



SAVE OUR STREETS 2006 YEAR END REPORT



Contents

About This Report	1
Background	1
About the SOS Program	1
About Auburn's Pavement Management	2
2006 SOS Projects	3
Projects	3
Expenditures	4
Lessons Learned	4
Current Pavement Condition	5
Future SOS Projects	5
Appendix	6

ABOUT THIS REPORT

The **Save Our Streets (or SOS) Program** was created in 2004 to preserve and improve the pavement of the local street system by funding yearly pavement preservation and improvement projects.

At the end of each year the Auburn Public Works Department produces a Year End Report to update the public on the accomplishments and future plans of the SOS Program. This is the second Year End Report produced for the SOS Program and includes:

- Background on the SOS Program and Auburn's pavement management strategy.
- A summary of the SOS projects completed and expenditures spent during 2006.
- An update of the overall pavement condition of Auburn's local streets.
- An update on plans for future SOS Projects.

BACKGROUND

ABOUT THE SOS PROGRAM

The City maintains 165 centerline miles of streets, of which 85 centerline-miles (or more than half the network) is made up of local streets. In 2004 the public was showing concern over the condition of these local streets, but local street funding had dropped dramatically in preceding years (see Figure 1) and the City could not afford to make the needed improvements.

In response to the situation, the City proposed a funding measure (Proposition No. 1) which was approved by Auburn citizens in the November 2004 General Election. This Proposition now allows the City's property tax levy to generate money for a **Dedicated Local Street Fund** which is solely used to fund a local street preservation and improvement program, called the Save Our Streets (or SOS) Program.

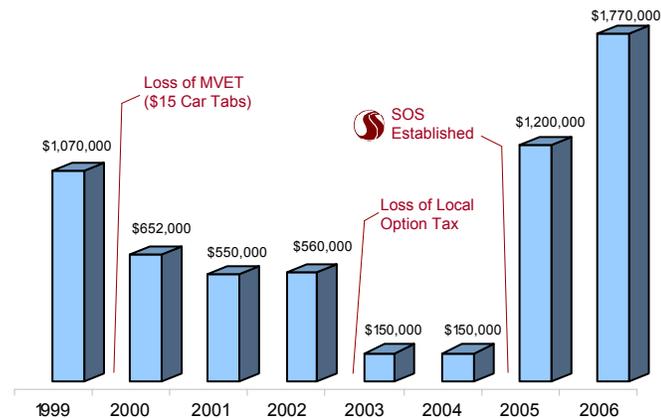


Figure 1: History of Funding for Local Streets

Currently the levy generates about \$500,000 a year which is combined with other funding sources to provide the SOS Program with at least \$1.2 million annually (as property values increase, the levy will generate an increasingly greater portion of the funding for the SOS Program each year).

ABOUT AUBURN'S PAVEMENT MANAGEMENT

The City measures pavement condition using the **Pavement Condition Index (or PCI)**. As shown in Figure 2, PCI values represent pavement condition based on a scale from 0 to 100 with 100 being pavement in perfect condition and 0 indicating the pavement has completely failed.

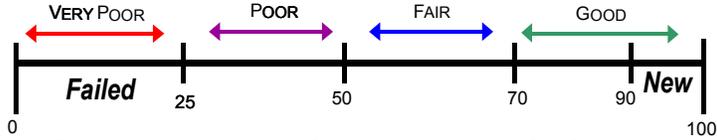


Figure 2: Pavement Condition Index (PCI) Scale

PCI values generally indicate the best treatment for pavements in different conditions. For example, pavements with high PCI values typically require relatively cheap treatments that simply preserve the existing pavement; pavements with average to low PCI values typically require more expensive rehabilitative treatments; and pavements with really low PCI values are often unsalvageable and have to undergo very expensive rebuilds.

Figure 3 shows the general guidelines (called a **decision tree**) the City follows to select treatments for pavement in different PCI ranges as well as the typical costs of each treatment (although final treatment selection is always an engineering decision).

Pavement Condition	Typical Treatment	Typical Cost
PCI 90 - 100 Like-New Condition	No Treatment Needed	\$0
PCI 70 - 90 Good Condition	Seal Cracks – Cracks are sealed with melted asphalt to prevent water from penetrating the street and weakening the foundation.	\$0.25 per square yard
PCI 50 - 70 Fair Condition	Patching and Thin Overlay – Broken pavement is replaced (patched) to renew the load carrying ability of the existing pavement. Then the road is overlaid with a thin layer of pavement (1½ inch or less in depth) to preserve the existing pavement and provide a smooth driving surface.	\$10.00 per square yard
PCI 25 - 50 Poor Condition	Extensive Patching and Thin Overlay – Same treatment as above only more extensive patching is typically required. (Some streets in this condition require a thicker overlay)	\$15.00 per square yard
PCI 0 - 25 Very Poor Condition	Rebuild Pavement – Existing pavement is completely removed and a new road is constructed.	\$75.00 per square yard

Figure 3: Maintenance Decision Tree for Local Streets

About every 4 years, the City surveys Auburn’s entire street system and calculates a PCI value for each street. With the help of **pavement management software**, the City uses all the PCI values from the survey and the general treatment guidelines and costs from the decision tree to determine the funding needs of the entire street system. Since these needs are always a lot more expensive than the City can actually finance in a single year, the City has to prioritize and select groups of streets to treat each year.

During the initial years of the SOS program, groups of streets in fair condition have been given the priority, since these streets would be considerably more expensive to treat in the future if allowed to deteriorate (as shown by the treatment costs listed in Figure 3). Therefore, this strategy of **“treating the fair streets first”** will ultimately save the SOS Program a lot of money which in turn will allow the Program to treat more streets overall. Once the majority of streets in fair condition have been preserved, the City will begin rebuilding the unsalvageable pavement.

2006 SOS PROJECTS

PROJECTS

The 2006 SOS projects were devoted to preserving groups of streets in fair condition (as described in the previous section). In 2006 the City rehabilitated and preserved 10.3 miles of pavement (saving an estimated \$8.5 million in future reconstruction costs). This work was completed using two separate treatments administered with two separate construction contracts; asphalt patching and thin asphalt overlay. Specific project streets are shown on Map 1 (History of Local Street Treatments) in the Appendix.

PATCHING PROJECT – The patching project involved removing and replacing areas of damaged pavement to improve its strength. Additionally, this project replaced segments of sunken curb and gutter to improve drainage on the street. The City contracted with Lakeridge Paving to complete the work. Construction began on July 31 and was complete by September 25.



Dogwood St SE After Patching



Dogwood St SE After Overlay

THIN OVERLAY PROJECT – The thin overlay project involved resurfacing the street with a thin layer (1½ inch or less in depth) of asphalt pavement to preserve the existing pavement and provide a smooth driving surface. The City contracted with Woodworth and Company to complete this work. Construction began on August 24 and was mostly complete by October 13. (Approximately 3 blocks of streets will be finished in spring of 2007 as part of this project because unforeseen underground utility work needs to be completed before these streets are overlaid.)



Sidewalk Scheduled for Repair
on 21st St NE

In addition, the 2006 SOS project streets are also included in the Citywide Sidewalk Improvement Project, scheduled to be constructed in early 2007. This project will fix tripping hazards on the existing sidewalks and install new wheelchair ramps at certain locations. The sidewalk project is not funded through the SOS Program.

EXPENDITURES

Figure 4 shows revenues and the expenditures of the SOS Program during 2006.

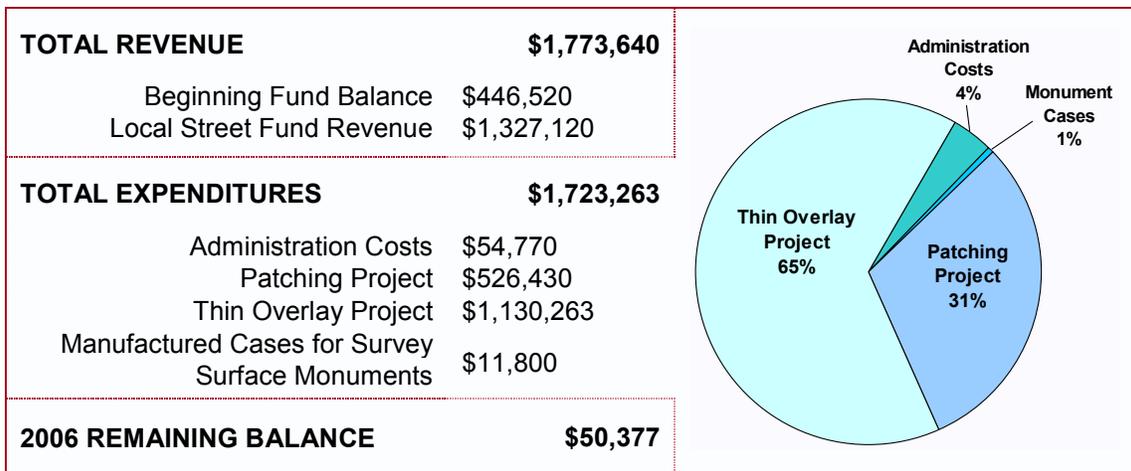


Figure 4: Expenditures of Local Street Fund during 2006

LESSONS LEARNED

During the 2005 SOS thin overlay project, the City had to rebuild over 50 survey surface monuments to raise them to the new height of the pavement surface. This work was expensive and time consuming (especially since each monument had to be referenced by a surveyor before it was replaced), so this year the City manufactured custom cases to install over the surface monuments during the overlay (see picture on right). These cases were less expensive to manufacture and easier to install than rebuilding the monument, and they left the existing surface monument intact and flush with the new pavement surface



Manufactured Case Installed Over
a Surface Survey Monument
on E St SE

CURRENT PAVEMENT CONDITION

Figure 5 shows a summary of the current pavement condition of Auburn's local street system compared to previous years (current pavement conditions of individual local streets are shown on Map 2 in the Appendix.) The thin overlay treatments completed in 2005 and 2006 (implemented through the SOS Program) have reduced the quantity of streets in fair, poor, and very poor condition by approximately 9 miles, so the SOS Program has been doing an effective job improving the condition of Auburn's local streets. Furthermore Figure 6 shows that the average PCI of the entire local street system has increased by about 2 PCI values each year since the SOS Program was formed, confirming the success of the Program.

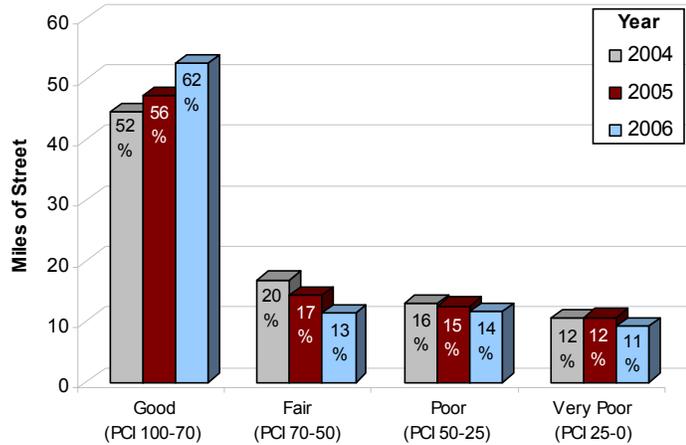


Figure 5: Pavement Condition History of the Local Street System

Year	Average Local Street System PCI
2004	66
2005	68
2006	70

Figure 6: History of Average Local Street System PCI

FUTURE SOS PROJECTS

2007 SOS projects will continue to be devoted to preserving streets in fair condition. Treatments will be the same as 2005 and 2006 using a patching project and a thin overlay project. \$1.68 million is available in the 2007 Budget for these projects which will allow an estimated 6.5 miles of streets to be preserved. Map 3 in the Appendix shows the specific streets the City plans to preserve in 2007 as part of these projects.

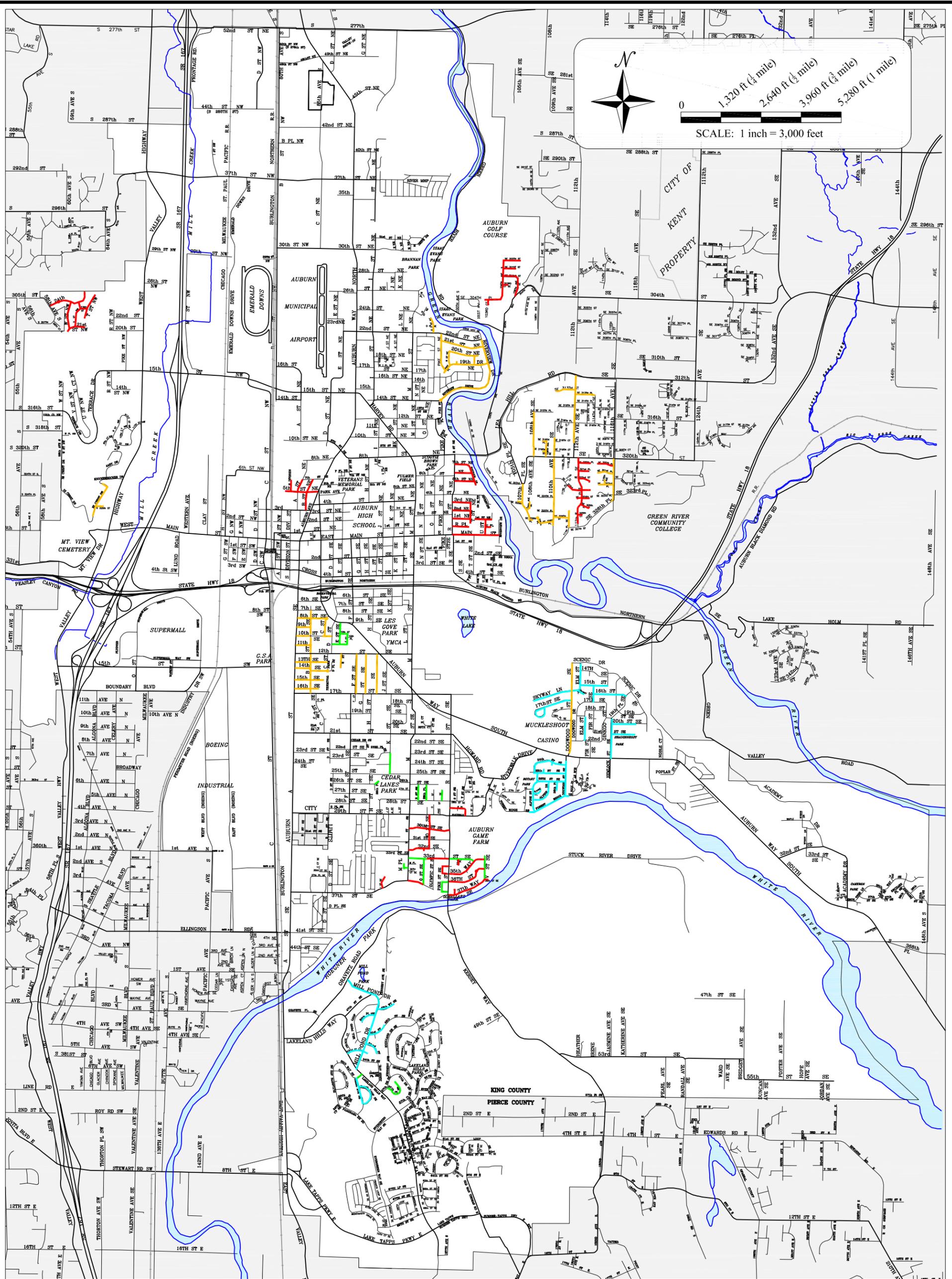
Currently the City has not formalized plans for SOS Projects after 2007. With the completion of a pavement condition survey in the summer of 2006, the City will reevaluate the needs of the local street system and develop an annual maintenance schedule that shows which streets the City plans to work on each year for the remaining years of the SOS Program. The City is also looking into the possibility of securing additional funding sources to ensure that every local street can be treated in the remaining years of the Program, and beyond.



J St NE Scheduled to be Overlaid in 2007

APPENDIX

- Map 1:** **History of Local Street Treatments** - This map shows the history of local street improvement projects (including SOS projects completed in 2006).
- Map 2:** **Current Pavement Conditions of Local Streets** - This map shows the current pavement condition of every local street in Auburn.
- Map 3:** **2007 SOS Projects** - This map shows which streets the City plans to improve as part of the 2007 SOS projects.



MAP 1: History of Local Street Treatments

LEGEND

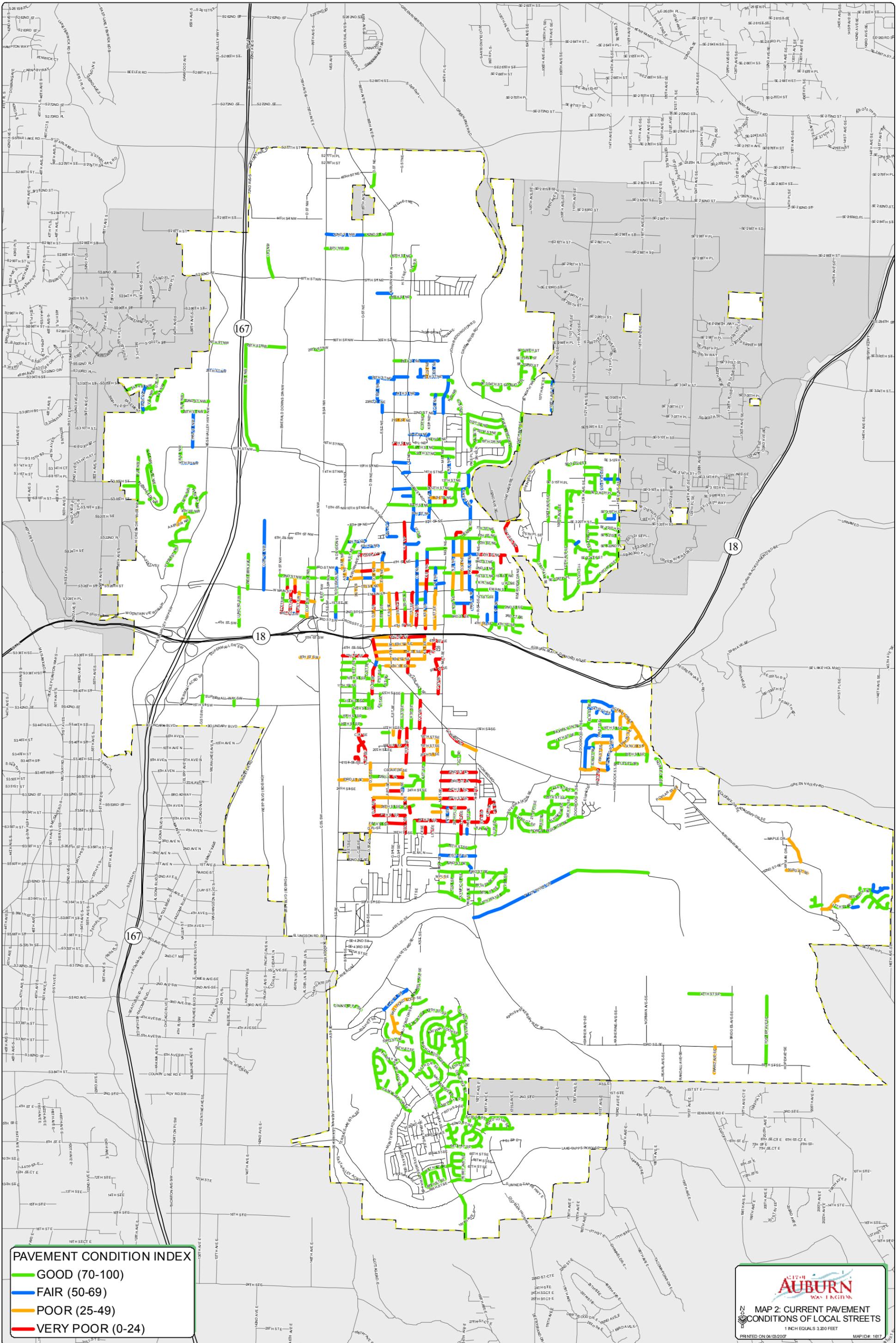
- 2006 THIN OVERLAY - 2006 SOS PROJECTS
- 2005 THIN OVERLAY - 2005 SOS PROJECTS
- 2004 CHIP SEAL
- 2003 CHIP SEAL
- OUTSIDE AUBURN CITY LIMITS

TREATMENT DEFINITIONS

Thin Overlay: The existing pavement is patched (by removing and replacing areas of damaged pavement) to renew the load carrying ability of the existing pavement. Then a mixture of coarse rocks and asphalt is spread over the road, 1 1/2 inches or less in depth, to preserve the existing pavement and provide a smooth driving surface.

Chip Seal: The existing pavement is patched (by removing and replacing areas of damaged pavement) to renew the load carrying ability of the existing pavement. Then a layer of asphalt is sprayed on the road and covered with a layer coarse rocks (called chips) to preserve the existing pavement.

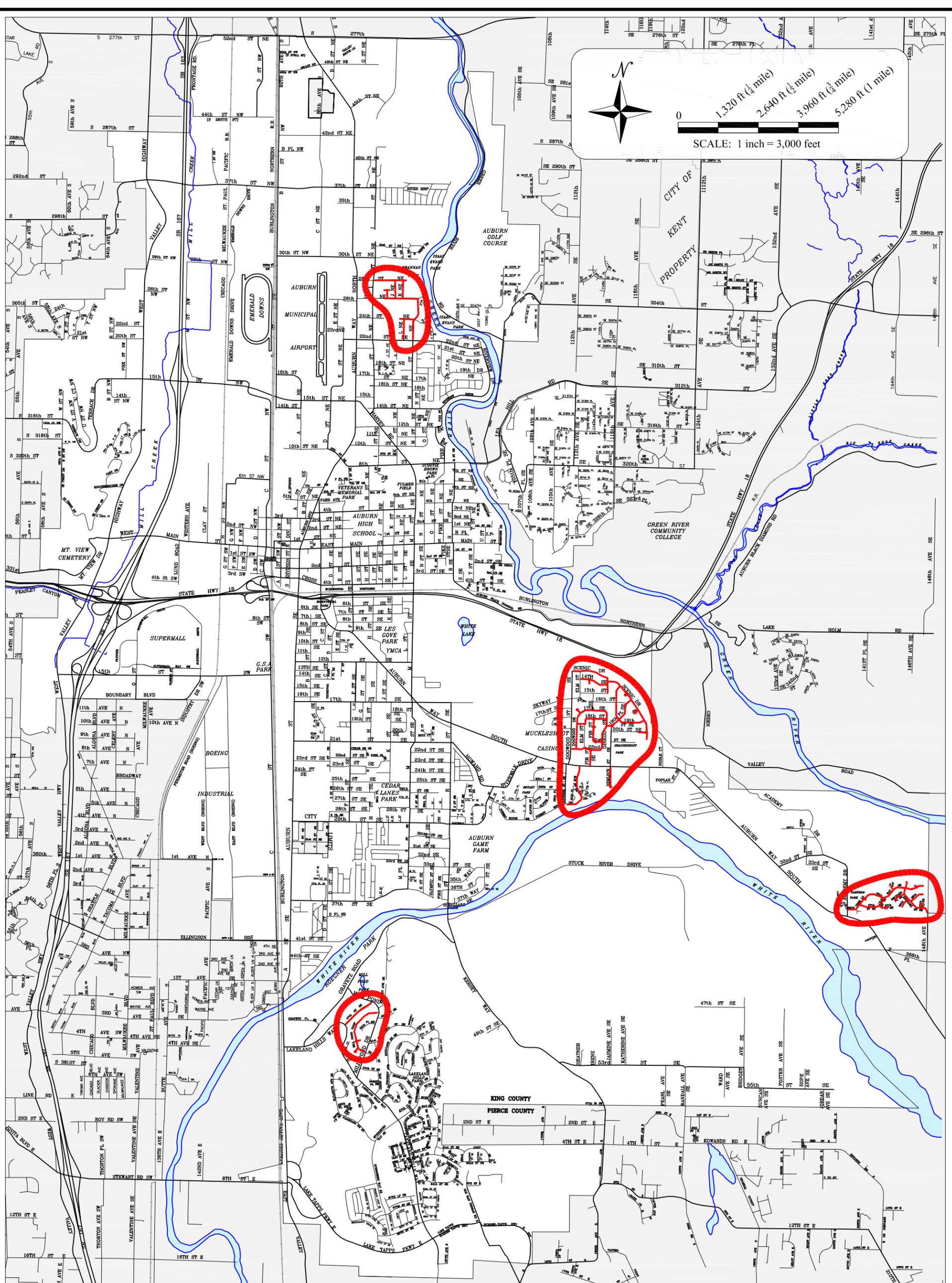




PAVEMENT CONDITION INDEX

- GOOD (70-100)
- FAIR (50-69)
- POOR (25-49)
- VERY POOR (0-24)


**MAP 2: CURRENT PAVEMENT
CONDITIONS OF LOCAL STREETS**
 1 INCH EQUALS 300 FEET
 PRINTED ON 04/03/2007 MAP ID# 1617



MAP 3: 2007 SOS Projects

LEGEND

- 2007 PATCHING AND THIN OVERLAY PLANNED
- OUTSIDE AUBURN CITY LIMITS

TREATMENT DEFINITIONS

Thin Overlay: The existing pavement is patched (by removing and replacing areas of damaged pavement) to renew the load carrying ability of the existing pavement. Then a mixture of coarse rocks and asphalt is spread over the road, 1 1/2 inches or less in depth, to preserve the existing pavement and provide a smooth driving surface.

