



DRAFT

CAPITAL IMPROVEMENT PLAN

AND 2021 CAPITAL BUDGET

2021-2025 DRAFT CIP 5-YEAR PLAN

February 5, 2020

DRAFT -Capital Improvement Plan

- This CIP should be considered a planning document and current fiscal year capital budget – the CIP is an evolving plan that requires continual review and modification during the course of each year.
- The amounts indicated in 2021 are the FY21 Capital Budget.
- The following table details the planned expenditures for the Fiscal Years 2021-2025 CIP. Expenditures are focused on replacement, installation and/or abandonment of existing water mains, replacement of inoperable fire hydrants, rehabilitation of sewer systems, management of storm water with green infrastructure, upgrades to information technology systems, replacing aging equipment and vehicles, as well as rehabilitation of facilities that support the operation of the utility.



Summary of the Draft CIP Financial Plan and FY2020-2021 Capital Budget

The FY 2021 – FY 2025 capital improvement plan provides for \$233 million of water system improvements and \$173 million of sewer system improvements over the five year planning cycle. **FY21 Draft Capital Budget of \$144,461,445**

Category Summary	% of 5-Year Spend	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	Total 5-Year 2021-2025
Water Main	40%	54,362	45,799	40,550	20,800	-	161,511
Sewer Line Replacement	19%	29,244	25,456	19,650	1,950	-	76,300
CIPMO	3%	8,280	5,590	-	-	-	13,870
Green Infrastructure	13%	12,480	11,568	10,483	8,785	9,995	53,311
Central Services	18%	28,096	11,575	11,235	11,000	11,000	72,906
Meters/ Fire Hydrants	7%	12,000	4,000	4,000	4,000	4,000	28,000
O&M - I&E	0%	-	-	-	-	-	-
	100%	144,461	103,988	85,918	46,535	24,995	405,897
Water	58.5%	84,550	58,381	50,168	30,300	9,500	232,898
Sewer	41.5%	<u>59,912</u>	<u>45,606</u>	<u>35,751</u>	<u>16,235</u>	<u>15,495</u>	<u>172,999</u>
	100.0%	144,461	103,988	85,918	46,535	24,995	405,897

Water Project List

Total estimated cost (1000's)

Water Project List 2021-2025 CIP

Description	Status	Source of Funds	2020-21	2021-22	2022-23	2023-24	2024-25	2021-2025 CIP Total	Percent of CIP
WS-693A Joy Road Water Main Replacement Phase 2 (17,500LF)	C	Loan (DWRf)	-	-	-	-	-	-	0.0%
WS-697 Water Main Replacement -Westside (19,136LF)	C	(DWRf)	-	-	-	-	-	-	0.0%
WS-698 Water Main Replacement -Westside (26,743LF)	C	Loan (DWRf)	-	-	-	-	-	-	0.0%
WS-703 Water Main Replacement (33,820 LF)	A	I&E	-	-	-	-	-	-	0.0%
WS-704 Water Main Replacement -along Outerdrive (20,500LF)	A	Bond	-	-	-	-	-	-	0.0%
WS-705 Water Main Replacement-2-sections Eastside and Westside (33,400LF)	A	Bond	599	-	-	-	-	599	0.3%
WS-706 Water Main Replacement Wayne Co. Roads (26,400)	A	Bond	500	-	-	-	-	500	0.2%
WS-707 Water Main Replacement- (20,000LF)	A	Loan (DWRf)	1,000	-	-	-	-	1,000	0.4%
WS-709- Unplanned Lead Service Line Replacement	C	Grant	-	-	-	-	-	-	0.0%
WS-710 Water Main Replacement-Incl Wayne Co Roads (31,594LF)	P	(DWRf) Loan	6,000	2,000	-	-	-	8,000	3.4%
WS-711 Water Main Replacement- Incl Jefferson Streetscape(39,801LF)	P	(DWRf)	6,000	5,200	-	-	-	11,200	4.8%
WS-712 Water Main Replacement-Cornerstone Village (48,000LF)	N	I&E/Bond	9,000	3,630	-	-	-	12,630	5.4%
WS-713 Water Main Replacement-Jefferson/Chalmers	N	DWRf	-	7,500	7,500	-	-	15,000	6.4%
WS-714 Water Main Replacement-MDOT Streetscape (25,100LF)	N	DWRf	4,300	-	-	-	-	4,300	1.8%
WS-715 Pilot Areas-Riverdale, Minnock, Miller & Rosedale	N	DWRf	7,800	5,900	-	-	-	13,700	5.9%
WS-716 High Priority Areas: Brewster Douglas	N	I&E	-	1,000	3,500	-	-	4,500	1.9%
WS-718 WM New Center Commons & Virginia Park	N	DWRf/I&E	4,500	1,500	-	-	-	6,000	2.6%
DWS-907 Watermain & Sewer Rehab- North Rosedale Park	P	I&E/Bond	3,900	1,519	-	-	-	5,419	2.3%
WS-720 Watermain Replacement-Various Streets	N	I&E/Bond	-	-	5,000	10,000	-	15,000	6.4%
WS-702 Repair & Replacement of Water Mains	A	I&E	558	-	-	-	-	558	0.2%
WS-708 Repair of Water Mains	A	I&E	-	-	-	-	-	-	0.0%
WS-717 Repair & Replacement of Water Mains (WS-702)	N	I&E	1,000	8,000	9,000	-	-	18,000	7.7%
WS-719 Repair of Water Mains (WS-708)	N	I&E	-	1,000	7,000	4,000	-	12,000	5.2%
DWS-902 Repair of Pavement (break repair)	A	I&E	6,220	-	-	-	-	6,220	2.7%
DWS-904 Repair of Lawns (break repair)	A	I&E	664	-	-	-	-	664	0.3%
DWS-919 (replace DWS-902)	N	I&E	-	6,800	6,800	6,800	-	20,400	8.8%
CS-1673 Professional Engineering Services for Design of Water Main	A	I&E	-	-	-	-	-	-	0.0%
CS-1909A-Condition Assessments-High Priority Neighborhoods	N	I&E	571	-	-	-	-	571	0.2%
CS-1921 Watermain/Sewer Design	N	I&E	1,000	1,000	1,000	-	-	3,000	1.3%
CS-1923 Third Party Inspection (Water & Sewer)	N	I&E	750	750	750	-	-	2,250	1.0%
CS-1812 Professional Engineering and Construction Services for CIPWO	A	I&E	4,140	2,795	-	-	-	6,935	3.0%
Water Meter Replacement Program	A	I&E	3,000	3,000	3,000	3,000	3,000	15,000	6.4%
Fire Hydrant Replacement Program	A	I&E	1,000	1,000	1,000	1,000	1,000	5,000	2.1%
Iron Migration -MIU Replacement	N	I&E	8,000	-	-	-	-	8,000	3.4%
Vehicle, Heavy Equipment, and Equipment Purchases	A	I&E	3,569	2,000	2,000	2,000	2,000	11,569	5.0%
Information Technology	A	I&E	4,244	1,788	1,618	1,500	1,500	10,649	4.6%
Facility Improvement Allowance	A	I&E	6,236	2,000	2,000	2,000	2,000	14,236	6.1%
TOTALS			84,550	58,381	50,168	30,300	9,500	232,898	100.0%

Sewer Project List

Total estimated cost (1000's)

Sewer Project List 2021-2025 CIP

Description	Status	Source of Funds	2020-21	2021-22	2022-23	2023-24	2024-25	2020-2025 CIP Total	Percent of CIP
DWS-900 Inspection and Rehab North Side (10,660LF)	C	I&E	-	-	-	-	-	-	0.0%
DWS-903 Inspection and Rehabilitation of Sewers City Wide	A	I&E/ Bond	8,675	-	-	-	-	8,675	5.0%
DWS-907 North Rosedale Park	P	I&E/ Bond	2,600	1,013	-	-	-	3,613	2.1%
DWS-908 Cornerstone Village Sewer Rehab	P	I&E/ Bond	4,000	1,693	-	-	-	5,693	3.3%
DWS-909 Sewer Condition assessments throughout City	P	I&E	1,500	-	-	-	-	1,500	0.9%
DWS-910- Sewer Condition Assessments High Priority	P	I&E	1,500	-	-	-	-	1,500	0.9%
PC-804 Relocation of Sewer Syphon-West Parkway (MOU-DPW)	A	I&E	228	-	-	-	-	228	0.1%
DWS-916	N	SRF	3,000	2,600				5,600	3.2%
DWS-917 Sewer Improvement at Riverdale	N	SRF	-	7,000	7,000			14,000	8.1%
DWS-918 Rosedale	N	SRF	-	5,000	4,500			9,500	5.5%
DWS-920 (Replace DWS-903)	N	I&E/ Bond	5,000	5,000	5,000	-		15,000	8.7%
Sewer Program Allowances	N	I&E	-	-	-	-		-	0.0%
City Planning & Development Framework Allowance	N	I&E/ Bond	-	-	-	-		-	0.0%
CS-1812 Professional Engineering and Construction Services for Capital Improvement Program Management Organization	A	I&E	4,140	2,795	-	-		6,935	4.0%
DWS-902 Repair of Pavement (break repair)	A	I&E	1,098	-	-	-		1,098	0.6%
DWS-904 Repair of Lawns (break repair)	A	I&E	443	-	-	-		443	0.3%
DWS-919 (replace DWS-902)	N	I&E	1,200	1,200	1,200			3,600	2.1%
CS-1921 Watermain/Sewer Design	N	I&E	-	1,000	1,000	1,000		3,000	1.7%
CS-1923 Third Party Inspection (Water & Sewer)	N	I&E	-	750	750	750		2,250	1.3%
Sewer Pump Stations (DWS-921)	N	I&E	-	200	200	200		600	0.3%
CS-1522 Green Infrastructure Program Management	C	I&E	50	-	-	-		50	0.0%
Stoepel Park No. 1	C	I&E	-	-	-	-		-	0.0%
PC-799 Crowell Rec Center and EcoSite Modifications	C	I&E	15	5	-	-		20	0.0%
Tireman Phase II Bioswale	C	I&E	10	-	-	-		10	0.0%
West Warren (Constance at Rouge Park/Tireman Sawyer PH III)	N	I&E	3,995	7,040	7,650	6,280	3,995	28,960	16.7%
PC-801A Oakman Blvd	P	I&E	4,500	1,800	300	-		6,600	3.8%
Liuzzo Park	C	I&E	-	-	-	-		-	0.0%
PC-800 O'Shea Park	C	I&E	10	10	-	-		20	0.0%
PC-802 Joy Rd. Drainage Improvements	C	I&E	-	-	-	-		-	0.0%
Minock Park	-	I&E	-	-	-	-		-	0.0%
Charles H. Wright Academy	N	I&E	1,200	205	25	-		1,430	0.8%
North Rosedale (Edinborough)	N	I&E	40	3	3	-		46	0.0%
Capital Partnership Program-St. Paul Tabernacle	P	I&E	100	-	-	-		100	0.1%
Chandler Park Drive (CIPMP)	N	I&E	60	5	5	5		75	0.0%
Green Stormwater Infrastructure Construction Allowance	-	I&E	-	-	-	-	5,000	5,000	2.9%
CS-1884 Green Infrastructure Program Management	P	I&E	2,500	2,500	2,500	2,500	1,000	11,000	6.4%
Vehicle, Heavy Equipment, and Equipment Purchases	N	I&E	3,569	2,000	2,000	2,000	2,000	11,569	6.7%
Information Technology	N	I&E	4,244	1,788	1,618	1,500	1,500	10,649	6.2%
Facility Improvement Allowance	N	I&E	6,236	2,000	2,000	2,000	2,000	14,236	8.2%
TOTALS			59,912	45,606	35,751	16,235	15,495	172,999	100.0%

Information Technology



Descriptions	Type		2020-21
Security			
Access Control	Software	Addition	100,000
Camera Replacements	Hardware/Equipment	Addition	100,000
Video Security System Upgrades	Software	Addition	150,000
Customer Service			
City Insights Portal Phase II	Software	Software Maintenance	150,000
EnQuesta Upgrade	Software	Software Maintenance	700,000
Administrative			
Records Management Services	Software	New Software Implementation	271,200
Facilities			
Meeting Room Upgrades/ Hardware/Cons	Hardware/Equipment	Hardware/Equipment	250,000
Additional IT space at CSF	Hardware/Equipment	New Hardware/Equipment Implementation	100,000
Building Control System	Software	New Software Implementation	500,000
Operations			
Collaboration Software for Drainage & Records Management	Software	New Software Implementation	190,000
GPS for vehicles	Hardware/Equipment	New Hardware/Equipment Implementation	110,000
Misc. Equipment for AssetWorks	Hardware/Equipment	New Hardware/Equipment Implementation	50,000
Itron Replacement (staffing support)	Other IT Implementation	CIP IT STAFFING	600,000
Complaint Management	Software	New Software Implementation	250,000
CityWorks	Software	New Software Implementation	500,000
Oracle Supply chain Management	Other IT Implementation	New Other IT Implementation Implementation	800,000
Information Technology			
Desktops	Hardware/Equipment	Hardware	175,000
Laptop Charging Stations	Hardware/Equipment	Hardware	25,000
Laptops	Hardware/Equipment	Hardware	216,000
Rugged Tablets/Laptops	Hardware/Equipment	Hardware	100,000
Tablets	Hardware/Equipment	Hardware	154,000
Vehicle Mounts	Hardware/Equipment	Hardware/Equipment	60,000
Oracle DC Migration	Hardware/Equipment	New Other IT Implementation Implementation	500,000
Low Voltage Wiring DWS-885	Hardware/Equipment	New Hardware/Equipment Implementation	750,000
Network Infrastructure - CoD MERGER	Software	New Hardware/Equipment Implementation	200,000
Network Infrastructure-REPLACEMENT	Software	New Hardware/Equipment Implementation	156,000
Phone System Migration to Avaya	Hardware/Equipment	New Hardware/Equipment Implementation	20,000
Printers	Hardware/Equipment	Hardware	30,000
Radios	Hardware/Equipment	Hardware	230,000
Executive Dashboard	Software	New Software Implementation	150,000
Cityworks/AssetWorks/Records Implemen	Other IT Implementation	New Other IT Implementation Implementation	900,000
GIS Update As-Built Drawing Upgrades	Other IT Implementation	New Other IT Implementation Implementation	-
Total			\$ 8,487,200

Vehicle, Heavy Equipment, and Equipment



Descriptions	Type	Addition/ Replacement	QTY	Estimated Unit Cost	2020-21
Meter Operations				250,000	
Utility Truck	Heavy Equipment	Replacement	1	130,000	130,000
Full Size Transit	Van	Replacement	3	40,000	120,000
Field Services Operations				3,968,000	
Brick Trucks	Specialty Truck	Replacement	1	175,000	175,000
F150	Truck	Replacement	10	45,000	450,000
F-350 Super Duty	Pick-up Truck	Addition	3	45,000	135,000
F-450 Super Duty	Utility Truck	Addition	4	125,000	500,000
F-550 Super Duty	Utility Truck	Addition	5	130,000	650,000
14-Yard Dump Truck	Specialty Truck	Addition	2	220,000	440,000
5-Yard Dump Truck	Specialty Truck	Replacement	3	180,000	540,000
Boom Truck	Specialty Truck	Replacement	1	338,000	338,000
Backhoe	Heavy Equipment	Replacement	2	300,000	600,000
BackhoeTrailer	20 ton	Replacement	2	20,000	40,000
Front end loader	Heavy Equipment	Replacement	2	50,000	100,000
Fleet Operations				2,919,300	
Service Truck	Specialty Truck	Addition	1	275,000	275,000
SUV	Vehicle	Replacement	10	32,000	320,000
Mini Bus (24-Passenger)	Specialty Vehicle	New	1	100,000	100,000
Van (15-Passenger)	Vehicle	Replacement	1	45,000	45,000
Pool Vehicles	Vehicle	Replacement	5	35,000	175,000
Golf Cart	Vehicle	Replacement	2	15,000	30,000
F150	Truck	Replacement	5	45,000	225,000
F-350 Super Duty	Truck	Addition	5	45,000	225,000
F-450 Super Duty	Truck	Addition	5	115,000	575,000
Full Size Transit	Van	Replacement	3	40,000	120,000
Passenger Vehicles	Vehicle	Replacement	10	25,000	250,000
Heavy Equipment	Specialty Truck	Addition	1	225,000	225,000
Vactor Hoist (100,00lbs)	Heavy Equipment	New	1	200,000	200,000
Tire Changer	Equipment	Replacement	1	30,000	30,000
Lift-Back Hoe	Equipment	New	1	50,000	50,000
Lift-Oil Rack	Equipment	New	1	30,000	30,000
Auto Lift w/Installation	Equipment	New	1	2,800	2,800
Oil Filter Crusher	Tools	Addition	1	7,000	7,000
Hybrid Dianostic Tool	Tools	Addition	3	7,500	22,500
Evaporative Cooler	Fixtures	Addition	2	6,000	12,000
Total				7,137,300	



FY 2021 Facility Improvements

Descriptions	Type	QTY	Unit Cost	2020-21
Roofing				
CSF/West/MOB	Roof replacement			7,000,000
Heating Units				
CSF	HVAC Units	10	150,000	1,200,000
West Payment	HVAC Rooftop Unit Replacement	2	15,000	30,000
MOB	Steam Improvements			15,000
MOB	Heat Improvement - Car Elevator area			36,000
Misc. HVAC Improvements	Auto Garage - Extra large Fans	6	20,000	120,000
Garage Door Replacement				
CSF/ West Yard	Fabric Door Replacement	10	25,000	350,000
Furniture				
Training Room Table & Chairs	CSF - 1st Fl & Garage			100,000
Interior Improvements				
CSF - Meter Shop Build Out	Interior Space Improvements			100,000
CSF - Yards - Build Out	Interior Space Improvements/Rea	5	200,000	150,000
Flooring	Interior West Yard	10	100,000	250,000
Flooring	Exterior West Yard			150,000
CSF - Air Compressor	New Air Compressor System			150,000
2nd Floor Admin-Buildout	Design/Feasibility			50,000
Parking Lot Improvements				
LED Lights	West Yard/ East & West Payment Exterior			50,000
LED Lights	Yards/Garage			200,000
Gate Operator	CSF & West Yard			20,000
Detroit Building Authority (DBA)	Consolidation, Renovations & Improvements			2,500,000
Total				\$12,471,000

Next steps to finalize CIP Plan

- Submit a copy of this draft to GLWA as required in the Lease Agreement
- Provide feedback to BOWC Committee questions
- Develop final draft CIP Book with project descriptions
- Request to approve 5-Year Plan and FY 2021 Capital Budget
- Submit FY2021 Capital Budget to City of Detroit Budget Dept and City Council for review

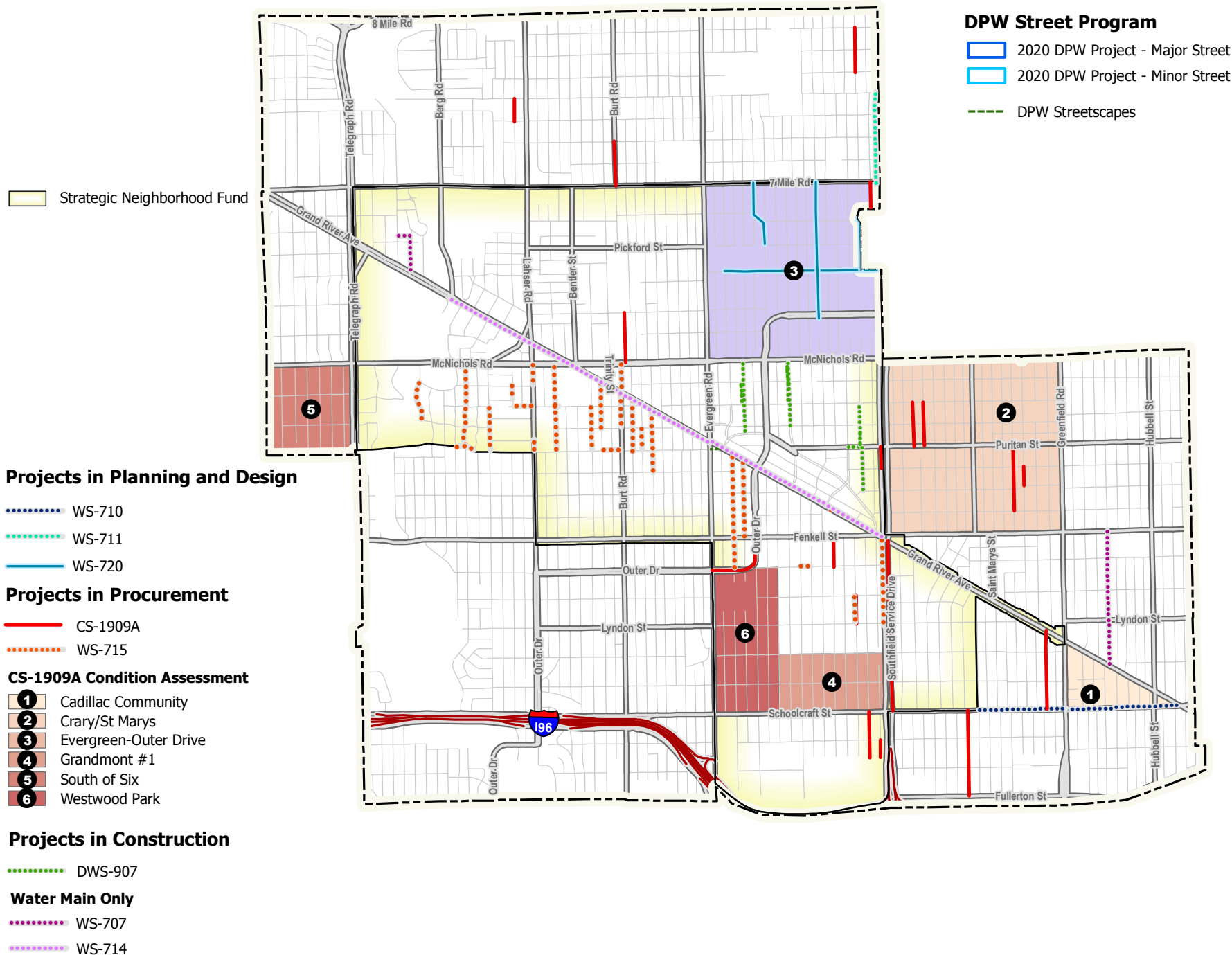


District Maps

Watermain Projects by District

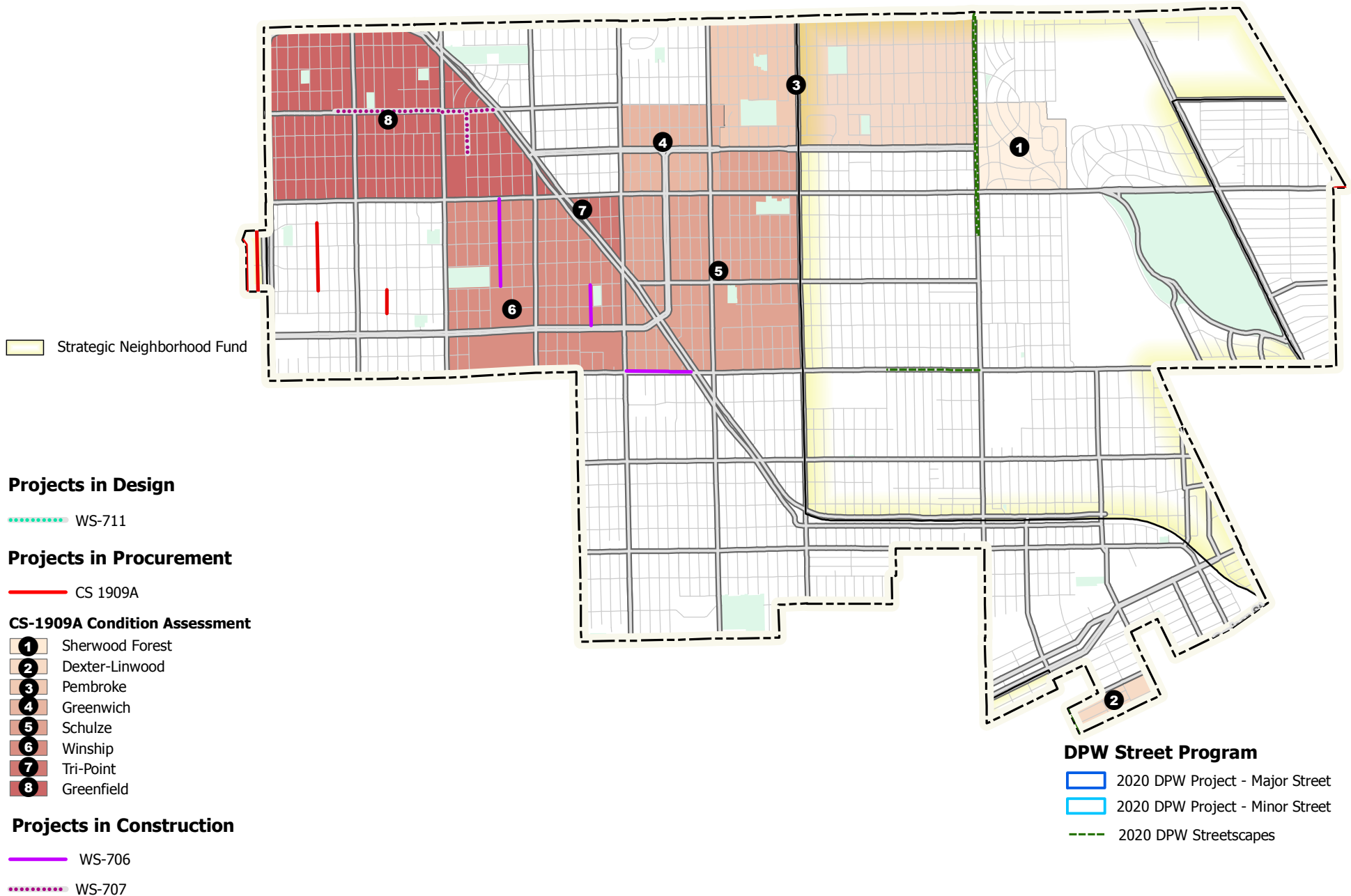
DWSD Capital Improvement Plan FY2021 Projects - Water

District 1 Active Projects



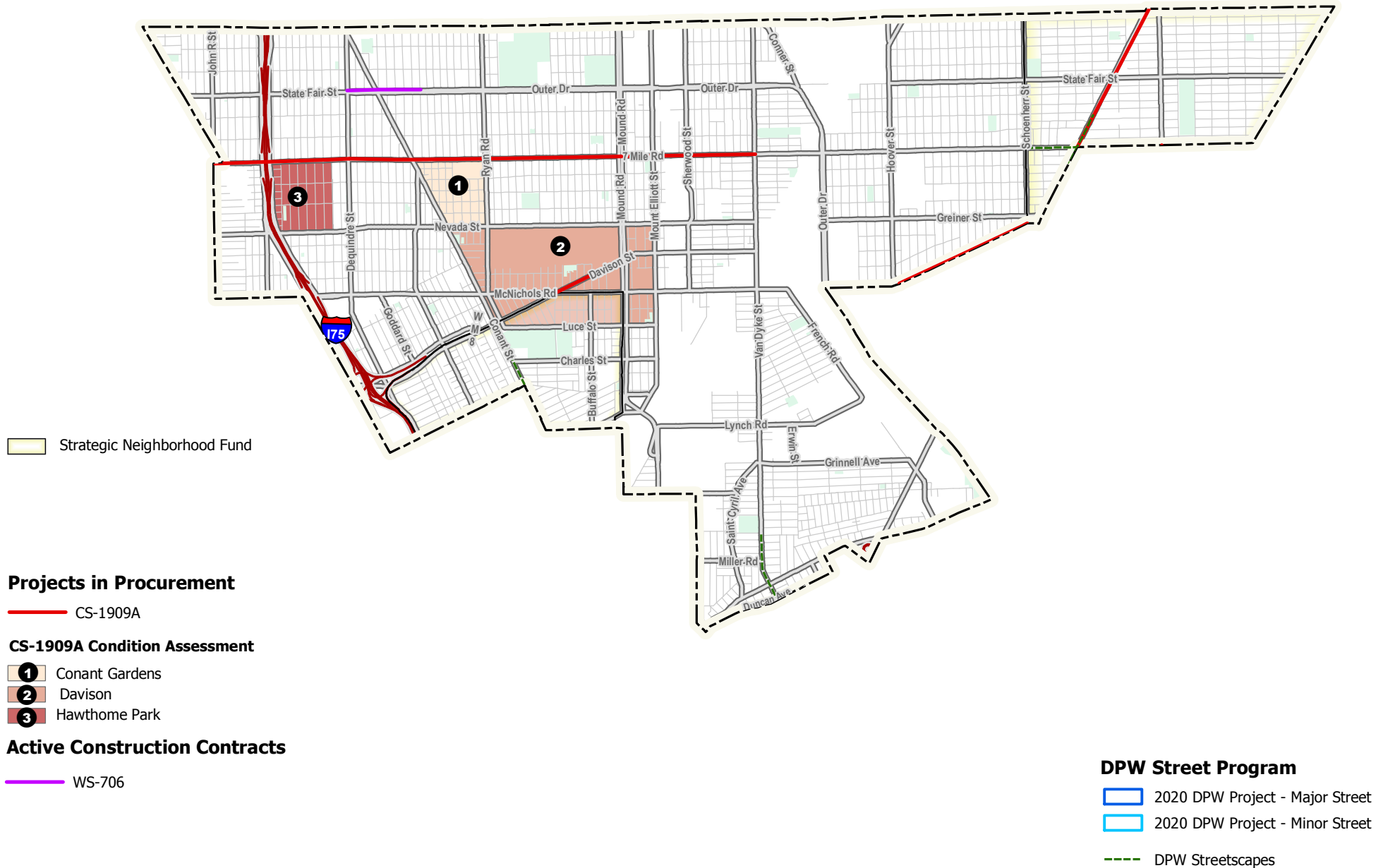
DWSD Capital Improvement Plan FY2021 Projects - Water

District 2 Active Projects



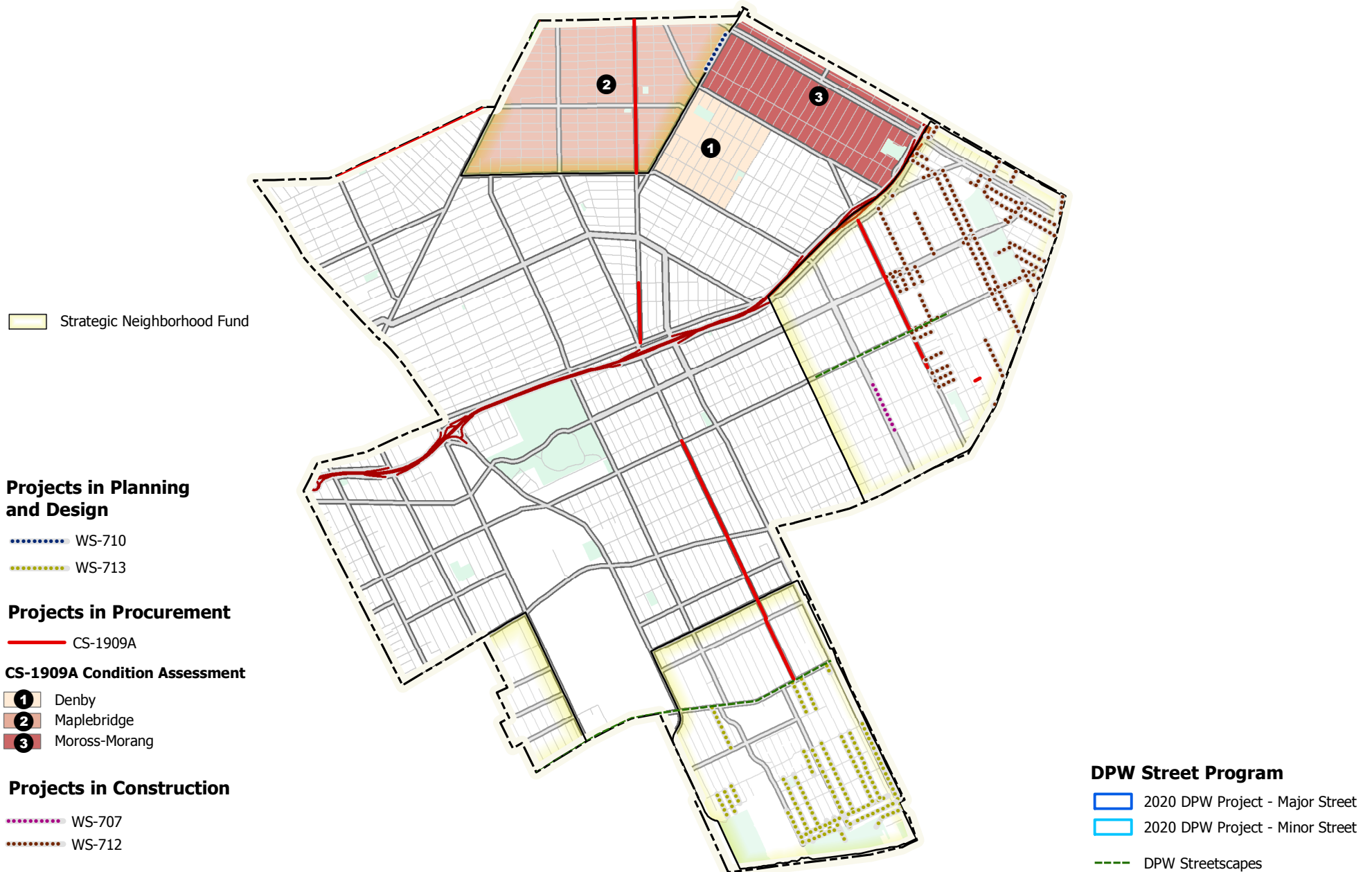
DWSD Capital Improvement Plan FY2021 Projects - Water

District 3 Active Projects



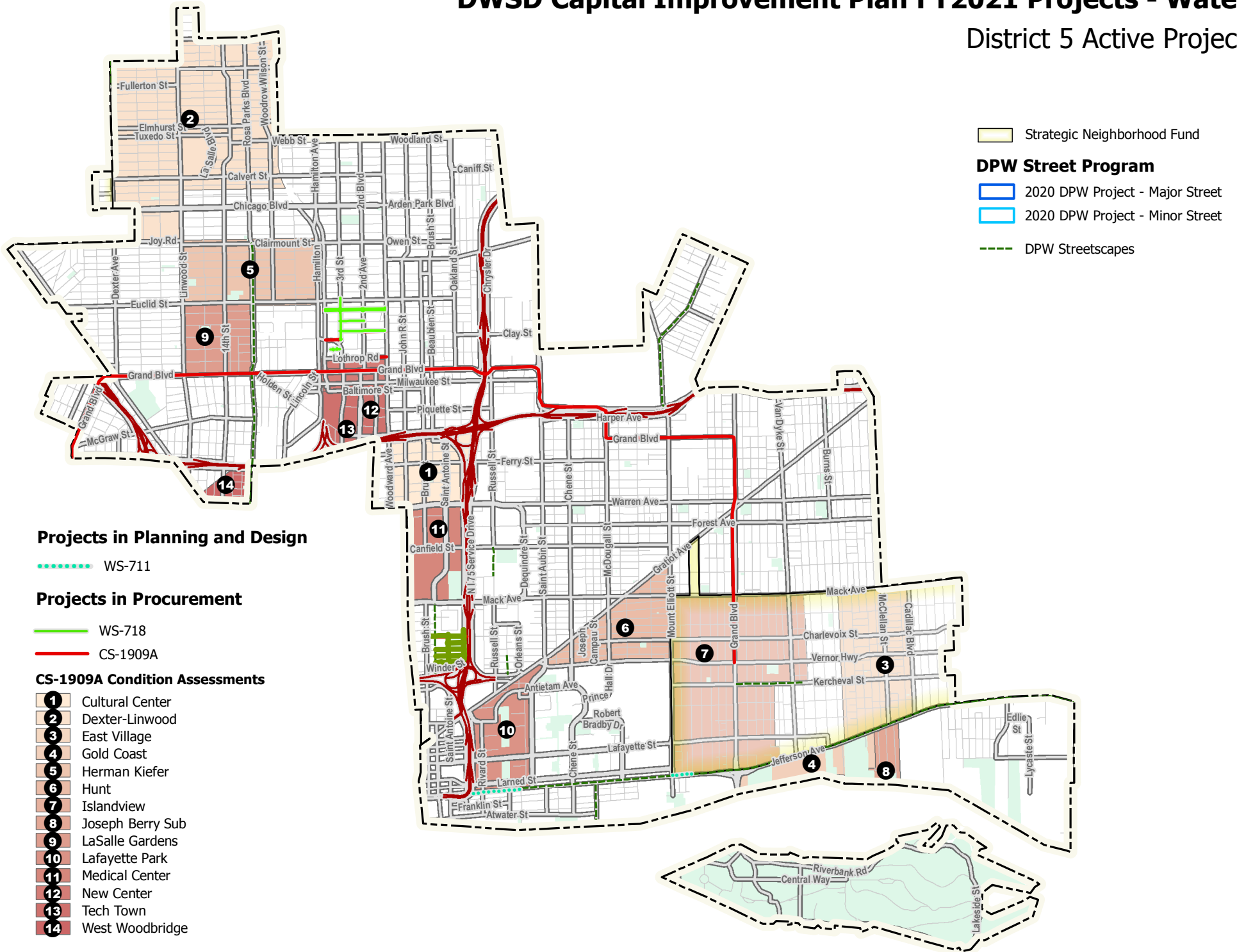
DWSD Capital Improvement Plan FY2021 Projects - Water

District 4 Active Projects



DWSD Capital Improvement Plan FY2021 Projects - Water

District 5 Active Projects



DWSD Capital Improvement Plan FY2021 Projects - Water

District 6 Active Projects

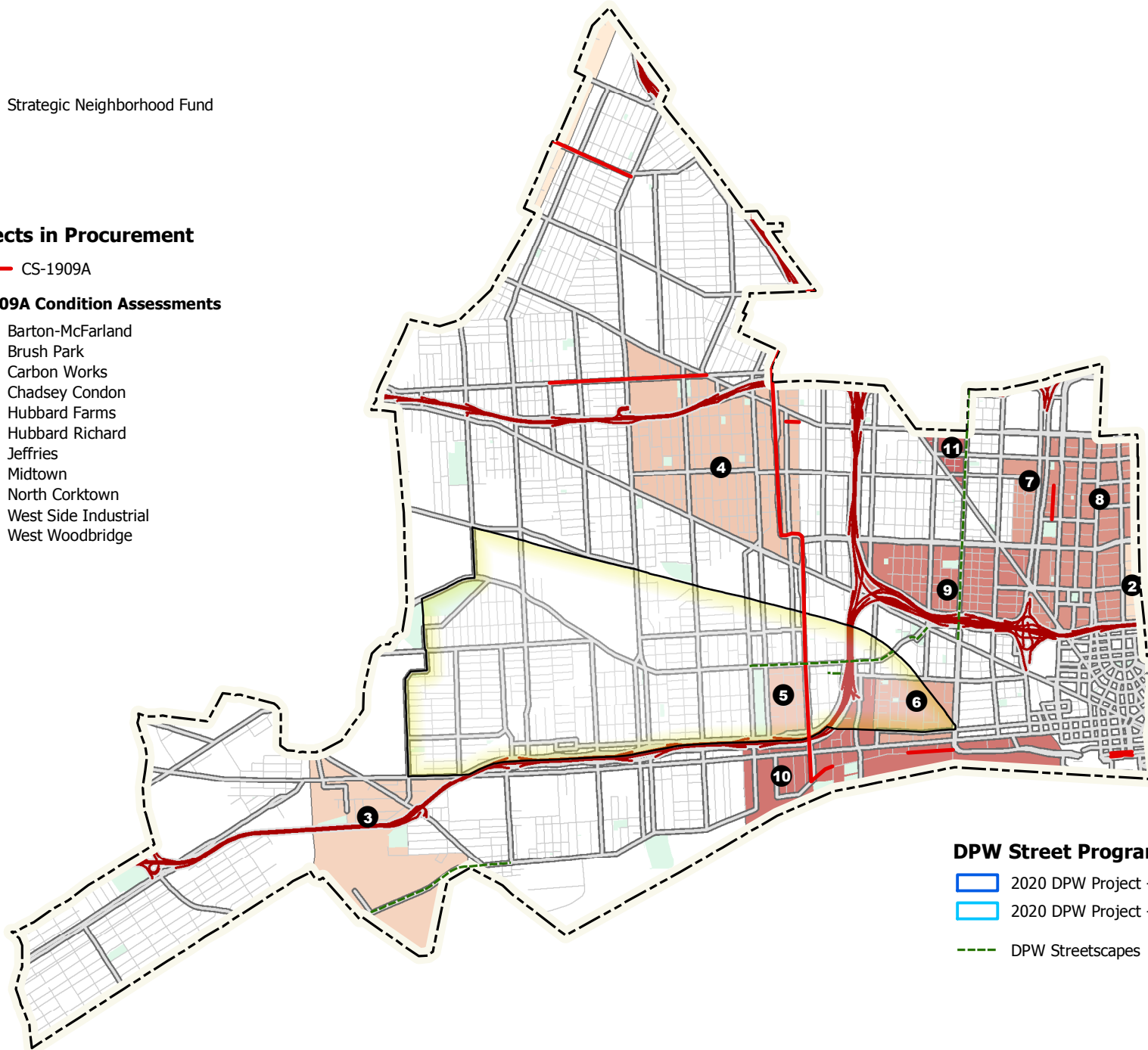
 Strategic Neighborhood Fund

Projects in Procurement

 CS-1909A

CS-1909A Condition Assessments

- | | |
|----|----------------------|
| 1 | Barton-McFarland |
| 2 | Brush Park |
| 3 | Carbon Works |
| 4 | Chadsey Condon |
| 5 | Hubbard Farms |
| 6 | Hubbard Richard |
| 7 | Jeffries |
| 8 | Midtown |
| 9 | North Corktown |
| 10 | West Side Industrial |
| 11 | West Woodbridge |

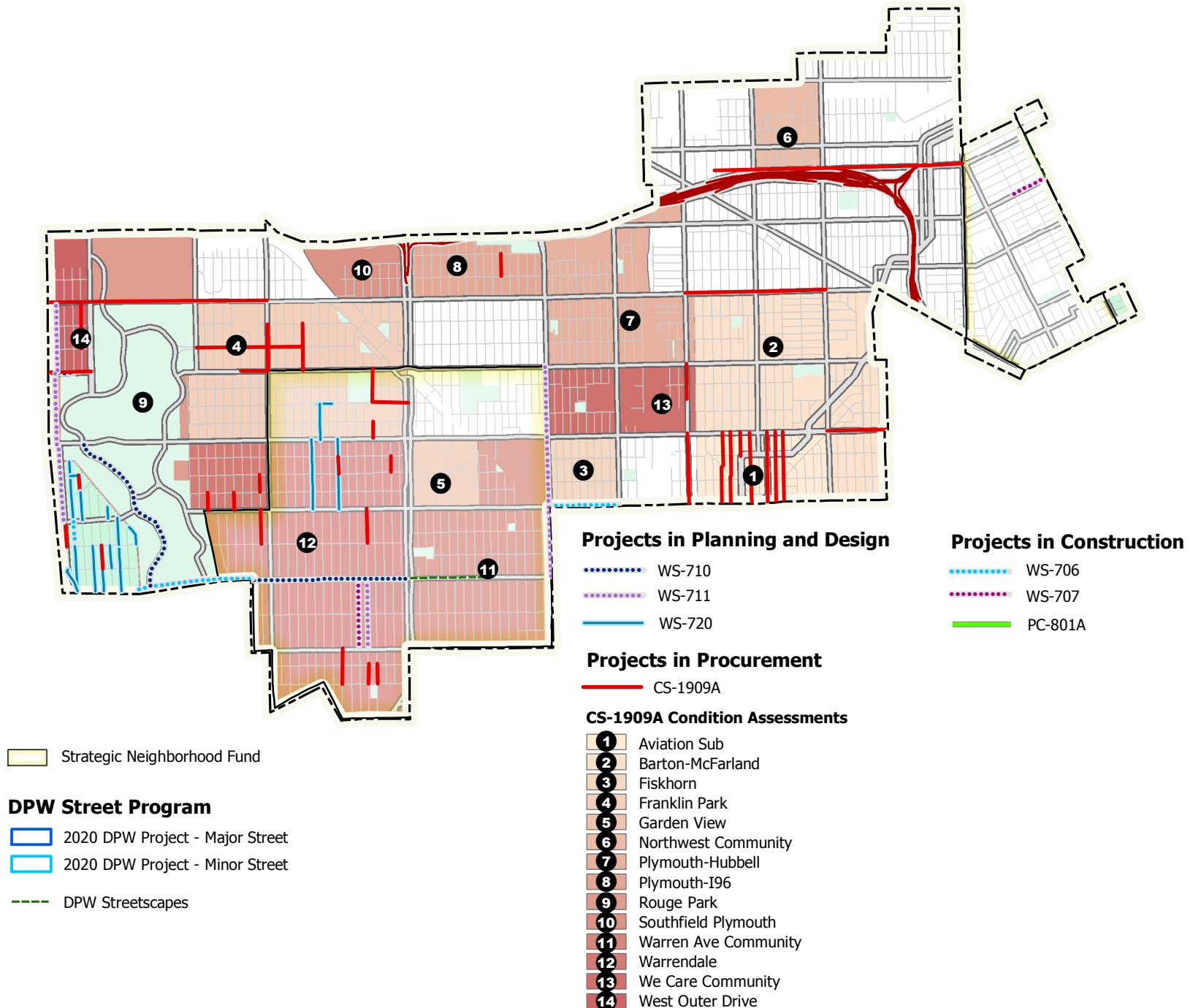


DPW Street Program

- | | |
|---|---------------------------------|
|  | 2020 DPW Project - Major Street |
|  | 2020 DPW Project - Minor Street |
|  | DPW Streetscapes |

DWSD Capital Improvement Plan FY2021 Projects - Water

District 7 Active Projects, Condition Assessment/Evaluation, Planning, and Design



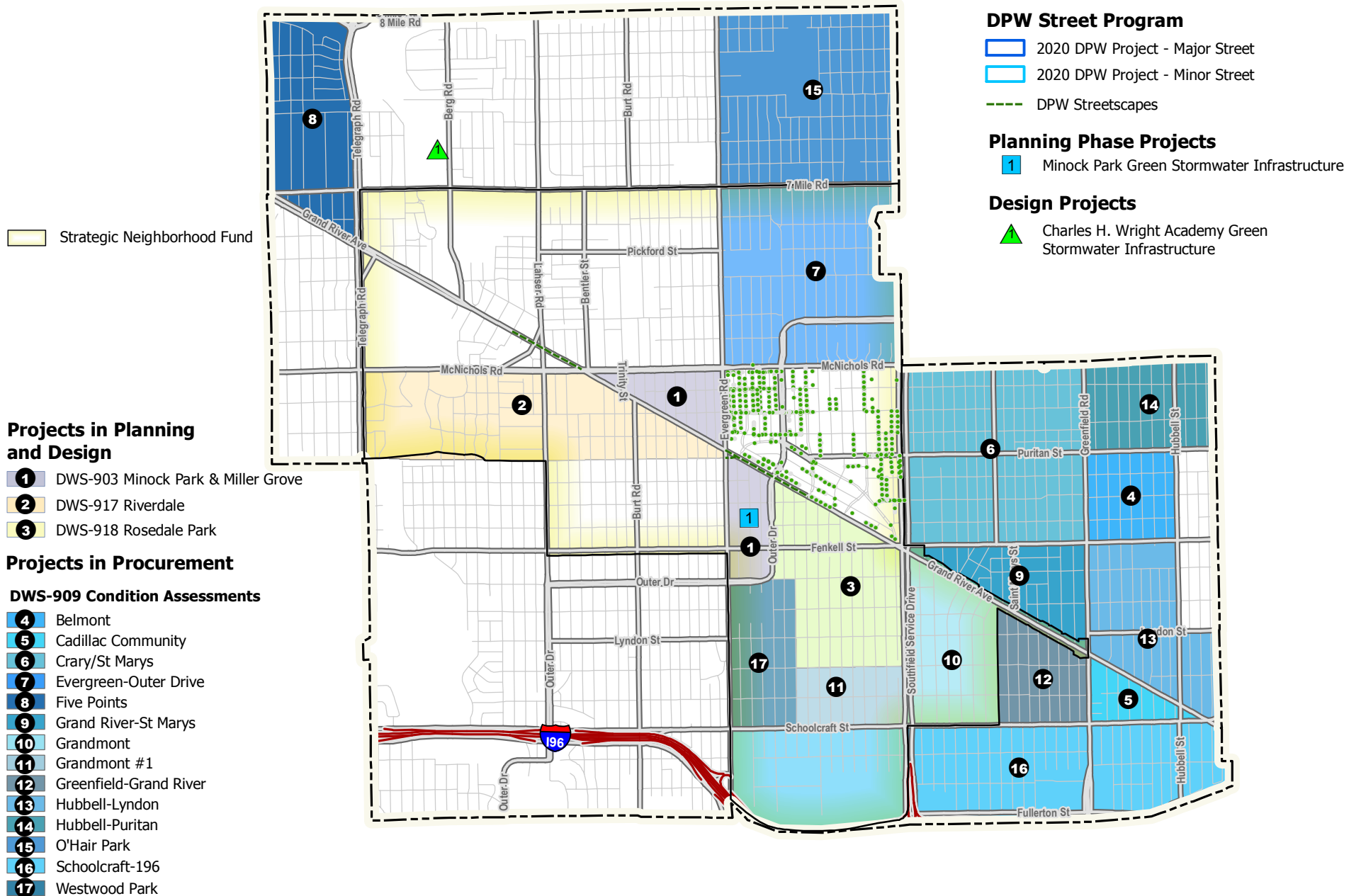


District Maps

Sewer/Green Infrastructure Projects by District

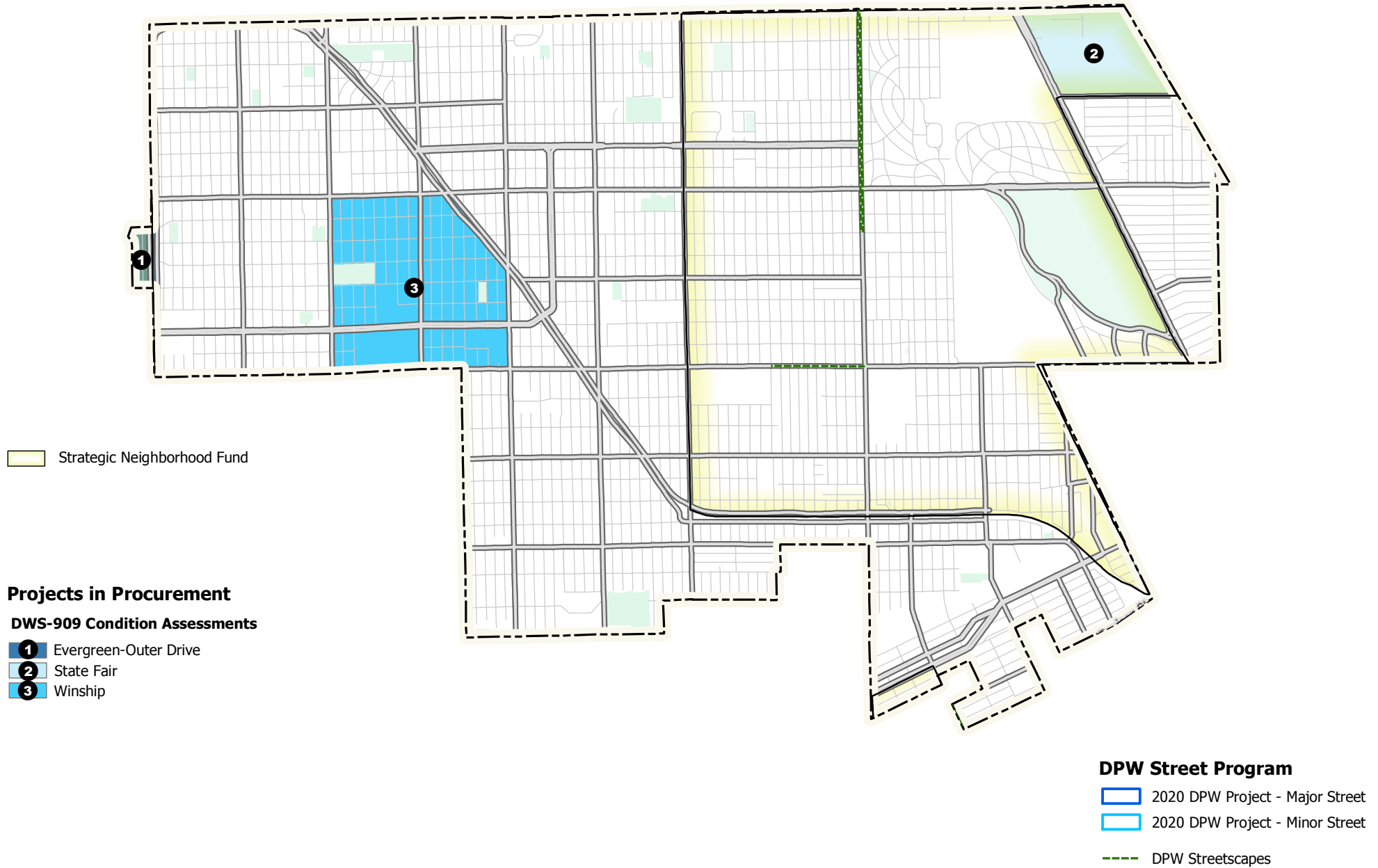
DWSD Capital Improvement Plan FY2021 Projects - Sewer

District 1 Active Projects



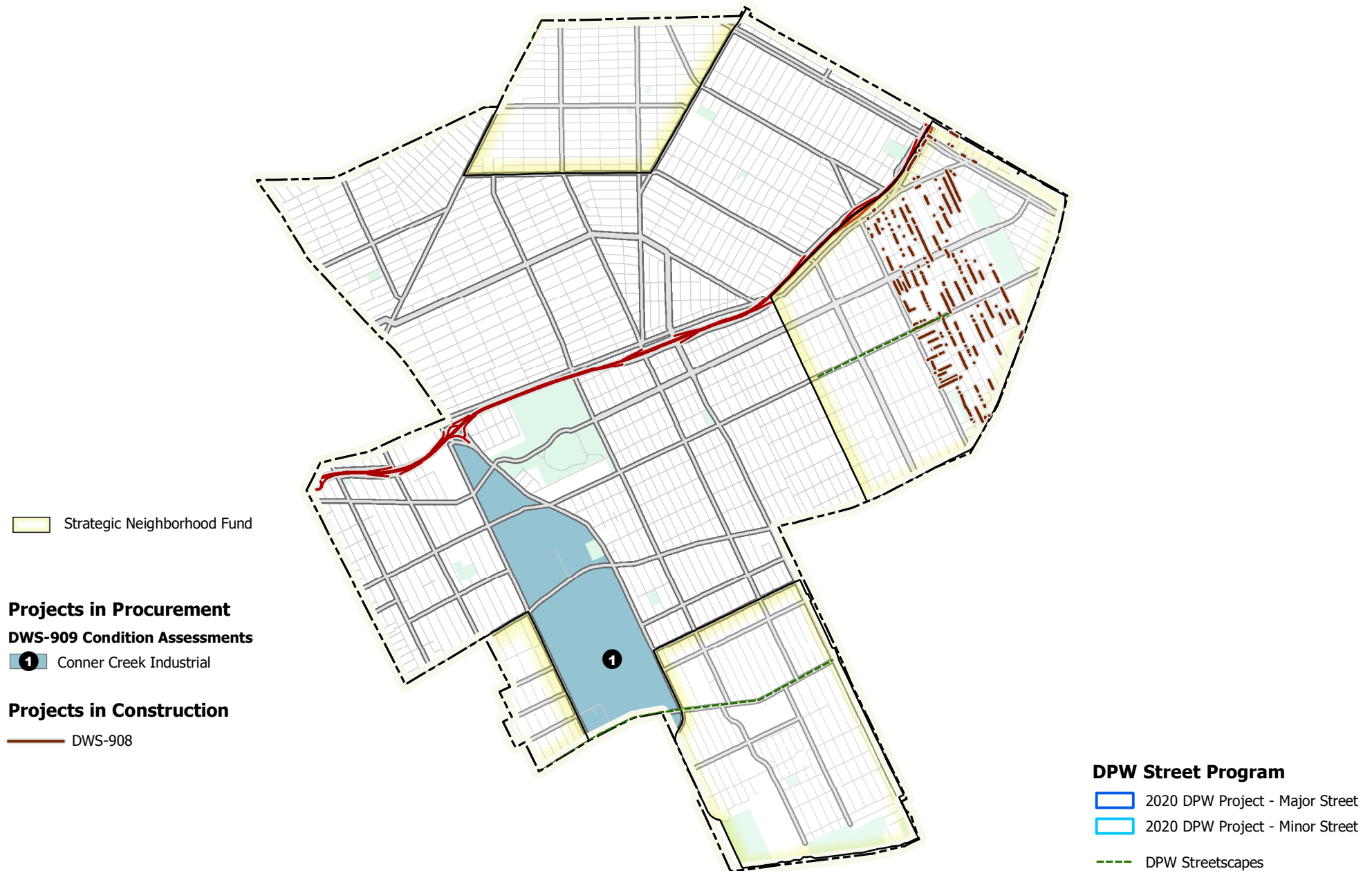
DWSD Capital Improvement Plan FY2021 Projects - Sewer

District 2 Active Projects



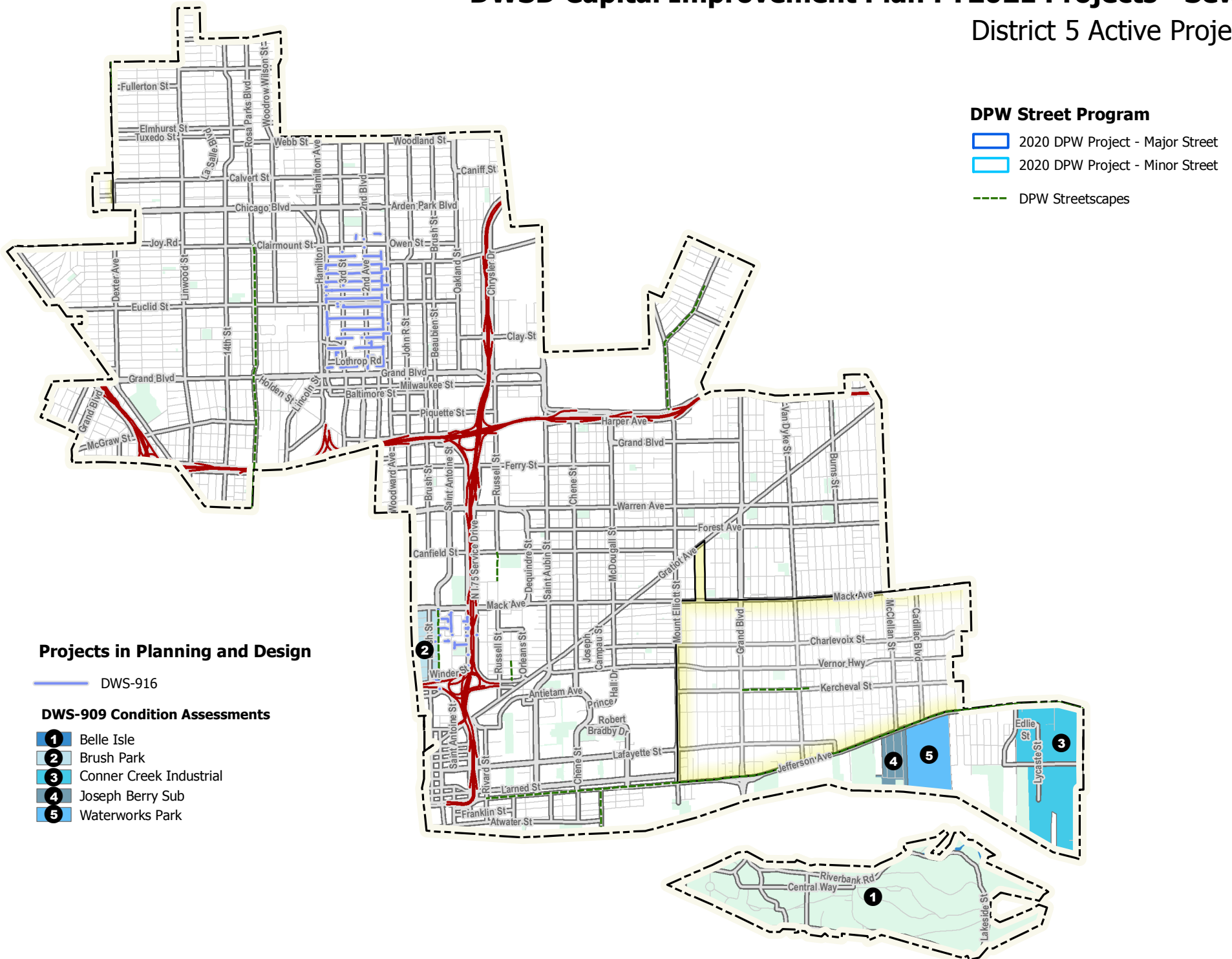
DWSD Capital Improvement Plan FY2021 Projects - Sewer

District 4 Active Projects



DWSD Capital Improvement Plan FY2021 Projects - Sewer

District 5 Active Projects



DWSD Capital Improvement Plan FY2021 Projects - Sewer

District 6 Active Projects






 Strategic Neighborhood Fund

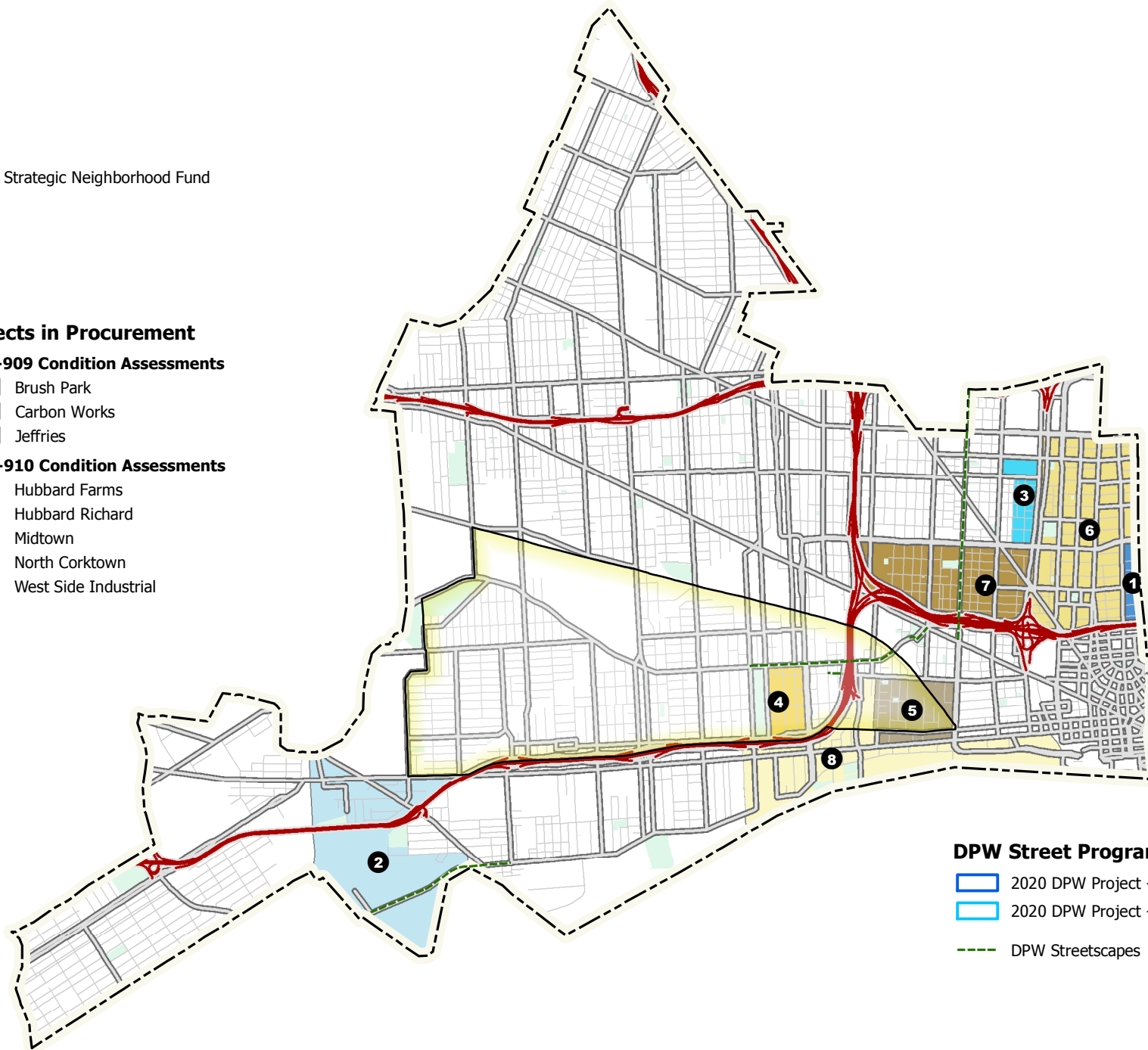
Projects in Procurement

DWS-909 Condition Assessments

-  1 Brush Park
-  2 Carbon Works
-  3 Jeffries

DWS-910 Condition Assessments

-  4 Hubbard Farms
-  5 Hubbard Richard
-  6 Midtown
-  7 North Corktown
-  8 West Side Industrial

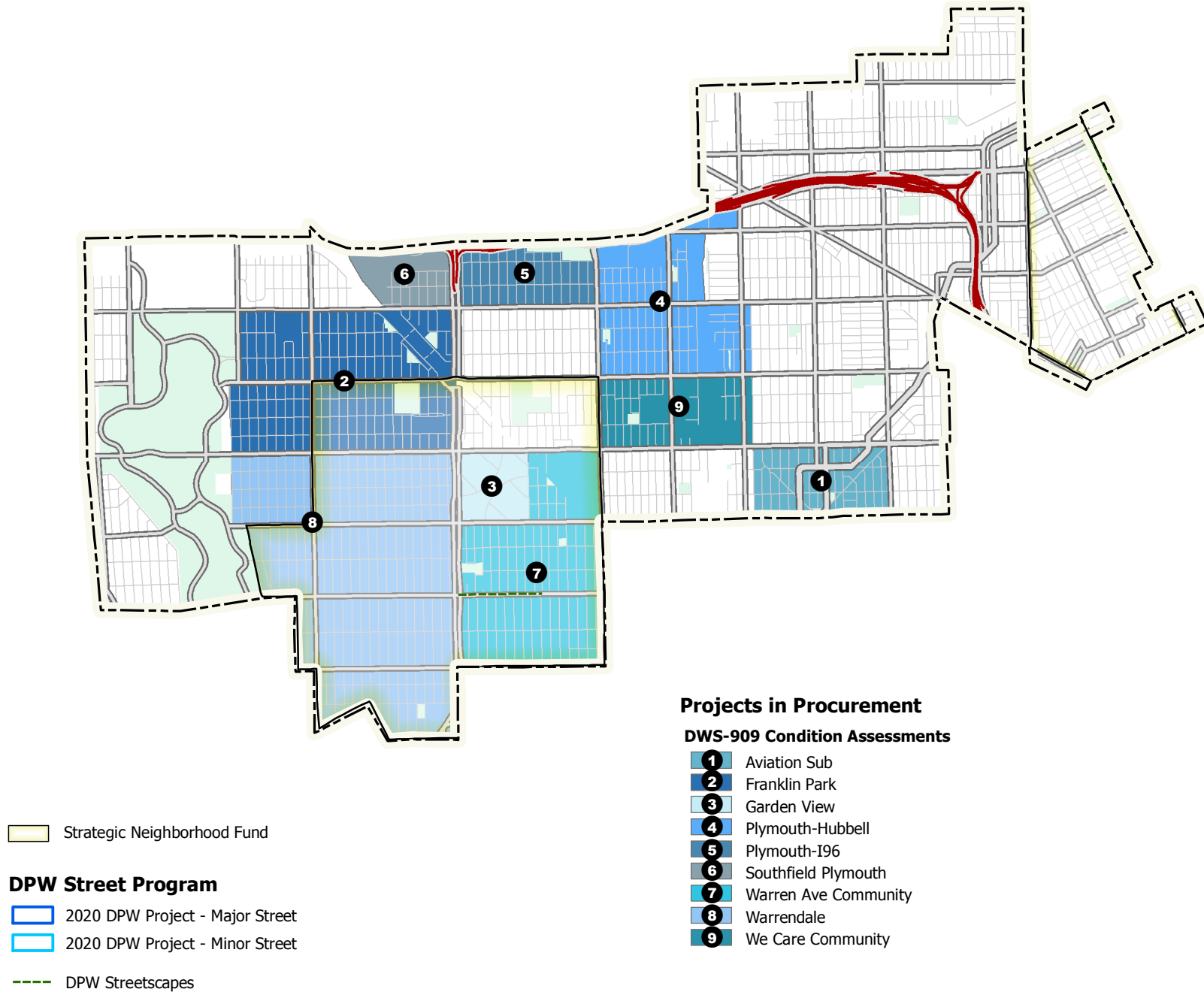


DPW Street Program

-  2020 DPW Project - Major Street
-  2020 DPW Project - Minor Street
-  DPW Streetscapes

DWSD Capital Improvement Plan FY2021 Projects - Sewer

District 7 Active Projects



Thank You



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[@detroitwatersewerage](https://instagram.com/detroitwatersewerage)