



Administrative Report

N.2., File # 24-0368

Meeting Date: 4/16/2024

To: MAYOR AND CITY COUNCIL
From: ANDREW WINJE, PUBLIC WORKS DIRECTOR

TITLE

DISCUSSION AND POSSIBLE ACTION ON THE MOST RECENT TRIENNIAL CITYWIDE PAVEMENT MANAGEMENT SURVEY FOR BOTH STREETS AND ALLEYWAYS AND THE RECOMMENDED WORK PLAN FOR THE RESIDENTIAL STREET REHABILITATION AND CITYWIDE SLURRY SEAL CAPITAL PROJECT PROGRAMS

EXECUTIVE SUMMARY

In order to remain in compliance with certain funding and accounting requirements and maximize the efficiency of roadway maintenance efforts, the City surveys the condition of its streets every three years and prepares a report that helps prioritize future street rehabilitation projects. The City relies on the assistance of a specialized engineering consultant to perform this work.

The 2023 Pavement Management Program Implementation Report (2023 Report) includes both the survey information and the proposed streets identified for the next iterations of the Residential Street Rehabilitation and the Citywide Slurry Seal Programs. The 2023 Report reveals that City's current average street Pavement Condition Index (PCI) rating is 69 following the completion of active projects. This is a decline from the citywide PCI of 72 that was cited in the survey completed in 2020. The report discusses the reasons for this decline including the incredible inflation of construction costs, labor and material supply chain disruptions that arose during and after COVID-19, and the uncharacteristically high rainfall that has been experienced the past two years.

The 2023 Pavement Management Program Implementation for Alleyways Report (2023 Alleyways Report) provides the updated survey information for the alleyways citywide. The 2023 Alleyways Report reveals that the PCI rating is 54, an improvement from 52 in 2018.

Abridged editions of the 2023 Report and the 2023 Alleyway Report, without appendices, are included as Attachments. The entirety of each report will be posted on the City's website once it's received by the City Council. Maps depicting current PCI levels by street, the 2020 Workplan, and the proposed 2023 Workplan are also included.

At this time, staff recommends that the City Council receive and file the 2023 Street and Alleyway Reports and provide guidance for the streets to be included in the upcoming phases of the Residential Street Rehabilitation and Citywide Slurry Seal Programs.

BACKGROUND

In order to meet the reporting requirements of Governmental Accounting Standards Board (GASB) 34 and to qualify for use of Proposition C and Measure R Local Return funding used for the rehabilitation of City streets, the City conducts a survey of the condition of the street pavement every three years. The City relies on the assistance of a specialized engineering consultant to perform this work. The report is used to prioritize the streets paved through the Residential Street Rehabilitation and Slurry Seal Programs.

The Residential Street Rehabilitation Program began in 2001 with the goal to completely rehabilitate all residential streets within 10 years. The original program took 16 years and 12 phases to complete, due to reduced funding and staffing resulting from the Great Recession. Following completion of the original Program Cycle in 2017, the City moved to a pavement evaluation method that used the Pavement Condition Index (PCI) rating. The PCI method is considered a best management practice and is used by the majority of Redondo's benchmark cities.

On April 18, 2017, the City Council awarded NCE a contract to perform the initial survey using the new method, develop a report, and to collect asset information. The results of the survey were used to update the City's established pavement management system (StreetSaver Software) database, which helps inform prioritization of rehabilitation work and serves as a technical guide regarding the level of effort necessary for future roadway maintenance.

In June 2017, the City's streets were surveyed, and the PCI was determined to be 70. In January 2018, the City Council was presented with multiple budget scenarios to maintain the City's street pavement asset. At the meeting, Council gave direction to pursue the budget scenario with a goal of improving the City's PCI to 75 within 10 years to determine the City's budget for street maintenance projects. The City has worked hard to achieve the goal of a PCI 75 by 2027 through the construction of a multitude of capital improvement projects and the use of City crews to regularly perform smaller maintenance projects, such as minor overlays and patch removal and replacement repairs to the asphalt. It should be noted that the Public Works Department has completed more projects and maintenance efforts in the past few years than ever before, but due to inclement weather and the construction inflationary challenges identified above has had a hard time simply maintaining the prior PCI level.

During the January 2018 meeting, the Council approved a motion to have a pavement management study performed on the City's alleyways in addition to the City's streets. An amendment to NCE's contract was approved in March 2018, and they performed a survey of all the alleys in the City. In January 2019, the Council received and filed the 2018 Alley Pavement Management Survey Report. The City's average Alley Pavement Condition Index (Alley PCI) rating at the time was 52.

In May 2020, NCE completed the re-survey of all the streets only as necessary to meet the funding requirements. At that time, the City's updated PCI improved to 72, however that was before the City began experiencing the challenges identified above.

In March 2023, the Council awarded a contract to NCE to re-survey both the streets and alleyways. In May 2023, the re-survey of the streets and alleys was completed. The City's updated PCI for streets declined to 67, however following the completion of the Torrance Blvd and Manhattan Beach Blvd resurfacing projects currently underway will immediately improve to a PCI of 69. The City's updated PCI for alleyways has improved from a PCI of 52 to a PCI of 54.

Below is a breakdown of PCIs by the functional class of the street:

Condition Category	PCI Range	Description
Very Good	70 – 100	Pavements with little or no distress.
Good	51 – 69	Pavements with significant distress that is predominantly load related.
Poor	26 – 50	Pavements with major distress.
Very Poor	0 – 25	Pavements with extensive distress.

Pavement Condition Breakdown by Functional Class - Streets

TABLE 3. PAVEMENT CONDITION SUMMARY - STREET NETWORK

Condition Category	Arterial (%)	Collector (%)	Residential/Local (%)	Entire Network (%)
Very Good	57.7%	54.0%	42.8%	48.4%
Good	30.8%	34.3%	37.2%	34.9%
Poor	10.7%	11.7%	20.0%	16.4%
Very Poor	0.8%	0.0%	0.0%	0.3%

Pavement Condition Breakdown - Alleys

Condition Category	Alleyways (%)
Very Good	15.5%
Good	34.5%
Poor	47.6%
Very Poor	2.4%

Budget Discussion

In 2017, a budget scenario was presented that calculated the funding required to achieve a PCI of 75 by 2027. In this scenario, approximately \$4.5 million dollars per year needed to be allocated beginning in 2018 and would have resulted in \$20.5 million in deferred maintenance at the end of the 10-year period.

Per the 2020 update, the budget scenario to achieve the City’s goal of a PCI of 75 by 2027 required approximately \$4.62 million dollars per year and would have resulted in \$28.5 million in deferred maintenance in 2027.

Per the current 2023 Report, the budget scenario to achieve the City’s goal of a PCI of 75 by 2027 now requires \$34.5 million, or approximately \$11.5 million per year, and would result in \$38.3 million in deferred maintenance in 2027. The increase in each of these metrics reflects the full impacts of inflation on the construction industry over the period being evaluated. It also reflects the growing gap between the current PCI and the goal of 75. This gap increased between 2020 and 2023, despite the City’s continued commitment to fund pavement rehabilitation projects.

Between June 2017 and June 2023, the City spent over \$29.9 million, approximately \$4.9 million per year, on streets through the Capital Improvement Program, which is in line with the anticipated budget needed to achieve a citywide PCI of 75 in both 2017 and 2020 reports. Additionally, City crews continue to perform regular maintenance work not captured in this figure.

There are several reasons that can explain the reduction in the street PCI at the end of the analysis period. The COVID-19 pandemic disrupted the worldwide economy, leading to the delayed inflation of prices and interest rates. The average overall inflation rate in the United States increased from 1.23% in 2020 to 8.00% in 2022 and was far greater in the construction industry. Due to unexpected price increases, the projected funding for the City’s rehabilitation and maintenance program fell short of the level needed to complete all of the planned improvement projects. This has led to an increase in deferred maintenance each year, which has significantly impacted the PCI of the City’s entire street network.

In the 2020 report, NCE considered an inflation rate of only 3% for the 10-year analysis period. As an example, the cost of slurry seal was considered as \$3.00/SY in 2020, whereas today, the estimated cost has risen to \$5.60/SY. This far outpaces the \$3.30/SY expected with the assumed 3%

inflation rate. With inflation going beyond the estimated rate, program goals could not be achieved due to increased costs that decreased the amount of the network that could be treated. This put upward pressure on deferred maintenance and resulted in a PCI rating that was less than previously projected.

Due to the significant increase in construction costs, the following three budget scenarios were evaluated in the 2023 Report:

1. City’s Typical Budget for Residential Street Rehabilitation and Citywide Slurry Seal Programs Only
2. Total Outlay to Achieve & Maintain PCI at 70
3. Increase PCI to 75 by 2027

Scenario	Description	Cumulative 3-year Budget (\$M)	End of year 3	
			Network PCI	Deferred Maintenance (\$M)
1	City’s Budget	7.5	66	81.3
2	Maintain PCI at 70	20.4	70	60.4
3	Increase PCI to 75	34.5	75	38.3

Investment of only the City’s historical average annual budget of \$2.5M for the Residential Rehabilitation and Citywide Slurry Seal programs would result in a PCI of 66 in 2026. The City typically appropriates funding for stand-alone arterial and collector rehabilitation projects, which brought the average investment to approximately \$4.9M over the last five years. To reach and maintain a PCI of 70, the annual budget required for all resurfacing programs would take an estimated \$6.8M per year. To increase the PCI of the network to 75 would require an estimated annual budget of \$11.5M per year.

Streets Identified for Treatment

The 2023 survey information and updated data was input into the StreetSaver database program to identify the priority streets to be included in the Residential Street Rehabilitation Citywide Slurry Seal Programs based on an annual budget of \$2.5M. The streets identified by NCE are designed to provide the most efficient and beneficial way to apply this funding and are included in the Proposed 2023 Work Plan and include streets with pending work from the previous three-year work plan and streets and alleyways that were specifically identified in the FY 2023-24 Budget Motion.

Staff provided information to each Council Member and discussed the streets that were identified by the StreetSaver Program. These are recommended to be approved as part of the Proposed 2023 Work Plan, assuming funding requirements can be met.

As for alleyways, the City Council approved one-time monies to rehabilitate segments with a PCI of less than 25 as part of the FY 2022-23 General Fund budget motion. Alleys are not eligible for gas tax or other typical funding sources that may be used to improve streets. As the segments are fairly isolated throughout the City, alleyways with a PCI of under 25 are added to rehabilitation projects in the vicinity to minimize both construction costs and disruption to local traffic flow. Council also identified specific alleyways and street segments to prioritize as part of the FY 2023-24 Budget Motion. A list of these segments and the project to which they are attached is included with this

report. It should be noted that the most recent Residential Street Rehabilitation Project (known as the 2021 Project), was advertised for construction in May 2022 and occurred prior to the FY 2022-2023 and FY 2023-24 budget motions. As such, the first available projects to which a grind and overlay treatment of additional alleyways will be conducted is either the Residential Street Rehabilitation 2022 Project, which will be advertised for bid this Summer, or the Residential Street Rehabilitation 2023 project which will be advertised for bid this Winter. The “2022” and “2023” Rehab Projects are part of the 2020 three-year workplan, are in design, and include the identified street segments and alleyways from the FY 2023-24 Budget Motion. Another component of the previous three-year pavement study is the most recent and final phase of the annual Slurry Seal Project. Bids are expected for the Slurry Project in mid-April and the contract should be awarded in May for construction this June/July.

The street and alley segments identified in the prior to Budget Motions were added to one of the three upcoming work efforts from the 2020 three-year workplan based on the treatment type and the geographical proximity to the residential streets identified for each project. Therefore, the Alley east of McBain, between Manhattan Beach Blvd and Beland Blvd, was included with the Residential Street Project in District 5, which is next up and is expected to be advertised for construction bids this summer. The portion of Emerald Street between Prospect and N Juanita, the portion of N. Juanita between Emerald and Spencer, the alley east of Maria Ave, between Del Amo St and Diamond St, and the alleys north of 190th Street, adjacent to Fisk Ln, have been added to the Residential Street Rehabilitation Project expected to be advertised for construction in Winter 24-25. In order to identify the cost of accelerating the execution of these street and alley segments staff intend to identify them as bid alternate work in the 2022 Rehab Project and/or determine if the segment can receive slurry treatment and be included as part of the upcoming Slurry Project.

The funding for alleys with a PCI under 25 from FY 2022-23 has not been fully expended, although no additional alleys are recommended in the 2020 Workplan or the Proposed 2023 Workplan because there are no alleys with a PCI less than 25 that are not already being addressed. Council may decide to add alleys to the 2023 three-year workplan, and they can be incorporated into future projects in the most economical way possible.

With the increase in costs of construction and the current budget, the City is no longer on target to meet the goal of a PCI of 75 by 2027 as it will require an unattainable average investment of \$11.5M per year. A more realistic goal is a Citywide average PCI of 70, but this will also likely be challenging given current inflation and the static or even decreasing availability of traditional funding sources. As an example, the State’s Legislative Analyst Office (LAO) released a report regarding the anticipated decline in gas tax revenues, which are used for municipalities for maintenance of local roads, over the next ten years. Given these realities, the available funding for local roads and streets will decline and the City must plan accordingly and identify alternative funding sources.

The 2023 Street and Alleyway Reports are now being brought to the City Council to receive and file. The updated 2023 Report includes the revised budget scenarios listing of each street’s updated PCI, and the proposed list of streets for the Residential Street Rehabilitation and Citywide Slurry Seal Programs for the upcoming three-year workplan, based on the City’s anticipated budget of \$2.5M annually for these programs.

Should additional funding become available during the next three-year period, staff recommends

programming some of these funds towards reconstruction of specific arterial or collector streets, such as Grant Avenue or Aviation Blvd north of Artesia Blvd, which are both in need and serve a large portion of the City's resident, commuter, and visitor populations.

COORDINATION

The Public Works Department coordinated the 2023 Street and Alleyway Reports.

FISCAL IMPACT

There is no direct fiscal impact to receive and file these reports. The budget required to treat the streets proposed for the Residential Street Rehabilitation and Citywide Slurry Seal Programs is approximately \$2.5 M per year. The cost to complete the updated surveys and 2023 Pavement Management Program Update was \$76,100. Funding for the surveys was provided in the FY 2022-23 Budget.

APPROVED BY:

Mike Witzansky, City Manager

ATTACHMENTS

- 2023 Pavement Management Program Report (abridged), March 2024
- 2023 Alley Pavement Management Program Report (abridged), March 2024
- Maps - Current PCI
- Map - Streets in Progress under Option A
- Maps for Proposed 2023 Work Plan
- List of Street Rehabilitation Annual Expenditures
- List of Segments added via Budget Motion