

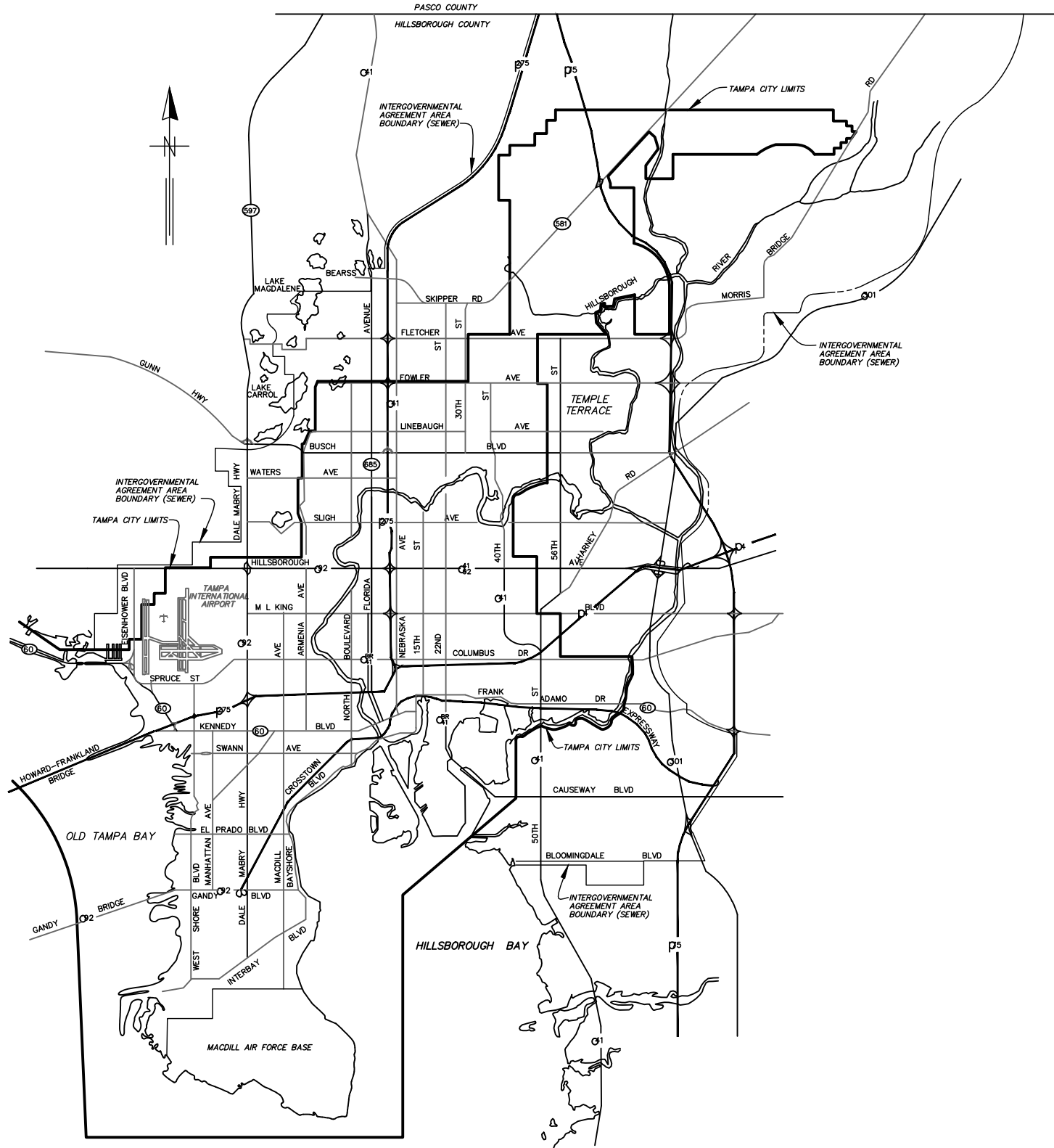
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**Please Email ALL Questions:**  
**[MailTo:ContractAdministration@TampaGov.net](mailto:ContractAdministration@TampaGov.net)**

**Please Let Us Know If You Plan To Bid**

City of Tampa  
Contract Administration Department  
306 E. Jackson St. #280A4N  
Tampa, FL 33602  
(813)274-8456

LOCATION MAP



# CITY of TAMPA



## WASTEWATER DEPARTMENT

### PLANS FOR FY18 MANHOLE REHABILITATION

CONTRACT No.  
18-C-000020

User: ssBk Drawing Name: K:\wastewater projects\fy18 manhole rehabilitation\Drafting\DWG\2018\_COVER.dwg Layout- May 17, 2018 - 1:00pm CTB - WK.CTB

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB	<b>CITY of TAMPA</b> WASTEWATER DEPARTMENT	FY18 MANHOLE REHABILITATION	SHEET 01
	3			DRN: MRL			
	2			CKD: JF			
	1			DATE:			
						COVER	

**GENERAL  
NOTES**

1. THE SCOPE OF THIS PROJECT SHALL CONSIST OF REHABILITATION OF 406 MANHOLES BY THE APPLICATION OF A STRUCTURAL COATING SYSTEM AND ALL APPURTENANCE ASSOCIATED WITH COMPLETION OF THE PROJECT.
2. FOR THE MANHOLES IN FDOT MAINTAINED ROADWAYS, THE CONTRACTOR SHALL NOTIFY FDOT MAINTENANCE DIVISION AT 744-6038 A MINIMUM OF 48 HOURS PRIOR TO STARTING THE MANHOLE REHABILITATION WORK. FDOT CONSIDERS THIS WORK AS MAINTENANCE AND, AS A RESULT, A RIGHT-OF-WAY PERMIT IS NOT REQUIRED. THE CITY WILL OBTAIN THE SPECIAL-USE PERMIT FROM FDOT. HOWEVER, CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL SIGNAGE IN ACCORDANCE TO FDOT INDEX 602 FOR ANY WORK ACTIVITY LOCATED 15' OR LESS FROM THE EDGE OF PAVEMENT, OR APPLICABLE FDOT INDEX DRAWINGS (MOST CURRENT EDITION).
3. CONTRACTOR SHALL BE FULLY RESPONSIBLE FOR OBTAINING THE NECESSARY ROAD CLOSURE AND RIGHT-OF-WAY PERMITS FROM THE APPROPRIATE GOVERNMENT AGENCIES HAVING JURISDICTION OVER THE SPECIFIC ROADWAYS. THE TABLE ON THIS SHEET, LISTS THE CONTACT NAMES AND PHONE NUMBERS FOR THE AGENCIES WITH JURISDICTION OVER THE VARIOUS LOCATIONS THROUGHOUT THIS PROJECT.
4. IN ORDER TO OBTAIN ROADWAY CLOSURE OR RIGHT-OF WAY PERMITS, AT MINIMUM, THE CONTRACTOR MUST SUBMIT DETAILED MAINTENANCE OF TRAFFIC (MOT) PLANS ALONG WITH APPLICATIONS TO THE APPROPRIATE AGENCY. THE MOT(S) SHALL CONFORM TO APPLICABLE FLORIDA DEPARTMENT OF TRANSPORTATION (FDOT) INDEX DRAWINGS (MOST CURRENT EDITION). THE GOVERNING AGENCIES MAY REQUIRE ADDITIONAL INFORMATION AND DICTATE SPECIFIC WORK TIMES DURING NON-PEAK TRAFFIC HOURS. ALL FEES ASSOCIATED WITH THE PERMITS WILL BE PAID BY THE CITY USING THE CONTINGENCY FUNDS. REFER TO SPECIFIC PROVISIONS FOR SPECIFIC TRAFFIC CONTROL REQUIREMENTS.
5. DURING THE MANHOLE'S INTERIOR CLEANING OPERATION, THE CONTRACTOR MUST PROVIDE A MEANS OF CAPTURING AND DISPOSING OF THE REMOVED DEBRIS. THIS METHOD SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW AND APPROVAL.
6. THE ONLY EXCAVATION NECESSARY FOR THIS PROJECT IS FOR THE REMOVAL AND REPLACEMENT OF THE MANHOLE FRAME AND COVERS AS INDICATED IN THE REHABILITATION SCHEDULE. FOR THESE CASES, THE CONTRACTOR IS REQUIRED TO CALL SUNSHINE AT 1-800-432-4770 TO DETERMINE UTILITY LOCATIONS PRIOR TO EXCAVATION.
7. ALL EXPOSED STEEL REINFORCEMENT SHALL BE THOROUGHLY CLEANED OF ANY DETERIORATION/RUST AND COATED WITH THE PROPOSED COATING SYSTEM.
8. OSHA STANDARD EQUIPMENT SUCH AS SAFETY HARNESSSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
9. ALL RING AND COVERS DESIGNATED TO BE REMOVED SHALL BE DISPOSED OF BY THE CONTRACTOR IN A MANNER APPROVED BY THE ENGINEER.
10. BYPASS PUMPING WILL NOT BE REQUIRED FOR THE MANHOLE REHABILITATION AND BENCH RESTORATION. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.

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PROPOSED MANHOLE COATING SYSTEM THICKNESS	
Location	Coating System
Manhole Barrel	175 MILS (MIN)
Manhole Bottom or Junction Chamber	250 MILS (MIN)
Manhole Benches	125 MILS (MIN)

TRAFFIC OPERATIONS - CONTACTS NAMES			
Location	(Jurisdiction)	Contact Name	Phone Number
Tampa Bay Blvd., MacDill Ave, Himes Ave and including all other streets not mentioned.	(City of Tampa)	COT R/W Section	274-3100 Option 5
Kirby St., Lakeside Blvd., Armenia Ave. and including all other streets not mentioned.	(County)	Amos Castillo	628-5025
Ashley Dr., Florida ave., Busch Blvd., Kennedy Blvd. and including all other streets not mentioned.	(FDOT)	James Meyer	744-6038

No.	DATE	REVISIONS
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DES: CB  
DRN: MRL  
CKD: JF

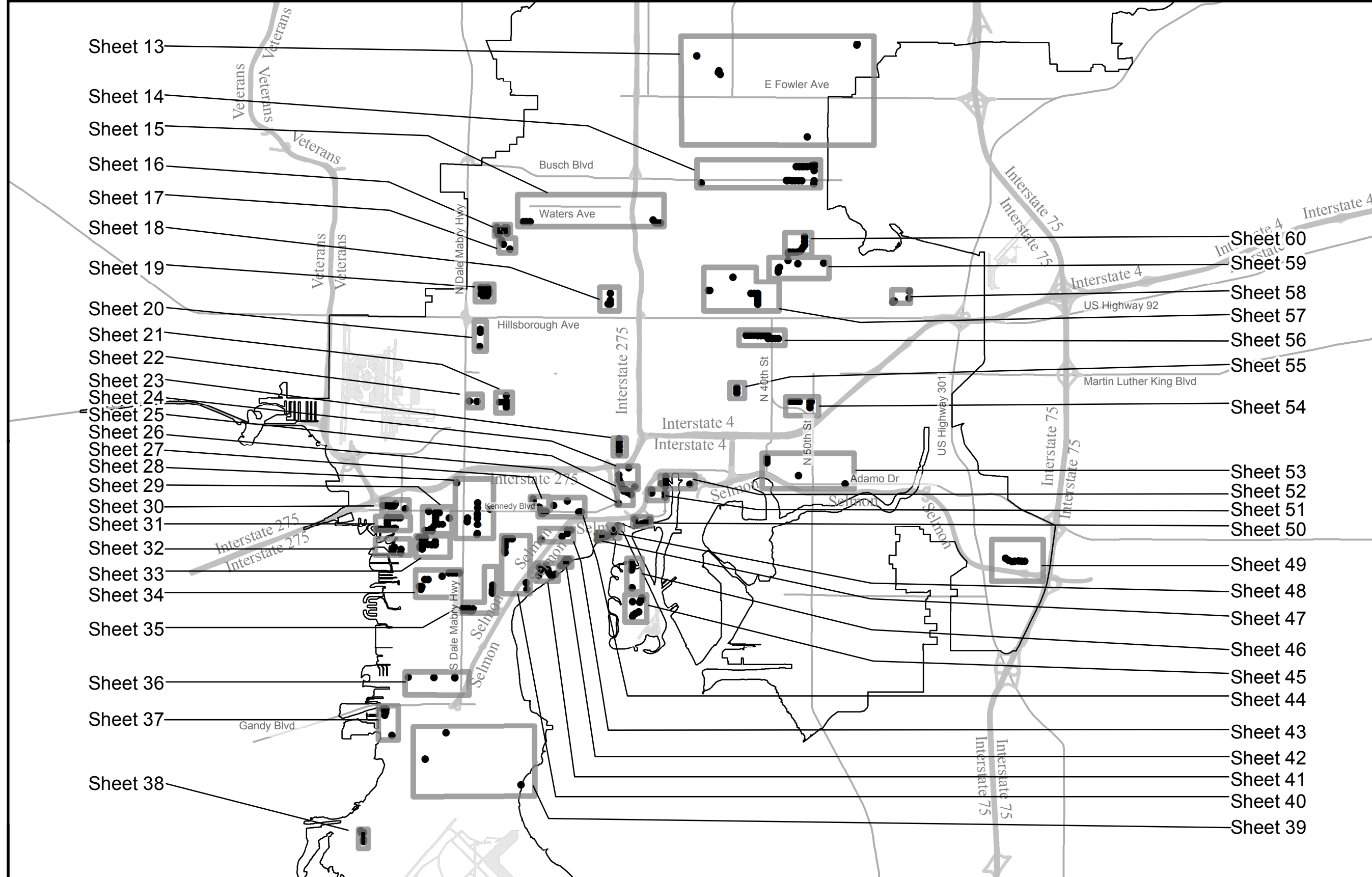
**CITY of TAMPA**  
WASTEWATER DEPARTMENT

**FY18 MANHOLE REHABILITATION**  
**INDEX AND GENERAL NOTES**

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No.	DATE	REVISIONS
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DES:  
DRN:  
CKD:  
DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
I-11	241878	B	43	11.90	4	18	10.57		NO (SMALL, PAVEMENT)	
I-11	241899	A	43	5.97	4	8	5.05		NO (SMALL, PAVEMENT)	
I-11	241961	B	43	7.32	4	10	6.32		NO (SMALL, PAVEMENT)	
J-11	241973	A	42	5.50	4	8	4.58		NO (SMALL, PAVEMENT)	Remove PVC grout pipe inside manhole prior to rehabilitation
J-11	241980	A	41	3.94	4	8	3.02		NO (LARGE, PAVEMENT)	
J-11	241988	A	41	5.00	4	8	4.08		YES (SMALL, GRASS)	
I-10	242005	A	28	9.34	4	12	8.26		NO (SMALL, PAVEMENT)	
I-10	242006	A	28	9.88	4	12	8.80		YES (SMALL, PAVEMENT)	
I-12	242077	B	50	9.53	5	24	7.95		NO (SMALL, PAVEMENT)	
I-12	242093	B	50	19.59	5	24	18.01		NO (SMALL, PAVEMENT)	
I-10	242132	A	40	4.94	4	15	3.73		YES (SMALL, PAVEMENT)	
I-10	242133	A	40	5.45	4	15	4.24		NO (SMALL, PAVEMENT)	
I-10	242134	A	40	6.89	4	18	5.56		NO (SMALL, PAVEMENT)	
J-10	242135	A	40	7.19	4	18	5.86		NO (SMALL, PAVEMENT)	
J-10	242136	A	40	8.15	4	18	6.82		YES (SMALL, PAVEMENT)	
J-10	242137	A	40	9.08	4	18	7.75		NO (SMALL, PAVEMENT)	
J-10	242138	A	40	8.57	4	18	7.24		NO (SMALL, PAVEMENT)	
I-10	242183	A	28	6.89	4	8	5.97		NO (SMALL, PAVEMENT)	
I-10	242184	A	28	7.18	4	8	6.26		NO (SMALL, PAVEMENT)	
I-10	242185	A	28	8.25	4	8	7.33		NO (SMALL, PAVEMENT)	
I-9	242187	A	28	9.53	4	10	8.53		YES (SMALL, PAVEMENT)	
I-9	242207	A	28	5.07	4	8	4.15		YES (SMALL, PAVEMENT)	
I-9	242211	A	28	4.45	4	8	3.53		YES (SMALL, PAVEMENT)	
I-10	242226	A	28	5.90	4	8	4.98		NO (SMALL, PAVEMENT)	
I-10	242230	A	28	3.24	4	8	2.32		NO (SMALL, PAVEMENT)	
I-10	242233	A	28	2.46	4	8	1.54		NO (SMALL, PAVEMENT)	
I-13	242293	A	51	4.84	4	8	3.92		NO (SMALL, PAVEMENT)	
I-13	242294	A	51	4.22	4	8	3.30		YES (SMALL, GRASS)	
I-13	242295	A	51	5.88	4	8	4.96		NO (LARGE, PAVEMENT)	
I-13	242296	A	51	8.60	4	8	7.68		NO (LARGE, PAVEMENT)	
J-10	242500	A	40	9.73	4	24	8.15		YES (SMALL, PAVEMENT)	
I-13	243114	A	50	7.55	4	24	5.97		NO (SMALL, PAVEMENT)	
I-12	243117	B	50	8.09	5	24	6.51		NO (SMALL, PAVEMENT)	
I-12	243119	B	50	8.31	5	24	6.73		NO (SMALL, PAVEMENT)	
I-12	243120	B	50	8.54	5	24	6.96		NO (SMALL, PAVEMENT)	
G-10	243153	A	21	10.76	4	10	9.76		NO (SMALL, PAVEMENT)	
G-10	243154	A	21	9.90	4	10	8.90		YES (SMALL, PAVEMENT)	
G-10	243155	A	21	8.68	4	10	2.00		NO (SMALL, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
G-10	243172	A	21	8.63	4	8	7.71		NO (SMALL, PAVEMENT)	
G-10	243179	A	21	4.90	4	8	3.98		YES (SMALL, PAVEMENT)	
D-10	243770	A	15	7.70	4	18	2.00		YES (LARGE, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
D-10	243771	B	15	10.89	4	18	9.56		YES (SMALL, PAVEMENT)	
I-11	244577	B	43	8.71	4	12	7.63		NO (SMALL, PAVEMENT)	
J-11	245269	B	42	6.59	4	12	5.51		YES (SMALL, PAVEMENT)	
J-11	245270	B	42	5.82	4	12	4.74		YES (SMALL, PAVEMENT)	
J-11	245271	B	42	5.46	4	15	4.25		YES (SMALL, PAVEMENT)	

User: ss8k Drawing Name: K:\wastewater\_projects\fy18\_manhole\_rehabilitation\Drafting\DWG\2018\_SCHEDULE.dwg  
 Layout: May 17, 2018 - 1:00pm CTB - WW.CTB TOSHIBA\_UNI\_COLOR (NORTH WING)

JACINTO CARLOS FERRAS, P.E.  
 #49454 DESIGN DIVISION HEAD  
 WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
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DES: CLB  
 DRN: MRL  
 CKD:  
 DATE:

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

FY18 Manhole rehabilitation  
 MANHOLE REHABILITATION SCHEDULE

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
J-11	245272	B	42	5.22	4	15	4.01		YES (SMALL, PAVEMENT)	
J-11	245289	B	41	6.37	4	8	5.45		YES (SMALL, PAVEMENT)	
J-11	245290	B	41	10.50	4	10	9.50		NO (SMALL, PAVEMENT)	
J-11	245291	B	41	9.68	4	10	8.68		NO (SMALL, PAVEMENT)	
J-11	245292	A	41	8.24	4	10	2.00		YES (SMALL, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
J-11	245301	B	41	7.04	4	8	6.12		NO (SMALL, PAVEMENT)	
J-11	245353	A	42	2.00	4	8	1.08		YES (SMALL, PAVEMENT)	
J-11	245357	B	42	3.09	4	15	1.88		YES (SMALL, PAVEMENT)	
J-11	245363	A	42	1.95	4	8	1.03		YES (SMALL, PAVEMENT)	
G-10	245408	A	21	7.02	4	8	6.10		YES (SMALL, PAVEMENT)	
G-10	245409	A	21	5.02	4	8	4.10		YES (SMALL, GRASS)	
E-15	246329	B	59	9.00	4	8	8.08		YES (SMALL, PAVEMENT)	
E-15	246614	A	59	9.25	4	8	8.33		NO (SMALL, PAVEMENT)	
E-15	246615	A	59	8.54	4	8	7.62		YES (SMALL, PAVEMENT)	
E-15	246616	A	59	5.51	4	10	4.51		YES (SMALL, GRASS)	BENCH RESTORATION REQUIRED
E-15	246617	A	59	6.04	4	12	4.96		YES (SMALL, GRASS)	BENCH RESTORATION REQUIRED
D-10	246921	A	15	8.14	4	18	2.00		YES (SMALL, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
I-12	246987	A	47	2.50	4	10	1.50		NO (SMALL, PAVEMENT)	
I-12	246995	A	47	3.50	4	8	2.58		NO (SMALL, PAVEMENT)	
J-10	247422	A	40	12.98	4	10	11.98		NO (SMALL, PAVEMENT)	
J-10	247445	A	40	10.47	4	8	9.55		NO (SMALL, PAVEMENT)	
J-11	247457	B	41	6.82	4	10	5.82		NO (SMALL, PAVEMENT)	
J-11	247458	A	41	2.68	4	8	1.76		YES (SMALL, SIDEWALK)	
I-12	247479	D	47	11.29	4	42	8.96	40	YES (SMALL, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247484	D	48	12.42	4	42	N/A		NO (LARGE, PAVEMENT)	MH HAS FRP LINER, BENCH RESTORATION ONLY
I-12	247485	D	48	10.66	4	42	8.33	40	NO (LARGE, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247486	D	48	11.92	4	42	9.59	40	YES (SMALL, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247487	D	48	11.93	4	42	9.60	40	YES (LARGE, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247488	D	48	11.91	4	42	9.58	40	YES (SMALL, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247489	D	48	11.97	4	42	9.64	40	YES (SMALL, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247490	D	47	11.31	4	42	8.98	40	YES (SMALL, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247539	D	48	11.80	4	42	9.47	40	YES (LARGE, PAVEMENT)	REMOVE CALCIUM ALUMINATE LINER SYSTEM PRIOR TO PROPOSED COATING SYSTEM
I-12	247552	A	47	3.93	4	8	3.01		NO (SMALL, BRICK)	
I-12	247555	A	47	6.00	4	8	5.08		NO (SMALL, PAVEMENT)	
I-12	247556	A	47	5.42	4	8	4.50		NO (SMALL, PAVEMENT)	
I-12	247564	A	47	7.31	4	10	6.31		YES (SMALL, PAVEMENT)	

User: ss8k Drawing Name: K:\wastewater\_projects\fy18\_manhole\_rehabilitation\Drafting\DWG\2018\_SCHEDULE.dwg  
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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB	<b>CITY of TAMPA</b> <b>WASTEWATER DEPARTMENT</b>	FY18 Manhole rehabilitation	SHEET <span style="font-size: 2em;">05</span>
	3			DRN: MRL		MANHOLE REHABILITATION SCHEDULE (2)	
	2			CKD:			
	1			DATE:			

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
J-11	247598	A	42	5.94	4	8	5.02		YES (SMALL, GRASS)	
J-10	247605	A	35	9.86	4	8	8.94		NO (SMALL, BRICK)	
J-10	247606	A	35	9.62	4	8	8.70		NO (SMALL, BRICK)	
J-10	247607	A	35	9.94	4	8	9.02		NO (SMALL, BRICK)	
J-10	247608	A	35	12.10	4	8	11.18		NO (SMALL, BRICK)	
J-8	248100	B	32	6.25	4	8	5.33		YES (SMALL, PAVEMENT)	
J-8	248122	B	32	10.99	4	8	10.07		YES (SMALL, PAVEMENT)	
J-8	248123	B	32	5.71	4	8	4.79		YES (SMALL, PAVEMENT)	
D-10	248474	A	16	4.66	4	8	3.74		NO (SMALL, PAVEMENT)	
D-10	248475	A	16	4.28	4	8	3.36		NO (SMALL, PAVEMENT)	
D-10	248476	A	16	3.90	4	8	2.98		NO (SMALL, PAVEMENT)	
D-10	248485	A	16	4.00	4	8	3.08		YES (SMALL, PAVEMENT)	
D-10	248486	A	16	4.31	4	8	3.39		YES (SMALL, PAVEMENT)	
D-10	248488	A	16	9.30	4	10	8.30		YES (SMALL, GRASS)	BENCH RESTORATION REQUIRED
D-10	248490	A	16	9.23	4	8	8.31		NO (SMALL, PAVEMENT)	
D-10	248491	B	16	9.45	4	10	8.45		YES (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
D-10	248494	A	16	4.58	4	8	3.66		NO (SMALL, PAVEMENT)	
D-10	248499	A	16	9.04	4	8	8.12		NO (SMALL, PAVEMENT)	
D-10	248517	B	17	10.76	4	10	9.76		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
D-10	248526	B	17	11.27	4	10	10.27		NO (SMALL, PAVEMENT)	
D-10	248527	B	17	10.80	4	10	9.80		NO (SMALL, PAVEMENT)	
D-10	248531	B	17	8.76	4	10	7.76		NO (SMALL, GRASS)	
H-12	249831	A	24	7.01	4	18	5.68		NO (SMALL, PAVEMENT)	
I-12	249832	B	25	10.33	4	20	8.91		YES (SMALL, PAVEMENT)	
I-12	249833	B	25	10.27	4	20	8.85		NO (SMALL, PAVEMENT)	
I-12	249834	B	25	9.25	4	20	7.83		NO (SMALL, PAVEMENT)	
I-12	249835	B	25	8.78	4	20	7.36		YES (SMALL, PAVEMENT)	
H-12	249836	B	24	8.17	4	20	6.75		YES (SMALL, PAVEMENT)	
H-12	249838	B	24	8.22	4	20	6.80		NO (SMALL, PAVEMENT)	
H-12	249839	A	24	7.30	4	18	5.97		NO (SMALL, PAVEMENT)	
H-12	249842	A	23	2.50	4	8	1.58		NO (SMALL, PAVEMENT)	
H-12	249847	A	23	3.00	4	8	2.08		NO (SMALL, PAVEMENT)	
H-12	249860	A	23	3.50	4	8	2.58		NO (SMALL, PAVEMENT)	
H-12	249861	A	23	3.50	4	8	2.58		NO (SMALL, PAVEMENT)	
I-11	249907	A	44	4.50	4	8	3.58		NO (SMALL, PAVEMENT)	
I-11	249908	A	44	4.50	4	8	3.58		NO (SMALL, PAVEMENT)	
I-11	249909	A	44	5.00	4	8	4.08		NO (SMALL, PAVEMENT)	
I-11	249969	A	44	4.34	4	8	3.42		NO (SMALL, PAVEMENT)	
H-12	250022	A	23	3.50	4	8	2.58		NO (SMALL, PAVEMENT)	
H-12	250031	A	23	5.47	4	8	4.55		NO (SMALL, PAVEMENT)	
H-12	250060	A	24	4.53	4	8	3.61		YES (SMALL, PAVEMENT)	

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	3			DRN: MRL		MANHOLE REHABILITATION SCHEDULE (3)	
	2			CKD:			
	1			DATE:			

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
I-12	250072	B	26	11.38	4	8	10.46		NO (SMALL, PAVEMENT)	
I-12	250073	B	26	11.37	4	20	9.95		NO (SMALL, PAVEMENT)	
I-12	250076	B	26	12.63	4	20	11.21		NO (SMALL, PAVEMENT)	
I-12	250077	B	26	12.99	4	20	11.57		YES (SMALL, PAVEMENT)	
I-12	250078	B	26	14.19	4	24	12.61		NO (SMALL, PAVEMENT)	
I-12	250083	A	26	13.60	4	24	12.02		NO (LARGE, PAVEMENT)	
I-12	250109	A	25	4.70	4	8	3.78		NO (SMALL, PAVEMENT)	
I-11	250167	A	27	7.80	4	8	6.88		NO (SMALL, PAVEMENT)	
I-11	250171	A	27	8.44	4	8	7.52		NO (SMALL, PAVEMENT)	
I-11	250172	A	27	5.81	4	8	4.89		NO (SMALL, PAVEMENT)	
I-11	250173	A	27	7.15	4	8	6.23		NO (SMALL, PAVEMENT)	
I-11	250174	A	27	8.00	4	8	7.08		NO (SMALL, PAVEMENT)	
I-11	250175	A	27	8.22	4	8	7.30		NO (SMALL, PAVEMENT)	
I-11	250176	A	27	8.84	4	8	7.92		NO (SMALL, PAVEMENT)	
I-11	250211	A	27	8.30	4	8	7.38		NO (SMALL, PAVEMENT)	
I-11	250212	A	27	8.00	4	8	7.08		NO (SMALL, PAVEMENT)	
I-11	250221	A	44	6.00	4	12	4.92		NO (SMALL, PAVEMENT)	
I-11	250222	A	44	6.20	4	12	5.12		NO (SMALL, PAVEMENT)	
I-11	250242	A	44	6.50	4	8	5.58		YES (SMALL, PAVEMENT)	
I-11	250243	A	44	6.50	4	8	5.58		YES (SMALL, PAVEMENT)	
I-11	250257	A	44	3.50	4	8	N/A		NO (SMALL, PAVEMENT)	MH HAS FRP LINER, BENCH RESTORATION ONLY
E-13	251457	B	18	16.33	5	30	14.50		NO (LARGE, PAVEMENT)	BENCH RESTORATION REQUIRED
E-12	251458	B	18	19.76	5	30	17.93		NO (LARGE, PAVEMENT)	BENCH RESTORATION REQUIRED
E-12	251459	B	18	19.55	5	30	17.72		YES (LARGE, PAVEMENT)	BENCH RESTORATION REQUIRED
E-12	252041	B	18	10.62	5	30	8.79		YES (LARGE, PAVEMENT)	BENCH RESTORATION REQUIRED
A-16	252991	A	13	5.91	4	8	4.99		YES (SMALL, GRASS)	
A-16	252992	A	13	4.45	4	8	3.53		YES (SMALL, GRASS)	
F-10	253256	A	20	4.95	4	8	4.03		NO (SMALL, PAVEMENT)	
F-10	253257	A	20	3.20	4	8	2.28		NO (SMALL, GRASS)	
F-10	253287	A	20	7.63	4	8	6.71		NO (SMALL, PAVEMENT)	
C-13	253311	A	14	4.45	4	8	3.53		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
L-9	253341	A	36	3.26	4	8	2.34		YES (LARGE, PAVEMENT)	
L-9	253342	A	36	3.81	4	8	2.89		YES (SMALL, GRASS)	
K-9	253488	B	39	8.50	4	24	2.00		YES (SMALL, GRASS)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
J-8	253491	B	32	5.24	4	8	4.32		YES (SMALL, PAVEMENT)	
J-8	253492	B	32	5.19	4	8	4.27		NO (SMALL, PAVEMENT)	
J-8	253493	B	32	4.66	4	8	3.74		YES (SMALL, PAVEMENT)	
H-13	253669	A	52	5.00	4	21	3.54		YES (SMALL, PAVEMENT)	
H-13	253670	A	52	12.94	4	21	11.48		YES (SMALL, PAVEMENT)	
H-13	253671	A	52	11.21	4	21	9.75		NO (SMALL, PAVEMENT)	
H-13	253672	B	52	10.03	4	21	8.57		NO (SMALL, PAVEMENT)	

User: ss8k Drawing Name: K:\wastewater\_projects\fy18\_manhole\_rehabilitation\Drafting\DWG\2018\_SCHEDULE.dwg  
Layout: May 17, 2018 - 1:00pm CTB - WW.CTB TOSHIBA\_UNI\_COLOR (NORTH WING)

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB DRN: MRL CKD: DATE:	<b>CITY of TAMPA</b> <b>WASTEWATER DEPARTMENT</b>	FY18 Manhole rehabilitation	SHEET <span style="font-size: 2em;">07</span>
	3						
	2					MANHOLE REHABILITATION SCHEDULE (4)	
	1						



Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
I-13	253673	A	52	10.04	4	18	8.71		NO (SMALL, PAVEMENT)	
I-13	253682	A	51	9.93	4	15	8.72		NO (SMALL, PAVEMENT)	
I-13	253685	A	51	8.04	4	15	6.83		NO (SMALL, PAVEMENT)	
H-13	253700	A	52	7.78	4	12	6.70		NO (SMALL, PAVEMENT)	
H-13	253701	A	52	6.38	4	12	5.30		NO (SMALL, PAVEMENT)	
A-13	254299	B	13	11.29	4	10	10.29		YES (SMALL, GRASS)	
I-9	255314	A	29	10.99	4	8	10.07		YES (SMALL, PAVEMENT)	
I-9	255324	A	29	6.75	4	8	5.83		YES (SMALL, PAVEMENT)	
I-9	255346	A	29	4.15	4	8	3.23		YES (SMALL, PAVEMENT)	
I-9	255349	A	29	9.15	4	12	8.07		YES (SMALL, PAVEMENT)	
I-9	255350	A	29	10.73	4	15	9.52		NO (SMALL, PAVEMENT)	
I-9	255351	A	29	12.58	4	15	11.37		NO (SMALL, PAVEMENT)	
I-9	255352	A	29	10.76	4	15	9.55		NO (SMALL, PAVEMENT)	
I-9	255353	A	29	9.01	4	15	7.80		NO (SMALL, PAVEMENT)	
I-9	255354	A	29	8.90	4	15	7.69		YES (SMALL, PAVEMENT)	
I-9	255355	A	29	9.12	4	15	7.91		YES (SMALL, PAVEMENT)	
I-9	255356	A	29	9.14	4	15	7.93		YES (SMALL, GRASS)	
I-9	255373	A	29	8.17	4	12	7.09		YES (SMALL, PAVEMENT)	
I-9	255383	A	29	4.29	4	8	3.37		NO (SMALL, PAVEMENT)	
I-9	255424	A	29	5.12	4	8	4.20		NO (SMALL, PAVEMENT)	
I-9	255435	A	29	7.28	4	8	6.36		NO (SMALL, PAVEMENT)	
I-9	255436	A	29	8.83	4	12	7.75		YES (SMALL, PAVEMENT)	
I-9	255497	A	28	4.22	4	8	3.30		YES (SMALL, PAVEMENT)	
K-9	256299	A	35	6.00	4	8	5.08		YES (SMALL, PAVEMENT)	
K-9	256300	A	35	5.00	4	8	4.08		NO (SMALL, PAVEMENT)	
K-9	256301	A	35	5.00	4	8	4.08		YES (SMALL, PAVEMENT)	
K-9	256302	A	35	3.50	4	8	2.58		YES (SMALL, PAVEMENT)	
K-9	256304	A	35	6.53	4	8	5.61		NO (SMALL, PAVEMENT)	
K-9	256305	A	35	4.50	4	8	3.58		NO (SMALL, PAVEMENT)	
K-9	256306	A	35	3.50	4	8	2.58		NO (SMALL, PAVEMENT)	
K-9	256307	A	35	3.50	4	8	2.58		YES (SMALL, PAVEMENT)	
E-17	256842	B	58	5.90	4	8	4.98		NO (SMALL, PAVEMENT)	
E-17	256845	B	58	8.41	4	12	7.33		YES (SMALL, PAVEMENT)	
E-17	256851	B	58	6.22	4	8	5.30		NO (SMALL, PAVEMENT)	
E-17	256852	B	58	6.52	4	8	5.60		YES (SMALL, PAVEMENT)	
E-17	256853	B	58	6.08	4	8	5.16		YES (SMALL, PAVEMENT)	
E-17	256854	B	58	5.35	4	8	4.43		NO (SMALL, PAVEMENT)	
E-10	256879	A	19	2.55	4	8	1.63		YES (SMALL, PAVEMENT)	
E-10	256883	A	19	7.60	4	8	6.68		YES (SMALL, PAVEMENT)	
E-10	256886	A	19	9.73	4	8	8.81		NO (SMALL, PAVEMENT)	
E-10	256891	B	19	9.05	4	8	8.13		NO (SMALL, PAVEMENT)	

User: ss8k Drawing Name: K:\wastewater\_projects\fy18\_manhole\_rehabilitation\Drafting\DWG\2018\_SCHEDULE.dwg  
Layout: May 17, 2018 - 1:00pm CTB - WW.CTB TOSHIBA\_UNI\_COLOR (NORTH WING)

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB	<b>CITY of TAMPA</b> <b>WASTEWATER DEPARTMENT</b>	FY18 Manhole rehabilitation	SHEET <span style="font-size: 2em;">08</span>
	3			DRN: MRL		MANHOLE REHABILITATION SCHEDULE (5)	
	2			CKD:			
	1			DATE:			

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
E-10	256892	B	19	9.00	4	8	8.08		YES (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
E-10	256893	A	19	8.53	4	8	7.61		NO (SMALL, PAVEMENT)	
E-10	256894	A	19	6.54	4	8	5.62		NO (SMALL, GRASS)	
E-10	256895	A	19	5.39	4	8	4.47		YES (SMALL, GRASS)	
E-10	256896	A	19	3.69	4	8	2.77		NO (SMALL, PAVEMENT)	
E-10	256897	A	19	3.95	4	8	3.03		YES (SMALL, PAVEMENT)	
E-10	256898	A	19	2.97	4	8	2.05		NO (SMALL, PAVEMENT)	
E-10	256901	A	19	3.97	4	8	3.05		YES (SMALL, PAVEMENT)	
E-10	256904	A	19	3.25	4	8	2.33		YES (SMALL, SIDEWALK)	
E-10	256910	A	19	8.95	4	8	2.00		YES (SMALL, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
L-9	257499	A	39	4.00	4	8	N/A		NO (SMALL, PAVEMENT)	MH HAS FRP LINER, BENCH RESTORATION ONLY
A-14	257583	A	13	9.87	4	10	8.87		NO (SMALL, PAVEMENT)	
A-14	257588	A	13	5.16	4	8	4.24		NO (SMALL, PAVEMENT)	
A-14	257589	A	13	4.83	4	8	3.91		NO (SMALL, PAVEMENT)	
A-14	257590	A	13	3.89	4	8	2.97		YES (SMALL, PAVEMENT)	
E-14	258172	B	57	5.15	4	8	4.23		NO (SMALL, GRASS)	
E-14	258437	A	57	3.50	4	8	2.58		YES (SMALL, PAVEMENT)	
E-14	258465	B	57	4.89	4	10	3.89		YES (SMALL, PAVEMENT)	
M-8	258569	A	37	7.44	4	8	6.52		NO (SMALL, PAVEMENT)	
D-15	258641	A	60	9.42	4	8	8.50		NO (SMALL, PAVEMENT)	
D-15	258642	A	60	8.77	4	8	7.85		NO (SMALL, PAVEMENT)	
D-15	258643	A	60	8.60	4	8	7.68		YES (SMALL, GRASS)	
D-15	258680	A	59	7.72	4	8	1.50		NO (SMALL, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
D-15	258684	A	60	16.19	4	10	15.19		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
D-15	258692	A	60	15.48	4	8	14.56		NO (SMALL, PAVEMENT)	
D-15	258694	A	60	15.22	4	8	14.30		NO (SMALL, PAVEMENT)	
D-15	258695	A	60	14.52	4	8	13.60		NO (SMALL, PAVEMENT)	
D-15	258696	A	60	13.80	4	8	12.88		NO (SMALL, PAVEMENT)	
D-15	258697	A	60	11.98	4	8	11.06		NO (SMALL, PAVEMENT)	
D-15	258698	A	60	11.40	4	8	10.48		NO (SMALL, PAVEMENT)	
D-15	258699	A	60	10.06	4	8	9.14		NO (SMALL, PAVEMENT)	
D-15	258738	B	60	7.51	4	8	6.59		YES (SMALL, GRASS)	
G-15	258754	A	54	9.15	4	8	8.23		YES (SMALL, PAVEMENT)	
G-15	258755	A	54	4.04	4	8	3.12		YES (LARGE, PAVEMENT)	
G-15	258768	A	54	10.45	4	8	9.53		NO (SMALL, PAVEMENT)	
G-15	258769	A	54	8.47	4	8	7.55		NO (SMALL, PAVEMENT)	
L-8	258926	A	36	8.43	4	8	7.51		YES (SMALL, GRASS)	
M-8	259383	A	37	5.11	4	8	4.19		YES (SMALL, PAVEMENT)	MH HAS FRP LINER, REHABILITATE BRICK RISER SECTION AND BENCH RESTORATION ONLY
M-8	259392	B	37	5.69	4	8	4.77		YES (SMALL, GRASS)	
M-8	259397	B	37	7.70	4	8	6.78		YES (SMALL, PAVEMENT)	

User: ss8k Drawing Name: K:\wastewater projects\fy18 manhole rehabilitation\Drafting\DWG\2018\_SCHEDULE.dwg  
Layout: May 17, 2018 - 1:00pm CTB - WW.CTB TOSHIBA\_UNI\_COLOR (NORTH WING)

JACINTO CARLOS FERRAS, P.E.  
#49454 DESIGN DIVISION HEAD  
WASTEWATER DEPARTMENT

No.	DATE	REVISIONS
3		
2		
1		

DES: CLB  
DRN: MRL  
CKD:  
DATE:

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

FY18 Manhole rehabilitation  
MANHOLE REHABILITATION SCHEDULE (6)

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
H-16	260161	B	53	3.85	4	8	2.93		YES (SMALL, GRASS)	
H-15	260241	C	53	10.62	4	48	2.00		YES (LARGE, GRASS)	MH HAS T-LOK LINER, REHAB BRICK RISER SECTION AND BENCH RESTORATION ONLY
H-15	260242	C	53	10.62	4	48	2.00		YES (LARGE, GRASS)	MH HAS T-LOK LINER, REHAB BRICK RISER SECTION AND BENCH RESTORATION ONLY
H-15	260243	C	53	7.21	4	48	3.00		NO (SMALL, PAVEMENT)	MH HAS T-LOK LINER, REHAB BRICK RISER SECTION AND BENCH RESTORATION ONLY
G-15	260352	B	54	7.79	4	15	6.58		YES (SMALL, GRASS)	
G-15	260353	B	54	6.65	4	15	5.44		YES (SMALL, PAVEMENT)	
G-15	260355	B	54	5.40	4	15	4.19		YES (SMALL, PAVEMENT)	
G-15	260356	B	54	4.88	4	15	3.67		YES (SMALL, PAVEMENT)	
F-15	260454	E	56	16.00	5	30	14.17		YES(LARGE, PAVEMENT)	REMOVE FIBERGLASS LINER SYSTEM PRIOR TO COATING SYSTEM; BENCH RESTORATION REQUIRED
F-14	260464	A	56	14.18	4	15	12.97		NO (SMALL, PAVEMENT)	
F-14	260465	A	56	8.18	4	12	7.10		YES (SMALL, PAVEMENT)	
F-14	260466	A	56	4.68	4	12	3.60		NO (SMALL, PAVEMENT)	
F-15	260504	A	56	9.57	4	15	8.36		NO (SMALL, PAVEMENT)	
F-15	260505	A	56	12.38	4	15	11.17		NO (SMALL, PAVEMENT)	
F-15	260506	E	56	16.00	5	30	14.17		YES(LARGE, PAVEMENT)	REMOVE FIBERGLASS LINER SYSTEM PRIOR TO COATING SYSTEM; BENCH RESTORATION REQUIRED
F-15	260507	A	56	8.54	4	15	7.33		NO (SMALL, PAVEMENT)	
F-15	260515	A	56	8.50	4	15	7.29		NO (SMALL, PAVEMENT)	
F-15	260525	A	56	12.16	4	15	10.95		NO (SMALL, PAVEMENT)	
F-15	260526	A	56	10.14	4	15	8.93		NO (SMALL, PAVEMENT)	
F-15	260527	A	56	8.42	4	15	7.21		NO (SMALL, PAVEMENT)	
F-15	260528	A	56	9.39	4	15	8.18		NO (SMALL, PAVEMENT)	
F-14	260561	A	56	13.26	4	15	12.05		NO (SMALL, PAVEMENT)	
G-14	260787	A	55	8.98	4	18	7.65		YES (SMALL, PAVEMENT)	
G-14	260788	A	55	8.91	4	18	7.58		YES (SMALL, PAVEMENT)	
G-14	260793	A	55	9.44	4	18	8.11		YES (SMALL, PAVEMENT)	
G-14	260794	A	55	10.26	4	18	8.93		YES (SMALL, PAVEMENT)	
G-14	260801	A	55	11.74	4	18	10.41		NO (SMALL, PAVEMENT)	
D-13	261668	B	15	16.48	4	42	14.15		NO (SMALL, PAVEMENT)	
J-9	261957	A	34	11.19	4	8	10.27		NO (SMALL, PAVEMENT)	
J-9	261958	A	34	11.77	4	8	10.85		NO (SMALL, PAVEMENT)	
J-9	261981	A	34	9.20	4	8	8.28		NO (SMALL, PAVEMENT)	
J-9	261982	A	34	10.38	4	8	9.46		NO (SMALL, PAVEMENT)	
J-9	261983	A	34	10.35	4	8	9.43		YES (SMALL, PAVEMENT)	
J-9	261998	A	33	4.89	4	21	3.43		NO (SMALL, PAVEMENT)	
J-9	261999	A	33	6.01	4	21	4.55		YES (SMALL, PAVEMENT)	
J-9	262000	A	33	6.03	4	24	4.45		YES (SMALL, PAVEMENT)	
J-9	262003	A	33	9.12	4	24	7.54		NO (SMALL, PAVEMENT)	
J-9	262004	A	33	8.63	4	24	7.05		YES (SMALL, PAVEMENT)	
J-8	262005	A	33	8.08	4	24	6.50		YES (SMALL, PAVEMENT)	
J-8	262006	A	33	7.44	4	24	5.86		YES (SMALL, PAVEMENT)	

User: ss8k Drawing Name: K:\wastewater projects\fy18 manhole rehabilitation\Drafting\DWG\2018\_SCHEDULE.dwg  
Layout- May 17, 2018 - 1:00pm CTB - WW.CTB TOSHIBA\_UNI\_COLOR (NORTH WING)

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB DRN: MRL CKD: DATE:	<b>CITY of TAMPA</b> <b>WASTEWATER DEPARTMENT</b>	FY18 Manhole rehabilitation	SHEET <b>10</b>
	3					MANHOLE REHABILITATION SCHEDULE (7)	
	2						
	1						

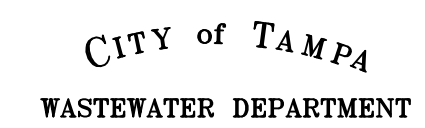
Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
J-8	262007	A	33	7.39	4	24	5.81		YES (SMALL, PAVEMENT)	
J-9	262008	A	33	11.81	4	24	10.23		YES (SMALL, GRASS)	
J-9	262021	B	34	14.97	4	27	13.26		YES (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-9	262022	B	34	15.27	4	27	13.56		YES (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-9	262047	A	34	7.38	4	8	6.46		NO (SMALL, PAVEMENT)	
J-9	262060	A	34	6.45	4	8	5.53		NO (SMALL, PAVEMENT)	
J-9	262135	A	33	10.07	4	8	9.15		NO (SMALL, PAVEMENT)	
J-9	262136	A	33	9.70	4	8	8.78		NO (SMALL, PAVEMENT)	
J-9	262137	A	33	9.76	4	8	8.84		YES (SMALL, PAVEMENT)	
J-9	262138	A	33	9.37	4	8	8.45		NO (SMALL, PAVEMENT)	
J-9	262139	A	33	8.16	4	8	7.24		NO (SMALL, PAVEMENT)	
J-9	262152	A	33	7.37	4	8	6.45		NO (SMALL, PAVEMENT)	
J-8	262192	A	34	11.93	4	8	11.01		NO (SMALL, PAVEMENT)	
C-15	262604	B	14	8.67	4	10	7.67		NO (SMALL, PAVEMENT)	
C-15	262605	B	14	7.43	4	10	6.43		NO (SMALL, PAVEMENT)	
C-15	262606	B	14	8.16	4	10	7.16		YES (SMALL, PAVEMENT)	
C-15	262607	B	14	8.77	4	10	7.77		NO (SMALL, PAVEMENT)	
C-15	262608	B	14	7.46	4	10	6.46		YES (SMALL, PAVEMENT)	
C-15	262609	B	14	9.38	4	10	8.38		NO (SMALL, PAVEMENT)	
C-15	262664	B	14	12.35	4	18	11.02		YES (SMALL, PAVEMENT)	
C-15	262683	B	14	15.84	4	21	14.38		NO (SMALL, PAVEMENT)	
C-15	262768	B	14	12.00	4	10	11.00		NO (SMALL, PAVEMENT)	
C-15	262772	B	14	9.41	4	10	8.41		YES (SMALL, PAVEMENT)	
C-15	262773	B	14	10.10	4	10	9.10		YES (SMALL, PAVEMENT)	
C-15	262774	B	14	10.03	4	10	9.03		YES (SMALL, PAVEMENT)	
C-15	262775	B	14	11.62	4	10	10.62		NO (SMALL, PAVEMENT)	
C-15	262776	B	14	9.00	4	10	8.00		YES (SMALL, PAVEMENT)	
C-15	262777	B	14	7.20	4	10	6.20		YES (SMALL, PAVEMENT)	
C-15	262827	B	13	11.07	4	8	10.15		NO (SMALL, PAVEMENT)	
C-15	262933	B	14	10.02	4	8	9.10		YES (SMALL, PAVEMENT)	
C-15	262940	B	14	4.30	4	8	3.38		YES (SMALL, PAVEMENT)	
C-15	262941	B	14	8.94	4	8	8.02		YES (SMALL, PAVEMENT)	
C-15	262945	B	14	9.19	4	8	8.27		NO (SMALL, PAVEMENT)	
C-16	262959	B	14	9.40	4	10	8.40		YES (SMALL, PAVEMENT)	
N-10	263626	B	39	16.06	4	21	14.60		NO (SMALL, PAVEMENT)	
K-12	264045	A	45	5.19	4	8	4.27		NO (SMALL, PAVEMENT)	
K-12	264046	A	45	5.14	4	8	4.22		NO (SMALL, PAVEMENT)	
K-12	264047	A	45	2.84	4	8	1.92		NO (SMALL, PAVEMENT)	
K-12	264048	A	45	3.87	4	8	2.95		NO (SMALL, PAVEMENT)	
J-12	264064	A	46	5.81	4	15	4.60		YES (SMALL, PAVEMENT)	
J-12	264067	A	46	5.14	4	15	3.93		NO (SMALL, PAVEMENT)	

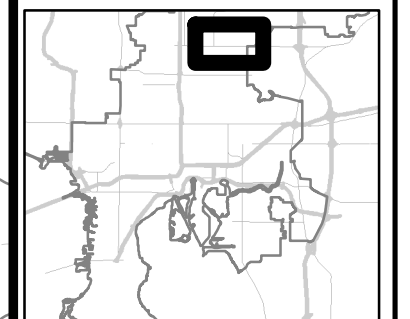
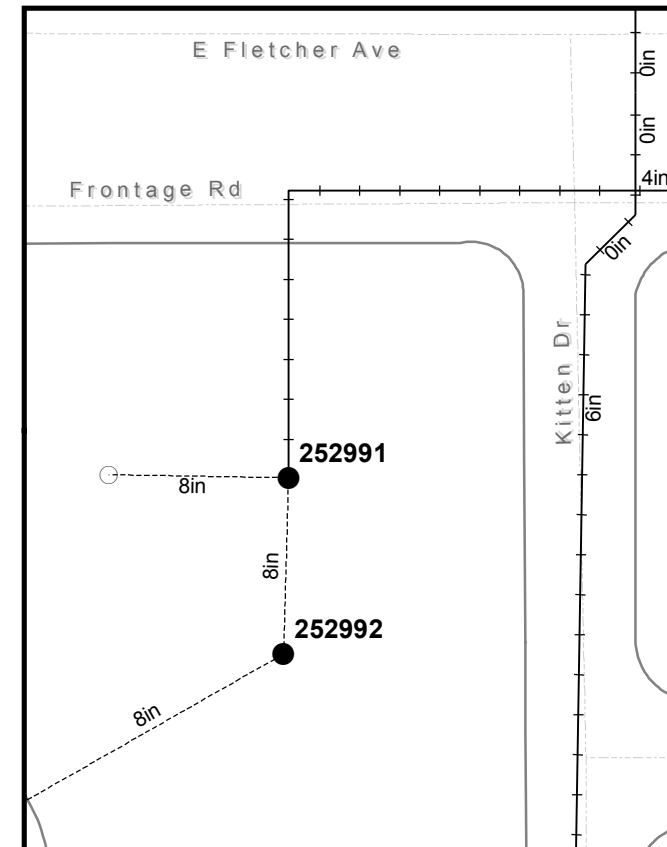
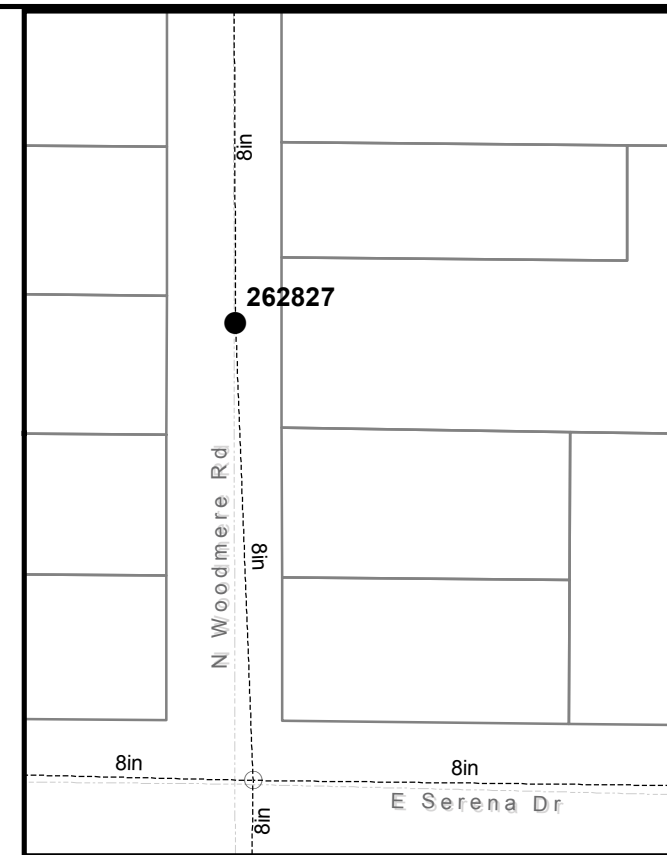
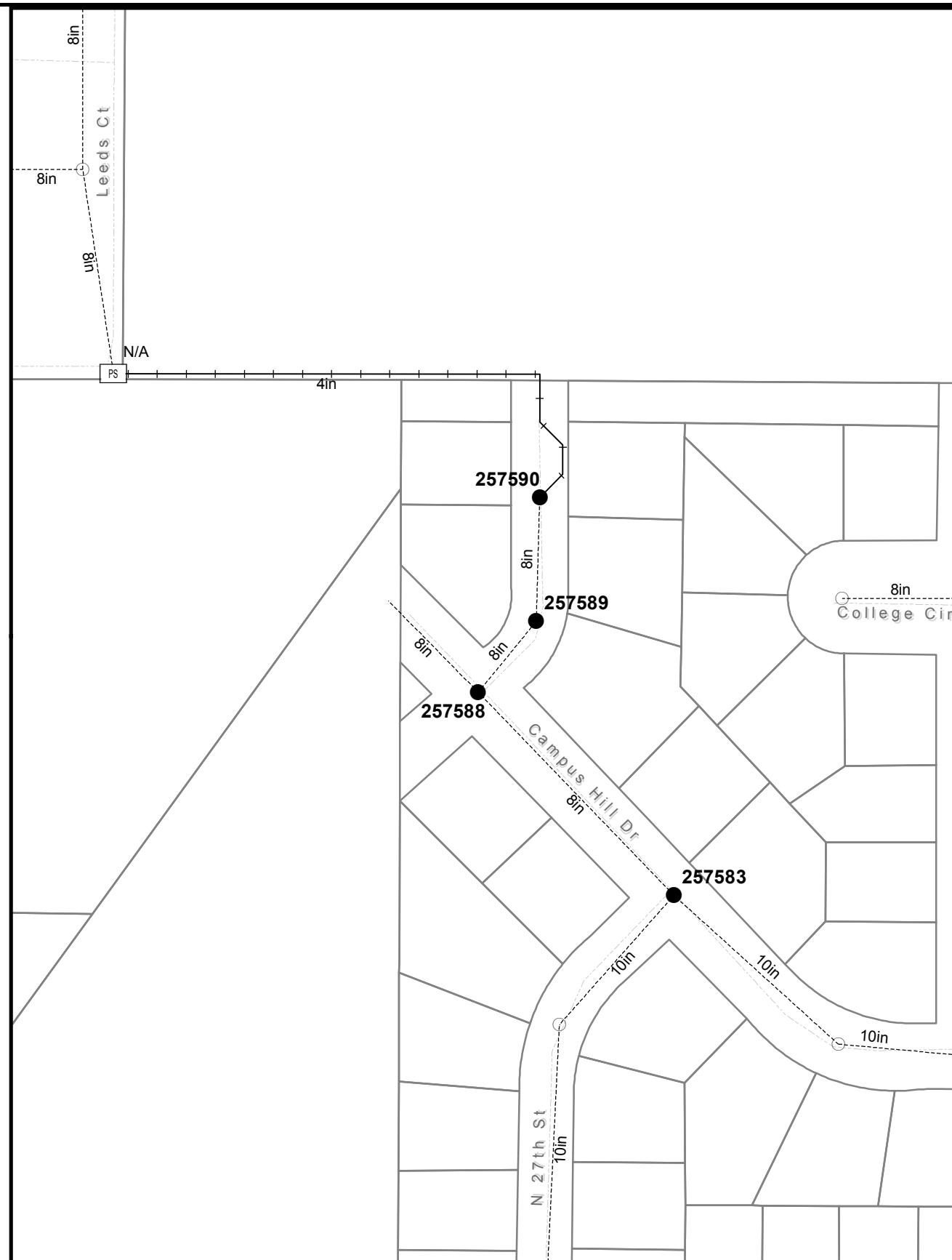
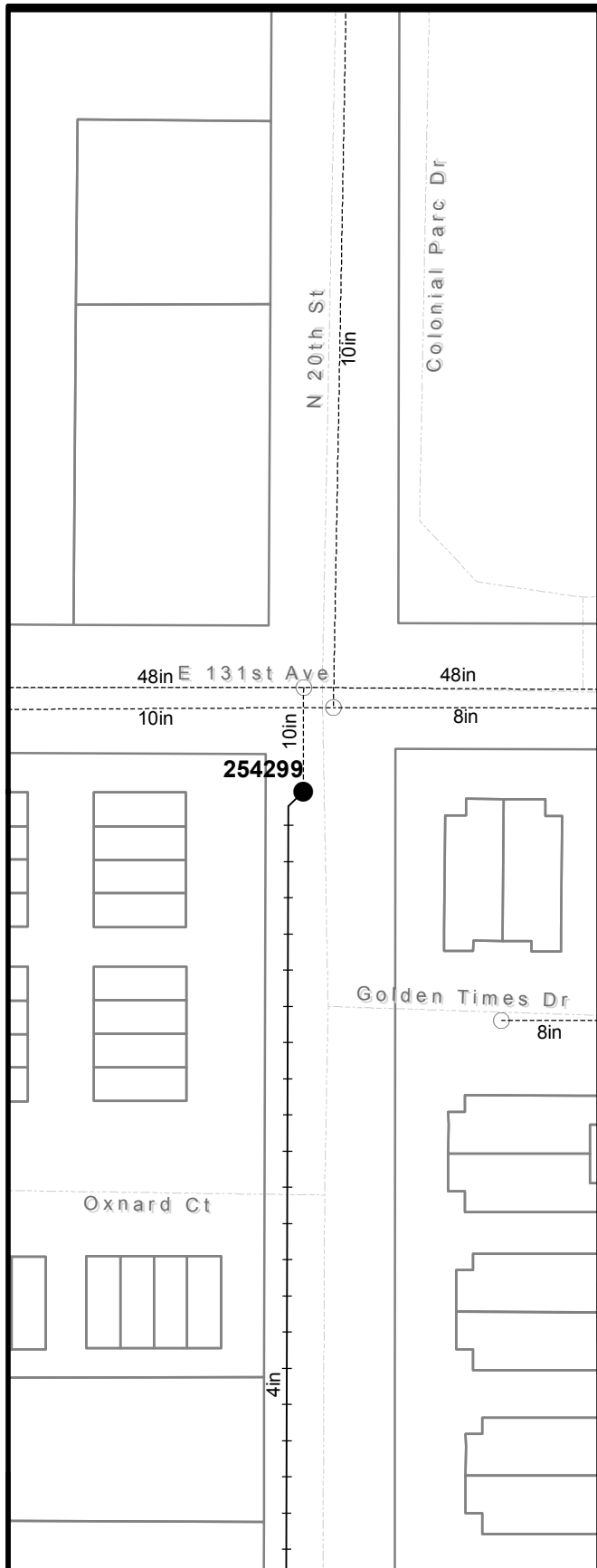
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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB	<b>CITY of TAMPA</b> <b>WASTEWATER DEPARTMENT</b>	FY18 Manhole rehabilitation	SHEET 11
	3			DRN: MRL		MANHOLE REHABILITATION SCHEDULE (8)	
	2			CKD:			
	1			DATE:			

Manhole Rehabilitation Schedule										
Atlas	FID	Manhole Type	Plan Sheet #	Approx Depth (ft)	Barrel Dia. (ft)	Downstream Pipe Dia. (in)	Barrel Payment Length (ft)	Bottom Chamber Payment Area (sf)	Replace Frame and Cover (Size, In Grass or Pavement)	Comments
J-12	264068	A	46	4.45	4	15	3.24		NO (SMALL, PAVEMENT)	
J-12	264070	A	46	4.84	4	8	3.92		NO (SMALL, PAVEMENT)	
K-12	264091	A	45	8.51	4	8	7.59		YES (SMALL, GRASS)	
K-12	264092	A	45	8.90	4	12	7.82		YES (SMALL, GRASS)	
K-12	264093	A	45	9.20	4	12	8.12		NO (SMALL, PAVEMENT)	
K-12	264094	A	45	10.20	4	12	9.12		NO (SMALL, PAVEMENT)	
K-12	264095	A	45	10.19	4	12	9.11		NO (SMALL, PAVEMENT)	
K-12	264113	A	45	5.98	4	8	5.06		YES (SMALL, GRASS)	
J-12	264127	B	46	8.45	4	8	7.53		NO (SMALL, PAVEMENT)	
J-12	264129	A	46	7.95	4	15	6.74		YES (LARGE, PAVEMENT)	
J-12	264130	A	46	5.35	4	8	4.43		NO (SMALL, PAVEMENT)	
E-15	264339	A	57	10.56	4	15	9.35		YES (SMALL, PAVEMENT)	
E-15	264340	A	57	7.43	4	15	6.22		YES (SMALL, PAVEMENT)	
E-15	264346	A	57	6.65	4	15	5.44		NO (SMALL, PAVEMENT)	
E-15	264347	A	57	9.29	4	18	7.96		NO (SMALL, PAVEMENT)	
E-15	264348	A	57	9.10	4	18	7.77		NO (SMALL, PAVEMENT)	
E-14	264349	A	57	7.77	4	15	N/A		YES (SMALL, PAVEMENT)	MH HAS FRP LINER, BENCH RESTORATION ONLY
E-14	264350	A	57	6.04	4	15	4.83		YES (SMALL, PAVEMENT)	
O-8	264507	A	38	3.00	4	8	2.08		NO (SMALL, PAVEMENT)	
O-7	264515	A	38	7.55	4	8	6.63		NO (SMALL, PAVEMENT)	
O-7	264516	A	38	8.16	4	8	7.24		NO (SMALL, PAVEMENT)	
O-8	264517	A	38	9.98	4	8	9.06		NO (SMALL, PAVEMENT)	
O-8	264520	A	38	3.80	4	8	2.88		NO (SMALL, PAVEMENT)	
J-19	265183	B	49	12.02	4	24	10.44		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-19	265184	B	49	11.06	4	24	9.48		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-19	265185	B	49	12.60	4	24	11.02		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-19	265188	B	49	11.98	4	24	10.40		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-19	265192	B	49	12.68	4	24	11.10		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-19	265194	B	49	14.68	4	24	13.10		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
J-19	265196	B	49	14.20	4	24	12.62		NO (SMALL, PAVEMENT)	BENCH RESTORATION REQUIRED
D-13	265235	B	15	19.38	4	42	17.05		YES (SMALL, PAVEMENT)	
D-13	265236	B	15	19.28	4	42	16.95		NO (SMALL, PAVEMENT)	
D-13	265238	B	15	16.65	4	36	14.57		NO (SMALL, PAVEMENT)	
G-9	265737	A	22	8.93	4	18	7.60		YES (SMALL, GRASS)	
G-9	265741	A	22	5.75	4	18	4.42		YES (SMALL, GRASS)	
I-8	266019	B	30	6.26	4	8	5.34		NO (SMALL, PAVEMENT)	
I-8	266021	B	30	10.52	4	10	9.52		NO (SMALL, PAVEMENT)	
I-8	266022	A	30	12.21	4	12	11.13		YES (SMALL, PAVEMENT)	
I-8	266023	A	30	13.54	4	12	12.46		NO (SMALL, PAVEMENT)	
I-8	266024	A	30	13.43	4	12	12.35		YES (SMALL, PAVEMENT)	
I-8	266025	A	30	14.13	4	12	13.05		NO (SMALL, PAVEMENT)	

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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: CLB		FY18 Manhole rehabilitation	SHEET 12
	3			DRN: MRL			
	2			CKD:		MANHOLE REHABILITATION SCHEDULE (9)	
	1			DATE:			



No.	DATE	REVISIONS
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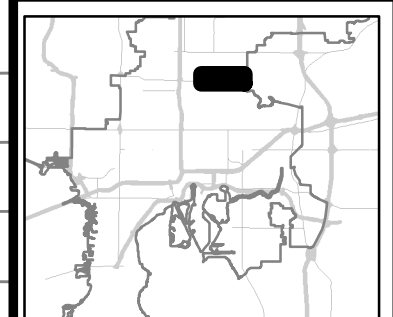
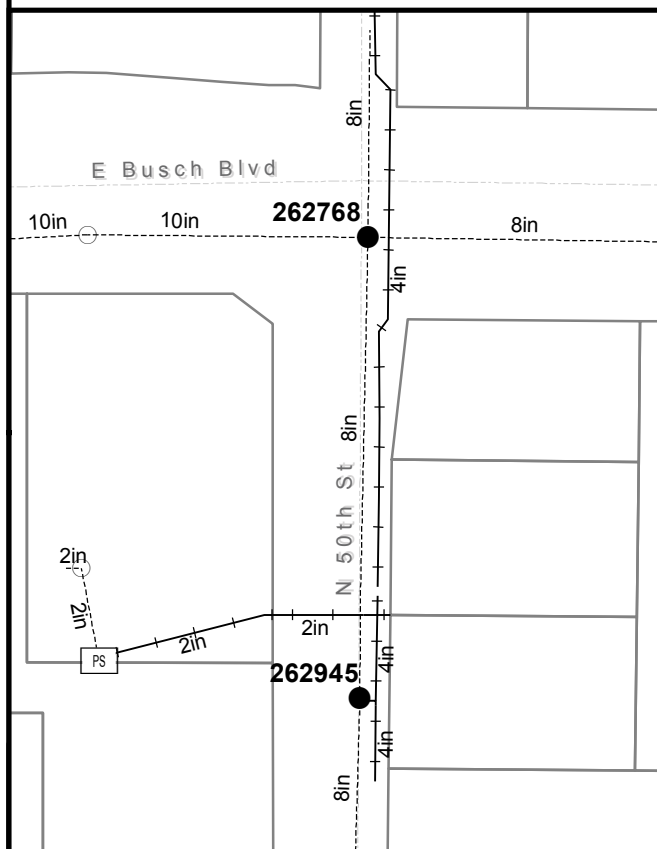
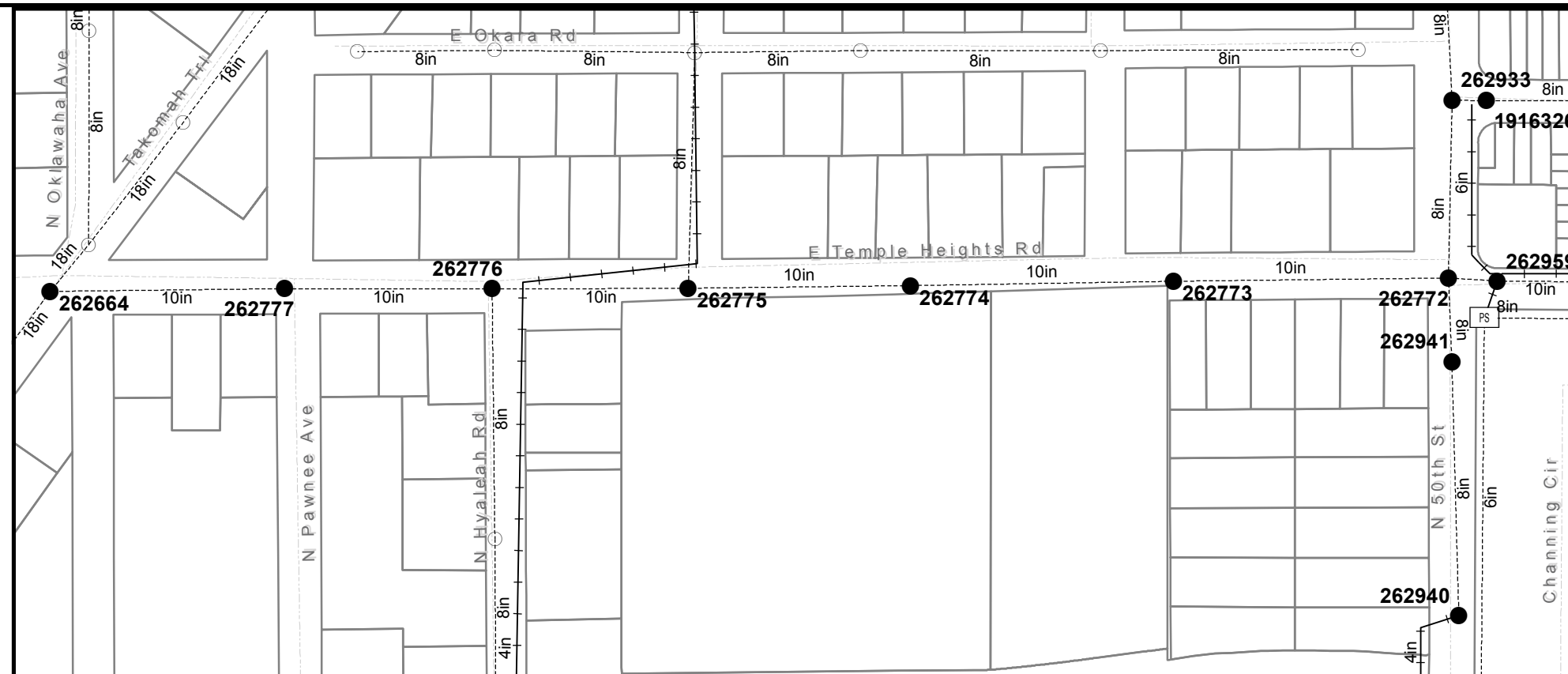
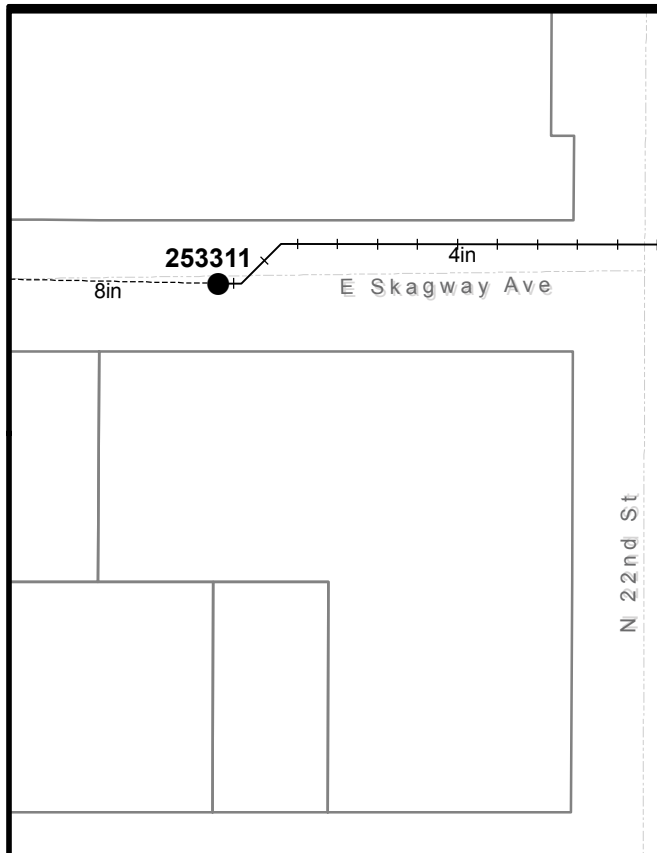
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-014



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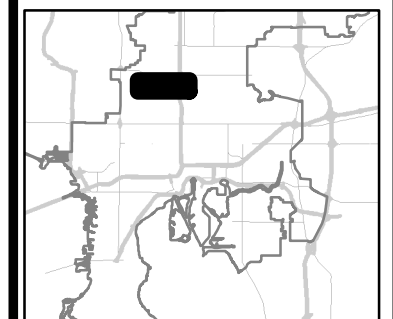
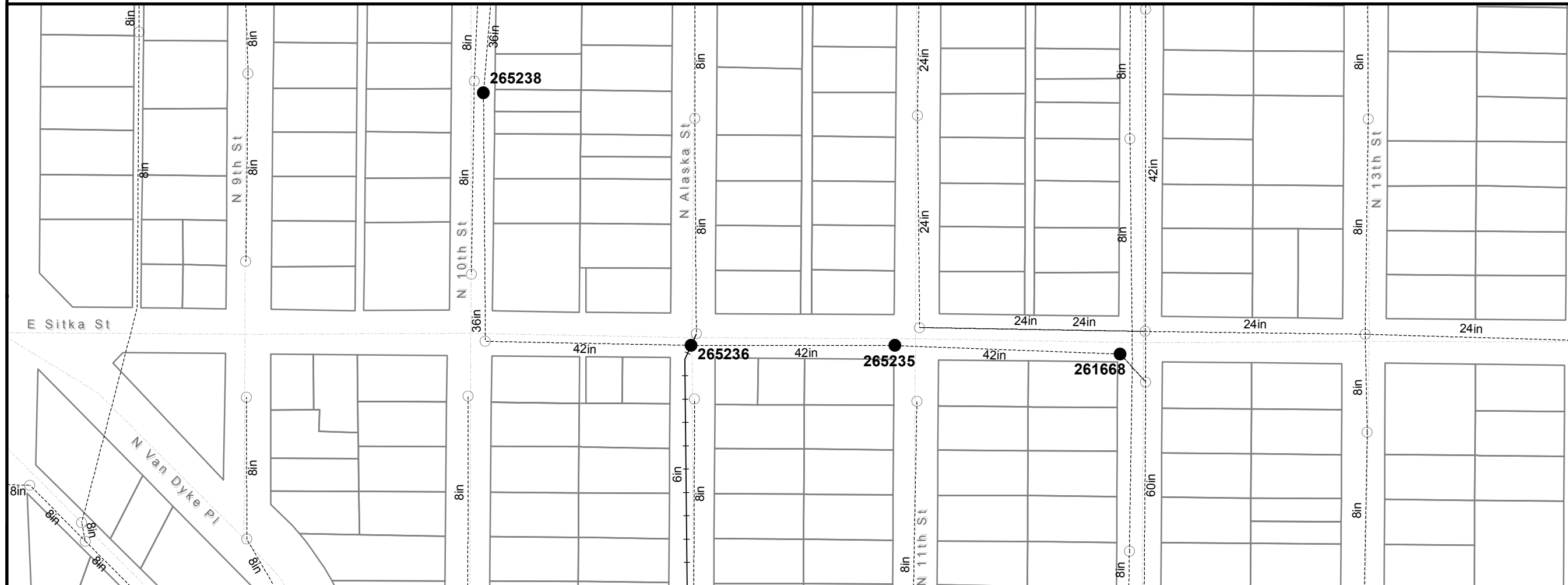
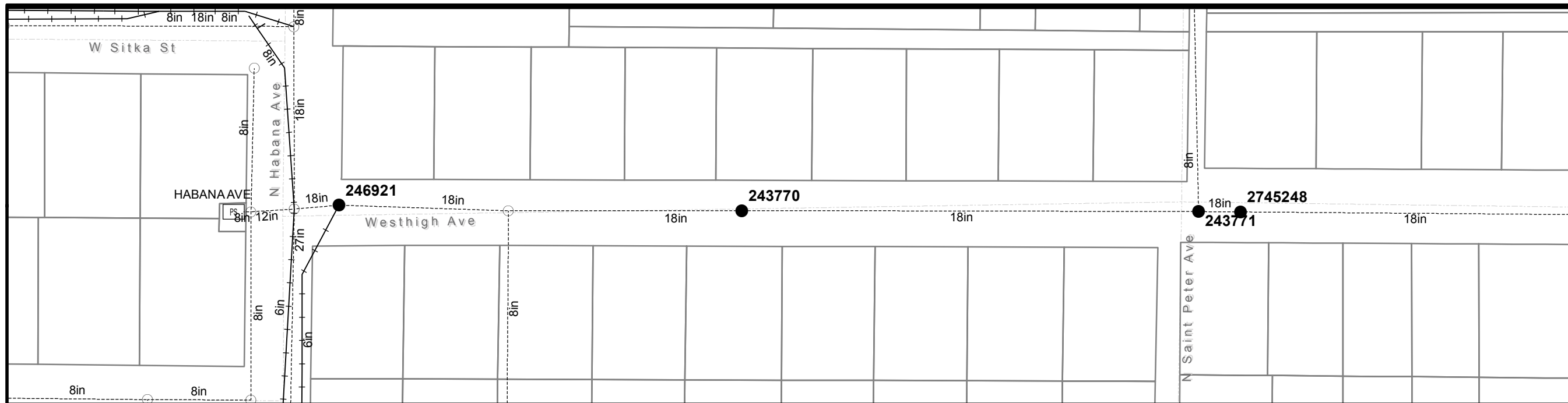
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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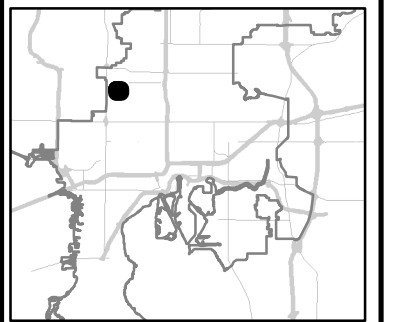
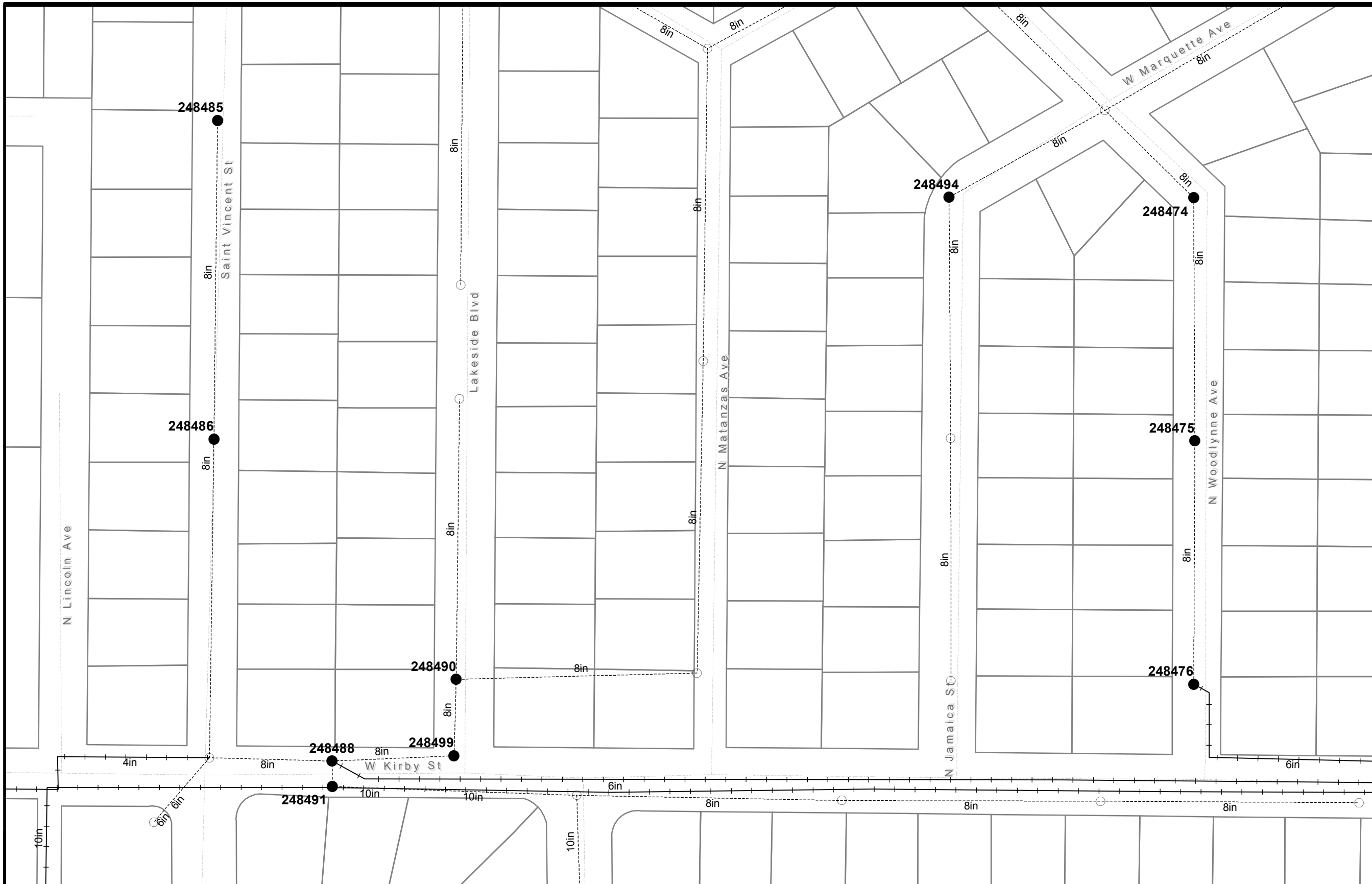
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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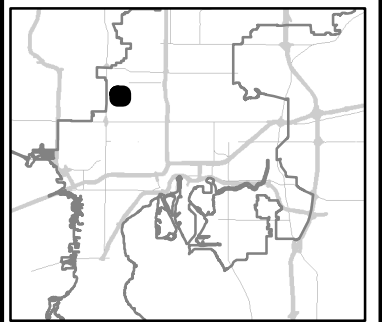
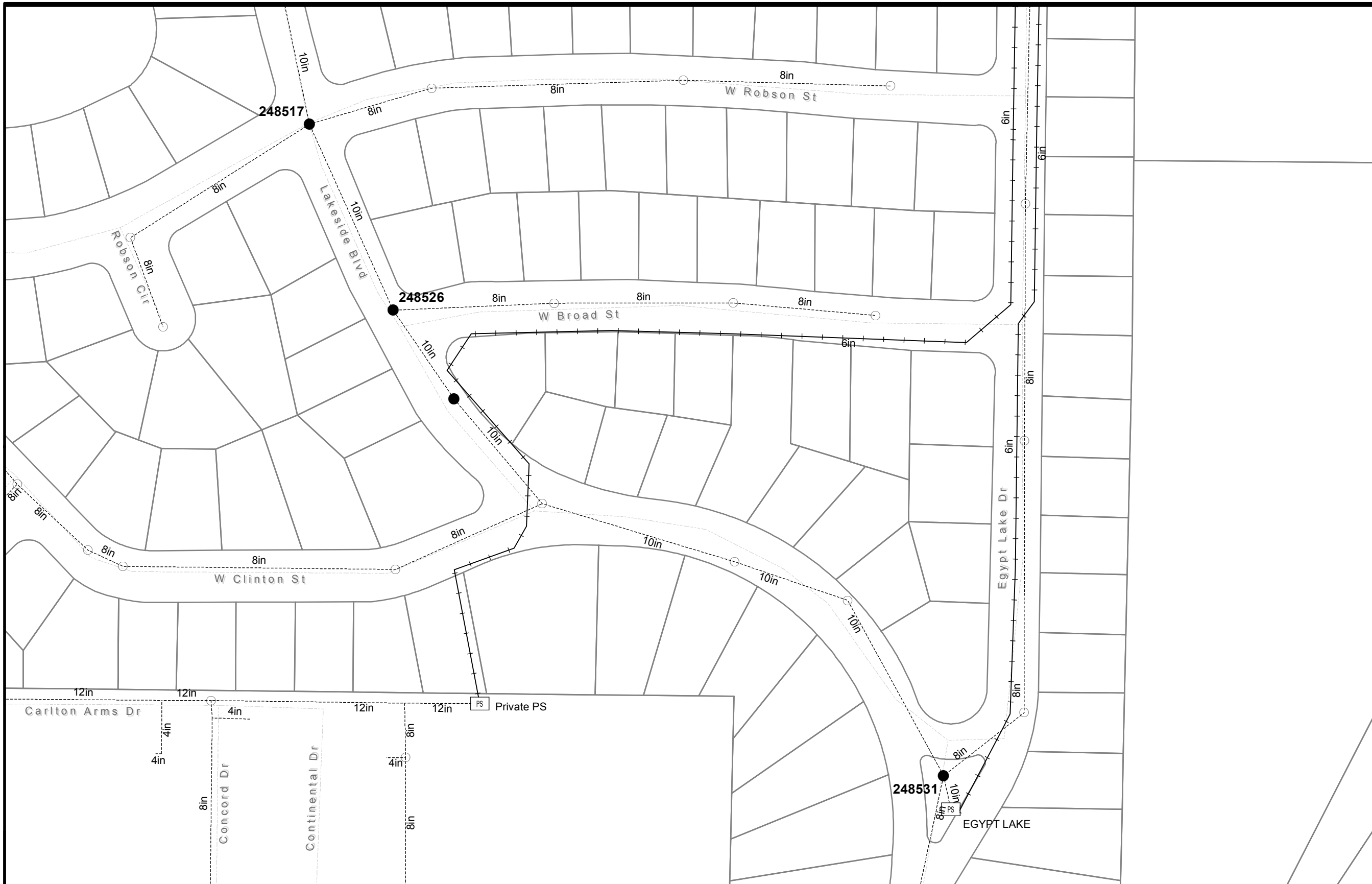
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains



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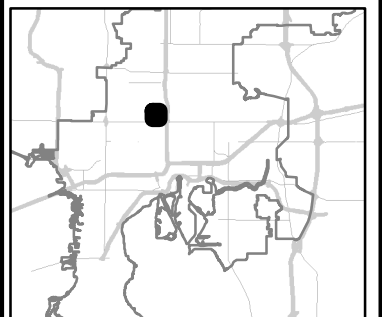
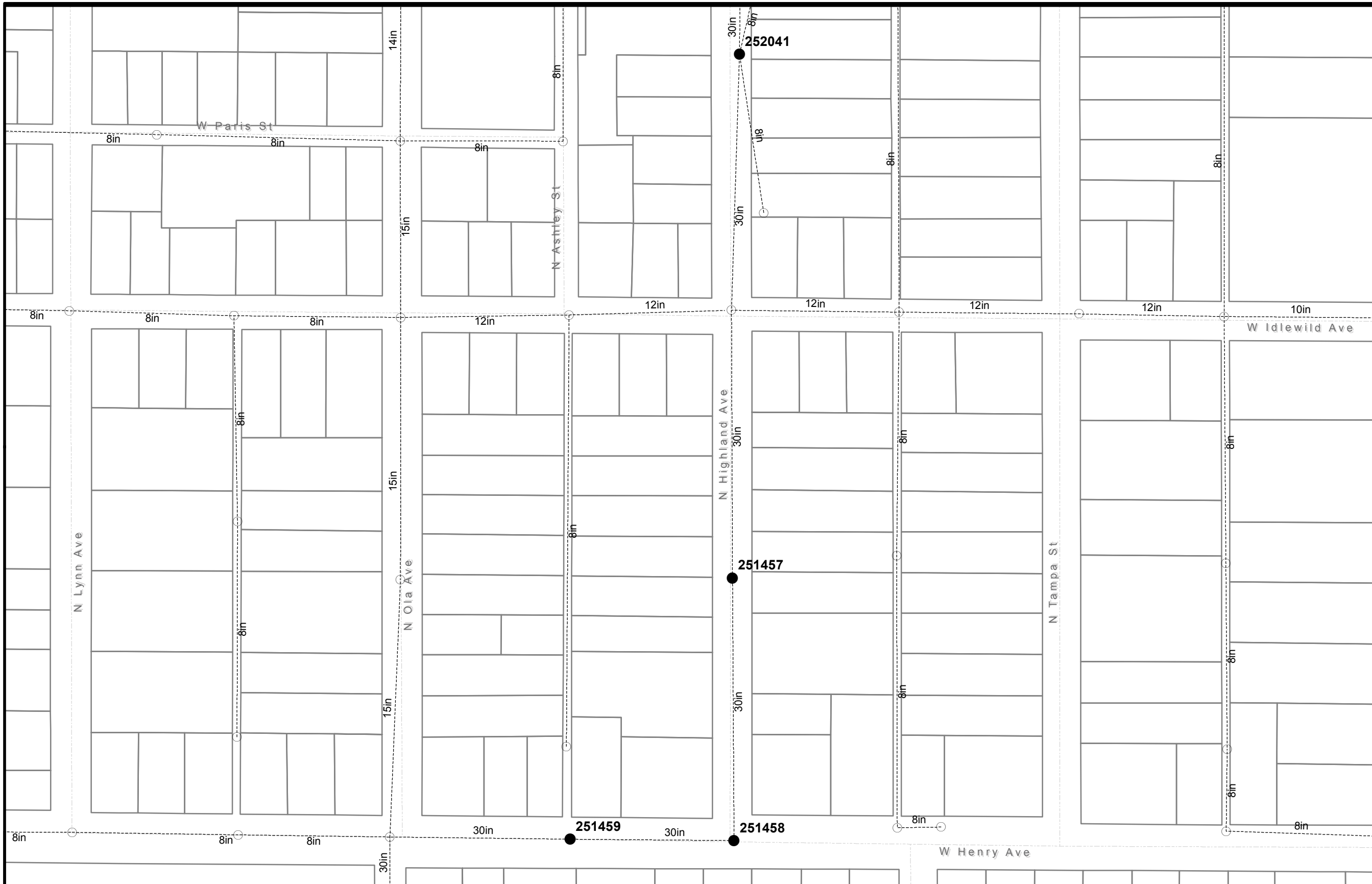
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-018



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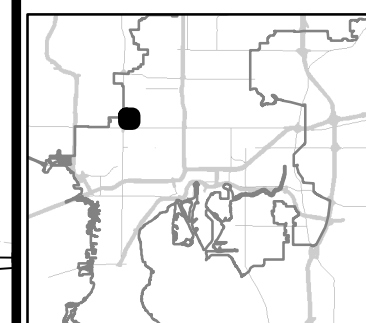
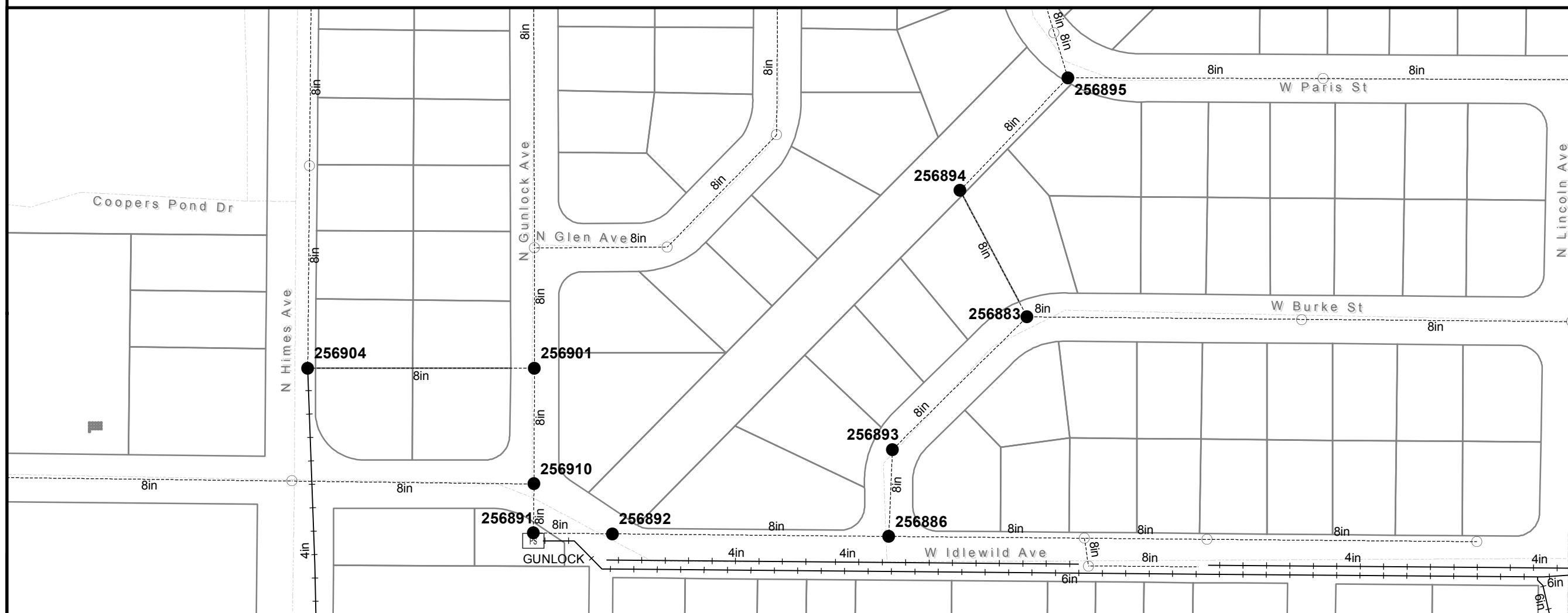
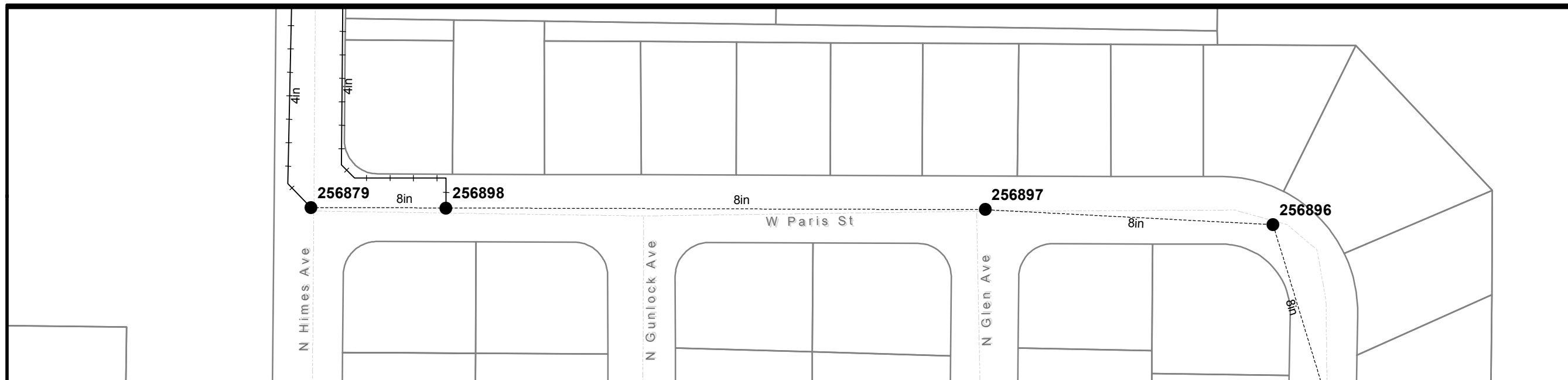
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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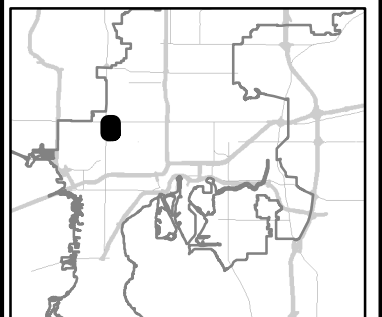
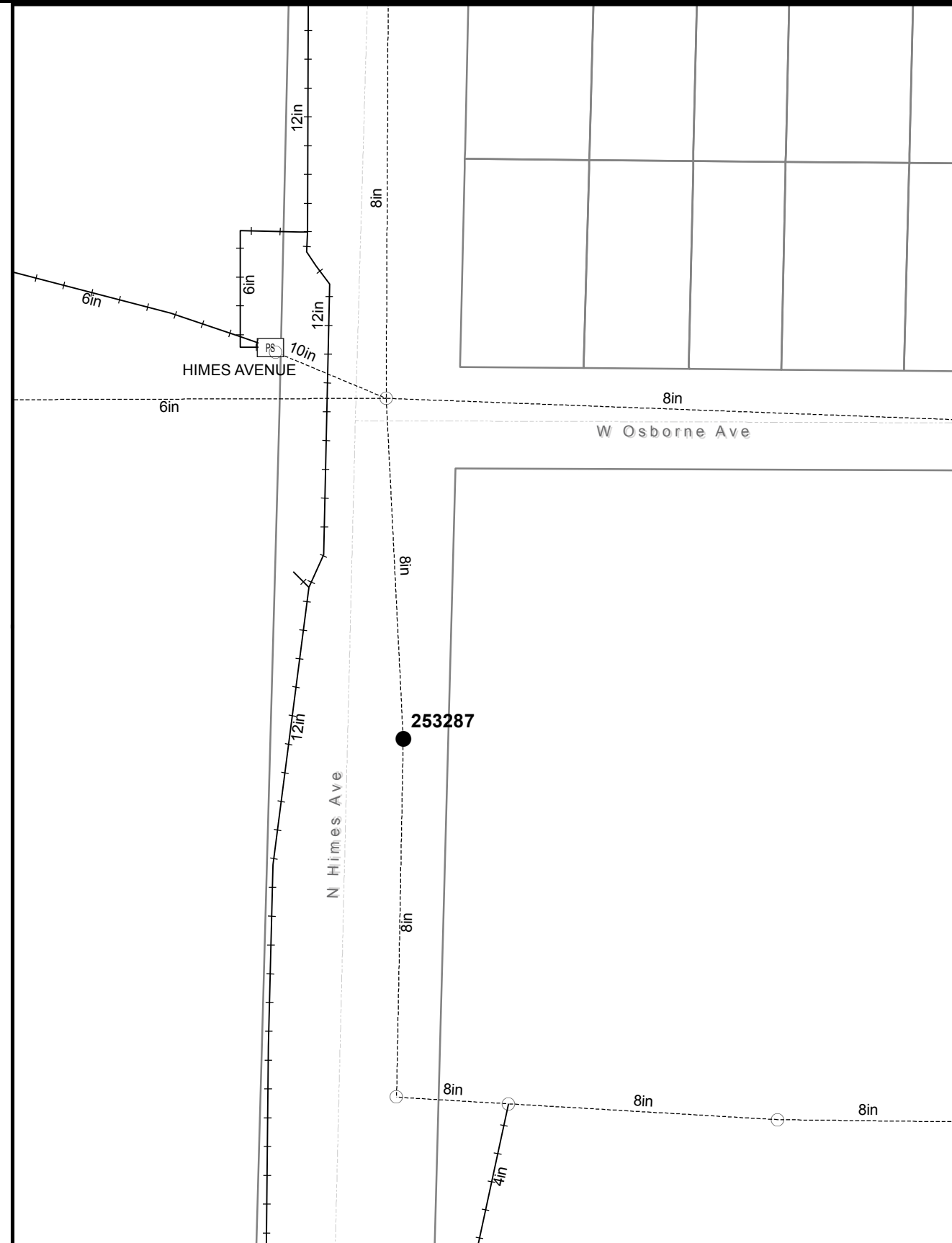
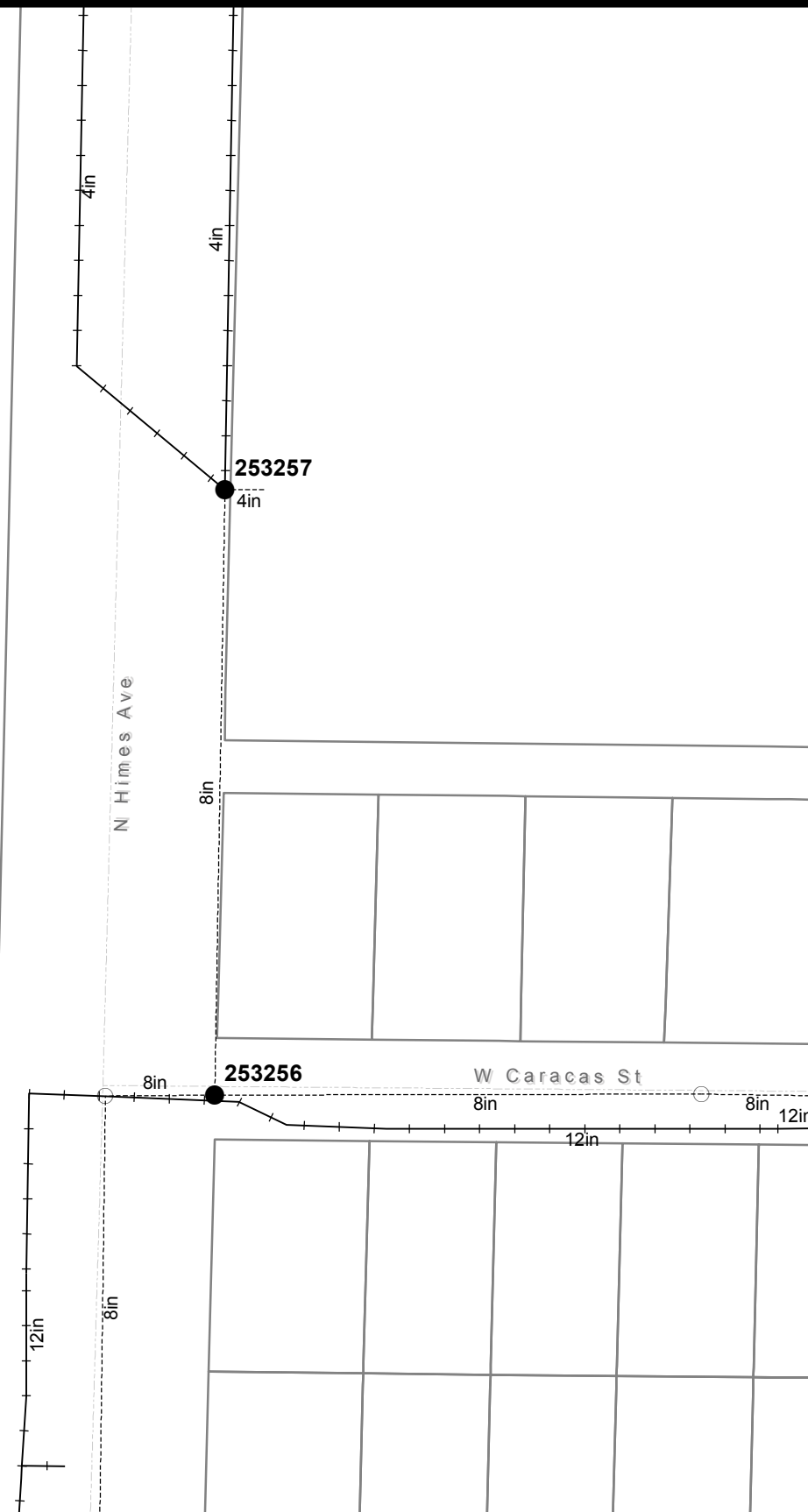
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-020



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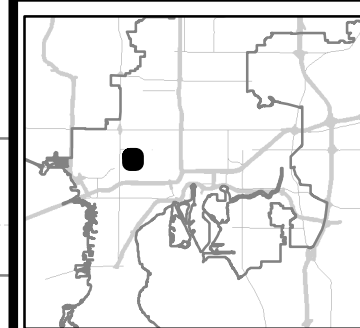
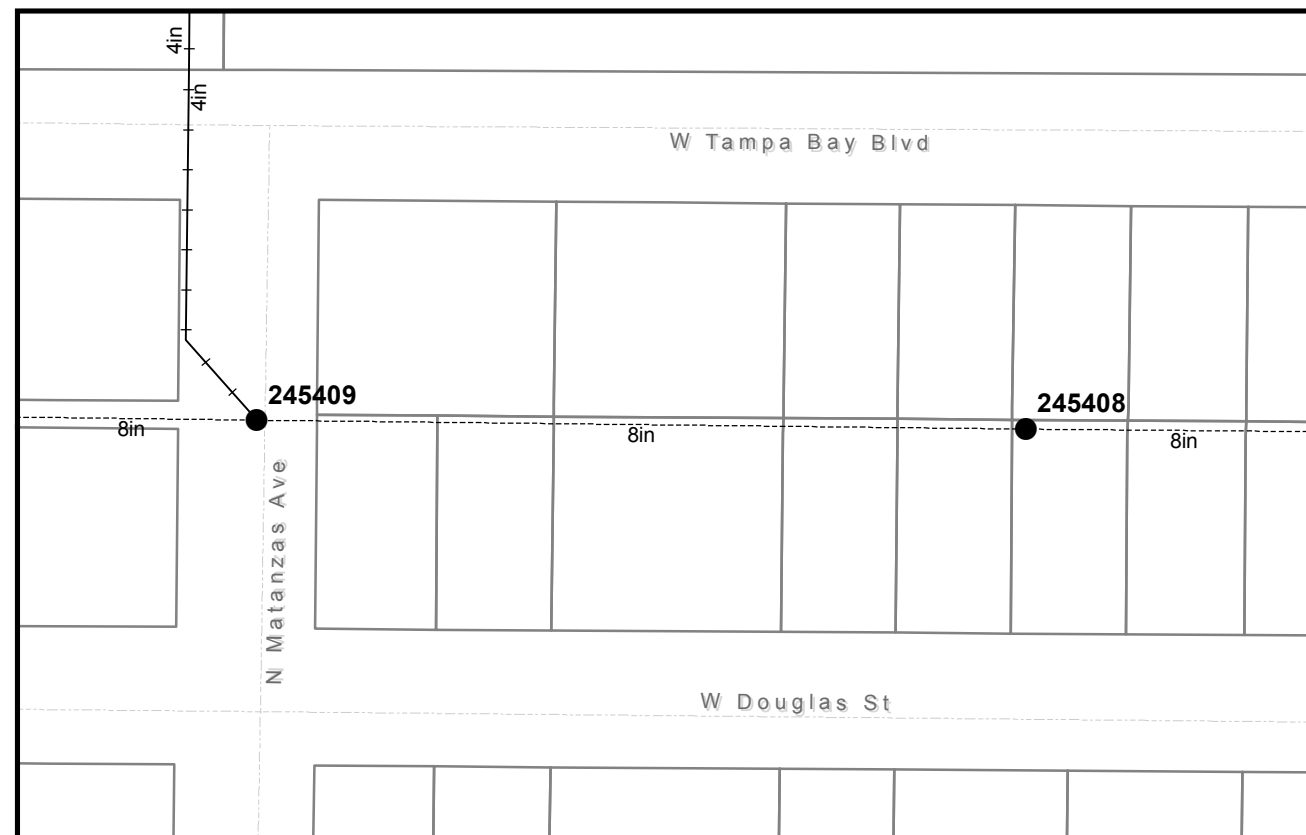
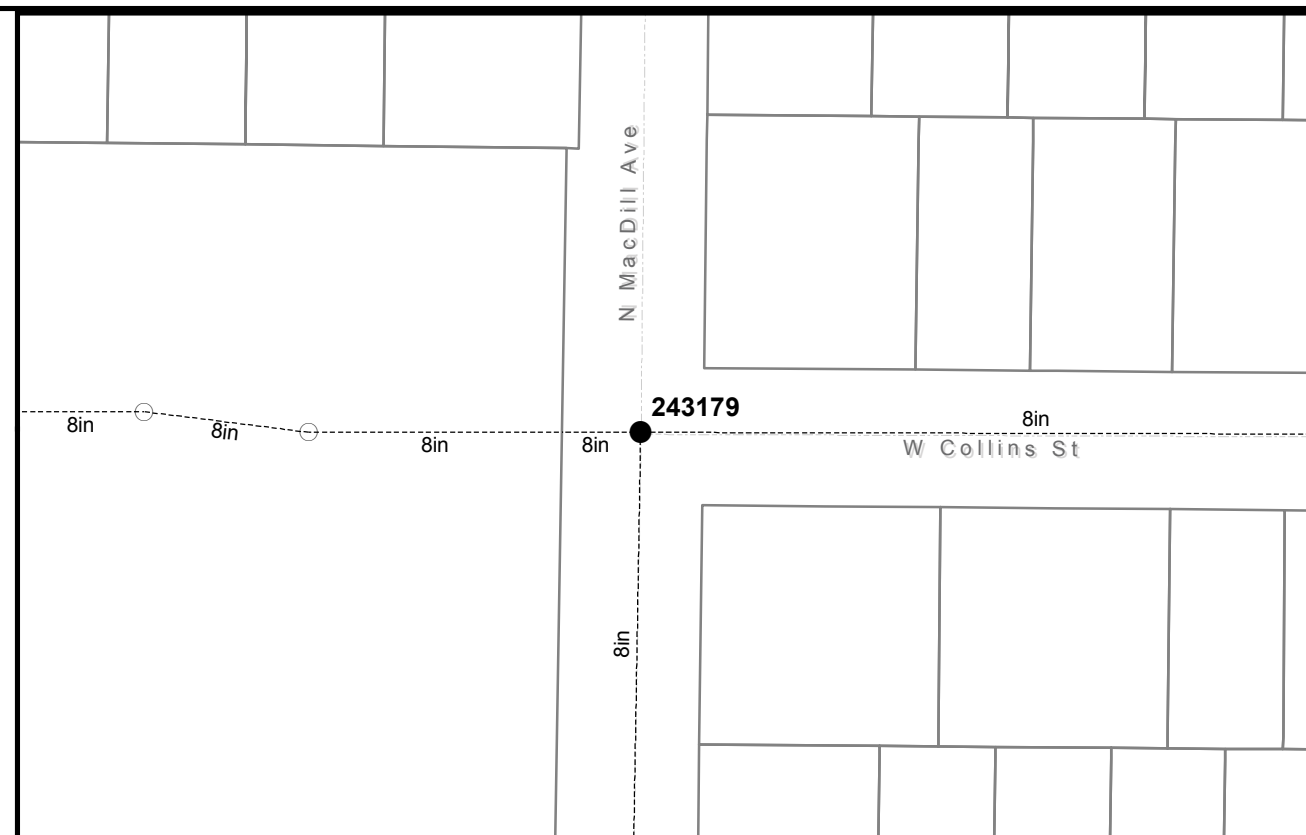
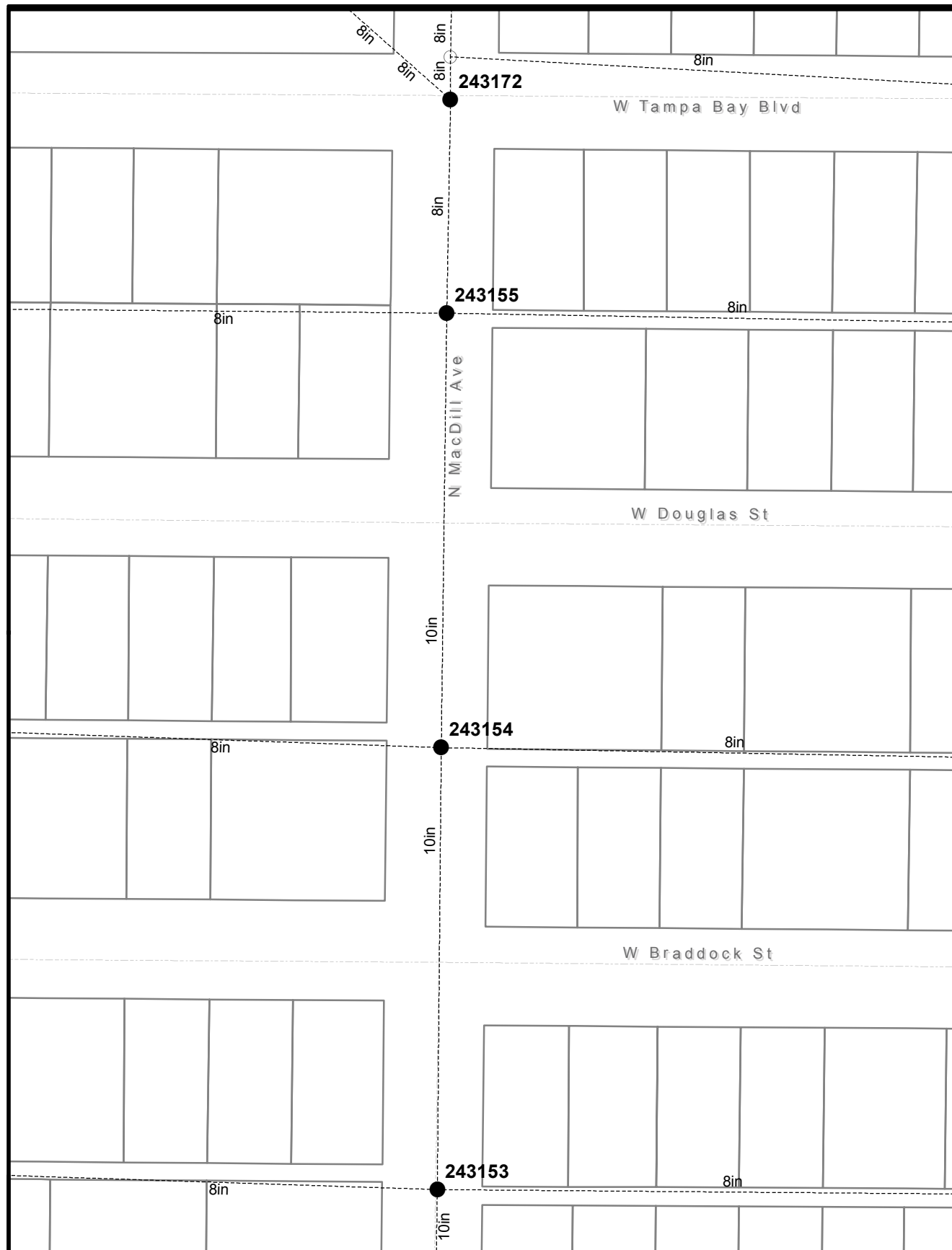
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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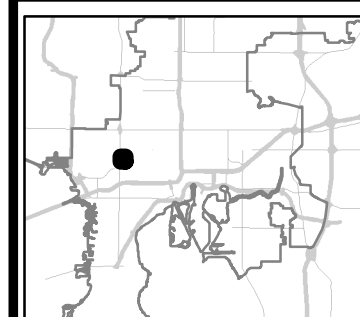
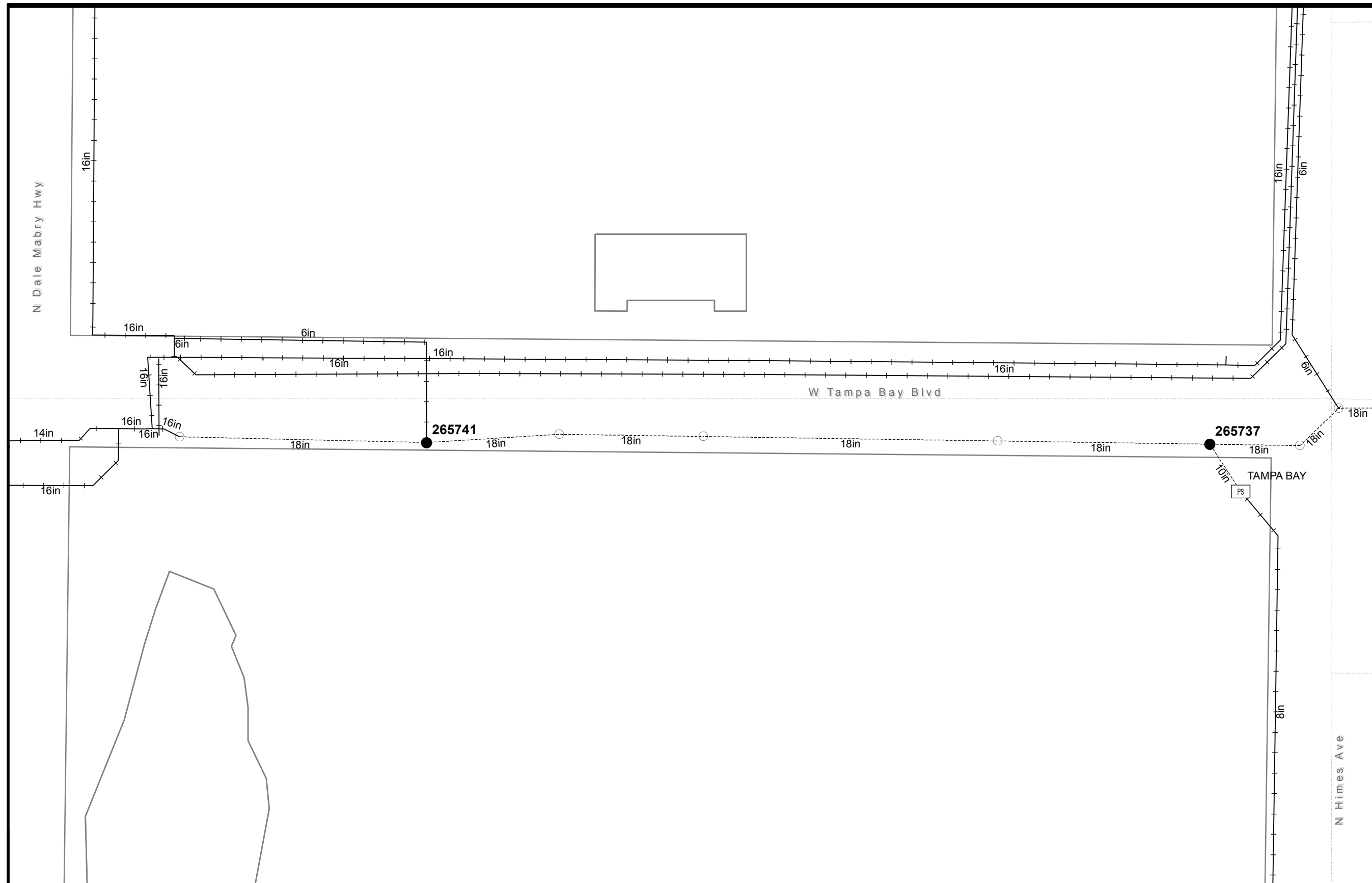
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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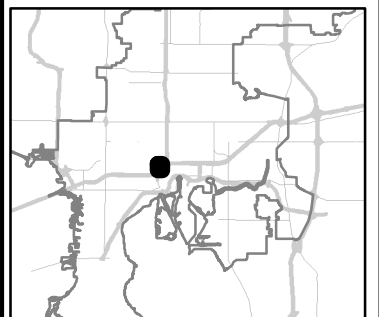
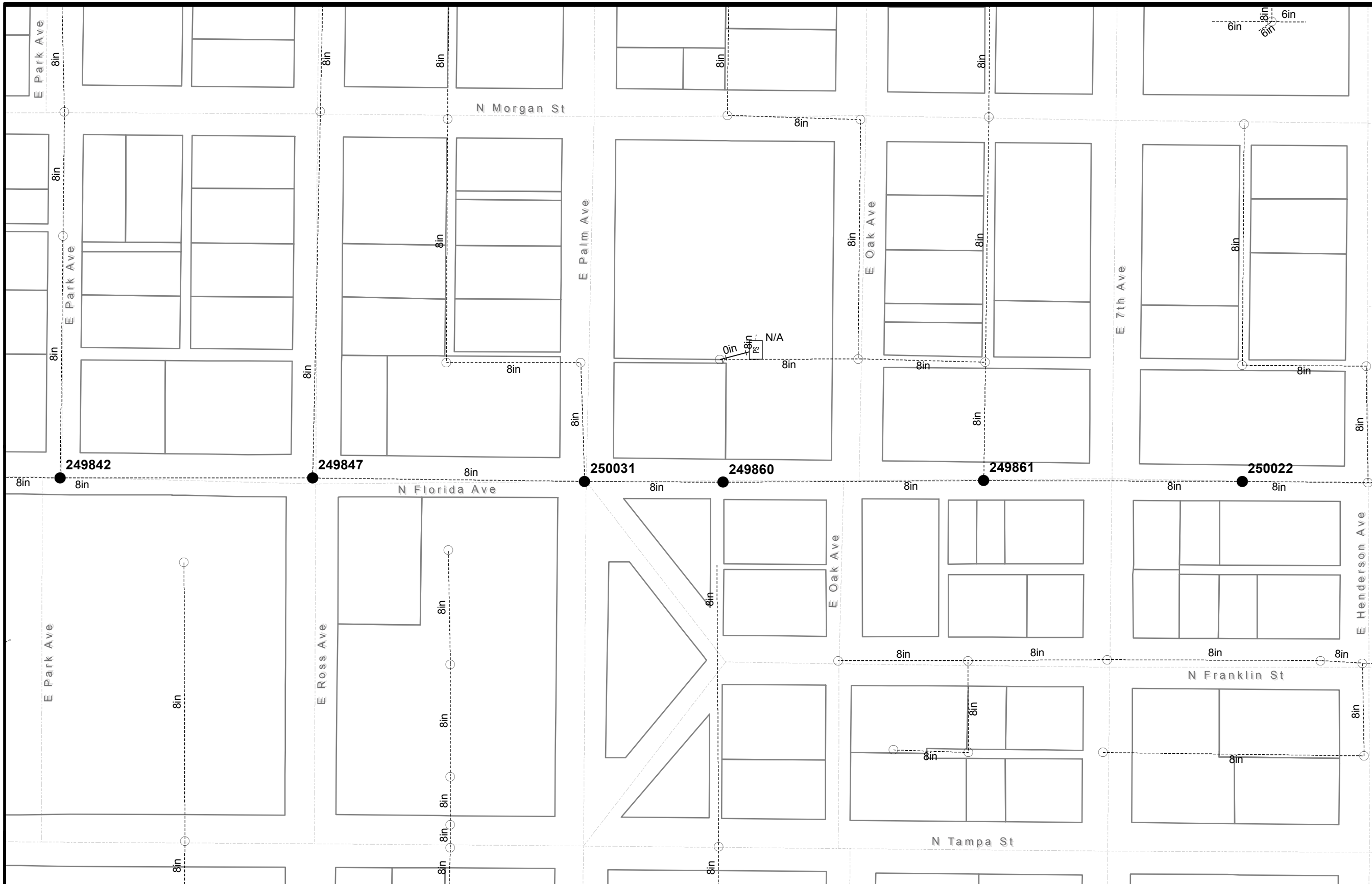
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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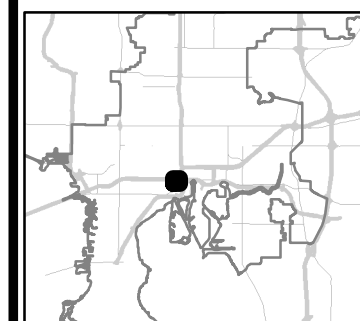
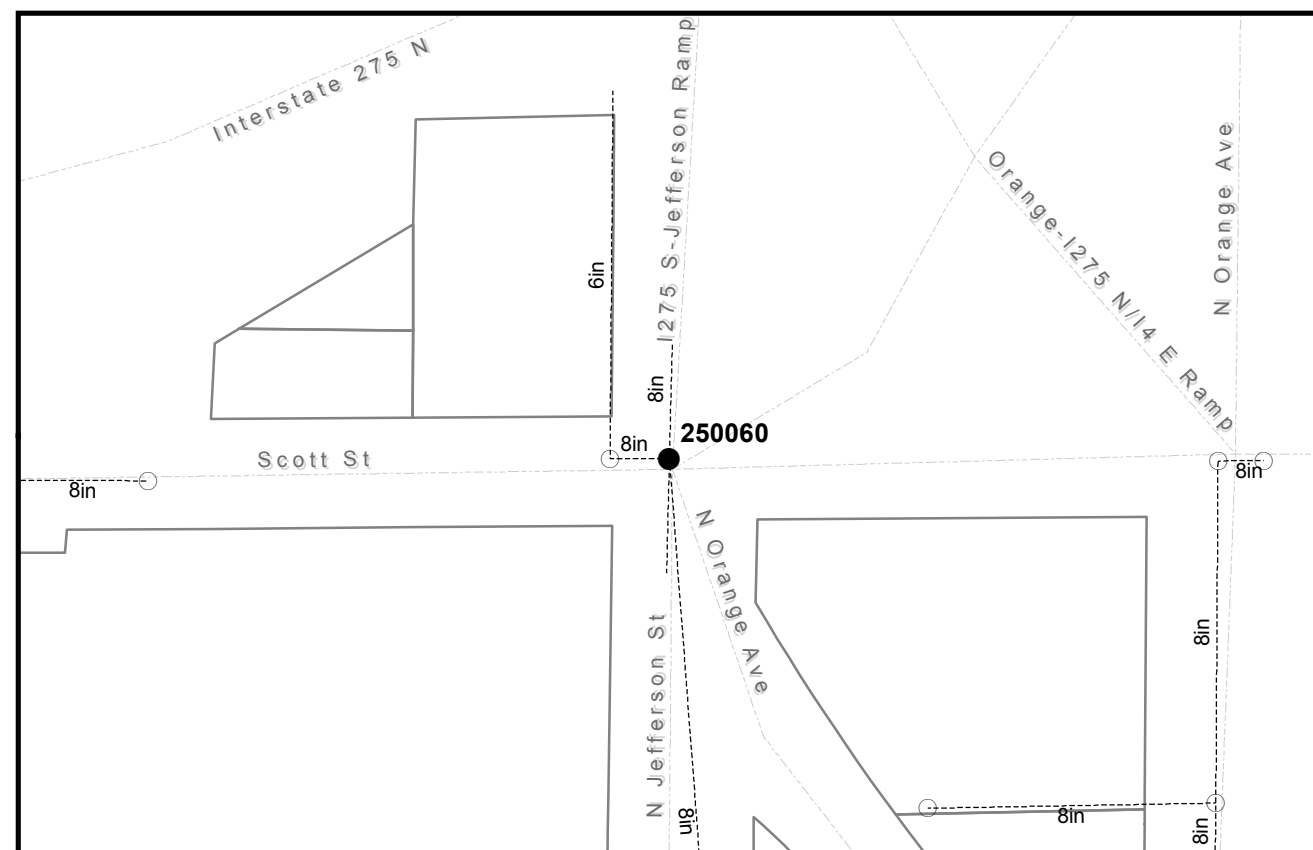
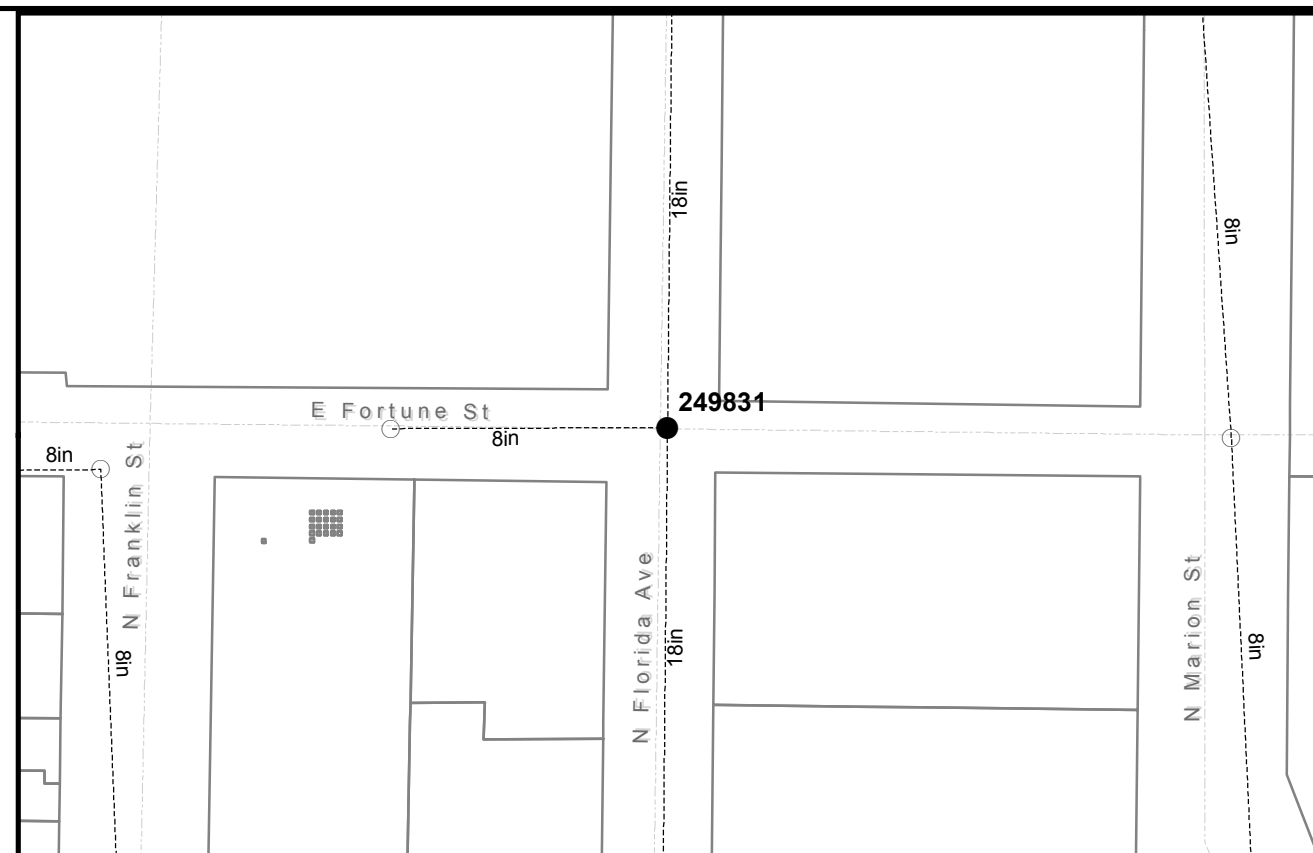
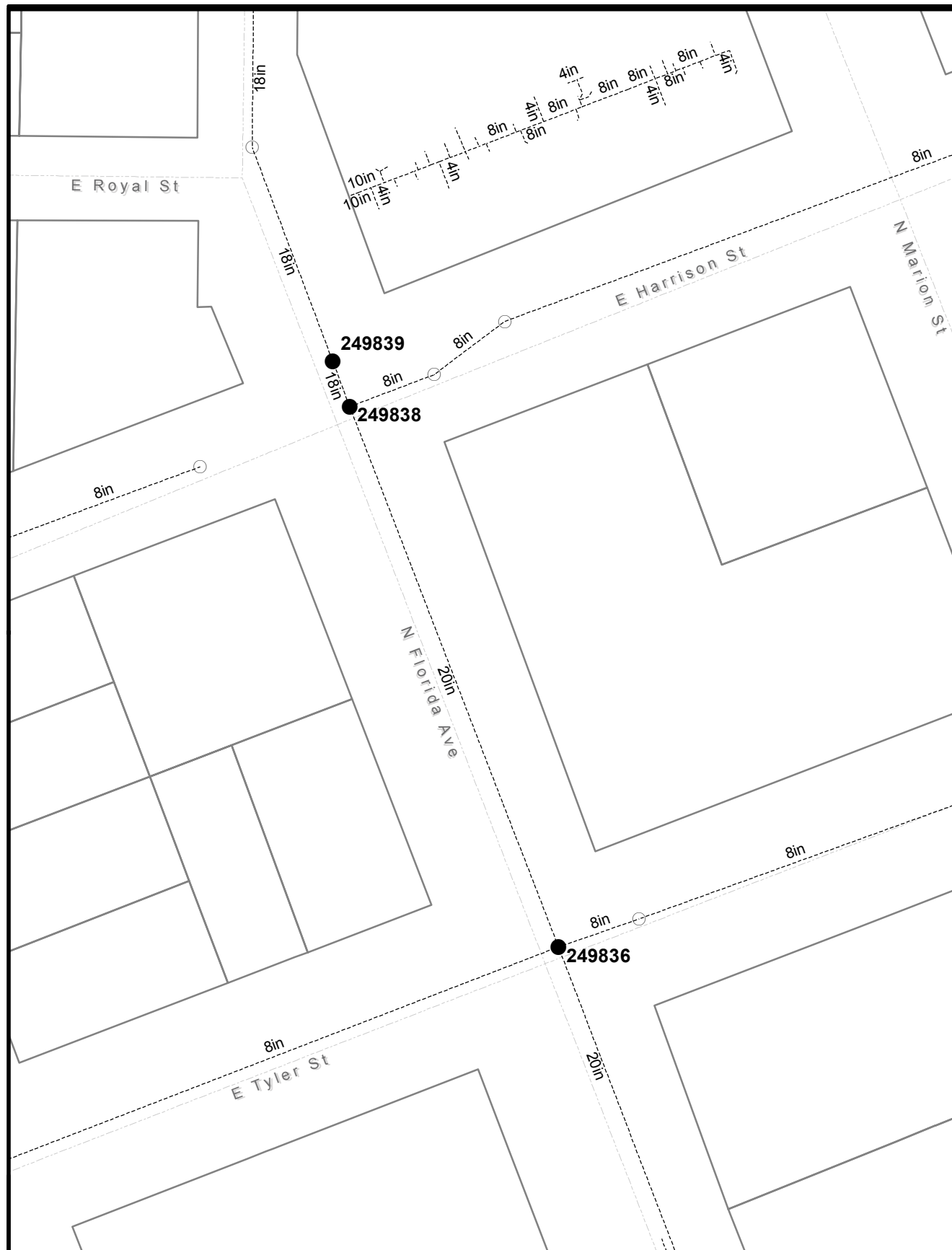
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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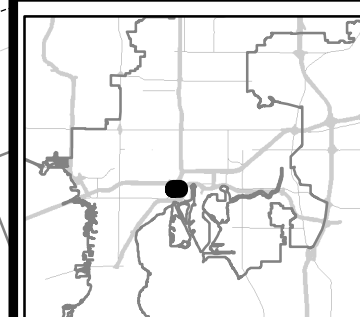
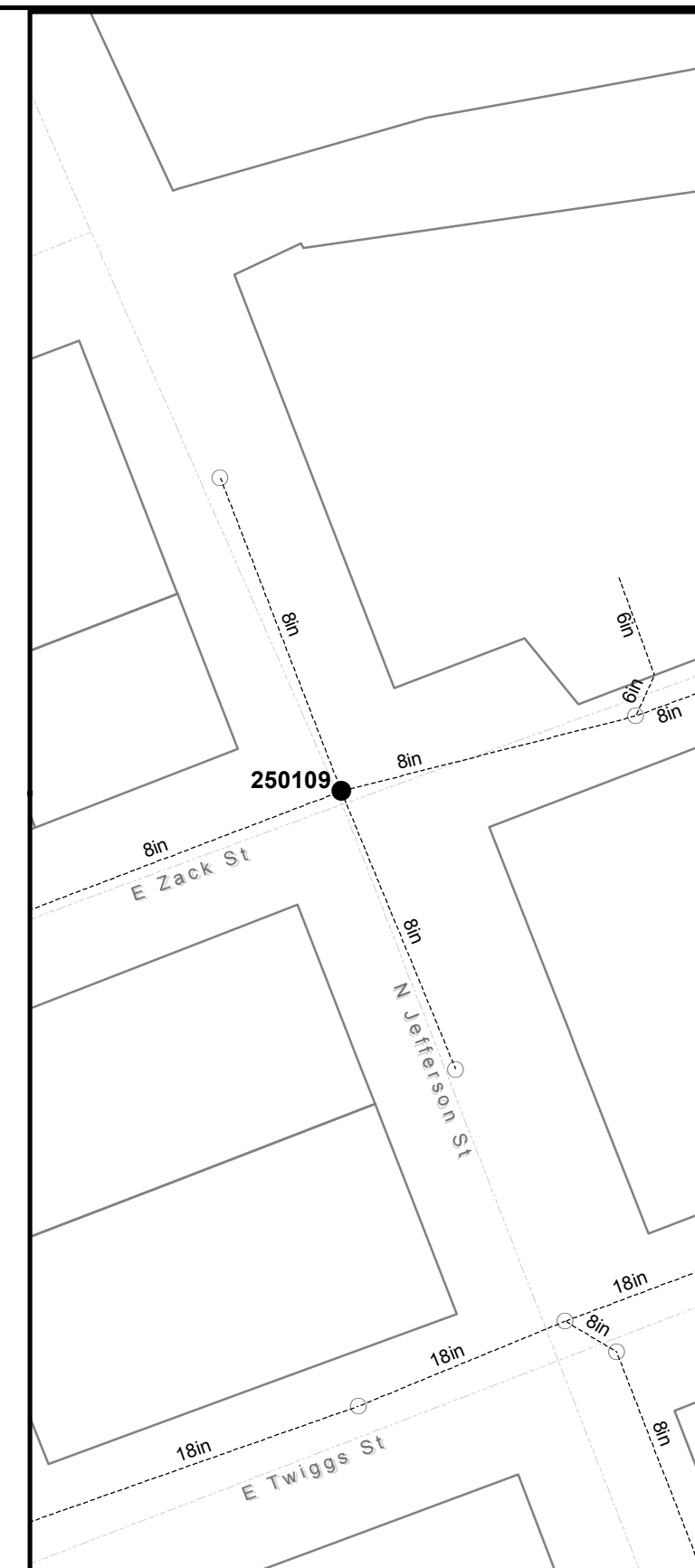
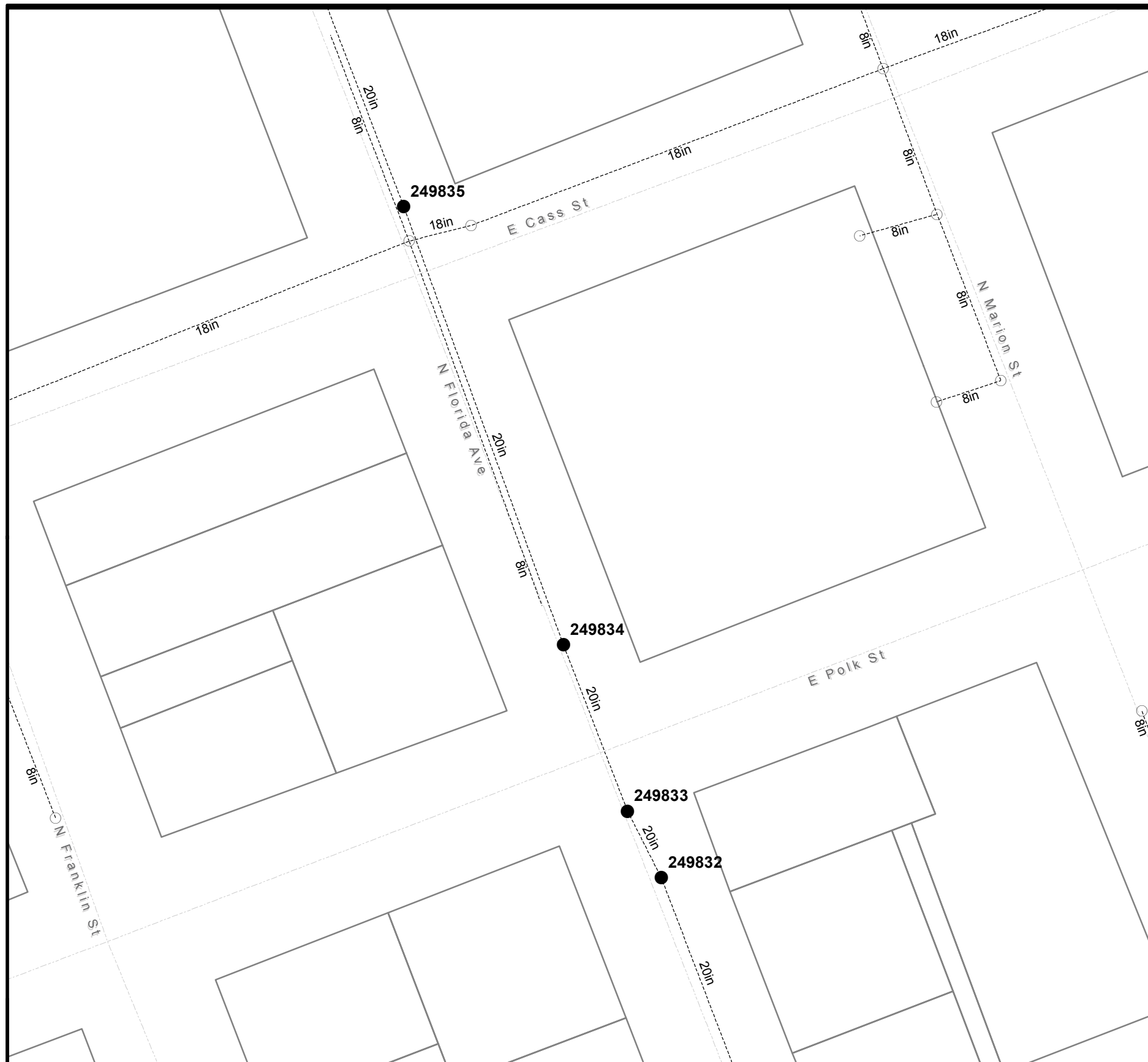
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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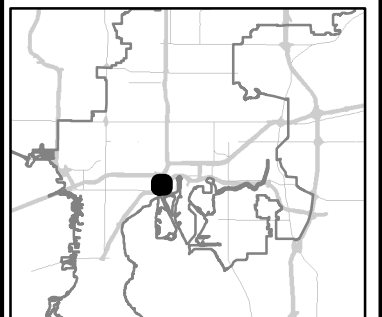
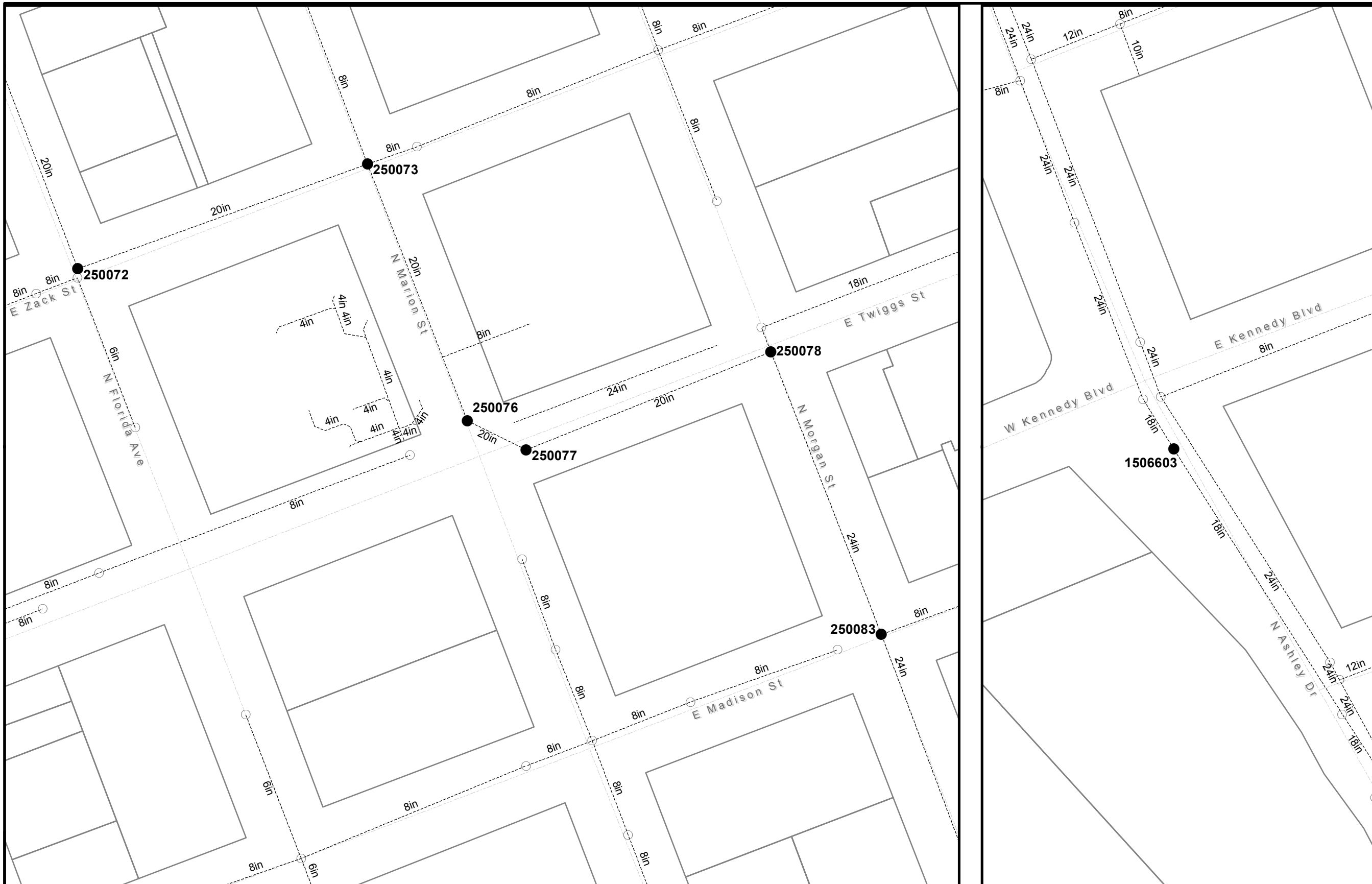
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

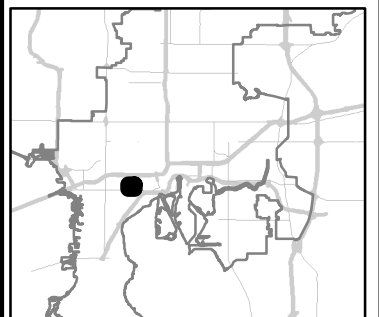
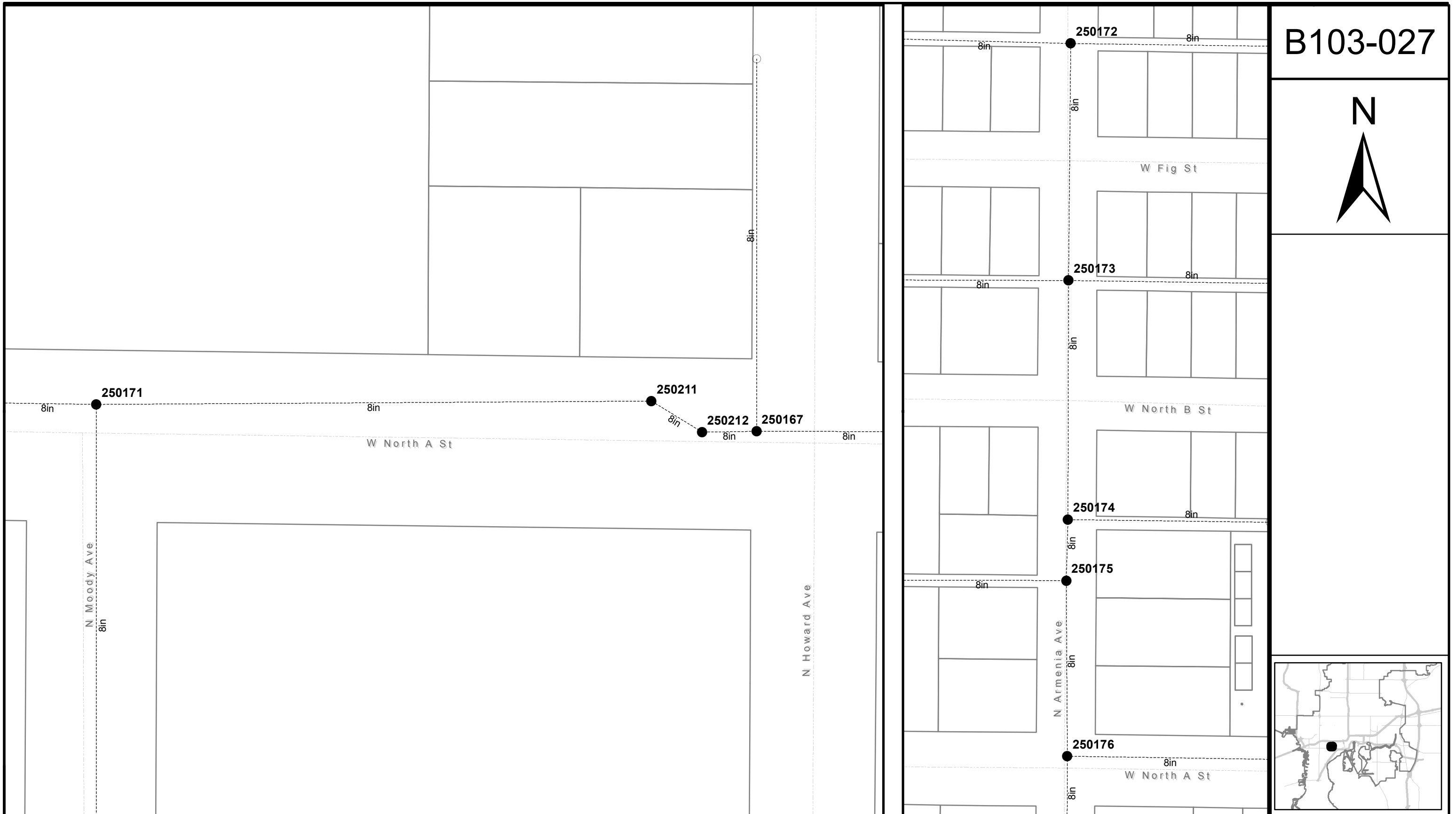
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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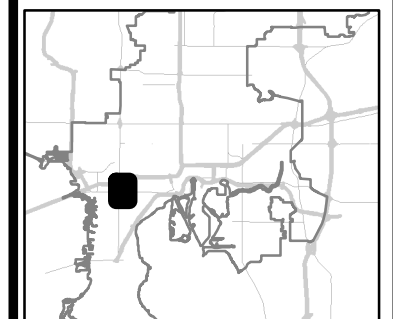
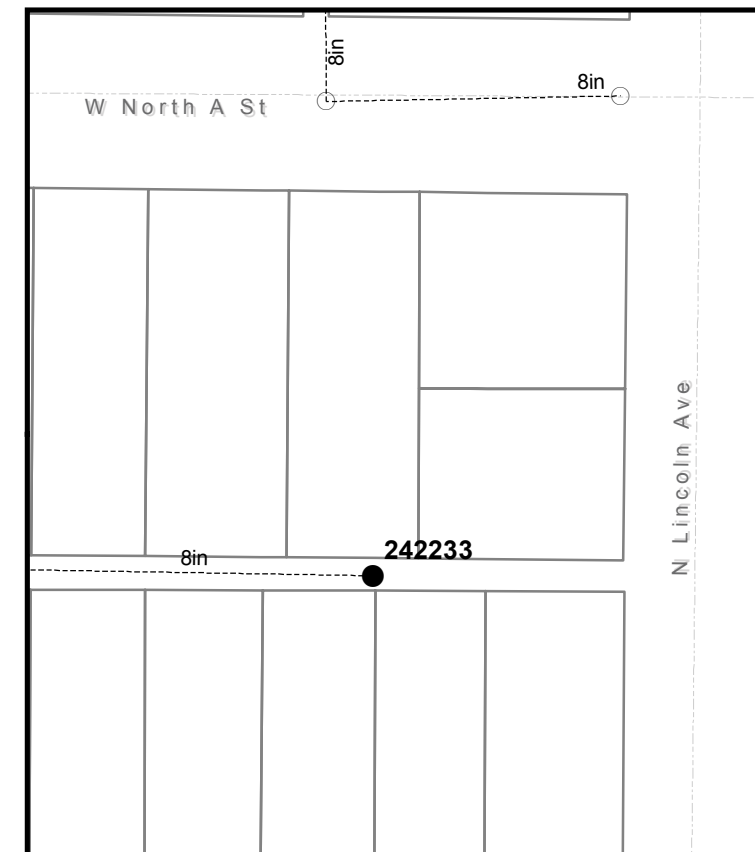
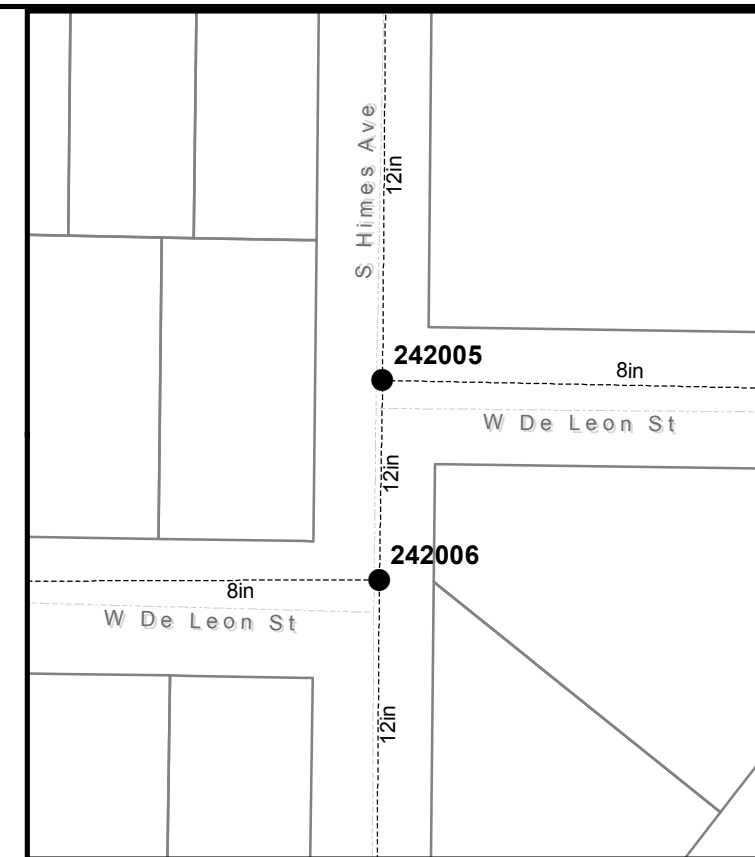
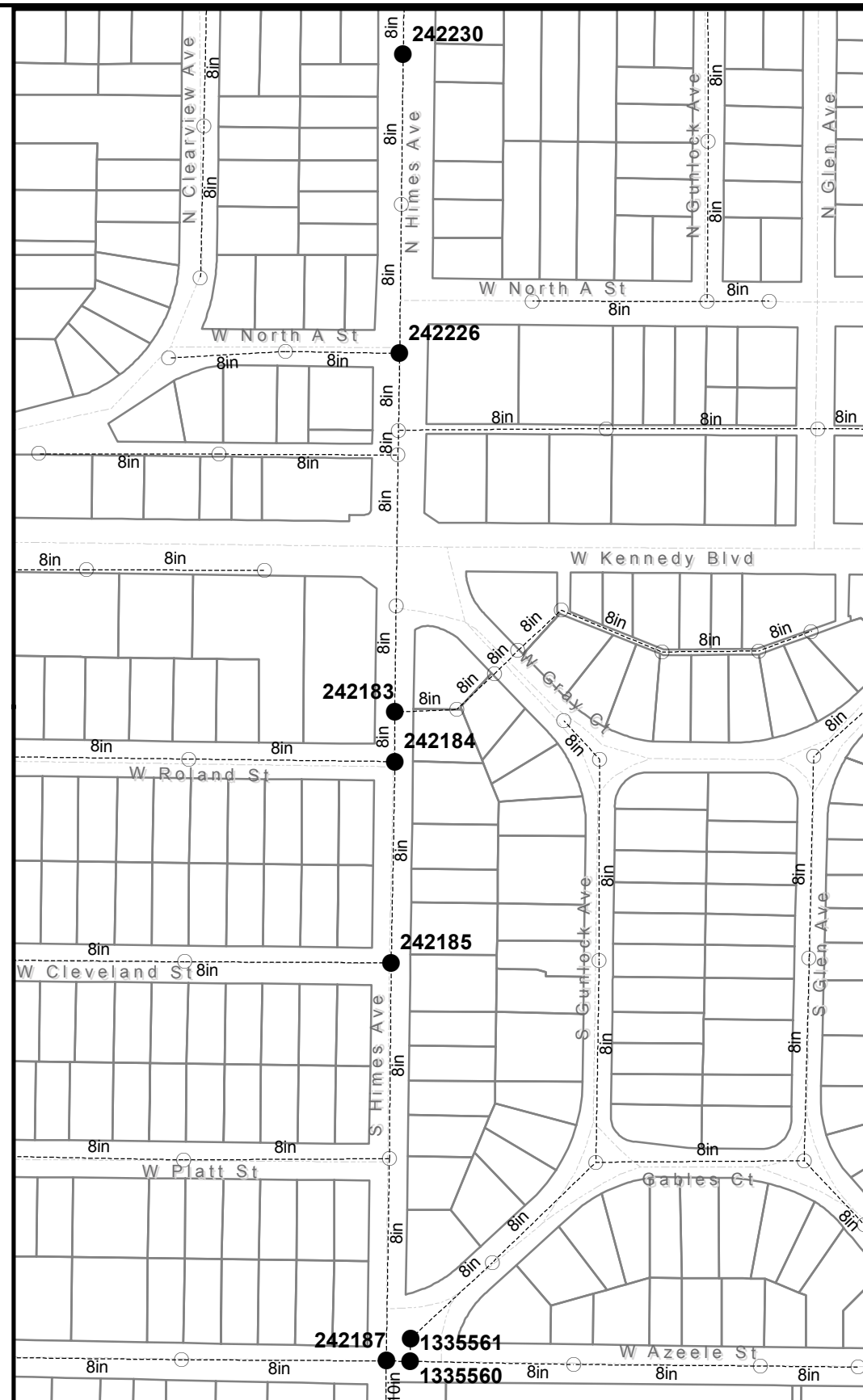
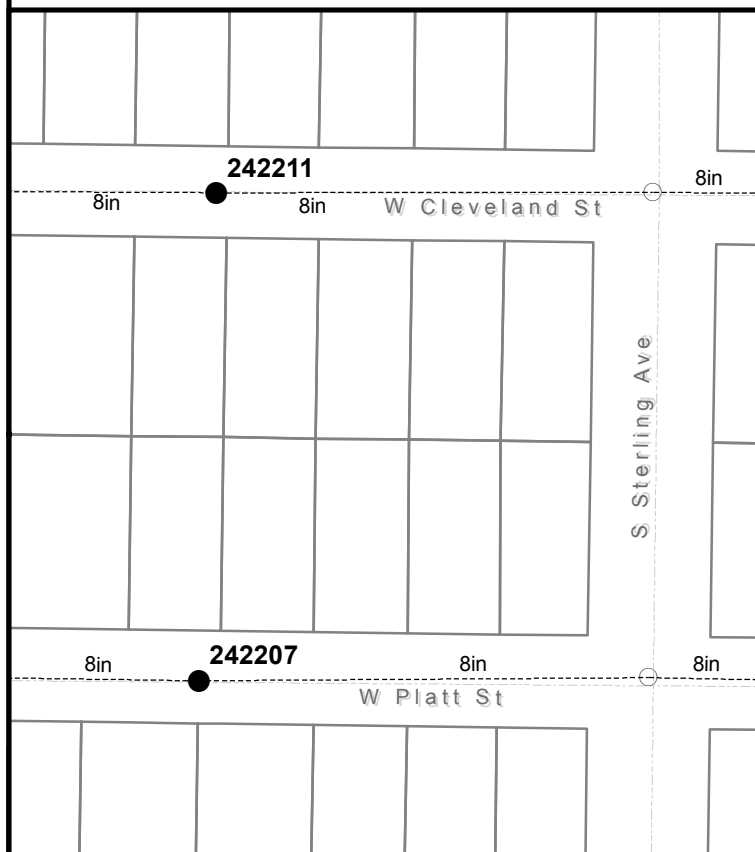
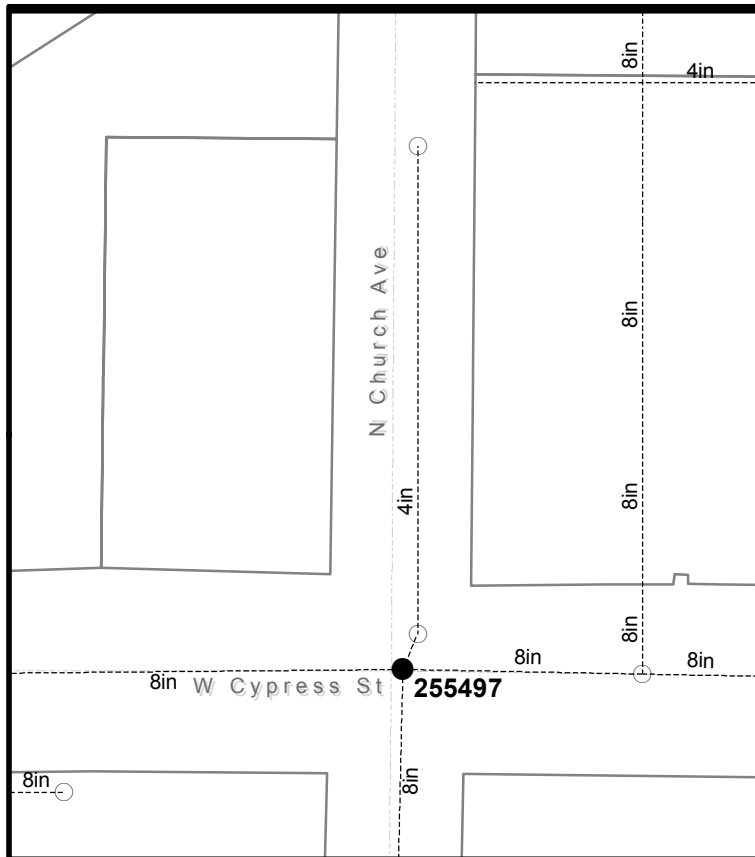
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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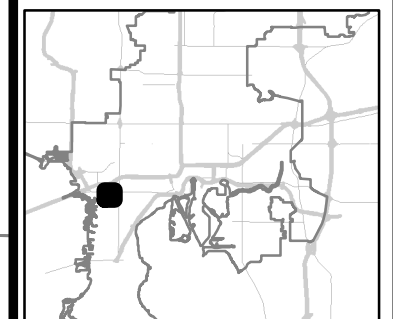
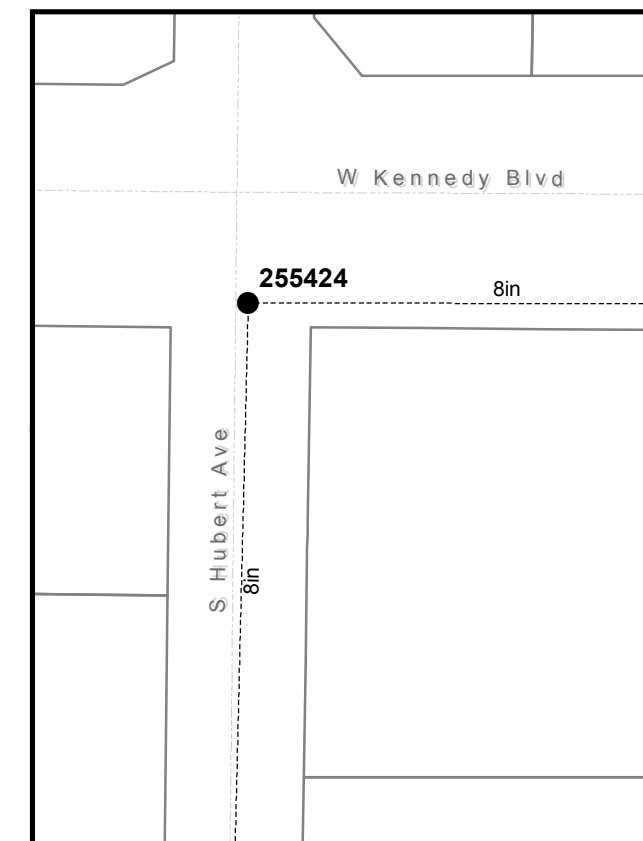
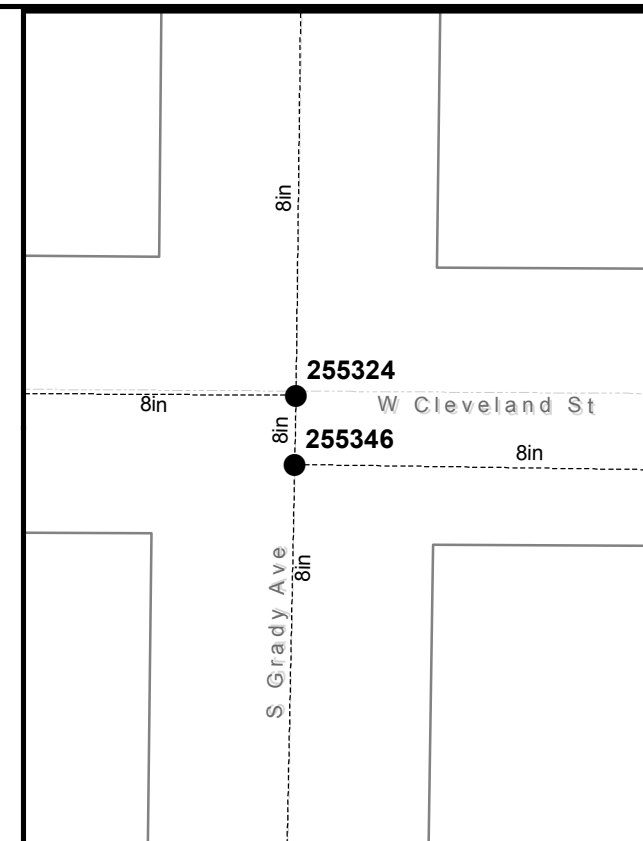
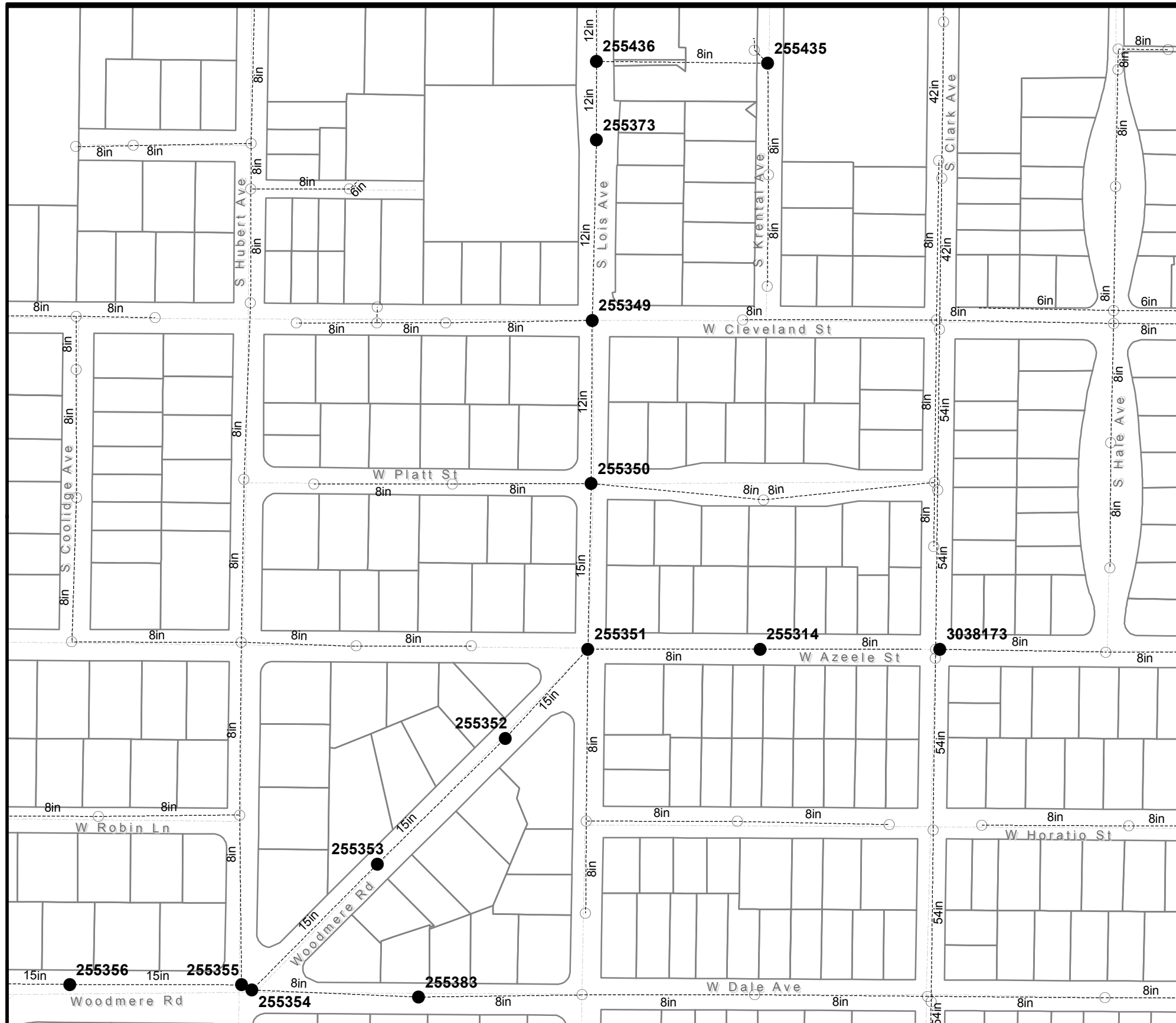
No.	DATE	REVISIONS
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 DES:  
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains



No.	DATE	REVISIONS
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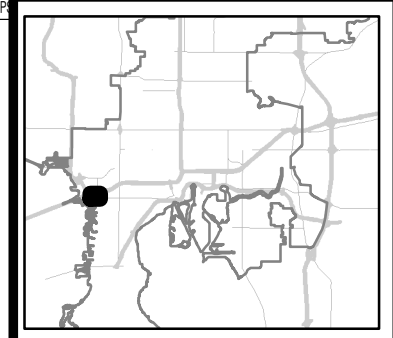
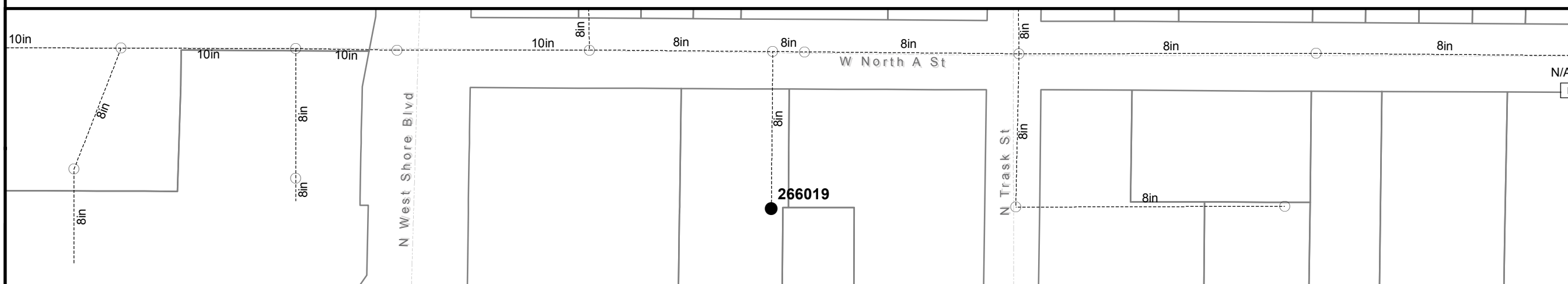
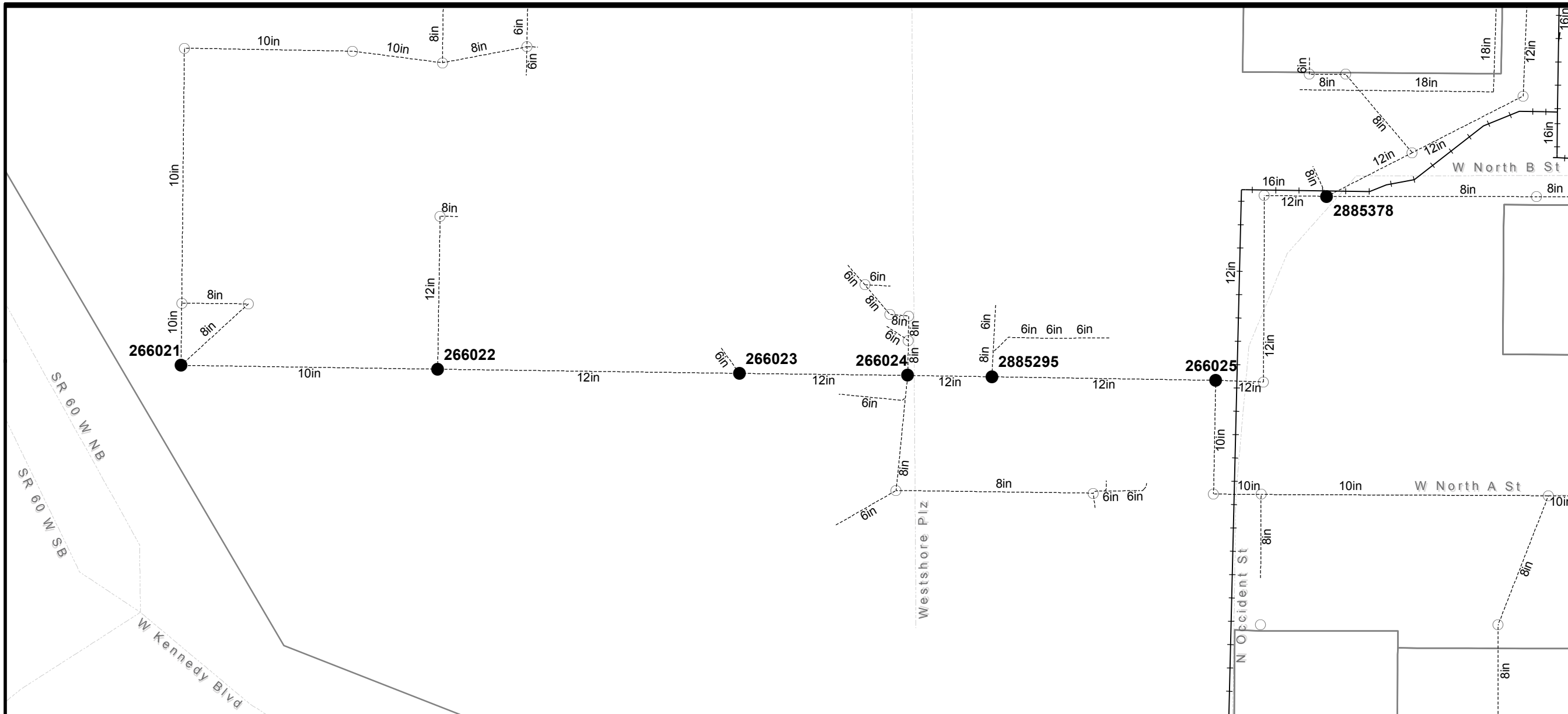
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

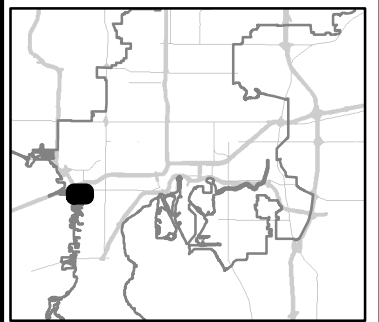
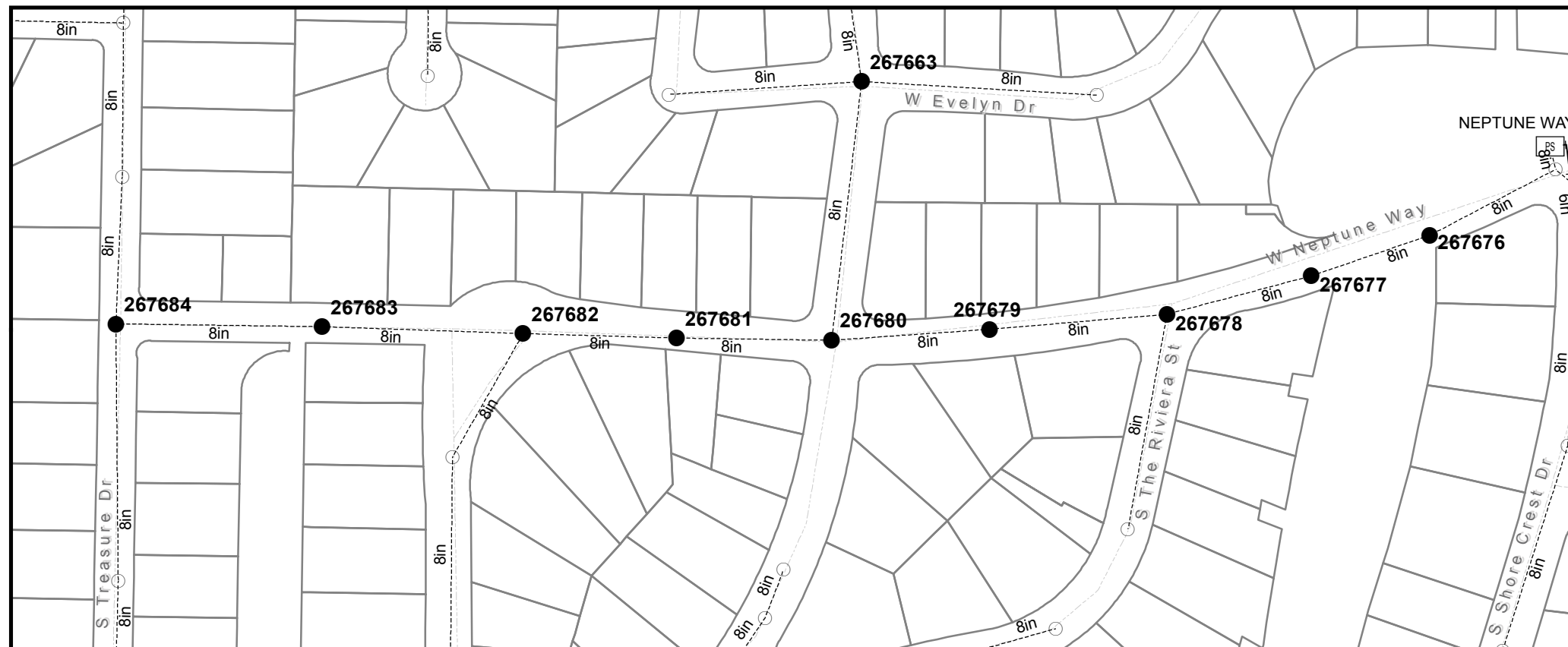
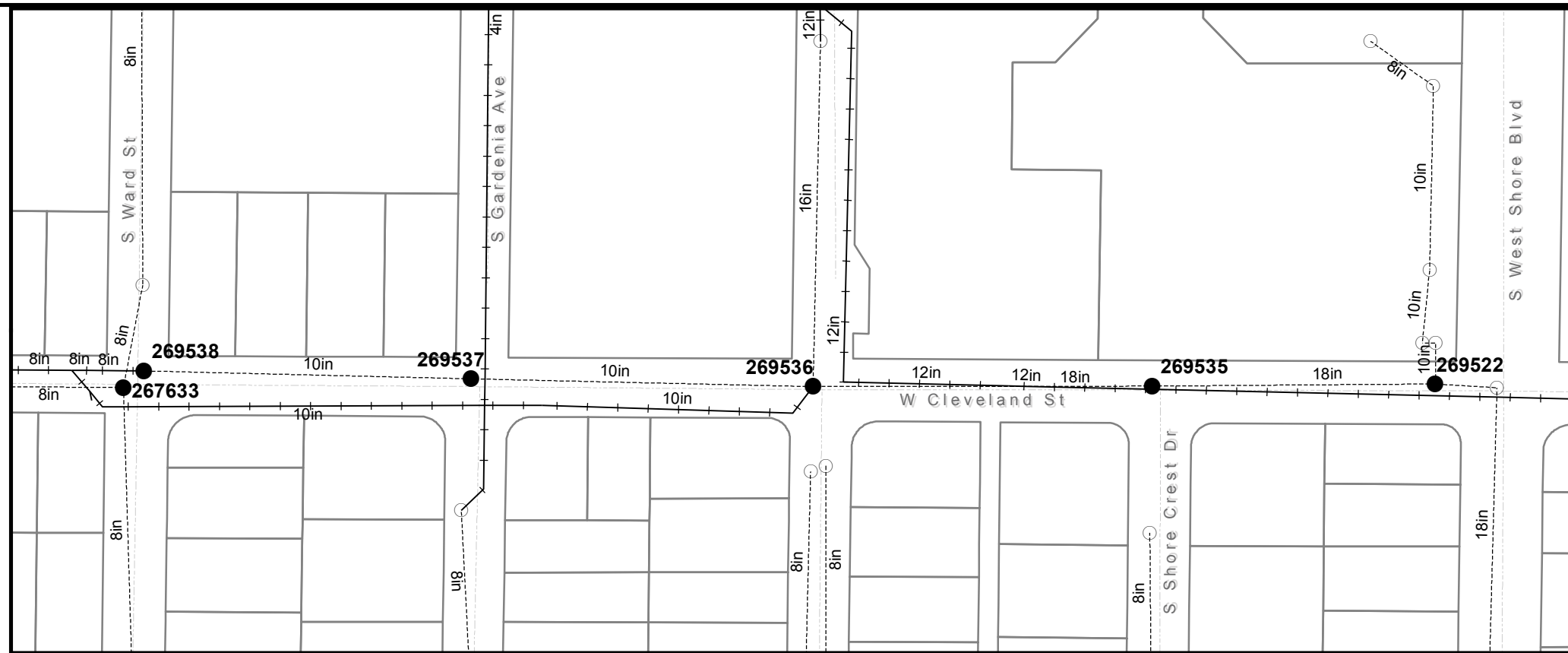
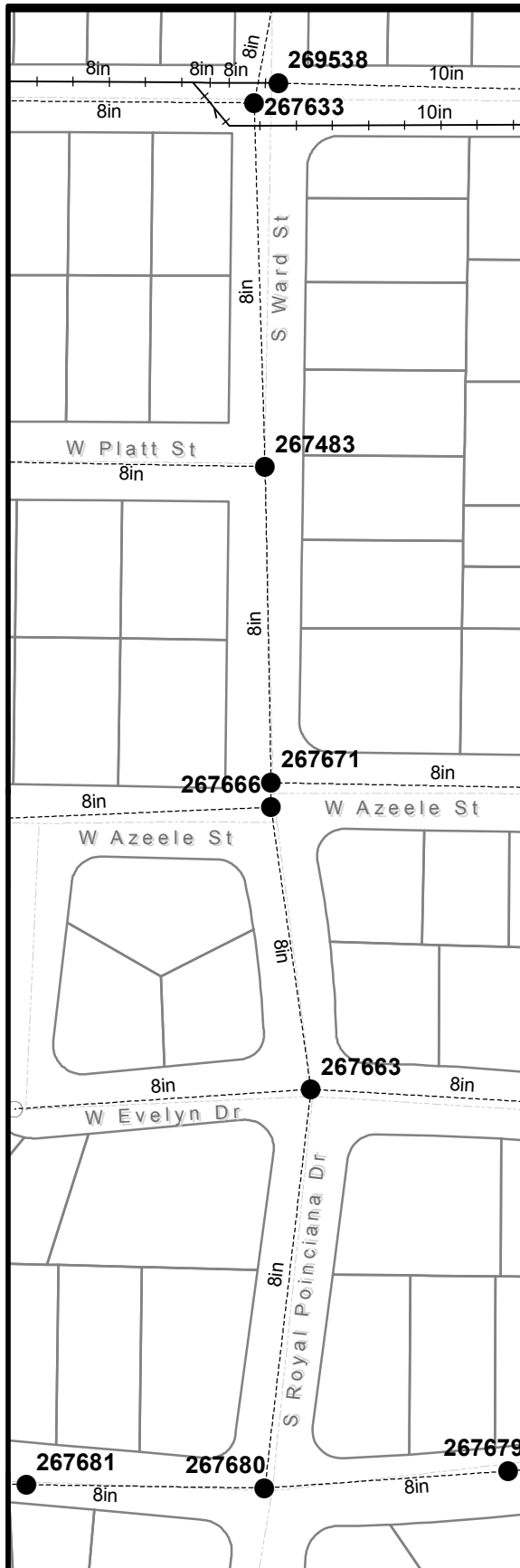
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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Scale varies  
 DES:  
 DRN:  
 CKD:  
 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

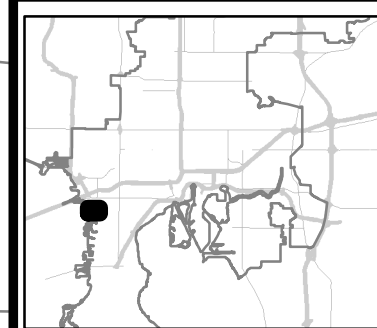
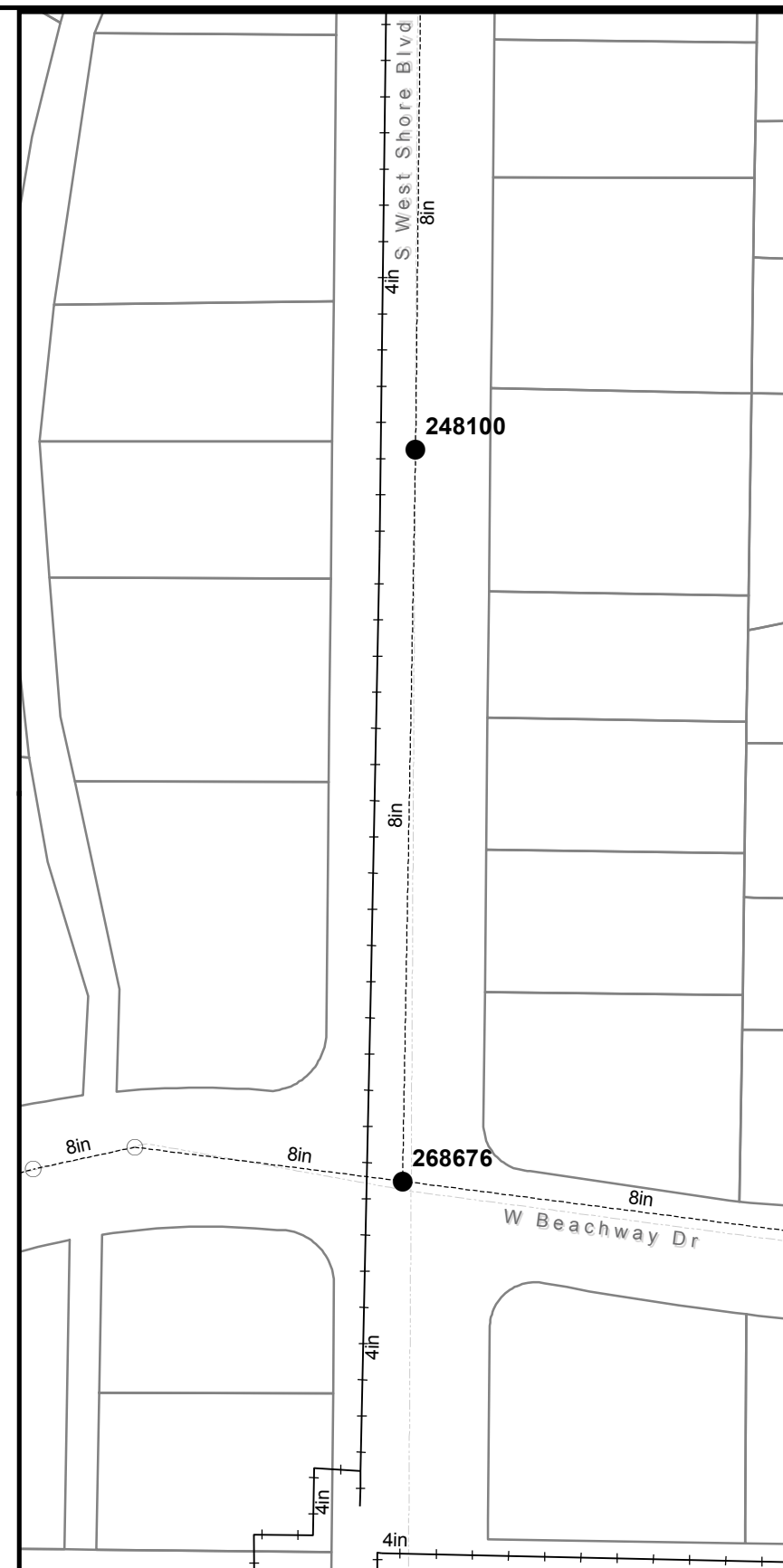
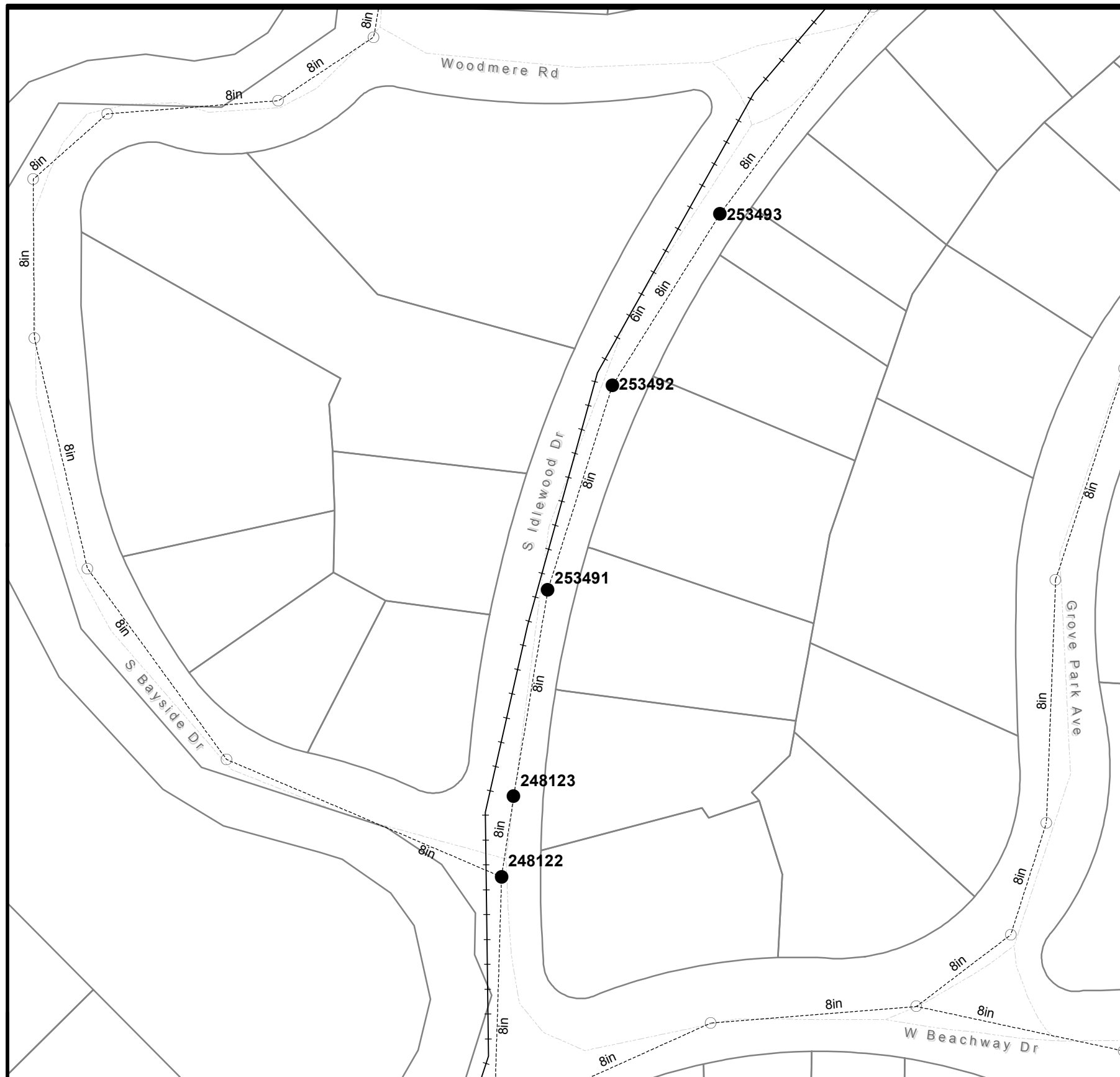
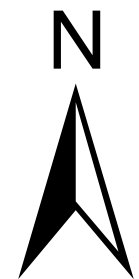
**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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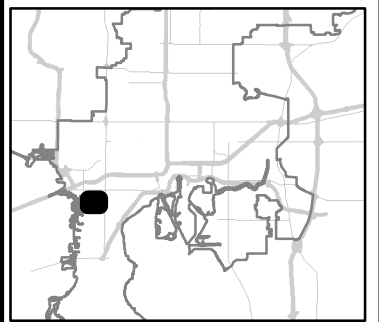
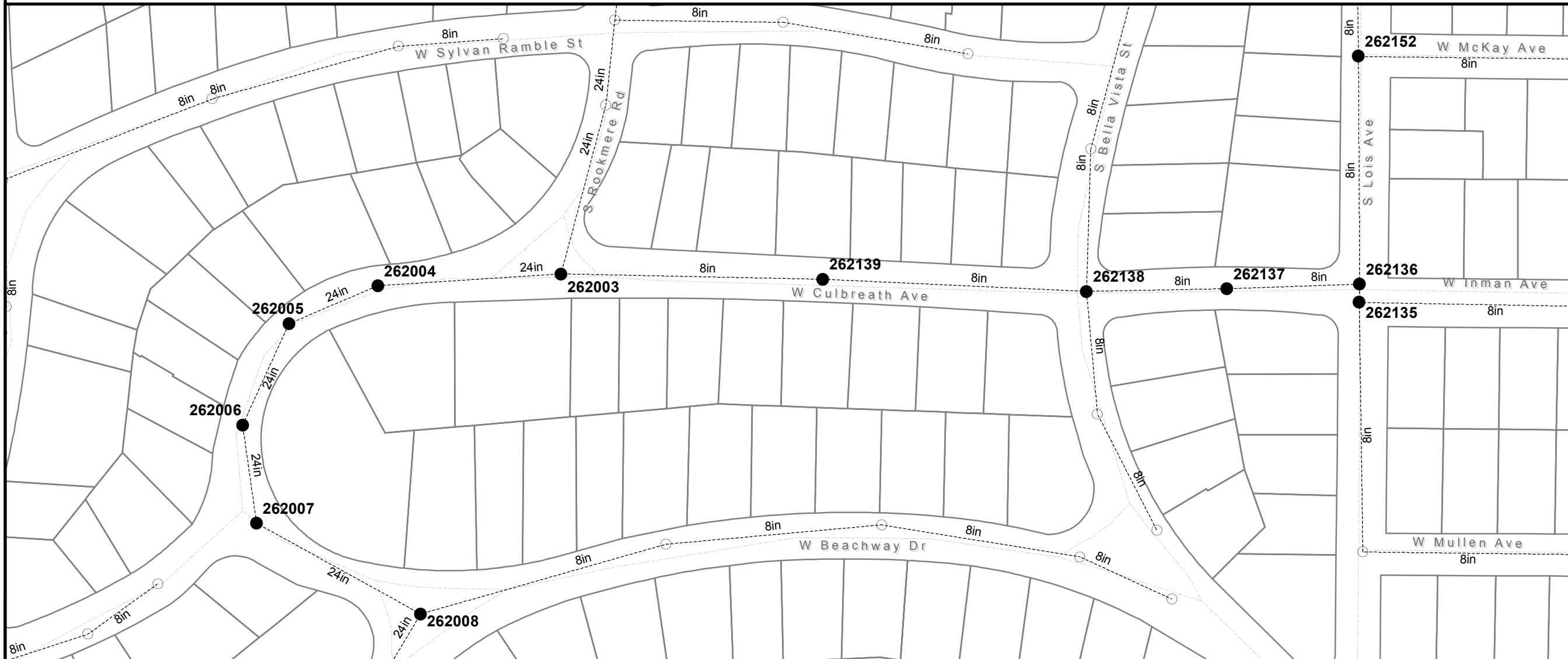
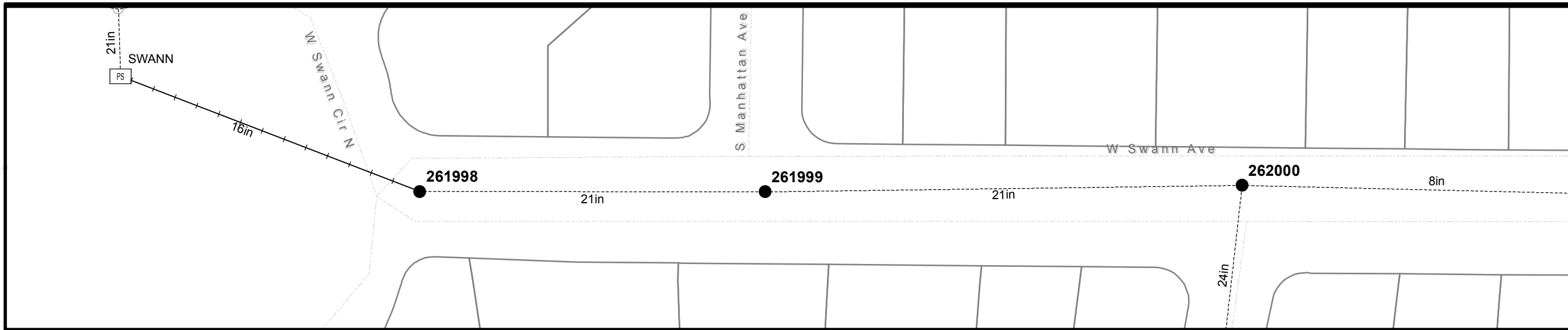
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
1		
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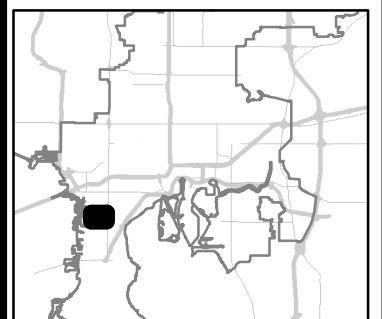
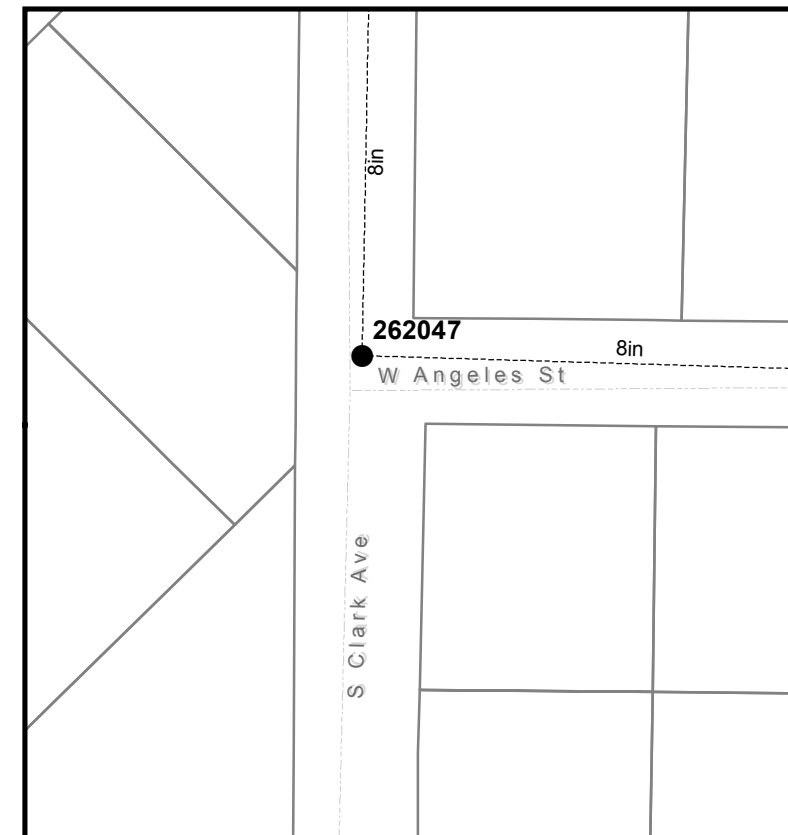
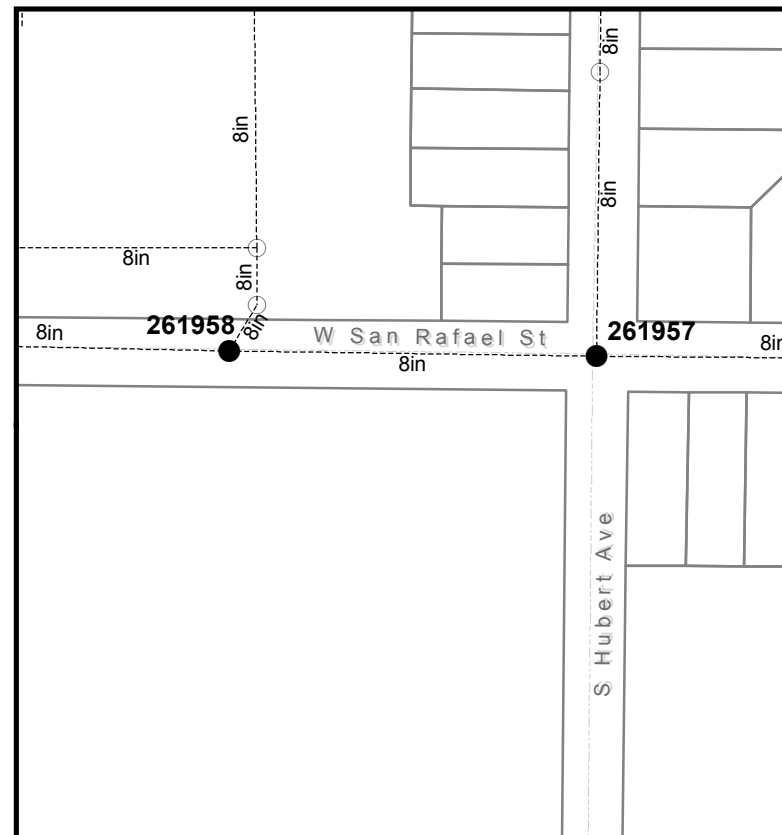
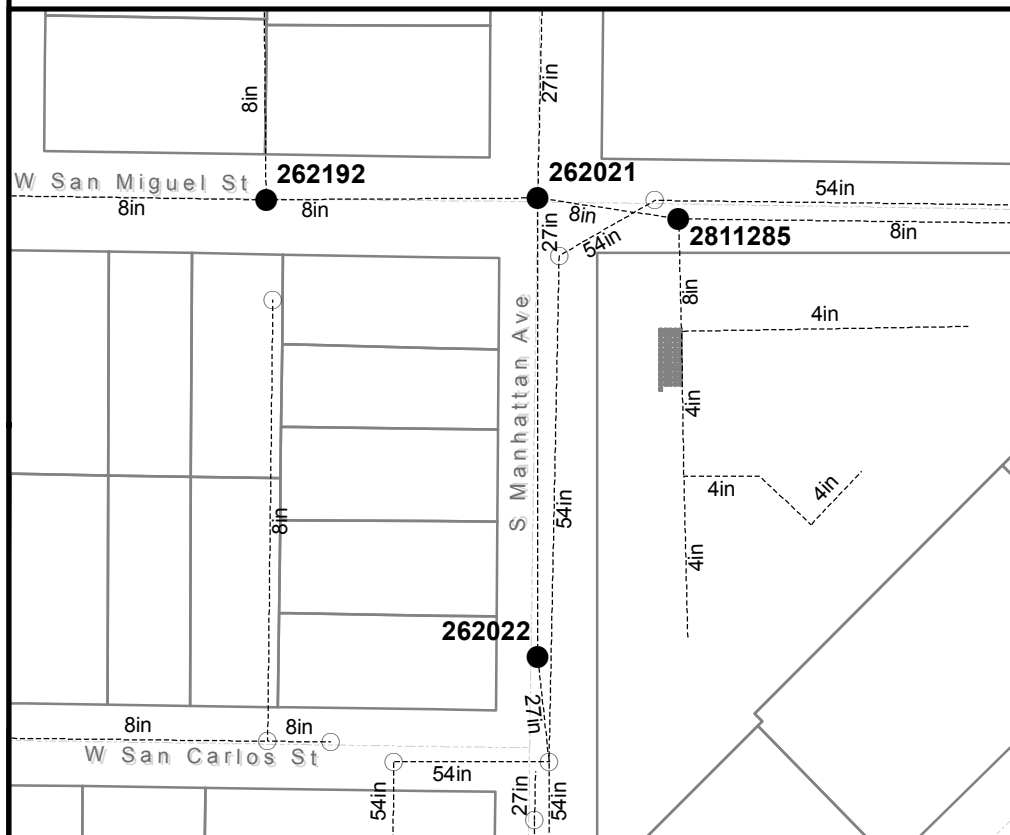
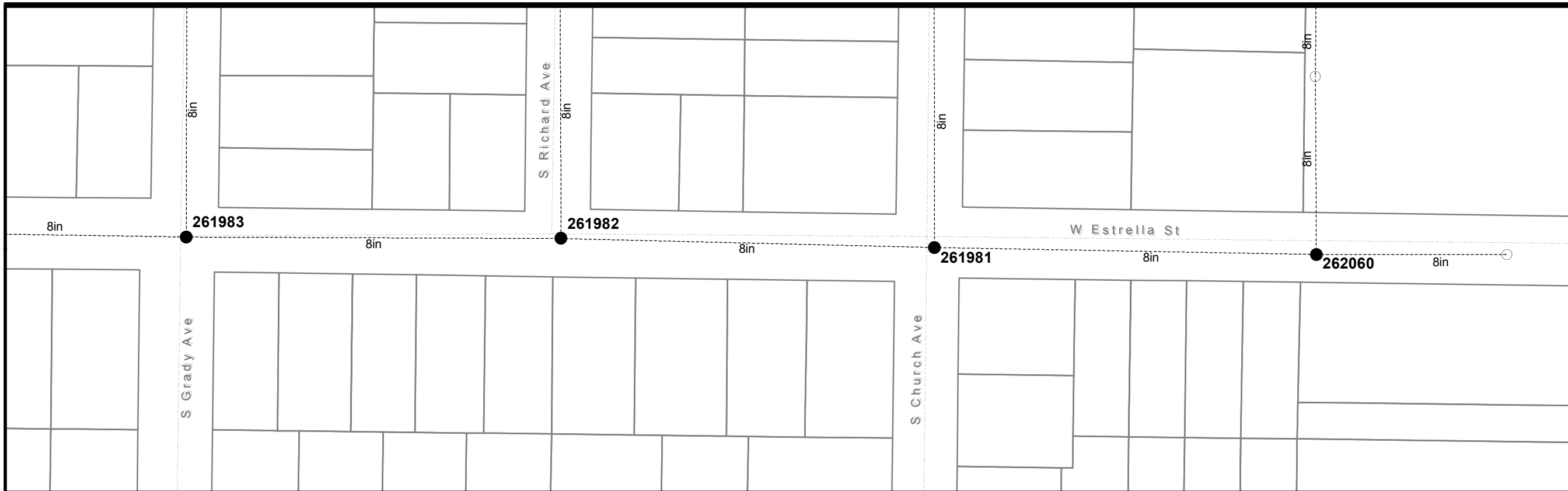
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

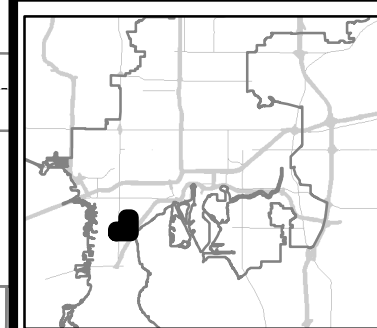
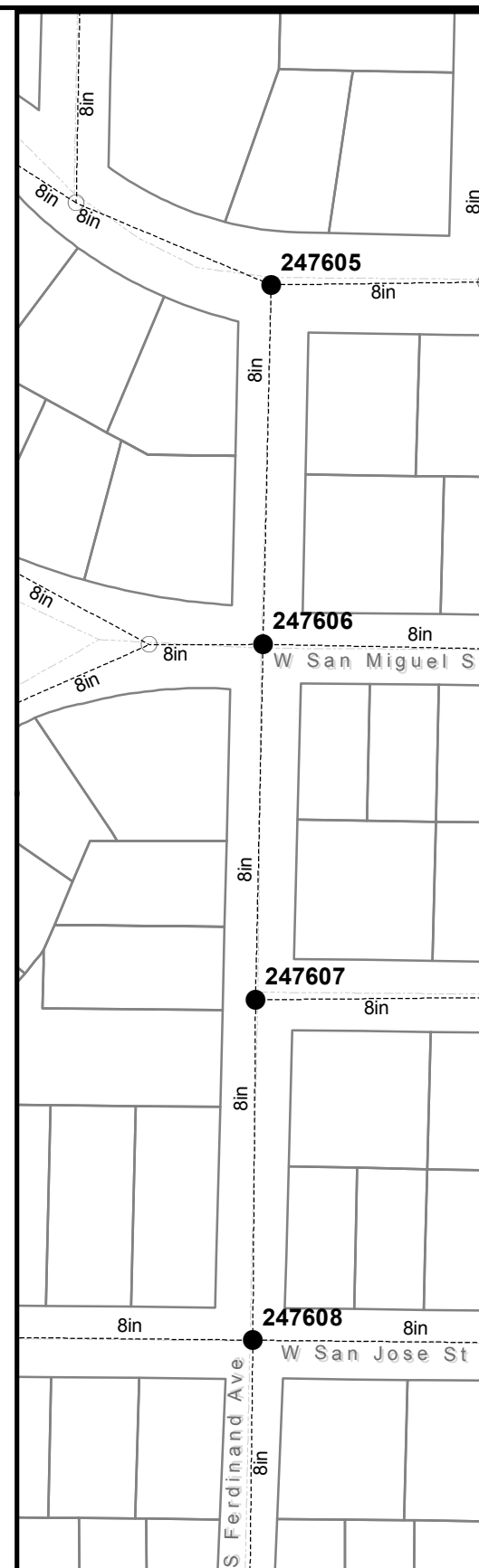
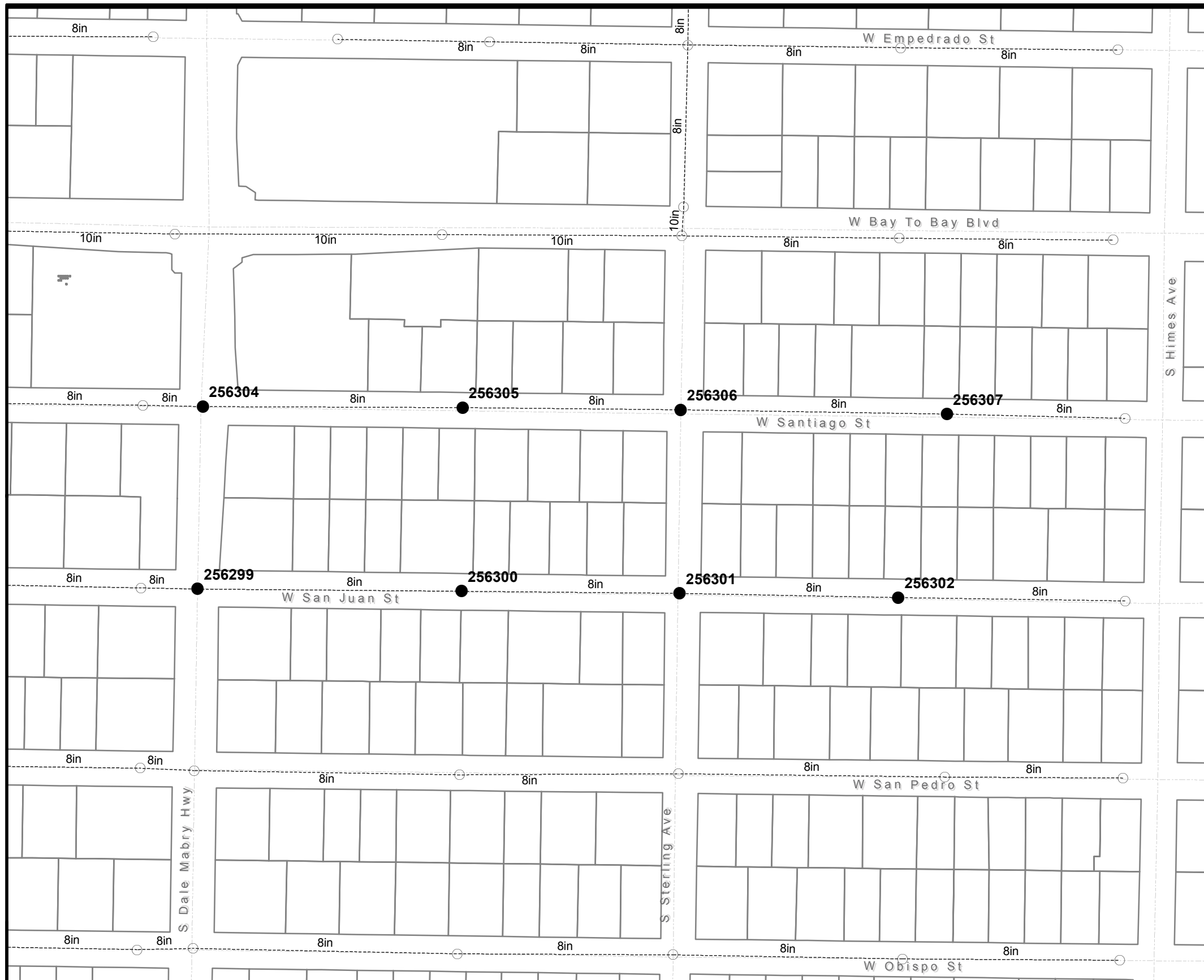
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

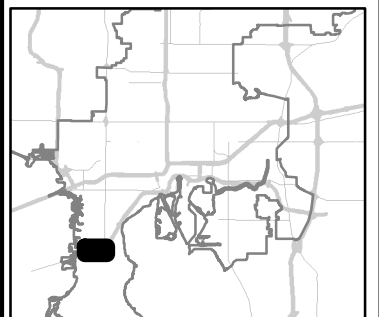
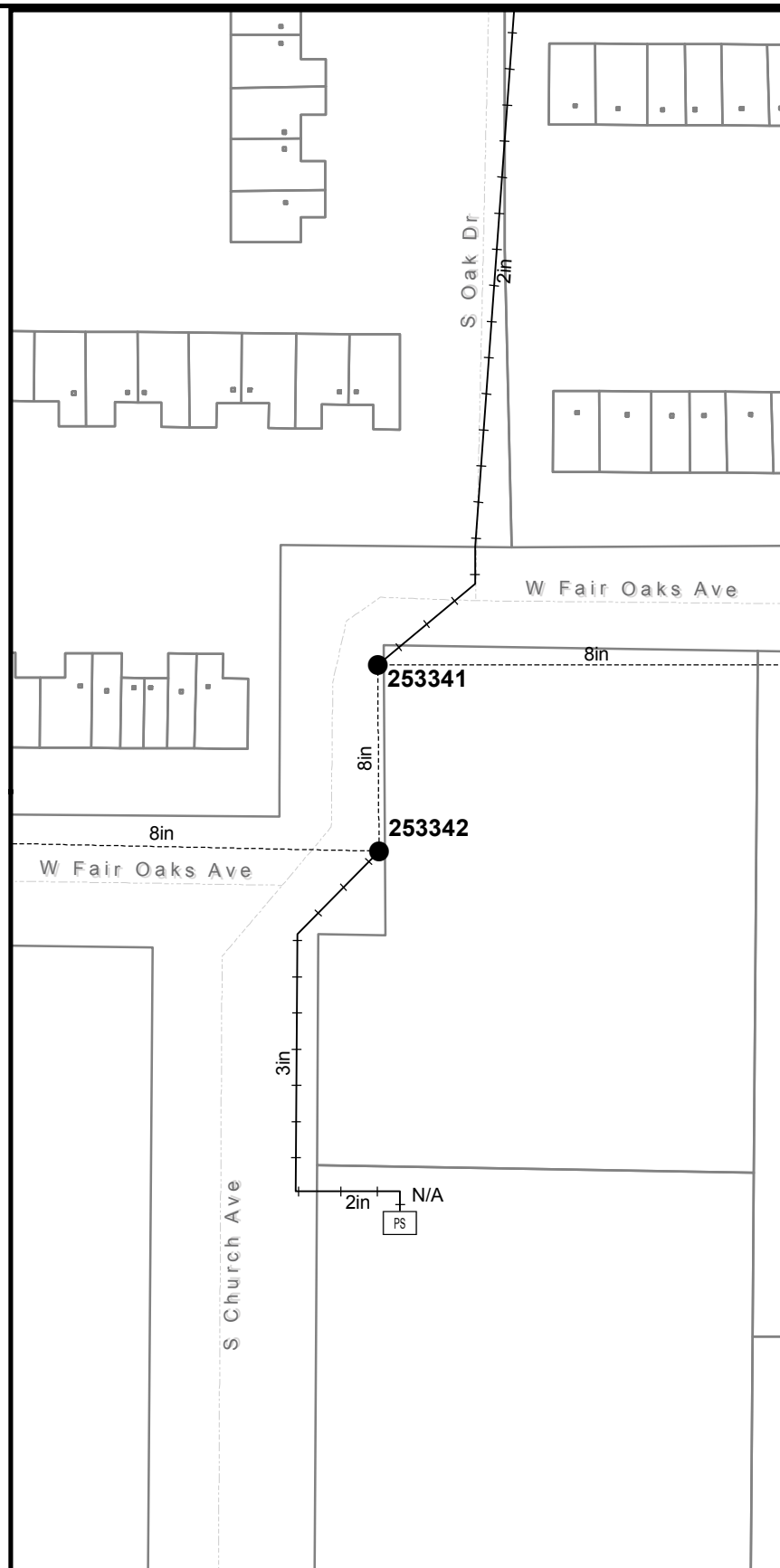
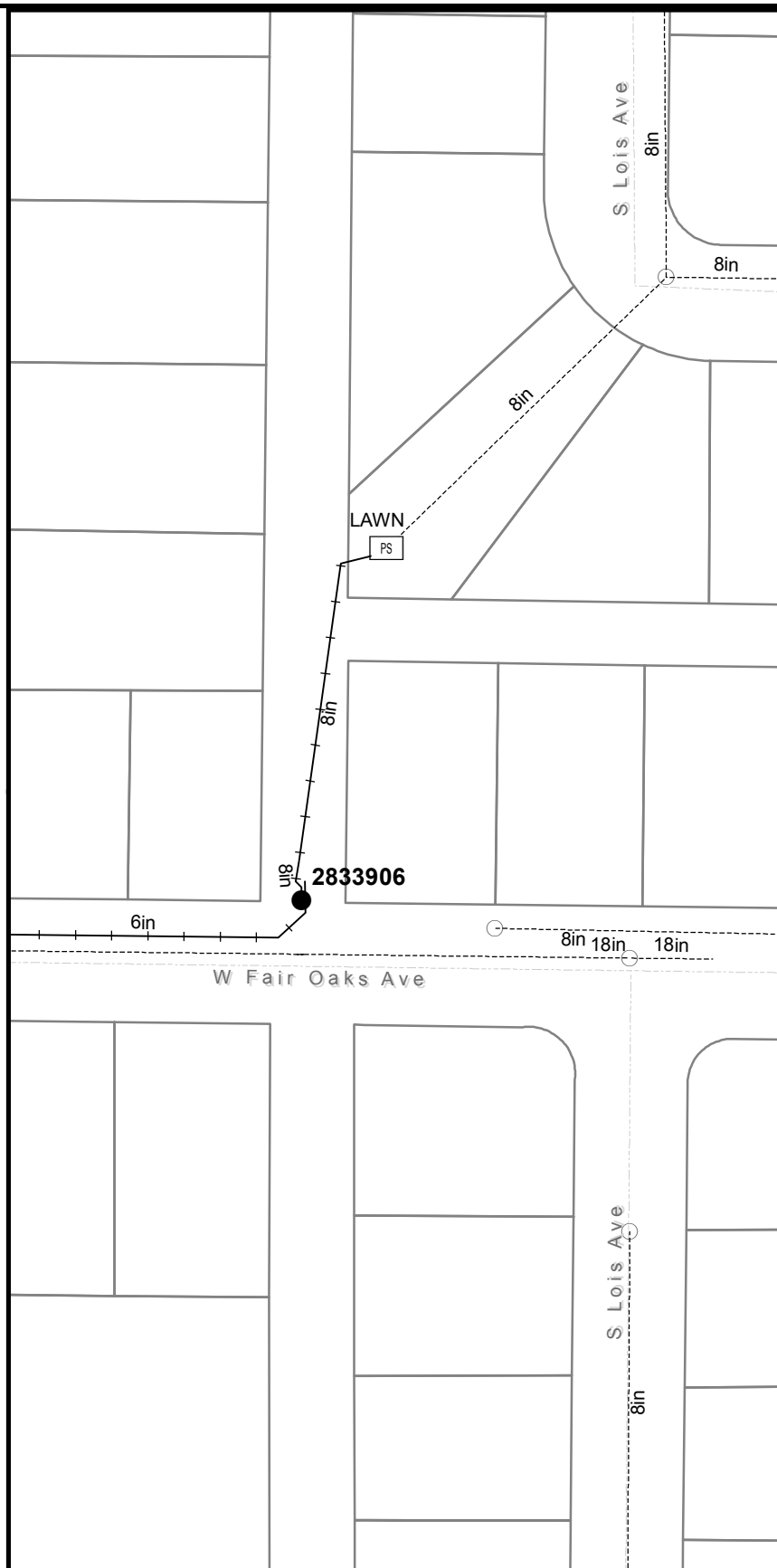
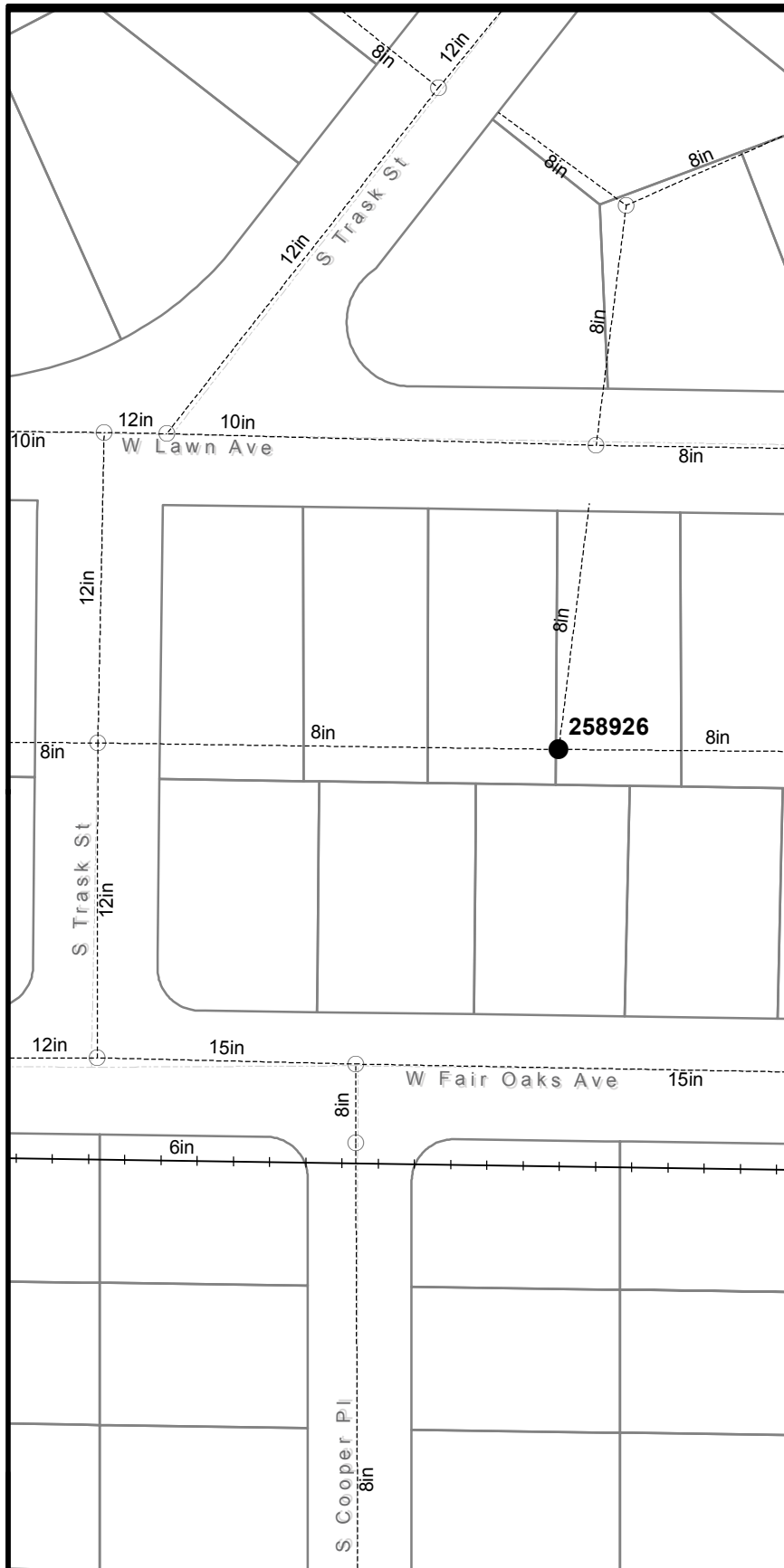
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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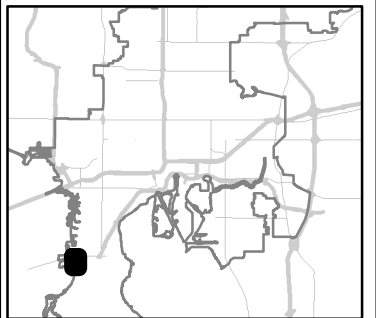
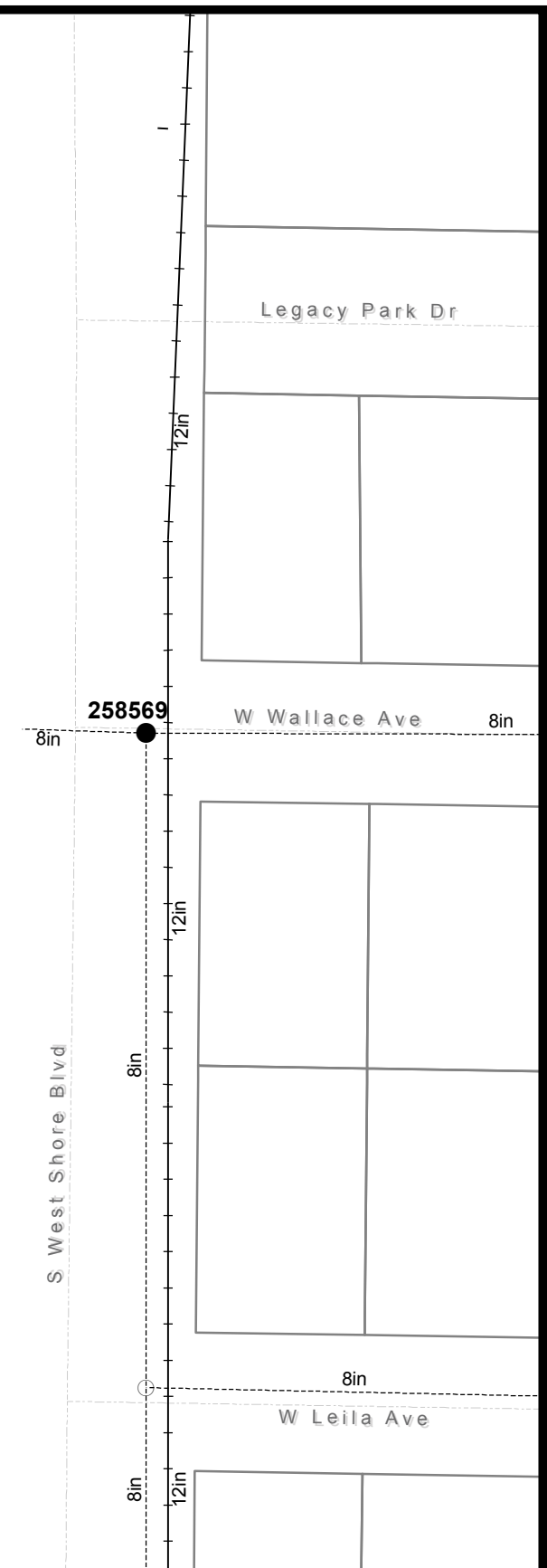
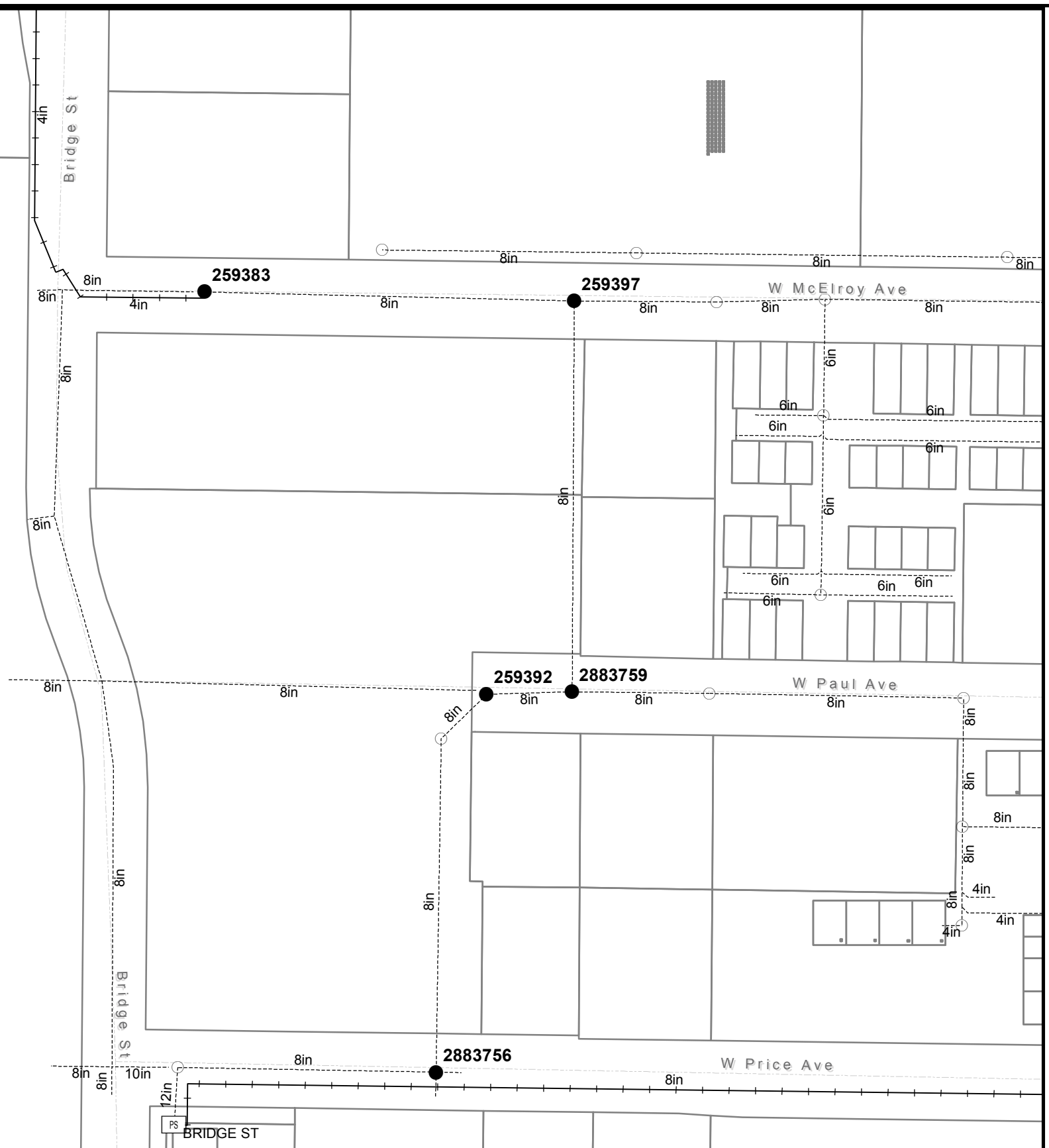
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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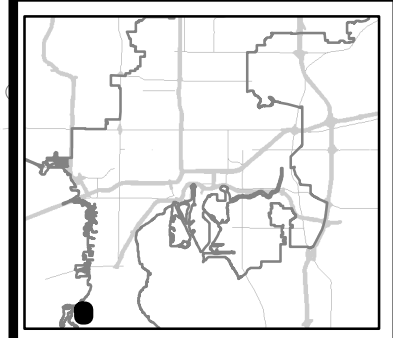
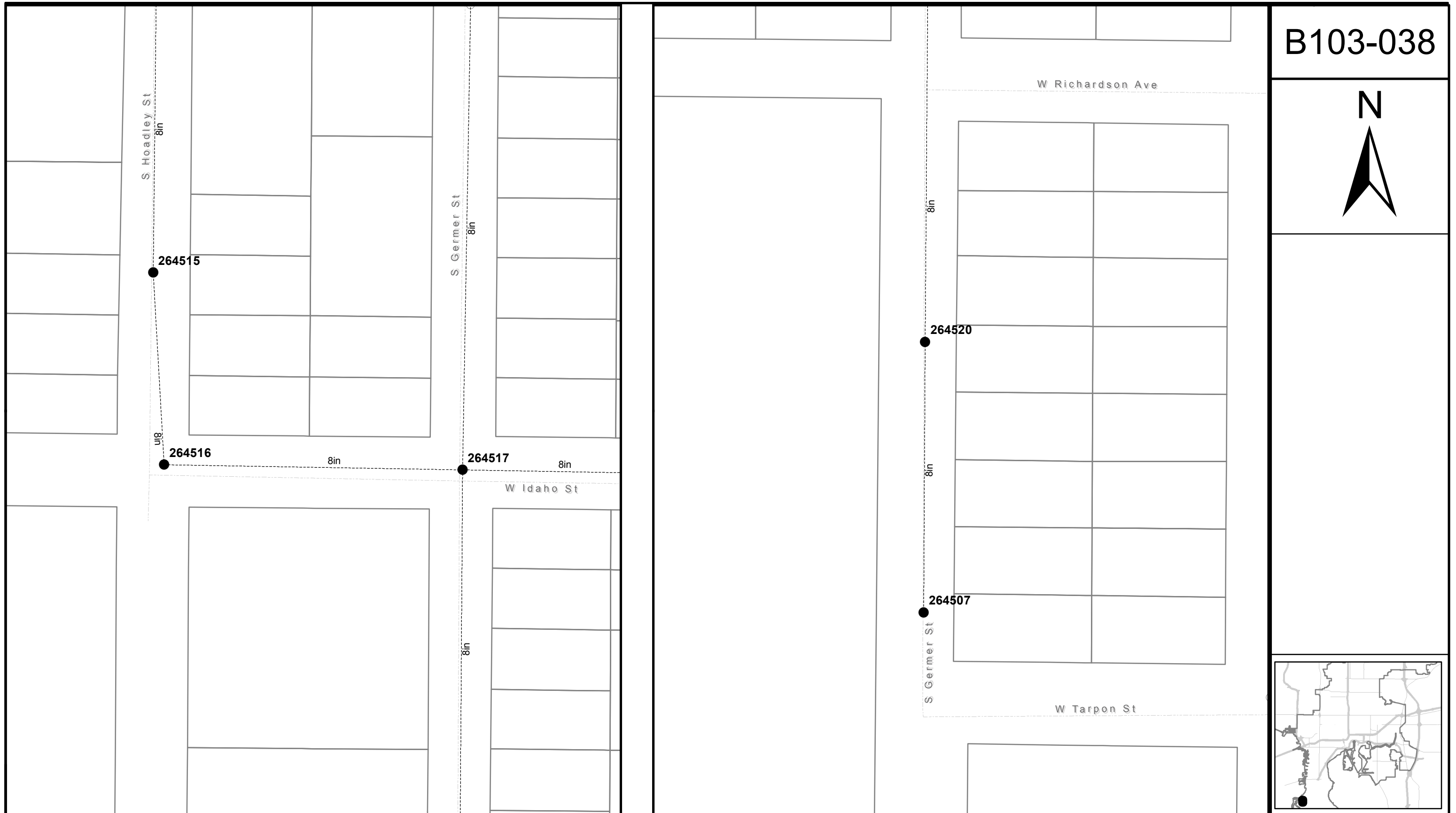
No.	DATE	REVISIONS
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains



No.	DATE	REVISIONS
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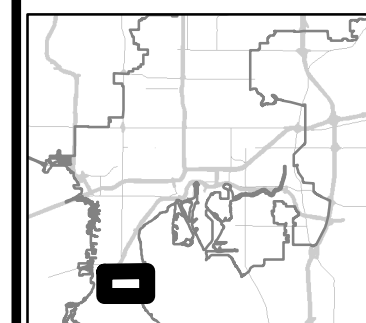
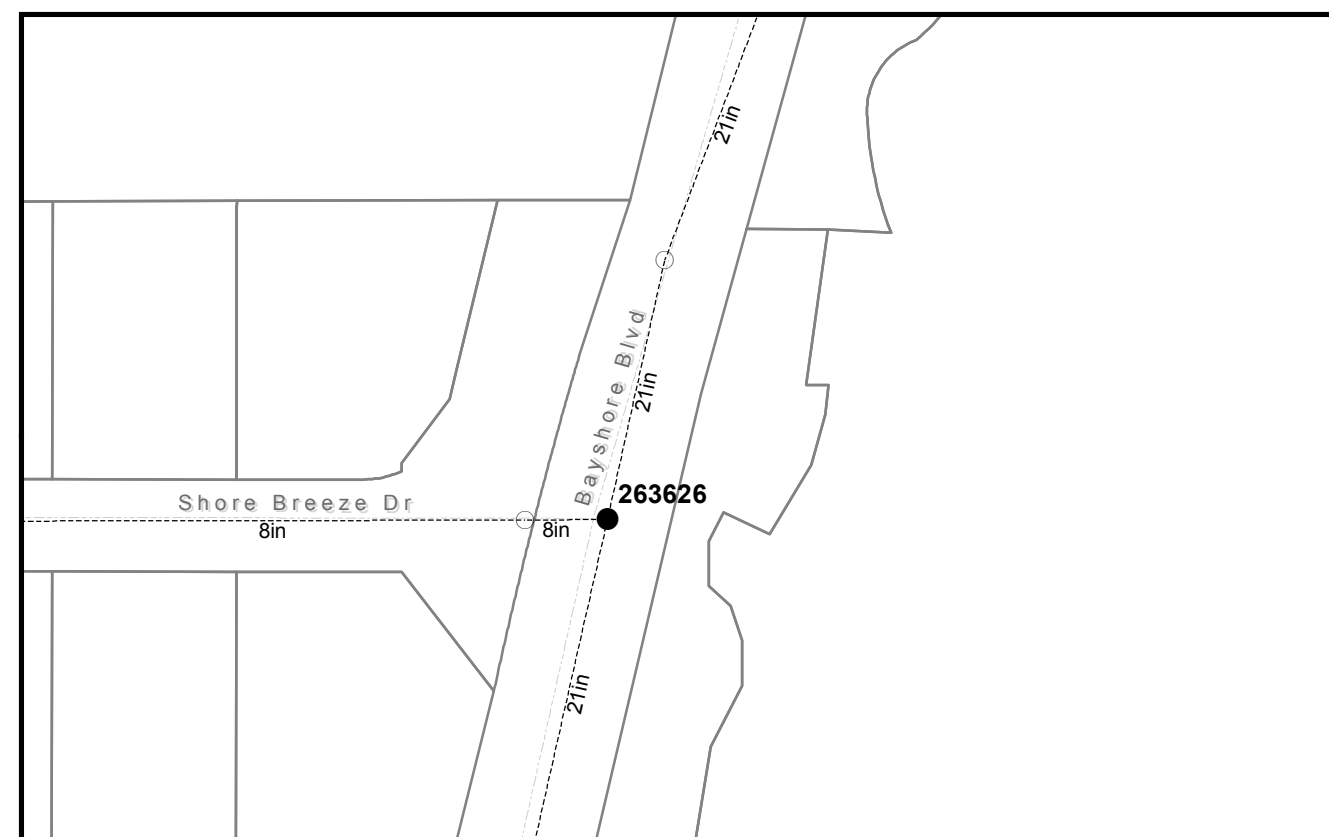
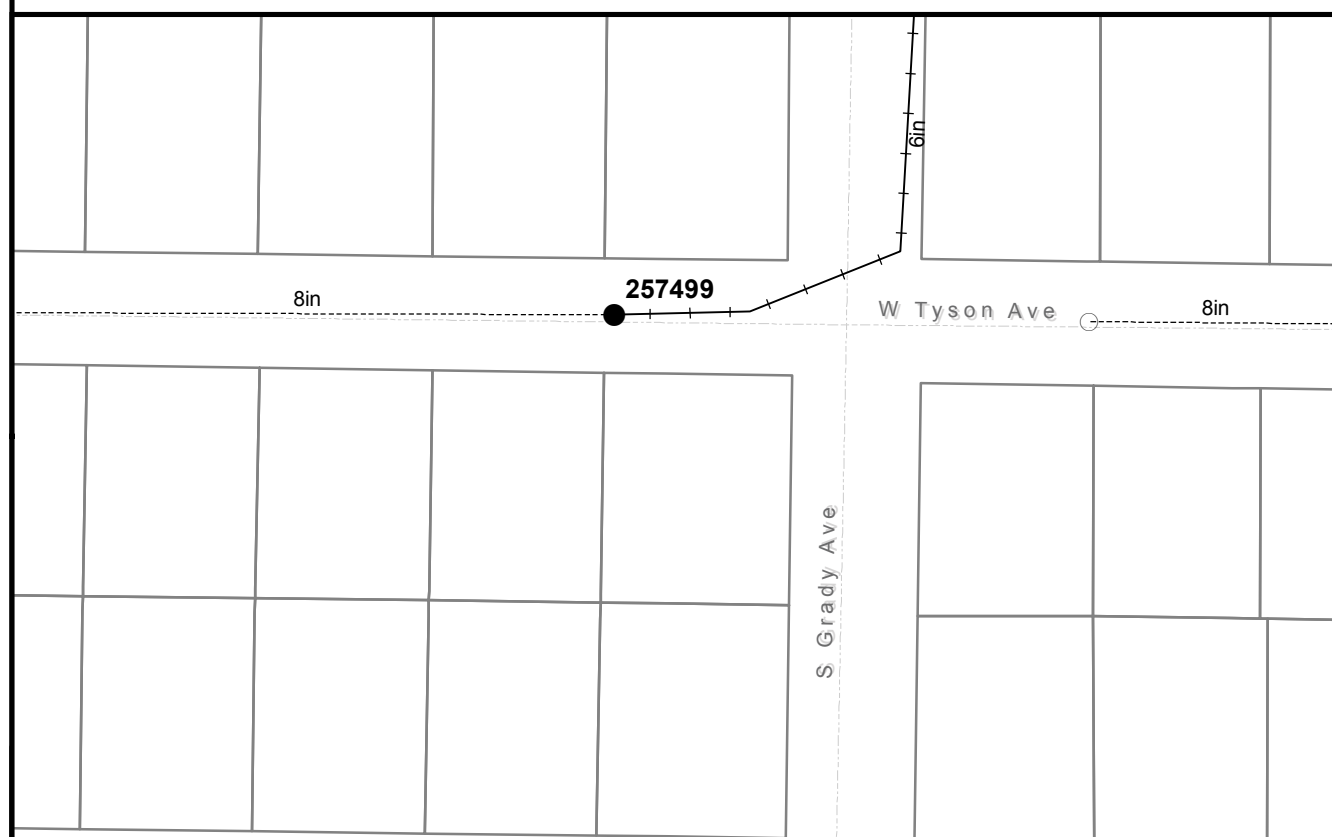
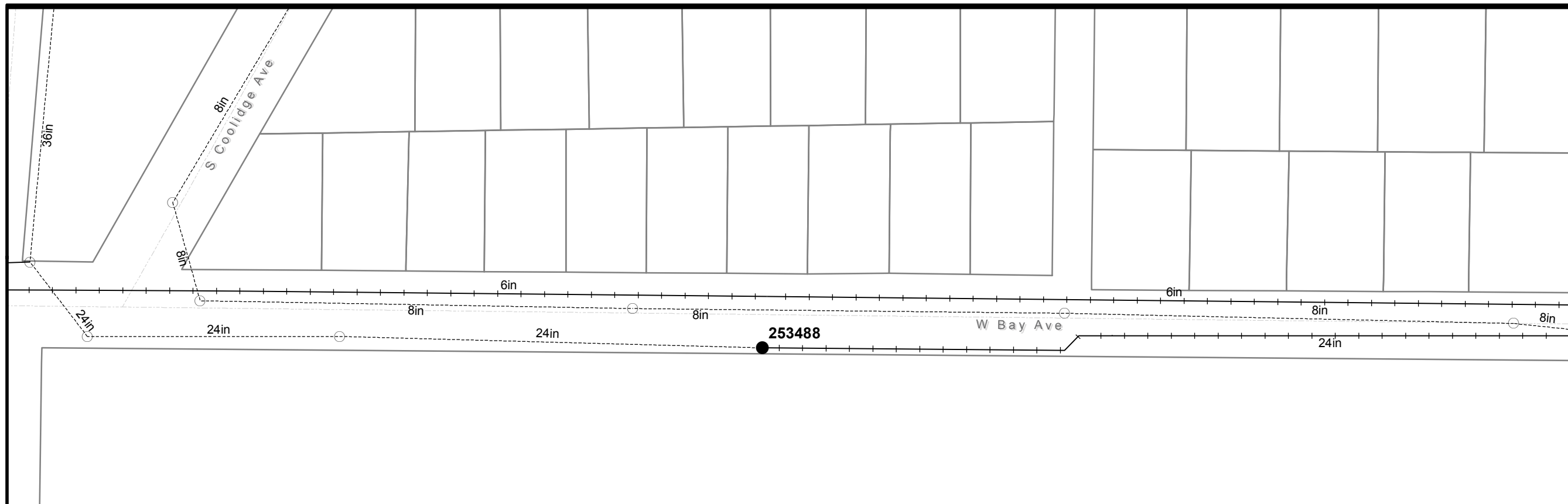
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

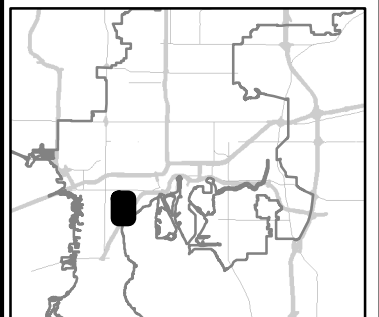
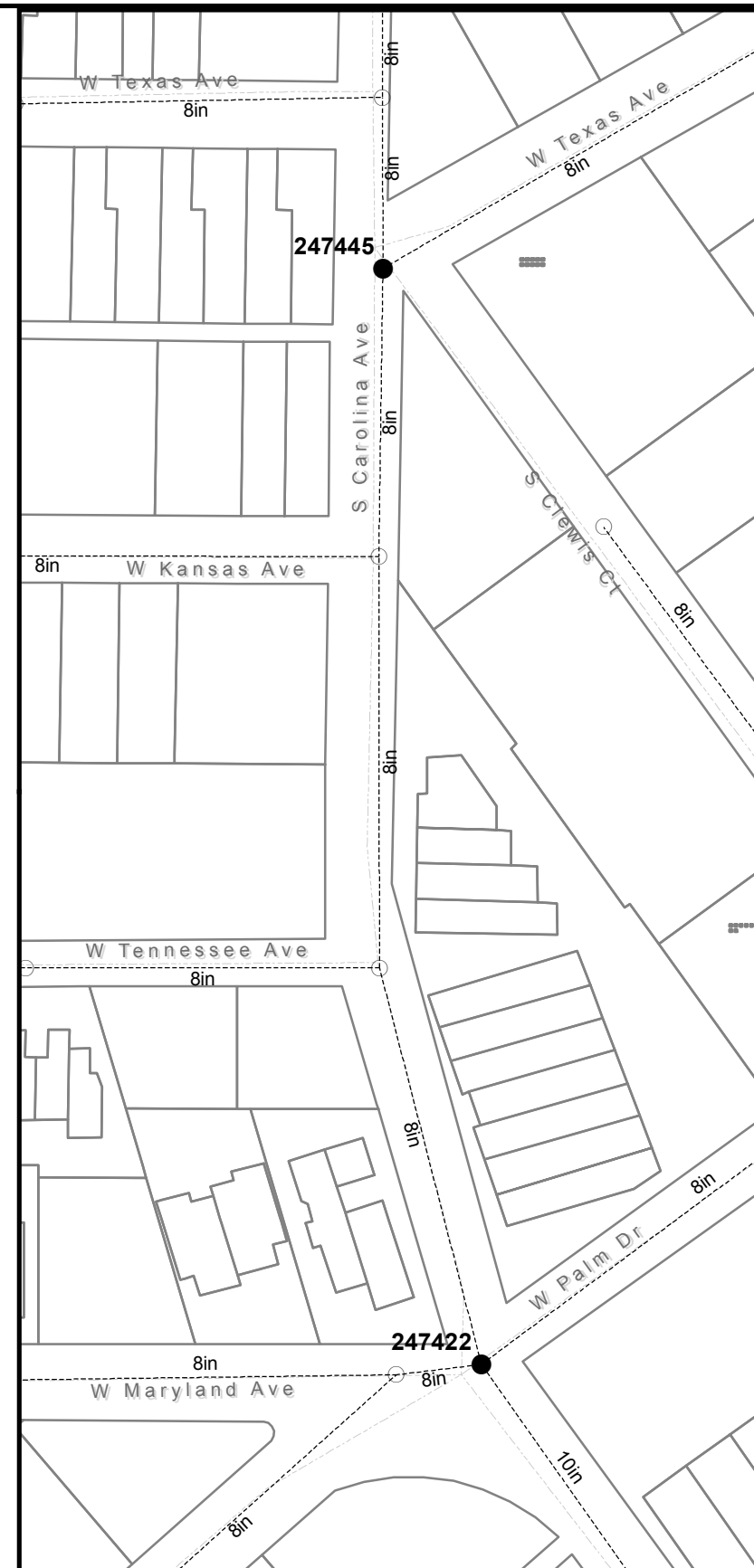
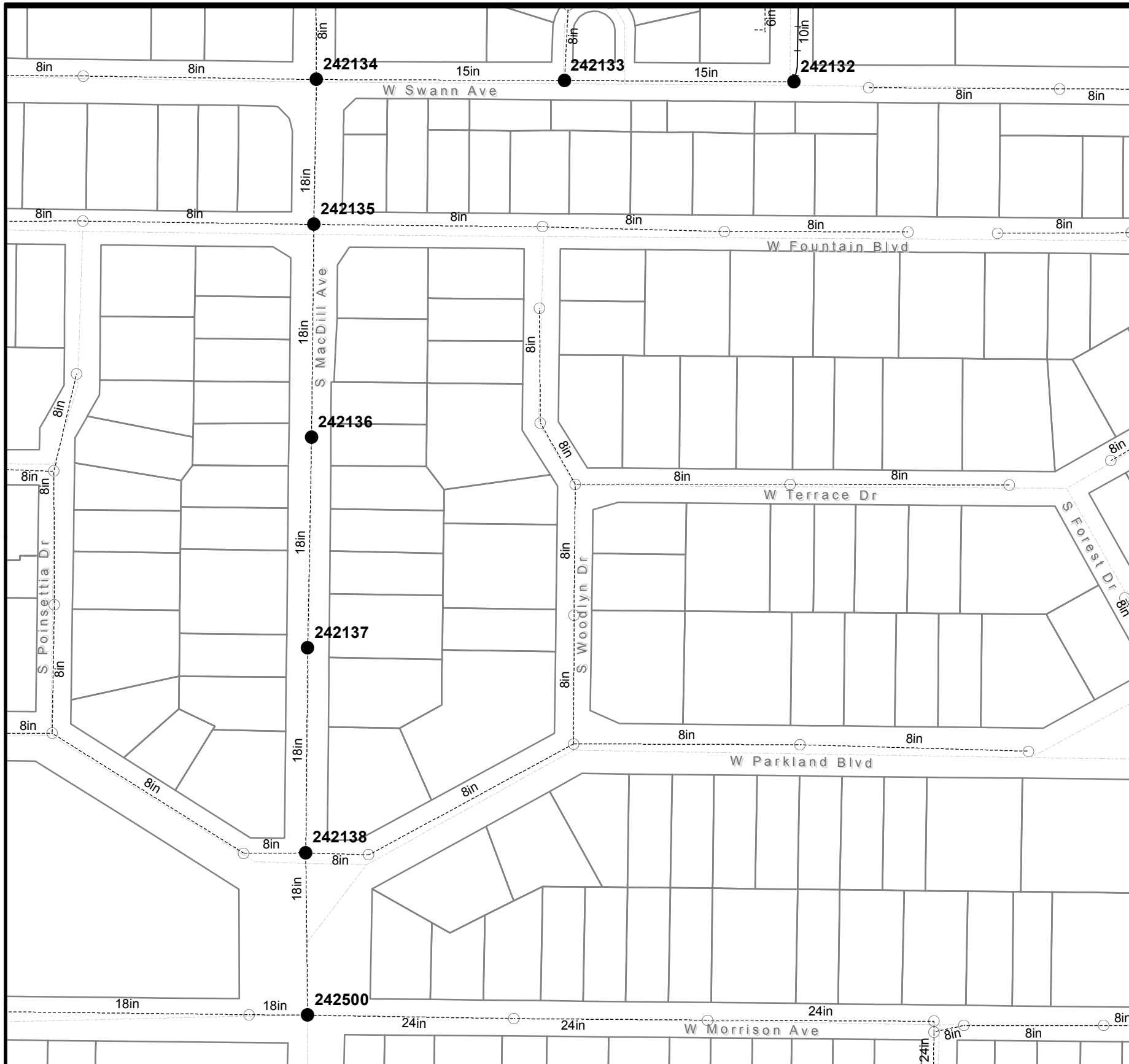
**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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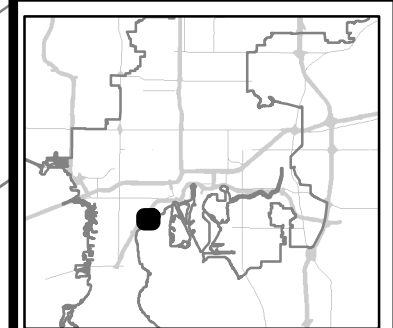
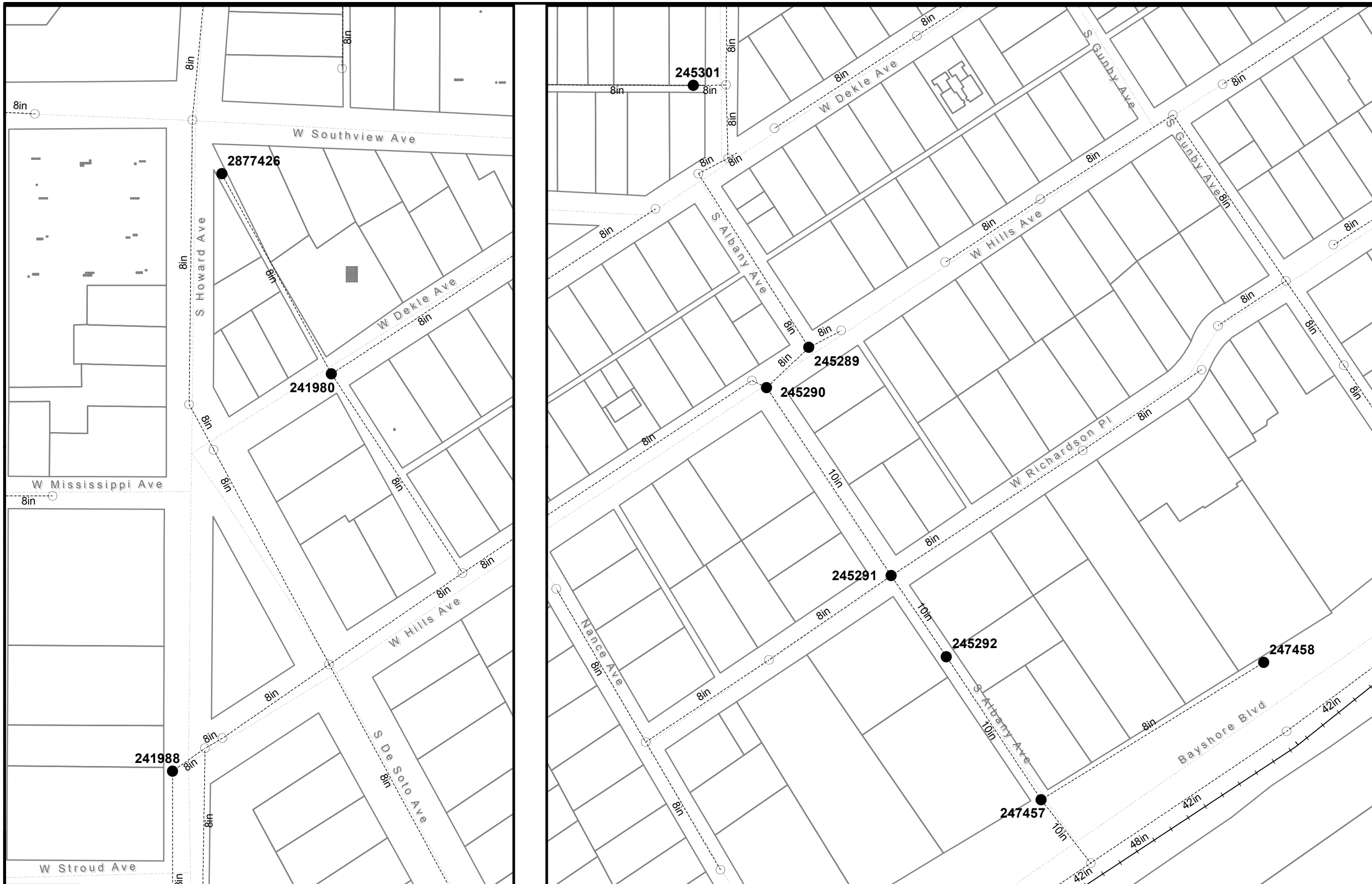
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
1		
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3		

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 DRN:  
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 DATE: 5/7/2018

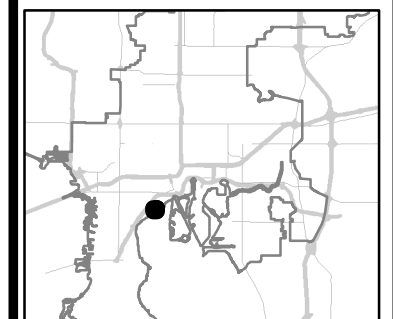
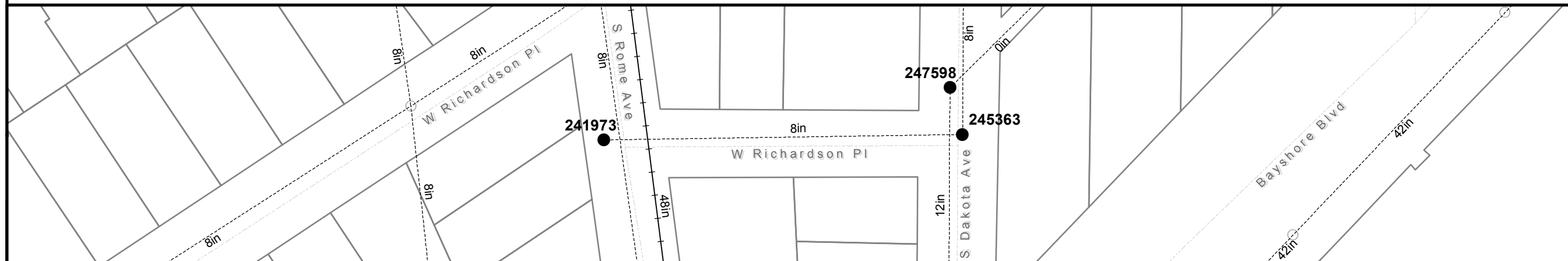
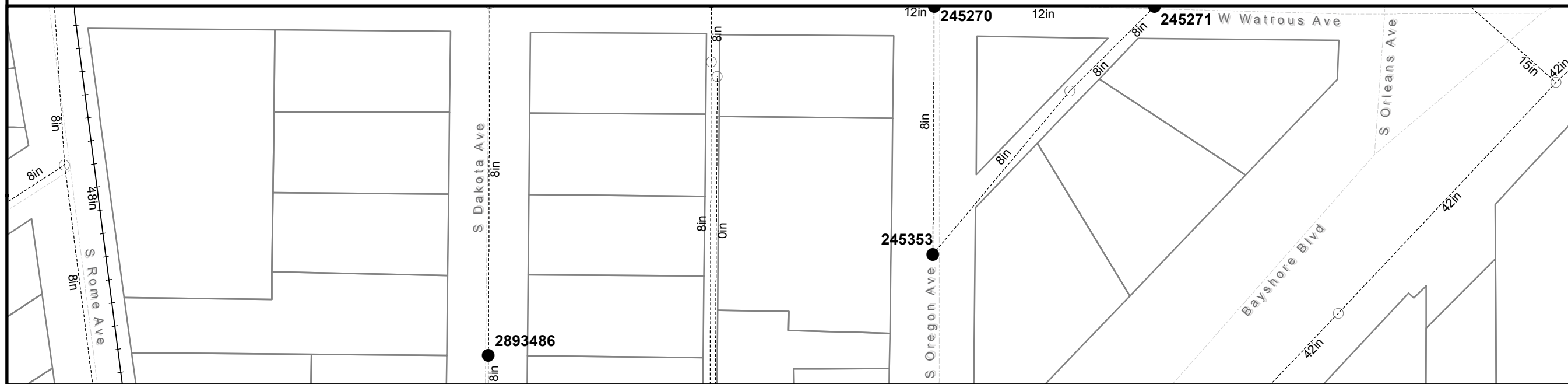
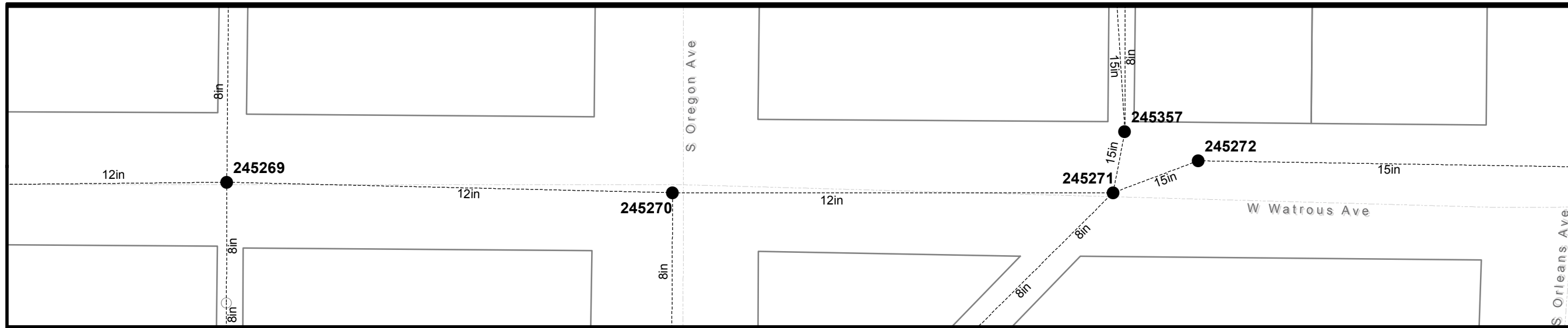
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DRN:  
 CKD:  
 DATE: 5/7/2018

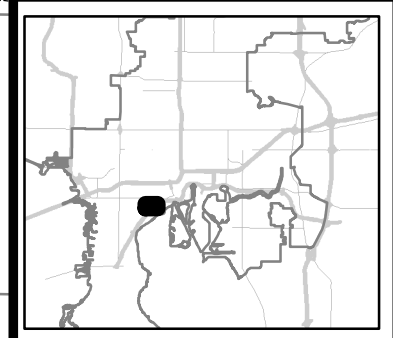
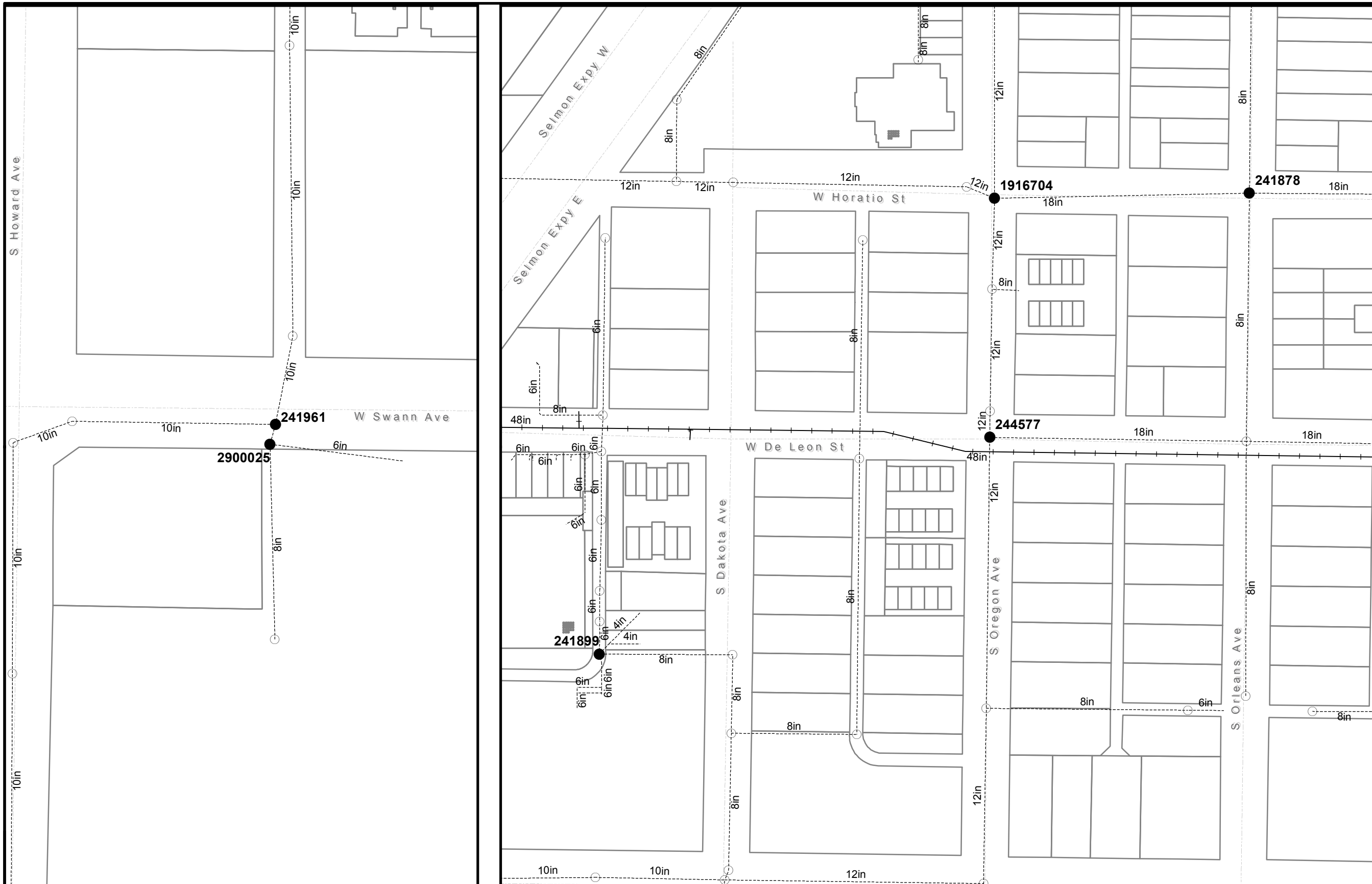
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
1		
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 DES:  
 DRN:  
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 DATE: 5/7/2018

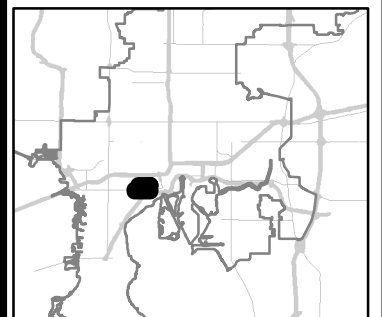
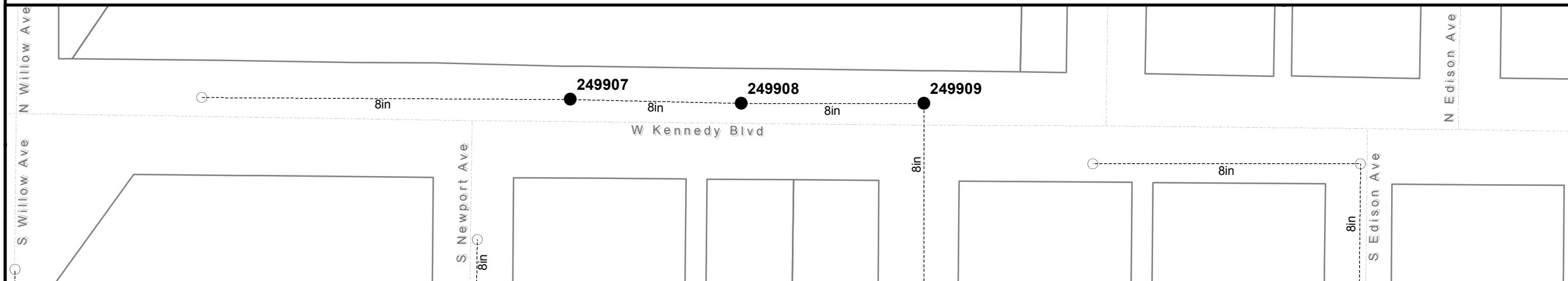
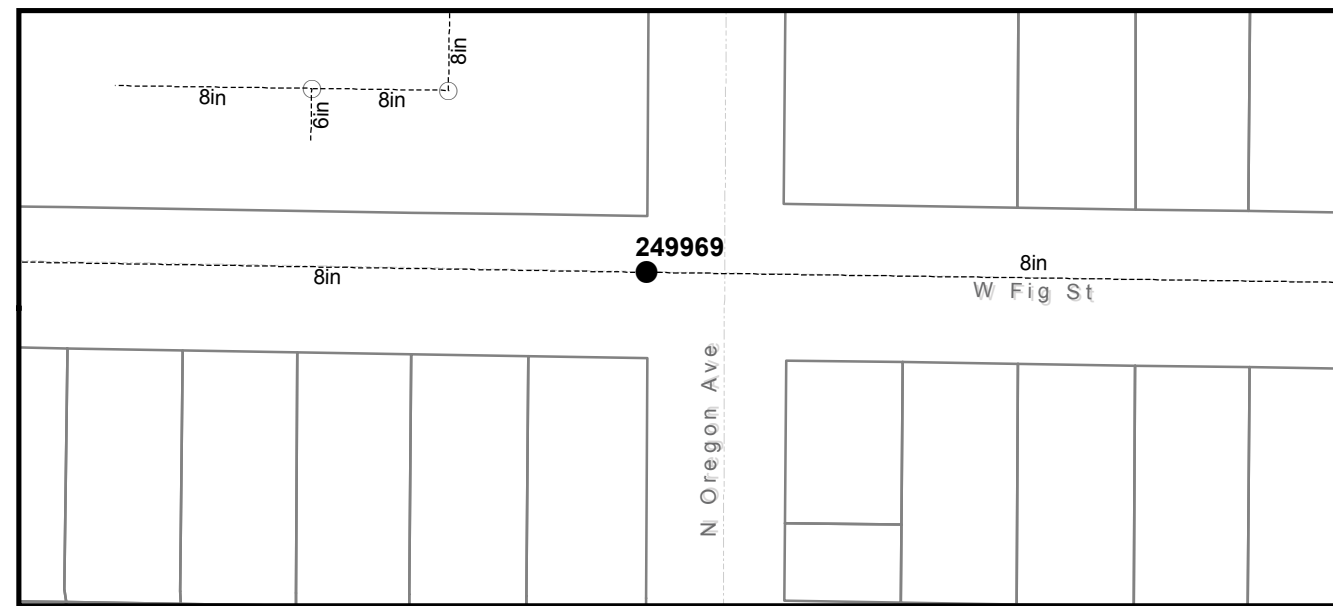
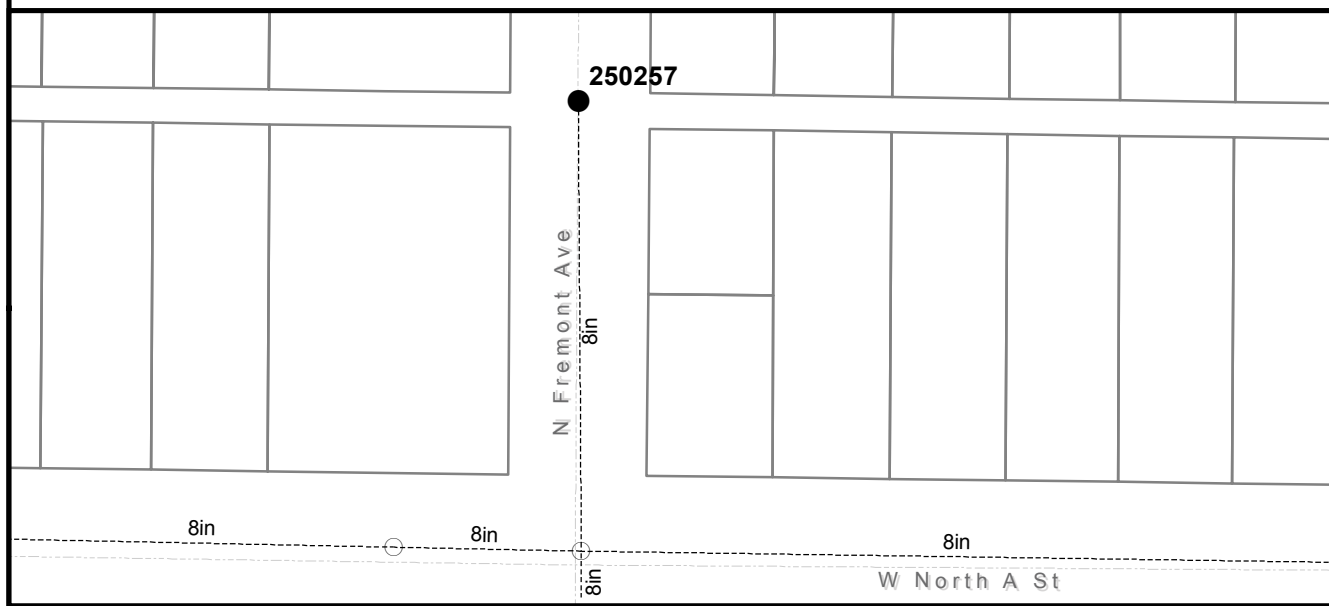
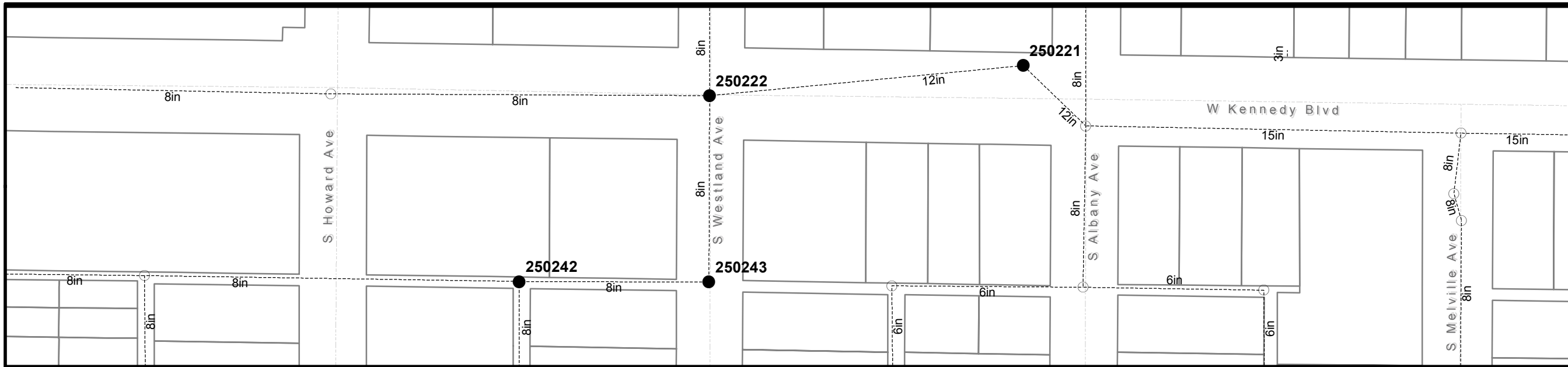
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
1		
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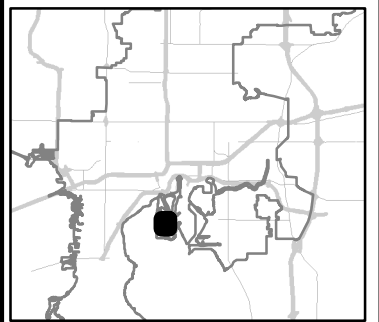
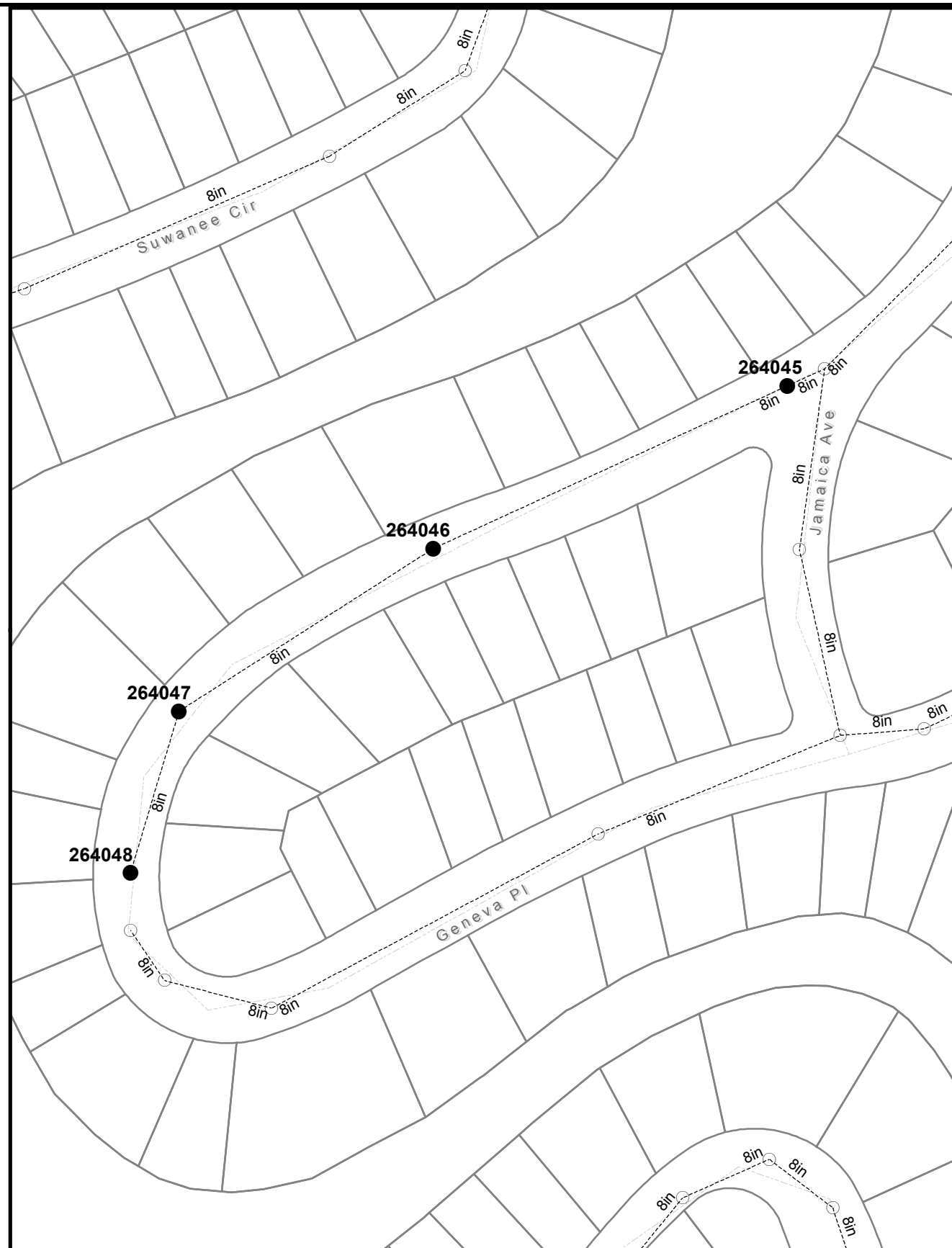
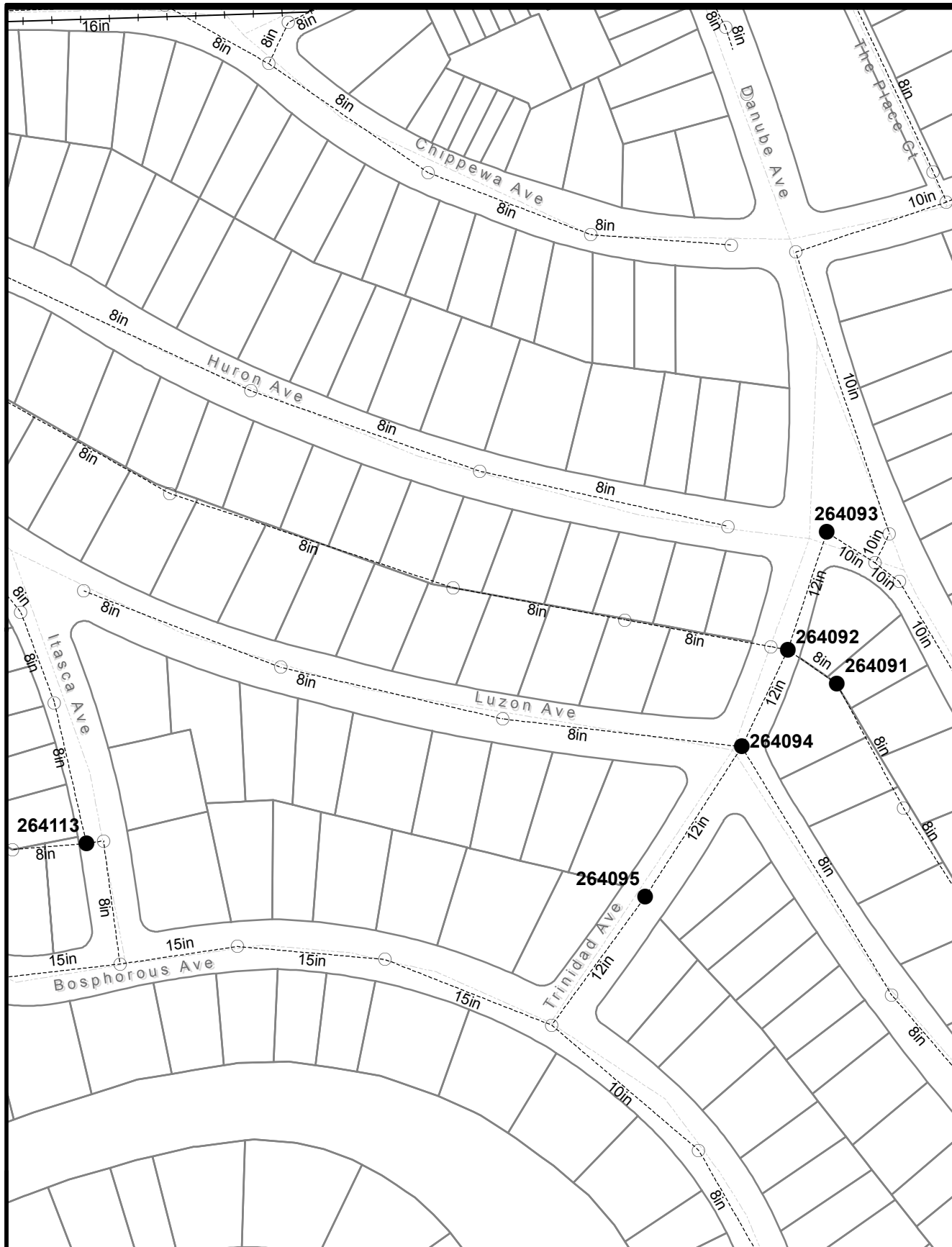
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 CKD:  
 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

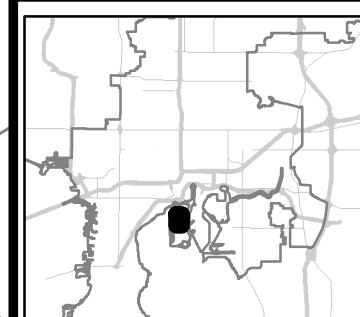
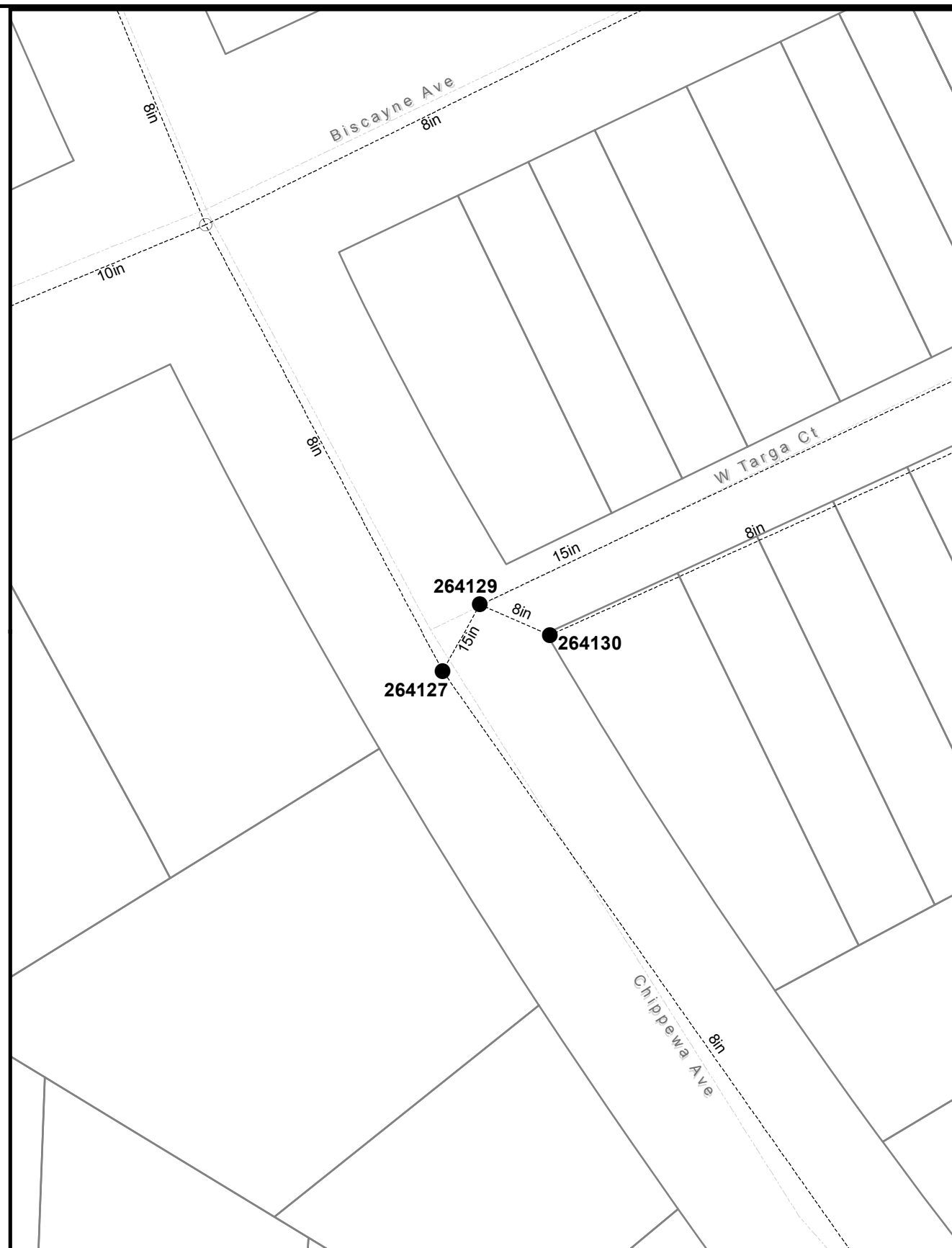
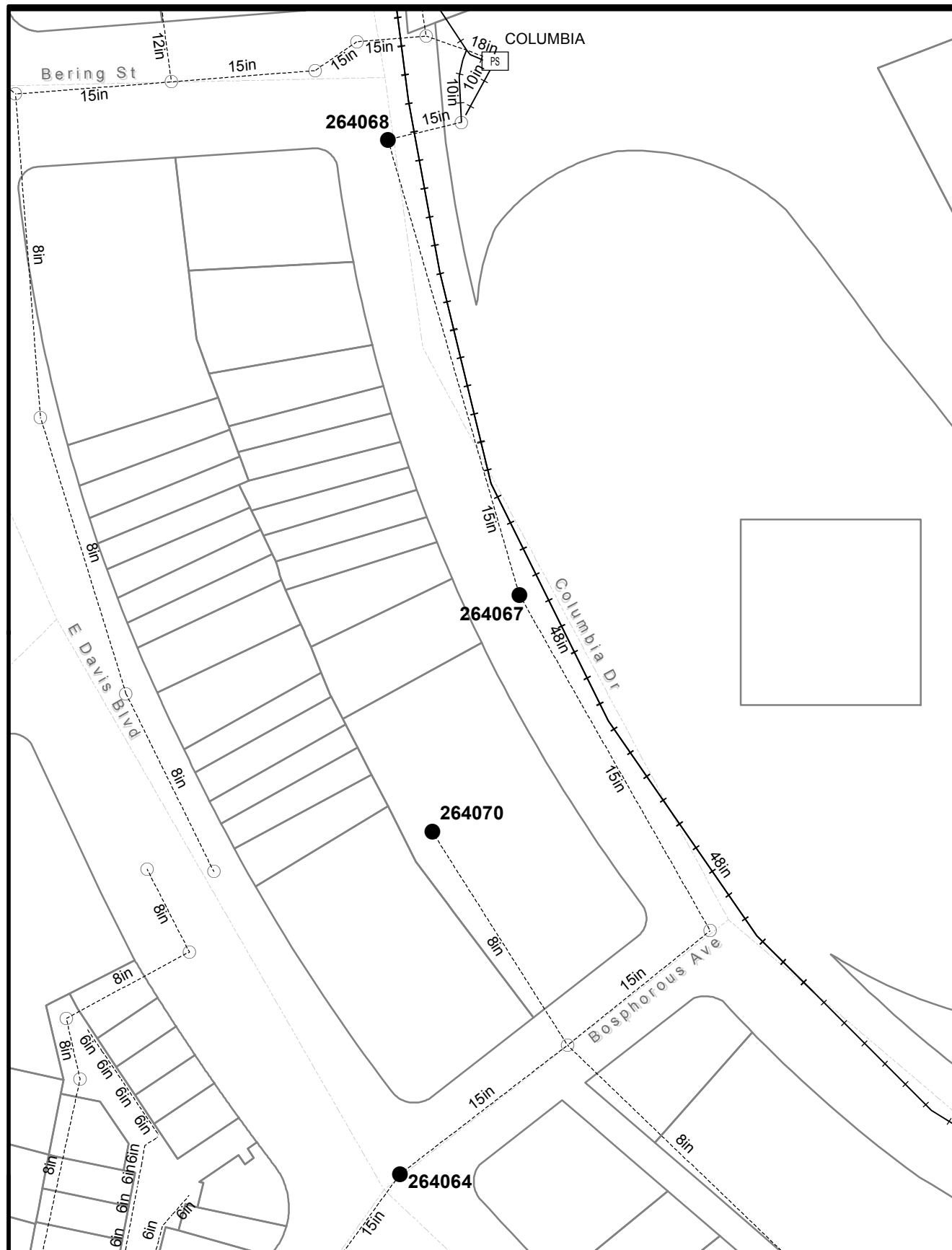
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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B103-046



No.	DATE	REVISIONS
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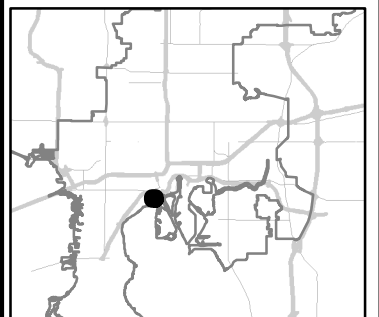
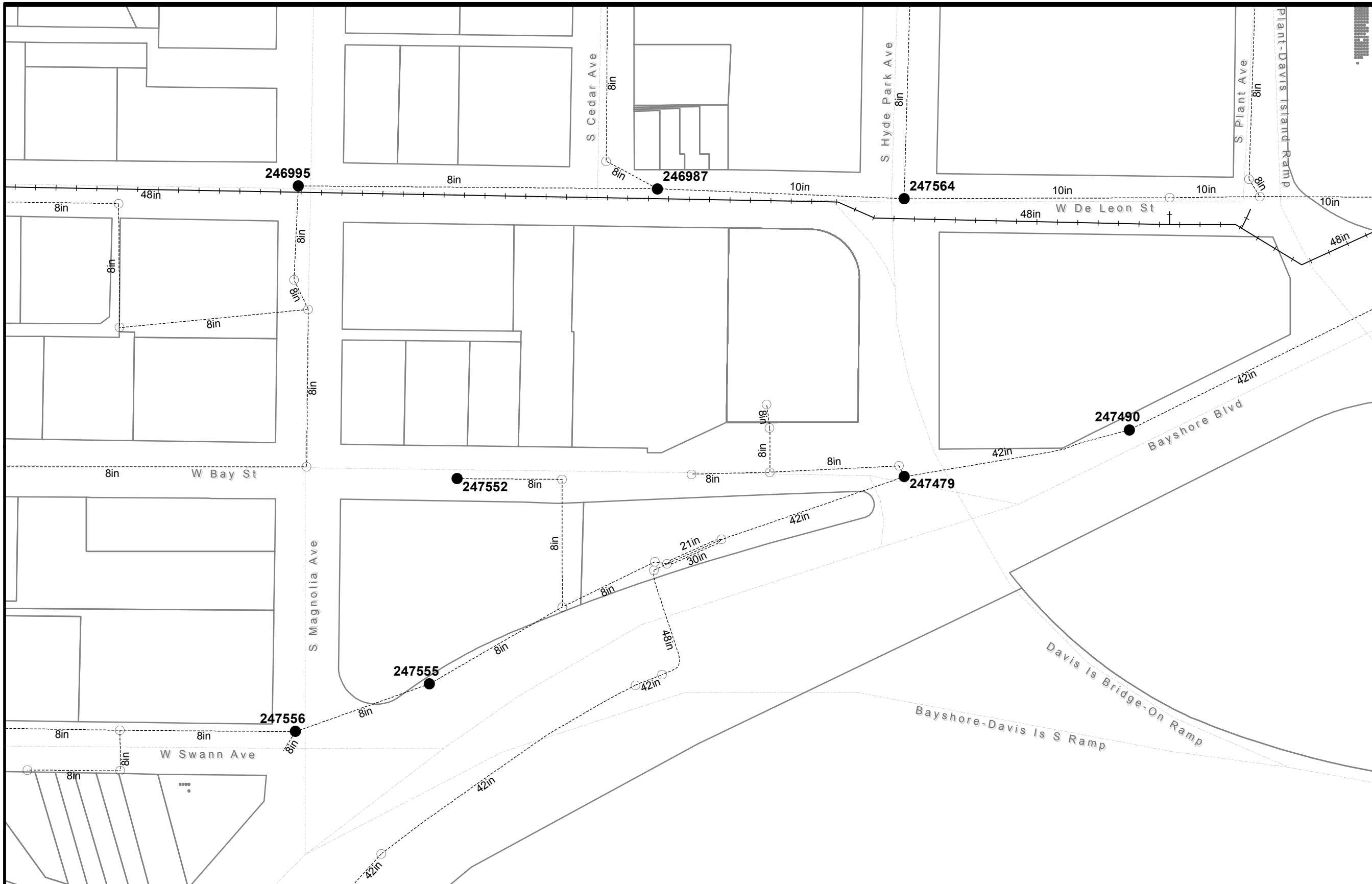
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

Sheet No.  
**46**  
 of 64



No.	DATE	REVISIONS
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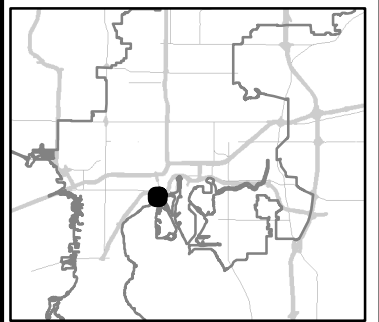
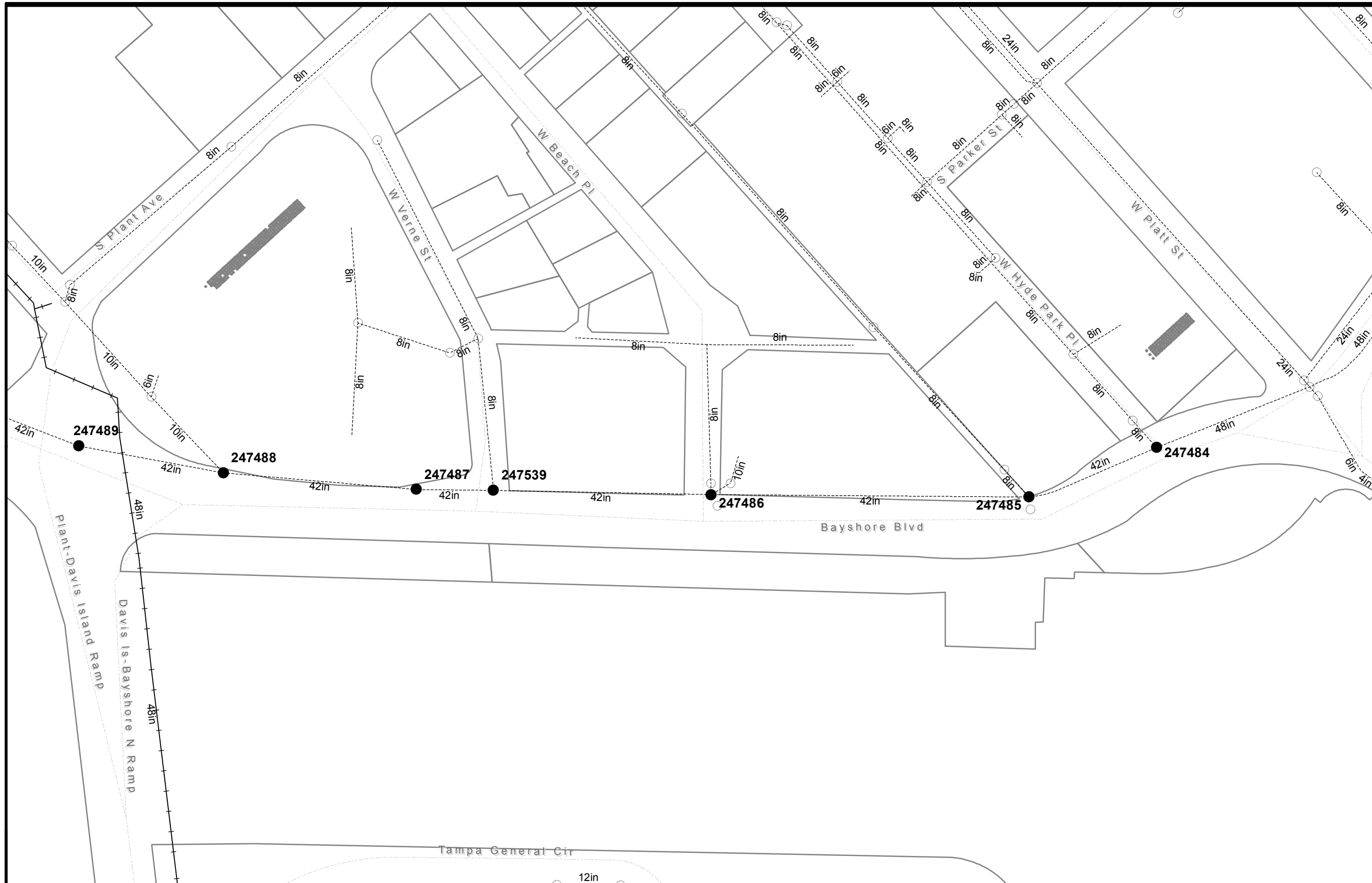
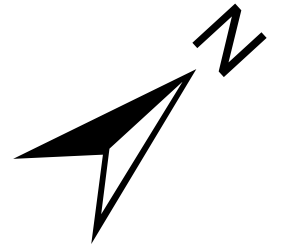
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains





No.	DATE	REVISIONS
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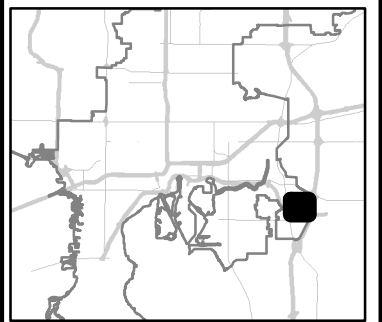
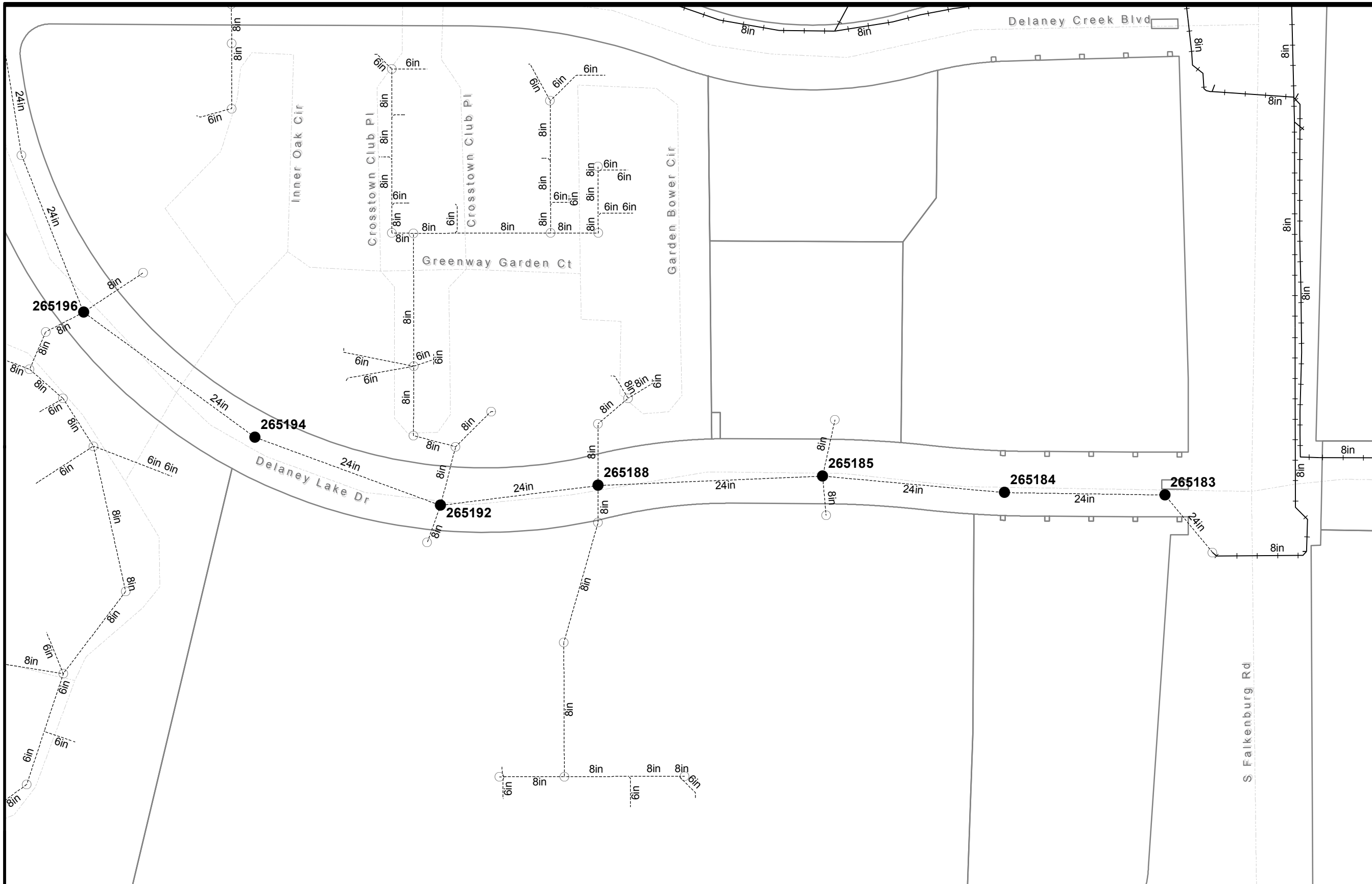
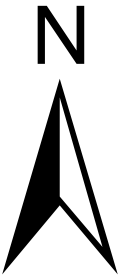
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-049



No.	DATE	REVISIONS
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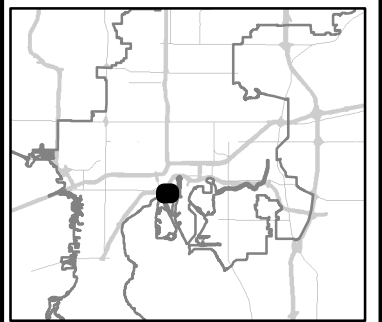
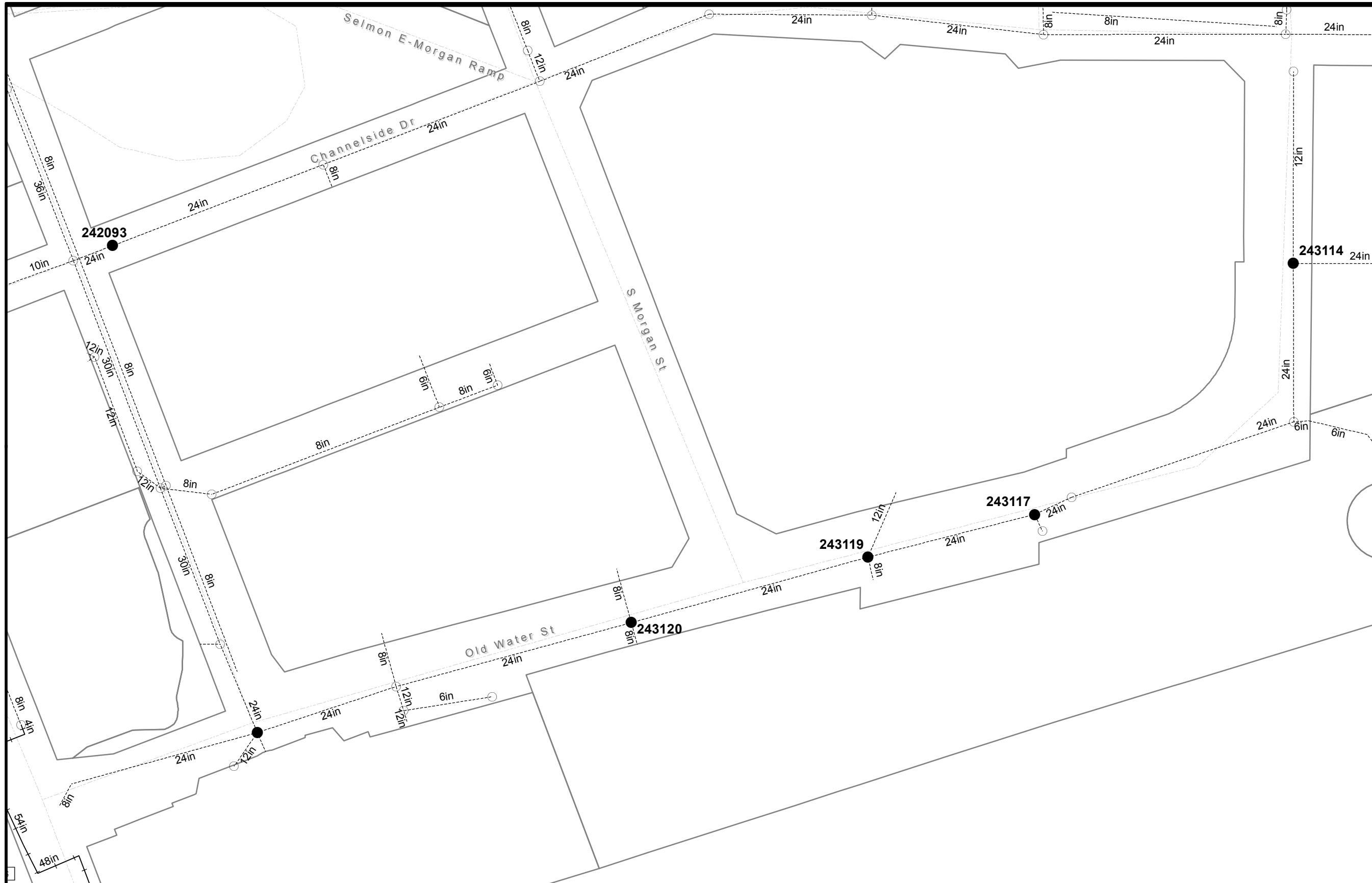
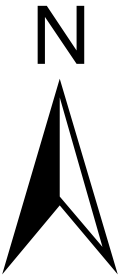
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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**49**  
 of 64

B103-050



No.	DATE	REVISIONS
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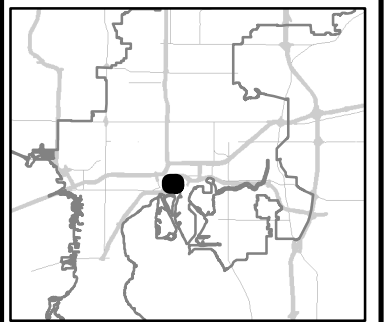
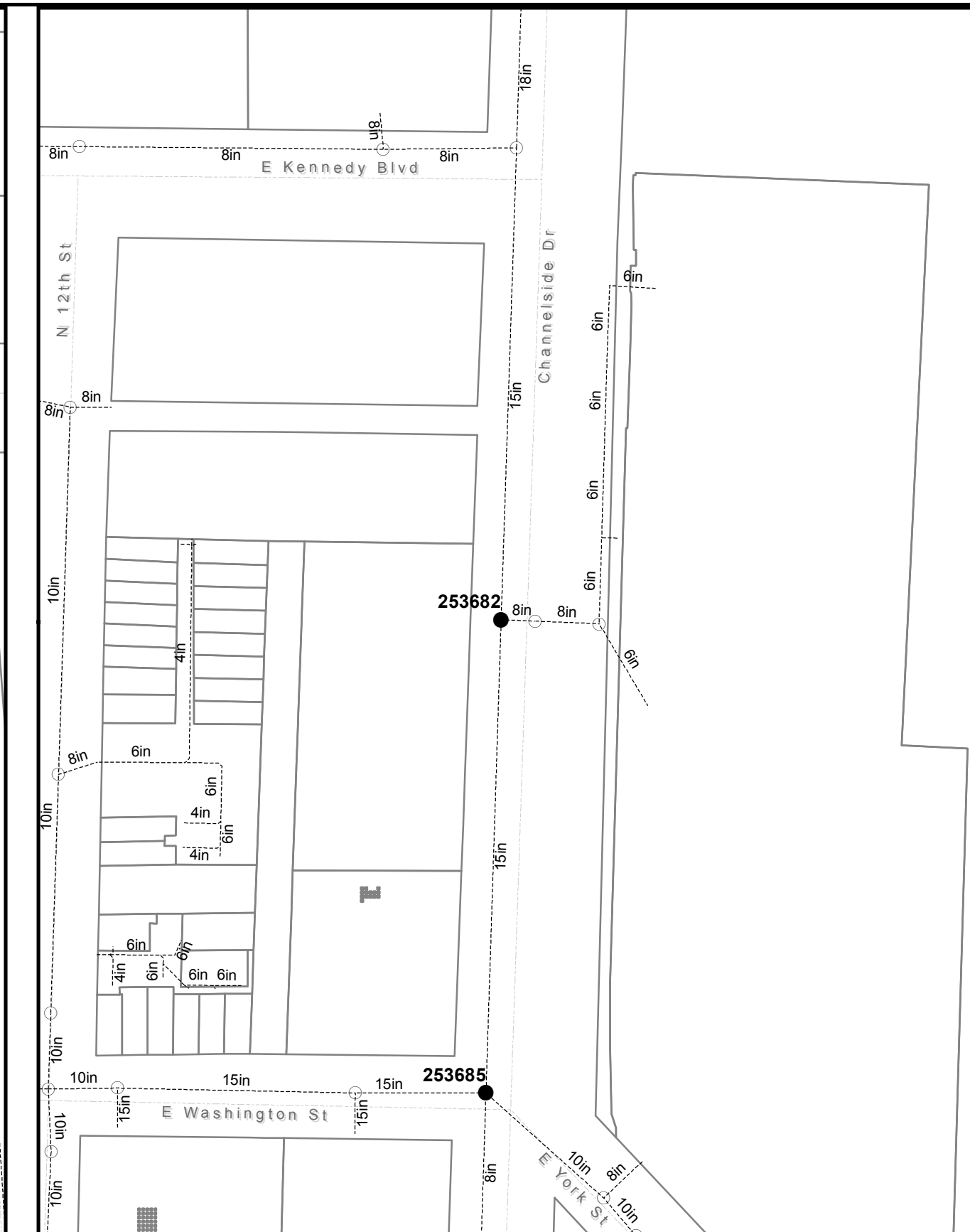
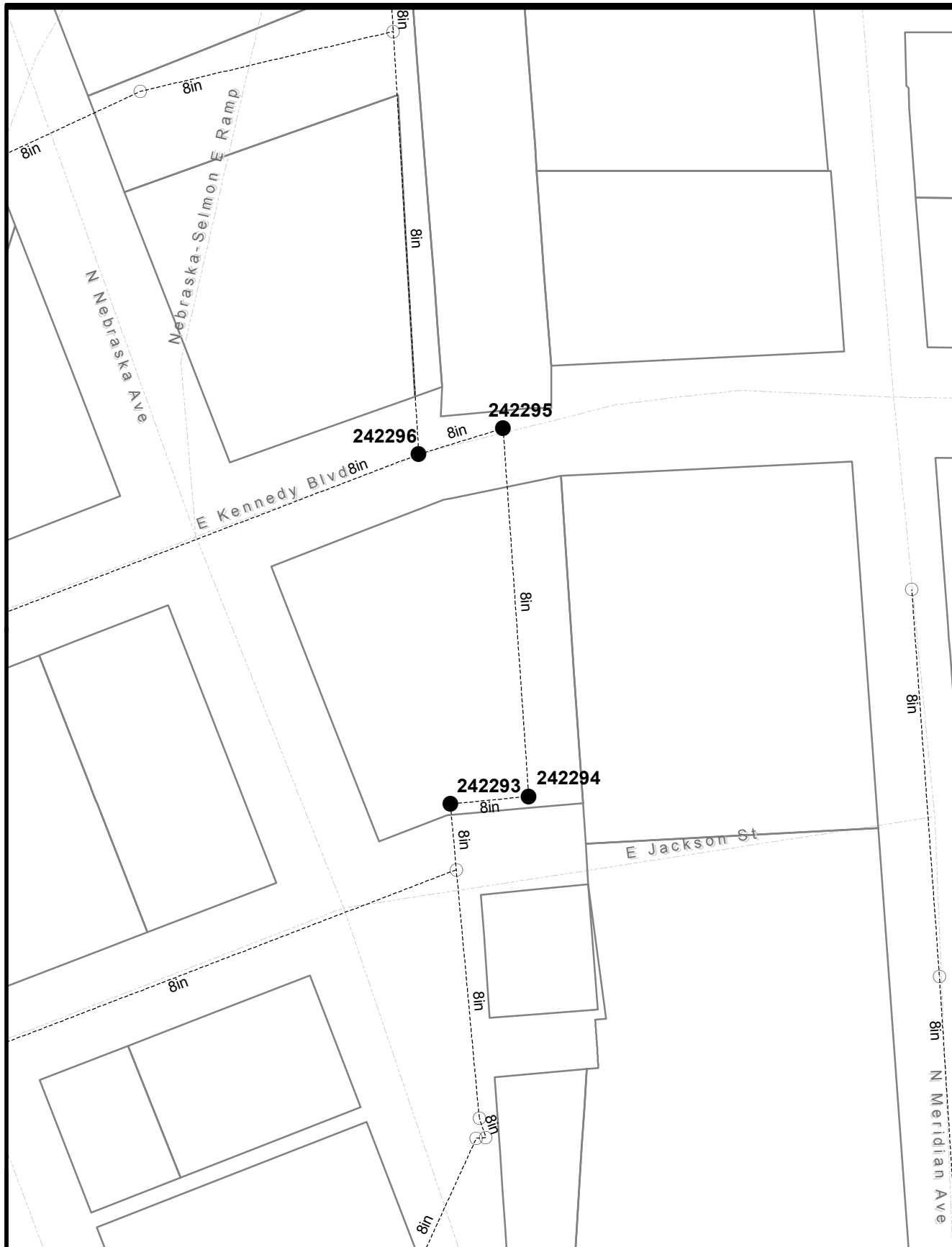
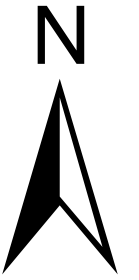
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

Sheet No.  
**50**  
 of 64



No.	DATE	REVISIONS
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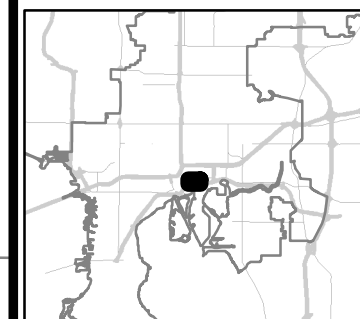
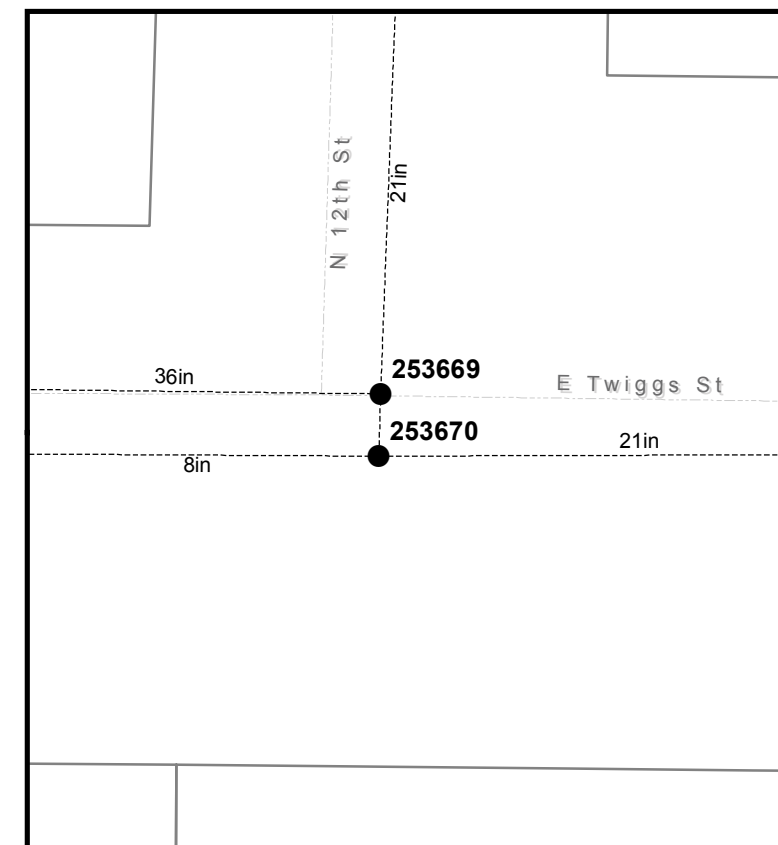
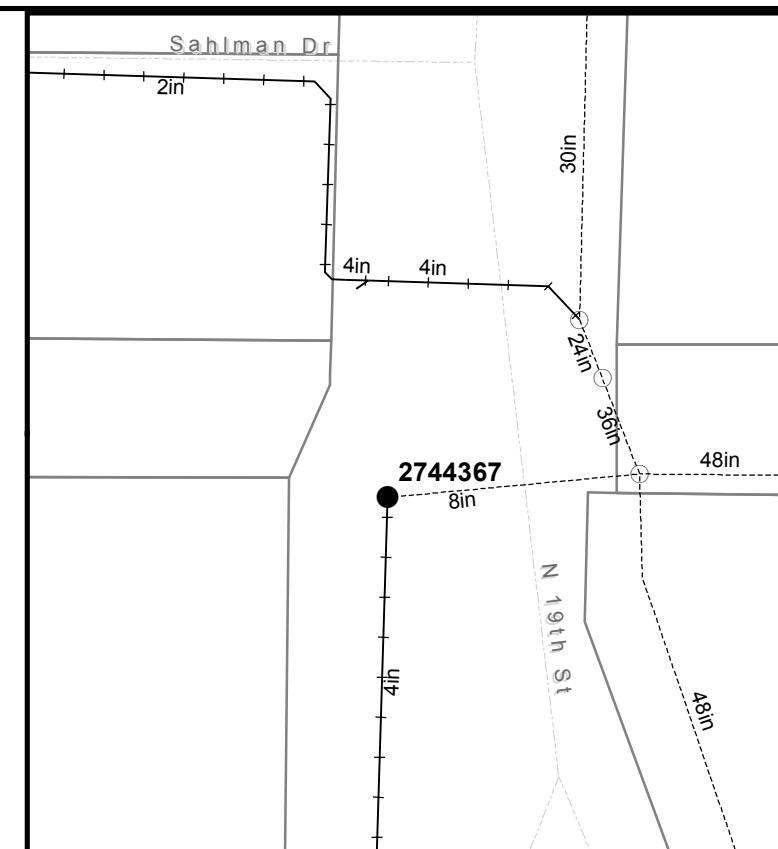
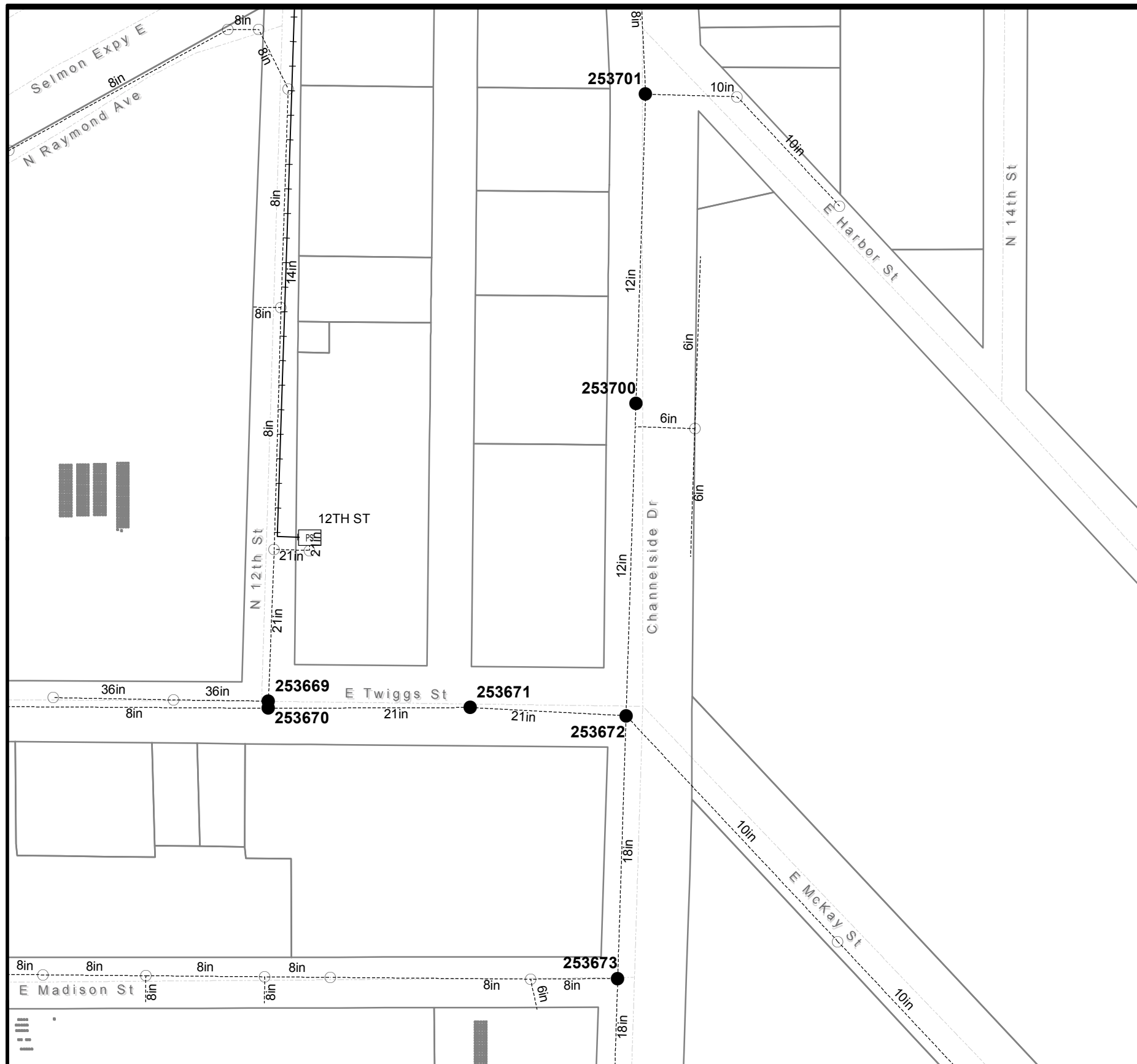
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-052



No.	DATE	REVISIONS
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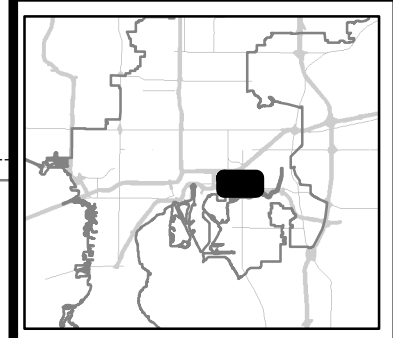
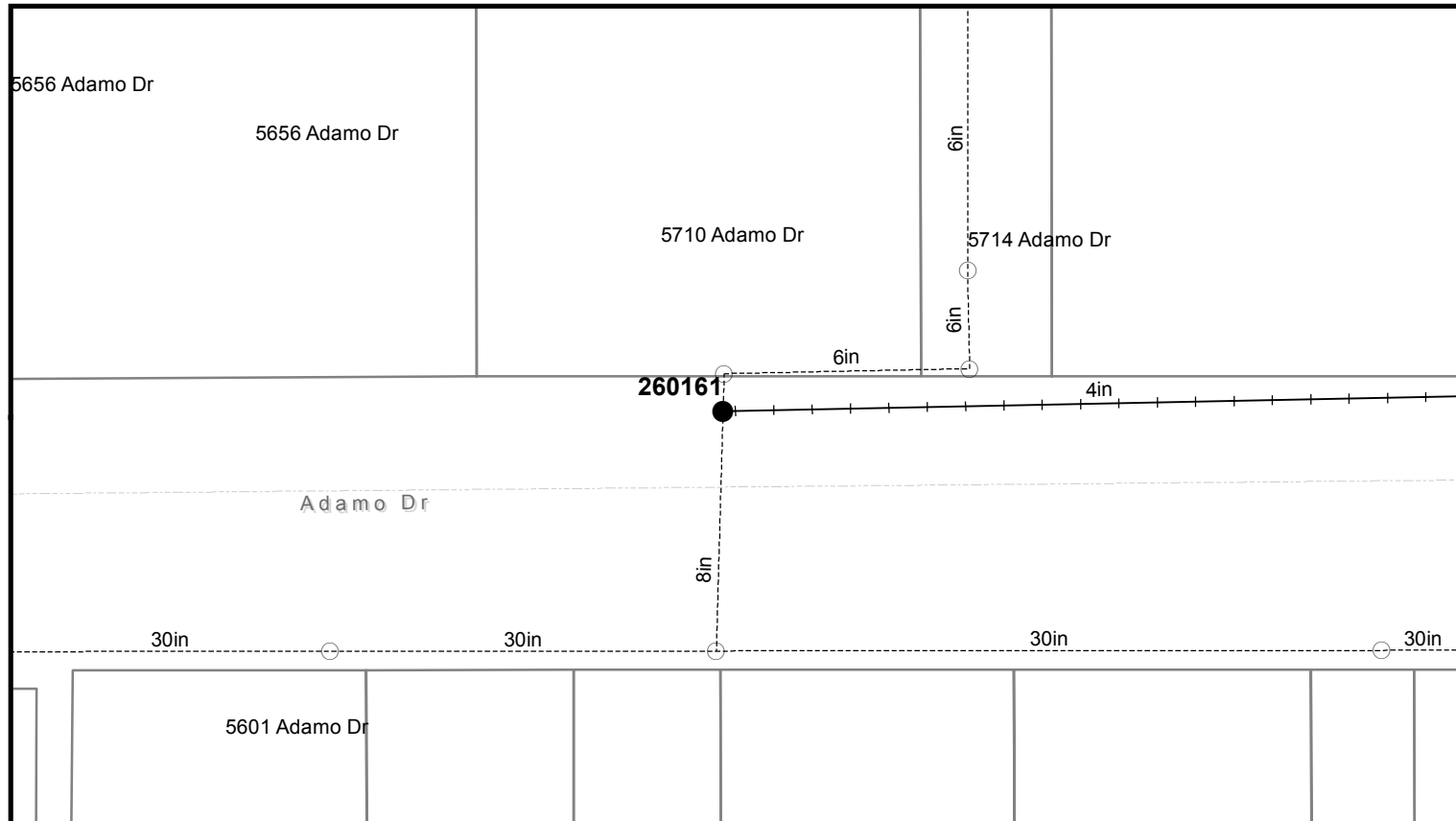
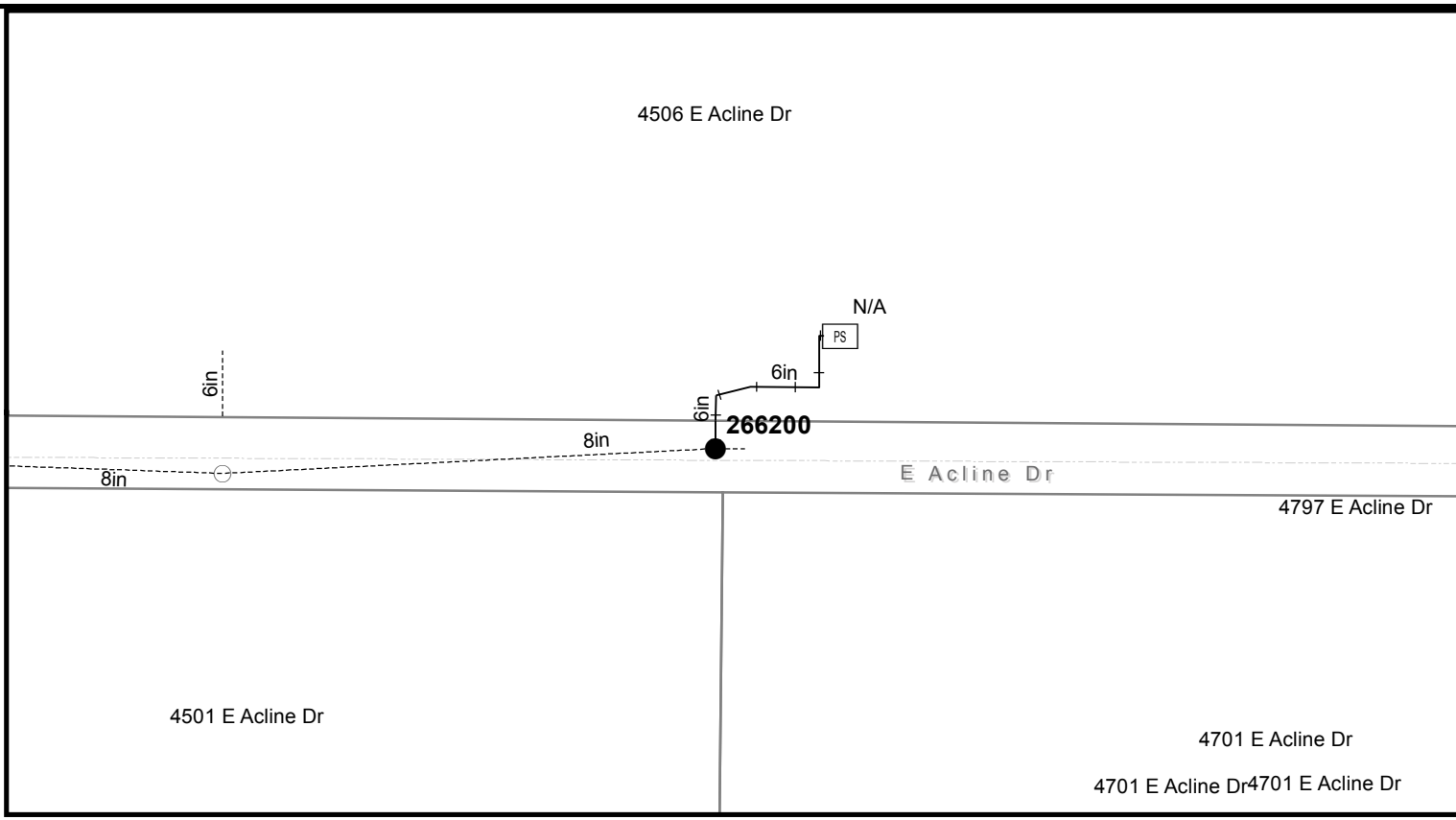
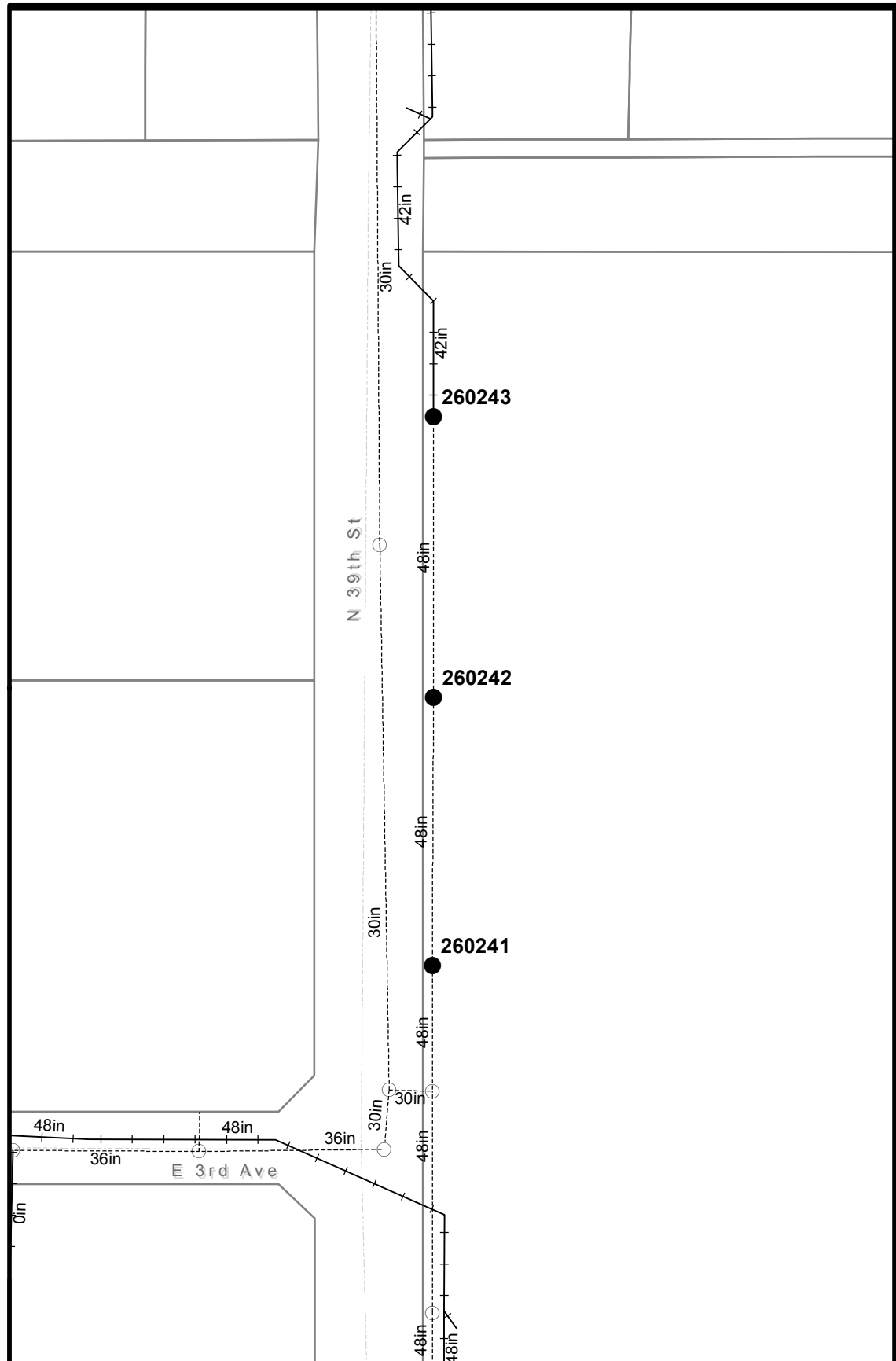
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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 of 64



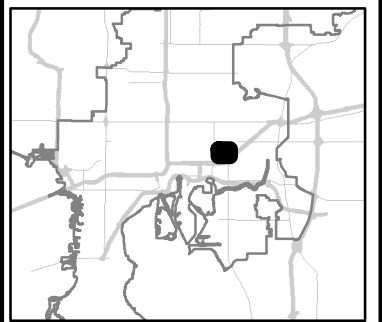
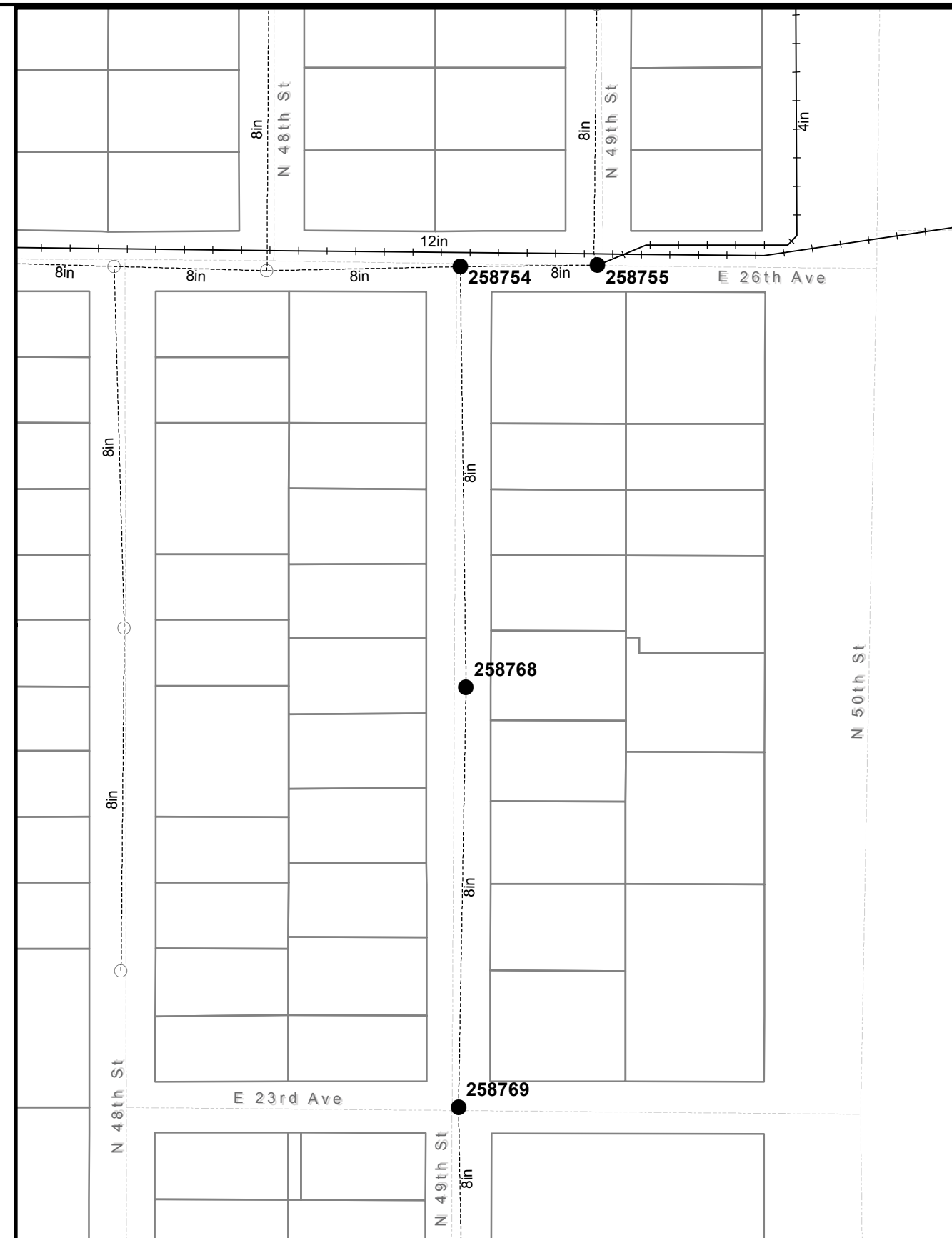
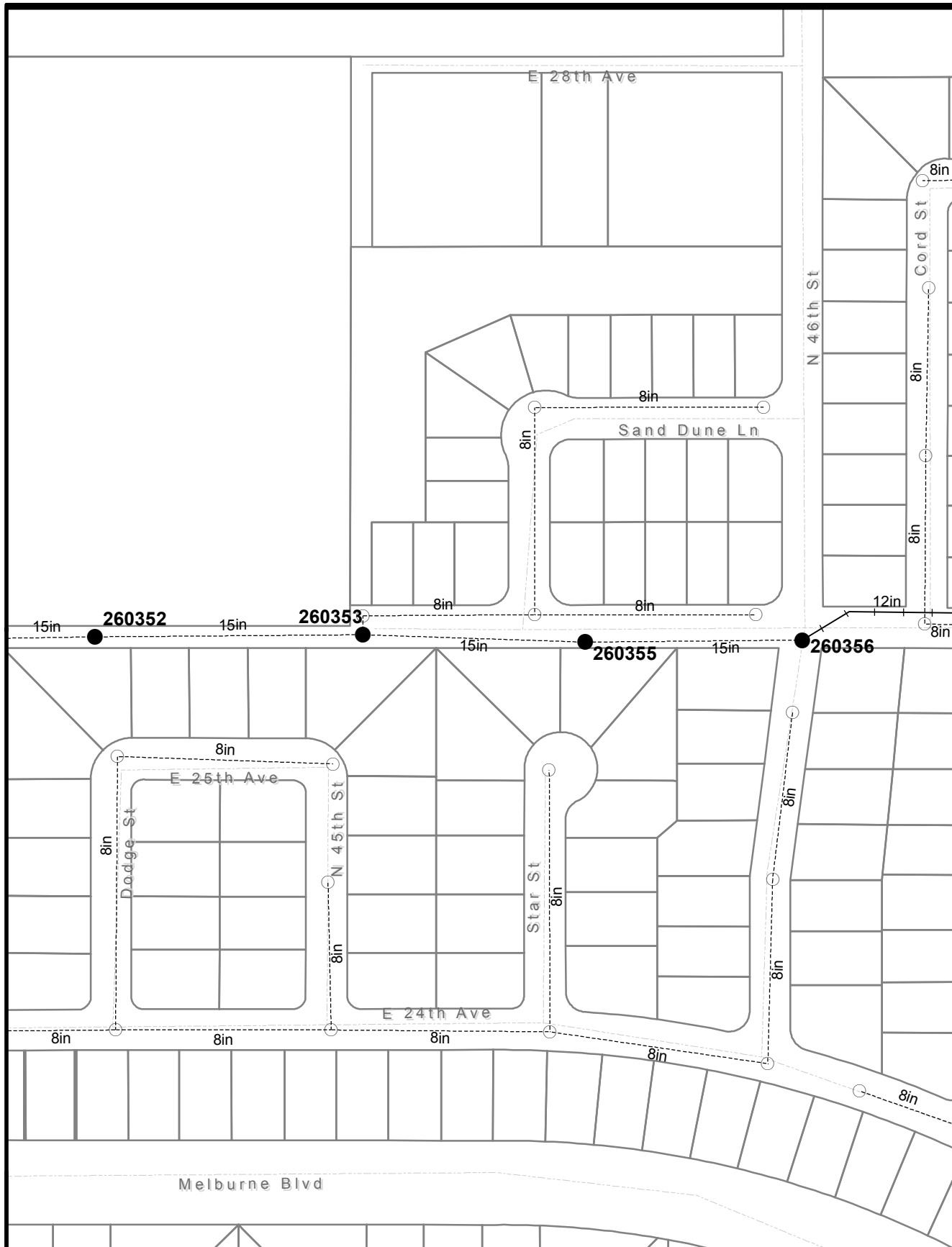
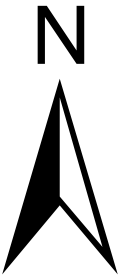
No.	DATE	REVISIONS
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains



No.	DATE	REVISIONS
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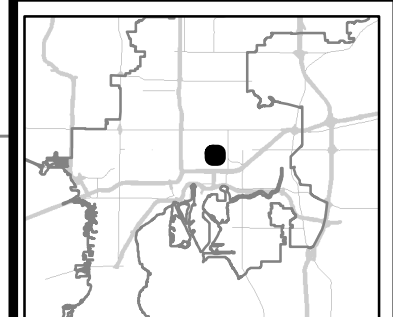
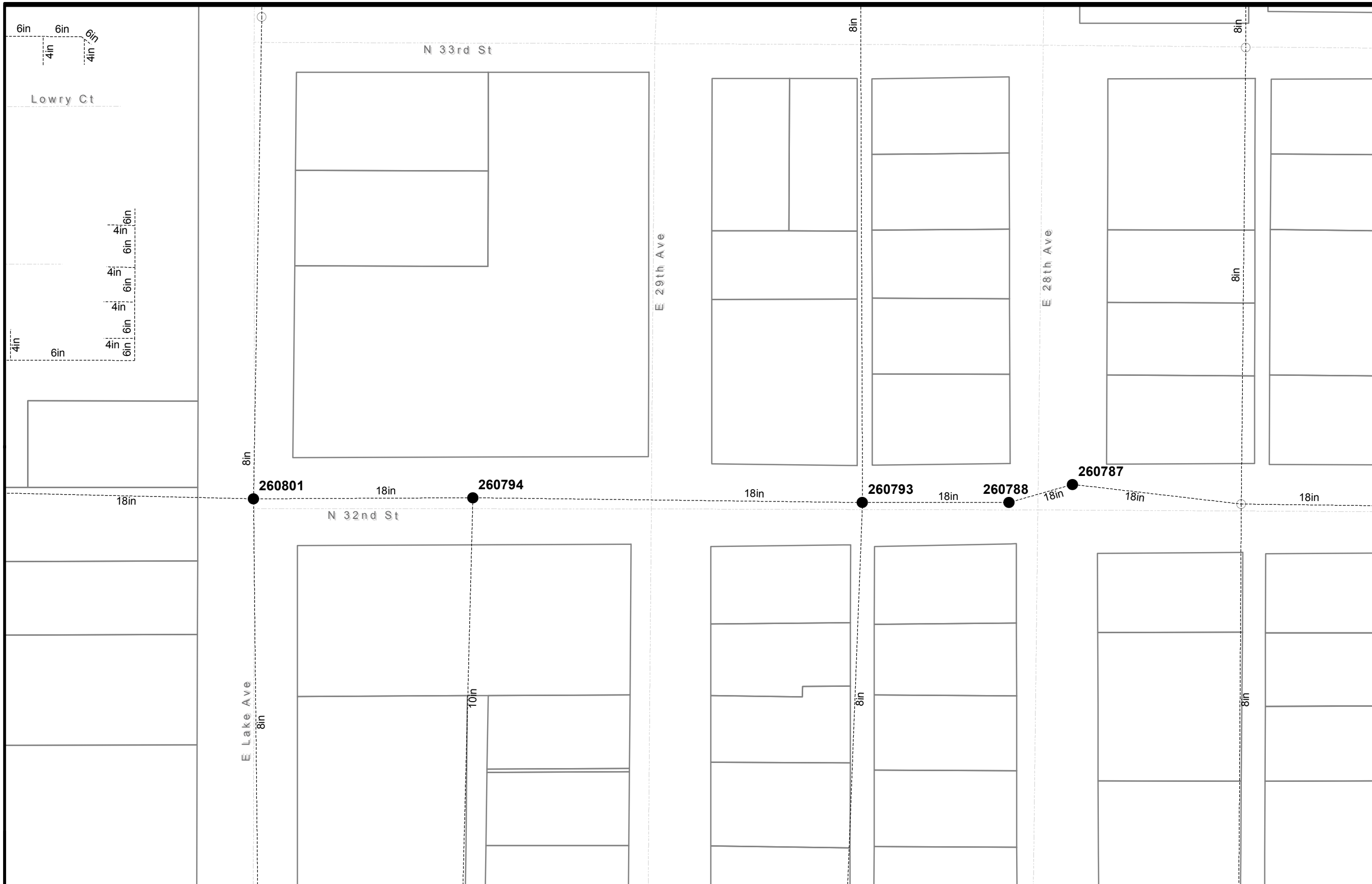
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-055



No.	DATE	REVISIONS
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

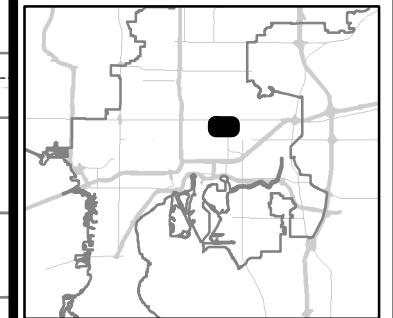
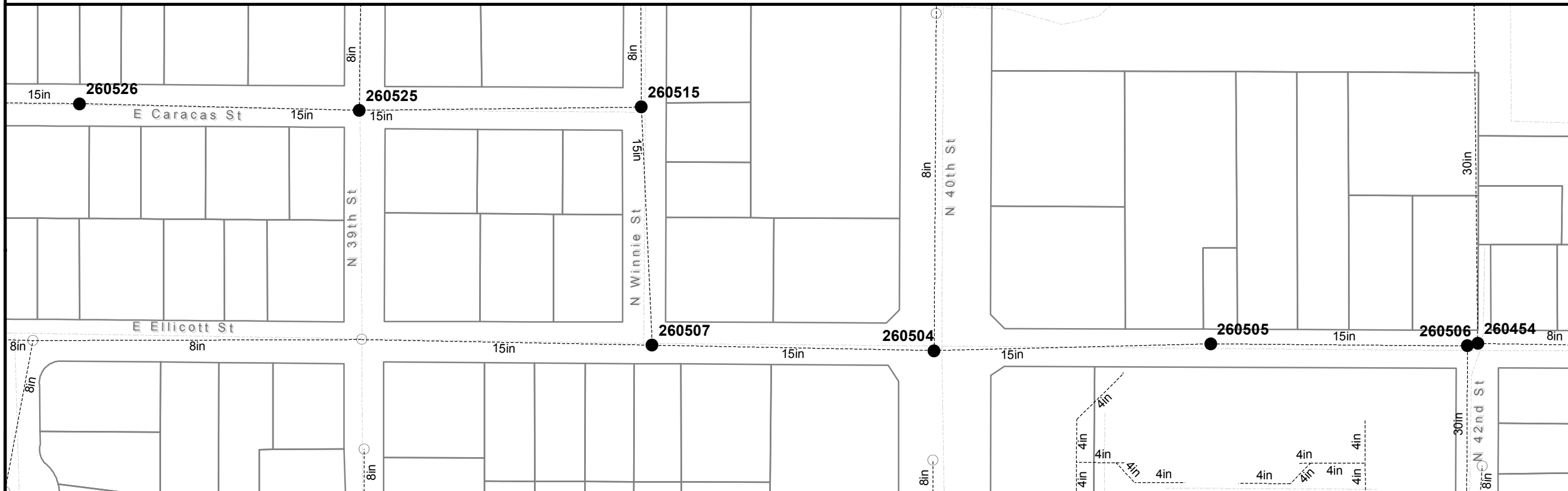
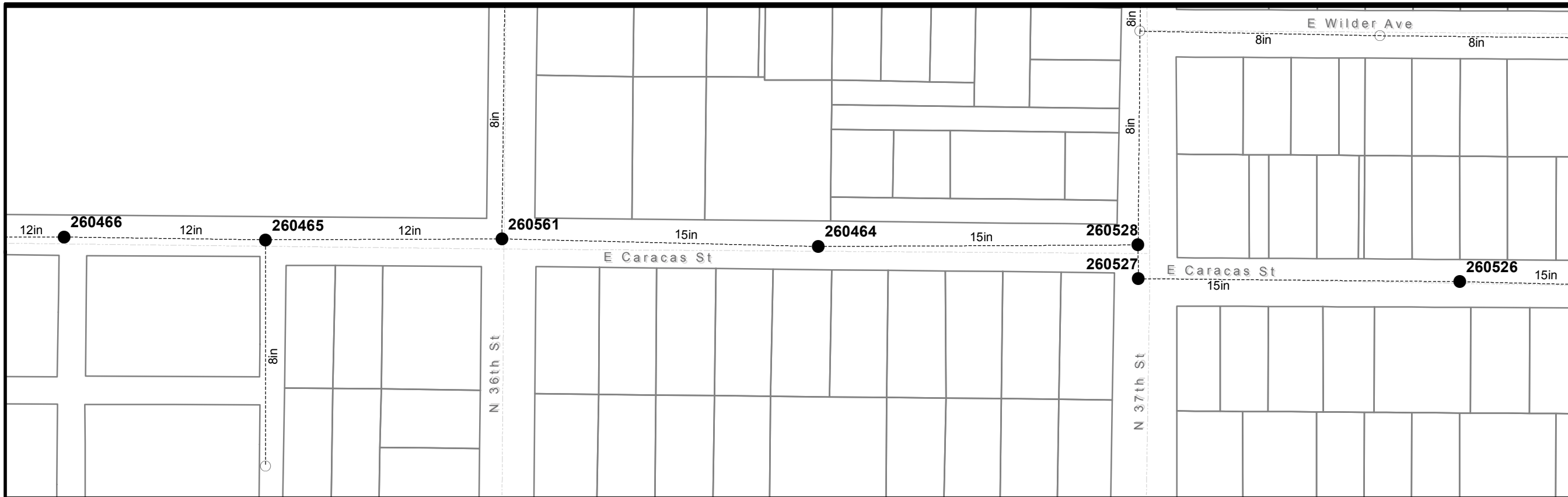
**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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 of 64



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No.	DATE	REVISIONS
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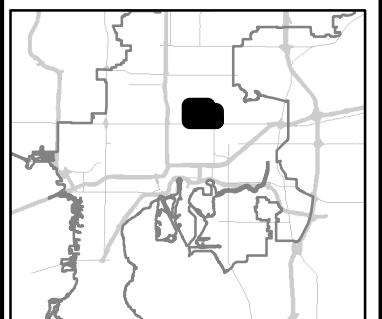
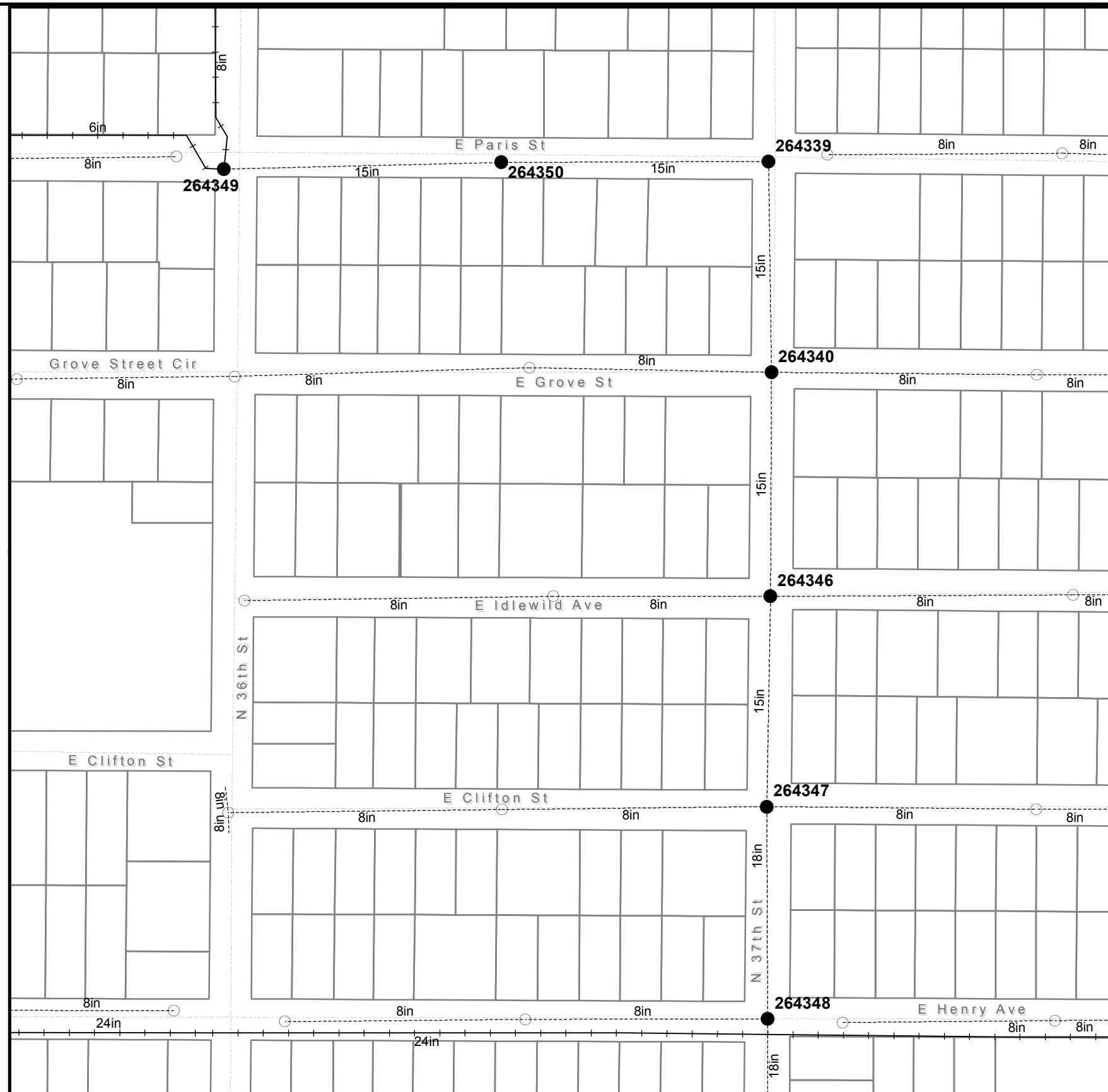
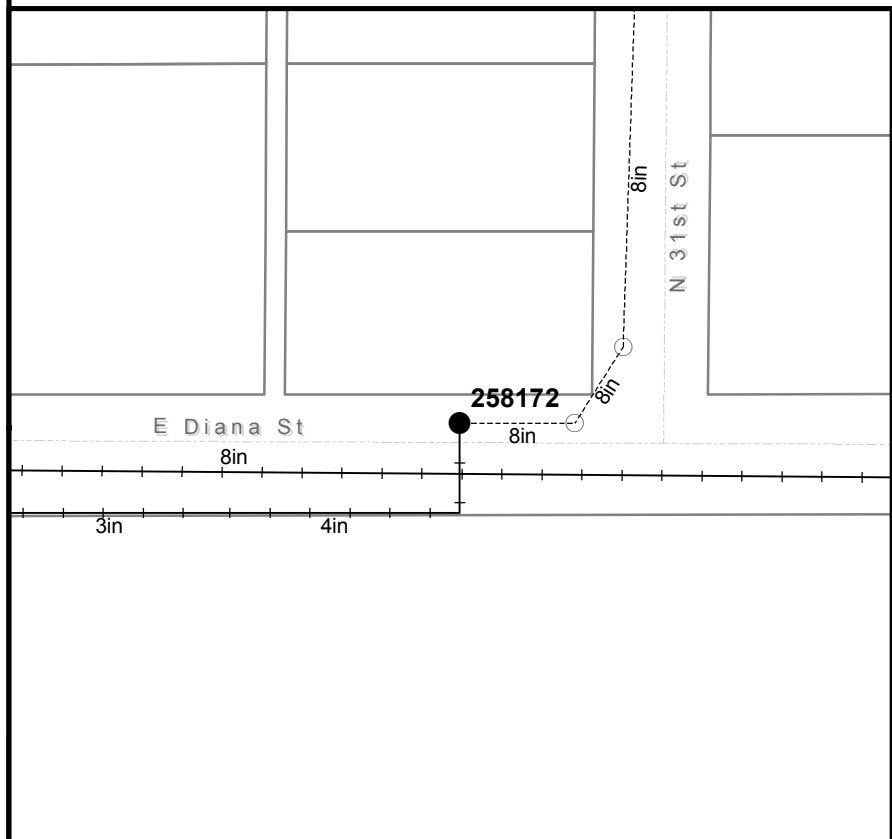
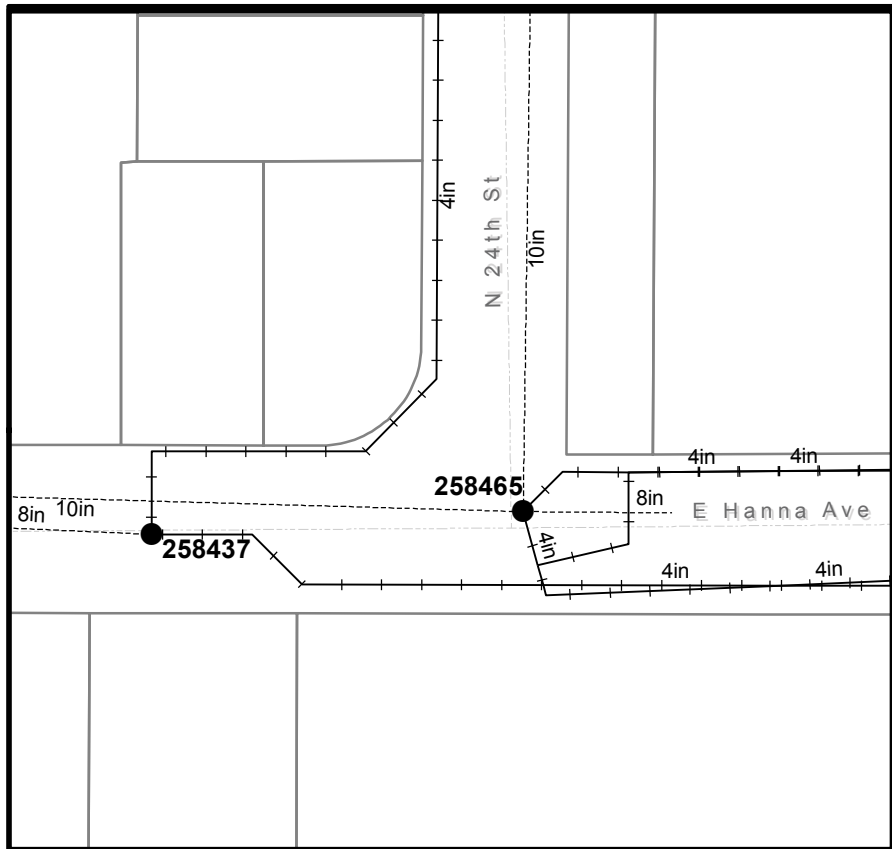
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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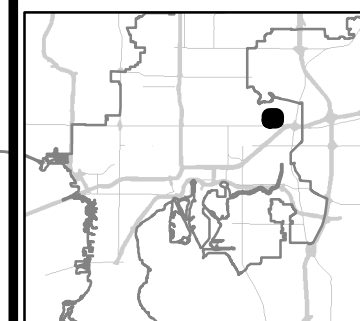
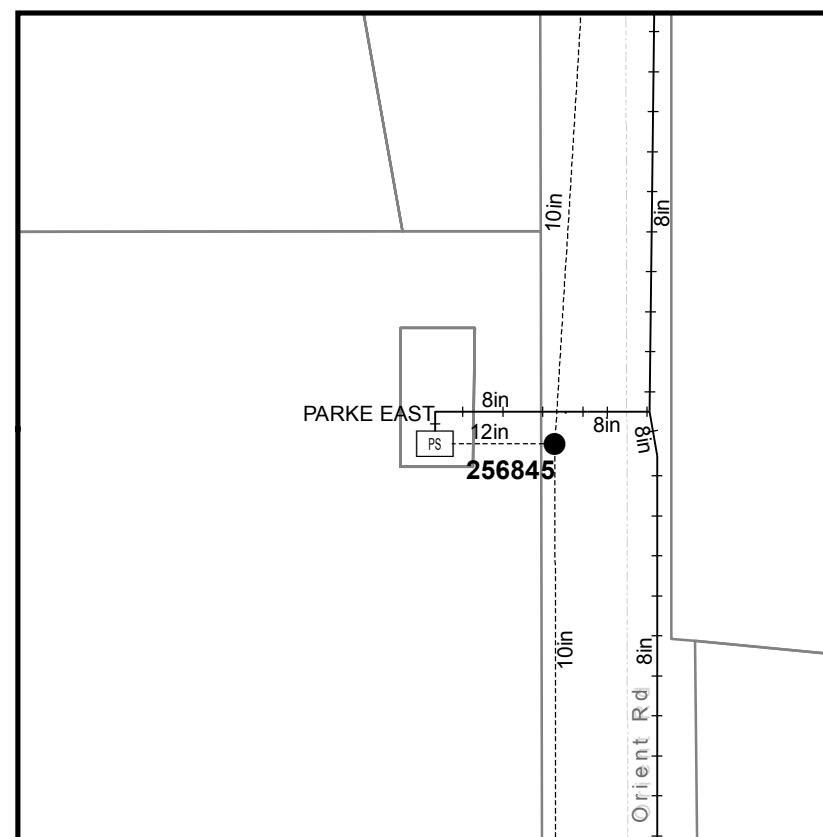
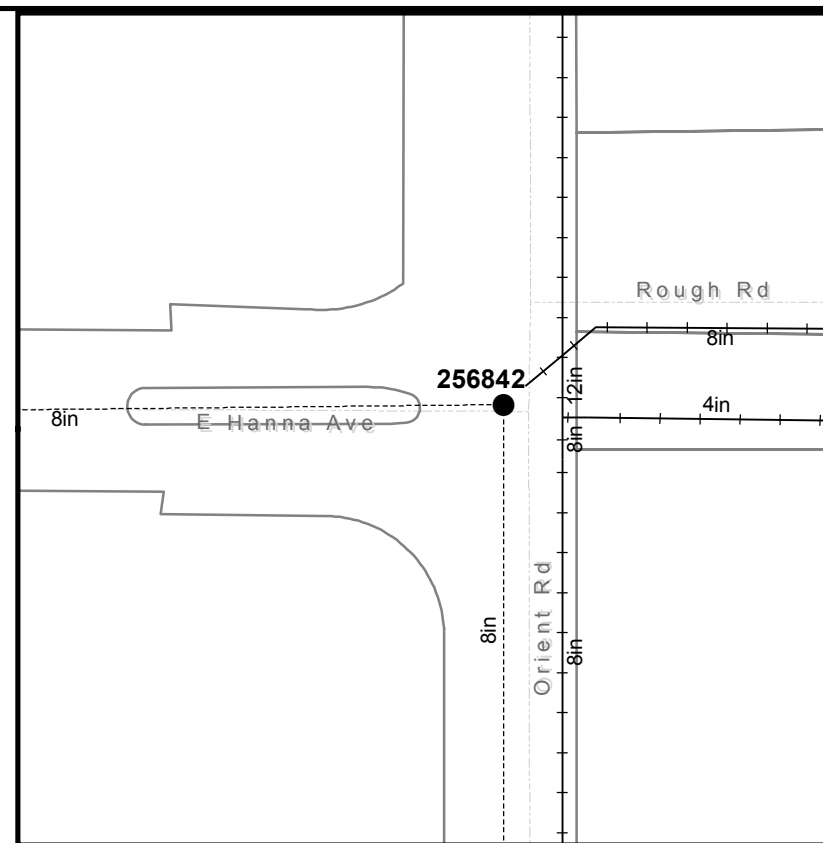
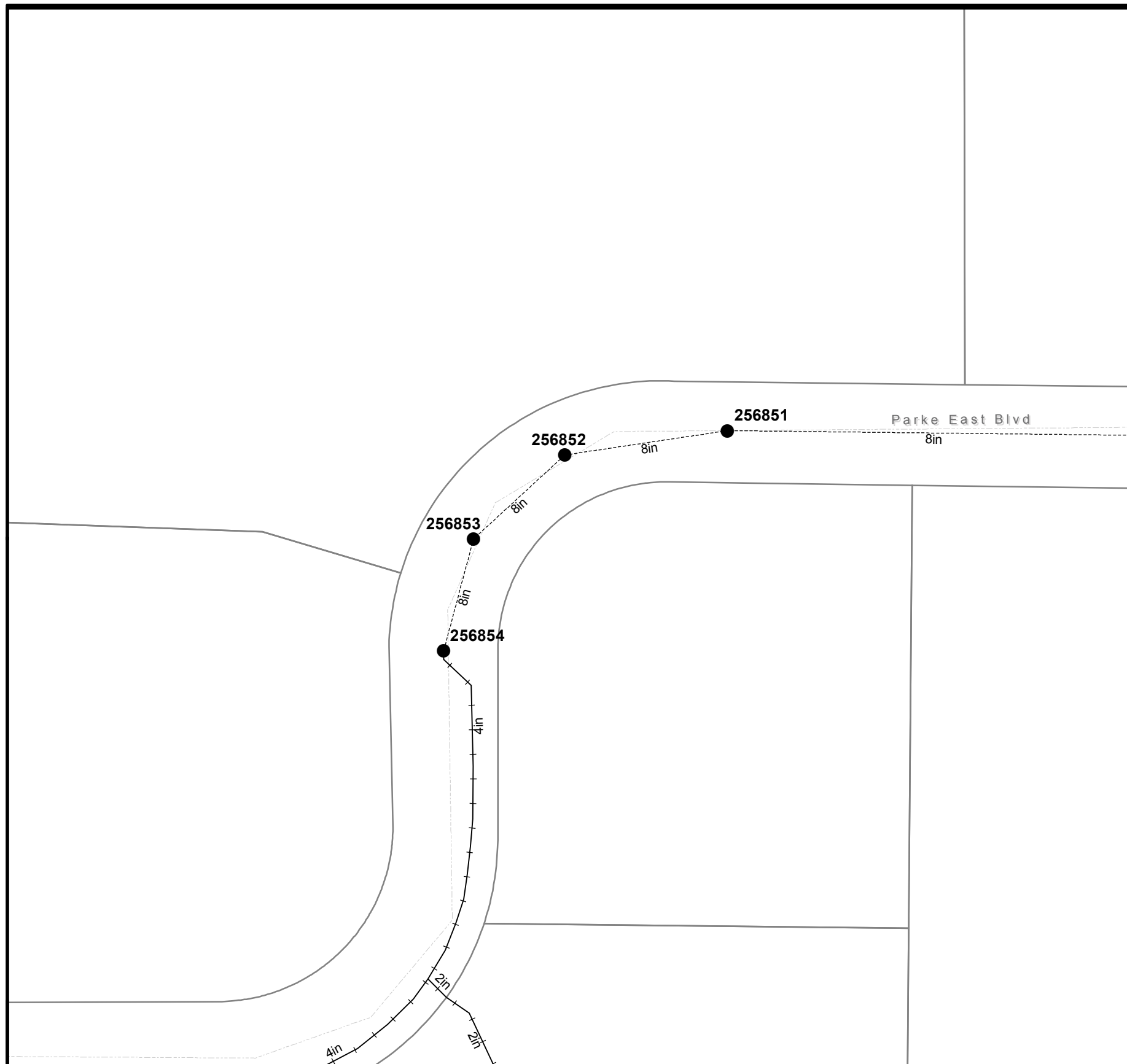
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains



No.	DATE	REVISIONS
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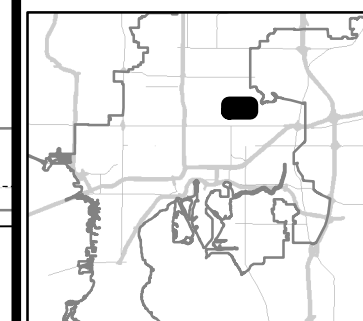
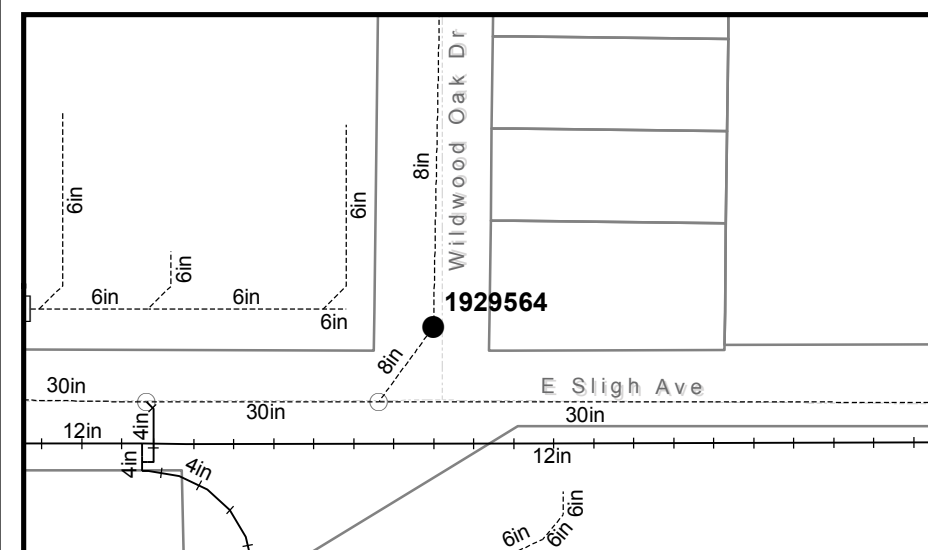
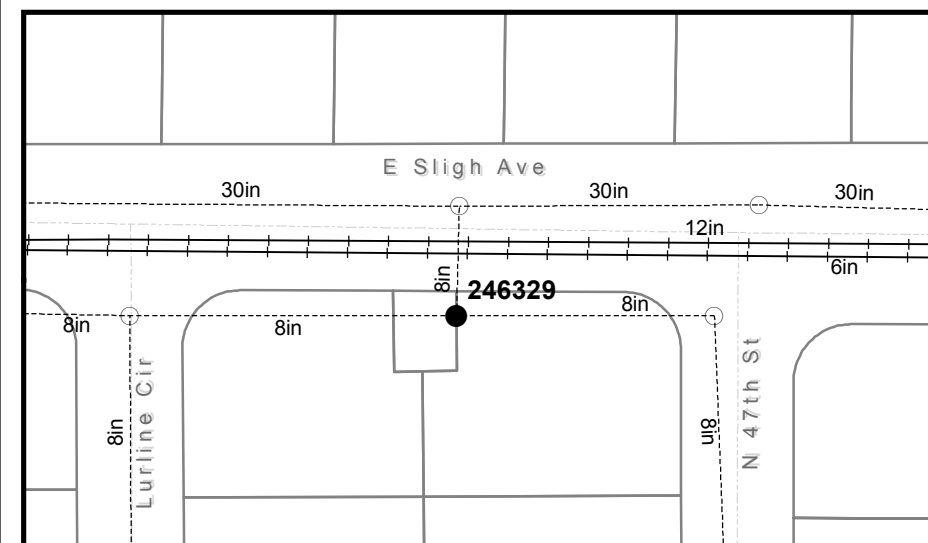
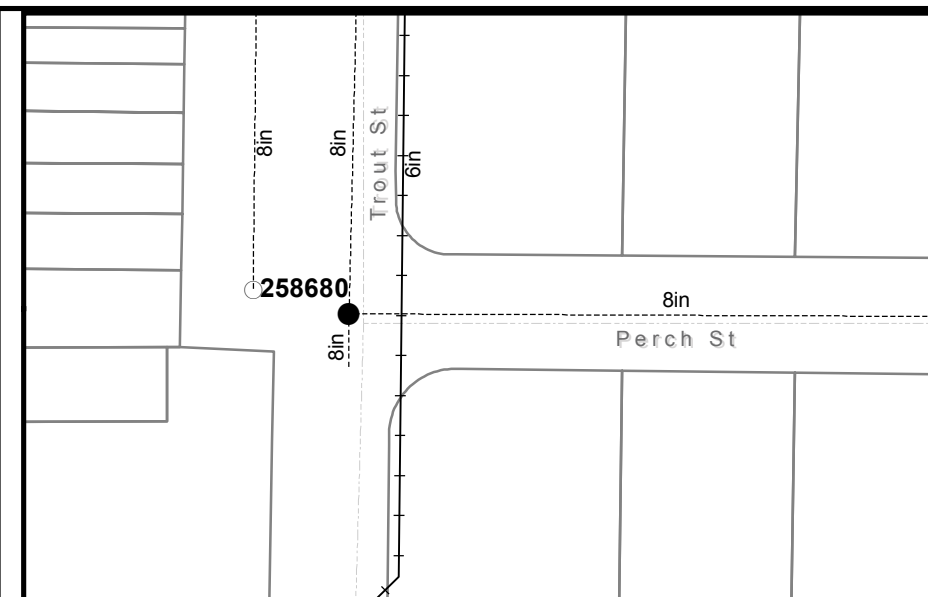
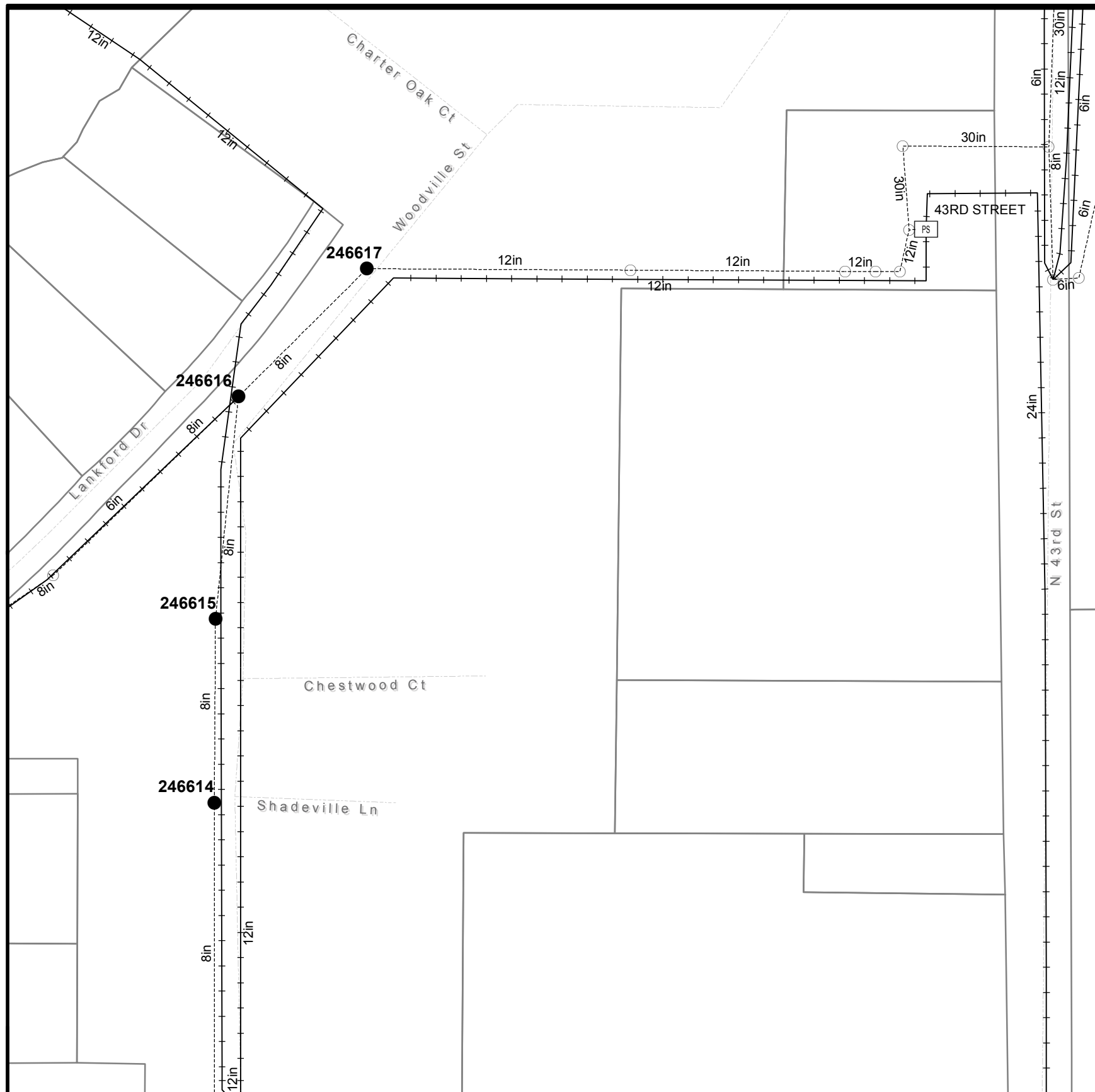
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**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

B103-059



No.	DATE	REVISIONS
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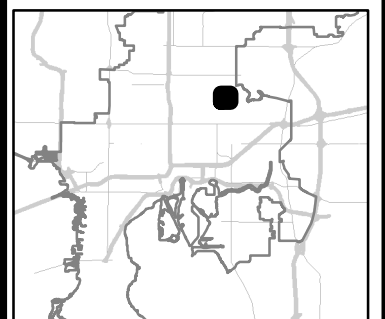
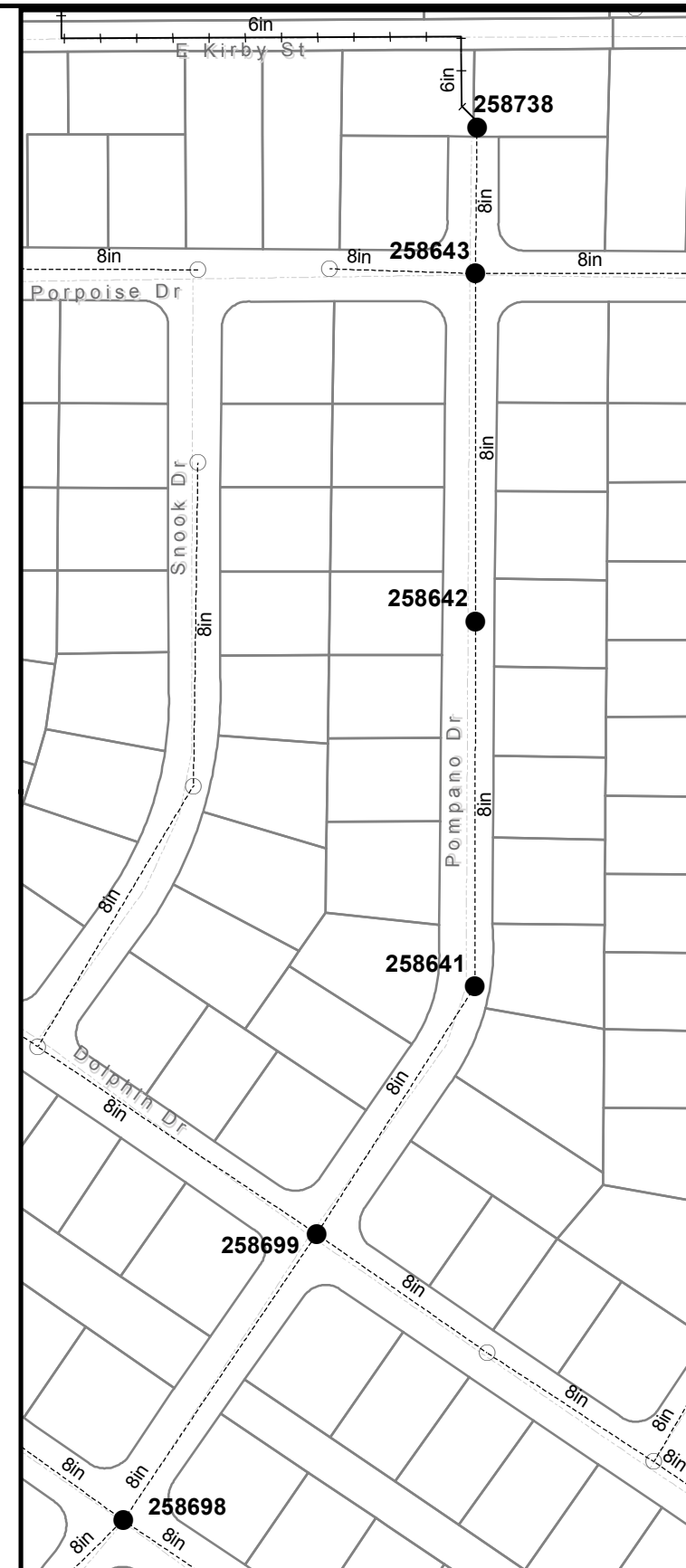
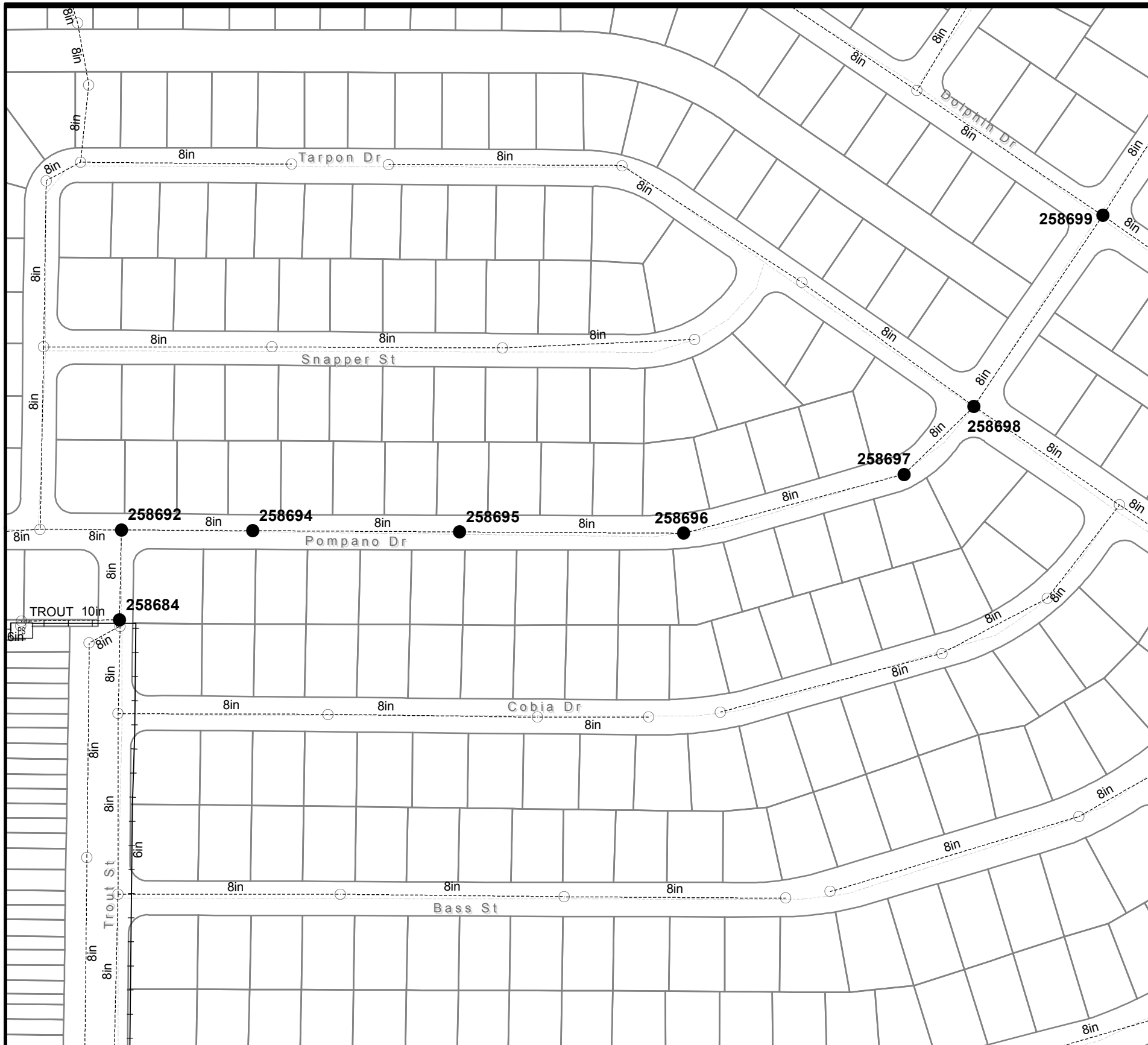
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 DATE: 5/7/2018

**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

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No.	DATE	REVISIONS
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 DATE: 5/7/2018

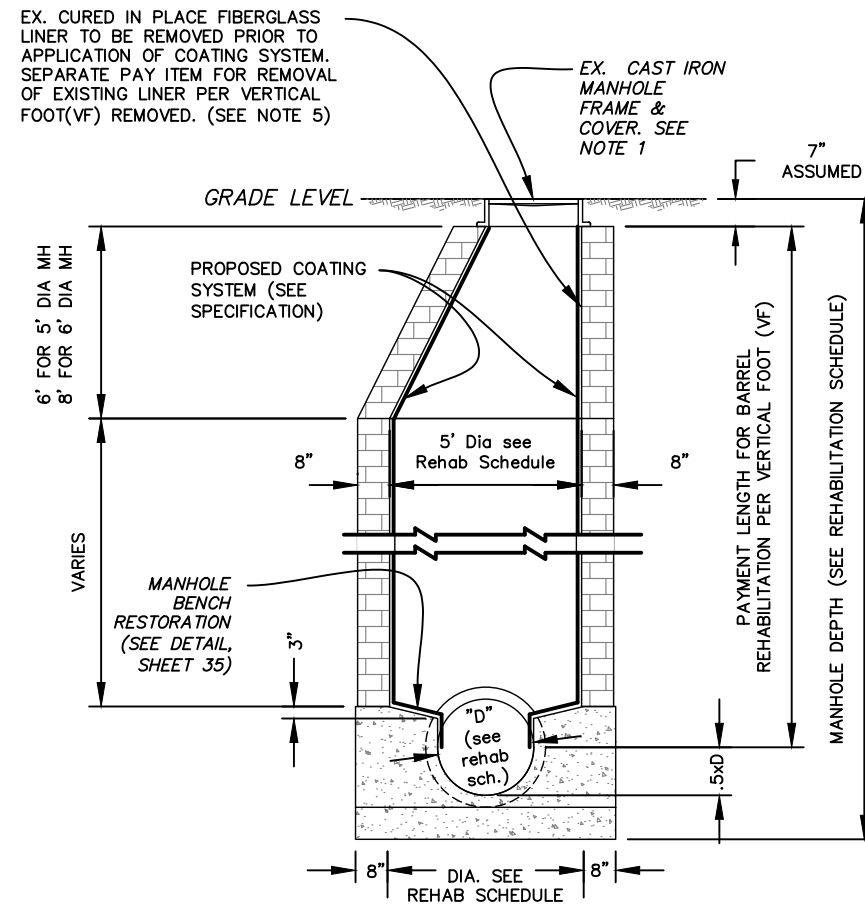
**CITY of TAMPA**  
**WASTEWATER DEPARTMENT**

**FY 2018 Manhole Rehabilitation**

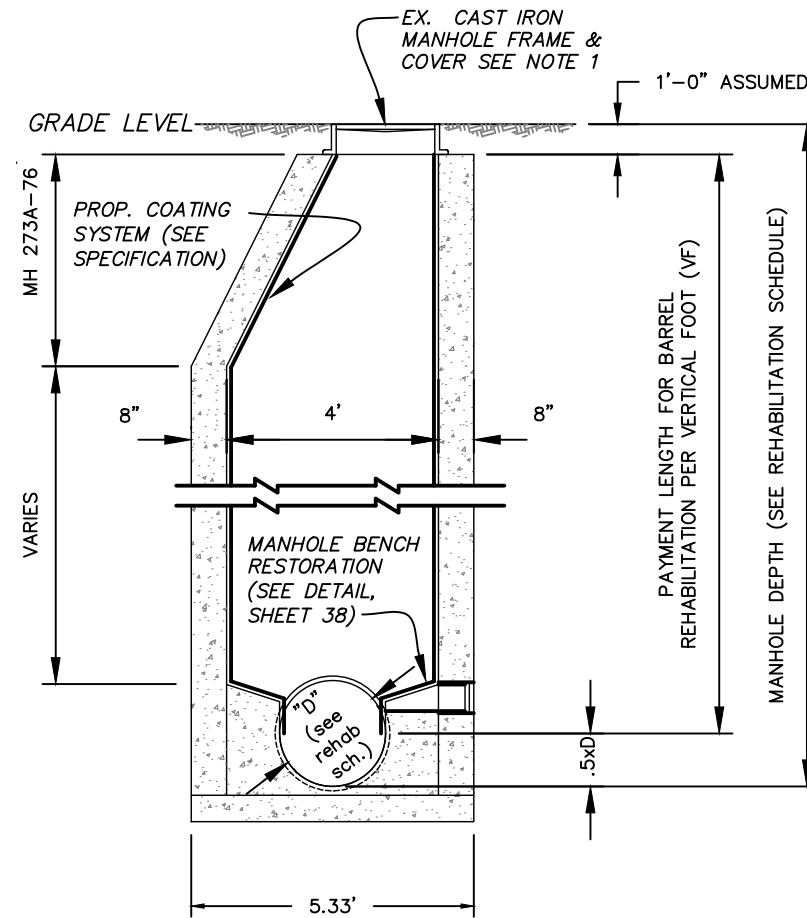
- Manholes - To Be Rehabilitated
- Manholes - No Rehabilitation Required
- Pressurized Mains
- - - Gravity Mains

**NOTES**

1. SEE MANHOLE FRAME AND COVER REPLACEMENT DETAILS ON SHEET 46, FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
2. IT IS THE ENGINEER'S INTENT THAT THE MANHOLE REHABILITATION AND BENCH RESTORATION WILL NOT REQUIRE BYPASS PUMPING. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.
3. THERE IS A SEPARATE PAY ITEM FOR THE BENCH RESTORATION.
4. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESS.
5. CONTRACTOR SHALL REMOVE ALL CALCIUM ALUMINATE LINER TO A SOUND SUBSTRATE PRIOR TO APPLICATION OF COATING SYSTEM. PAYMENT FOR THE REMOVAL OF THE CALCIUM ALUMINATE LINER WILL BE MADE AT THE CONTRACT ITEM UNIT PRICE PER VERTICAL FOOT (VF) OF LINER REMOVED.
6. CONTRACTOR SHALL REMOVE T-LOCK LINER TO A SOUND SUBSTRATE PRIOR TO APPLICATION OF CPP EPOXY PASTE COATING SYSTEM. IT IS NOT THE ENGINEERS INTENT TO REMOVE FIRMLY ATTACHED LINER. AFTER REMOVAL OF THE T-LOCK LINER, EXISTING EMBEDDED TEES SHALL BE CUT, GROUND AND SMOOTHED OVER PRIOR TO APPLICATION OF CPP EPOXY COATING SYSTEM. PAYMENT FOR THE REMOVAL OF DELAMINATING LINER WILL BE A SEPARATE PAY ITEM PER SQUARE FOOT (SF) OF LINER REMOVED.
7. PROVIDE A 6" MIN. STRIP OF PROPOSED COATING SYSTEM OVER EDGE OF EXISTING LINER. SURFACE PREPARATION AND APPLICATION OF COATING SYSTEM SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR INTERFACING WITH T-LOCK LINER.



**TYPE "A"**  
**BRICK MANHOLE**  
 (TYPICAL OF 277)  
 NOT TO SCALE



**TYPE "B"**  
**CONCRETE MANHOLE**  
 (TYPICAL OF 115)  
 NOT TO SCALE

User: ss8k Drawing Name: K:\wastewater\_projects\fy18\_manhole\_rehabilitation\Drafting\CAD Files\MANHOLE DETAILS C AND D.dwg Layout: May 17, 2018 - 12:59pm CTB - WW.CTB

JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.		DES: CLB
	3		DRN: GP
	2		CKD: JF
	1		DATE:

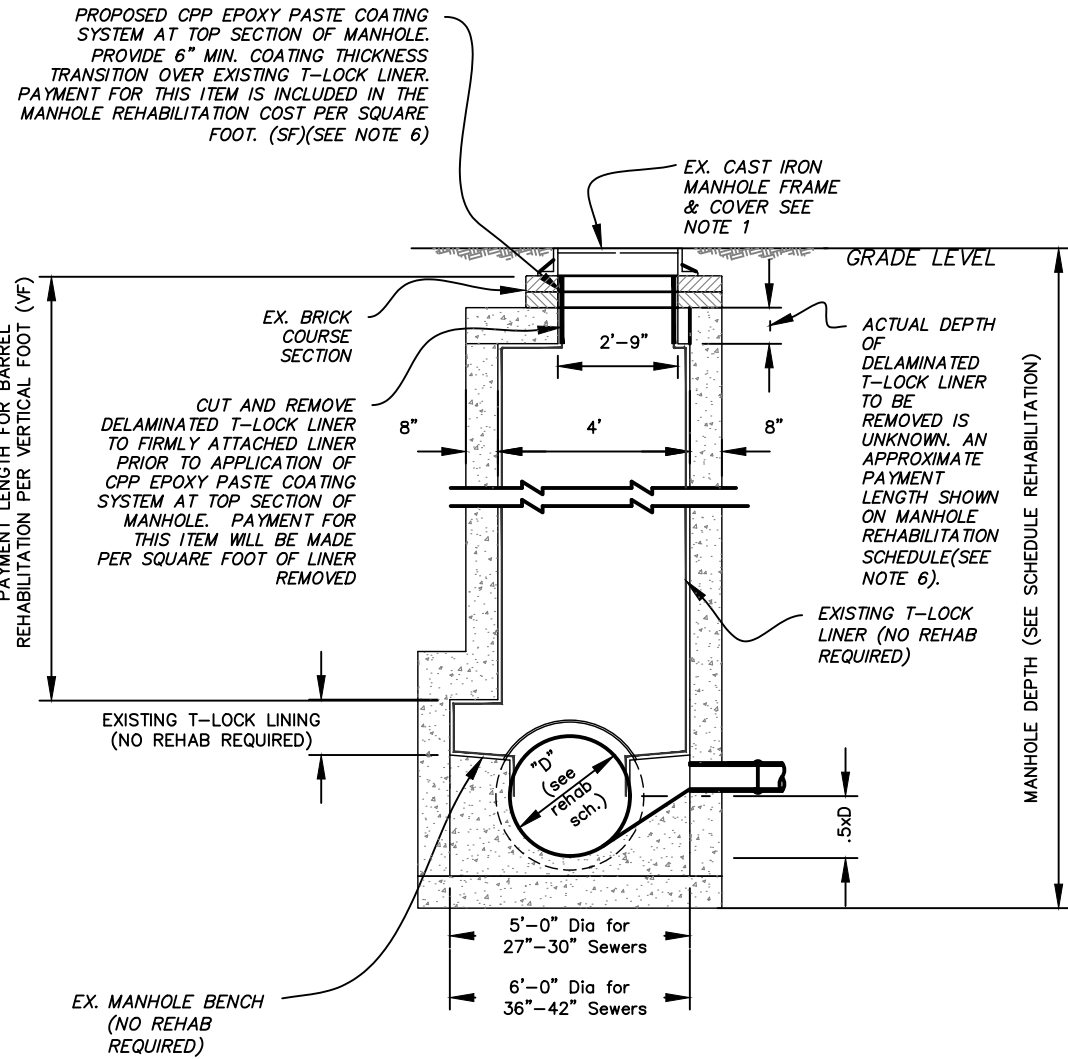
**CITY of TAMPA**  
 WASTEWATER DEPARTMENT

**FY18 Manhole rehabilitation**  
**MANHOLE DETAILS A AND B**

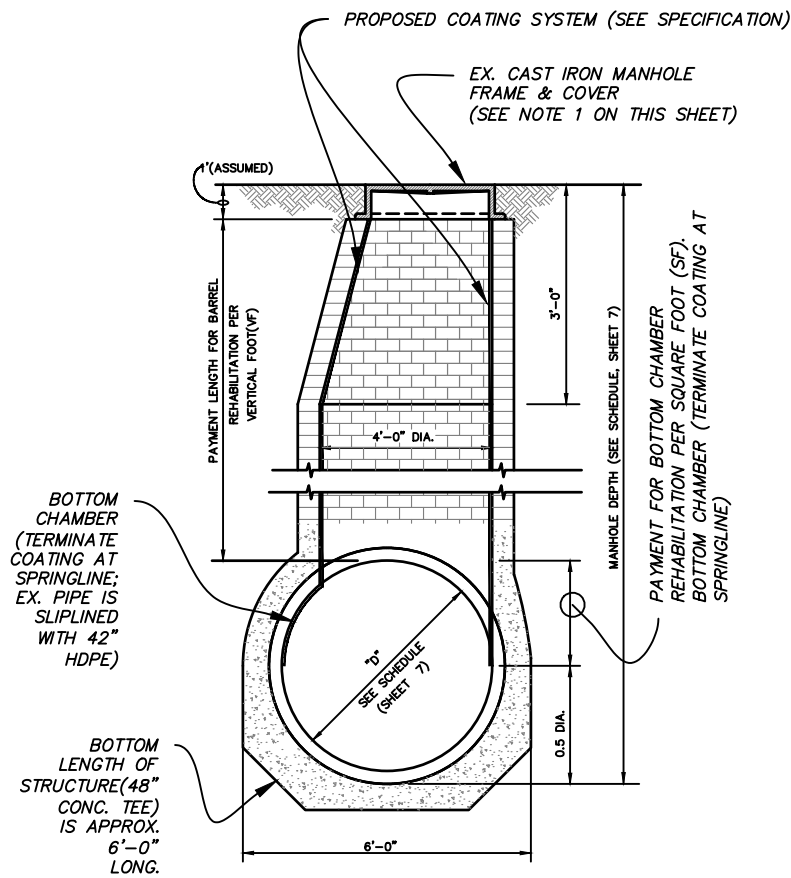
SHEET  
 61

**NOTES**

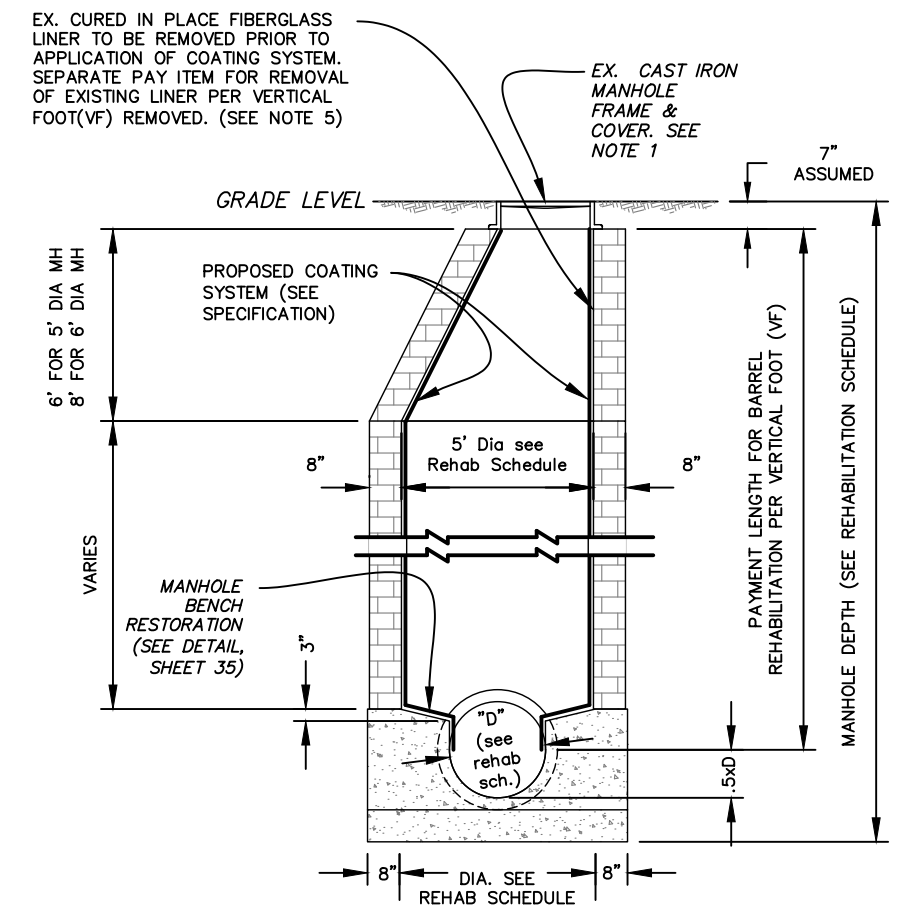
1. SEE MANHOLE FRAME AND COVER REPLACEMENT DETAILS ON SHEET 46, FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
2. IT IS THE ENGINEER'S INTENT THAT THE MANHOLE REHABILITATION AND BENCH RESTORATION WILL NOT REQUIRE BYPASS PUMPING. HOWEVER, WORK DURING LOW-FLOW PERIODS MAY BE NECESSARY.
3. THERE IS A SEPARATE PAY ITEM FOR THE BENCH RESTORATION.
4. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESS.
5. CONTRACTOR SHALL REMOVE ALL CALCIUM ALUMINATE LINER TO A SOUND SUBSTRATE PRIOR TO APPLICATION OF COATING SYSTEM. PAYMENT FOR THE REMOVAL OF THE CALCIUM ALUMINATE LINER WILL BE MADE AT THE CONTRACT ITEM UNIT PRICE PER VERTICAL FOOT (VF) OF LINER REMOVED.
6. CONTRACTOR SHALL REMOVE T-LOCK LINER TO A SOUND SUBSTRATE PRIOR TO APPLICATION OF CPP EPOXY PASTE COATING SYSTEM. IT IS NOT THE ENGINEERS INTENT TO REMOVE FIRMLY ATTACHED LINER. AFTER REMOVAL OF THE T-LOCK LINER, EXISTING EMBEDDED TEES SHALL BE CUT, GROUND AND SMOOTHED OVER PRIOR TO APPLICATION OF CPP EPOXY COATING SYSTEM. PAYMENT FOR THE REMOVAL OF DELAMINATING LINER WILL BE A SEPARATE PAY ITEM PER SQUARE FOOT (SF) OF LINER REMOVED.
7. PROVIDE A 6" MIN. STRIP OF PROPOSED COATING SYSTEM OVER EDGE OF EXISTING LINER. SURFACE PREPARATION AND APPLICATION OF COATING SYSTEM SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR INTERFACING WITH T-LOCK LINER.



**TYPE "C"**  
**CONCRETE OR BRICK MANHOLE**  
**WITH T-LOCK LINING**  
 (TYPICAL OF 3)  
 NOT TO SCALE



**TYPE "D"**  
**BRICK MANHOLE WITH EX.**  
**CALCIUM ALUMINATE LINER**  
 (TYPICAL OF 9)  
 NOT TO SCALE



**TYPE "E"**  
**BRICK MANHOLE WITH EX.**  
**FIBERGLASS LINER**  
 (TYP. OF 2)  
 NOT TO SCALE

User: ss8k Drawing Name: K:\wastewater projects\fy18 manhole rehabilitation\Drafting\CAD Files\MANHOLE DETAILS C AND D.dwg Layout: May 17, 2018 - 12:59pm CTB - MW.CTB

JACINTO CARLOS FERRAS, P.E.  
 #49454 DESIGN DIVISION HEAD  
 WASTEWATER DEPARTMENT

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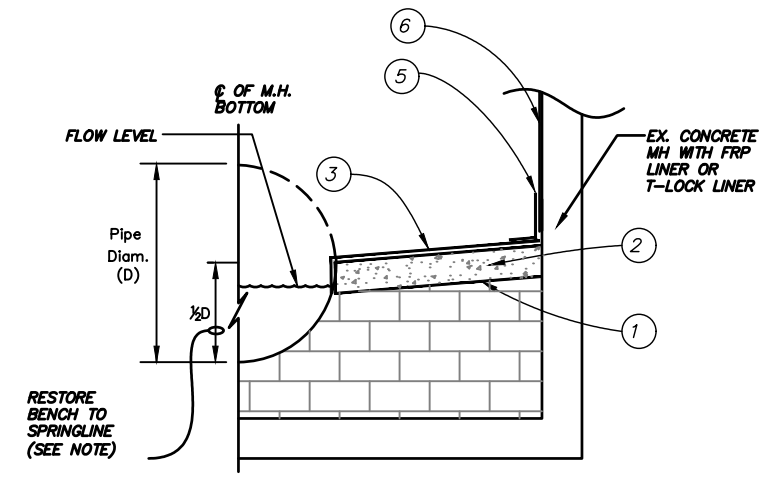
DES: CLB  
 DRN: GP  
 CKD: JF  
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**CITY of TAMPA**  
 WASTEWATER DEPARTMENT

**FY18 Manhole rehabilitation**  
**MANHOLE DETAILS C, D AND E**

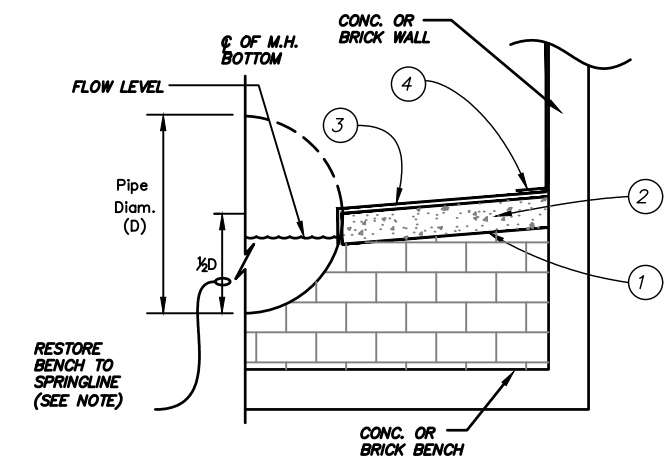
**NOTES**

1. REMOVE ALL DEBRIS AND LOOSE BRICKS FROM THE TOP OF THE BENCH.
2. INSTALL A MINIMUM 1" THICK ACCELERATED HYDRAULIC CEMENT OVER EXISTING BENCH. ALLOW CEMENT TO CURE (MIN. 24 HRS. UNLESS OTHERWISE APPROVED BY THE ENGINEER).
3. OVERLAY BENCHES WITH PROPOSED COATING SYSTEM.
4. PROVIDE 6" COATING THICKNESS TRANSITION. PAYMENT FOR THIS ITEM IS INCLUDED IN THE MANHOLE REHABILITATION COST PER VERTICAL FOOT.
5. PROVIDE A 6" MIN. STRIP OF PROPOSED COATING SYSTEM ON BOTTOM EDGE OF FRP LINING OR PLASTIC T-LOCK LINING. REFER TO SHEET 2 FOR PROPOSED COATING THICKNESSES. SURFACE PREPARATION AND APPLICATION OF COATING SYSTEM SHALL BE DONE IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS FOR INTERFACING WITH FRP LINERS. PAYMENT FOR THIS ITEM IS INCLUDED IN THE MANHOLE BENCH RESTORATION TYPE A ONLY.
6. CONTRACTOR SHALL PROTECT EXISTING INTEGRITY OF FRP LINER OR T-LOCK LINER THROUGHOUT MANHOLE.



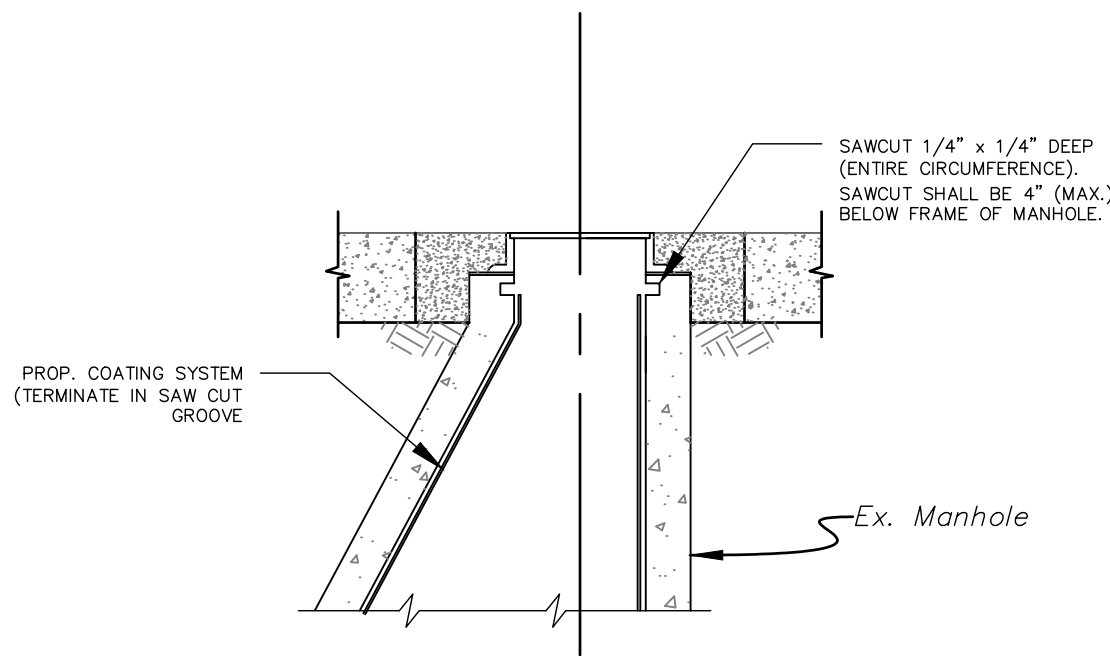
MANHOLE BENCH RESTORATION FOR LINED  
MANHOLES  
NOT TO SCALE

(X) - SEE CORRESPONDING NOTES ABOVE



TYPICAL MANHOLE BENCH  
RESTORATION DETAIL  
NOT TO SCALE

(X) - SEE CORRESPONDING NOTES ABOVE



COATING TERMINATION DETAIL  
NOT TO SCALE

User: ss8k Drawing Name: K:\wastewater projects\fy18 manhole rehabilitation\Drafting\CAD Files\MISCELLANEOUS DETAILS.dwg  
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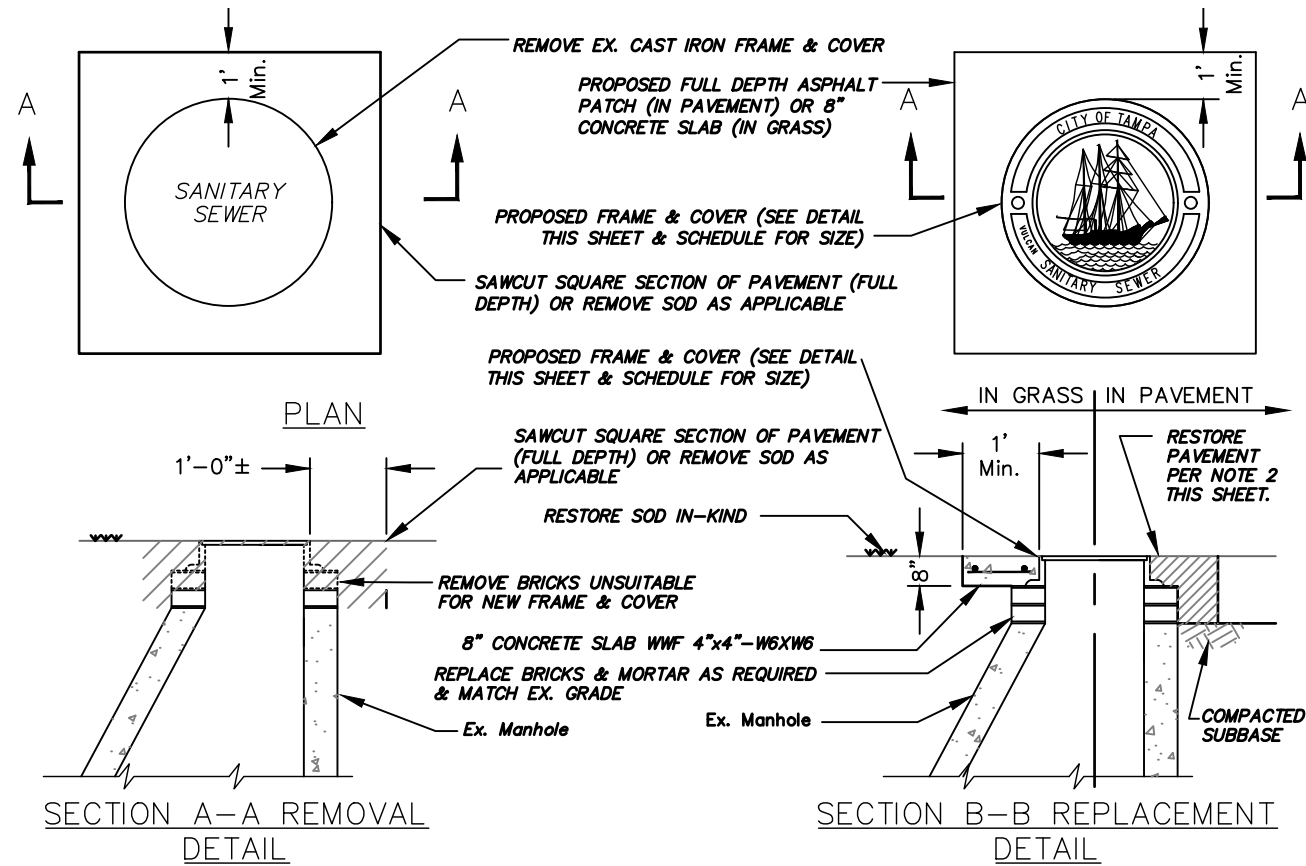
CITY of TAMPA  
WASTEWATER DEPARTMENT

FY18 Manhole rehabilitation  
MISCELLANEOUS\_DETAILS

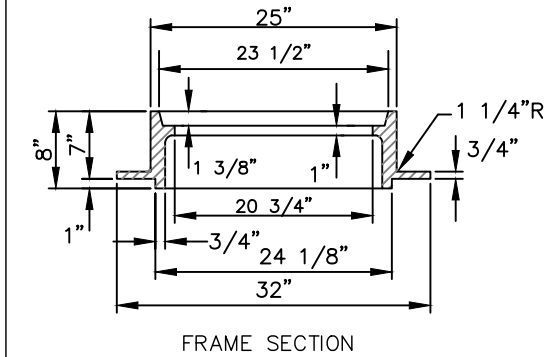
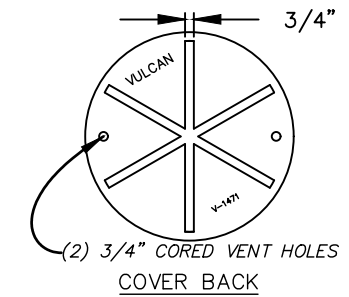
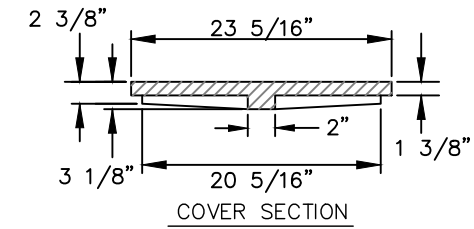


**NOTES**

- FOR MANHOLE COVER SIZES AND WHETHER THE COVERS ARE LOCATED IN GRASS OR PAVEMENT, REFER TO THE MANHOLE REHABILITATION SCHEDULE.
- PAVEMENT RESTORATION SHALL CONSIST OF 8" ABC-3 ASPHALT BASE AND 2" TYPE S-1 ASPHALT PAYMENT. UNLESS OTHERWISE NOTED. IF LOCATED IN D.O.T. ROW, AN ADDITIONAL 1 1/2" SUPER PAVE ASPHALT IS REQUIRED.



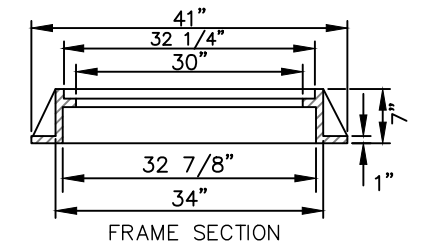
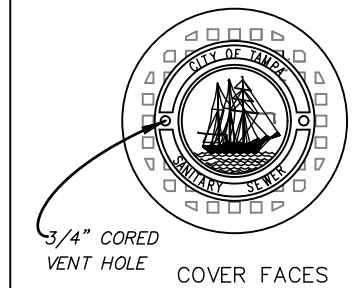
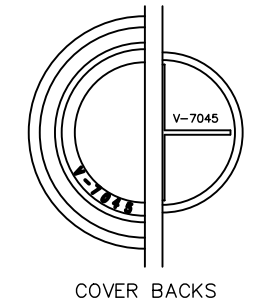
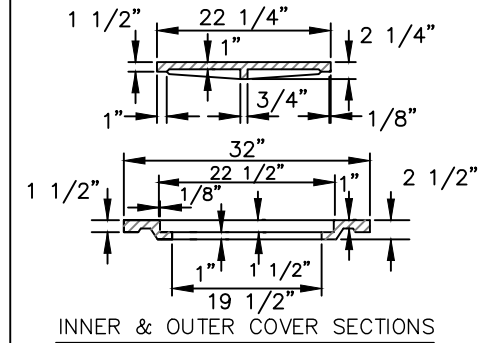
SMALL COVER DETAIL



FOR MH'S OF SEWERS 24" OR LESS IN DIAMETER:  
VULCAN FOUNDRY NO. V-1471,  
U.S. FOUNDRY NO. 575-AT, OR EQUAL

B103-064

LARGE COVER DETAIL



FOR MH'S OF SEWERS 27" OR GREATER IN DIAMETER:  
VULCAN FOUNDRY NO. V-7045,  
U.S. FOUNDRY NO. 230-AB-M, OR EQUAL

HEAVY DUTY CAST IRON MANHOLE FRAME & COVER DETAILS

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FY18 Manhole rehabilitation  
MISCELLANEOUS DETAILS

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