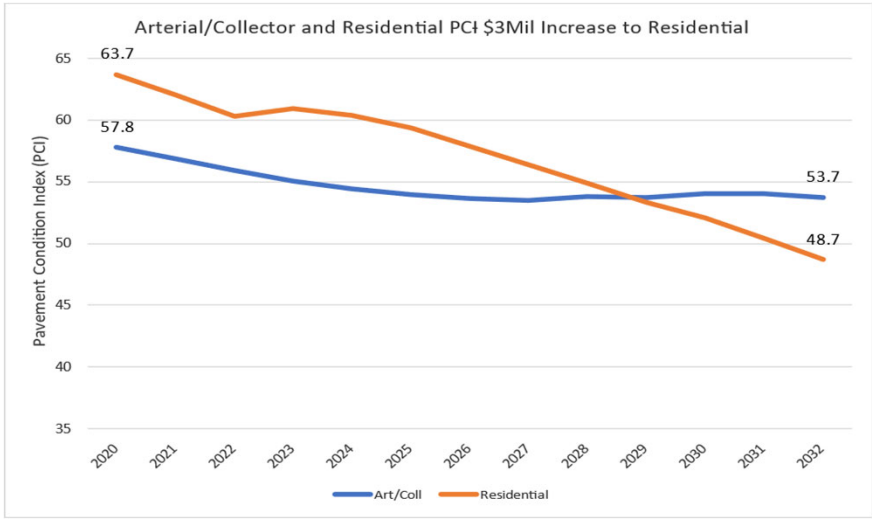

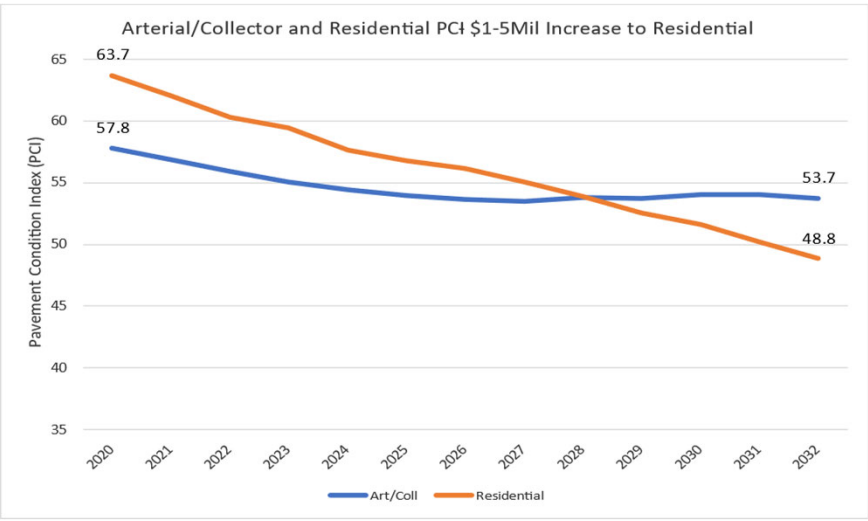

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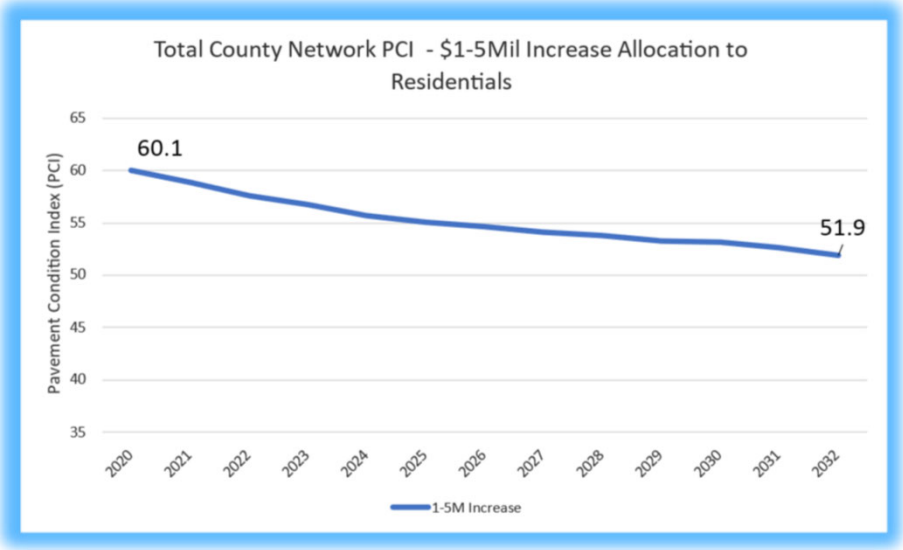
Network Pavement Condition Index (PCI) Results Additional Funding



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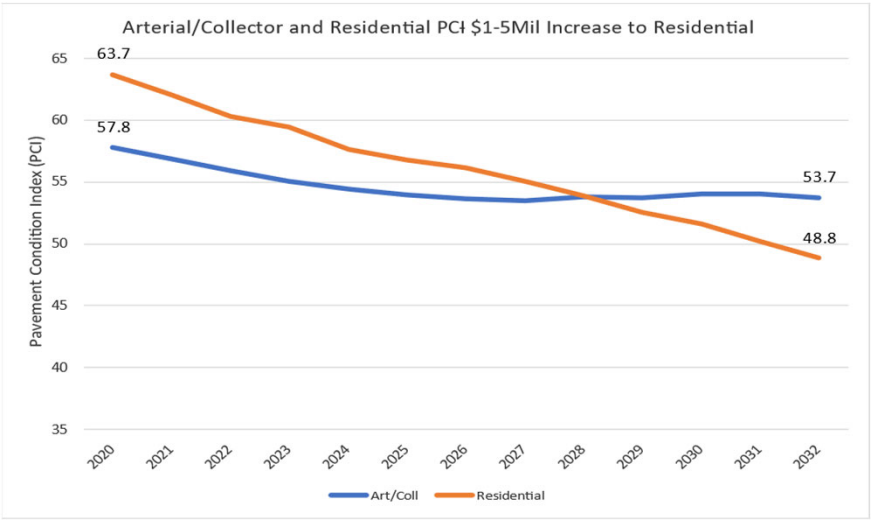

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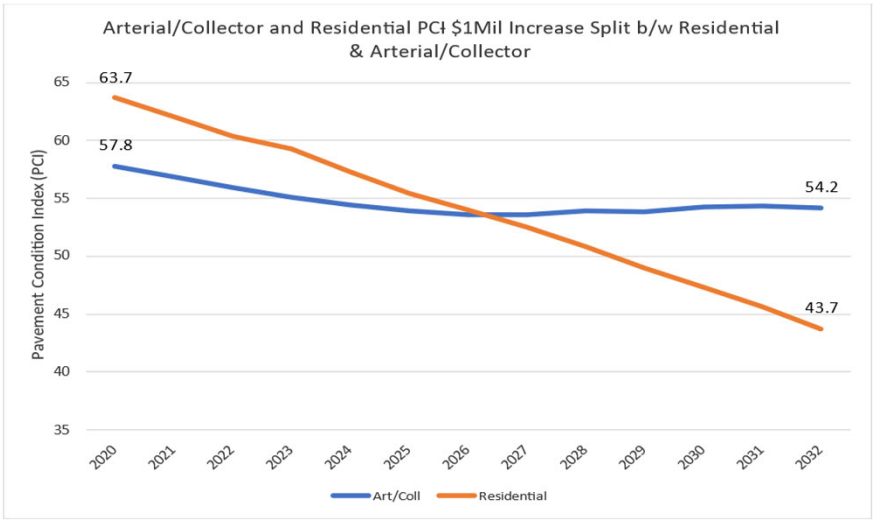

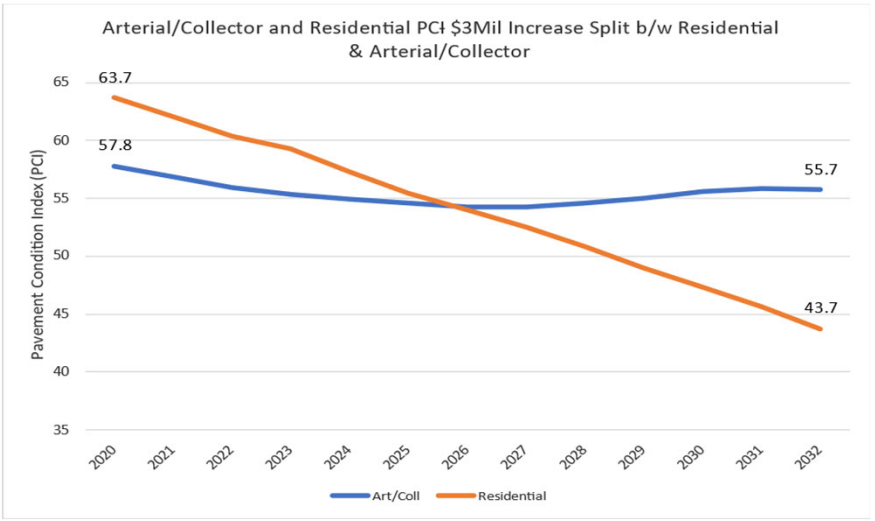

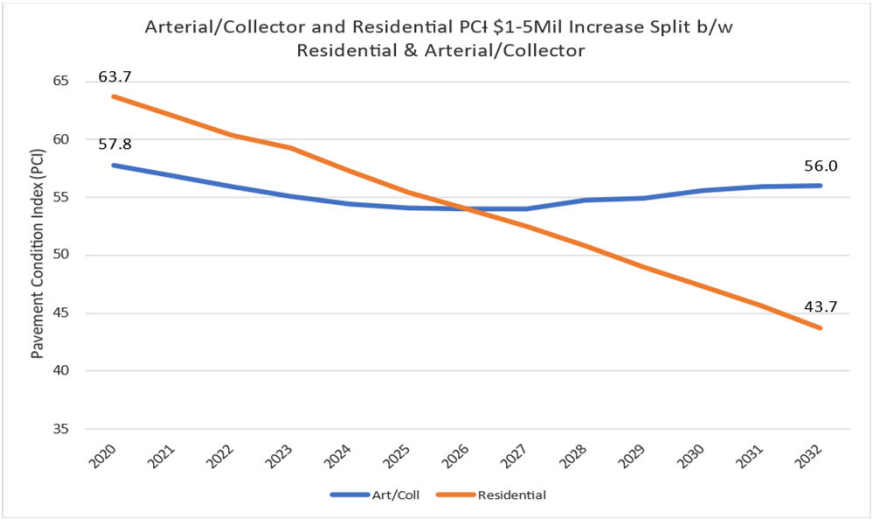

Allocate $750K to Residential Roadways within Areas of Inequity and Balance to Collectors / Arterials

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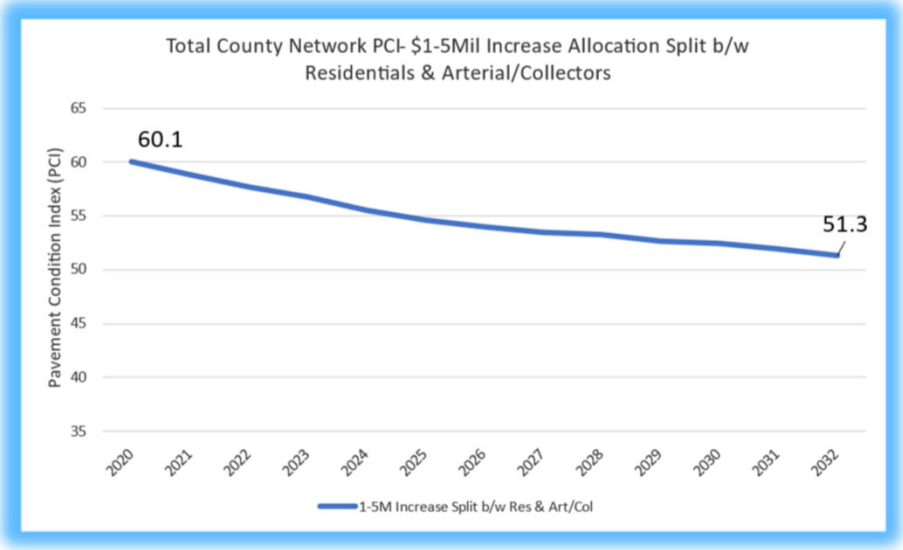

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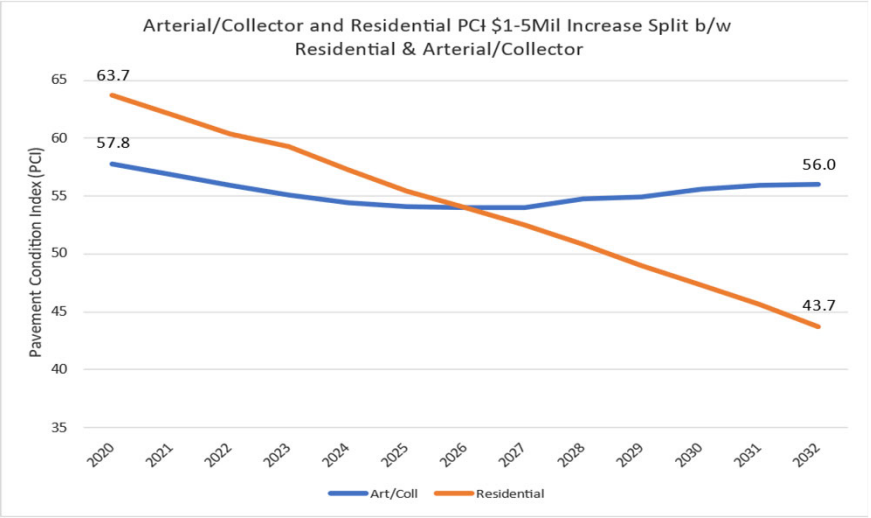

Summary

- **This is a leading-edge analysis considering Inequity – very important topic in Asset Management, but few examples available from around the US**
- **Areas of Inequity currently have a lower average PCI than rest of County network**
- **Increasing Benefit Weight to Areas of Inequity will improve the network condition (PCI) in Areas of Inequity**
- **Increasing Benefit Weight to Areas of Inequity will lower the network condition (PCI) outside of Inequity Areas**

Summary

- **Overall, the current funding does not maintain the overall network PCI. i.e. to improve the overall network, more funds would be needed**

- **Important:**
  - **This is an analysis of limited budgets, which means not all roads can be fixed.**
    - **Not all roads get selected in the analysis.**
    - **If additional revenues are allocated, or revenues exceed projections, more roads can be selected for repairs.**

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