



Executive Summary

Capital Improvement Program Overview

Purpose

El Dorado County Community Development Services (CDS) engages in a number of activities to assess and plan for the short and long term needs of the community. The Capital Improvement Program (CIP) represents the CDS's strategy for infrastructure development and maintenance. The CIP is a planning document that identifies capital projects and provides a schedule and funding options. It provides a means for the El Dorado County Board of Supervisors (Board) to determine capital priorities.

Key criteria used for project consideration and prioritization include: health and safety, project costs and funding, community support, consistency with the General Plan, and ongoing maintenance costs. Potential new projects are reviewed by CDS staff and presented to the Board for discussion and inclusion in the CIP. The CIP is a planning tool that the CDS updates annually as new information becomes available regarding priorities, funding sources, project cost estimates and schedule.

The CDS's goals for the CIP are to:

- Maintain and upgrade existing infrastructure to support existing residences and businesses.
- Develop new capital projects to help meet the highest priority community growth needs.
- Align capital budgets with adopted policies and plans.
- Link the County's development and fiscal planning processes.
- Broaden public participation in the budget process by providing documentation and scheduling hearings early in the process.
- Increase coordination between internal departments and public agencies.

CIP Overview

The CIP serves as a planning and implementation tool for the development, construction, rehabilitation and maintenance of the County's transportation infrastructure. Capital improvements are projects that provide tangible long-term improvements or additions of a fixed or permanent nature, have value and can be depreciated. The CIP process includes identifying, prioritizing and developing funding for needed projects. The CIP includes ongoing projects started in previous years and new projects starting in the current and future fiscal years.

The CIP is constrained by limited available funding sources that have specific restrictions on how they can be used. Currently, the County's infrastructure needs in the twenty-year time frame exceed available resources, which results in competing priorities for limited funds. In order to resolve this issue, the CDS uses outside funding sources (Federal, State and other grants) whenever possible, in addition to County funds (e.g., Traffic Impact Mitigation (TIM) Fees, General Fund).

The CIP makes up over 40% of the total CDS budget, and over half of the Department of Transportation's (DOT) budget. The CDS coordinates the development of the capital budget

with the development of the operating budget, so that future operating costs are projected in alignment with the capital infrastructure.

Emergency Projects

Starting in early January 2017, a series of heavy rainstorms over approximately eight weeks severely damaged County roads in locations on the West Slope and in the Tahoe Basin. Board approved the addition of 26 of these projects to the CIP. The County is currently coordinating with State and Federal officials regarding anticipated disaster relief funding. This emergency work has redirected DOT staff to the design and construction of emergency projects to repair damage to the County's infrastructure. As a result, some existing CIP projects have had schedules extended, and budgets adjusted accordingly, to account for the prioritization of the emergency work.

CIP Format

The 2018 CIP Book includes five capital programs:

- ❖ West Slope Road/Bridge (CIP)
- ❖ Tahoe Environmental Improvement Program (EIP)
- ❖ Airport Capital Improvement Program (AICP)
- ❖ Transportation Facilities Improvement Program (TFIP)
- ❖ Capital Overlay and Rehabilitation Program (CORP)

The CDS maintains an interactive map depicting the location of projects in each capital program, located at <http://gem.edcgov.us/cip/>.

CIP Annual Updating Process

All Transportation programs are reviewed and updated annually, including revenue estimates, project scopes, costs and schedules. Proposed changes to the CIP are usually finalized upon Board adoption in June. The CIP current work plan is developed concurrently with the CDS budget for the upcoming fiscal year. The CIP/Budget cycle is shown in Figure 1-1.



Figure 1-1: Typical CIP/Budget Cycle

The Airport CIP and the Tahoe EIP have additional review requirements which are tied to their specific funding sources. The Airport CIP is tied directly to the FAA's (Federal Aviation Administration) annual grant cycle and the Tahoe EIP is tied directly to TRPA's (Tahoe Regional Planning Agency) annual planning cycle.

The following tables list projects in the Current Year work plan:

- Table 1-1: projects currently in construction or scheduled to begin in FY 2018/19.
- Table 1-2: projects scheduled to be in planning, design, right of way or environmental monitoring phases in FY 2018/19.

Table 1-1: Projects Currently In Construction or Scheduled to Begin in FY 2018/19

Project Type	Project Description	Total Cost (\$M)¹
West Slope Road/Bridge	#78717 Airport Road Storm Damage	0.60
	#77128 Bassi Road at Granite Creek – Bridge Replacement	4.28
	#97016 Bicycle/Pedestrian Counters – Class 1 Trails	0.27
	#77119 Blair Road at EID Canal - Bridge Replacement	2.05
	#78716 Bucks Bar Road Storm Damage	0.71
	#78710 Cable Road Storm Damage	0.67
	#72143 Cameron Park Drive Widening – Palmer Drive to Sudbury Rd.	8.51
	#78701 Cosumnes Mine Road Storm Damage (Location 1)	1.80
	#78712 Cosumnes Mine Road Storm Damage (Location 2)	0.14
	#78700 Cosumnes Mine Road Bridge Storm Damage	2.71

¹ Costs are estimated, and rounded to the nearest hundredth of \$1 million.

Table 1-1: Projects Currently In Construction or Scheduled to Begin in FY 2018/19

Project Type	Project Description	Total Cost (\$M)²
West Slope Road/Bridge	#71360 Country Club Drive Realignment - Bass Lake Road to Tierra de Dios Drive	7.97
	#72375 Diamond Springs Parkway – Phase 1A – SR49 Realignment	14.78
	#97012 El Dorado Trail – Los Trampas to Halcon	1.75
	#97014 El Dorado Trail – Missouri Flat Road to El Dorado	4.17
	#77137 Greenstone Road at Slate Creek – Bridge Replacement	3.64
	#78702 Fort Jim Road Storm Damage	1.57
	#71363 Francisco Drive – Americans with Disabilities Act (ADA) Imp.	0.35
	#78707 Green Valley Road Storm Damage	1.48
	#78724 Happy Valley Road Storm Damage	0.87
	#77125 Hazel Valley Road at EID Canal – Bridge Replacement	3.64
	#77131 Ice House Road at Jones Fork Silver Creek - Bridge Maintenance Project	1.12
	#78703 Kyburz Drive Storm Damage	0.50
	#72312 Merrychase and Country Club Drive - Sidewalks and Class II and Class III Bike Paths	0.90
	#78713 Mt. Aukum Road Storm Damage	0.94
	#78706 Newtown Road Storm Damage	2.16
	#72308 New York Creek Trail (East) – Phase 2	1.48
	#77134 Oak Hill Road at Squaw Hallow Creek – Bridge Replacement	4.07
	#78718 Pony Express Trail Storm Damage	1.83
	#71324 Saratoga Way Extension - Phase 1	18.79
	#72310 Silva Valley Parkway Class 1 and Class 2 Bike Lanes (Harvard to Green Valley Road)	2.58
	#72378 Silva Valley Parkway/Harvard Way Intersection Improvements	0.61
	#77124 Silver Fork at South Fork American River – Bridge Replacement	2.66
	#76108 Silver Springs Pkwy to Bass Lake Rd (South Segment)	9.46
	#77115 Sly Park Road at Clear Creek Crossing – Bridge Replacement	6.80
	#78715 Starkes Grade Road Storm Damage	1.49

² Costs are estimated, and rounded to the nearest hundredth of \$1 million.

Table 1-1: Projects Currently In Construction or Scheduled to Begin in FY 2018/19

Project Type	Project Description	Total Cost (\$M) ³
West Slope Road/Bridge	#71368 U.S. 50/Silva Valley Parkway Interchange – Phase 1 Landscape	2.20
	#78711 White Meadows Road Storm Damage	0.92
Tahoe EIP	#95191 Country Club Heights Erosion Control Project	1.82
	#95157 CSA #5 Erosion Control Project	1.51
	#78725 Elks Club Drive Storm Damage	0.93
	#78726 Fallen Leaf Road/Tahoe Mountain Road Storm Damage	0.84
	#78722 Lakeview Avenue Storm Damage	0.69
	#95198 San Bernardino Water Quality Project	0.75
Airports - Placerville	#93130 Taxiway Edge Lights	0.74
Airports – Georgetown	#93527 Crack Seal, Joint Seal & Mark Runway, Taxiways, Aprons & T-Hangar Taxilanes; Change Runway End ID	0.36
	#93503 Obstruction Survey	0.19
CORP	#72192 Elks Club Drive Overlay - Boca Raton to Pioneer Trail	1.00
TFIP	#81134 Headington Wash Rack Facility Project	1.49

Table 1-2: Projects in Planning, Design or Right of Way Phase in FY 2018/19

Project Type	Project Description	Total Cost (\$M) ¹
West Slope Road/Bridge	#77116 Bucks Bar Road at the North Fork Cosumnes River – Bridge Replacement	8.56
	#72361 U.S. 50/Cameron Park Drive Interchange Improvements	92.96
	#77138 Clear Creek Road at Clear Creek (PM 1.82) – Bridge Replacement	4.37
	#77139 Clear Creek Road at Clear Creek (PM 0.25) – Bridge Replacement	4.46
	#72334 Diamond Springs Parkway – Phase 1B	28.29
	#72311 El Dorado Hills Blvd Class I Bike Path: Governor Drive to Brittany Place	1.14
	#97015 El Dorado Trail – Missouri Flat Road Bike/Pedestrian Overcrossing	5.20
	#97017 El Dorado Trail – Halcon Road to Carson Road	1.50
	#73365 Enterprise Drive – Signalization	2.48

³ Costs are estimated, and rounded to the nearest hundredth of \$1 million.

Table 1-2: Projects in Planning, Design or Right of Way Phase in FY 2018/18 (Cont.)

West Slope Road/Bridge	#77127	Green Valley Road at Indian Creek – Bridge Replacement	5.61
	#77136	Green Valley Road at Mound Springs Creek – Bridge Replacement	5.64
	#72376	Green Valley Road Widening from County Line to Sophia Parkway	0.09
	#77135	Hanks Exchange at Squaw Hollow Creek – Bridge Replacement	4.09
	#72191	Ice House Road Pavement Rehab, Ph. 2	20.32
	#73366	Industrial Drive – Signalization & Realignment	2.15
	#77126	Mosquito Road Bridge at South Fork American River	71.81
	#77129	Mount Murphy Road at South Fork American River – Bridge Replacement	32.11
	#77122	Newtown Road at South Fork of Weber Creek– Bridge Replacement	5.66
	#71319	U.S. 50/Camino Area Safety Project	9.16
	#71333	U.S. Ponderosa Rd/So. Shingle Rd. Interchange Improvements	24.02
	#72381	White Rock Road Widening (2 to 4 lanes) – Windfield Way to Sacramento	4.45
	Tahoe EIP	#95177	Apache Avenue/US Highway 50 Intersection Improvement Project
#72379		Pioneer Trail / US 50 Intersection Safety Improvement Project	4.95
#95177		Oflying Water Quality Project	0.87
#95117		San Bernardino Class 1 Bike Path -East San Bernardino St. to West San Bernardino St.	1.77
#95200		South Tahoe Greenway Shared Use Trail	5.50
Airports - Placerville	#93132	Airport Layout Plan Update and Obstruction Survey – Placerville	0.66
	#93133	Crack Seal and Remark Runway 5.23, Taxiways, Aprons and T-Hangar Taxilanes	1.68
Airports - Georgetown	#93537	Runway Pavement Closure for Runway Safety Area	0.56
CORP	#72193	Overlay – El Dorado Hills Blvd.	5.40

¹ Costs are estimated, and rounded to the nearest hundredth of \$1 million.



West Slope Road/Bridge Capital Improvement Program Overview

A Capital Improvement Program (CIP) is a planning document that identifies capital improvement projects (e.g. roads and bridges) a local government or public agency intends to build over a certain time horizon (usually between five and twenty years). CIPs typically provide key information for each project, including delivery schedule, cost and revenue sources. The County's CIP provides a means for the Board to determine capital improvement project and funding priorities over a 20-Year horizon.

In order to maintain the integrity of the County's roadway network, the County is required to implement General Plan Policy TC-Xb and Implementation Measures TC-A and TC-B. These measures require the development of a 5- 10- and 20-Year CIP. These policies also require an update of the twenty-year growth forecast every five years.

The forecast is needed to update the CIP and Traffic Impact Mitigation Fee (TIM) Fee Program. Forecasting growth is an iterative and ongoing process – forecasts are reviewed and adjusted annually as well as every five years. Routinely verifying and updating growth forecasts allows the County to account for new information and adjust its assumptions and plans accordingly.

Figures 1-2 and 1-3 illustrate the CIP Update cycles.

Typical Major Five-Year CIP Update Cycle

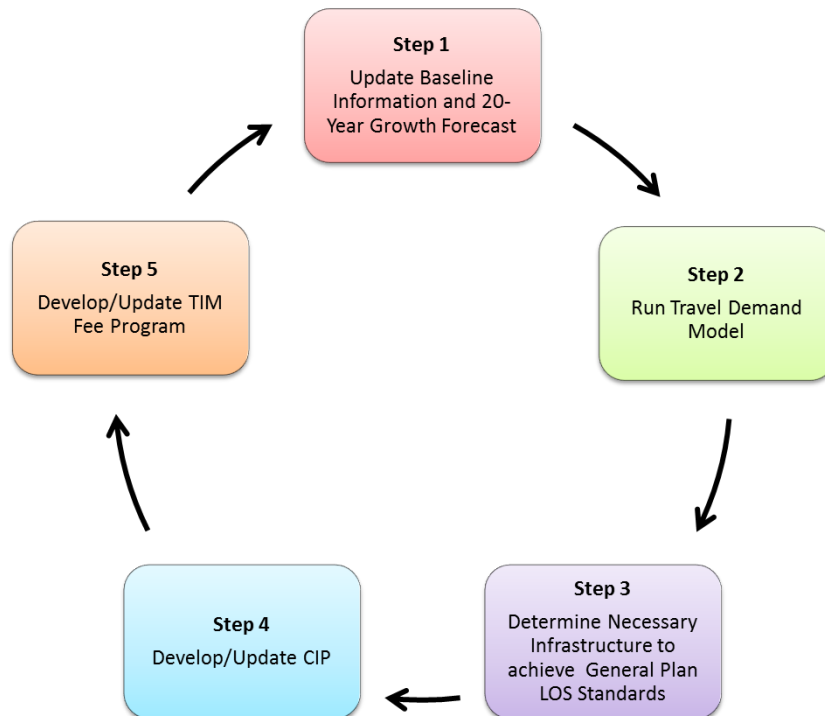


Figure 1-2: Typical Major Five-Year Update Cycle
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Typical Annual CIP Update Cycle

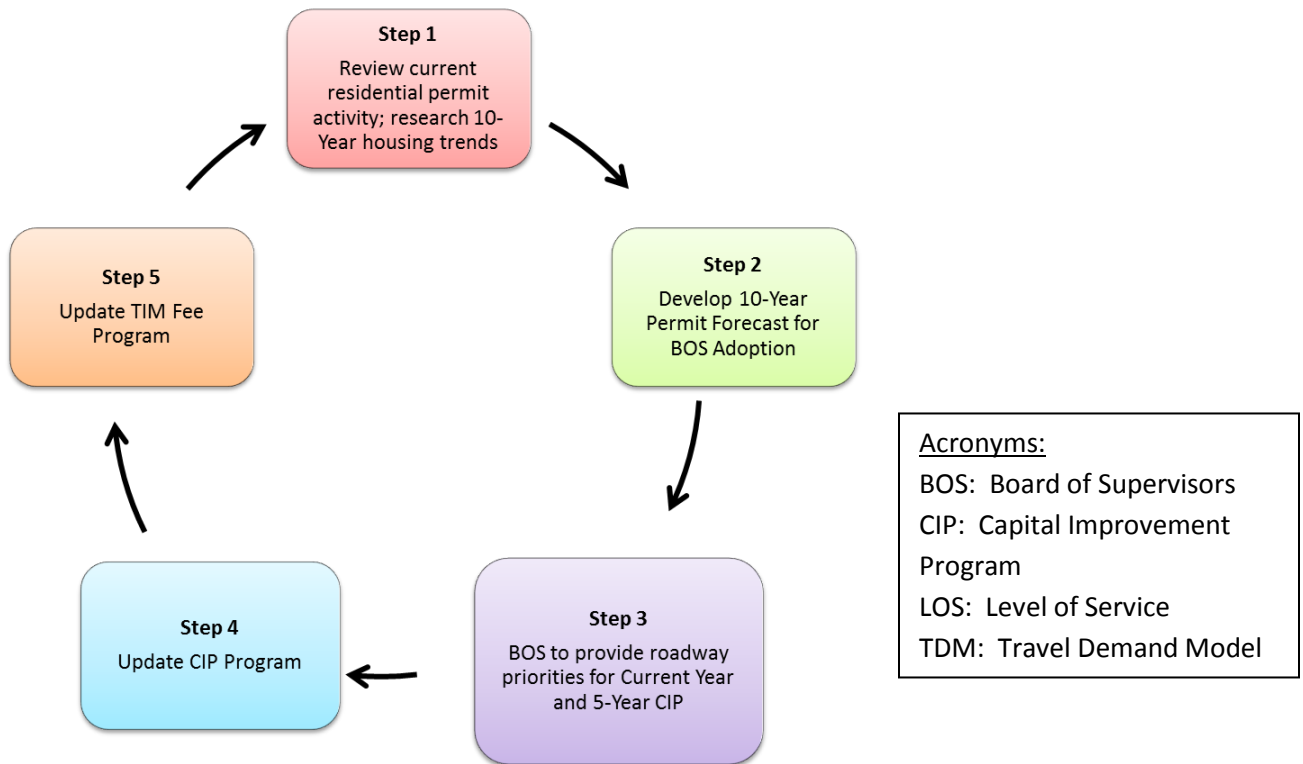


Figure 1-3: Typical Annual Update Cycle

Project Prioritization

Community Development Services (CDS) uses several criteria to prioritize road improvement projects including:

- **Estimated Construction Start**
 - The first fiscal year the project is planned to be in construction.
 - Projects estimated to start construction in fiscal year (FY) 2017/18 or 2018/19 are more desirable.
- **Supports Economic Development in the County of El Dorado**
 - Projects that would help create connections to pave the way for new commercial development are more desirable.
 - For projects with proposed scopes that don't include construction, the CDS denotes that these projects will support economic development once constructed.
- **Safety Ranking**
 - Projects are rated High, Medium, or Low based on the likelihood that they would improve safety conditions once constructed (High = higher likelihood of the proposed project improving safety).
 - For projects with proposed scopes that don't include construction, the CDS estimates the safety rating once the project is constructed.
 - Projects with Medium or High rankings are more desirable.

- **Capacity/Traffic Relief**
 - Average Daily Trip (ADT) traffic counts are reviewed for existing roads to provide a relative sense of how heavily they are used.
 - For proposed new roads, projected ADTs are provided from recent traffic studies.
 - Projects on roads with ADTs around 10,000 or higher are more desirable.
- **Funding/Grant Leveraging**
 - Projects are ranked high, medium, or low based on their ability to attract grant funding (High = higher likelihood of attracting grant funding).
 - Projects with medium or high rankings are more desirable
- **Caltrans Sufficiency Rating (applicable to Bridge projects)**
 - Caltrans' bridge sufficiency ratings are based on a scale of 1-100: bridges with scores between 0 and 50 are eligible for replacement; bridges with scores between 51 and 80 are eligible for rehabilitation; and bridges with scores between 81 and 100 are eligible for maintenance.
 - Bridge projects eligible for rehabilitation or replacement are a higher priority.

In addition to prioritizing projects in or near construction, the CDS prioritizes projects the Board has previously expressed an interest in moving forward. The CDS has continued to pursue potential Federal grants for rural bridge rehabilitation or replacement, which require little or no matching funds. This effort facilitates delivering these bridge projects now, avoiding the need for maintenance or replacement at a future date when grant funding may no longer be available.

Twenty-Year CIP Total Expenditures

The CDS's projected expenditures for the West Slope Road/Bridge Twenty-Year CIP are approximately \$823,851,000 which includes funding from all sources. CIP Revenue sources as of FY 2017/18 are displayed in Figure 1-4.

Sources of Revenue for Transportation CIP - FY2017/18

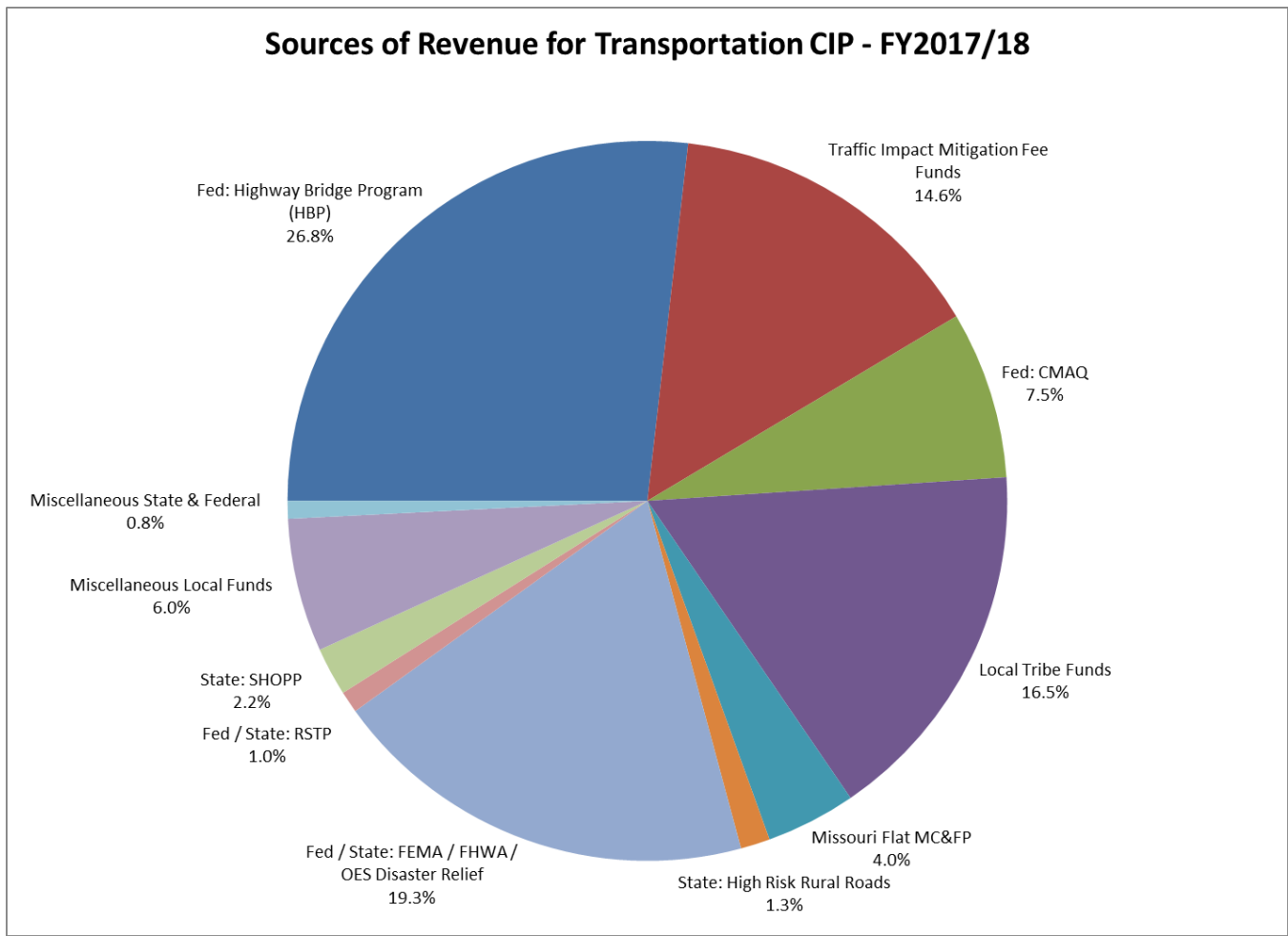


Figure 1-4: Sources of Revenue for Transportation CIP – FY 2017/18

CIP Book Format

Indexes

Indexes in Section 2 provide alternate ways to locate detailed project summaries – alphabetically, by project number and by Supervisor district.

In addition, the CDS maintains an interactive map depicting the location of projects in the West Slope Road/Bridge CIP, located at <http://gem.edcgov.us/cip/>.

Cash Proformas

Section 3 includes cash proformas for the TIM Fee Program, Local Funds – Tribe, the Missouri Flat Corridor Master Circulation and Funding Program, and Regional Surface Transportation Program (RSTP) Match and Exchange Funds. The cash proformas show how funding source revenues are used and what is left in each fund at the end of each year. Pending and approved reimbursements are also noted in this section, as well as a description of revenue sources and their potential uses.

Individual Projects

Individual project summaries are provided in alphabetical order in Section 4 for each project in the CIP. The summaries provide detailed descriptions, location maps, schedule, cost and revenue information. The “Revenues” section of each project summary lists the various funding sources for each project, including TIM Fee funds, State and Federal grants, developer advances, etc. The “Expenditures” section of each project summary includes the various types of costs planned to be incurred for each project (i.e., Planning/Environmental, Design, Right of Way, Construction and Environmental Monitoring.)

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project, including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDS staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)
2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase. “Design – Staff” refers to the cost for CDS staff time, while “Design – Consultant” includes all other costs (e.g., staff time from non-CDS departments, external consultants, etc.)
3. **Right of Way:** This phase includes expenditures for “Right of Way – Staff”, “Right of Way – Acquisition”, and “Right of Way – Consultant”. The Right of Way phase includes all costs related to determining what property or easements are needed for a CIP project, and acquisition. This phase begins after the environmental document has been certified by the Board, and can be completed in parallel with the Design phase. “Right of Way – Staff” refers to the cost for CDS staff time; “Right of Way – Acquisition” refers to the cost of land; and “Right of Way – Consultant” includes all other costs (e.g., staff time from non-CDS departments, external consultants, etc.)
4. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant” and “Direct Construction Costs”. This phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for CDS staff time, while “Construction Mgmt – Consultant” includes all other labor costs (e.g., staff time from non-CDS departments, external consultants, etc.) “Direct Construction Costs” refers to the actual cost to build the project.
5. **Environmental Monitoring:** This phase includes the costs associated with monitoring the environment affected by the project to ensure any impacts are mitigated. The Environmental Monitoring phase includes expenditures for “Env Monitoring – Staff” and “Env Monitoring – Consultant”. “Env Monitoring – Staff” refers

to the cost for CDS staff time while “Env Monitoring – Consultant” includes all other costs (e.g., staff time from non-CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

The project initiation date either coincides with the date of the project engineer's initial estimate or the date of Board adoption of 2004 General Plan TIM Fee Program Resolution 266-2006.

Unfunded Projects

In addition to the funded CIP projects (using TIM Fees, state/federal grants and other local funding), an “Unfunded” list is included in the CIP Book after the funded projects. The “Unfunded” list was compiled using various sources, including:

- Projects in the current CIP or TIM Fee programs which are no longer eligible for TIM Fee funding under the updated TIM Fee program.
- Projects suggested by the public.
- Projects included in the *El Dorado County Bicycle/Pedestrian Plan 2010*.
- Projects suggested by the *Green Valley Road Final Corridor Analysis Report, 2014*, *Diamond Springs-El Dorado Area Mobility and Livable Community Plan, 2014* and *Cameron Park Community Transportation Plan, 2015*.

For further clarification, the “Unfunded” list includes projects that were suggested by the public. These suggested projects may be partially included in the CIP or TIM Fee Program. Unfunded projects may be added to the CIP by the Board as funding becomes available. "Safety" projects requested by the public during the outreach process of the CIP Major Update adopted in 2016 have not officially been identified as "Safety Projects" by County staff.



Tahoe Environmental Improvement Program Overview

The Lake Tahoe Basin has long been at the forefront of environmental improvements at Federal, State and Local levels. Community Development Services (CDS), Transportation Division's Tahoe Engineering Unit (TEU) is solely grant funded, and is primarily responsible for capital projects identified in the Tahoe Environmental Improvement Program (EIP) to improve the environmental quality of Lake Tahoe. Projects are aimed at implementing improvements in the Lake Tahoe watershed, airshed and the lake itself. The TEU's projects address the EIP threshold categories of Water Quality, Soil Conservation/Stream Environment Zone, Air Quality/Transportation, Fisheries and Recreation. These environmental threshold carrying capacities are defined as environmental standards necessary to maintain significant scenic, recreational, educational, scientific or natural values of the Lake Tahoe Region, or to maintain public health and safety within the region.

As tourism and summer outdoor recreation become more important in the Lake Tahoe Basin, more bike trail projects are appearing in the Tahoe EIP. The TEU's Five-Year EIP includes construction of one to two projects per construction season. The construction season in Tahoe is limited to May 1 through October 15, per regulatory ordinances. Since the TEU's environmental improvement projects are dependent on grant funds, the projects included in this EIP represent the TEU's best project delivery forecast at this time.

Tahoe EIP Annual Updating Process

The EIP program is reviewed and updated annually, including revenue estimates and project costs and schedules. The EIP is developed concurrently with the CDS's budget for the upcoming fiscal year. Figure 1-5 illustrates the annual EIP update cycle.

In the case of the EIP, the needs of granting agencies are reviewed during July through November, and project costs and anticipated revenues are updated. TEU staff identifies the needs of granting agencies, updates the Federal/State/Local grant forecast and revises projects in the Tahoe EIP based on latest cost and grant information. This list is then submitted to the Tahoe Regional Planning Agency (TRPA) for review in December. Project costs, funding sources and delivery priorities are reviewed, updated and presented to the Board of Supervisors (Board) for discussion and adoption in February.

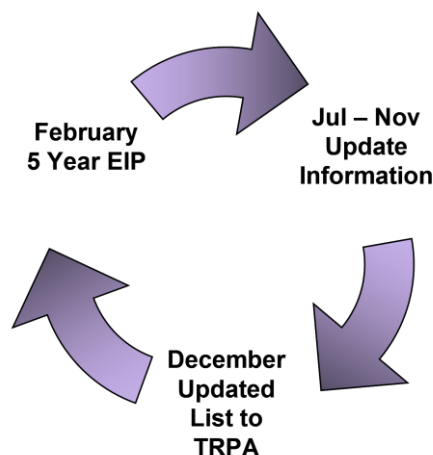


Figure 1-5: Tahoe EIP Annual Updating Process

The CDS maintains an interactive map depicting the location of projects in the Tahoe EIP, located at <http://gem.edcgov.us/cip/>.

Individual Projects - Grouped by Project Type

Individual project summaries are located in Section 4.2, and provide detailed descriptions, schedule, cost and revenue information. Projects are listed in alphabetical order within this section. The “Revenues” section of each project summary lists the various funding sources for each project, and can include many different grants, including California Tahoe Conservancy (CTC), TRPA, U.S. Forest Service (USFS), etc. The “Expenditures” section of each project summary includes the various types of costs expected for each project (i.e., Planning/ Environmental, Design, Right of Way, Construction and Environmental Monitoring).

The “Project Schedule” provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project, including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDS staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)
2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase. “Design – Staff” refers to the cost for CDS staff time, while “Design – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
3. **Right of Way:** This phase includes expenditures for “Right of Way – Staff”, “Right of Way – Acquisition”, and “Right of Way – Consultant”. The Right of Way phase includes all costs related to determining what property or easements are needed for a CIP project, and acquisition. This phase begins after the environmental document has been certified by the Board, and can be completed in parallel with the Design phase. “Right of Way – Staff” refers to the cost for CDS staff time; “Right of Way – Acquisition” refers to the cost of land; and “Right of Way – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
4. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant” and “Direct Construction Costs”. This phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for CDS staff time, while “Construction Mgmt – Consultant” includes all other labor costs (e.g., staff time from non- CDS departments, external consultants, etc.) “Direct Construction Costs” refers to the actual cost to build the project.

5. **Environmental Monitoring:** This phase includes the costs associated with monitoring the environment affected by the project to ensure impacts are mitigated. This phase includes expenditures for “Env Monitoring – Staff” and “Env Monitoring – Consultant”. “Env Monitoring – Staff” refers to the cost for CDS staff time while “Env Monitoring – Consultant” includes all other costs. “Plant Establishment – Staff” and “Plant Establishment – Consultant”: Typically done at the end of construction, environmental improvement projects include re-establishment of vegetation that may have been removed or damaged during the construction phase. This step includes all costs related to planting, watering and maintaining the new or disturbed vegetation until it becomes established. “Plant Establishment – Staff” refers to the cost for CDS staff time while “Plant Establishment – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

The project initiation date coincides with the date funding becomes available through the award of grant funds.

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Airport Capital Improvement Program Overview

Community Development Services (CDS) is responsible for operating the Placerville and Georgetown Airports, which includes developing and implementing the Airport Capital Improvement Program (ACIP) for both airports. The Federal Aviation Administration (FAA) reviews, authorizes and funds the ACIPs. Thus, the ACIPs are developed in partnership with the FAA. The FAA's ACIP funds 90% of most ACIP project costs (this excludes preparation of Categorical Exclusions to satisfy National Environmental Policy Act [NEPA] requirements). The County can apply for State of California Department of Transportation (Caltrans) Division of Aeronautics ACIP matching grant funds, which, if successful in obtaining, would fund 5% of the FAA grant amount (4.5% of total FAA grant eligible project costs). The remaining 5.5% of the project costs would need to be covered by the Local Accumulative Capital Outlay (ACO) fund, which would also need to fund Categorical Exclusions to satisfy NEPA requirements.

Caltrans has provided matching grant funds for ACIP projects in past years. However, State matching funds were not programmed in the 2018 ACIP, as these funds have become unreliable. Therefore, the ACIP projects include approximately 10% ACO matching funds. State funding will continue to be pursued.

ACIP projects are prioritized based on several criteria including safety, security, and capacity.

Annual Updating Process

All CIPs are reviewed and updated annually, including revenue estimates, project costs and schedules. In the case of the ACIP, the CDS drafts a proposed list of projects and submits it to the FAA in December for discussion. The FAA reviews the Airport Layout Plan (ALP) for compliance with aviation design standards, and proposes revisions to the ALP and ACIP. The FAA consults with the CDS in project ranking and funding eligibility. The FAA circulates the draft ACIP for potential funding to California Transportation Commission, Federal and State aviation divisions.

In January, the CDS updates the ACIP and submits it to the FAA. The FAA provides direction to staff regarding which projects it will fund, and requests the CDS submit grant applications in March so that projects can be initiated in June/July. Projects may be authorized for planning, design, and/or construction work.

Simultaneously, the CDS presents its CIP recommendations to the Board of Supervisors for discussion and adoption. The budget for next year's potential projects is then updated, based on Federal and State budget constraints. Figure 1-8 illustrates the ACIP Annual Updating Process.

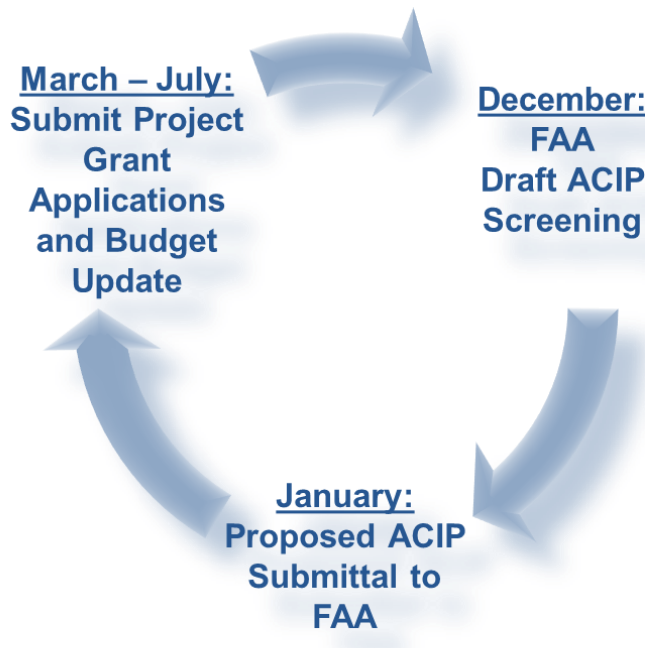


Figure 1-8: ACIP Annual Updating Process

Airport CIP Projects

The CDS has recently updated its Airport Layout Plan with Program Narrative Report for the Georgetown Airport and an Airport Layout Plan Update for the Placerville Airport is underway. Each Airport Layout Plan includes updated plans to provide appropriate criteria and guidelines for future airport projects and will generate an updated project list. ACIP projects scheduled to be worked on in Fiscal Year 2018/19 are listed in the Executive Summary CIP Overview section.

The CDS maintains an interactive map depicting the location of projects in the ACIP, located at <http://gem.edcgov.us/cip/>.

Individual Projects - Grouped by Project Type

Individual project summaries are provided in Section 4.3 for each segment of the ACIP, grouped by airport, and provide detailed descriptions, timing, cost and revenue information. Projects are listed in alphabetical order within each segment of the ACIP. The “Revenues” section of each project summary includes anticipated grants from the FAA along with matching funds from Accumulative Capital Outlay or airport operations (i.e., “Enterprise funds”). The “Expenditures” section of each project summary includes the various types of costs planned to be incurred for each project (i.e., Design and Construction).

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project, including the preliminary design and research required to complete the environmental

analysis. “Planning/Env – Staff” refers to the cost for CDS staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase. “Design – Staff” refers to the cost for CDS staff time, while “Design – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
3. **Right of Way:** This phase includes expenditures for “Right of Way – Staff”, “Right of Way – Acquisition”, and “Right of Way – Consultant”. The Right of Way phase includes all costs related to determining what property or easements are needed for a CIP project, and acquisition. This phase begins after the environmental document has been certified by the Board, and can be completed in parallel with the Design phase. “Right of Way – Staff” refers to the cost for CDS staff time; “Right of Way – Acquisition” refers to the cost of land; and “Right of Way – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
4. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant” and “Direct Construction Costs”. The Construction phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for CDS staff time, while “Construction Mgmt – Consultant” includes all other labor costs (e.g., staff time from non- CDS departments, external consultants, etc.) “Direct Construction Costs” refers to the actual cost to build the project.
5. **Environmental Monitoring:** This phase includes the costs associated with monitoring the environment affected by the project to ensure any impacts are mitigated. The Environmental Monitoring phase includes expenditures for “Env Monitoring – Staff” and “Env Monitoring – Consultant”. “Env Monitoring – Staff” refers to the cost for CDS staff time while “Env Monitoring – Consultant” includes all other costs (e.g., staff time from non-CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

The project initiation date is the date that coincides with the project engineer’s original budget.

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Transportation Facilities Improvement Program Overview

County Community Development Services (CDS) is responsible for constructing, repairing and maintaining County Transportation Division facilities. The Transportation Facilities Improvement Program (TFIP) includes capital maintenance projects, which are prioritized based on several criteria, including health and safety, ongoing maintenance costs and state or Federal requirements.

The TFIP section of the 2018 Capital Improvement Program (CIP) Book includes one Facilities project – the Headington Wash Rack Facility Project (CIP #81134). The project is for an automated water treatment reclamation/recycling wash system for heavy equipment at the Headington Maintenance Yard. This facility project is designed to meet the objectives of the Clean Water Act and the County’s Storm Water Management Program and reduce future operational costs.

The purpose of this project is to replace the existing uncovered wash facility for County fleet vehicles and maintenance equipment. The improvements include construction of a covered vehicle wash building, water recycling treatment system, rainwater collection and storage tanks, and disconnecting from the existing sewer line.

Significant operational cost savings could be realized at the facility due to the elimination of sewer discharges (and corresponding sewer fees), and use of automated wash features (less labor and wash time). The CDS maintains an interactive map depicting the location of projects in the TFIP program, located at <http://gem.edcgov.us/cip/>.

Individual Projects - Grouped by Project Type

A project summary is provided in Section 4.4 for the TFIP project, which provides a detailed description, schedule, cost and revenue information. The “Revenues” section of the project summary includes anticipated revenue for the project. The “Expenditures” section of the project summary includes the various types of costs planned to be incurred for each project (i.e., Planning/Environmental, Design, Construction and Environmental Monitoring).

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project, including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for CDS staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non-

CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase. “Design – Staff” refers to the cost for CDS staff time, while “Design – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
3. **Right of Way:** This phase includes expenditures for “Right of Way – Staff”, “Right of Way – Acquisition”, and “Right of Way – Consultant”. The Right of Way phase includes all costs related to determining what property or easements are needed for a CIP project, and acquisition. This phase begins after the environmental document has been certified by the Board, and can be completed in parallel with the Design phase. “Right of Way – Staff” refers to the cost for CDS staff time; “Right of Way – Acquisition” refers to the cost of land; and “Right of Way – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
4. **Construction:** This phase includes expenditures for “Construction Mgmt – Staff”, “Construction Mgmt – Consultant” and “Direct Construction Costs”. This phase includes all costs related to managing, overseeing, and inspecting a project once the project has been bid and awarded to an external firm for construction. “Construction Mgmt – Staff” refers to the cost for CDS staff time, while “Construction Mgmt – Consultant” includes all other labor costs (e.g., staff time from non- CDS departments, external consultants, etc.) “Direct Construction Costs” refers to the actual cost to build the project.
5. **Environmental Monitoring:** This phase includes the costs associated with monitoring the environment affected by the project to ensure any impacts are mitigated. The Environmental Monitoring phase includes expenditures for “Env Monitoring – Staff” and “Env Monitoring – Consultant”. “Env Monitoring – Staff” refers to the cost for CDS staff time while “Env Monitoring – Consultant” includes all other costs (e.g., staff time from non-CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

The project initiation date is the date that coincides with the project engineer's original budget.



Capital Overlay and Rehabilitation Program Overview

Capital Overlay and Rehabilitation Program (CORP) projects are roadway rehabilitation projects which require an improvement to the roadway structural integrity. CORP projects are very visible improvements that have positive impacts in El Dorado County. They are an efficient use of one time revenues, with lower planning, environmental, and design costs than other transportation projects (e.g., bridges, road widening projects, etc.). The Community Development Services, Department of Transportation (DOT) is able to get overlay projects on the ground very quickly.

DOT plans to overlay and rehabilitate as many of the roads as possible on its project priority list given available funding. Past asphalt concrete overlay projects have been funded by Regional Surface Transportation Program Exchange Funds, Proposition 1B, American Recovery and Reinvestment Act funds, and contributions from the General Fund and Tribal Funds. The Road Fund is generally used for maintenance work (e.g., brushing, ditching, chip seal, etc.) and not for asphalt concrete overlays.

Pavement Management Program (PMP)

Information provided by the Pavement Management Program (PMP) drives the Road Maintenance Program (RMP) and CORP. The PMP is a tool used to assist in monitoring the condition of all paved roads within the County. It maintains a history of surface treatment and overlay work performed on the roads. The PMP also assists in funding procurement by demonstrating use of proper maintenance strategies with existing funds.

The PMP allows staff to evaluate and monitor the condition of pavement to enable Transportation to use its limited resources in the most efficient manner possible. Ideally, each road should be inspected every other or every third year. Surface treatment and overlay data is entered upon completion of work, and used to prioritize maintenance and overlay work plans.

The PMP inspection process has two components.

In the field:

- For every 1,000 feet of roadway, 100 feet are inspected on foot.
- Each inspection looks for 19 different potential deficiencies.
- Each deficiency encountered is measured and evaluated for severity.
- Inspectors must be trained to identify deficiencies and properly evaluate severity.
- Inspection is quantitative and statistics-based.

In the office:

- Data is entered into the StreetSaver program.
- Pavement Condition Index (PCI) is calculated (on a scale of 0 to 100) and updated.
- Roads are prioritized for maintenance or overlay work.

The PMP will enable staff to focus on common-sense preventative maintenance, which will maximize the useful life of the County's roadway infrastructure.

CORP Annual Updating Process

DOT prioritizes CORP projects based on several criteria, including pavement condition, traffic volume, traffic circulation and funding. Between October and February, staff performs pavement inspections (Tahoe inspections are performed prior to snow season). Upon completion of pavement inspections, the PMP database is updated. Between February and April, staff uses PMP data to set priorities for surface treatment and to determine which CORP projects to include in the Capital Improvement Program. During the period from April to October, staff or contractors perform overlay work.

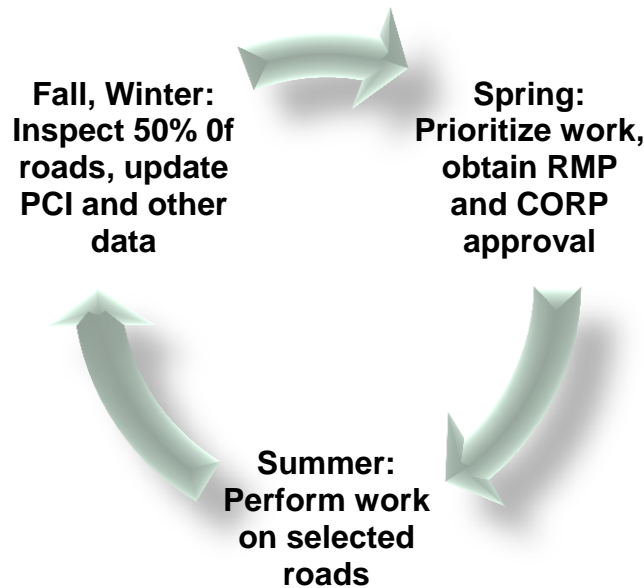


Figure 1-7: CORP Annual Updating Process

CORP Projects

CORP projects scheduled to be worked on in Fiscal Year 2018/19 are listed in the Executive Summary CIP Overview section.

The 2017 CIP book included the Overlay - El Dorado Hills Boulevard (CIP #72193) project. This project will overlay El Dorado Hills Boulevard from Saratoga Way/Park Drive to Brittany Place. The project will implement pavement repairs to failed areas of the existing roadway, add Class II bike lanes along portions of the project limits, improve pedestrian ramps to be consistent with the Americans with Disability Act standards and provide for bicycle and pedestrian detection improvements at all signalized intersections. The Overlay - El Dorado Hills Boulevard is scheduled for construction in Fiscal Year (FY) 2019/20.

On March 18, 2018, the Board approved addition of the Elks Club Drive Overlay - Boca Raton to Pioneer Trail (CIP #72192) to the 2017 CIP. Elks Club Drive is a major collector for El Dorado County (approximately 0.81 miles long), providing an important connection from U.S. Highway 50 to Pioneer Trail for residents and visitors to South Lake Tahoe. The

Average Daily Traffic (ADT) is 2,099 vehicles per day and Pavement Condition Index (PCI) is 4 (very poor). The project will include the grind and overlay of existing asphalt concrete and associated work throughout the limits of the project. In order to extend the useful life of the pavement, the project also proposes to install a layer of pavement reinforcement material after grinding and before installation of the overlay. Additional drainage improvements will be constructed along Elks Club Drive to provide an environmental benefit to the region. The project will include approximately 125,000 square feet of pavement rehabilitation and new asphalt concrete overlay on Elks Club Drive in South Lake Tahoe. Construction for this project is scheduled for FY 2018/19.

DOT's strategy has been to fund CORP projects primarily with external funding. Table 1-3, the Infrastructure Investment Options List, includes projects staff has prioritized, in no particular order. Projects on this list could be constructed if the Board wishes to approve additional General Fund revenue, continue allocating some Tribe revenue, or redirect revenue currently recommended for West Slope Road/Bridge Projects.

Table1-3: CORP Infrastructure Options List

Project	Start	End	Length	ADT	PCI
Greenwood Road	Marshall Road	State Highway 193	26,400	1,679	30
Sawmill Road	U.S. Highway 50	Lake Tahoe Blvd.	9,715	1,495	24
Sly Park Road	Mt. Aukum Road	Sierra Springs Drive	25,399	2,971	46
Sly Park Road	Sierra Springs Drive	Mormon Emigrant Trail	9,766	2,059	46
South Shingle Road	Latrobe Road	U.S. Highway 50	47,203	1,044 - 9,751	42

Individual Projects - Grouped by Project Type

Individual Project Summaries are provided in Section 4.5 for each segment of the CORP, and provide detailed descriptions, timing, cost and revenue information. Projects are listed in alphabetical order within each segment of the CORP. The “Revenues” section of each project summary lists the various funding sources for each project. The “Expenditures” section of each project summary includes the various types of costs expected for each project (i.e., Design and Construction.) CORP projects do not normally have Planning/Environmental, Right of Way or Environmental Monitoring costs.

The “Project Schedule” section provides an estimate of the funding year each phase is expected to occur. This section is divided into the following phases:

1. **Planning/Environmental:** This phase includes expenditures for “Planning/Env – Staff” and “Planning/Env – Consultant”. Typically the first step in the project delivery process, the Planning/Environmental phase includes all costs related to planning the project, including the preliminary design and research required to complete the environmental analysis. “Planning/Env – Staff” refers to the cost for Community

Development Services (CDS) staff time, while “Planning/Env – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants who specialize in environmental analysis, rental of monitoring equipment, etc.)

2. **Design:** This phase includes expenditures for “Design – Staff” and “Design – Consultant”. The Design phase includes all costs related to developing the project plans, specifications and engineer’s cost estimates to make a project bid-ready. This phase usually begins after the environmental document has been certified by the Board, and can be completed in parallel with the Right of Way acquisition phase. “Design – Staff” refers to the cost for CDS staff time, while “Design – Consultant” includes all other costs (e.g., staff time from non- CDS departments, external consultants, etc.)
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The project initiation date is the date that coincides with the project engineer’s original budget.