

Better NB

Case Studies of City Initiatives
Making New Braunfels a
Better Community

Equipment Investments Pave the Way for More Street Work

Asphalt Paver

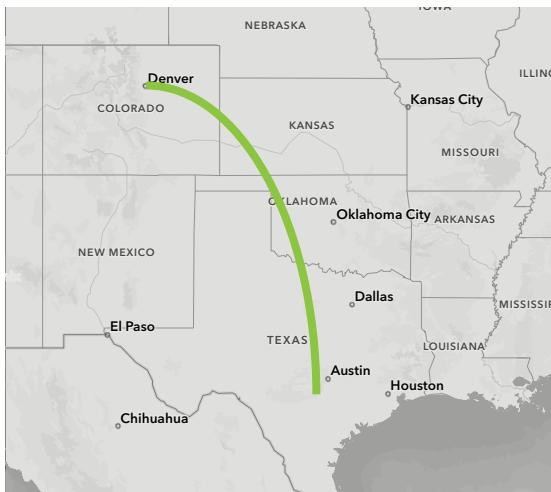


Equipment: Asphalt Paver

Cost: \$247,286

Primary Purpose: Distributes and levels asphalt, while compacting layers to create smooth surfaces for roadways and parking lots.

It's just before 8am and the cones start going out on Magazine Avenue as City of New Braunfels Public Works crews get ready to begin their day. The foreman, Greg Schwerdtfeger, a 9-year employee of the City with 40 years of road construction experience, gives the all-clear to his crew to get started on the work. Engines turn over and for the next two weeks a variety of vehicles do the heavy-lifting of digging, scraping, milling, and paving. And when all is said and done, the cones are picked up and that section of Magazine Avenue has a brand new road surface for residents to enjoy.



The City maintains as many lane miles as the distance between New Braunfels and Denver, CO.

This is just one of roughly 30 such projects that the City completed during the 2022-2023 fiscal year. There are currently about 944 lane miles in New Braunfels, roughly equal to the number of lane miles between New Braunfels and Denver, Colorado. In years past, the City relied on hiring contractors to handle much of the work needed to maintain the ever-growing New Braunfels road system. That often left the City at the mercy of those contractor's availability and competing with TxDOT as well as other cities and counties for quality work crews, leading to delays of needed projects and increased costs.

Recognizing this, the City of New Braunfels began making significant investments in both equipment and personnel, giving City crews the ability to schedule road maintenance projects on their own. Since 2018, the City of New Braunfels has funded the purchase of more than \$4 million in road construction equipment.

Motor Grader

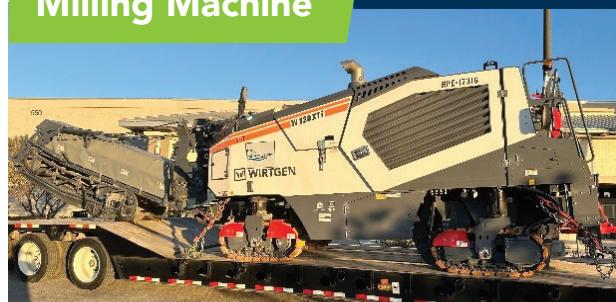


Equipment: Motor Grader

Cost: \$315,043

Primary Purpose: A versatile piece of equipment that can smooth almost any surface for road and drainage projects.

Milling Machine



Equipment: Milling Machine

Cost: \$461,628

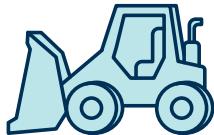
Primary Purpose: Removes part of existing asphalt for spot rehabilitation.

"Adding large equipment to our road construction fleet puts the City on a whole new footing. We can address roadwork issues faster, more efficiently, and at a much lower cost than when we relied almost solely on hiring contractors and renting equipment," said Public Works Director Greg Malatek.

Investments Align with City Priorities

This investment in equipment to increase efficiency aligns to the City's strategic priorities, with New Braunfels City Council and City Administration working together to find ways to stretch tax dollars into better roads, better drainage, and better overall quality of life for residents.

Types of Street Work



Street Rehabilitation:
Reconstructing the entire roadway section, replacing sections of concrete curb and fixing the drainage issues



Mill and Overlay:
Remove and replace the old existing asphalt with new asphalt



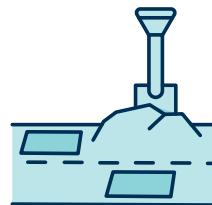
Limited Overlays:
Projects that need 1 inch or less of new asphalt



Micro-Surfacing:
Preventive maintenance using a thin layer of liquid asphalt to extend the useful life



Blade Level Up:
Placement of a thin layer of asphalt pavement to fill-in areas that hold water due to the shifting subgrade



Crack Sealing:
Preventive maintenance covering up cracks in the pavement to prevent water from getting in

Spotlight on Micro-Surfacing

Micro-surfacing is a new technique the City is implementing to extend the life of our roadways. Micro-surfacing is a protective seal coat of about 1/4 inch of asphalt applied to the top of existing pavement that is in good condition. It is a cost effective preventative method to renew the road surface, adding 10+ years to the existing pavement and saving thousands of dollars over time.

"It's not lost on City management that the state of the City's transportation infrastructure is often a top priority for residents who have voiced their concerns during City Council meetings and through public input surveys like the National Community Survey and the Street Maintenance Survey," noted City Manager Robert Camareno. "That input has been critical and contributed to the City's decision to expand our street equipment inventory to be more proactive and productive in improving street repairs and maintenance efforts."

"Over the next several budget cycles, we plan to continue to invest to provide our dedicated street crews with additional equipment and technology necessary to maximize their output and efficiency." - City Manager Robert Camareno

101.1

of roadway lane miles with significant work completed between 2021-2023

85%

% of high priority street repair service requests completed within 10 business days

450

of street service requests processed in FY 2023

5,000

of potholes repaired by City Streets Division in FY 2023

875

of signs repaired or installed in FY 2023

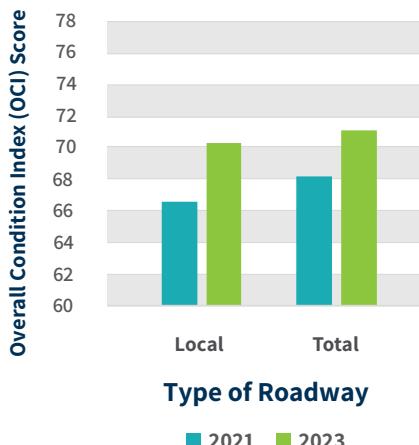
Beyond street maintenance and repair, voters in New Braunfels also recognize the need for major road rehabilitation projects, approving a total of \$192.2 million dollars in transportation and roadway improvements in the last three bonds (\$48.4 million in the 2013 Bond, \$44.5 million in the 2019 bond, and \$99.3 million in the 2023 bond). In 2019, the City also invested \$34,000 in a printer specifically used to make street signs, bypassing expensive contractors and giving the City creative control over the look of those signs.

Keeping Up With Pavement Conditions

So how does the City know which street maintenance projects are needed? A list of projects is compiled using a combination of resident input and data collected during periodic pavement surveys. Every 5 to 7 years, each city street is analyzed and assigned a pavement score and that, along with feedback from residents in the form of surveys and open house forums, is used to create the City's Street Maintenance Plan.

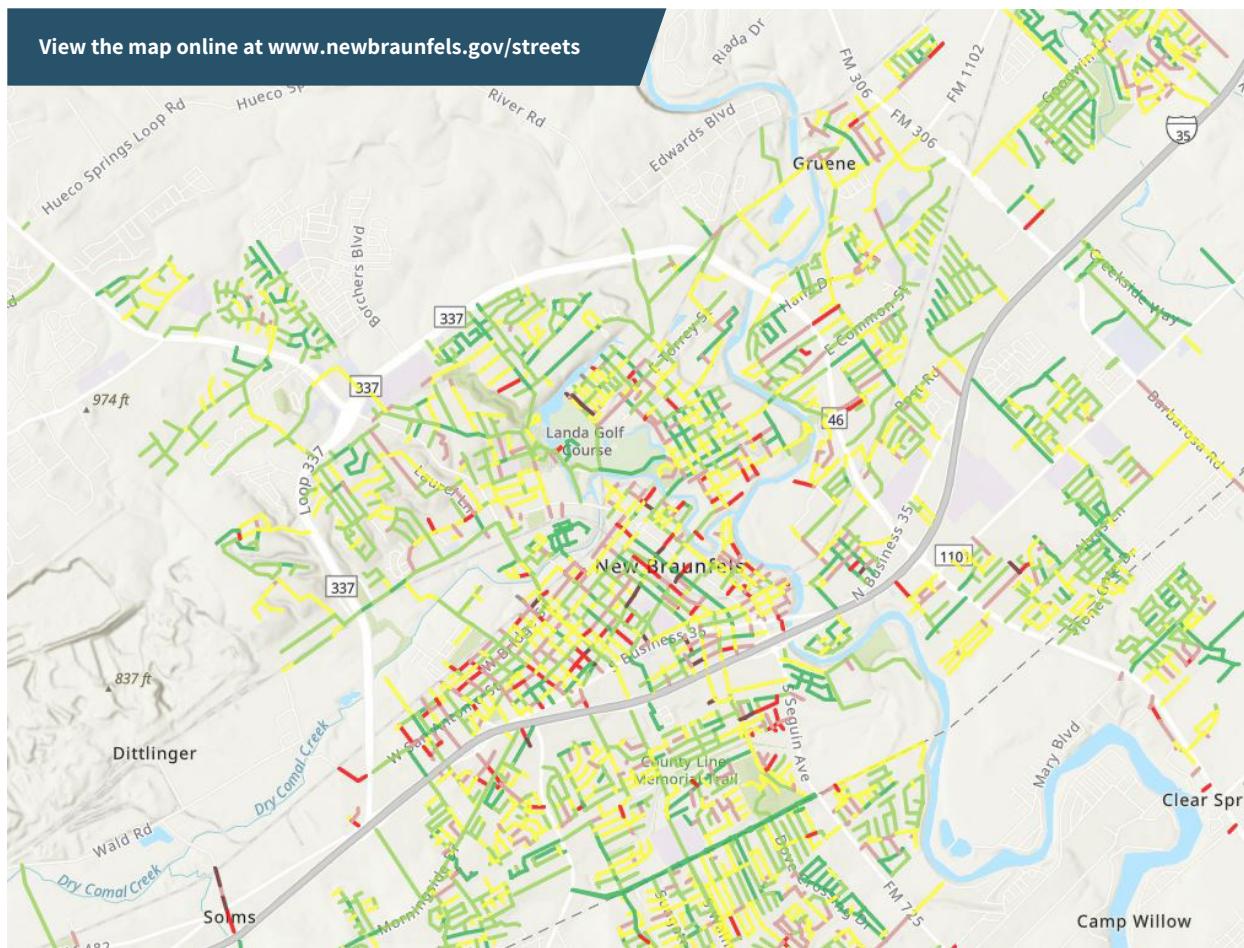
Residents can find the Street Maintenance Plan, and learn more about the Street Maintenance Survey, by visiting the City website at www.newbraunfels.gov/streets. Residents can also get information about ongoing transportation projects by using the interactive New Braunfels at Work map found at www.newbraunfels.gov/nbatwork.

Pavement Condition Reports



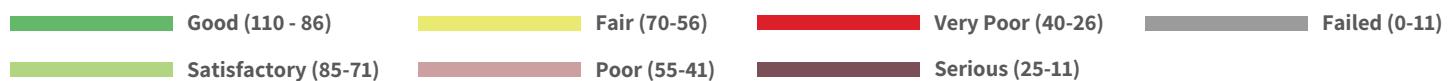
Due to investment in paving equipment, an aggressive maintenance plan, and street projects thru the bond programs, the asphalt pavement score and overall score have increased significantly in just 2 years.

Pavement Scores Map



Estimated Overall Condition Index (OCI) of City Streets

Type of Roadway



Pavement Management Program

Pavement Management is the process of managing the life cycle of roadways to maximize the pavement life and to minimize the maintenance costs. This process inventories the streets into maintainable segments followed by a survey to determine the surface condition and rideability.

Each city street was evaluated and given an Overall Condition Index (OCI), or Pavement Score, shown in the map above. The OCI considers the smoothness of the roadways and cracks, rutting, utility cuts and potholes in the pavement surface. A street with an OCI of 99 is in excellent condition and needs no repair or treatment.

The estimated OCI scores are used to enable the city to prepare a list of roadways for the preventive maintenance budget each year. The preventive maintenance budget will consist of work like crack sealing, pothole repairs, base repairs, chip seals, limited overlays, mill and overlays and rehabilitation/reconstruction of roadways.