2020 Recommended Capital Project Descriptions  
December 4th, 2019

.75% SALES TAX CAPITAL PROJECTS

FIRST RESPONDER TAX

1. Police Department Remodel for New Positions, $350,000 (First Responder Tax Funded $350K) – At the end of 2019 the GJPD contracted with Blythe Group project architects to redesign the GJPD police station on 544 Ute Avenue in Grand Junction, CO. The purpose of the redesign and renovation will be to maximize space and use of the current building. With the passage of the first responder tax, the GJPD will grow in authorized positions and the building will need to accommodate 31 new employees.

STREETS

2. Street Maintenance, $5,800,000 – Street Maintenance requires an ongoing annual commitment to maintain the City’s $266 million worth of street assets. In 2017, this effort was increased with the passing of 2017 Measure 2B and those funds are part of the ongoing effort to upgrade our pavement condition index (PCI) beginning in 2018 through 2022 with a target PCI of 73. A pavement management system is used to evaluate pavement quality and prioritize street maintenance needs. Parameters used to determine the PCI for major streets include ride quality, structural adequacy and surface distress. These parameters are measured every five years by non-destructive testing methods. According to a Colorado Asphalt Paving Association 2016 study, most communities surveyed were trying to maintain a PCI of 73. The City is divided into 12 Street Maintenance Areas (SMAs) with an area scheduled to receive a chip seal each year. However, each of the streets in an SMA are analyzed for the proper treatment, whether that be a fog seal, chip seal, microsurface, overlay or total reconstruction. In 2020, the City’s street maintenance efforts will focus on:

   a) Contract Street Maintenance, $4,300,000 – The annual program includes contracting for street maintenance using treatments such as hot mix asphalt overlays, asphalt patching, micro surfacing, high density mineral bond (HAB) and minor street reconstructions.

   b) Chip Seal/Crackfill, $1,500,000 – One of the most detrimental effects to the structure of a road is to let water migrate through the surface and get into the subgrade. Allowed to perpetuate, more moisture continues to weaken the subgrade causing more cracks which eventually leads to potholes and degradation of the road surface. The City’s crackfill program aims to fill cracks in all of the road surfaces that are planned for chip seal, microsurface or other light maintenance activity. Chipseal enhances safety by providing good skid resistance. They provide an effective moisture barrier for the underlying pavement against water intrusion and prevent deterioration of the asphalt surface from the effects of aging and oxidation due to water and sun. This increased level of expenditure factors in the additional capacity of the Project Team that will be dedicated to street maintenance.

COMMUNITY DEVELOPMENT

3. Comprehensive Plan Update, $62,500 (DOLA Grant $37.5K) – In 2018, the City commenced the Comprehensive Plan update process with a statistically valid community survey followed by hiring the national known consultancy Houseal Lavigne Associates to assist in developing the plan. The plan work began in 2019 and was scoped as an approximate 16 to 18-month process and is targeted to be completed in Spring 2020. This update to the Comprehensive Plan will develop a community vision with specific goals and strategies related to implementing the plan. A significant part of the project will entail planning for future growth of the community but will also focus on other values that may include elements such as public safety, parks, trails and open space, sustainability, tourism, economic diversity and housing. Extensive public outreach has been ongoing in the process and will continue for the duration of the development and drafting of the plan.

4. Development Code Re-Write, $50,000 (DOLA Grant $25K) ($50K planned for 2021, DOLA Grant $25K) – It is considered a best practice upon completion of a Comprehensive Plan for a City to review its development code to ensure that its regulatory requirements align with the vision and goals of the Community. Funding has been budgeted to complete an assessment of the Code in 2020 and to conduct targeted updates to the Code as may be appropriate.

GENERAL SERVICES
5. **Avalon Theater Improvements, $100,000 (Foundation Match $50K)** – This will match donations raised by the Avalon Foundation Board’s pipeline project which is focused on further improvements to the Theater that include shading sails for the rooftop terrace, blinds for the mezzanine and a wraparound marquee sign among other behind the scenes improvements.

**PUBLIC SAFETY**

6. **Fire Training Facility Completion, $275,000** – This is the continuation of the Fire Training Facility project that began in 2018 and continues through 2020. This phase of the project will complete additional training props for hazardous material and technical rescue training that will involve concrete structures and collection pools to allow for the simulation of leaking tanks. Additional asphalt driving surfaces will be added to facilitate driver training and improve ingress and egress to the live-fire building. This project started in 2014 with the award of a Mesa County Federal Mineral Lease (MCFML) grant that assisted in funding water and septic system infrastructure and the placement of two modular classroom buildings. Once this project is complete, the Fire Department will be able to regularly provide live fire training for all new fire recruits and current firefighters. These controlled fires will allow a safer and regular training opportunity without having to transport our firefighters to other parts of the State for required training.

7. **Shooting Range Safety Improvements & Expansion, $600,000 (FML Grant $200K, First Responder Tax $200K)** – The firing range facility is managed by the Grand Junction Police Department and used by multiple agencies including the State Patrol, Sheriff’s Department, and Fruita Police Department. It is heavily used and in need of safety improvements related to lead remediation in the soil and sanitary sewer requirements. In preparation for new police positions from First Responder Funding, the range will be expanded to meet additional training requirements and add a 5-lane rifle section, a non-ballistic shoot house (one that will use simunitions, as opposed to live rounds, to reduce wear and tear and potential structural damage), a range building and proper retaining barriers between ranges. Because of the regional use of the shooting range, staff will apply for an FML grant to help fund the improvements.

**PARKS & RECREATION**

8. **Columbine and Kronkright Park Fence Replacement, $30,000 (CTF Funded $30K)** - The chain link fencing on first and third base lines around both the Columbine and Kronkright Softball Complexes is extremely old and showing wear from years of soft toss into the fence, the fence being hit or run into, and people climbing over the fence in a number of locations. Project would consist of removal of existing chain link fence and replace with black vinyl fence (preferred) or chain link (based on cost) as well as a new yellow safety topper.

9. **Crime Prevention Through Environmental Design (CPTD) Park Improvements, $50,000 ($25K planned for 2021)** – Criminal and destructive behaviors in our parks is increasing every year. Parks have experienced bent or broken picnic tables and benches; portions of playgrounds set on fire, cut, or broken; bathroom fixtures completely destroyed; graffiti; broken sprinkler heads; stolen backflow devices; and many other costly activities. Working in collaboration with the Police Department, many of our parks have had a CPTED audit performed. The most immediate needs are increased lighting and security cameras. Parks is in the process of converting existing pedestrian and shelter lights to LED lights for increased uniformity; however, many parks are in need of additional lighting around shelters and play areas. The highest priority park is Canyon View due to the lack of lights around the playground. Since installation in 2015, the play area has experienced extreme use and vandalism including shade sails being cut, picnic tables thrown into the pond, theft of playground parts, damage to rope components, and other devious activities. The extra light will prevent the hiding spots after hours and allow better observation from police. Staff is currently researching options to install LED Cobra head lights as well as solar lights.

10. **Horizon Park Master Plan, $50,000 (Parkland Funded $50K)** – The development of Fire Station 6 provides an opportunity to develop a small first phase of Horizon Park to include a small play area, landscaping, and
parking. Joint design efforts will create a collaborative design for both projects. The area includes 1.7 acres, with total park space of 12.6 acres.

11. Lincoln Park Marquee, $55,000 – The current marquee was installed in 2006 by Platinum Signs. The current marquee’s technology is outdated and some parts are no longer manufactured. A recent failure of the marquee resulted in a three-week outage while waiting on refurbished used parts from Daktronics. The new marquee will utilize cellular technology that will allow for easy updates from the web and will not need to be connected to a network. Estimate includes install.

12. Lincoln Park Pool Deck Furniture Replacement, $25,000 (CTF Funded $25K) – The existing deck furniture was replaced in 2003 and in 2006. Furniture includes sand chairs, lounge chairs, regular chairs, and some tables. The furniture was a minimum of 10 years old in 2016 and half of the inventory was replaced. The remaining inventory requires replacement.

13. Lincoln Park Pool Diving Boards, $27,000 (CTF Funded $27K) – The diving boards were last replaced in 2006 and typically last 10-15 years. When the boards become slick, they become a safety hazard. Cost to replace the three boards is $27,000. Staff repainted the diving boards in 2018 to minimize slip hazards.

14. Parks, Recreation and Open Space Master Plan, $115,000 (GOPO Grant $56.25K & Parkland Funded $58.75k) – The last park master plan was developed in 2001. This most recent plan also lacked a focus on recreation and open space. The plan will evaluate the full system including all levels of parks, outdoor and indoor recreation facilities, recreation programs and open space. It will provide guidance and policy direction for the Department’s role in the community, and it will lay out the blueprint to help the department maximize the quality and quantity provided to the community. The plan will include an opportunity to survey the community, analyze the system’s current condition and challenges, develop long-range goals, and high-level initiatives to build success over time. A $56,250 grant was awarded from GOCO on September 27, 2019 to fund half of the cost of this master plan.

15. Playground Repairs, $25,000 (CTF Funded $25K) – Parks Operations is taking all precautions to ensure that every playground within the park system meets the highest of National Playground Safety Institute (NPSI) national standards for safety. The Department has three certified playground inspectors who have implemented a daily, weekly and monthly playground inspection program that will determine the long and short-term condition of every playground structure. The annual updating of our most needed play structures will meet the new safety and accessibility standards being implemented and recommended for public playgrounds. Typical play structures have a safe and useful life expectancy of between 10 and 15 years. Life is usage dependent. Funds will be used for playground equipment repair and replacement parts due to wear, tear, abuse, and vandalism. They will also be used to replace the rubber and artificial surfacing as needed. Staff will continue the inspections to update the condition of the play structures and surfacing as well as be proactive in maintenance practices to extend the life, safety and playability standards recommended for public playgrounds.

16. Riverfront Trail Repair, $250,000 (CTF Funded $25K) – Annually $25,000 is allocated from Conservation Trust Funds (CTF) funds to address areas of concerns in the riverfront trail system and is used to correct safety concerns and hazardous situations and replace areas of asphalt with concrete. The increased amount for 2020 includes major repair to the trail behind High Country Court off the Riverside Parkway. This area has incurred 75 feet of bank erosion since the tamarisk were removed in 2008. The project will
include bank stabilization to allow the trail to exist in its current location while withstanding annual flooding.

**Stadium Master Plan Improvements, $460,000** – This project is made up of several components including:

17. **Track Replacement, $350,000** (CTF Funded $50K, PIAB Funded $90K, SD51 Funded $90K) – The Stocker Stadium Track infrastructure, sub-base asphalt base layer, and drains were originally installed over 40 years ago. Though the track was last repainted in 2012 the infrastructure has far surpassed its useful life expectancy. The drains are not functioning properly thus allowing water to sit on the track and penetrate between the asphalt and the rubber surfacing causing separation. Project would consist of a complete renovation of the track surfacing to include: repair/replacement of the asphalt base (if needed) and installation of new rubber surfacing and repainting.

18. **Suplizio Stands Temporary Repair, $85,000** (CTF Funded $85K) – This project was approved for $100,000 in 2019. Of that amount $15,000 was spent and remainder of $85,000 is moved to 2020. The stands structure at Suplizio field is showing severe signs of failure. There are several sections of the stands that surface rust has completely eaten through steps and many sections that the surface rust has caused significant damage. Repairs will include stripping out all rust, repairing damaged sections, sealing cracks and repainting of the stands. This is only a temporary fix as the more permanent fix will be much more extensive and expensive.

19. **Suplizio Temporary Outfield, $25,000** (CTF Funded $25K) – This temporary solution to a much larger problem will improve the playability of the outfield. This will mitigate Poa, an invasive species of grass, that is spreading throughout the outfield. In 2021, the outfield will be considered for complete replacement including drainage improvements.

**PUBLIC WORKS**

20. **ADA Accessibility Improvements, $24,000** (CDBG Funded $24K) – City Hall and other public spaces have accessible parking spots within the public right-of-way that no longer meet current ADA regulations. This project upgrades several ramps to meet current codes.

21. **Alley Improvement Districts** – (Assessment Revenue Funded $20K) – This program has been on hold for 10 years. This will replace one alley at a yet to be determined location. This program is a partnership with adjacent property owners where residential properties pay 10% of the cost, multifamily 15%, and commercial 50%. Alleys will be reviewed and selected based on previous interest.

22. **City Entry Way Signs, $150,000** – This project was originally approved in 2019 but put on hold to coordinate with the results of branding study being completed by Visit Grand Junction. The existing signs are over 40 years old and are in need of an update to project a positive image representative of the largest community between Denver and Salt Lake City.

23. **Curb, Gutter, and Sidewalk Safety Repairs, $100,000, ($100K planned for 2021)** – This program includes the replacement or repair of deteriorated or hazardous curbs, gutters, and sidewalks on City streets. It also includes replacement of curbs and gutters that do not properly drain. Tripping hazards on sidewalks are given highest priority. Concrete replacement locations are determined from field surveys and citizen complaints. Each location is rated and prioritized according to the type of problem and degree of hazard.
The benefits include keeping our curb, gutter, and sidewalks in a state of good repair providing a reliable surface for non-motorized users and conveyance of stormwater without standing water.

24. Monument Road Trail - Land Acquisition with Colorado West Land Trust, $189,920 (GOCO Grant $159,920, CTF Funded $30K) – The City and Colorado West Land Trust (CWLT) have applied for a grant to acquire a property/right-of-way necessary for Phase II of the Monument Road Trail that will connect the Lunch Loop Trailhead with South Camp Road. This portion is the City's participation for the grant match.

25. Monument Rd Trail-D Rd to Lunch Loop Parking Lot, $350,000 (Open Space Funded $75K, GOCO Grant $200K, Mesa County Funded $75K) – The Monument Road Trail from D Road to Lunch Loop Trailhead came in significantly under budget allowing for additional scope to be considered. Planned improvements include paving the parking lot and extension of the parking lot to the west to add Trailer/Vendor parking.

26. Riverfront at Dos Rios Infrastructure, $1,000,000 million (DOLA Grant $1 million) – By leveraging public investment already made in Dos Rios the City will apply for a grant for additional infrastructure (including pedestrian bridge listed next), potentially lower debt issuance and related mill levy on property owners.

27. Riverfront at Dos Rios Pedestrian Bridge, $3,500,000 (Grants, Partners $3M) – Connectivity is one of five key goals in the Downtown Development Authority’s Plan of Development. With the development of Dos Rios and the redevelopment of the 2nd Street and the Depot area, this signature bridge will provide a safe pathway for bikes and pedestrians between Downtown and the new Riverfront at Dos Rios development. Potential funding sources include CDOT’s Multi-Modal Options Fund, GOCO Connect grant, and the Department of Local Affairs Energy Impact grant.

28. Riverside Parkway Borrow Project, $50,000 – This project will help convert the Riverside Parkway Borrow area on the northwest side of the cemetery to outdoor storage to replace the City’s storage area being developed for the Riverfront at Dos Rios. This is for materials only as most of the work will be conducted by City staff.

29. B 1/2 Rd at 27 1/2 Rd Crossing Orchard Mesa Middle School Safe Routes to School, $40,000 (CDBG Funded $40K) – This project will construct a crossing of B 1/2 Road at 27 1/2 Road to provide a safer crossing for kids to get to Orchard Mesa Middle School from south of Highway 50.

30. B Road 29 3/4 Rd to 29 7/8 Rd, Mesa View Elementary Safe Routes to School, $95,000 (CDBG Funded $95K) – This project will construct 920 feet of sidewalk to connect Mesa View elementary to newer subdivisions east of the school.

31. Lorey Drive from Westlake Park to 1st Street, West Middle School Safe Routes to School, $75,000 (CDBG Funded $75K) – This project will construct 450 feet of sidewalk along Lorey Drive from existing sidewalk north to Lilac Lane providing a safer connection from the Fruitvale neighborhood to Westlake Park as well as West Middle School.

32. Traffic Signal Controllers, $87,000 (CDOT Funded $25K) ($89K planned for 2021) – The City currently owns 52 traffic signals with electronic controllers of varying age and functionality and operates the 46 state highway signals inside the City limits under a maintenance contract. This is an on-going replacement/upgrade program for traffic signal controllers. Maintaining a replacement cycle for signal controllers is necessary, primarily because of the limited service life of the controller which is exposed to
in-the-field conditions. It is also necessary to keep pace with current technology supporting traffic signal coordination, vehicle detection, and emergency pre-emption systems; all of which contribute to safer and less congested roadways. With the renewal of the CDOT Maintenance Agreement for 2019-2023, an additional $25,000 was added for purchase of signal controllers for CDOT signals.

33. **Traffic Signal Equipment Upgrade, $200,000 (CDOT Funded $25K) ($100K planned for 2021)** – Upgrades to signal equipment are required for safety and compliance with Federal requirements. It is also a cost-effective way to extend the life of the signal investment. Installation of this equipment provides safer and more efficient operation for aging signals and extends their service life. An ongoing maintenance program to replace these key signal components when they begin to fail is a more efficient way to preserve the signal infrastructure. This also adds a good deal of assistance to the aging, the physically challenged, and children. Pre-emption for fire department vehicle movement greatly enhances their efforts toward quicker and safer emergency runs. With the renewal of the CDOT Maintenance Agreement for 2019-2023, an additional $25,000 was added for purchase of signal equipment for CDOT signals.

**STORM DRAINAGE CAPITAL PROJECTS**

34. **Drainage System Improvements, $30,000** – Many small drainage improvements are constructed by City crews. This funding buys materials for Public Works Stormwater Division to install.

35. **Pioneer Meadows Drainage Improvements, $250,000 (Partnership Mesa County)** – Mesa County is proposing to reconstruct E Road between 31 and 32 Road in 2019 and requested the City to participate in the storm drainage infrastructure that will benefit not only the new road but also provide a stormwater outfall to the proposed Pioneer Meadows Subdivision which is within City limits.

**TRANSPORATION CAPACITY CAPITAL PROJECTS**

36. **25 Road Left Turn Lanes North of Patterson, $646,000** – 25 Rd. is classified as a principal arterial to F 1/2 Rd. and minor arterial north of F 1/2 on the City-County urban functional classification map and is designated as a bike route on the Urban Trails Master Plan. This project will widen 25 Rd. at Waite Street, F 1/4 Rd. and F 1/8 Rd. where left turn lanes are warranted. No curb, gutter, sidewalk or street lights are proposed as part of this project, however enough pavement width is proposed to stripe a bike lane. Widening of approximately 2,000 linear feet of 25 Rd. is included. Right of Way acquisition of approximately 10,000 sq. feet will be required from five properties.

37. **G Rd & 24 Road Intersection Improvements, $2.85 million ($200k for 2020 and $2.65M planned for 2021)** – With recent growth along both the 24 Road and G Road corridors, this intersection has started to experience long delays during peak hours of the day. These intersection improvements will add capacity to the intersection thereby minimizing motorist delays.

38. **I-70 Interchange 1601 and Environmental Assessment (City Share), $800,000 ($400K in 2020 and 2021)** – In 2019 the City and County partnered with Mesa County on a Planning and Environmental Linkages (PEL) that is the first phase of environmental documentation for the construction of a new interchange on I-70 at 29 Road. The completion of the documentation for CDOT’s policy directive 1601 and the accompanying environmental assessment will require an estimated $1.6 million that will again be split evenly with Mesa County over 2020 and 2021.

39. **Monument Road Left Turn Lane, $150,000** – The Monument Rd Trail from D Road to Lunch Loop Trailhead came in significantly under budget allowing for additional scope to be considered. Planned improvements
include paving the parking lot and extension of the parking lot to the west to add Trailer/Vendor parking. This project will add a center left turn lane into the new parking lot.

40. **Riverfront at Dos Rios Left in Turn Lane, $120,000** – In 2017, the City constructed a right turn lane into the southern access into the Riverfront at Dos Rios property. This project will add a left turn lane by removing a portion of the island to allow lefts into the development.

41. **Tour of the Moon/S. Broadway Improvements, $100,000** – Mesa County and City of Grand Junction staff have been working together on improving infrastructure as follow-up to citizen concerns for the popular Tour of the Moon bike route through much of the Redlands. Mesa County has agreed to match the City’s investments in widening key segments of S. Broadway to improve safety for motorists and bicyclists.

42. **24 Road and Riverside Parkway Interchange, $200,000 ($2.8M, $3.5M planned for 2021, 2022)** – *2019 Ballot Measure 2A project.* Intersection improvements are proposed to improve circulation and make interchange more intuitive. Project also constructs bike path connecting Riverfront Trail to the Mall and on to Canyon View Park.

43. **24 Road Widening, Patterson to I-70, $500,000 ($7.5M planned for 2021)** – *2019 Ballot Measure 2A project.* The existing was original constructed as a three-lane facility in 1999 with expansion planned to the west side. The road is nearing capacity with new development in the area such as the Medical Office Building / Community Hospital as well as Caprock Academy ½ mile to the east. Improvements would start just north of Patterson to the I-70 Interchange.

44. **F ½ Road Parkway, 24 Road to Patterson $250,000 ($2M, 14.75M planned for 2021, 2022)** – *2019 Ballot Measure 2A project.* The creation of the F ½ Road Parkway from 24 Road to Patterson Road. This 5 lane, multimodal arterial will provide an alternative route around congested Patterson Road and serve rapidly developing area.

45. **F ½ Road, 30 Road to Persigo Boundary, $100,000 ($500k, $2.9M planned for 2021, 2022)** – *2019 Ballot Measure 2A project.* F ½ Road will be widened to a three lane “collector” including center turn lane, curb, gutter, sidewalk, and streetlights from 30 Road to east of Thunder Mountain Elementary providing safer routes for kids to get to school.

46. **G Road, 23 ½ Road to 24 ½ Road, $250,000 ($3.95M planned for 2021)** – *2019 Ballot Measure 2A project.* This stretch of G Road is experiencing growth with the Medical Office Building / Community Hospital on the west and Caprock Academy on the east. This project will tie into the proposed 24 Road improvements as well as the 24 ½ Road improvements that are also part of Ballot Initiative 2A. A full collector section with curb, gutter, sidewalk, bike lanes, center turn lane, and streetlights is proposed.

47. **Patterson Capacity Improvements (5 intersections), $100,000 ($900K planned 2021-2024)** – *2019 Ballot Measure 2A project.* With the volume of cars using Patterson Road higher now than ever before, there has been an observed degradation in the level of service and vehicle delays experienced at key intersections along the corridor due to traffic volume growth. The increases in vehicle delay and degradation in level of service cannot be solved with traffic signal timing optimization; it requires roadway expansion. One way to expand roadway capacity is by adding turn lanes at signalized intersections. An analysis of all the traffic
signals on Patterson Road was performed in order to identify which intersections, and specifically which intersection approaches, would benefit the most from adding right turn lanes. The following represent the “Top 5”: 25 Road eastbound to southbound (AM & PM), 12th Street southbound to westbound (AM & PM); 28¾ Rd eastbound to southbound (PM rush), 29 Road eastbound to southbound (PM rush), 29 Road southbound to westbound (AM Rush).

**COMMUNICATIONS CENTER CAPITAL PROJECTS**

48. **Next Gen 9-1-1, $60,000 ($30K planned for 2021)** – As CenturyLink builds out the Emergency Services Network (ESINET), firewalls and routers will be needed in the Comm. Center to provide IP connectivity and security to the emergency network.

49. **800 MHz Capital Improvements, $70,000 ($70K planned for 2021)** – Capital improvements for the 800MHz radio infrastructure. This will cover those capital improvements or emergency repairs for the 800MHz radio infrastructure.

50. **Microwave Replacement at Radio Sites, $115,000 ($115K planned for 2021)** – The microwave units at several radio sites are more than 10 years old and need to be replaced to remain compatible with the 800 MHz statewide network. It is also to provide new functionality and capacity in preparation for building a backup 911 network that will connect to other Communication Centers.

51. **Uncompahgre Radio Site Battery Replacement, $80,000** – The Uncompahgre Butte Site is a Solar powered site located along Divide Road on the Uncompahgre Butte, southeast of Gateway CO. The site consists of an array of 30 Solar panels, that feed into a battery bank of 40 batteries to provide power to the radio back hall equipment for the Digital Trunked Radio (DTR) Network. The Batteries have reached the end of their life cycle and this project will replace them.

52. **CAD System Upgrades, $20,000** – Rapid SOS integration with CAD. This product provides the dispatcher the capability to type in a 911 caller’s phone number and retrieve the location within integration with CAD. This will also be used to provide CAD to CAD connectivity with Garfield County 911.

53. **Priority Dispatch (EMD) Software Upgrade, $60,000** - This software upgrade is for the Priority Dispatch Medical Transport Protocol Suite to handle calls from medical facilities (doctor’s offices, assisted living centers, skilled nursing facilities, hospitals) needing patients transported to a higher level of care i.e. St. Mary’s. This software will work in conjunction with our existing ProQA CAD software.

54. **Fiber Project as Part of Raw Water Line project, $30,000** – The Communications Center maintains a (DTR) tower site at the Grand Junction Water Plant facility that is a critical link to the state DTR network. The Dispatch Center currently utilizes an aging microwave link from GJRCC to the Water Plant tower. The Public Works Fiber Project allows the Communications Center to cost share with other departments in the City in the installation of a long-term Fiber pathway to the Water Plant.

**ENTERPRISE FUNDS CAPITAL PROJECTS**

**WATER FUND**

55. **Water Line Replacements, $1,250,000 ($1.4M planned for 2021)** – Water Line Replacements in the Distribution System. The majority of the lines to be replaced are 4" to 12" cast iron lines that have been in
service in excess of 50 years and have a recent history of breaks or are in areas targeted to increase flow capacity to meet fire protection requirements. All lines will be replaced with Poly Vinyl Chloride (PVC) pipe, thereby eliminating the possibility of external corrosion. The existing cast iron, ductile iron, and steel pipe materials are highly susceptible to external corrosion. Selection of project areas is based on pipe condition as well as street overlay and reconstruction schedule. Areas identified for replacement in 2020 include: 9th Street from D Road to Pitkin Ave., Elm to Orchard between 15th & 23rd St. and 9th to 12th St north of Orchard Ave. In addition, this project includes year 2 of a 5-year lead service line replacement program.

56. Flow Line Replacements, $2,550,000 ($6M planned for 2021) – These funds will be used for water line and infrastructure replacements in the raw water supply system. The majority of the lines to be replaced are 20” to 24” cast iron, and ductile iron lines that have been in service in excess of 50 years and have a recent history of breaks. The project includes design of finishing the Purdy Mesa flowline replacement (6.5 miles), a pressure control tank above Sullivan Draw, and Kannah Creek Water Treatment Plant alternate water supply line.

57. Water Treatment Plant Modifications, $500,000 – These funds are used for replacement of equipment and upgrades at the water treatment plant. In 2020, the third phase of the Supervisory Control and Data Acquisition (SCADA) system upgrade project will be initiated. The upgraded SCADA system will allow for a computer interface between all processes at the plant and also incorporate watershed and distribution system monitoring. Also included in this project is replacing the electrical motor control center (MCC) at the Water Treatment Plant, which is over 50 years old. Allows for the replacement of an old 20” cast iron waterline used to convey raw water to the Water Treatment Plant from the Reservoir #3 Pump house.

58. Grand Mesa Reservoir Improvements, $50,000 – These funds will be utilized to address minor improvements at the City's reservoirs on the Grand Mesa recommended by the State Dam Safety Engineer as a result of annual inspections.

59. Juniata Reservoir Aeration, $300,000 - These funds would allow for the design and installation of an aeration system to maintain adequate dissolved oxygen levels in the lower reaches of Juniata Reservoir. Eliminating these seasonal anoxic episodes will improve water quality by decreasing available nutrients for algae, lowering dissolved iron and manganese levels, and reducing treatment costs.

60. Carson Lake Dam Rehabilitation, $200,000 ($2.3M planned for 2021) – These funds are set aside for the rehabilitation of Hogchute Reservoir (aka Carson Lake). This reservoir was reclassified as a high hazard dam in 2015 due to increased development downstream. Although the reservoir has been deemed safe and does not have a capacity restriction placed on it, there are requisite modifications needed as a result of the new classification.

61. Water Meter Replacement, $570,000 ($530K planned for 2021) – There are 9,300 water meters in the City’s water system. The City began replacing the manual meters with radio read meters that allow the data on each meter to be transmitted to a data base through a radio frequency, which significantly reduces the labor required to obtain meter readings on a monthly basis. Requested funding of $570,000 per year will enable accelerated replacement of remaining manual read meters in a span of 3 years.
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62. Somerville/Anderson Ranch Improvements, $25,750 ($25,523 planned for 2021) – Miscellaneous maintenance projects are budgeted at $25,750 (plus 3% inflation) per year after completion of the National Resources Conservation Service project, 2018-2028.

63. Historic Water Treatment Plant Structural Engineering, $50,000 – The City of Grand Junction’s original water treatment plant has been designated an historic structure by the City of Grand Junction. An historical structural assessment (HSA) was completed in 2019 to assess structural improvements that would be required to preserve the structure for public use as a water history and education center. Structural engineering will be completed based on the recommendations of the HSA to complete initial structural improvements.

64. Lead Water Line Replacements, $85,000 (CDBG Funded $10K) – Funding will be utilized to continue year 2 of a 5-year lead service line replacement program. This program includes replacement of the municipal service line as well private service lines for properties that qualify for Community Development Block Grant funding.

Ridges Irrigation

65. Distribution System Replacement, $30,000 – This will allow for the start of an incremental replacement plan of the distribution system at the Ridges Subdivision.

Joint Sewer Operations Fund

66. Sewer Line Replacement/Rehabilitation, $3,870,000 ($4.5M planned for 2021) – Funds are budgeted through 2029 to replace/rehabilitate existing sewer mains within the Persigo 201 service area collection system. The collection system is comprised of approximately 577 miles of pipe of which approximately 200 miles is scheduled for replacement over the next 30 years. This replacement schedule was recommended in the 2015 independent rate study and approved by the Persigo Board. The above requested funds are consistent with Board approval.

67. Sewer Improvement Districts, $60,000 ($100K planned for 2021) – In 2000, the City and the County passed a joint resolution establishing the septic system elimination program to provide incentives to property owners to eliminate septic systems. There are still approximately 1,500 properties that remain on septic systems within the Persigo 201 sewer boundary. The program has not yet achieved the goal of eliminating septic systems and making available connection to the sewer system to all properties within the service area. The last sewer improvement district was completed in 2010. Recommended funding for 2020 is to revitalize the incentive program by targeting completion of existing and new sewer improvement districts over the next 10 years.

68. Lift Station Elimination/Rehabilitation, $3,000,000 – The 2020 requested funds will be used to eliminate the River Bend Lift Station and replace the Ridges #1 Lift Station. Both lift stations have surpassed their design lives and it is recommended that these lift stations be replaced due to existing deficiencies regarding their condition, capacity, and long-term reliability. Funding planned for 2021 and beyond are focused on the continued implementation of predictive and preventative maintenance programs for the 27 lift stations in the collection system.

69. Collection System Equipment, $160,000 – These funds are recommended to purchase specialty equipment needed to efficiently operate and maintain the sewer collection system. Funds planned for 2020 will be used to purchase new camera equipment to remotely inspect manholes and sewer lines.
70. **Wastewater Treatment Plant Improvements and Asset Replacement (previously called “Plant Backbone Improvements”), $577,000 ($606K planned for 2021)** – These expenditures are associated with plant backbone improvements and ongoing asset replacement needs at the wastewater treatment plant. The funds planned for 2020 will be used for asset replacement in the headworks, power supply redundancy in disinfection, automation of the septic and grease receiving stations, and several other smaller projects.

71. **Plant Studies, $50,000** – This expenditure is proposed for the completion of an Arc Flash and Electrical Safety study to be completed in 2020.

72. **Odor Control Improvements, $500,000 ($500K planned for 2021)** – An odor control study for the wastewater treatment plant and the sewer collection system is currently underway and will be completed in 2019. The recommended funds for 2020 are to design and construct odor control improvements. A three-year phased construction approach was assumed at $500,000 per year from 2020 through 2022.

73. **CNG Gas Storage/Enhanced Fueling Station, $1,080,000 (DOLA Grant $520K)** – In 2015, the Persigo wastewater treatment plant commissioned a first-of-its-kind project that beneficially recaptures waste methane gas (biogas) produced as a byproduct of the treatment process and converts it into compressed natural gas (CNG) which is used as a vehicle fuel. Recommended funding would be used to design and construct improved biogas storage and upgraded instrumentation and automation on the fleet fueling system that will maximize the amount of methane biogas used as vehicle fuel, instead of flaring it to the atmosphere. Due to existing constraints with biogas storage and fueling automation approximately 21% or 25,500 gasoline gallon equivalents (GGE) of CNG are flared to the atmosphere per year. The improvements from this project will allow nearly 100% of the CNG produced to be used as vehicle fuel and will result in an additional reduction of over 500,000 lbs-CO2/year.

74. **Parallel Tiara Rado Force Main, $2,500,000** – A design of a new force main for the Tiara Rado Lift Station is funded and has been initiated in 2019. Recommended 2020 funds are to construct a parallel force main from the Tiara Rado lift station, across or under the Colorado River, to the River Road Interceptor east of the Persigo Wastewater Treatment Plant. The existing force main from the lift station is ductile iron and was installed during the 1980’s. A section of this pipe has failed in the past and has been repaired. This parallel line will allow an alternative discharge option from the lift station. Once the new line is placed into service; the existing line can be inspected to determine if it can be rehabilitated to serve as a redundant pipeline or if the line should be taken out of service.

**INTERNAL SERVICE FUNDS CAPITAL PROJECTS**

**INFORMATION TECHNOLOGY FUND**

75. **Phone System Replacement, $464,000** – The City’s Phone system was originally purchased in the 1990s with Public Branch eXchange (PBX) switches updated in 2006 through 2011. The typical life expectancy of a PBX switch is typically 10 years. The current system uses digital technology and provides call center functionality that provides for highly customized call handling. The current configuration uses 12 switches located at each of the major City facilities that communicate with a central switch located at City Hall over fiber, microwave, or CenturyLink provided phone lines. A central voice mail system provides voice mail for all switches. The system requires a dedicated network with proprietary handsets located at each
workstation. We currently have more than 800 handsets in use. While PBX technology is still used in some situations, more and more organizations are moving to Voice over Internet Protocol (VoIP) systems which take advantage of existing data networks and standard network switches. The replacement project will look at the newest voice technology options. We anticipate a Request for Information process to begin in 2019 with a contract signed in 2020. Existing equipment will be offered for sale to recoup some costs.

76. VMware NSX Platform, $212,217 – VMware NSX is a virtual networking and security software product intended to secure the City’s network infrastructure from malicious attempts to corrupt, compromise or steal data. NSX software-defined networking (SDN) offers cloud computing on virtualization technologies. NSX exposes logical firewalls, switches, routers, ports, and other networking elements to enable virtual networking among cloud management systems and associated network hardware. It also supports external networking and security services.

77. Purchase of Redlands Communication Tower, $150,000 - This is an existing, privately owned, tower that is currently being used by the Communications Center and City Information Technology for critical communications. The tower owner is no longer interested in continuing to provide services and has offered to sell the facility to the City. The site is a prime location and the tower has potential to generate revenue from private cellular companies. Loss of this site would cause the City and GJRCC to potentially relocate and replace the tower at a significant cost.

FLEET FUND

78. Fleet Replacements, $3,700,000 ($2.8M planned for 2021) – This project represents scheduled vehicle & equipment replacements. The replacements are made from the equipment fund balance which is maintained by accrual charges for the equipment being used by the operating divisions. The accrual charges are included as part of the equipment rent and are an operating expense in the various division budgets. Future replacement needs are based on projected equipment life, replacement years, present replacement value and an annual inflation factor. In addition to tractors, mowers and other pieces of specialty equipment, there are 21 vehicles up for replacement in the 2020 budget. Of these 21 replacement vehicles, 12 are targeted as alternative fuel vehicles. These include electric vehicles for the Facilities, Water Services and Golf divisions, hybrids for the Forestry and Traffic divisions and Compressed Natural Gas for the Solid Waste, Streets, Parks and Code Enforcement divisions. There are also 5 Police patrol units a fire truck and an ambulance due to be replaced in 2020.

79. Mobile Column Lifts, $35,000 – These are vehicle lifts that can be moved from bay to bay in the fleet repair buildings as needed to raise equipment up in the air to work on the underside of the equipment. They are adjustable and will accommodate anything from a police car to a fire truck.