

DEPARTMENT OF PERSONNEL & ADMINISTRATION

John W. Hickenlooper Governor

> Kathy Nesbitt Executive Director

FY 2015-16 Capital Construction Request October 1, 2014

Signature Date

Department Priority: 02

Capitol Grounds Water Conservation and Landscaping Renovation

Summary of Capital Construction Request	Total Funds	CCFE
FY 2015-16	\$1,143,954	\$1,143,954
FY 2016-17	\$0	\$0
FY 2017-18	\$0	\$0

Request Summary:

The Department of Personnel & Administration requests \$1,143,954 Capital Construction Funds to complete a water conservation and landscaping renovation project on the east lawn of the Capitol grounds. The project's goal is to promote water conservation and will also completely renovate the current landscaping, signage, lighting, site furnishings, and eliminate bluegrass.

Project Description:

The project involves a renovation of the east lawn of the Capitol grounds. It is estimated that this project will be completed over a six to nine month period. The landscaping plans that this request is based on are preliminary in nature; full planning and engineering would take approximately four months. Next, during the construction phase of the project, equipment and supplies will be located in the renovation areas. Based on current data, the project will not consume parking spots or cause any long-term pedestrian lane closures. Below is an overview of the estimated project time table:

Estimated Project ' Steps to be completed	Fime Table Start Date	Completion Date
Request for Proposal	May 2015	July 2015
Project Planning (Design, Engineering)	July 2015	August 2015
Project Construction and Contract Management	August 2015	November 2015

Background and Justification:

Water conservation is necessary in Colorado due to the increasing population in metropolitan areas, limited supply of available water, and the corresponding threat to agricultural lands. Additionally, pursuant to a number of water compacts, approximately two thirds of the State's 16.0 million acre-feet of annual water supplies must be delivered to other States.

The Statewide Water Supply Initiative 2010 (SWSI) report indicates the increase in population in metropolitan areas, projected to double by 2050, will cause a deficit between 600,000 and 1.0 million acre feet of water by 2050. Legislation in 2014 has also sought to address water consumption of municipal areas, Senate Bill 14-103 prohibits the sale of low efficiency plumbing fixtures in Colorado after September 2016.

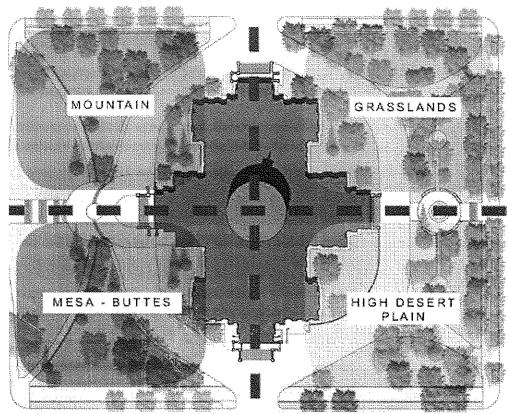
The population increase also poses a risk for agricultural lands. As a leading industry in the State, agriculture generates over \$40.0 billion annually and supports 170,000 jobs. The SWSI 2010 report estimated that as many as 700,000 acres of cropland could be put out of production by 2050 due to the population based demand on water supplies.

Another threat related to agricultural lands production is a trend called Agricultural Buy and Dry. This occurs when municipalities purchase water rights from farms to use for municipal consumption. Generally, municipalities can pay a much higher rate for water than farms, since the cost is distributed over thousands of people. This threat was realized in Crowley County. As a result of water rights purchases, a total of 45,000 irrigated acres of cropland have been removed from production. Any time agricultural lands are removed from production additional economic impacts may be borne by State's economy through a reduced economic impact of the industry, or a reduction of jobs.

With the limited water supply of the State in mind, and the statewide effort to conserve water through the Colorado Water Plan, a work group was assembled to determine a way to showcase an aesthetically pleasing landscape that conserves more water than a traditional lawn landscape. The workgroup focused on native vegetation of the State with an end goal of demonstrating water conservation opportunities to all Capitol visitors. This showcase will feature vegetation and landscapes that require less water, which may encourage others to follow the State's lead and shift from water consumption behaviors to water conservation behaviors.

The project plans used in this request were developed by a public-private collaborative including: the Colorado Water Conservation Board, Denver Water, Denver Botanic Gardens, Colorado Nursery Association, and Studio Insite. Both the project plans, found in Appendix A, and cost estimates were provided by Studio Insite. All parties agreed on the concept titled "Colorado Quadrants." The original concept included the following four quadrants, representative of the topography of the state: mountain, grasslands, mesa-buttes, and high desert plain. A cost estimate for all four quadrants is included in the Life Cycle Cost Analysis section. The grasslands and high desert plain quadrants have been prioritized for this request.

Denver Water has estimated that the east quadrants landscaping renovation will save 2,031,540 gallons of water annually. This is the equivalent of 23,900 individuals' daily water consumption, or enough water to cover 6.2 acres of agricultural land with one foot of water. Based on current water rates, this would save the State \$7,476 per year. In addition, Denver Water will contribute one dollar per square foot of converted landscaping, or \$72,255 for the east quadrants, which may offset some utility costs to agencies. The following graphic depicts all four quadrants; the quadrants included in this request are located at the corners of Colfax Avenue and Grant Street, and Grant Street and 14th Avenue.



Source: Appendix A

Life Cycle Cost (LCC) Analysis:

Based on the goal of water conservation, there are no known alternatives to the proposal presented in this request. Other than the construction costs to complete the landscaping renovation, there are no known ongoing costs. Annual water conservation of 2,031,540 gallons will continue indefinitely once the project is complete, saving 20,315,400 gallons over the next ten years.

Funding all four quadrants would increase the required appropriation amount by approximately \$954,698 total funds, as detailed in the table below. In addition, prioritization of the east quadrants promotes greater water conservation as compared to the west quadrants, based on the information provided by Denver Water.

Additional Cost f		rants Landscaping Renovation Description
SW Quadrant	\$406,415	Proposed cost associated with irrigation, amending and
NW Quadrant	\$286,433	planting in the tree lawn in the NE quadrant of the grounds
Softscape (NW and SW right of way)	\$64,350	irrigation, amending and planting in the tree lawn
Site Furnishings	\$20,000	Benches, trash receptacles, and other furnishings
Way finding and interpretive signage	\$37,500	Informative signage for the public
Tree pruning and removal	\$15,000	Tree maintenance including pruning or removal, due to disease
		Low level lighting to the secondary path network through the
Lighting	\$125,000	proposed planting areas
Total	\$954,698	

Consequences if not Funded:

If this request is not approved, the Capitol grounds will remain unchanged. This will eliminate the opportunity to conserve 2,031,540 gallons of water each year an estimated cost savings of \$7,476 per year. Finally, the Department will continue to seek partnership opportunities to help mitigate its water consumption if this request is not approved.

Operating Budget Impact:

There is no associated operating budget impact for this request for FY 2015-16. The Department cannot determine if additional resources will be necessary until the project is complete. If needed, an operating request will be submitted for FY 2016-17.

Conversations with the Denver Botanic Gardens resulted in a potential partnership opportunity. The partnership would allow the Botanic Gardens to use the new space for education, while providing full time and seasonal staff to manage the vegetation during the growing season. A partnership will not be finalized until the project is complete.

Currently, agencies are billed for water usage through the Capitol Complex Leased Space common policy in the Long Bill. If cost savings from water conservation are realized, agencies could see a decrease in water utility billings.

Assumptions for Calculations:

Below is a table detailing the costs associated the request, followed by a description of each component.

If this request is approved, the Department plans to seek a grant to fund the enhancements outlined in the Additional Enhancement section of the following table. This table also includes the contribution from Denver Water. These funds are not included in the request since Section 24-50.3-105 (8) (b), C.R.S., allows the executive director to expend grants that are custodial funds without appropriation by the General Assembly. Additionally, potential granting organizations require a funding match before an application can be submitted. The Department cannot meet that requirement until funding for this request is finalized.

Assumptions for Calculations - Capitol Grounds	Water Co	servation :	and Landscaping	Renovation
Description	Qty.	Unit	Unit Cost	Total
Base Bid- NE Quadrant				
Softscape (Capitol Grounds) @ 75% area (33,760 sf total)	25,320	SF	14	\$354,480.00
Crusher fine paths (3' wide, steel edger containing path)	450	LF	18	\$8,100.00
Softscape (NE right of way)	2,575	SF	13	\$33,475.00
Site furnishings (per quadrant)				\$10,000.00
Way finding and interpretative signage (per quadrant)				\$18,750.00
Tree pruning and removal (per quadrant)				\$7,500.00
Lighting (per quadrant)				\$62,500.00
Amphitheater at NE stair- stone (allowance)				\$75,000.00
Base contingency 10% (bold items)				\$36,258.00
Total				\$606,063.00
Base Bid- SE Quadrant				
Softscape (Capitol Grounds) @ 75% area (31,885 sf total)	23,914	SF	14	\$334,792.50
Crusher fine paths (3' wide, steel edger containing path)	450	LF	18	\$8,100.00
Softscape (SE right of way)	4,035	SF	13	\$52,455.00
Site furnishings (per quadrant)				\$10,000.00

Assumptions for Calculations – Capitol Grounds \	Vater Co	nservation a	nd Landscapin;	g Renovation
Description	Qty.	Unit	Unit Cost	Total
Way finding and interpretative signage (per quadrant)				\$18,750.00
Tree pruning and removal (per quadrant)				\$7,500.00
Lighting (per quadrant)				\$62,500.00
Base contingency 10% (bold items)				\$34,289.25
Total				\$528,386.75
Request Total				\$1,134,449.75
Additional Enhancements (pursued through grant funding)				
North entry enhancement (update paving-hardscape)	5,180	SF	20.00	\$103,600.00
East entry enhancement (update paving-hardscape)	2,520	SF	20.00	\$50,400.00
South entry enhancement (update paving-hardscape)	5,350	SF	20.00	\$107,000.00
Hardscape rework (demo-restoration of east ped hardscape excluding vertical walls and horizontal hardscape around the east monument)		SF	20.00	\$220,000.00
Street crossing enhancements (allowance)	6	each	\$50,000.00	\$300,000.00
Denver Water Contribution	72,225	SF	\$1.00	\$72,225.00
Total (not included in request)				\$853,225.00

Cost Assumption Descriptions:

Softscape (Capitol Grounds) and Crusher fine paths: proposed cost associated with irrigation, amending and planting in the tree lawn in the NE quadrant of the grounds including softscape and paths.

Softscape (NE right of way): proposed cost associated with irrigation, amending and planting in the tree lawn in the NE quadrant of the grounds.

Site furnishings: benches, trash receptacles, and other furnishings that would be utilized in the water conservation project on the grounds. This represents the cost per quadrant.

Way finding and interpretive signage (allowance): allowance for informative signage for the public to better understand the water conservation project and specific plant material. This represents the cost per quadrant.

Tree pruning and removal (allowance): proposed cost associated with the number of existing trees on the Capitol grounds that need some maintenance including pruning or removal, due to disease. This represents the cost per quadrant.

Lighting (allowance): proposed cost associated with evaluation of necessary and safe levels of lighting. This allowance will be used to provide low level lighting to the secondary path network through the proposed planting areas. This represents the cost per quadrant.

Amphitheater at NE stair – stone (allowance): proposed cost to install an amphitheater to be utilized by education groups and Capitol tour attendees.

Softscape (Capitol Grounds) and Crusher fine paths: proposed cost associated with irrigation, amending and planting in the tree lawn in the SE quadrant of the grounds including softscape and paths.

Softscape (SE right of way): proposed cost associated with irrigation, amending and planting in the tree lawn in the SE quadrant of the grounds.

Site furnishings: benches, trash receptacles, and other furnishings that would be utilized in the water conservation project on the grounds. This represents the cost per quadrant.

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Lighting (allowance): proposed cost associated with evaluation of necessary and safe levels of lighting. This allowance will be used to provide low level lighting to the secondary path network through the proposed planting areas. This represents the cost per quadrant.

Additional Enhancements

North entry enhancement (update paving-hardscape): proposed cost associated with enhancing the pedestrian entry at the north side of the Capitol. This would remove the asphalt paving, approximately the width of the current entry stairs, and replace it with stone, pavers or enhanced concrete hardscape, enhancing the pedestrian entry experience. This proposed cost based on rough square footage and not based on a final design. The proposed level of finishes would be similar to what is installed at the west stair.

East entry enhancement (update paving-hardscape): proposed cost associated with enhancing the pedestrian entry at the east side of the Capitol. This would remove the asphalt paving, approximately the width of the current entry stairs, and replace it with stone, pavers or enhanced concrete hardscape, enhancing the pedestrian entry experience. This proposed cost based on rough square footage and not based on a final design. The proposed level of finishes would be similar to what is installed at the west stair.

South entry enhancement (update paving-hardscape): proposed cost associated with enhancing the pedestrian entry at the south side of the Capitol. This would remove the asphalt paving, approximately the width of the current entry stairs, and replace it with stone, pavers or enhanced concrete hardscape, enhancing the pedestrian entry experience. This proposed cost is based on rough square footage and not based on a final design. The proposed level of finishes would be similar to what is installed at the west stair.

Hardscape rework: proposed cost associated with reworking all existing pedestrian hardscape between the city walk and the asphalt parking surrounding the Capitol. Some of the stairs and stone paving are heaving and need to be reset.

Street crossing enhancements (allowance): proposed cost associated with improvements to city street crossings and intersections adjacent to the Capitol. The Capitol and Capitol grounds deserve a stronger urban identity that may start by enhancing adjacent intersections. This idea could be spread throughout the Capitol Complex providing an urban identity to this district (street crossings proposed in the allowance

would only be adjacent to the Capitol and include Lincoln & 14th, Lincoln & Colfax, Colfax & Sherman, 14th & Sherman, Grant & Colfax, Grant & 14th).

Denver Water Contribution: Denver Water has pledged to contribute one dollar per square foot of renovated landscape.

Additional Request Information				
Please indicate if three-year roll forward spending	\square	Yes	No)
authority is required.				
Date of project's most recent program plan:				
Please provide the link to the program plan or attached				
the first page of the analysis to this document:				
Request 6-month encumbrance waiver?		Yes	\checkmark	No
New construction or modification?		New	abla	Renovation
50 		Expansion		Capital Renewal
Total Estimated Square Footage		ASF	72,2	.55 GSF
Is this a continuation of a project appropriated in a prior		Yes	V	No
year?	Tollog			
If this is a continuation project, what is the State				
Controller Project Number?			 	

ESTIMATED PROJECT TIME TABLE		
Steps to be completed	Start Date	Completion Date
Request for Proposal	May 2015	July 2015
Project Planning (Design, Engineering)	July 2015	August 2015
Project Construction and Contract Management	August 2015	November 2015

			Y 2019-20	Prepared By:	Terry Jensse	511		arijur deta	Gerra Williams
				Phone:	(303) 866-62	226	E-Mail:	terry.jenssen@st	ate.co.us
gency or institution;	Dep	partment of	Personnel & Admir	istration					
Project Title:	Funding	Source	Total Project Cost	Prior Appropriation	Budget Year Request Yr 1 FY 2015-16	Year Two Request	Year Three Request	Year Four Request	Year Five Request
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Gross Square Ft: 72,255		FF	\$0	\$0	\$0	\$0	\$0	\$0	\$0
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Dennis@ Insight Studios

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Kathy Nesbitt Executive Director

FY 2015-16 Capital Construction Request | October 1, 2014

Date

Department of Personnel & Administration Priority: 01
Capitol Grounds Water Conservation and Landscaping Renovation

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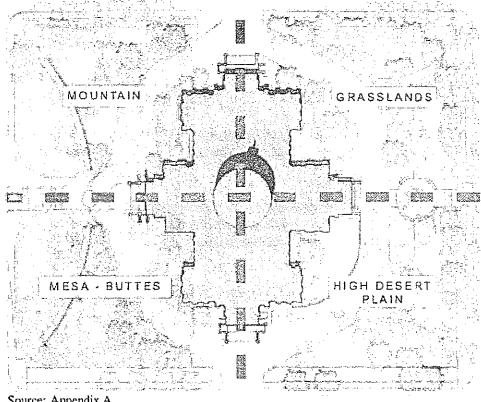
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Assumptions for Calculations:

Below is a table detailing the costs associated the request, followed by a description of each component.

If this request is approved, the Department plans to seek a grant to fund the enhancements outlined in the Additional Enhancement section of the following table. This table also includes the contribution from Denver Water. These funds are not included in the request since Section 24-50.3-105 (8) (b), C.R.S., allows the executive director to expend grants that are custodial funds without appropriation by the General Assembly. Additionally, potential granting organizations require a funding match before an application can be submitted. The Department cannot meet that requirement until funding for this request is finalized.

Description	Qty.	Unit	Unit Cost	Total
Base Bid- NE Quadrant				
Softscape (Capitol Grounds) @ 75% area (33,760 sf total)	25,320	SF	14	\$354,480.00
Crusher fine paths (3' wide, steel edger containing path)	450	LF.	18	\$8,100.00
Softscape (NE right of way)	2,575	SF	13	\$33,475.00
Site furnishings (per quadrant)			<u></u>	\$10,000,00
Way finding and interpretative signage (per quadrant)				\$18,750.00
Tree pruning and removal (per quadrant)				\$7,500.00
Lighting (per quadrant)				\$62,500.00
Amphitheater at NE stair- stone (allowance)				\$75,000.00
Base cantingency 10% (bold items)				\$36,258.00
Total				\$606,063.00
Base Bid- SE Quadrant				
Softscape (Capitol Grounds) @ 75% area (31,885 sf total)	23,914	SF	14	\$334,792.50
Crusher fine paths (3' wide steel edger containing path)	450	LF	18	28,100,0
Softscape (SE right of way)	4,035	SF	13	\$52,455.0
Site furnishings (per quadrant)		•		\$10,000.00

Description	Qty.	Unit	Unit Cost	Total
Way finding and interpretative signage (per quadrant)				\$18,750,00
Tree pruning and removal (per quadrant)				\$7,500,00
Lighting (per quadrant)				\$62,500,00
Base contingency 10% (bold items)				\$34,289,25
Total				\$528,386.75
Request Total				\$1,134,449.75
Additional Enhancements (pursued through grant funding)			eren er erger bijde. Sterne eren	
North entry enhancement (update paving-hardscape)	5,180	SF	20,00	\$103,600.00
East entry enhancement (update paving-hardscape)	2,520	SF	20 00	- \$50,400,00
South entry enhancement (update paving-hardscape)	5,350	SF	20,00	\$107,000,00
Hardscape rework (demo-restoration of east ped hardscape excluding vertical walls and horizontal hardscape around the east monument)	11,000	SF	20,00	5220,000,00
Street crossing enhancements (allowance)	6	each	\$50,000.00	\$300,000,00
Denver Water Contribution	72,225	SF	\$1.00	\$ 72,225.00

Cost Assumption Descriptions:

Softscape (Capitol Grounds) and Crusher fine paths: proposed cost associated with irrigation, amending and planting in the tree lawn in the NE quadrant of the grounds including softscape and paths.

Softscape (NE right of way): proposed cost associated with irrigation, amending and planting in the tree lawn in the NE quadrant of the grounds.

Site furnishings: benches, trash receptacles, and other furnishings that would be utilized in the water conservation project on the grounds. This represents the cost per quadrant.

Way finding and interpretive signage (allowance): allowance for informative signage for the public to better understand the water conservation project and specific plant material. This represents the cost per quadrant.

Tree pruning and removal (allowance): proposed cost associated with the number of existing trees on the Capitol grounds that need some maintenance including pruning or removal, due to disease. This represents the cost per quadrant.

Lighting (allowance): proposed cost associated with evaluation of necessary and safe levels of lighting. This allowance will be used to provide low level lighting to the secondary path network through the proposed planting areas. This represents the cost per quadrant.

Amphitheater at NE stair - stone (allowance): proposed cost to install an amphitheater to be utilized by education groups and Capitol tour attendees.

Softscape (Capitol Grounds) and Crusher fine paths: proposed cost associated with irrigation, amending and planting in the tree lawn in the SE quadrant of the grounds including softscape and paths.

Softscape (SE right of way): proposed cost associated with irrigation, amending and planting in the tree lawn in the SE quadrant of the grounds.

Site furnishings: benches, trash receptacles, and other furnishings that would be utilized in the water conservation project on the grounds. This represents the cost per quadrant.

Way finding and interpretive signage (allowance): allowance for informative signage for the public to better understand the water conservation project and specific plant material. This represents the cost per quadrant.

Tree pruning and removal (allowance): proposed cost associated with the number of existing trees on the Capitol grounds that need some maintenance including pruning or removal, due to disease. This represents the cost per quadrant.

Lighting (allowance): proposed cost associated with evaluation of necessary and safe levels of lighting. This allowance will be used to provide low level lighting to the secondary path network through the proposed planting areas. This represents the cost per quadrant.

Additional Enhancements

North entry enhancement (update paving-hardscape): proposed cost associated with enhancing the pedestrian entry at the north side of the Capitol. This would remove the asphalt paving, approximately the width of the current entry stairs, and replace it with stone, pavers or enhanced concrete hardscape, enhancing the pedestrian entry experience. This proposed cost based on rough square footage and not based on a final design. The proposed level of finishes would be similar to what is installed at the west stair.

East entry enhancement (update paving-hardscape): proposed cost associated with enhancing the pedestrian entry at the east side of the Capitol. This would remove the asphalt paving, approximately the width of the current entry stairs, and replace it with stone, pavers or enhanced concrete hardscape, enhancing the pedestrian entry experience. This proposed cost based on rough square footage and not based on a final design. The proposed level of finishes would be similar to what is installed at the west stair.

South entry enhancement (update paving-hardscape): proposed cost associated with enhancing the pedestrian entry at the south side of the Capitol. This would remove the asphalt paving, approximately the width of the current entry stairs, and replace it with stone, pavers or enhanced concrete hardscape, enhancing the pedestrian entry experience. This proposed cost is based on rough square footage and not based on a final design. The proposed level of finishes would be similar to what is installed at the west stair.

Hardscape rework: proposed cost associated with reworking all existing pedestrian hardscape between the city walk and the asphalt parking surrounding the Capitol. Some of the stairs and stone paving are heaving and need to be reset.

Street crossing enhancements (allowance): proposed cost associated with improvements to city street crossings and intersections adjacent to the Capitol. The Capitol and Capitol grounds deserve a stronger urban identity that may start by enhancing adjacent intersections. This idea could be spread throughout the Capitol Complex providing an urban identity to this district (street crossings proposed in the allowance

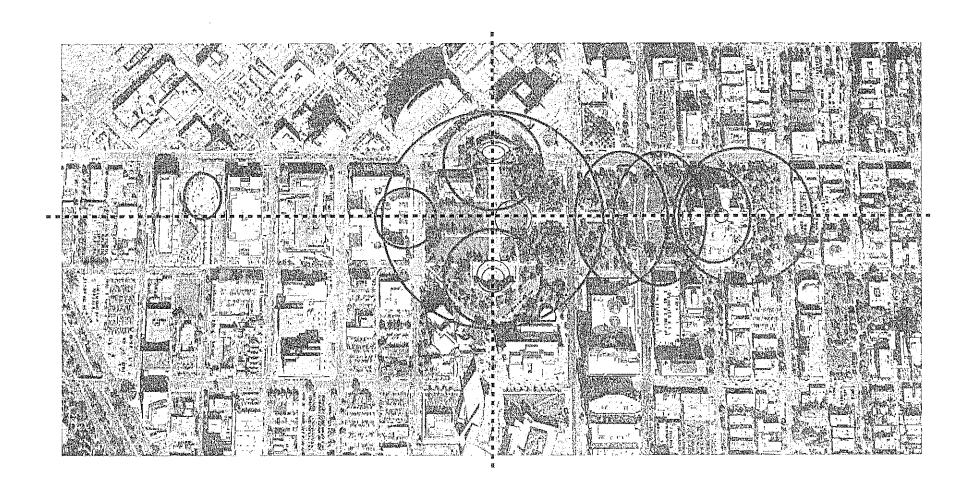
would only be adjacent to the Capitol and include Lincoln & 14th, Lincoln & Colfax, Colfax & Sherman, 14th & Sherman, Grant & Colfax, Grant & 14th).

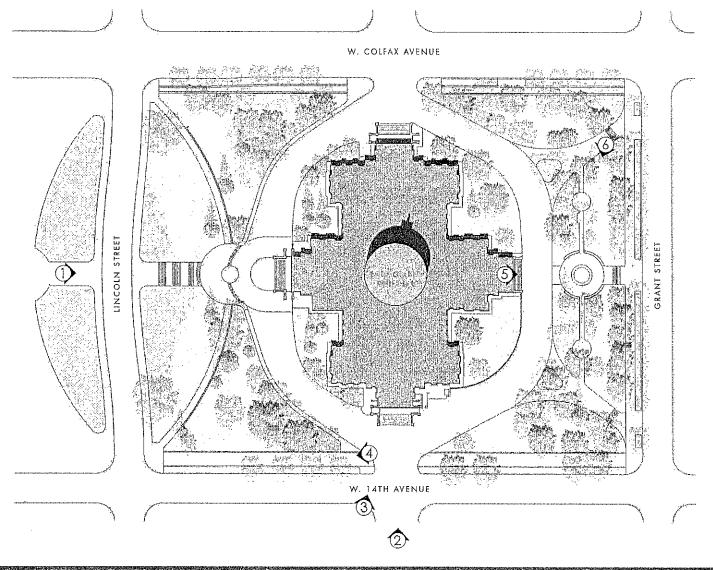
Denver Water Contribution: Denver Water has pledged to contribute one dollar per square foot of renovated landscape.

Ø	Yes		No

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	New	5	☑ Renovation
	Expansion	[Capital Renewal
	ASF	7	72,255 GSF
	Yes	6	Ži No
<u> </u>			
		······································	
		☐ Yes ☐ New ☐ ExpansionASF	☐ Yes ☐ ☐ New ☐ Expansion ☐ ☐ ASF 7

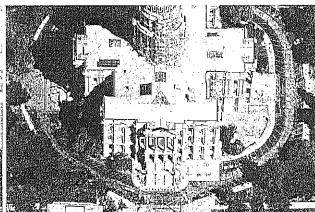
ESTIMATED PROJECT TIME TABLE	of California Control	
Steps to be completed	Start Date	Completion Date
Request for Proposal	May 2015	July 2015
Project Planning (Design, Engineering)	July 2015	August 2015
Project Construction and Contract Management	August 2015	November 2015



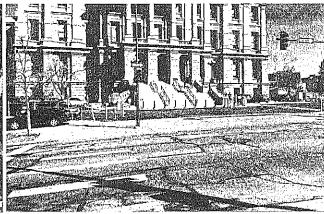




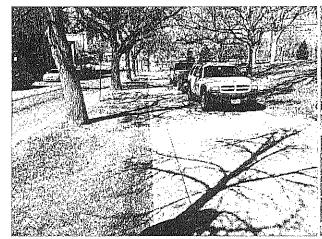




2 Historical pedestrian promenade - existing parking



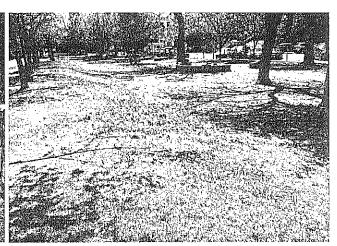
3 Enhance existing entrie



▲ Parking challenges



5 Pedestrian friendly entry enhancements

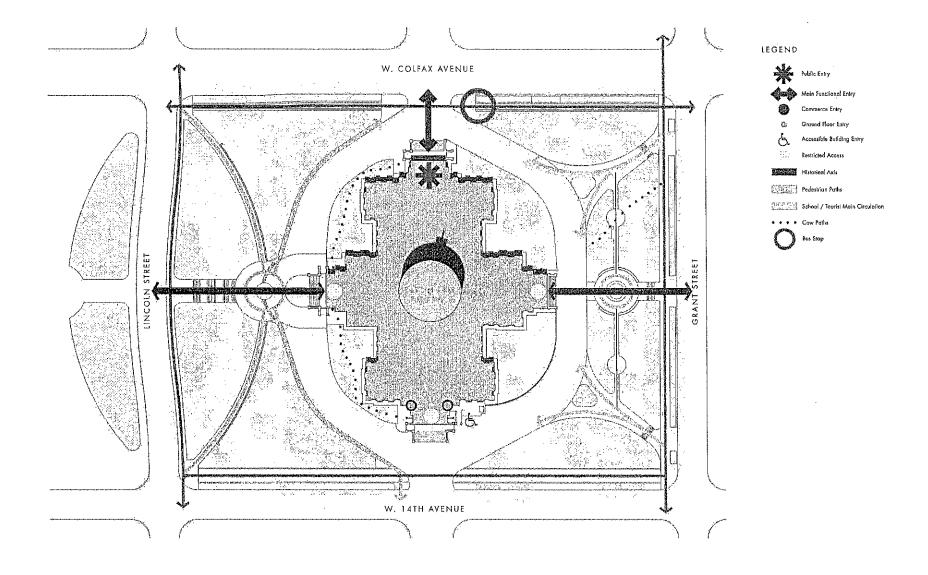


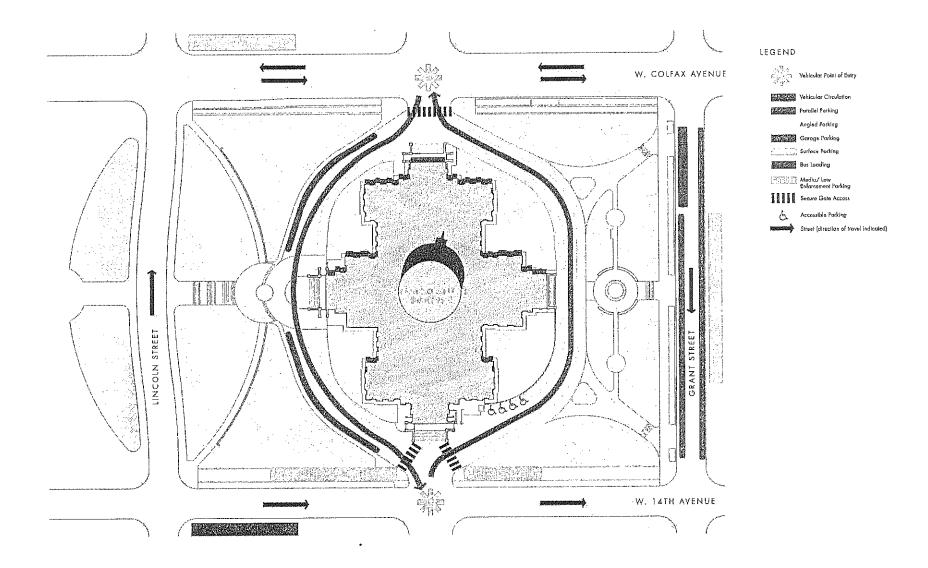
6 General site landscape issues and challenges

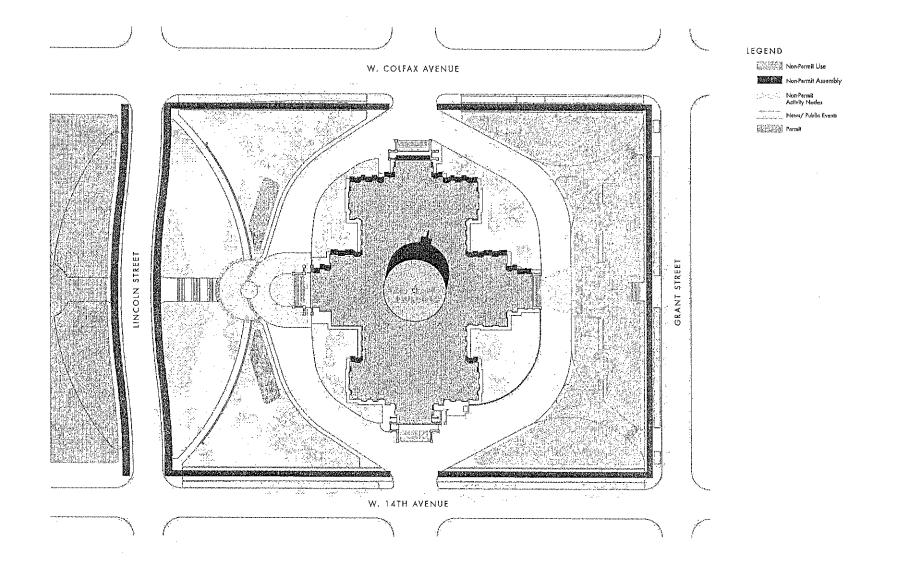






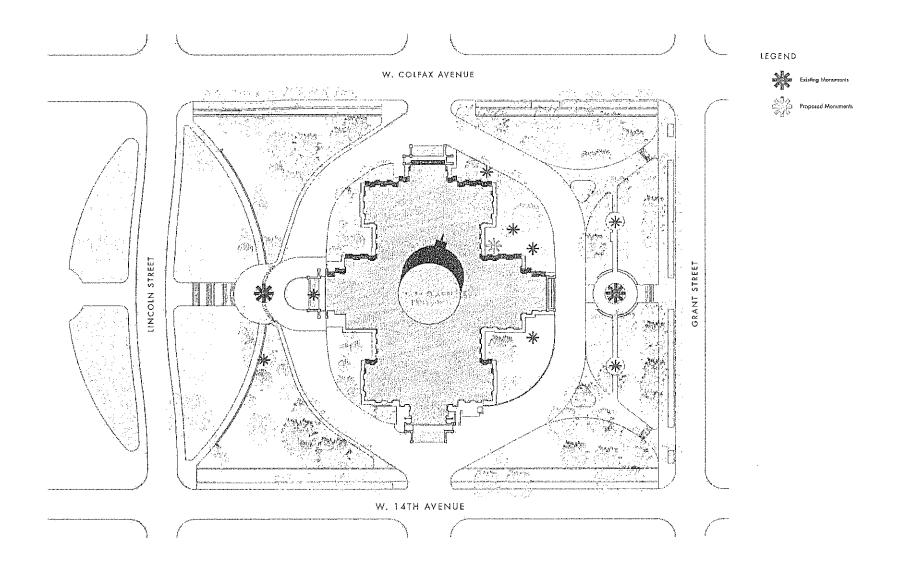




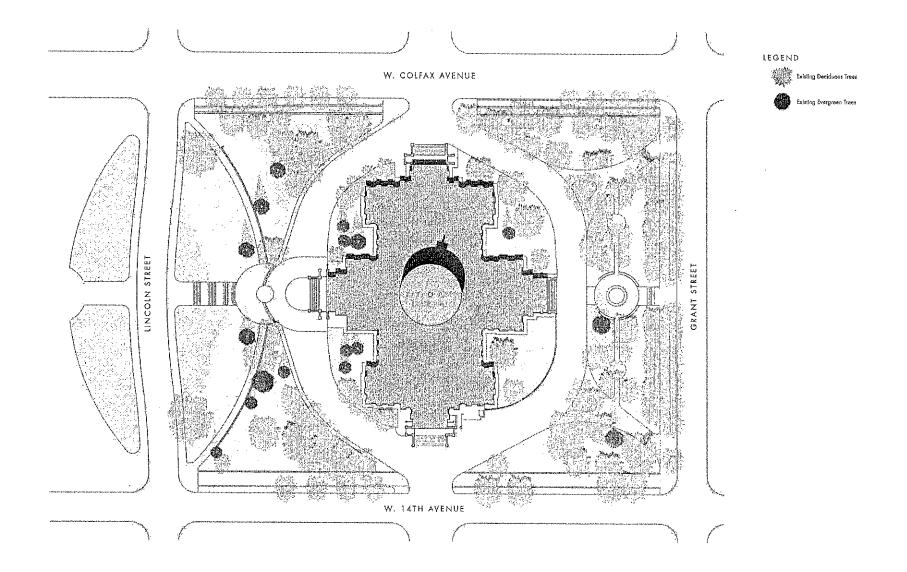




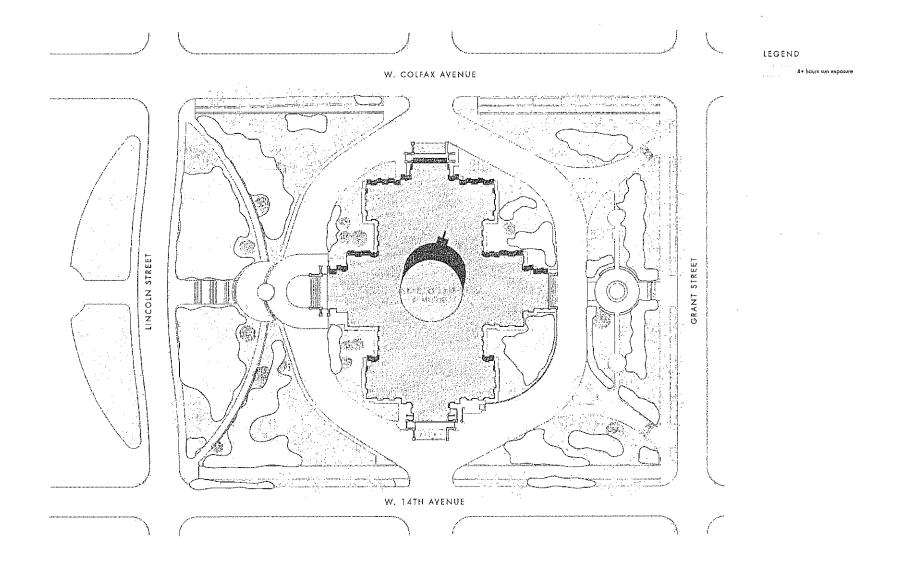


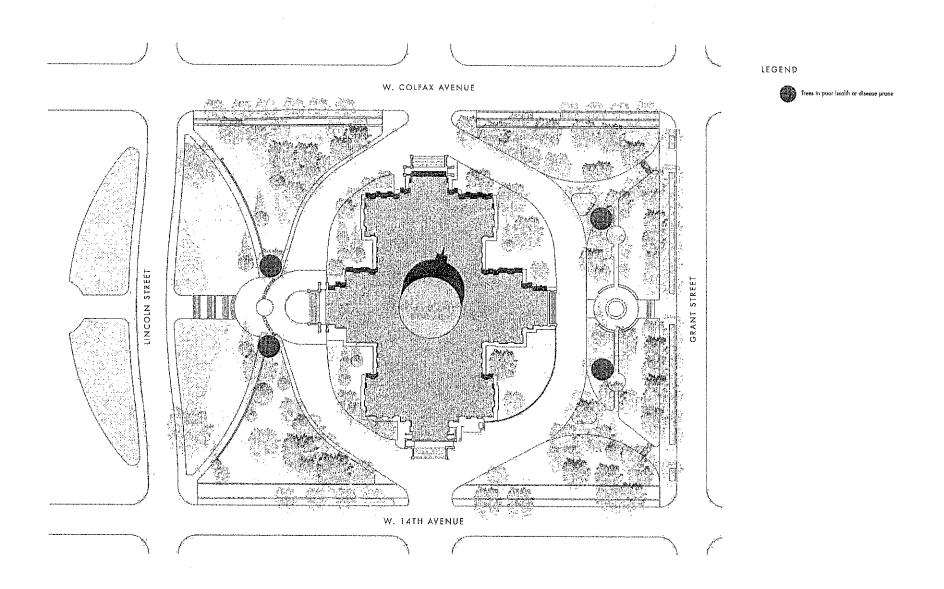


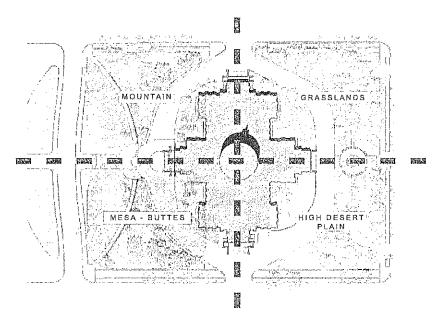






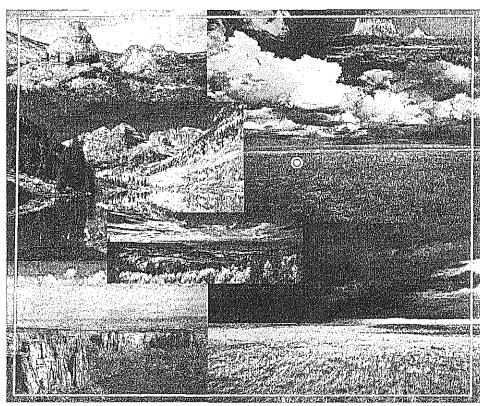




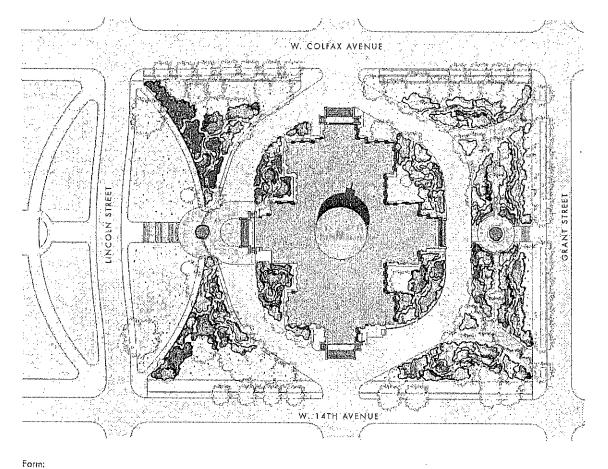


Concept:

The Colorado Quadrants concept represents Colorado's four main landscape typologies: grasslands, high desert plain, mesa/buttes, and mountain. It relates the geography of these regions to the quadrants formed by the historical axes of the Capital Building, creating symmetry and a narrative to the grounds.







This concept reflects the symmetry of the Capitol Grounds while imbuing the site with detail and diversity. The quadrants serve as the large-scale foundation to anchor the design. The plant palette within each section lends an organic, gardenesque quality that tells a story through Colorado's native flora.

