



Storm Drainage System

The Storm Drainage System Program designs and constructs drainage improvement projects in areas of the City with a demonstrated need of flood protection for Houston and its residents. The Storm Water Drainage System includes collection of rainfall runoff via roadside ditches and/or streets with underground pipe (storm sewer) and the conveyance of storm water via off-road channels and underground structures to a receiving system and detention structures designed to manage the rate of flow into a receiving system. The receiving system can be a bayou, tributary channel, or another storm sewer. The program includes investments in channel and detention capacity made in partnership with the Harris County Flood Control District.

The Capital Improvement Plan (CIP) provides an estimate of delivery by fiscal year for the next five years. The FY2020-2024 CIP includes \$666 million for Storm Drainage System improvements funded primarily through drainage fees assessed on non-exempted benefitted property and a dedication of ad valorem revenue to the Dedicated Drainage and Street Renewal Fund (DDSRF). An additional \$99 million of Water and Wastewater improvements are planned to accompany Storm Drainage System projects.

The Storm Drainage System Program consists of the following major components:

Capital Improvement Projects:

- The City uses objective criteria to develop a ranked list of the highest priority need areas across the City and prioritize candidate storm drainage projects based on their benefits and costs. Projects are developed in accordance with the City's design criteria to convey 2-year rainfall events within the collection system (roadside ditch and/or storm sewer) and reduce the risk of structural flooding during 100-year storm events. Properties within special flood hazard areas or the 100-year flood zone will be protected from localized event flooding, but may not be protected from flooding related to inadequate level of service of the receiving system.

Local Drainage Program (LDP) & Storm Water Action Team (SWAT) Projects:

- These programs address localized storm water drainage system problems including inadequate level of service due to underground storm sewer capacity, roadside ditch grade deterioration and encroachments, inlet capacity, and/or structural failure of the storm sewer or outfall. Engineering and construction are accomplished by work order contracts in order to address these problems quickly and cost effectively. The FY2020-2024 CIP commits approximately \$147 million to these programs.

Storm Drainage System Projects deferred to future CIPs:

The following projects were previously listed in Adopted CIPs and will be prioritized for construction as additional funding is identified in future CIPs.

M-410007-0001	Gulfway Terrace Sec 1 Area
M-410019-0001	Sharpstown Area 2
M-410021-0001	Pinewood Village 2
M-410022-0001	Garden Oaks and Shepherd Park (East)
M-410036-0002	Spring Shadows Area

Project Allocation	Fiscal Year Planned Appropriations					2020-2024
	2020	2021	2022	2023	2024	
Planning						
Acquisition-Land		875				875
Design	23,855	19,395	24,800	15,500	15,500	99,050
Construction	143,866	105,451	107,902	113,077	34,781	505,077
Equipment Acquisition						
Salary Recovery						
Other	12,580	11,000	11,000	13,000	13,000	60,580
Total Allocation	180,301	136,721	143,702	141,577	63,281	665,582
Source of Funds						
4042 - Street & Trfc Control & Strm Drain DDSRF	134,892	125,721	132,702	130,577	52,281	576,173
5000 - Federal Government - Grant Funded	34,409	10,000	10,000	10,000	10,000	74,409
5430 - Federal State Local - HPW Pass thru DDSR	11,000	1,000	1,000	1,000	1,000	15,000
8500 - HPW-W&S Syst Consolidated Constr Fd						
Total Funds	180,301	136,721	143,702	141,577	63,281	665,582

STORM DRAINAGE SYSTEM - Summary of Funds
2020-2024 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project	Fiscal Year Planned Appropriations					2020-2024
		2020	2021	2022	2023	2024	
M-000247	Nottingham & Yorkshire Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF			12,603			12,603
	8500 - HPW-W&S Syst Consolidated Constr Fd			5,064			5,064
	Project Total			17,667			17,667
M-000288	Easthaven Blvd (Bryant to Ledge)						
	4042 - Street & Trfc Control & Strm Drain DDSRF		10,857				10,857
	8500 - HPW-W&S Syst Consolidated Constr Fd		1,994				1,994
	Project Total		12,850				12,850
M-000294	Cullen Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF				12,422		12,422
	8500 - HPW-W&S Syst Consolidated Constr Fd				1,783		1,783
	Project Total				14,205		14,205
M-000295	Scott Street Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF				9,877		9,877
	8500 - HPW-W&S Syst Consolidated Constr Fd				1,218		1,218
	Project Total				11,095		11,095
M-410001	Woodshire Area Drainage and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF	10,180					10,180
	8500 - HPW-W&S Syst Consolidated Constr Fd	2,022					2,022
	Project Total	12,201					12,201
M-410002	Potomac & Nantucket Area Drng and Paving						
	4042 - Street & Trfc Control & Strm Drain DDSRF		12,942				12,942
	8500 - HPW-W&S Syst Consolidated Constr Fd		2,885				2,885
	Project Total		15,827				15,827

STORM DRAINAGE SYSTEM - Summary of Funds
2020-2024 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project						2020-2024
		2020	2021	2022	2023	2024	
M-410004	Little York, Courtlandt Mdws, York Mdws						
	4042 - Street & Trfc Control & Strm Drain DDSRF	8,132					8,132
	8500 - HPW-W&S Syst Consolidated Constr Fd	1,250					1,250
	Project Total	9,382					9,382
M-410005	Spring Shadows (North)						
	4042 - Street & Trfc Control & Strm Drain DDSRF			14,211			14,211
	Project Total			14,211			14,211
M-410006	Arlington Heights Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF		12,780	9,703			22,483
	8500 - HPW-W&S Syst Consolidated Constr Fd		4,798	4,634			9,432
	Project Total		17,578	14,338			31,916
M-410008	Freeway Manor South Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF			10,898			10,898
	8500 - HPW-W&S Syst Consolidated Constr Fd			1,388			1,388
	Project Total			12,286			12,286
M-410009	Briar Meadow Subdivision Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF	14,267					14,267
	8500 - HPW-W&S Syst Consolidated Constr Fd	5,643					5,643
	Project Total	19,910					19,910
M-410010	Freeway Manor: North of Edgebrook						
	4042 - Street & Trfc Control & Strm Drain DDSRF			16,917			16,917
	8500 - HPW-W&S Syst Consolidated Constr Fd			3,737			3,737
	Project Total			20,654			20,654

**STORM DRAINAGE SYSTEM - Summary of Funds
2020-2024 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2020-2024
		2020	2021	2022	2023	2024	
M-410013	Melrose Park Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF		4,209				4,209
	Project Total		4,209				4,209
M-410014	Wynnewood Acres Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF	7,706					7,706
	Project Total	7,706					7,706
M-410015	Magnolia Park Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,965	13,169		7,880		23,014
	8500 - HPW-W&S Syst Consolidated Constr Fd		6,304		4,986		11,290
	Project Total	1,965	19,473		12,866		34,304
M-410016	Westridge and Braes Terrace Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF		7,198				7,198
	8500 - HPW-W&S Syst Consolidated Constr Fd		10,633				10,633
	Project Total		17,831				17,831
M-410017	Garden Oaks and Shepherd Park (West)						
	4042 - Street & Trfc Control & Strm Drain DDSRF	19,865					19,865
	8500 - HPW-W&S Syst Consolidated Constr Fd	2,282					2,282
	Project Total	22,147					22,147
M-410019	Sharpstown Area 2						
	4042 - Street & Trfc Control & Strm Drain DDSRF	2,080					2,080
	Project Total	2,080					2,080
M-410023	Richmond Plaza (South) Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF				18,536		18,536
	8500 - HPW-W&S Syst Consolidated Constr Fd				1,660		1,660
	Project Total				20,196		20,196

STORM DRAINAGE SYSTEM - Summary of Funds
2020-2024 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project						2020-2024	
		2020	2021	2022	2023	2024		
M-410024	Southland Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF			11,813				11,813
	8500 - HPW-W&S Syst Consolidated Constr Fd			1,309				1,309
	Project Total			13,122				13,122
M-410025	Inwood Forest Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF	2,657	331		8,894			11,882
	8500 - HPW-W&S Syst Consolidated Constr Fd				6,509			6,509
	Project Total	2,657	331		15,403			18,391
M-410027	Richmond Plaza (North)							
	4042 - Street & Trfc Control & Strm Drain DDSRF					3,226		3,226
	8500 - HPW-W&S Syst Consolidated Constr Fd					2,816		2,816
	Project Total					6,042		6,042
M-410028	Westbury Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF		12,650					12,650
	8500 - HPW-W&S Syst Consolidated Constr Fd		8,637					8,637
	Project Total		21,287					21,287
M-410029	Chateau Forest West Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF				6,479			6,479
	8500 - HPW-W&S Syst Consolidated Constr Fd				8,235			8,235
	Project Total				14,714			14,714
M-410030	Fuqua 48 in STW							
	4042 - Street & Trfc Control & Strm Drain DDSRF			201				201
	Project Total			201				201

STORM DRAINAGE SYSTEM - Summary of Funds
2020-2024 CAPITAL IMPROVEMENT PLAN (\$ Thousands)

CIP No.	Project						2020-2024
		2020	2021	2022	2023	2024	
M-410031	72 In. SWT line Midtown/Montrose						
	4042 - Street & Trfc Control & Strm Drain DDSRF				1,467		1,467
	Project Total				1,467		1,467
M-410032	West Alabama 72 in. SWT						
	4042 - Street & Trfc Control & Strm Drain DDSRF		519				519
	Project Total		519				519
M-410033	Avalon Place						
	4042 - Street & Trfc Control & Strm Drain DDSRF	3,823					3,823
	Project Total	3,823					3,823
M-410034	72 in. SWT EADO						
	4042 - Street & Trfc Control & Strm Drain DDSRF	3,414					3,414
	Project Total	3,414					3,414
M-410035	Jefferson Davis School Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF	3,406	544		15,966		19,916
	8500 - HPW-W&S Syst Consolidated Constr Fd				1,572		1,572
	Project Total	3,406	544		17,538		21,488
M-410036	Spring Shadows Area						
	5430 - Federal State Local - HPW Pass thru DDSR	10,000					10,000
	8500 - HPW-W&S Syst Consolidated Constr Fd	400					400
	Project Total	10,400					10,400
M-410038	Central Park Area						
	4042 - Street & Trfc Control & Strm Drain DDSRF		3,567				3,567
	Project Total		3,567				3,567

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2020-2024 CAPITAL IMPROVEMENT PLAN (\$ Thousands)**

CIP No.	Project						2020-2024	
		2020	2021	2022	2023	2024		
M-410039	Cottage Grove East Area							
	4042 - Street & Trfc Control & Strm Drain DDSRF	11,462					11,462	
	8500 - HPW-W&S Syst Consolidated Constr Fd	6,892					6,892	
	Project Total	18,354					18,354	
M-420126	Local Drainage Program (LDP)							
	4042 - Street & Trfc Control & Strm Drain DDSRF	11,580	12,233	12,000	12,000	12,000	59,813	
	Project Total	11,580	12,233	12,000	12,000	12,000	59,813	
M-420HUD	CDBG Disaster Recovery Program							
	5000 - Federal Government - Grant Funded	24,409					24,409	
	Project Total	24,409					24,409	
M-430006	Storm Water Action Team (SWAT)							
	4042 - Street & Trfc Control & Strm Drain DDSRF	17,500	17,500	17,500	17,500	17,500	87,500	
	Project Total	17,500	17,500	17,500	17,500	17,500	87,500	
M-430100	Pre-Engineering for Storm Water Drainage							
	4042 - Street & Trfc Control & Strm Drain DDSRF	5,000	1,215	4,500	1,500	1,500	13,715	
	Project Total	5,000	1,215	4,500	1,500	1,500	13,715	
M-430220	Project Mgmt. Incl. Testing & Inspection							
	4042 - Street & Trfc Control & Strm Drain DDSRF	8,000	1,652	8,000	1,700	1,700	21,052	
	Project Total	8,000	1,652	8,000	1,700	1,700	21,052	
M-430241	Stormwater Pump Station & Flood Warning							
	4042 - Street & Trfc Control & Strm Drain DDSRF	1,000	1,000	1,000	1,000	1,000	5,000	
	5430 - Federal State Local - HPW Pass thru DDSR	1,000	1,000	1,000	1,000	1,000	5,000	
	Project Total	2,000	2,000	2,000	2,000	2,000	10,000	

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CIP No.	Project						2020-2024	
		2020	2021	2022	2023	2024		
M-430296	Regional Stormwater Detention							
	4042 - Street & Trfc Control & Strm Drain DDSRF	2,355	2,355	2,355	2,355	2,355	11,775	
	5000 - Federal Government - Grant Funded	10,000	10,000	10,000	10,000	10,000	50,000	
	Project Total	12,355	12,355	12,355	12,355	12,355	61,775	
M-430800	Developer Participation							
	4042 - Street & Trfc Control & Strm Drain DDSRF	500	1,000	1,000	3,000	3,000	8,500	
	Project Total	500	1,000	1,000	3,000	3,000	8,500	
M-500001	Future Design							
	4042 - Street & Trfc Control & Strm Drain DDSRF		10,000	10,000	10,000	10,000	40,000	
	Project Total		10,000	10,000	10,000	10,000	40,000	
M-NA0000	Funding Offset							
	8500 - HPW-W&S Syst Consolidated Constr Fd	-18,489	-35,250	-16,133	-25,962	-2,816	-98,650	
	Project Total	-18,489	-35,250	-16,133	-25,962	-2,816	-98,650	
	Total Appropriations:	180,301	136,721	143,702	141,577	63,281	665,582	