TO: Albany City Council

VIA: Wes Hare, City Manager

FROM: Jeff Blaine, P.E., Public Works Engineering & Community Development Director
           Chris Bailey, Public Works Operations Director

DATE: February 1, 2017, for the February 6, 2017, City Council Work Session

SUBJECT: Pavement Condition Assessment

RELATES TO STRATEGIC PLAN THEME: • Great Neighborhoods
                                  • Safe City
                                  • An Effective Government

Action Requested:

No action is requested at this time.

Discussion:

At the January 23, 2017 Work Session, Council reviewed a white paper on pavement asset management. Council reviewed:

- Types of pavement failures,
- Pavement Condition Indexes (PCI's),
- Pavement preservation techniques, and
- Least life cycle cost strategies.

A major point of January's discussion was that the best financial strategy for road maintenance is to "keep good roads good." This is contrary to the typical request from the public to fix the worst roads first.   The following two graphics were used to help illustrate this concept.
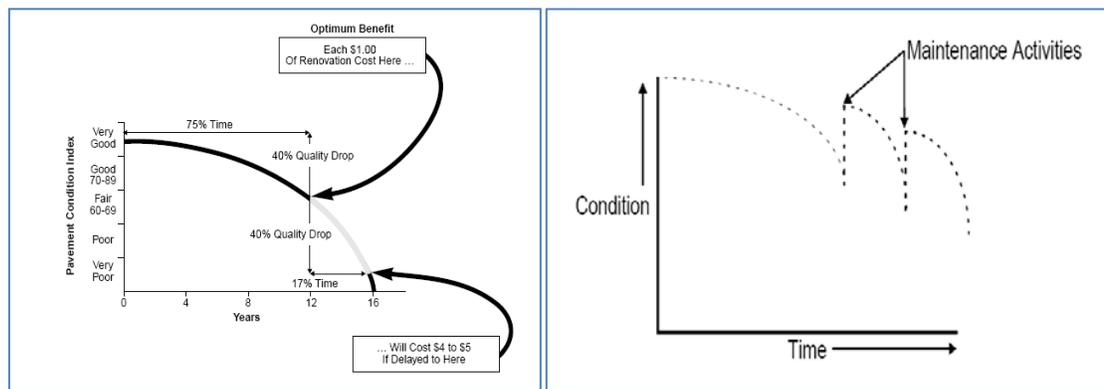
All asset management strategies start with understanding what assets you have and identifying their condition. For streets, municipalities typically rely on the PCI. As reviewed at the last work session, PCI's are based on a scale of 0-100 with zero being the worst and 100 being the best street condition. A typical rating scale was provided, and is shown below.

FIG. 1 Pavement Condition Index (PCI), Rating Scale, and Suggested Colors
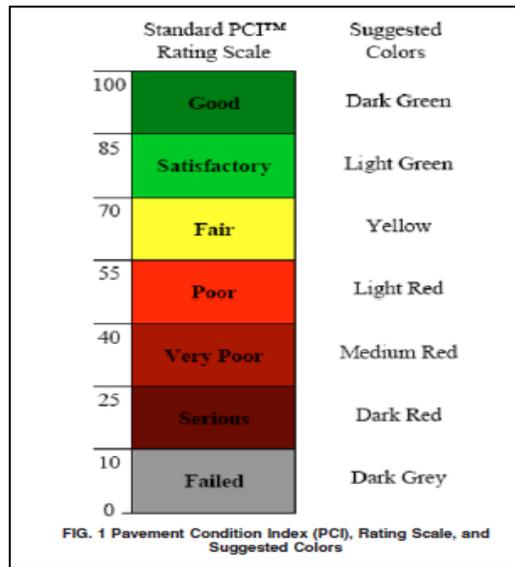
The City of Albany contracts for visual pavement condition assessments about every five years. The results are used to assess the condition of pavement assets as a whole, inform investment strategies, and suggest appropriate maintenance techniques. The information is also used to prioritize roadway pavement restoration projects within the City's 5-year Capital Improvement Program (CIP). As roads are considered for improvement, staff conducts additional testing when visual inspection alone is not adequate or additional information is necessary for pavement structural design. Albany's most recent condition assessment was completed in 2016. The City's **system-wide PCI is 60**, which can be considered "Fair." Assessment results are summarized graphically on Attachment 1 and are further described in the data tables below. The following definitions are helpful for understanding the data:

Arterial – Arterials are transportation corridors that generally have high traffic volumes and provide service for trips of moderate to extended length. They offer connectivity for intra-area travel by providing connections to the regional transportation system. Attachment 2 depicts the arterials that are under Albany's jurisdiction.

Collector – Collector roads serve the critical role of gathering and channeling traffic from Local Roads to the Arterial network. Their purpose is to provide for a combination of local access and through movements. Attachment 2 depicts the collectors that are under Albany's jurisdiction.

Local Street – Local roads are low traffic volume roads whose primary purpose is to provide direct access to abutting land. They are not intended to be used for long distance through movements.

Miles – As used in this report, miles refers to the centerline (linear) road miles. When comparing miles by classification it is important to remember that an arterial will have much more pavement to maintain as compared to a local street of the same length due to its additional width to serve larger traffic volumes and additional uses.

Assuming no additional funding is found for pavement maintenance and no new streets are added to the system, staff would anticipate Albany's PCI dropping over time as shown below.

Condition Assessment Results

	Arterial		Collector		Local		Total Miles
	Miles	%	Miles	%	Miles	%	
Total Miles	18.36	100%	14.72	100%	153.63	100%	186.71
PCI							
80+	2.34	13%	3.46	24%	38.85	25%	44.65
70-80	6.12	33%	2.12	14%	29.3	19%	37.54
60-70	6.58	36%	2.6	18%	14.77	10%	23.95
50-60	3.28	18%	4.4	30%	15.5	10%	23.18
Less than 50	0.04	0%	2.14	15%	55.21	36%	57.39

Projected PCI with No Additional Funding

	Existing	+10 yrs	+20 yrs	+30 yrs
Arterial	70	51	29	26
Collector	63	47	33	27
Local	58	45	33	24

Albany's strategic plan identifies an objective of maintaining arterial and collector streets in satisfactory or better condition. This equates to a PCI of 70 or greater. As shown in the provided data tables, based on current financial resources this objective cannot be met. That would remain the case even if local streets were to receive no funding for maintenance.

Required Funding

The amount of funding required for pavement asset management is dependent on a community's desired level of service. In many cases, achieving that desired level of service turns out to be financially unachievable. In those instances communities must be creative when identifying various funding sources, strategic in their investment strategies, and recognize that not all system needs will be met; when looking at Albany's data this reality becomes clear. Simply maintaining Albany's system wide average PCI of 60 would require an investment of $11.5M per year, over the next 10 years. Albany's currently available funding for street projects is closer to $1.6M and consists of In Lieu of Franchise Fees (ILFF), Surface Transportation Program (STP), and Transportation System Development Reimbursement fees (TSDCr). Of that amount, $450,000 is restricted to arterial and collector streets. The restricted money is from the state STP, allocated to Albany through the Albany Area Metropolitan Planning Organization (AAMPO). There is no guarantee that AAMPO will allocate those funds to Albany projects each year over projects submitted by other AAMPO partners.

The tables below show estimates of funding required to achieve various PCI targets. The tables show the annual investment required to achieve the identified average PCI in 10 years, 20 years, or 30 years (the longest projection our asset management program is capable of making).

Required Annual Investment to Achieve PCI

PCI Target	Arterial			Collector			Local		
	10 yrs	20 yrs	30 yrs	10 yrs	20 yrs	30 yrs	10 yrs	20 yrs	30 yrs
60 (Fair)*	$3,200,000	$5,900,000	$4,700,000	$2,800,000	$2,500,000	$2,300,000	$5,500,000	$5,000,000	$5,700,000
70 (Satisfactory)	$2,800,000	$4,500,000	$3,900,000	$3,400,000	$2,800,000	$2,800,000	$8,200,000	$6,300,000	$6,700,000
80 (Good)	$4,200,000	$4,600,000	$5,900,000	$4,800,000	$3,400,000	$3,200,000	$11,800,000	$7,800,000	$7,700,000

*Albany's existing system wide average

Required Annual Investment to Achieve PCI

PCI Target	System Wide		
	10 yrs	20 yrs	30 yrs
60 (Fair)*	$11,500,000	$13,400,000	$12,700,000
70 (Satisfactory)	$14,400,000	$13,600,000	$13,400,000
80 (Good)	$20,800,000	$15,800,000	$16,800,000

*Albany's existing system wide average

As the data shows, there is a significant gap between financial needs and means. At the March 6, 2017 Work Session staff will present information on various street funding alternatives for Council consideration.

Budget Impact:

This memorandum is for discussion only.

JJB:rk
Attachments (2)
c: Jorge Salinas, IT Director (via email)
    Jon Goldman, Transportation Superintendent (via email)
    Jeff Babbitt, Public Works/Community Development Business Manager (via email)
    Staci Belcastro, P.E., City Engineer (via email)
    Guy Graham, P.E., Engineering Manager/Assistant City Engineer (via email)
    Ronald G. Irish, Transportation Systems Analyst (via email)