

# City of Madison Resurfacing Program





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- ✓ You may use the “raise hand” option at the bottom if you have something that required immediate clarification.
- ✓ Use “chat” option if you are having technical issues and a staff person can try to assist.
- ✓ Please use the “Q&A” option at the bottom of the screen to type your question. Questions will be answered at the end of the presentation. Inappropriate questions may be dismissed.
- ✓ If you cannot ask via typing your question, use the “raise hand” option and you will be unmuted when it is your turn.



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# How to Participate

The screenshot displays a Zoom meeting interface. At the top, a green banner indicates "You are viewing City of Madison's screen" and "View Options". The main content is a shared Microsoft Excel spreadsheet with a grid of data. A "City of Madison" logo is visible in the top right corner of the spreadsheet. Below the spreadsheet, there are two audio options: "Phone Call" and "Computer Audio". A blue button labeled "Join Audio by Computer" is highlighted with a red arrow pointing upwards. In the bottom left corner of the Zoom interface, there is a "Join Audio" button with a headset icon, also highlighted with a red arrow pointing upwards. The bottom right corner of the Zoom interface features a "Leave Webinar" button.

Make sure to join audio

# How to Participate

Recording

You are viewing City of Madison's screen

View Options

City of Madison

Phone Call

Computer Audio

Join Audio by Computer

Join Audio

Q&A

Chat

Raise Hand

Leave Webinar

Raise your hand to be unmuted  
For comments or ask additional questions.

# How to Participate

The screenshot displays a Zoom webinar interface. At the top, a green banner reads "You are viewing City of Madison's screen" with a "View Options" dropdown. The main content is a shared Microsoft Excel spreadsheet. The spreadsheet has a header row with columns labeled A through Z. The first row is labeled "Sally". Below the header, there are two rows of data for the years 2019 and 2020, with columns for months from May to August. A "City of Madison" logo is visible in the top right corner of the shared screen. In the bottom left corner of the Zoom interface, there is a "Join Audio" button with a headset icon. In the bottom center, there are three icons: "Q&A" (a question mark), "Chat" (two speech bubbles), and "Raise Hand" (a hand icon). A red arrow points to the "Chat" icon. In the bottom right corner, there is a "Leave Webinar" button.



Use chat if you have technical issues or a question for the panelists

# City Engineering Division

## RESURFACING PROGRAM

- ⇒ Resurface about 1 mile of streets throughout the City
- ⇒ Resurfacing program which includes resurfacing, crack filling, mill/overlay and seal coat is designed to improve the quality of the street and delay the need for total reconstruction
- ⇒ Deficient C&G sections are replaced
- ⇒ Some streets will have new storm sewer installed
- ⇒ Terraces are restored (topsoil, seed & matting)
- ⇒ Pavement is milled or pulverized
- ⇒ New layer(s) of asphalt are paved

# SELECTION PROCESS

- ⇒ How are streets selected for resurfacing?
- ⇒ Streets rated bi-annually
  - PASER Scale (UW-Madison)
- ⇒ Coordination with other public works projects
- ⇒ Group streets around City for cost/efficiency



# RATING SYSTEM

- ⇒ PASER rates streets from 1 – 10
- ⇒ **Resurface** streets with a pavement rating of 5 or less and a c&g rating of 6 or greater
- ⇒ **Reconstruct** streets with lower ratings (these streets require extensive replacement and not cost effective for resurfacing)

# State of Our Streets

<b>All Streets:</b>	<b>2001</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
Total Miles	682.38	769.14	784.78	789.95	798.15	800.41	802.08	807.76
Total Lane Miles		1717.91	1752.04	1761.55	1779.15	1781.79	1785.04	1796.14
Average Surface Year	1982	1991	1994	1995	1996	1996	1997	1998
Average Curb Rating	6.86	7.19	7.28	7.30	7.36	7.43	7.41	7.38
Average Pavement Rating	6.53	6.90	6.64	6.63	6.59	6.77	6.47	6.67
<b>All Streets by Class</b>	<b>2001</b>	<b>2010</b>	<b>2015</b>	<b>2016</b>	<b>2017</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>
<b>Arterial Streets</b>								
Total Miles	75.21	93.35	95.16	95.82	99.50	96.29	95.67	96.06
Total Lane Miles		312.57	325.74	327.56	334.92	326.95	324.86	325.73
Average Surface Year	1986	1996	2002	2003	2003	2004	2005	2005
Average Curb Rating	7.64	7.37	7.60	7.58	7.68	7.71	7.68	7.61
Average Pavement Rating	6.85	7.32	6.90	6.95	6.79	7.02	6.57	6.78
<b>Collector Streets</b>								
Total Miles	153.99	166.48	169.38	169.68	171.83	172.55	171.88	173.30
Total Lane Miles		376.79	380.66	380.91	385.96	387.48	387.33	390.18
Average Surface Year	1987	1996	2001	2002	2002	2002	2003	2003
Average Curb Rating	7.05	7.42	7.60	7.63	7.64	7.70	7.68	7.58
Average Pavement Rating	6.80	7.08	6.84	6.82	6.68	6.84	6.52	6.67
<b>Local Streets</b>								
Total Miles	453.18	509.31	520.24	524.45	526.81	531.57	534.61	538.40
Total Lane Miles		1028.54	1045.64	1053.08	1058.27	1067.36	1072.85	1080.23
Average Surface Year	1980	1988	1992	1992	1993	1994	1994	1995
Average Curb Rating	6.67	7.09	7.12	7.14	7.20	7.29	7.28	7.28
Average Pavement Rating	6.39	6.76	6.53	6.51	6.52	6.70	6.44	6.65

802 miles of streets. Ave curb and pavement rating is 7

# State of Our Streets

Arterial, Collector and Local	2001	2010	2015	2016	2017	2018	2019	2020
% Miles at or below Cond State 10	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Miles at or below Cond State 9	94.5%	97.4%	97.7%	97.9%	96.8%	94.7%	96.0%	97.3%
% Miles at or below Cond State 8	87.7%	89.9%	93.4%	94.1%	93.9%	91.9%	92.9%	93.5%
% Miles at or below Cond State 7	65.0%	53.2%	62.0%	57.6%	60.8%	51.9%	78.4%	62.6%
% Miles at or below Cond State 6	57.2%	37.4%	40.7%	42.6%	44.6%	43.1%	44.4%	41.5%
% Miles at or below Cond State 5	32.1%	25.0%	24.6%	26.5%	26.6%	24.8%	25.6%	23.6%
% Miles at or below Cond State 4	9.3%	6.5%	14.4%	15.4%	15.3%	13.6%	13.1%	12.2%
% Miles at or below Cond State 3	1.8%	0.7%	2.7%	2.8%	3.3%	2.9%	2.4%	2.2%
% Miles at or below Cond State 2	0.7%	0.0%	0.1%	0.1%	0.1%	0.2%	0.1%	0.2%
% Miles at or below Cond State 1	0.6%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%
% Miles at or below Cond State 0	0.3%	0.0%	0.0%	0.0%	0.0%	0.1%	0.0%	0.0%

Goal (26%) is centered around the number of streets rated at or below 5.

# State of Our Arterial Streets

Arterial	2001	2010	2015	2016	2017	2018	2019	2020
% Miles at or below Cond State 10	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Miles at or below Cond State 9	98.3%	92.0%	98.0%	97.9%	97.8%	95.1%	95.1%	97.4%
% Miles at or below Cond State 8	87.0%	76.6%	89.8%	89.7%	93.6%	90.7%	92.9%	91.8%
% Miles at or below Cond State 7	58.4%	47.0%	56.4%	46.1%	53.8%	42.5%	78.9%	57.9%
% Miles at or below Cond State 6	46.3%	28.2%	37.8%	38.9%	37.8%	36.5%	40.6%	39.9%
% Miles at or below Cond State 5	23.3%	15.8%	18.4%	23.0%	26.3%	24.6%	25.6%	25.8%
% Miles at or below Cond State 4	2.0%	8.1%	7.1%	7.5%	8.8%	6.9%	8.6%	8.2%
% Miles at or below Cond State 3	0.5%	0.8%	2.4%	2.3%	2.5%	1.6%	1.1%	1.2%
% Miles at or below Cond State 2	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.1%
% Miles at or below Cond State 1	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Miles at or below Cond State 0	0.5%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Goal: less than 15% of total miles of arterial streets at or below 5.

# State of Our Collector Streets

Collector	2001	2010	2015	2016	2017	2018	2019	2020
% Miles at or below Cond State 10	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Miles at or below Cond State 9	94.2%	96.9%	96.4%	97.1%	96.7%	95.1%	96.1%	97.0%
% Miles at or below Cond State 8	86.1%	89.0%	90.8%	93.1%	93.0%	91.5%	92.8%	95.0%
% Miles at or below Cond State 7	58.3%	48.5%	58.8%	51.7%	61.5%	53.1%	78.0%	64.4%
% Miles at or below Cond State 6	48.6%	32.4%	39.0%	41.4%	44.3%	43.1%	46.5%	43.9%
% Miles at or below Cond State 5	27.8%	19.3%	18.9%	22.7%	23.1%	21.3%	25.0%	22.6%
% Miles at or below Cond State 4	6.0%	4.7%	9.1%	9.5%	10.2%	9.5%	8.4%	8.1%
% Miles at or below Cond State 3	0.3%	0.8%	2.9%	2.8%	3.2%	3.0%	1.8%	1.6%
% Miles at or below Cond State 2	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.0%
% Miles at or below Cond State 1	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.0%
% Miles at or below Cond State 0	0.0%	0.0%	0.0%	0.0%	0.0%	0.2%	0.2%	0.0%

Goal: less than 20% of total miles of collector streets at or below 5

# State of Our Local Streets

Local	2001	2010	2015	2016	2017	2018	2019	2020
% Miles at or below Cond State 10	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
% Miles at or below Cond State 9	93.9%	98.6%	98.1%	98.1%	96.6%	94.6%	96.1%	97.4%
% Miles at or below Cond State 8	88.3%	92.6%	94.9%	95.2%	94.3%	92.2%	92.9%	93.4%
% Miles at or below Cond State 7	68.2%	56.0%	64.1%	61.6%	61.8%	53.2%	78.5%	62.9%
% Miles at or below Cond State 6	61.8%	40.7%	41.8%	43.7%	45.9%	44.3%	44.3%	41.1%
% Miles at or below Cond State 5	34.9%	28.5%	27.6%	28.4%	27.8%	25.9%	25.7%	23.5%
% Miles at or below Cond State 4	11.6%	6.7%	17.5%	18.8%	18.2%	16.2%	15.4%	14.3%
% Miles at or below Cond State 3	2.4%	0.6%	2.7%	2.9%	3.5%	3.1%	2.9%	2.6%
% Miles at or below Cond State 2	0.9%	0.0%	0.1%	0.2%	0.2%	0.2%	0.1%	0.3%
% Miles at or below Cond State 1	0.8%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
% Miles at or below Cond State 0	0.4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%

Goal: less than 30% of total miles of local streets  
at or below 5

# Curb & Gutter

- ⇒ What is the purpose of curb & gutter?
  - Drainage
  - Define parking
  - Keep terrace intact

# Selection Criteria

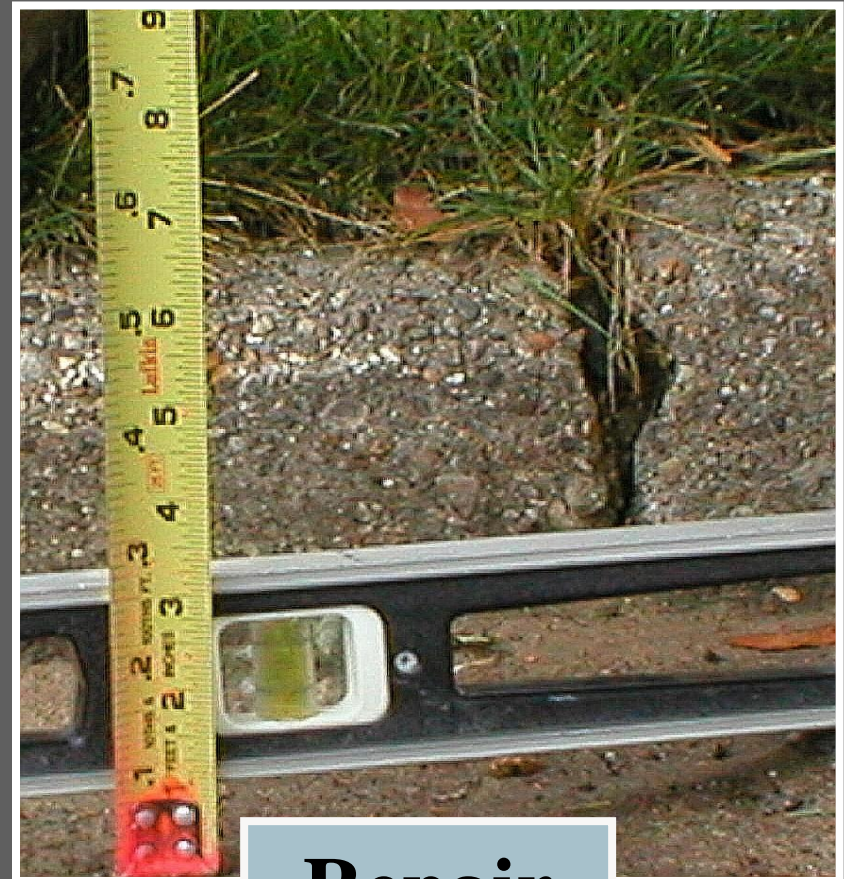
- ⇒ Look for 6 different types of problems in c&g:
- ⇒ Vertical Offset
- ⇒ Horizontal Offset
- ⇒ Water Ponding
- ⇒ Curb Head
- ⇒ Tipped Curb
- ⇒ Pitted Concrete



# Vertical Offset



**Repair**



**Repair**

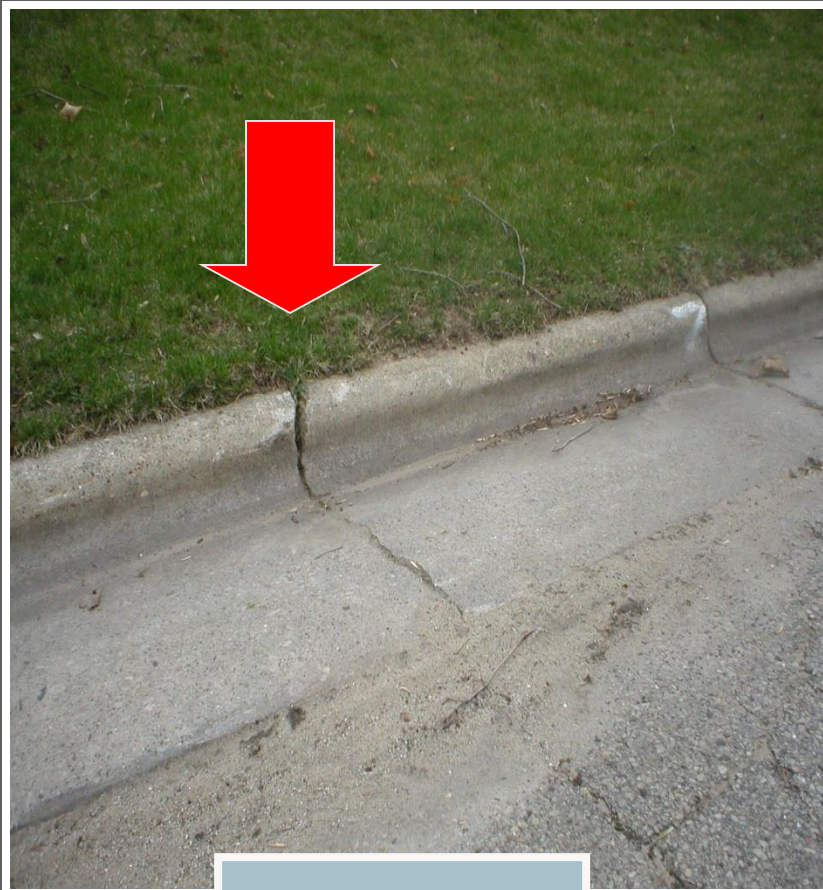
# Horizontal Offset



**Repair**



# Cracks



**Repair**



**Leave**

# Water Ponding



**Repair**



# Curb Head



**Repair**

# Tipped Curb



**Repair**

# Pitted Concrete



**Leave**

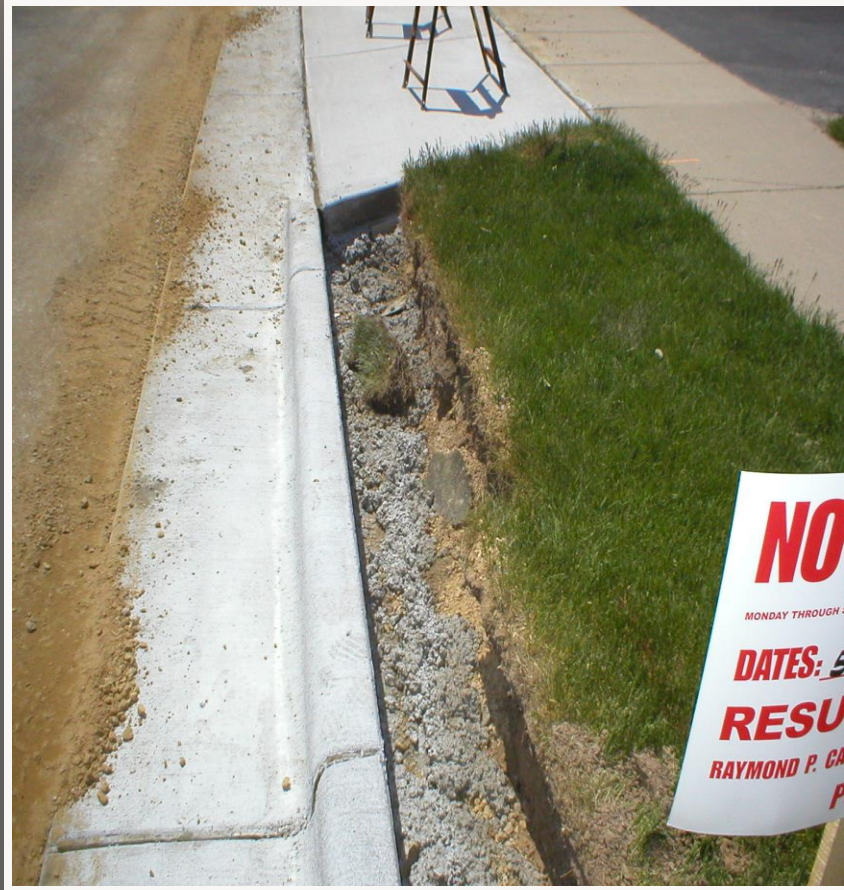


# Assessments

- ⇒ Cost split with property owner and City
- ⇒ Curb & Gutter work associated with storm sewer inlets is not assessed to property owners
- ⇒ Public hearings at Board of Public Works and Common Council meetings
- ⇒ Pay assessment in full the year invoiced or pay installments over an eight year period



# CURB & GUTTER CONSTRUCTION



⇒ HAND PLACED C&G VS. MACHINE PLACED C&G



# STORM SEWER CONSTRUCTION



- ➔ REBUILDING INLETS
- ➔ INSTALLING NEW INLET AND PIPE



# UTILITY CASTING ADJUSTMENTS



- ➔ ADJUSTING CASTING
- ➔ ADJUSTING WATER VALVE BOX



# DRIVE APRON CONSTRUCTION



- ⇒ PARTIAL REPLACEMENT OF DRIVE APRON
- ⇒ FULL REPLACEMENT OF DRIVE APRON IN PHASES



# PAVEMENT PULVERIZING



- ➔ ASPHALT AND GRAVEL BASE ARE PULVERIZED
- ➔ NEW BASE IS GRADED AND COMPACTED
- ➔ NEW BASE IS TEST ROLLED AND UNDERCUT
- ➔ NEW BASE IS FINISHED ROLLED TO FINAL GRADE



# PAVEMENT PULVERIZING



- ➔ ROLLED AND COMPACTED BASE
- ➔ UNDERCUT SOFT AREA AFTER TEST ROLL



# PAVEMENT MILLING



➔ MILLING OPERATION

➔ SOFT AREA THAT WILL BE UNDERCUT OR BASE PATCHED



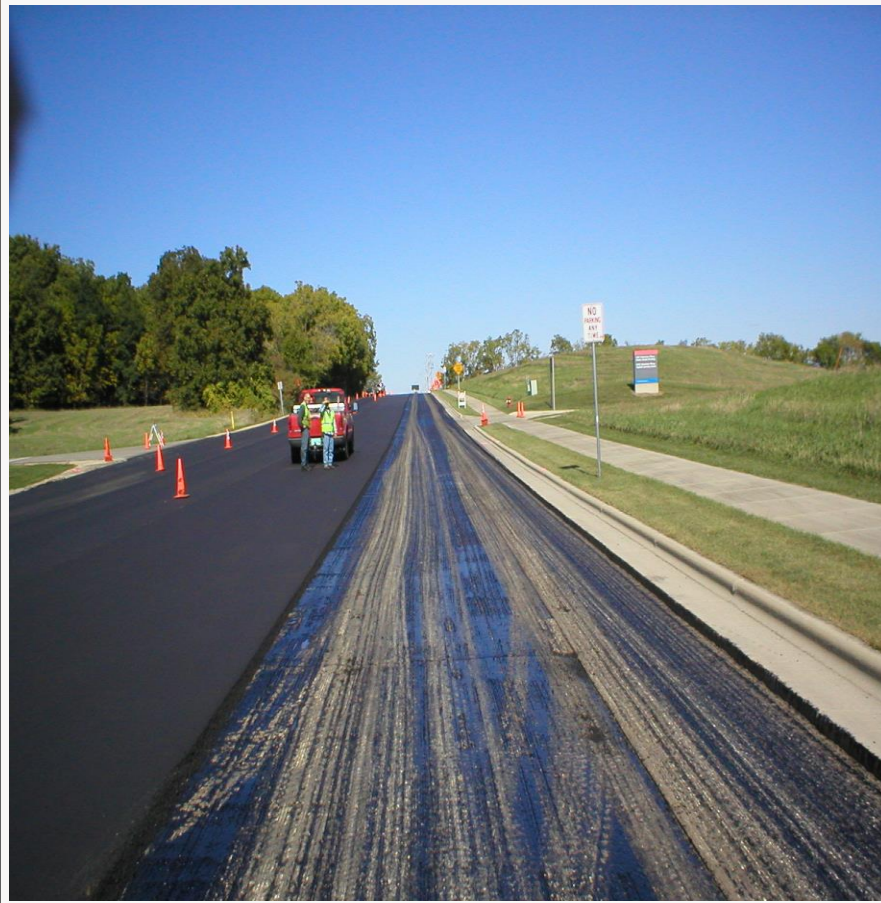
# PAVEMENT MILLING - UNDERCUT



- ➔ TEST ROLL PAVEMENT
- ➔ EXCAVATE SOFT AREAS
- ➔ PLACE BREAKER RUN STONE OR ASPHALT



# ASPHALT PAVING



- ➡ TACK COAT APPLIED TO LOWER ASPHALT LAYER
- ➡ PAVING FINAL LIFT OF ASPHALT



# ASPHALT PAVING & RESTORATION



➔ ASPHALT PAVING

➔ RESTORATION OF TERRACES AFTER C&G INSTALLED

# City Engineering Division RESURFACING PROGRAM

- PUBLIC INFORMATION MEETINGS: Dec 14.
- BPW APPROVAL OF 3 CONTRACTS
  - CURB AND GUTTER REPLACEMENT WITH RESURFACING
  - PULVERIZING & PAVING WITH RESURFACING
  - PATCHING
- BPW PUBLIC HEARING ON ASSESSMENTS JANUARY 19, 2022
- COMMON COUNCIL HEARING FEBRUARY 1, 2022
- SURFACE PAVING NEW PLAT PHASES: CITY COST SHARE FOR IMPROVEMENTS TO EXISTING STREETS
- PAVEMENT PATCHING/MILLING/OVERLAY CITYWIDE
- RESURFACING WEB SITE (SIGN UP FOR UPDATES)
- SCHEDULE WILL BE POSTED ON WEB SITE WHEN KNOWN