2019/2020
PUBLIC WORKS
ANNUAL REPORT

Engineering and Architecture . Construction Management . Facilities Management
Streets Management . Traffic Management . Public Works Resources

City of Las Cruces®
MOUNTAINS OF OPPORTUNITY®
LETTER FROM THE DIRECTOR

David Sedillo, P.E., Public Works Director

The year 2020 has presented various challenges and unique circumstances that have brought forth many changes and uncertainty. During these unprecedented times, staff of the Public Works Department has unselfishly made it their top priority to maintain services for our customers in a safe, reliable, and accessible manner to public infrastructure.

We are humbly aware of the importance these services provide our community. As such, Public Works is proud to be an integral part in the success of the mission of other City departments, government agencies, community agencies, and businesses, as they serve the needs of their customers.

It is my distinct honor to recognize the strong efforts and excellent customer service staff has continuously provided during the year, highlighted in the Public Works Department Annual Report. We hope our report will provide customers a glimpse into the daily operations of the department's programs, with the intent to streamline any specific questions and requests our customers may have.

On behalf of the Public Works Department, we look forward to the continued collaboration with all customers, while continuing to improve services to our community.

Sincerely,

David Sedillo, P.E.,
Public Works Director
ABOUT US: ENGINEERING AND ARCHITECTURE

Engineering and Architecture provides technical surveys and engineering design work to develop plans and specifications to build, maintain, and replace public infrastructure as well as manage the design and construction of City facilities. This program is also responsible for the City’s Stormwater Pollution Program, which provides the public with awareness on watershed management, water quality and stormwater pollution prevention.

Previously, Engineering and Architecture was responsible for the City’s National Flood Insurance Program/Community Rating System. This year the program was transferred to the City’s Community Development Department in order to streamline the permitting process. The move will provide easier access to flood information and inquiries for citizens that have existing homes or properties that are required to have flood coverage, or, if they are planning to purchase or build a new structure that is within a special flood hazard area. Public Works engineers will review drainage studies for large developments in flood prone areas and will also provide technical support to Community Development staff for drainage design, modeling and analysis.

SURVEYING

Engineering and Architecture Staff are using high definition scanning to generate engineering design and architectural base maps. The process improves staff safety and reduces traffic impact while collecting site infrastructure in the field. Starting in August 2020, engineering construction documents will use a new coordinate system designed by our Survey team. The new system creates a Low Distortion Projection coordinate grid that minimizes horizontal and angular distortions encountered when curved surfaces (the Earth) are projected onto a flat plane surface.

Having a standard coordinate system reduces potential systematic design errors and provides a consistently reliable survey basis for our projects.
INFRAWORKS

During the design phase of projects, the Engineer and City staff conduct a public meeting to present the project to the public. For a more realistic view of the project, staff has implemented a new software called Autodesk Infraworks 360. Infraworks is a planning and design platform that enables engineers to quickly and easily convey preliminary design intent in a real-world environment for enhanced team decision making. This tool was most recently used for the Van Patten reconstruction project to give the public a much better understanding of the proposed layout of the project and its improvements adjacent to their properties because it provides a 3D view of the project at completion. This allows for more efficient feedback during the public input period.

AUTOCAD CIVIL 3D

Engineering & Architecture uses as software called AutoCAD Civil3D to perform complex design of the reconstruction of streets, ponds, storm drainage and utilities. AutoCAD Civil 3D software is a design and documentation solution for civil engineering that supports building information modeling (BIM) workflows.

STORMWATER MANAGEMENT

The City of Las Cruces is permitted under the National Pollutant Discharge Elimination System (NPDES). This permit regulates stormwater discharges through the Clean Water Act (CWA) authorized by the Environmental Protection Agency (EPA). Our natural stormwater can contain sediment, trash, pet waste, oils and chemicals, that are generated everyday by human activities. The NPDES stormwater program regulates stormwater discharges from three potential sources: municipal separate storm sewer system (MS4), construction activities and industrial activities. The NPDES permit was designed to help communities reduce the negative impacts that stormwater pollution has on the regional watershed and local surface waters. In the City of Las Cruces there are roughly 108 miles of storm drainpipes, 100+ stormwater detention facilities throughout the City that temporarily hold runoff during and after storm events, and 2,523 catch basins that help mitigate flooding. The City Public Works Streets Weed and Flood section is responsible for the maintenance of 65 of these detention facilities.

GIS DATA COLLECTION

The City has been working with a consultant to collect data on our storm water facilities. To date, four phases of this project have been completed and a fifth one is beginning. Using this data, we are developing a 3D storm drain management system with integration to our asset management system. This project will identify the assets and map the location and details of the key feature elements comprising the City’s stormwater system. Having a comprehensive stormwater GIS asset database will allow greater efficiency in project design, management, maintenance and planning.

INSPECTIONS

Inspections to the MS4 are carried out annually to determine the condition and maintenance required to keep the system operating effectively. An inspection camera system is used to confirm location, condition and functionality of existing storm drain pipes. The camera is also utilized to verify proper installation of new pipes that will be added to the system. Video is captured and reviewed by staff engineers which helps them make decisions regarding quality, condition, and potential maintenance that may be required.
Outreach

Normally, staff participates in outreach activities to educate the public about stormwater pollution prevention and stormwater management. The pandemic has put a damper on our outreach program. During the year these events may include workshops, water festivals, career days, neighborhood leadership academies and public school presentations. Students learn about their watershed and ways they can help protect and manage stormwater within their community.

In addition to presenting to students, the outreach team may also give presentations on water quality and stormwater construction site management to local developers, home builders, residents and staff from both the City and County. Starting this fiscal year, City staff are participating in the creation of The Master Watershed Conservationist Program being developed through a grant from The New Mexico Soil and Water Conservation Commission (SWCC). The goal of the grant program is to promote the health of New Mexico’s watersheds and conserve the water resources they produce. The Doña Ana Soil and Water Commission secured the grant through the state and established a working group of local professionals and stakeholders. The objective for this group is to create the curriculum and educational training needed for anyone interested in learning more about how to manage and protect the health of our aquifer’s local watershed.

Weather Stations

Staff collaborates with the Doña Ana County (DAC) Flood Commission to provide data for a website showing current and historical weather, rainfall and river level monitoring data. This network of weather and stream level gauge sites is a collaborative project of the Doña Ana County Flood Commission, the Elephant Butte Irrigation District, the City of Las Cruces, the National Weather Service, and New Mexico State University. This web interface incorporates data collected at gauge sites as well as weather and stream gauging sites operated in the area by other agencies such as the United States Geological Survey, the Jornada Experimental Range, local airports and other nearby cities and counties. The weather stations are just one component of the All Hazards Mitigation plan and DAC Flood Warning System designed to help identify natural hazards and to alert residents with an advanced warning system. The weather and monitoring stations can be accessed by anyone online via an interactive map at the following website: https://weather.donaanacounty.org/
PAVEMENT MAINTENANCE

The Engineering and Architecture Program of Public Works oversees over 131 miles of major roadways (arterials and collectors) and 357 miles of residential roadways, encompassing over 10.1M square yards of asphalt and concrete surfacing. At a replacement cost approaching $1.1M per mile – not including the value of the land, the City has over $500.8 million invested in the paved roadway network. Preservation while extending the life of existing road and street systems has become a major activity for the City and therefore funds that have been designated for pavement preservation must be used as effectively as possible.

One proven method to obtain maximum value of available funds is using a pavement management system. This system is a set of tools and methods that assists decision makers in finding optimum strategies for maintaining pavement in a serviceable condition over a given time period. Figure 1 illustrates the deterioration of a pavement through its life and the increase in cost to rehabilitate if maintenance is delayed.

Applying pavement management techniques allows the pavement to be revived and sealed, giving the pavement a longer lifecycle as shown in Figure 2. Applying the correct technique to the right pavement at the right time is imperative in increasing the pavement’s life.

The Engineering and Architecture section continues to analyze the current roadway network to maximize funding and continues to increase the number of roadway mile improvements by year. Staff begins with an objective computerized pavement management system to rate the condition of existing roadways, Pavement Condition Index (PCI), and provides the most cost-effective method to rehabilitate roadways throughout the City.
The majority of the Las Cruces road network falls under the Good to Very Good (green) categories while the amount of Very Poor to Fair (red) streets is minimal when compared to Cities similar to Las Cruces in size and funding. These “green” roads benefit the most from preventative maintenance techniques, similar to changing the oil in your car to help increase its life cycle.

Following the improvements for 2019-2020, the current PCI rating for the City of Las Cruces is 66. Typical roadway networks drop approximately 2 points per year on average without maintenance. Las Cruces has effectively minimized any noticeable drop in condition. Staff’s long-term focus is to ensure that the overall condition does not drop and that the number of red streets do not grow excessively over time thereby saving millions of dollars by preventing roadway failure.

These segments are analyzed by the computer software and assigned a maintenance or rehabilitation type based on their condition. This analysis is further reviewed by staff for acceptance into our maintenance program.

Streets are surveyed, evaluated, scored, and categorized as shown in the following table:

All street segments are represented in a map with corresponding colors. This map is updated each time any pavement maintenance or rehabilitation has occurred.

<table>
<thead>
<tr>
<th>PCI RANGE</th>
<th>DESCRIPTION</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>85-100</td>
<td>Excellent</td>
<td>Like new condition- little to no maintenance required when new; routine maintenance such as crack and joint sealing</td>
</tr>
<tr>
<td>70-85</td>
<td>Very Good</td>
<td>Routine maintenance such as patching and crack sealing with surface treatments such as seal coats or slurry.</td>
</tr>
<tr>
<td>60-70</td>
<td>Good</td>
<td>Heavier surface treatments and thin overlays. Localized panel replacements.</td>
</tr>
<tr>
<td>40-60</td>
<td>Fair to Marginal</td>
<td>Heavy surface-based inlays or overlays with localized repairs. Moderate to extensive panel replacements.</td>
</tr>
<tr>
<td>25-40</td>
<td>Poor</td>
<td>Sections will require very thick overlays, surface replacement, base reconstruction, and possible subgrade stabilization.</td>
</tr>
<tr>
<td>0-25</td>
<td>Very Poor</td>
<td>High percentage of full reconstruction.</td>
</tr>
</tbody>
</table>

A breakdown of the different maintenance and rehabilitation types is shown in the following table:

PREVENTATIVE MAINTENANCE
Crack Seal
Micro-Surfacing

REHABILITATION
Mill & Overlay
Pavement Replacement
Cape Seal

RECONSTRUCTION
CIP Full Reconstruction
PREVENTATIVE MAINTENANCE

In order to maintain good to excellent streets at their current PCI or better, it is necessary to apply preventative maintenance.

**Crack seals** are used to fill any cracks that have formed in the roadway to minimize any moisture from entering and affecting the pavement.

**Micro-Surfaces** are thin layers of asphalt applied over an entire roadway to help protect and keep the asphalt below in good conditions. In fiscal year 2019-2020, the Engineering & Architecture section identified approximately 112 streets that received preventative maintenance.

**Amount Expended on Preventative Maintenance FY 19-20**

- **CRACK SEAL** $286,000
- **MICRO-SURFACING & CAPE SEALS** $1,260,575

REHABILITATION

Streets that may have fallen below the Very Good PCI level require more invasive rehabilitation like a mill & overlay or pavement replacement. Mill & Overlay rehabilitation includes removing the top layer of asphalt and replacing it with new asphalt. Pavement Replacement consists of removing all asphalt and replacing it. In the fiscal year 2019-2020, 16 streets received a mill & overlay and 14 streets were selected to receive pavement replacements.

**Amount Expended on Rehabilitation FY 19-20**

- **MILL & OVERLAY** $1,200,000
- **PAVEMENT REPLACEMENT 19-20** $1,645,00
- **WALNUT ST IMPROVEMENTS PHASE I** $346,000
FULL RECONSTRUCTION

For streets from Poor to Very Poor condition, it is required that the entire roadway be reconstructed. Along with replacing the asphalt on these streets, they are completely improved including utilities, street lights, ADA ramps and sidewalks. In the fiscal year 2019-2020, four were full reconstruction projects.

Amount Expended on Reconstruction FY 19-20

- MCFIE AVENUE RECONSTRUCTION
  $820,000
- VAN PATTEN STREET RECONSTRUCTION
  $540,000
- CAMPO STREET DESIGN & RECONSTRUCTION
  $400,000
- TASHIRO ROAD WIDENING
  $3,650,000
ABOUT US: CONSTRUCTION MANAGEMENT

Construction Management is a program within the Public Works Department that focuses on construction of City projects, including the project management and inspection of Capital Improvement Projects as well as maintenance projects within the City of Las Cruces. Construction Management also provides oversight and contract administration of projects to ensure compliance with applicable plans, specifications, and standards. It includes both roadway and facility projects within the City of Las Cruces.

Construction Management also provides inspection and oversight for private infrastructure installed through subdivisions, right of way permits, and commercial development permits that will become public.

Construction Management oversees approximately 35-45 projects, every year totaling:

$35-50 Million

PALMER SUBDIVISION PROJECT

This project consisted of a complete street rehabilitation in the Palmer Subdivision area which included the streets of 2nd through 6th. The improvements included utilities, storm drain, street lighting, sidewalk, curb and gutter, and paving.

Project Cost: $6.4 Million

RIO GRANDE THEATER ROOF REPLACEMENT

This project consisted of replacing approximately 2,500 Sq. Ft. roof area with a new single ply Thermoplastic Polyolefin (TPO) roof system, as well as a new roof drain system. The Rio Grande Theater was built in 1926 and the roof has been replaced several times. On this project, a new roof drain was included to alleviate water ponding causing the roof leaks.

Project Cost: $118,119
ROADRUNNER PARKWAY EXTENSION
MESILLA VALLEY COMMUNITY OF HOPE RE-ROOF

ROADRUNNER PARKWAY EXTENSION
This project extended Roadrunner Parkway from Sunridge to Settler’s Pass. It included all necessary utilities, street lighting, sidewalk, curb and gutter and signage. It also included a culvert crossing of Sandhill Arroyo.

Project Cost: $2,413,240

MESILLA VALLEY COMMUNITY OF HOPE (MVCOH) RE-ROOF AND DRAINAGE IMPROVEMENTS
This project consisted of replacing approximately 8,800 Sq. Ft. of roof material with new 80 mil TPO Roof System. As well as providing a new 3,000 gal rain harvesting water tank and a new storm drain in the parking to alleviate water ponding issues. The MVCOH has served the community for many years and these improvements will allow for better services the community. This project was completed on time and on budget.

Project Cost: $199,475
Facilities Management

Energy Efficiency

About Us: Facilities Management

Facilities Management is responsible for implementing the overall operation and maintenance strategy as it relates to buildings and grounds for the City. This program consists of three functional areas that collectively maintain approximately over 1,000,000 square feet of building space spread across 100+ buildings, and provides support to more than 100 parks and recreation sites throughout the City.

Energy Efficiency

A part of our commitment to being good stewards of City facilities, enhancing the customer experience, looking for ways to reduce costs, and furthering sustainability goals, a consultant was hired to conduct an Investment Grade Audit (IGA). The purpose of such an audit is to assess and analyze energy consumption with the goal of identifying changes that could be made that improve operations, while reducing energy consumption and associated costs.

The consultant audited 112 facilities and parks, performed a utility bill analysis for 293 electric accounts, and 45 natural gas accounts. In addition, site visits were conducted, building users interviewed, and devices called “data loggers” were put into place which tracked how long lights were on or off, what the temperatures were in different parts of the building, reviewed existing energy management systems, along with other needed information. At the conclusion of the audit process this past spring, the consultant identified several Energy Conservation Measures (ECMs) that would provide a good opportunity to self-fund improvements in those areas.

ECM-1 relates to lighting improvements. This involves replacing/retrofitting lighting fixtures and bulbs with over 8,800 high efficiency LED units, including occupancy sensors. For our customers, this means light bulbs will need to be changed less frequently, while providing more consistent illumination.

ECM-2 relates to Energy Management Systems. This is a software package that will allow 22 building systems to be managed from a central point, allowing staff to identify potential problem areas before a major failure occurs. ECM-3 relates to heating, ventilation, and air conditioning (HVAC). This involves replacement and/or upgrades to 106 HVAC units, along with meeting Environmental Protection Administration (EPA) guidelines for types of refrigerant used in our systems. ECM-4 is related to street lighting. It involves changing the type of electric account used.

So, how is all this paid for? This is done through an Energy Savings Performance Contract (ESPC). It allows for improvements to be made today, and payments for those improvements are made over a fixed term, and the savings or revenue generated from the upgrades/retrofits pays for themselves. The reason it is called a performance contract is that the results/savings are guaranteed by the consultant during the life of the contract. City Council approved such a contract on June 15, 2020, and City staff are looking forward to providing updates to our customers in the coming year on the implementation, results, and benefits of this process.
OPERATION EFFICIENCY CHANGES

Facilities Management, as part of Public Works, is tasked with making sure facilities are safe, available for use, and provide an inviting environment for customers and staff. To help move down that path, the facilities program has continued to implement the Facility Management Plan that was adopted by City Council in 2019 which identifies various initiatives to raise the bar and provide improved services. By establishing the plan, it helped meet one of the identified milestones as outlined in the Strategic Business Plan as part of the PEAK Performance process. The purpose of such a plan is to manage and preserve the City’s facilities and prepare for the acquisition of future facilities.

One area of focus is the preventive maintenance program. This involves taking steps that are performed on a regular basis, whether it is a parking lot, building, piece of equipment, etc. to reduce the likelihood that the item will fail unexpectedly while increasing the life cycle of that item. In addition, by focusing on this area, the City can plan for future repair or replacement costs which will yield a budget more closely aligned with needs to provide a higher level of service to our customers. This past year, a City-wide parking lot assessment, including buildings and parks, was conducted (with the help of Construction Management). As part of the assessment, information such as pavement condition, striping, number of parking spaces, condition of wheel stops, ADA status, etc. were collected. Based on this data, City staff will be putting it into our new Enterprise Asset Management (EAM) system (implementation is currently underway), to prioritize and plan for maintenance and rehabilitation projects.

A second area of focus are the annual walk-throughs that continue at 65 buildings. These are facilities that serve our citizens directly. A walk-through of the entire building, including but not limited to: common areas, offices, storage rooms, restrooms, mechanical service rooms, and custodial support areas as well as a complete outside perimeter inspection is conducted.

As all these inspections are completed and reviewed, work orders are generated or inclusion in the Capital Improvement Plan takes place to address the various items, especially those that are a life safety or other high priority item.

A third area of focus is supplementing City resources with local contractor assistance. The City has a talented in-house staff consisting of building maintenance technicians, electricians, plumbers, and heating, ventilation, and air conditioning technicians. However, given the over 100 buildings under our maintenance responsibility and the desire to improve response time, utilizing local contractors in addition to City staff results in improved response times and a greater capacity to meet our customer’s needs. This is especially beneficial in situations in which there are multiple HVAC units requiring attention at the same time during the summer.
COVID-19 PANDEMIC RESPONSE

Facilities Management has been at the forefront in terms of helping keep City facilities safe for both customers and City staff that are on site. Our Custodial Services team, along with RNA (Contractor), are doing their best to address and minimize potential exposures to the virus on City properties. This includes placing a high priority on maintaining cleanliness at touchpoints (such as door-knobs, handles, water fountains, elevator controls, etc.) and other high traffic areas. In addition, as part of our daily processes, the custodial team ensures that all surfaces are cleaned and sanitized to reduce contamination, and then disinfectant is used to kill any contaminants using hospital grade materials.

A combination of approaches and tools are used to perform these procedures. One tool that has helped immensely has been the Protexus Handheld Electrostatic Sprayer and Mister. This equipment utilizes an electrostatic approach to improve coverage on surfaces during the treatment process. In addition, the unit uses hospital-grade disinfecting tablets that are EPA approved against Covid-19, while avoiding the harsh smell of bleach and providing a safer solution, especially for visitors to City facilities, along with staff that are on-duty.
REGIONAL RECREATION & AQUATIC CENTER ACCESSIBILITY IMPROVEMENTS

American’s with Disabilities Access (ADA) improvements and additional flag poles installed at the Las Cruces Regional Recreation & Aquatic Center. The City had received a request this past year to investigate concerns about ADA parking at the site, and the ability for customers arriving at the facility by bus, van, or other means, to easily access the front entryway sidewalk without stepping over a curb. As part of our Facility Management Plan, PEAK Performance initiatives, and improving customer service, City staff started the evaluation and review process to see if the request could be accommodated, and what the best approach would be to implement if approved. After the review process, it was found that the requested improvements could be implemented to enhance services to our citizens and within a reasonable cost. The scope of work included extending the ramps on the north and south ends of the ADA parking area nearest the building to allow improved access to the parking spaces at each end; installing a new drop-off area near the front entryway curb, installing a new sidewalk slope ramp at the drop-off area, and installation of four additional ADA parking stalls across from the new ramp. This approach has provided an improved level of service for those users of the facility arriving by bus, van, or other means.

In addition to the request above, the City also receives queries about flags and their display at buildings and within parks. One of the issues raised is how flags are flown at half-staff if they are located on the same pole (for instance, the State of NM Flag and the U.S. Flag). City staff took the opportunity to address this situation by adding two additional flag poles at the site which allows proper display of the City, State, and Federal Flags. This allows us to be more responsive to requests from the Mayor, Governor, and/or President in a timely manner.

This overall project highlights the City’s approach to customer service and being responsive to a citizen's requests.
ABOUT US: STREETS MANAGEMENT

Streets Management aims to provide a safe and efficient transportation environment for vehicular, pedestrian, and bicycle traffic through the maintenance of operation of City streets, sidewalks, drainage system, and flood control facilities.

ROAD CONSTRUCTION

Road Construction oversees road maintenance which consists of pothole repair, utility cut patching, and special projects. Pothole patching crew received 555 pothole requests in fiscal year 2020. They averaged 418 potholes per month, with 89% of those completed within 24 hours.

The utility cut patching crews are tasked with patching cuts that Las Cruces Utilities creates after they make repairs to their systems. This includes repairs to both asphalt roadways and concrete infrastructure. This section averaged 45 utility cuts per month, completing 543 work orders with 73% of those being completed within two weeks.

Special Project crews completed many projects to include 4.5 miles of chip seal followed by Fog Seal application, application of Mastic One polymer modified patching material in several locations.

Streets Management also conducts de-icing operations and snow plowing in the winter months when needed.
WEED AND FLOOD CONTROL

Streets Management's Weed & Flood Control is responsible for maintaining 65 ponding areas throughout the City. Maintenance includes cutting weeds, mowing grass, fixing erosions and removing dirt from the bottom of the pond. They also fix and/or improve drainage infrastructure when needed. Other duties of the Flood Control program include cleaning out and maintaining storm water drop inlets, french drains and culverts throughout the City. Lastly, through a maintenance agreement with EBID and the Army Corps of Engineers, City crews maintain The Outfall Channel, Mesilla Drain, Las Cruces Lateral, Park Drains and the Las Cruces Dam to assure they are clean and maintain their structural integrity and capacity. Finally, flood control provides sandbags to all the fire stations and residents within the City of Las Cruces. During FY20, flood control made and distributed 9000 sandbags.

The Weed portion of this program is responsible for cutting and removing weeds, trash and debris from roadways and sidewalks. This section received 332 requests for services last year along with its maintenance for 86.7 miles of main arterial ROW's and medians in the City that are not landscaped.

The Flood Control section in a collaborative effort with Engineering and Architecture, Construction Management, Road Construction and Road Maintenance successfully completed the new installation of a new Storm Sewer system at Kalahari Lane and Great Sandy Drive. This project included installing new drop inlets, storm drain pipe as well as modifications of the current roadway, sidewalk, and curb and gutter to address ponding and flooding at the intersection.

ROAD MAINTENANCE

Road Maintenance consist of two sections: Street Sweeping and Concrete Maintenance. The Street Sweeping section consist of seven street sweepers and are tasked with sweeping all City streets every four to six weeks. Our City streets are divided into six zones and within each of those zones there are six sub-zones. The Concrete Maintenance crew is tasked with maintaining all City sidewalks, ADA ramps, curbs, and any concrete infrastructure. In the past year, they removed and/or repaired 2399 linear feet of sidewalk and 8 ADA ramps. This crew averages 500 yards of placed concrete per year.
ABOUT US: TRAFFIC MANAGEMENT

The City of Las Cruces Traffic Management (TM) team collaborates with other departments and residents to efficiently improve local traffic safety in terms of TM devices and street lighting. TM devices that are seen throughout the City include: signage, traffic calming devices such as speed tables, crosswalks, traffic signals and markings.

TM is split into two groups: TM Engineering and TM Operations. TM Engineering focuses on performing the required studies that warrant traffic devices in the City, while TM Operations specializes in the installation and maintenance of traffic devices throughout the City.

INTELLIGENT TRANSPORTATION SYSTEM (ITS) PROJECT

The Intelligent Transportation System (ITS) is a centralized system for live traffic signal network activity. ITS creates a bridge between individual traffic signals and TM without requiring the team to go into the field. ITS provides live traffic information to TM and allows the team to remotely change the timing of the signal. TM focuses on the functionality of local traffic signals while saving time and increasing the efficient use of staff resources. TM continues to apply for state and federal funding for the utilization of the ITS throughout the City.

ADAPTIVE TRAFFIC CONTROL SYSTEM (ATCS)

The Adaptive Traffic Control System (ATCS) is a smart traffic management feature that allows TM to use live traffic data collection to improve travel times and therefore reduce the amount of red lights that motorists hit during their local travels.

The system continuously keeps track of traffic volumes to automatically adjust to daily traffic conditions. The ATCS automatically adapts the signal timing according to unexpected changes that occur in daily traffic, such as crashes and special events, and optimizes the flow of traffic during the affected time period.
REAL-TIME TRAFFIC MONITORING AND TRAFFIC DATA COLLECTION SYSTEM WITH BLUETOAD® AND BLUEARGUS®

TM has recently completed the full implementation of the city-wide, real-time traffic monitoring and traffic data collection system with BlueTOAD® and BlueARGUS®. The BlueTOAD system is the most advanced traffic-monitoring system in the traffic engineering field, directly measuring travel times using cost-effective, non-intrusive roadside technology. Designed to detect anonymous Bluetooth signals broadcast from vehicles to determine accurate travel times and speeds, BlueTOAD calculates travel times and speeds in real-time to provide route management capabilities. The BlueTOAD system has allowed TM to review changes in traffic patterns during the pandemic. The BlueTOAD system integrates seamlessly into the existing Adaptive Traffic Management System (ATMS) allowing the Traffic Engineer to make adjustments to the ATMS. In the near future TM will be publishing a real-time speed map with detailed information such as travel-time, average speed, and a historical 48-hour performance graph for major corridors

NEIGHBORHOOD TRAFFIC CALMING PROGRAM (NTCP)

The Neighborhood Traffic Calming Program (NTCP) is a City of Las Cruces program established by ordinance to create traffic calming in residential areas. The NTCP provides four options for reducing/calming traffic on concerned streets. The four options include: free yard signs, lendable radar dolly, Las Cruces Police Neighborhood Enforced Team (NET), or an active petition for study purposes. Kilmer Street provides motorized and pedestrian access from the neighborhood to other major roadways in the area and to Sierra Middle School where children walk to and from school. At the request of a neighborhood resident, the TM worked with the neighborhood residents to obtain the required signatures (75% or more) to begin the traffic studies.

TM performed a traffic study which identified a significant amount of speeding. TM held a community meeting with the neighborhood to present the results and proposed solutions to their speeding concerns. TM asked for and received feedback form more than 50% of residents voting for the installation of traffic calming. Speed tables were subsequently constructed by the City’s Street Management Program.
PUBLIC WORKS ONLINE RESOURCES

For more information about the Public Works Department, please visit us at:
http://www.las-cruces.org/Public-Works

To report an incident or make a request please visit:
https://cityoflascrucesnm.tylerportico.com/tim/portal/request-create

700 N. Main Street | publicworkssupportstaff@las-cruces.org | (575) 528-3333