

ENVIRONMENT COMMITTEE AGENDA

June 14, 2018 – North Conference Room

21630 11th Avenue South – Des Moines 98198

6:00P – 6:30 PM

1. Approval of the minutes of the 5.10.2018 meeting (Chair to call the meeting to order and start @ 6:00 pm)
2. CIP Project Update (Informational, 6:00 to 6:05 pm)
Staff will be providing an update of the current active CIP projects.
3. Draft 2019-2024 SWM CIP (Discussion Item 6:05 to 6:30 pm)
Staff will present the proposed 2019-2024 SWM Capital Improvement Program.

DRAFT MINUTES - ENVIRONMENTAL COUNCIL COMMITTEE MEETING 5.10.2018

The meeting was called to order @ 6:00 PM, Thursday, May 10, 2018, in the North Conference room @ 21630 11th Avenue South, Des Moines with the following in attendance:

Council Members

Traci Buxton (Chair)
Robert Back
Matt Pina

City Staff

Brandon Carver, PW Director
Dan Brewer, Chief Operations Officer
Loren Reinhold, SWM Utility Manager
Matt Hutchins, Asst. City Attorney
Tyler Beekley, Civil Engineer I
Peggy Volin, Admin Asst. II

AGENDA:

1. Approve minutes of the 4.12.2018 meeting
2. Poverty Bay Shellfish Downgrade Update
3. Midway Sewer District Comprehensive Sewer Plan, Follow-up

MEETING:

1. Approve the minutes of the April 12, 2018 meeting: Unanimously approved.
2. Poverty Bay Shellfish Downgrade Update: Public Works Director Brandon Carver and SWM Utility Manager Loren Reinhold briefed the Committee on the April 27 Poverty Bay Technical Committee meeting they attended. The Technical Committee discussed the Des Moines letter to the Washington State Department of Health (WSDOH) and the City's request to remove the July 23, 2014 sample from station data. Loren and Brandon also provided copies of the response letter received from WSDOH that denied removing the July 2014 sample from the data set. Staff also informed the Committee that WSDOH will be proceeding to complete a dilution analysis of the drainages to Poverty Bay that will be used to set the stream water quality criteria that would need to be met before lifting the shellfish downgrade.
3. Midway Sewer District Comprehensive Sewer Plan Follow-up: SWM Utility Manager Loren Reinhold reviewed the draft comments letter City staff prepared to address the Draft 2018 Midway Sewer District General Plan that was presented by Midway Sewer at the April 2018 Environmental Committee meeting.

Meeting adjourned at 6:55 pm

Minutes respectfully Submitted by: Peggy Volin, Admin Asst II

CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Barnes Crk/Kent-Des Moines Rd Culvert	451
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CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

Project improvements will include the installation of an approximately 100-foot long pre-cast concrete box culvert along with concrete wing-walls at both ends. The design of the culvert will be performed by the Washington State Department of Transportation per Local Agency Agreement GCB2959. The design will meet current fisheries requirements. The dramatic elevation change from upstream to downstream and the need to moderate velocity for fish passage may require that a special energy dissipater and/or fish ladder be installed at the culvert outlet.

Justification/Benefits: This culvert replacement is needed to convey peak predicted flows without flooding Kent-Des Moines Road. At this point a reinforced concrete box culvert is planned to replace the existing undersized culvert. However, the new culvert size will need to be designed to meet current Hydraulic Code to allow both high- and low-flow fish passage. An energy dissipater will be included at the downstream end of the culvert (with a fish ladder). This project was identified in the Lower Massey Creek Basin Plan and Alternative Analysis. A culvert survey made in 2015 indicated the existing culvert is in poor condition.

PROJECT SCOPE	
Expenditures	Total Budget
Design	372
Land & Right of Way	20
Construction	1,037
Contingency	534
Total Expenditures	1,963

Funding Sources	Total Budget
Surface Water Utility	1,963
Total Funding	1,963

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
104	268		20						
17			1,020						
284	50		200						
405	318	20	1,220						

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
405	318	20	1,220						
405	318	20	1,220						

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT					
	2018	2019	2020	2021	2022
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
(Amount in Thousands)

24th Ave Pipeline Replacement/Upgrade

451.815

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

Replacement of existing storm drainage system on 24th Avenue from S. 224th to S. 227th Street with approximately 1100 feet of 36-inch pipe and from S. 223rd to S. 224th with approximately 570 feet of 24-inch diameter pipe. This project will coincide with the 24th Avenue S. Improvement Project (Transportation).

Justification/Benefits: During major storms the drainage system along the east side of 24th Avenue between S. 226th and S.227th overflows to the pipe system on the west side. These overflows bypass the trunk system which conveys flows to the City Park detention facility and flood properties south of 227th south of Pacific Middle School. This project is recommended in the 1992 Massey Creek Basin Plan and is identified as Projects No. 5 and 23 of the 2015 Surface Water Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	102
Land & Right of Way	-
Construction	579
Contingency	180
Total Expenditures	861

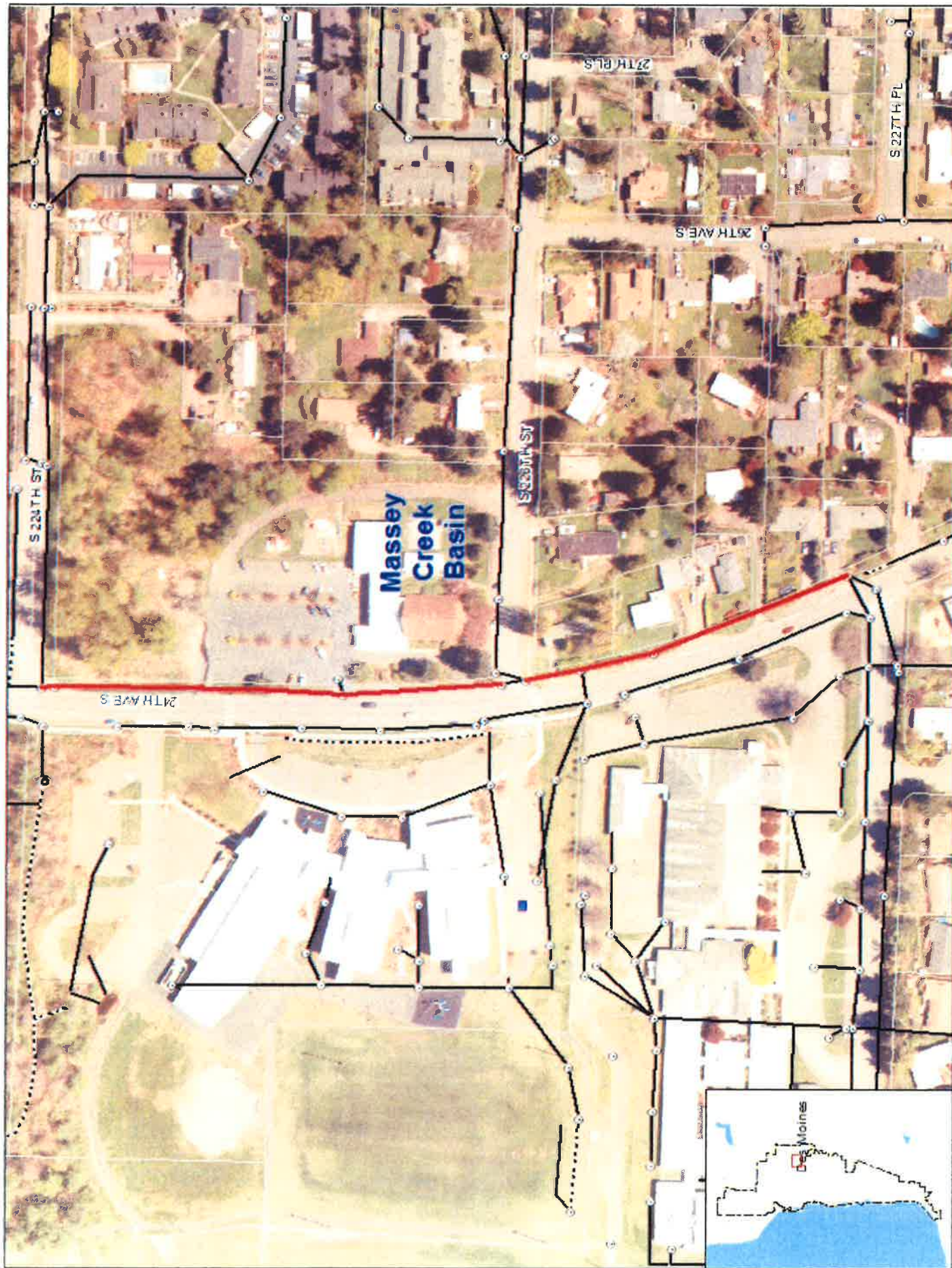
Funding Sources	Total Budget
Surface Water Utility	861
Total Funding	861

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
28	25	49							
-									
-				579					
-		15		165					
28	25	64		744					

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
28	25	64		744					
28	25	64		744					

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT						
	2018	2019	2020	2021	2022	2023
-	-	-	-	-	-	-
-	-	-	-	-	-	-





CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Deepdene Plat Outfall Replacement	451,828
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CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

This project assumes the replacement of 300 linear feet of outfall pipe with outfall diffuser and dissipator pad, and installing 2 catch basins and 150 feet of 12-inch pipe with road restoration for redirecting flows from the west side of Marine View Drive to the east side of MVD to avoid the slide area.

Justification/Benefits: In 2016, following heavy rains and shoreline erosion from high tides and strong waves, a landslide occurred at the base of the ravine adjacent to Puget Sound at 260th Street damaging the 8-inch storm pipe that serves the Deedene Plat as well as a short segment of Marine View Drive. This project assumes a full replacement of the existing storm outfall plastic (PVC) pipe that is buried with a more flexible and durable high-density polyethylene (HDPE) that is more appropriate for a slide area and can be placed above ground and anchored in a manner that protects the pipe if the earth shifts.

PROJECT SCOPE	
Expenditures	Total Budget
Design	166
Land & Right of Way	-
Construction	224
Contingency	20
Total Expenditures	410

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
1	165								
		224							
	20								
1	185	224							

Funding Sources	Total Budget
Surface Water Utility	410
Total Funding	410

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
1	185	224							
1	185	224							

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT					
	2018	2019	2020	2021	2022
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

Deepdene Plat Outfall Replacement



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

216th/11th Ave Intersection Pipe Replacement 451.831

Summary Project Description:

This project involves installing approximately 400 feet of 12-inch storm pipe and seven catch basins, removal of existing facilities (or abandonment in place filled with control density fill), and roadway restoration within the intersection area including trench patching, replacement of impacted curb, gutter, sidewalk, and pavement overlay).

CIP Category: Transportation - Capital Project

Managing Department: Plan, Build & PW Admin

Justification/Benefits: Following inspection of the drainage system in preparation for the design of the Gateway Segment 3 Project, it was discovered that the storm system within the intersection of 216th Street and 11th Avenue was in very poor shape with segments of the system crushed and other segments partially full of standing water and unable to flow properly. All new drainage is proposed within the intersection with the project constructed as a separate bid schedule to the Gateway Segment 3 Project.

PROJECT SCOPE	
Expenditures	Total Budget
Design	38
Land & Right of Way	
Construction	230
Contingency	61
Total Expenditures	329

ANNUAL ALLOCATION									
Project to Date 12/31/17	Scheduled Year	2018	Plan Year	2019	Plan Year	2020	Plan Year	2021	Plan Year
20		18							
				230					
		11		50					
20	29	29		280					

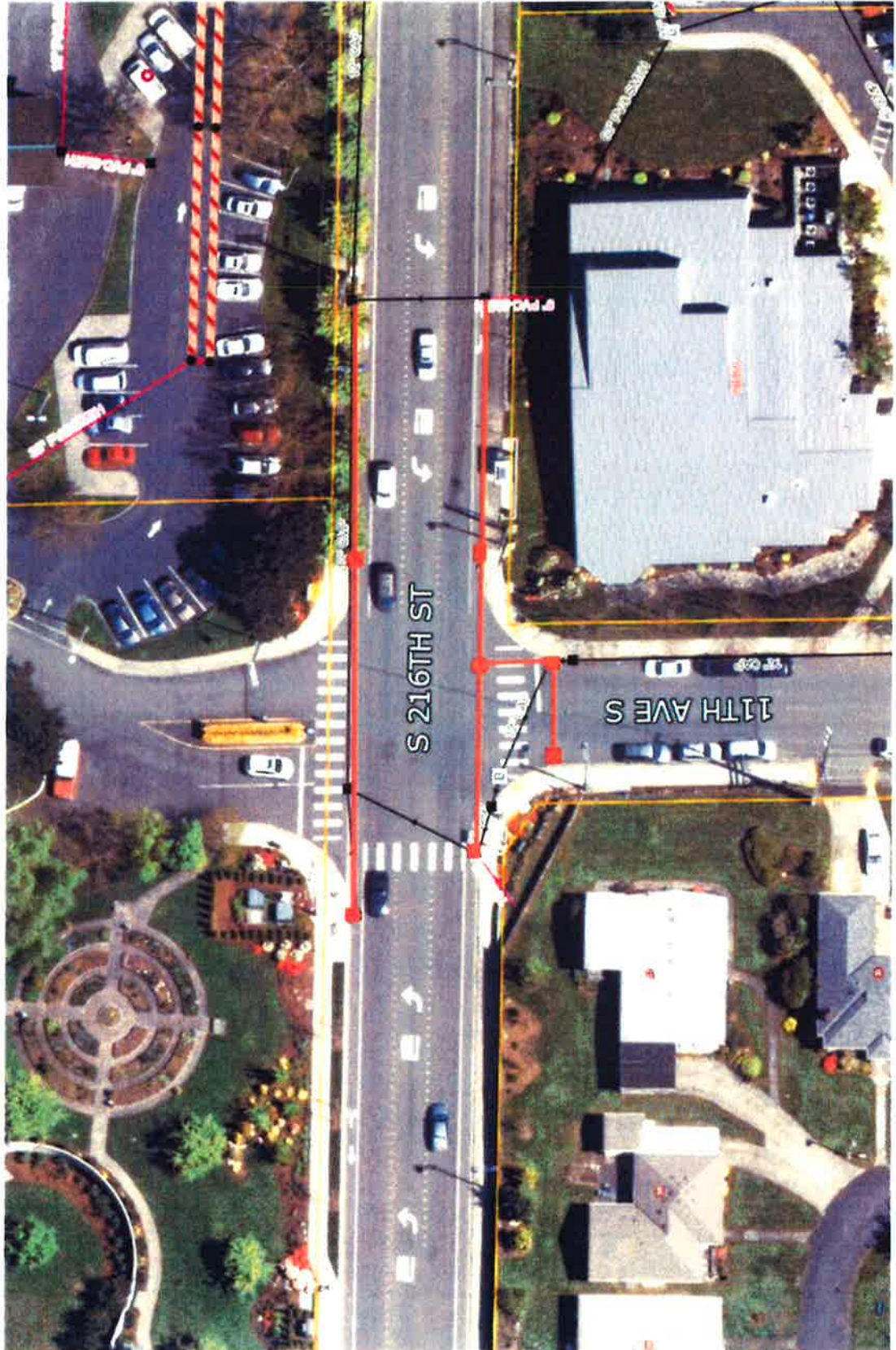
Funding Sources	Total Budget
Surface Water Utility	329
Total Funding	329

Project to Date 12/31/17	Scheduled Year	2018	Plan Year	2019	Plan Year	2020	Plan Year	2021	Plan Year
20		29		280					
20	29	29		280					

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT					
	2018	2019	2020	2021	2022
	-	-	-	-	-
	-	-	-	-	-
	-	-	-	-	-

216th / 11th Ave Intersection Pipe Replacement



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

8th Ave (26-4th to 265th)	451
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CIP Category: Surface Water Mgmt

Managing Department: Public Works

Summary Project Description:	
This project proposes to install approximately 910 feet of 12 inch storm pipe, 9 catch basins along the west side of 8th Avenue and replace an existing manhole at the intersection of S 265th Place and 8th Avenue where the new storm drain system connects to the existing system.	

Justification/Benefits: Presently most of the runoff from 8th Avenue sheetflows on the properties west of 8th Avenue and is not collected into the existing system located on the east side of the road. The purpose of this project is to collect and prevent runoff from 8th Avenue from exacerbating a landslide hazard located west of the project. This is a high priority project listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	29
Land & Right of Way	-
Construction	200
Contingency	29
Total Expenditures	258

Funding Sources	Total Budget
Surface Water Utility	258
Total Funding	258

ANNUAL ALLOCATION									
Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024		
		29							
		200							
		29							
		258							

Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024		
		258							
		258							

OPERATING IMPACT		ANNUAL OPERATING IMPACT				
Operating Impact		2018	2019	2020	2021	2022
Revenue		-	-	-	-	-
Expenses		-	-	-	-	-
Net Impact		-	-	-	-	-

OPERATING IMPACT		ANNUAL OPERATING IMPACT				
Operating Impact		2018	2019	2020	2021	2022
Revenue		-	-	-	-	-
Expenses		-	-	-	-	-
Net Impact		-	-	-	-	-

8th Avenue (264th to 265th)



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Soundview Dr./Redondo Beach Dr. Pipe Upgrade Project	451
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CIP Category: Surface Water Management

Managing Department: Public Works

Justification/Benefits:

Summary Project Description:	
Install 250 feet linear feet of 12-inch storm pipe between Soundview Drive and Redondo Beach Drive. Relocate approximately 30 feet of 24-inch concrete pipe at the tributary crossing below Redondo Beach Drive north of 287th Street and replace the creek trash rack structure at 28742 Soundview Drive. Project also includes installation of 5 catch basins and pavement restoration.	

PROJECT SCOPE	
Expenditures	Total Budget
Design	35
Land & Right of Way	-
Construction	125
Contingency	45
Total Expenditures	205

Funding Sources	Total Budget
Surface Water Utility	205
Total Funding	205

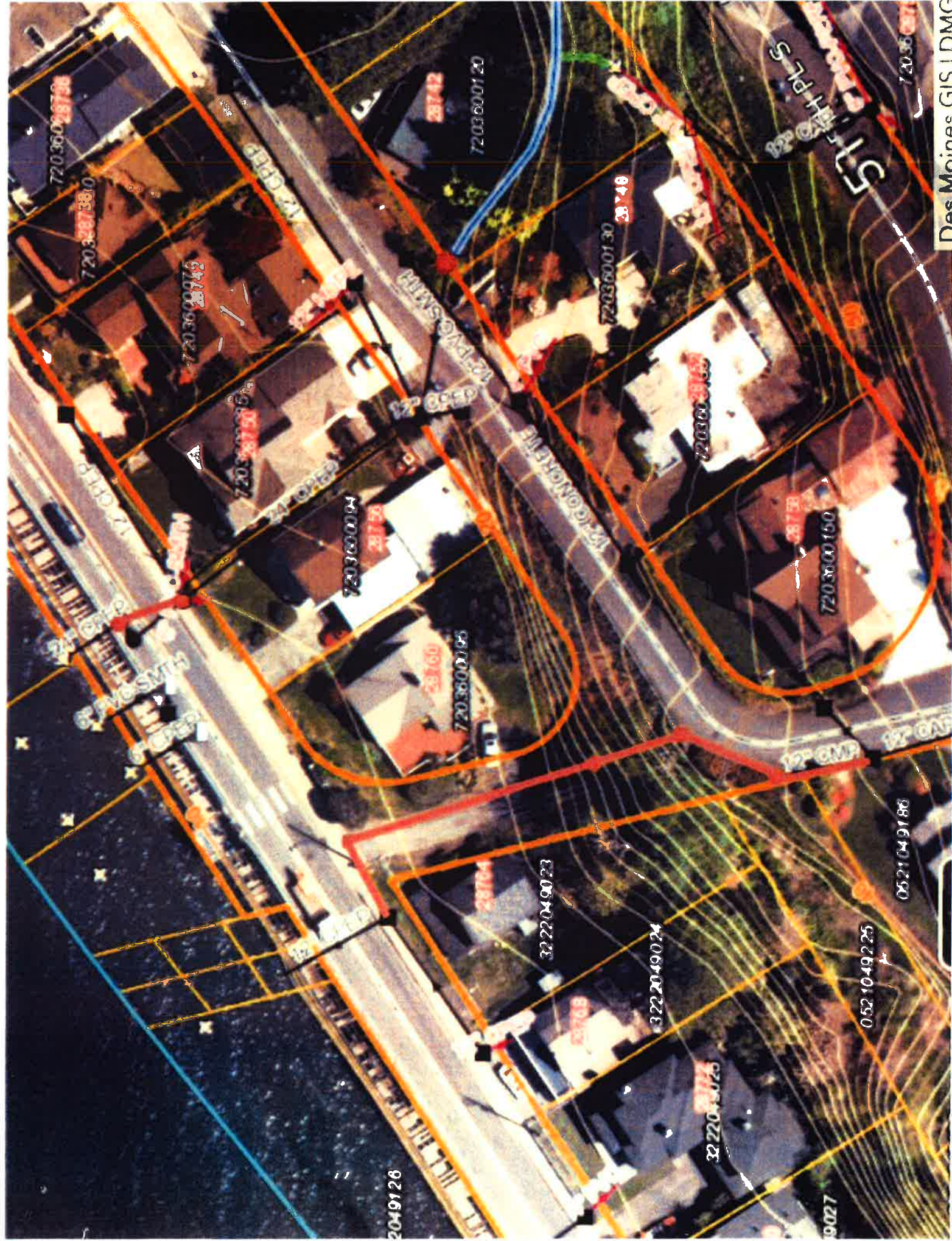
ANNUAL ALLOCATION											
Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020
		35									
			125								
		10	35								
		45	160								

Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024
		45	160				
		45	160				

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT						
	2018	2019	2020	2021	2022	2023
	-	-	-	-	-	-
	-	-	-	-	-	-

#N/A



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

Pond Safety Improvements	451	Summary Project Description:
CIP Category: Surface Water Mgmt Managing Department: Public Works		This project adds or replaces dilapidated wooden fencing with vinyl coated chainlink fencing at the following areas: Fence replacement for the entire pond located on Marine View Drive across from Taco Time; new fencing around the control panel and pump station adjacent to Taco Time; wooden fence replacement to the pond on 250th Street w/o 16th Ave.; wooden fence replacement to the ponds at 194th/5th and 193rd e/o 6th. A total of approximately 1,500 feet of fencing with gate assemblies.

Justification/Benefits: Ponds that have wooden fencing bordering adjacent properties need to be replaced with more durable vinyl coated chainlink fencing that will last longer. Several of the ponds have fencing that have been damaged from high winds and need to be replaced. The Washington Cities Insurance Authority (WCIA) also recommends that ponds with permanent pools be contained with a 6-foot fence for safety. The newly built electrical control panel and pump station adjacent to Taco Time also needs to be enclosed with a fence for safety/security.

PROJECT SCOPE		ANNUAL ALLOCATION									
Expenditures	Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024		
Design	-	-	-	-	-	-	-	-	-	-	-
Land & Right of Way	-	-	-	-	-	-	-	-	-	-	-
Construction	78	-	48	30	-	-	-	-	-	-	-
Contingency	15	-	10	5	-	-	-	-	-	-	-
Total Expenditures	93	-	58	35	-	-	-	-	-	-	-
Funding Sources	Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024		
Surface Water Utility	93	-	58	35	-	-	-	-	-	-	-
Total Funding	93	-	58	35	-	-	-	-	-	-	-
OPERATING IMPACT		ANNUAL OPERATING IMPACT									
Operating Impact	6 Year Total	2018	2019	2020	2021	2022	2023	2024			
Revenue	-	-	-	-	-	-	-	-	-	-	-
Expenses	-	-	-	-	-	-	-	-	-	-	-
Net Impact	-	-	-	-	-	-	-	-	-	-	-

CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

N. Fork McSorley Ck Diversion	451
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CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

This project proposes to install a diversion structure on 20th Ave. S. between S. 244th Pl. and 245th Pl. From the diversion structure a new 24-in storm bypass pipe will be installed on the west side of 20th Avenue, turn west and follow the south side of 245th Pl and then to McSorley Creek. This project also includes pavement restoration, replacement of curb and gutter and minimal dredging of McSorley Creek and bank stabilization near the discharge point of the bypass pipe.

Justification/Benefits: When the Des Moines Trace Subdivision was developed in the early 1980's a segment of the north fork of McSorley Creek was relocated to a narrow rock lined channel within a 15-foot wide drainage easement along the north side of the subdivision (lots 14 through 25). Over time this channel has filled in with sediment and is overgrown with canary reed grass causing the channel to overtop and flood both the subdivision lots and the adjacent properties to the north. This project will provide a flow diversion whereby normal flows will continue into the creek section but high flows are bypassed to a lower point in the channel. As part of this project, the channel section across lots 17-25 will be dredged. This is a high-priority project (CIP-30) identified in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	85
Land & Right of Way	-
Construction	281
Contingency	66
Total Expenditures	432

Funding Sources	Total Budget
Surface Water Utility	432
Total Funding	432

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
-	-	85	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	281	-	-	-	-	-	-
-	-	-	66	-	-	-	-	-	-
-	-	85	347	-	-	-	-	-	-

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
-	-	85	347	-	-	-	-	-	-
-	-	85	347	-	-	-	-	-	-

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT						
	2018	2019	2020	2021	2022	2023
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

N. Fork McSorley Ck Diversion



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

6th Ave/239th Pipe Replacement

451.833

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

This project proposes to replace the existing 8-inch drainage system on the west side of 6th Ave S. and connect to the drainage system on 239th Street. This project will also install a new 18-inch HDPE storm drain outfall from 239th St. to Puget Sound. The stairway above the outfall pipe will be replaced as part of this project.

Justification/Benefits: During major storms the drainage system the small 8-inch conveyance system within 6th Avenue S. is overcome and overflows into the properties on the west side of the street. In addition, the outfall pipe from S. 239th is comprised of coated corrugated steel pipe that has separated in the lower section of the pipe that leads over the bank to the Sound. This project proposes to upgrade the 8-inch pipe on 6th Avenue to standard 12-inch and replace the corrugated steel outfall pipe with HDPE pipe. This project also proposes to replace the stairway that is located above the outfall pipe. This is a high-priority project (CIP-39) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE

Expenditures	Total Budget
Design	39
Land & Right of Way	-
Construction	159
Contingency	59
Total Expenditures	257

ANNUAL ALLOCATION

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024
-	-	39	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	159	-	-	-	-	-
-	-	59	-	-	-	-	-
-	-	257	-	-	-	-	-

Funding Sources

Funding Sources		Total Budget
Surface Water Utility		257
Total Funding		257

Project to Date

Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
2018	2019	2020	2021	2022	2023	2024	2024
-	257	-	-	-	-	-	-
-	257	-	-	-	-	-	-

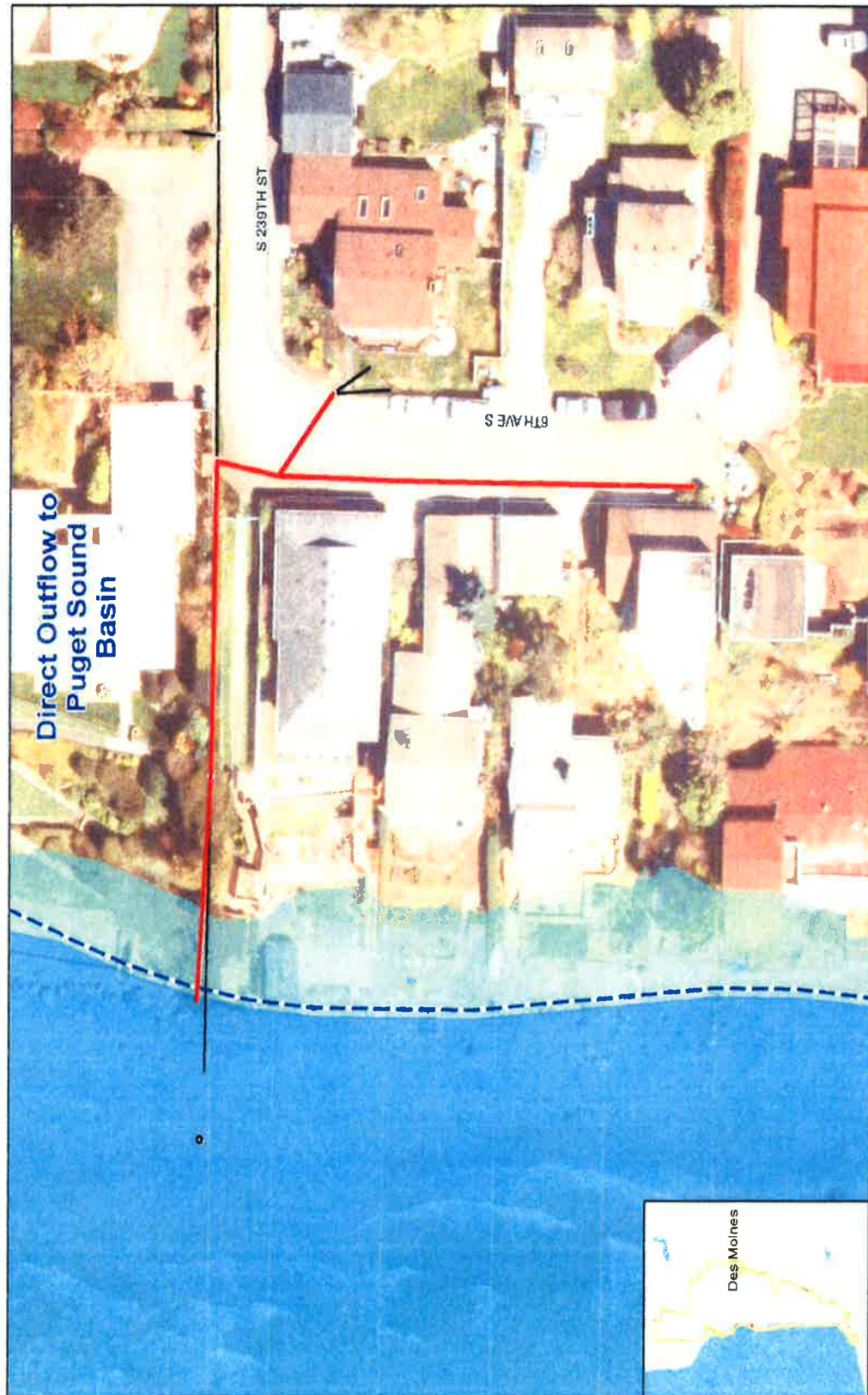
OPERATING IMPACT

Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT

2018	2019	2020	2021	2022	2023	2024
-	-	-	-	-	-	-
-	-	-	-	-	-	-

6th Ave/239th Pipe Replacement



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
(Amount in Thousands)

14th Ave (268th to 272nd) Pipe Upgrade

451

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

This project proposes to upgrade the ditch and driveway culvert system along the west side of 14th Avenue with a new storm pipe as well as replace the existing culverts below 272nd Street and 268th Street. This project includes 900 linear of 36-inch diameter pipe, 6 manhole structures, an outfall dissipator, and minimal road restoration.

Justification/Benefits: The culvert below 272nd Street is not sufficiently sized and is too shallow. During major storms the pipe system leading from the Redondo Rivera subdivision (south of 272nd) backs up creating significant flooding within the subdivision particularly in the vicinity of 275th Place and 15th Place. North of 272nd St., the drainage system on 14th Avenue is comprised of a shallow ditch system with driveway culverts that are easily blocked exacerbating the problem south of 272nd Street. There is also significant erosion due to a drop of grade at the downstream end of the culvert at S. 268th Street. This project proposes to replace the culverts at 272nd Street and 268th Street and install a new 36-inch pipe system on the west side of 14th Avenue from 272nd Street to 270th Street. This project is a high-priority project (CIP-36) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE

Expenditures	Total Budget
Design	94
Land & Right of Way	-
Construction	310
Contingency	74
Total Expenditures	478

ANNUAL ALLOCATION

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024
-	-	94	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	310	-	-	-	-
-	-	-	74	-	-	-	-
-	-	94	384	-	-	-	-

Funding Sources	Total Budget
Surface Water Utility	478
Total Funding	478

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024
-	-	94	384	-	-	-	-
-	-	94	384	-	-	-	-

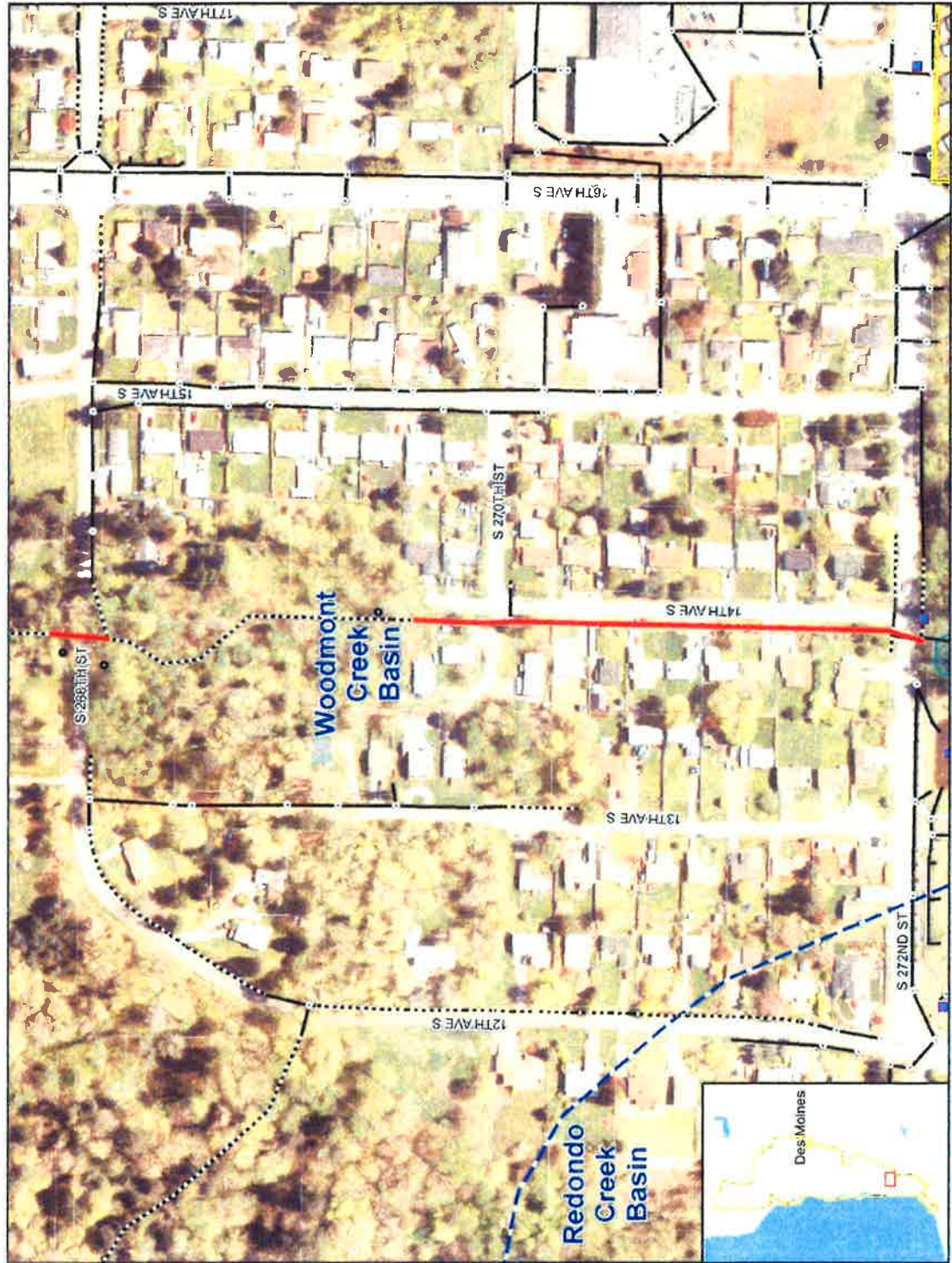
OPERATING IMPACT

Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT

	2017	2019	2020	2021	2022	2023	2024
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-
-	-	-	-	-	-	-	-

14th Ave (268th to 272nd) Pipe Upgrade



Pipe Replacement Program 451.017	Summary Project Description: Replacement of existing pipes based on customer request and video based condition assessment. This program is scheduled to be finished in 2022 but may extend longer depending on the results of the pipe assessment.
	CIP Category: Surface Water Mgmt Managing Department: Plan, Build & PW Admin

Managing Department: Plan, Build & PW Admin

Justification/Benefits: A video assessment of existing storm drain pipes is scheduled to begin in 2018. From the assessment a prioritized list of pipes needing replacement will be developed along with estimated costs.

PROJECT SCOPE		ANNUAL ALLOCATION								
Expenditures	Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024	
Design	76	-				38				
Land & Right of Way	-	-								
Construction	460	-				230	230			
Contingency	131	-					60	60		
Total Expenditures	667	-				49	328	290		

Funding Sources		Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024
Surface Water Utility		667				49	328	290		
Total Funding		667				49	328	290		

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CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

KDM /16th Avenue A Pipe Replacement	451
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CIP Category: Surface Water Mgmt
 Managing Department: Plan, Build & PW Admin

Summary Project Description:	
Replace approximately 300 feet of existing roadside ditch (east of 16th Avenue) along KDM Road with 24-inch storm pipe and connect to existing 18-inch culvert crossing KDM Rd at 16th Avenue. Install 50 feet new 24-inch storm drain southwest of KDM Road connecting to existing 18-inch culvert crossing and replace 350 feet of existing 24-inch corrugated metal pipe with larger 36-inch pipe downstream of the culvert crossing.	

Justification/Benefits: During major storm events the capacity of the existing drainage system along Kent-Des Moines Road and the highway crossing will be exceeded causing runoff to overflow across KDM and flood the property downstream. In addition, the system on that property (located within a public drainage easement) that intercepts flows is also insufficiently sized and is prone to overtopping. This project proposes to replace the undersized pipes with 24-inch and 36-inch diameter pipes. This is a high-priority project (CIP-25A) listed in the 2015 SWM Comprehensive Plan and to be coordinated with projects CIP-4 and CIP-25B that would take a portion of the flows west to a new outfall pipe at Barnes Creek (rather than upsizing the 18-inch corrugated aluminum crossing below KDM Road.)

PROJECT SCOPE	
Expenditures	Total Budget
Design	54
Land & Right of Way	-
Construction	176
Contingency	42
Total Expenditures	272

ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
-	-	-	-	54	-	-	-	-	-
-	-	-	-	-	-	-	-	-	-
-	-	-	-	176	-	-	-	-	-
-	-	-	-	42	-	-	-	-	-
-	-	-	-	272	-	-	-	-	-

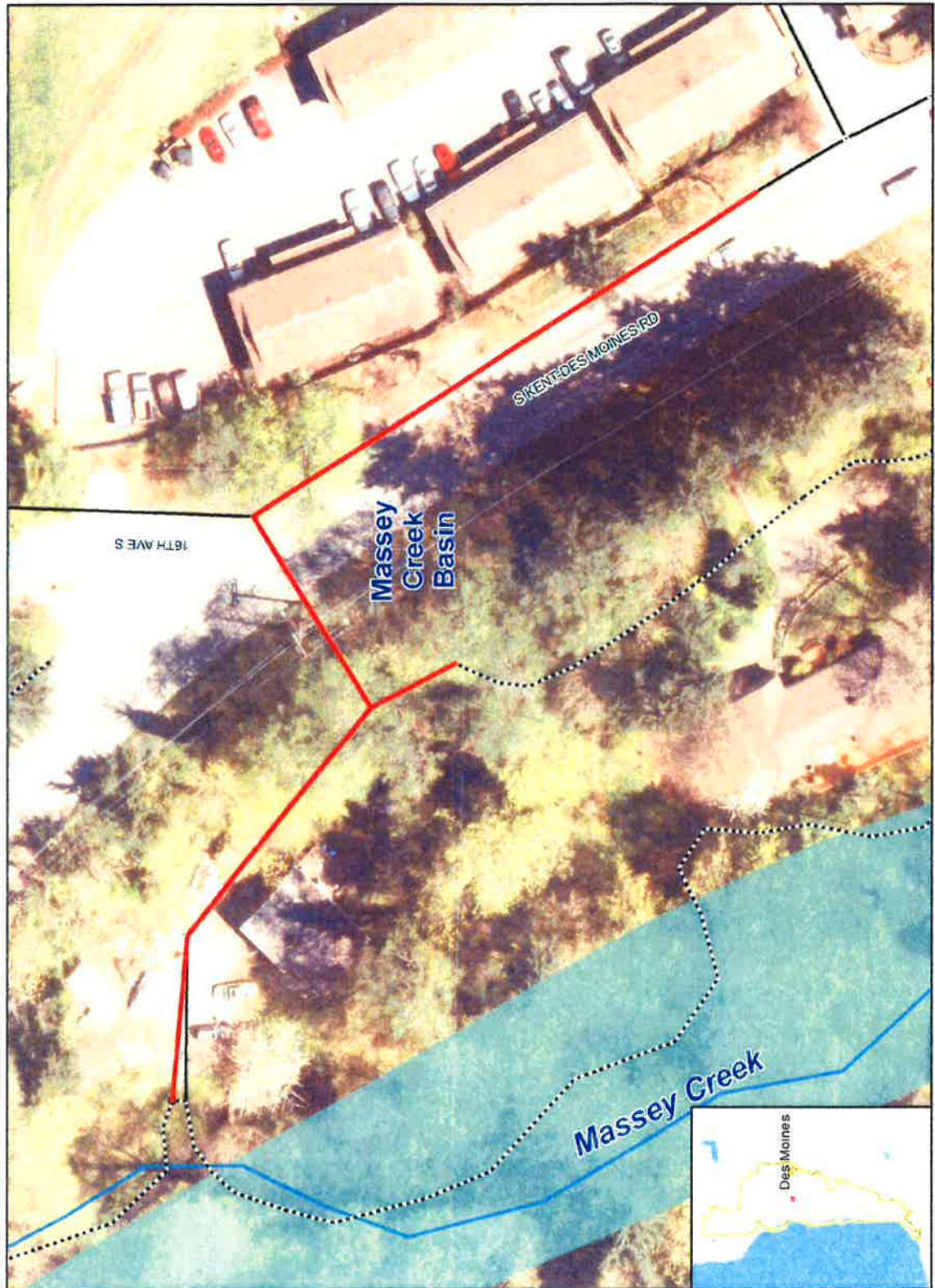
Funding Sources	
	Total Budget
Surface Water Utility	272
Total Funding	272

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
-	-	-	-	272	-	-	-	-	-
-	-	-	-	272	-	-	-	-	-

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT						
	2018	2019	2020	2021	2022	2023
-	-	-	-	-	-	-
-	-	-	-	-	-	-
-	-	-	-	-	-	-

KDM /16th Avenue Pipe Replacement



(Amount in Thousands)

154

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

Replace approximately 1500 feet of existing roadside ditch and corrugated metal pipe along the west side of Des Moines Memorial Drive from 208th Street to 212th Street. Includes installation of 14 manhole structures and minimal road restoration.

Justification/Benefits: The ditch and culvert system along the west side of Des Moines Memorial Drive is insufficient to convey a 25-year storm causing water to pool in the south bound lane of Des Moines Memorial Drive. This project proposes to replace the existing corrugated metal pipe and ditch system with approximately 1500 feet of new 18-inch pipe that would connect to the pipe replacement work made on Des Moines Memorial Drive in 2014. This project is a high priority project (CIP-18) listed in the 2015 SWM Comprehensive Plan.

Design	119
Land & Right of Way	-
Construction	391
Contingency	93
Total Expenditures	603

					119		
					391		
					93		
					603		

Surface Water Utility	603
Total Funding	603

				603	
				603	

Net Impact

100

DMMD 208th to 212th Pipe Project



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

5th Ave/212th Street Pipe Upgrade

451

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

Replacement of approximately 2,630 feet of cmp pipe with new 1,700 feet of 12-inch pipe and 930 feet of 18-inch pipe in the North Hill area in the vicinity of 212th Street and 5th Avenue South.

Justification/Benefits: This project will replace over 2,000 feet of aged corrugated metal pipe and upgrade over 900 feet of pipe to 18-inch pipe that has inadequate capacity during major storms. During two major storm events in 2013 and 2014, the pipe system overflowed creating significant erosion near the stairway at 212th Street and Des Moines Memorial Drive. The project will connect to the DMMD pipe upgrade installed in 2014. This project is identified as a high-priority project (CIP-16) in the 2015 Stormwater Comprehensive Plan.

PROJECT SCOPE			ANNUAL ALLOCATION									
Expenditures	Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024			
Design	170	-	-	-	-	170	-	-	-			
Land & Right of Way	-	-	-	-	-	-	-	-	-			
Construction	578	-	-	-	-	-	578	-	-			
Contingency	136	-	-	-	-	-	136	-	-			
Total Expenditures	884	-	-	-	-	170	714	-	-			

Funding Sources	Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024
Surface Water Utility	884	-	-	-	-	170	714	-	-
Total Funding	884	-	-	-	-	170	714	-	-

OPERATING IMPACT		ANNUAL OPERATING IMPACT						
Operating Impact		2018	2019	2020	2021	2022	2023	2024
Revenue	-	-	-	-	-	-	-	-
Expenses	-	-	-	-	-	-	-	-
Net Impact		-	-	-	-	-	-	-

5th Ave/212th Street Pipe Upgrade



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

KDM/16th Ave B Pipe Replacement	451
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CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

Install a new stormwater conveyance system on the west side of 16th Avenue S consisting of approximately 1220 feet of 12 inch pipe and 6 catch basins. Replace the existing ditch along the north side of Kent-Des Moines Road (KDM) with approximately 935 feet of 36 inch pipe and 9 storm drain manholes. The new 16th Ave S storm system will connect to the new system on KDM and outfall to Barnes Creek.

Justification/Benefits: During periods of heavy rainfall, runoff from 16th Avenue will overtop Kent-Des Moines Road (KDM) and erode/flood the properties on the south side of the road. This project will better collect the runoff from the west side of 16th Avenue and the north side of KDM and allow the abandonment of at least one KDM storm crossing. The project will also enclose the existing ditch system along KDM for vehicle and pedestrian safety. This project is a high priority project (CIP-25B) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE	
Expenditures	Total Budget
Design	176
Land & Right of Way	-
Construction	600
Contingency	215
Total Expenditures	991

Funding Sources	Total Budget
Surface Water Utility	991
Total Funding	991

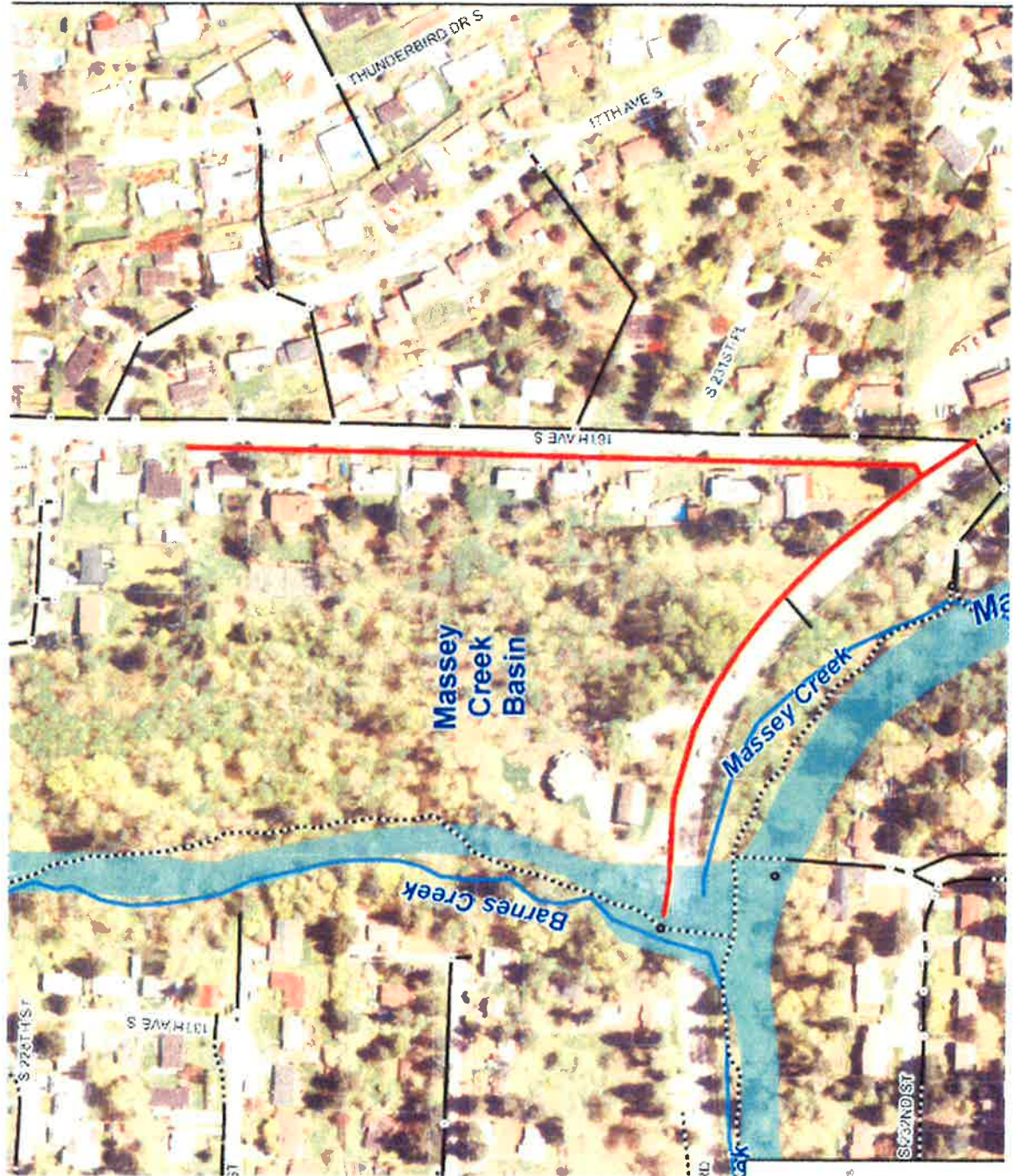
ANNUAL ALLOCATION									
Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
					176				
							600		
						35	180		
					211		780		

Project to Date	Scheduled Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year	Plan Year
12/31/17	2018	2019	2020	2021	2022	2023	2024		
					211	780			
					211		780		

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT					
	2018	2019	2020	2021	2022
	-	-	-	-	-
	-	-	-	-	-

KDM/16th Ave B Pipe Replacement



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
 (Amount in Thousands)

216th Pl./ Marine View Dr. Pipe Upgrade 451

CIP Category: Surface Water Mgmt

Managing Department: Plan, Build & PW Admin

Summary Project Description:

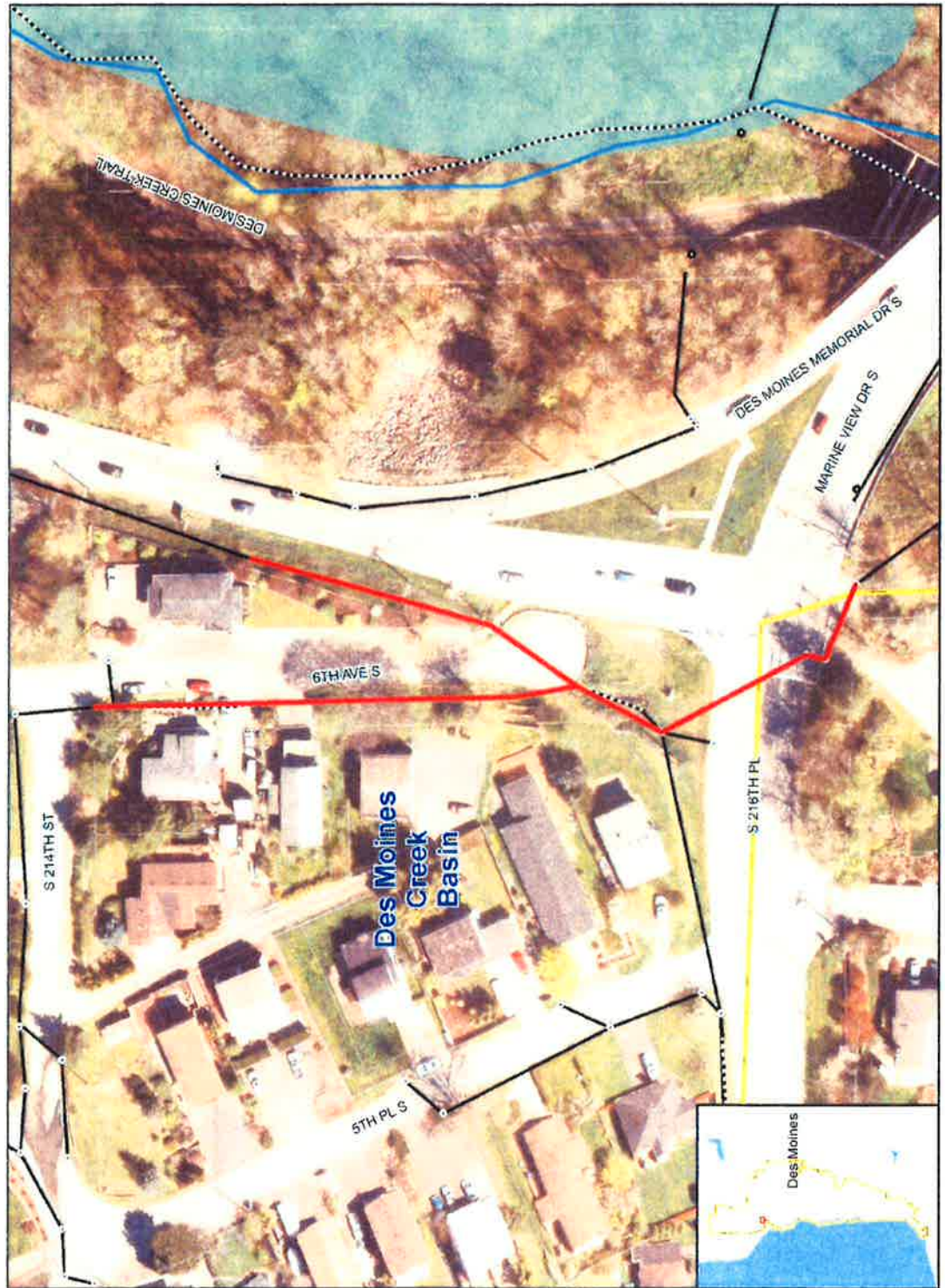
This project proposes to upgrade the ditch along Des Moines Memorial Drive with 300 linear feet of new 18-inch diameter pipe and connecting to 170 linear feet of new larger 24-inch diameter storm system crossing the intersection of MVD (216th Place). The project also proposes to pipe the ditches on the west side of 6th Avenue connecting to the new pipe system on DMMD.

Justification/Benefits: Previous upgrades have occurred within the storm system downstream of the project and west of the project along 216th Place. This project proposes to upsized the 18-inch crossing at Marine View Drive to 24-inch as well as pipe the ditch along Des Moines Memorial Drive. Along the storm segment below MVD near the border of Normandy Park and Des Moines is a buried inaccessible structure that may become blocked with debris and cause backup and flooding of the intersection and overflow to areas of recent landslide activity. This project will be coordinated with the City of Normandy Park (cost share for the portion of project within Normandy Park not shown). This is a high-priority project (CIP-17) listed in the 2015 SWM Comprehensive Plan.

PROJECT SCOPE				ANNUAL ALLOCATION											
Expenditures		Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024					
Design		64	-							64					
Land & Right of Way		-	-												
Construction		210	-							210					
Contingency		50	-							50					
Total Expenditures		324								324					
Funding Sources		Total Budget	Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024					
Surface Water Utility		324								324					
Total Funding		324								324					

OPERATING IMPACT				ANNUAL OPERATING IMPACT											
Operating Impact		6 Year Total	2018	2019	2020	2021	2022	2023	2024						
Revenue		-	-	-	-	-	-	-	-						
Expenses		-	-	-	-	-	-	-	-						
Net Impact		-	-	-	-	-	-	-	-						

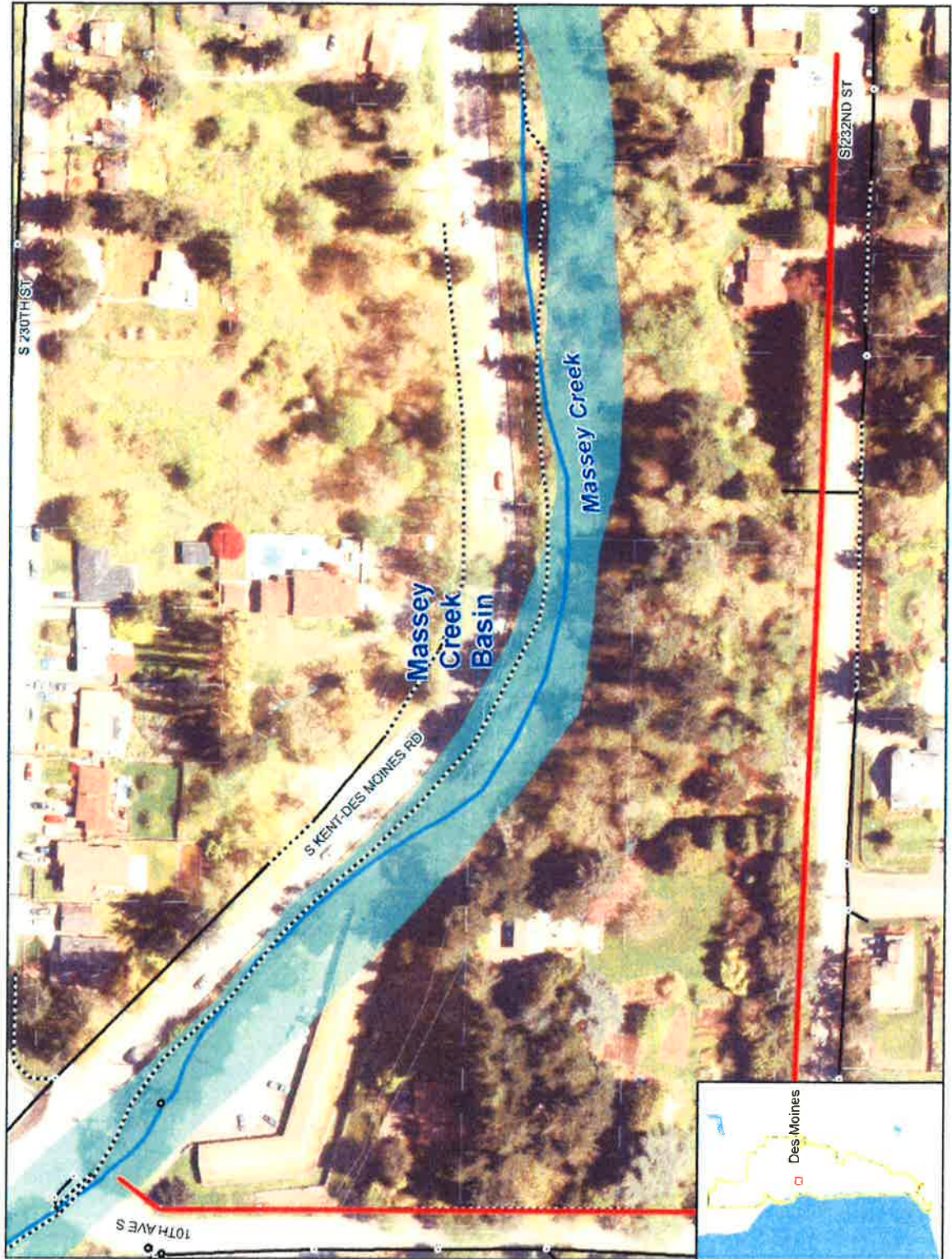
216th Pl./ Marine View Dr. Pipe Upgrade



(Amount in Thousands)

151

232nd Street (10th to 14th) Pipe Project



CITY OF DES MOINES
2019-2024 CAPITAL IMPROVEMENT PLAN
(Amount in Thousands)

258th Street (13th Pl to 16th) Pipe Project	451
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Summary Project Description:	
Replace roadside ditches along south side of S. 258th with approximately 960 feet of 18-inch pipe and 6 manholes. Drainage easements may be required for up to 12 properties, depending on pipe alignment.	

CIP Category: Surface Water Management
Managing Department: Public Works

Justification/Benefits: The drainage from 16th Avenue discharges into a steep poorly established channel located in the rear of several properties of the Providential Soundview Estates subdivision. This channel is experiencing severe erosion and frequently becomes blocked with debris causing localized flooding to adjacent and downstream properties. Additionally, the existing ditch system located on the south side of 258th Street is not sufficient to convey large storms. This project proposes to pipe the channel as well as pipe the ditch along S. 258th Street.

PROJECT SCOPE		
Expenditures	Total Budget	
Design	68	
Land & Right of Way	-	
Construction	222	
Contingency	53	
Total Expenditures	343	

ANNUAL ALLOCATION										
Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024			
								68		
								222		
								53		
								343		

Funding Sources	Total Budget
Surface Water Utility	343
Total Funding	343

Project to Date 12/31/17	Scheduled Year 2018	Plan Year 2019	Plan Year 2020	Plan Year 2021	Plan Year 2022	Plan Year 2023	Plan Year 2024
							343
							343

OPERATING IMPACT	
Operating Impact	6 Year Total
Revenue	-
Expenses	-
Net Impact	-

ANNUAL OPERATING IMPACT						
	2018	2019	2020	2021	2022	2023
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-
	-	-	-	-	-	-

#N/A

