The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:

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



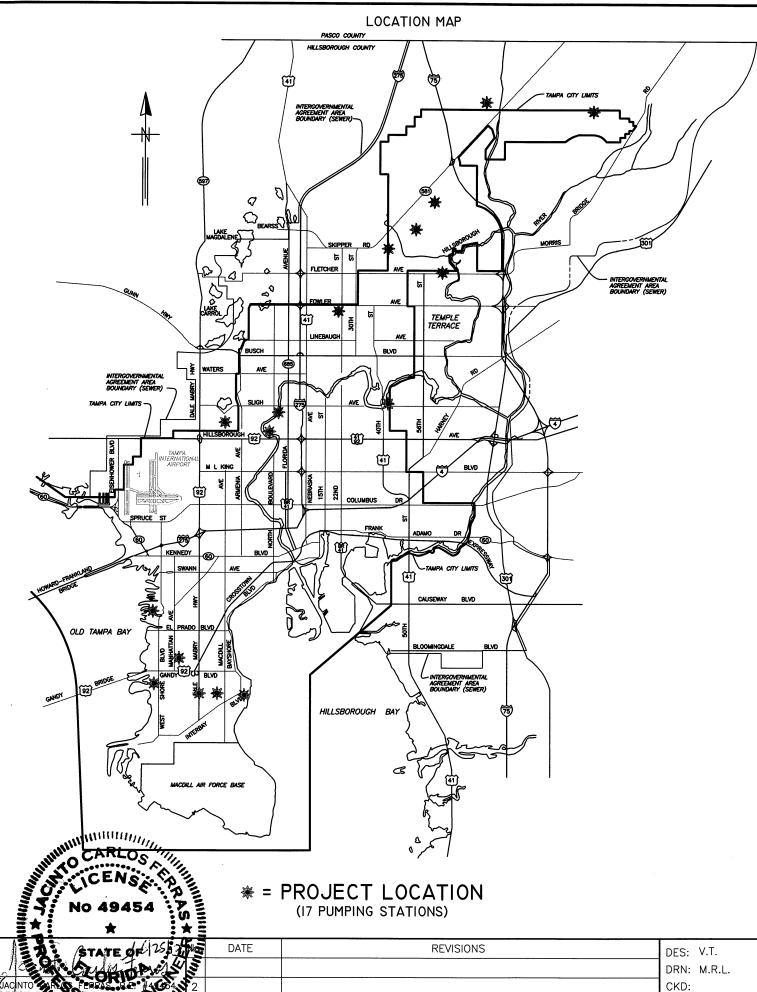


WASTEWATER DEPARTMENT

PLANS FOR

MISCELLANEOUS PUMPING STATION REPAIRS

CONTRACT No. 13-C-00016



CITY OF TAMPA
WASTEWATER DEPARTMENT

DATE:

MISCELLANEOUS PUMPING STATION REPAIRS

COVER SHEET

W.O. 5935 SHEET 1 of 61

- EXISTING DIMENSIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. TRUE DIMENSIONS SHALL BE DETERMINED IN THE FIELD BY THE CONTRACTOR
- 2. SALVAGEABLE MATERIAL AS DETERMINED BY TREATMENT PLANT PERSONNEL SHALL BE DELIVERED TO THE CITY OF TAMPA'S HOWARD F. CURREN AWTP AT 2700 MARITIME BOULEVARD. NON-SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTORS EXPENSE. IN GENERAL, ALL ITEMS CONSTRUCTED OF METAL SHALL REMAIN THE PROPERTY OF THE CITY AND SHALL BE DELIVERED TO THE TREATMENT PLANT.
- 3. ALL HARDWARE SHALL BE 316 STAINLESS STEEL.
- 4. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH THE PUMP STATION OPERATOR, VIA THE CONTRACT ADMINISTRATION DEPARTMENT PERSONNEL.
- PLUG VALVES SHALL BE DEZURIK, 100% FULL PORT ECCENTRIC PLUG VALVES (PEF) OR APPROVED EQUAL. THE CITY WILL PROVIDE 12-6" DEZURIK PLUG VALVES (FL-FL). IT IS CONTRACTOR RESPONSIBILITY TO COORDINATE PICK-UP FROM THE TREATMENT PLANT.
- 6. CHECK VALVES SHALL BE REPLACED USING APCO SERIES 100 RUBBER FLAP CHECK VALVES. THIS ITEM IS STANDARDIZED AT THIS FACILITY AND NO "OR EQUAL" ITEMS WILL BE
- 7. ALL METAL PIPE, FITTINGS, VALVES, ETC. SHALL RECIEVE:
 - A) SHOP COAT ONE COAT, 4-6 MILS (DRY) TNEMEC N140-1211 EPOXY PRIMER.
 - B) FIELD COAT ONE COAT, 5-7 MILS (DRY) Themec Series 446 Perma-Shield MCU
- i. ABOVE GRADE: ONE COAT, 4-6 MILS (DRY) TNEMEC 1074U ENDURASHIELD (WITH FACTORY ADDED UV BLOCKER)
- BELOW GRADE: ONE COAT, 5-7 MILS (DRY) TNEMEC SERIES 446 PERMA-SHIELD MCL
- 8. PIPE SUPPORTS SHALL BE CONSTRUCTED AS SHOWN ON THE PIPE SUPPORT DETAIL. (SEE DETAIL SHEET)
- EXISTING DISCHARGE PIPES ARE TO BE REPLACED WITH HDPE (PE4710), SDR11, GREEN STRIPE, AND DIPS OD. HDPE JOINTS SHALL BE BUTT FUSED OR FLANGED WITH 316 SS BACKUP RINGS. HDPE ELECTROFUSION JOINTS WILL BE ALLOWED, BUT ONLY IN THE WET WELL WITHIN 5 FEET FROM THE BOTTOM OF THE TOP SLAB.
- 10. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY FOR PROPOSED ITEMS. ALL SUBMITTALS AND SHOP DRAWINGS SHALL BE ORIGINALS OR HIGH QUALITY COPIES (EASILY READABLE). NO FAXED SHEETS OR POOR QUALITY COPIES WILL BE ACCEPTED FOR SUBMITTAL REVIEW.
- 11. AT PIPE PENETRATIONS THROUGH WET WELL, CONTRACTOR SHALL FASTEN LINER TO PROPOSED HDPE PIPE USING 316 STAINLESS STEEL STRAPS OR OTHER METHOD AS APPROVED BY THE ENGINEER (SEE DETAIL SHEET).
- 12. AFTER WET WELLS ARE DEWATERED, THE CONTRACTOR SHALL CLEAN WET WELLS OF ALL DEBRIS. DEBRIS MAY BE DELIVERED AND DISPOSED OF AT THE CITY OF TAMPA HOWARD F. CURREN AWTP, 2700 MARITIME BOULEVARD.
- 13. OSHA STANDARD SAFETY EQUIPMENT SUCH AS SAFETY HARNESSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE (SEE SAFETY SPECIFIC PROVISION).
- DURING THE REHABILITATION PROCESS, THE STRUCTURE SHALL BE ADEQUATELY VENTILATED AND HYDROGEN SULFIDE LEVELS SHALL BE CONTINUOUSLY MONITORED. THE CONTRACTOR
- 15. TESTING OF THE NEW DISCHARGE PIPES WILL BE ACCOMPLISHED BY OPERATING EACH PUMP FOR A MINIMUM 2 HOUR DURATION AND OBSERVING FOR ANY LEAKS. ANY MANUAL PUMP OPERATION OR SWITCHING PUMPS MUST BE PERFORMED BY CITY PERSONNEL.
- 16. NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4 PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.
- 17. ALL DUCTILE IRON PIPE AND FITTINGS SHALL BE LINED USING PROTECTO 401 EPOXY.
- 18. DISTURBANCE TO ANY PROPERTY, PUBLIC OR PRIVATE, WITHIN THE RIGHT-OF-WAY SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION. ALL DISTURBED OR DAMAGED PLANTS OR TREES TO BE REPLACED IN KIND.
- 19. CONTRACTOR SHALL SUPPLY (2) SOUND ATTENUATED DIESEL BY—PASS PUMPS (1 PRIMARY AND 1 BACKUP), EACH CAPABLE OF DELIVERING THE REQUIRED FLOW RATE AT GIVEN TDH (SEE TABLE) PLUS ANY LOSSES PRODUCED IN THE TEMPORARY BY-PASS PIPING (SEE PLAN SHEET FOR SUCTION AND DISCHARGE LOCATIONS). ELECTRIC PUMP(S) MAY BE UTILIZED IN LIEU OF DIESEL PUMP(S). IT'S THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE THE TEMPORARY ELECTRICAL SERVICE WITH TAMPA ELECTRIC COMPANY (TECO) AND PAY ALL ASSOCIATED COSTS. CONTRACTOR SHALL SUBMIT BYPASS PUMPING PLAN TO THE ENGINEER FOR APPROVAL FOR EACH PUMPING STATION.
- 20. THE CONTRACTOR MUST INSTALL ALL COMPONENTS NECESSARY FOR BYPASS WITHIN A SHUTDOWN WINDOW OF 2 HOURS DURING LOW FLOW PERIOD (IE. NIGHT). FLOW THROUGH PLUG INSTALLATION MAY REQUIRE INSTALLATION OF A TEMPORARY UPSTREAM PLUG.
- 21. CONCRETE SLAB SHALL BE 6-INCH THICK, 4,000 PSI (28 DAYS) CONCRETE AND RE-INFORCED WITH WIRE MESH (6 GAUGE 4"X4" WWF).
- 22. FIBERGLASS MANHOLE SHALL BE RATED FOR H-20 TRAFFIC LOADING AND MANUFACTURED IN ACCORDANCE WITH ASTM D-3753.
- 23. TAPPING SADDLES SHALL BE EPOXY LINED STEEL AND GATE (TAPPING) VALVES SHALL BE SERIES 2500 RESILIENT WEDGE GATE VALVES AS MANUFACTURED BY AMERICAN OR APPROVED EQUAL.
- 24. THERE ARE MULTIPLE LOCATIONS WHERE THE EXISTING CONCRETE SUPPORTS ARE TO REMAIN AND THE PIPE, VALVE OR FITTINGS THAT IT SUPPORTS WILL BE REPLACED. CONTRACTOR SHALL MODIFY THESE SUPPORTS AS NECESSARY TO SUIT NEW PIPE, VALVE OR FITTING (I.E. CHIPPING CONCRETE, NON-SHRINK GROUT APPLICATION, ETC.).
- 25. ALUMINUM ACCESS COVER SHALL BE HALLIDAY OR APPROVED EQUAL. ACCESS COVER SHALL HAVE STAINLESS STEEL HARDWARE AND SHALL BE RATED FOR A LIVE LOAD OF 150 PSF.
- 26. ALL BACKFILL SHALL BE COMPACTED TO 98% MODIFIED PROCTOR.
- 27. FLOWABLE FILL SHALL BE AN "EXCAVATABLE" TYPE AND PLACED IN ACCORDANCE WITH FDOT SPECIFICATION SECTION 121.
- 28. CONTRACTOR SHALL FURNISH AND INSTALL ONE FLOW METER AT WILDWOOD ACRES PUMPING STATION. CONTRACTOR SHALL INSTALL new FLYGT pumps AND PUMP BASES at River Terrace and Tyson PS(S), which will be furnished by the City. The electrical connections to the flow meter and new pumps will be performed by City forces.
- 29. Contractor will be responsible for the removal and reinstallation of the existing pumps. City forces will perform the necessary electrical disconnections and reconnections. Contractor shall provide the City a minimum 2 days notice of when this work is required.
- 30. Contractor is responsible for securing all equipment and materials that are to be reused at each PUMPING STATION location (I.E. pumps, brackets, etc.). The contractor shall replace any loss or damageD equipment that is to be reused at his expense and no payment shall be made for such.
- 31. CONTRACTOR SHALL HAVE ALL BYPASS EQUIPMENT AND MATERIALS BEFORE BEGINNING BYPASS OPERATIONS AT THE PUMPING STATION. A 72 HOURS NOTICE IS REQUIRED, PRIOR TO
- 32. SOME PUMPING STATION(S) HAVE CHEMICAL FEED FOR ODOR CONTROL. THE CHEMICAL FEED DISCHARGE LOCATIONS WILL NEED TO BE TEMPORARY RELOCATED DURING THE BYPASS OPERATION AND RESTORED AFTER COMPLETION. CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY.

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3	NOTES AND INDEX
4	SUMMARY
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11 - 13	BURKE STREET PUMP STATION
14 - 16	EPPS PARK PUMP STATION
17 - 19	INTERBAY PUMP STATION
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COVER SHEET

DESCRIPTION

SHEET NUMBER

	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

CITY of TAMPA WASTEWATER DEPARTMENT MISCELLANEOUS PUMPING STATION REPAIRS NOTES AND INDEX

W.O. 593 SHEET

61

Pump Station	Req'd Bypass Flow Rate (gpm)	Total Dynamic Head (ft)	Base Size (in)	Riser Size (in)	Valve Size (in)	Wetwell Bottom Elevation (ft)	Center Pipe Discharge of Elevation (ft)	Existing By-Pass Tee (in x in)	Pump Model	Force Main Size (in)	Proposed Valve Assembly Location	ITEMS*
Amberly	800	73	6	8	8	13.32	32.00	8x8	Flygt: 3152.181	10	Vault	Check Valves, Plug Valves, Risers, Pump Bases, Bypass Tee, Guide Rails, Upper and Intermediate Brackets
Arbor Greene	500	120	4	6	6	23.80	45.00	6x6	Fairbanks & Morse: 5433MV	8	Vault	Check Valves, Plug Valves, Risers, Pump Bases, Bypass Tee, Guide Rails, Upper and Intermediate Brackets
Burke	2300	129	8	10	10	16.00	35.54	8x6	KSB: 200/400/456	10	N/A	Risers, Pump Bases, Guide Rails, Upper and Intermediate Brackets
Epps Park	300	36	4	4	4	-5.16	1.30	4x4	Flygt: CP3102	6	Vault	Risers, Pump Bases, Check Valves, Plug Valves, bypass Tee, Guide Rails, Upper and Intermediate Brackets
Interbay	300	46	4	4	4	-13.12	6.01	4x4	Flygt: NP3102.185	6	Vault	Risers, Pump Bases, check valves, plug valves, bypass Tee, Guide Rails, Upper and Intermediate Brackets
Lawn	500	58	6	6	6	-3.77	5.35	6x6	KSB: KRTUF100-250/114	6	Above Ground	Check Valves, Plug Valves, Risers, Pump Bases, Bypass Tee, Replace bubbler tube & flange, Coat Wet Well, Guide Rails, Upper and Intermediate Brackets; Fill existing valve vault and install drain (see detail sheet)
Price	300	38	4	4	4	-12.51	2.67	4x4	Flygt: 3101	6	Above Ground	Risers, Pump Bases, Check Valves, Plug Valves, Bypass Tee, Guide Rails, Upper and Intermediate Brackets; Remove ex. vault cover & frame; Fill in ex. Valve vault and install drain(see detail sheet)
Richmond Place	700	160	6	8	8	18.46	44.88	8x8	ABS: AFP1501-M630/4	10	Vault	Check Valves, Plug Valves, Risers, Pump Bases, proposed Bypass Tee just outside of valve vault, Guide Rails, Upper and Intermediate Brackets
River Terrace	300	58	(new)** 4	4	4	-14.70	3.27	4x4	(new)** Flygt: CP3127.181	6	Vault	Risers, Check Valves, Plug Valves, Bypass Tee, Guide Rails, Upper and Intermediate Brackets; City provide new Flygt pumps and Pump Bases
Seminole	100	15	4	4	4	-3.05	10.55	4x4	Flygt: 3085	4	N/A	Risers, Pump Bases, Guide Rails, Upper and Intermediate Brackets
Sherwood Heights	350	80	6	6	6	14.77	25.72	6x6	Flygt: C3152.181	6	N/A	Risers, Pump Bases, Safety Rail, Concrete slope in wet well, Guide Rails, Upper and Intermediate Brackets
Sterling	200	12	4	4	4	-0.59	10.45	4x4	Flygt: 3085	6	Above Ground	Risers, Pump Bases, Check Valves, Plug Valves, Bypass Tee, Coat Wet Well, Chain Link Fence, Guide Rails, Upper and Intermediate Brackets; Fill in ex. valve vault and install drain (see detail sheet)
Sunset Park	500	32	6	6	6	-12.47	2.69	6x6	Flygt: 3127	6	Vault	Risers, Pump Bases, Check Valves, Plug Valves, Valve support, Bypass Tee, Guide Rails, Upper and Intermediate Brackets
Tampa Palms	880	56	8	8	8	11.46	35.00	8x8	Flygt: C3152.181	8	Vault	Check Valves, Plug Valves, Risers, Pump Bases, Fix section of T-Lock in Wet Well, Guide Rails, Upper and Intermediate Brackets
Tyson	300	21	4	6	6	0.03	9.41	6x6	(new)** Flygt: NP3102.181	6	Vault	Risers, Check Valves, Plug Valves, Bypass Tee, Guide Rails, Upper and Intermediate Brackets; City provide new Flygt pumps and Pump Bases.
University Woods	300	72	4	6	6	26.80	39.75	6x6	Flygt: 3126	6	Vault	Check Valves, Plug Valves, Risers, Pump Bases, Bypass Tee, Replace existing valve vault covers, Guide Rails, Upper and Intermediate Brackets
Wildwood Acres (Woodcrest)	300	97	6	6	6	18.65	29.05	6x6	Flygt: CP3152.181	6	Above Ground	Check Valves, Plug Valves, Risers, Pump Bases, Bypass Tee, Magnetic Flow Meter, Guide Rails, Upper and Intermediate Brackets; Fill in ex. valve vault and install drain (see detail sheet)

DES: V.T.

CKD:

DATE:

DRN: M.R.L.

** CITY TO FURNISH NEW PUMPS AND BASES

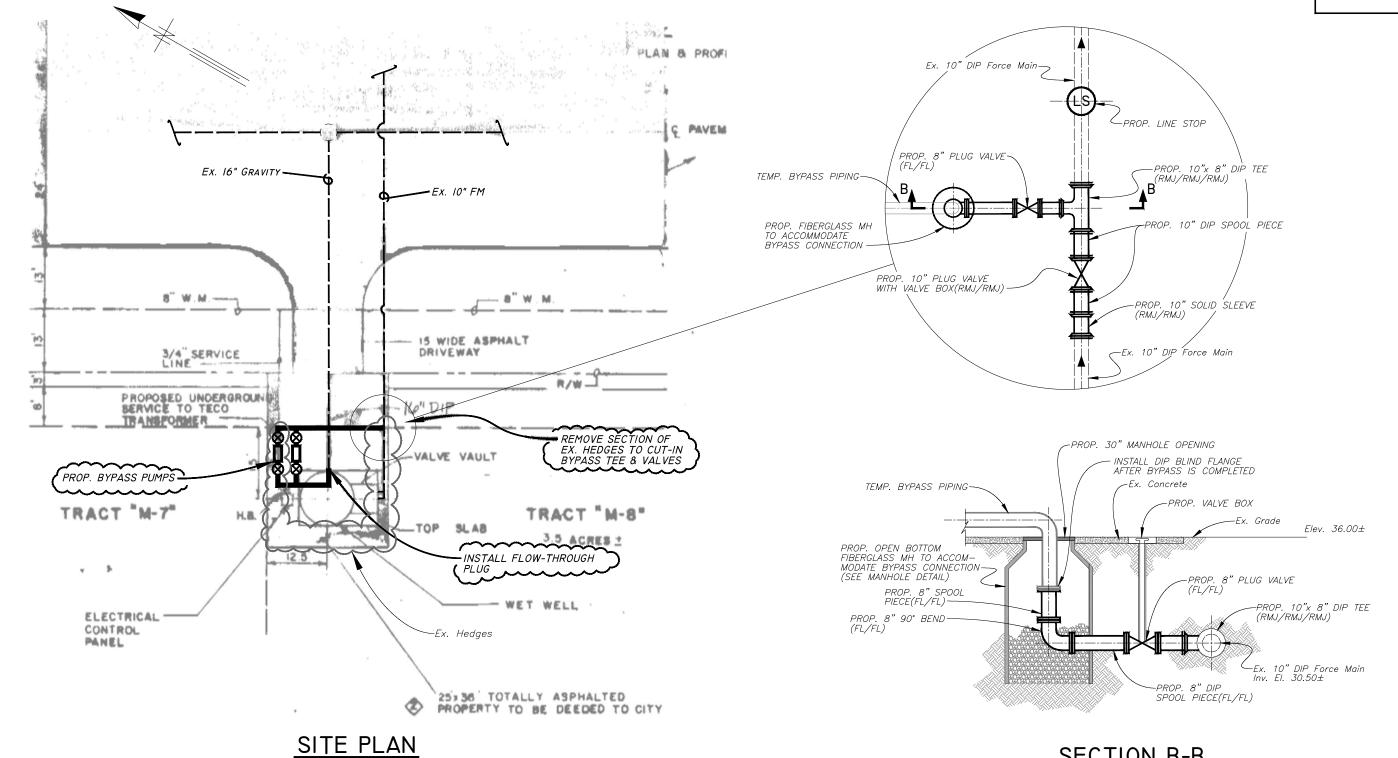
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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	2		
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 C^{1TY} of $T_{AMP_{\mathcal{A}}}$ WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS
SUMMARY

W.O. 5935 SHEET

of 61



DES: V.T.

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SECTION B-B
NOT TO SCALE

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DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	1		

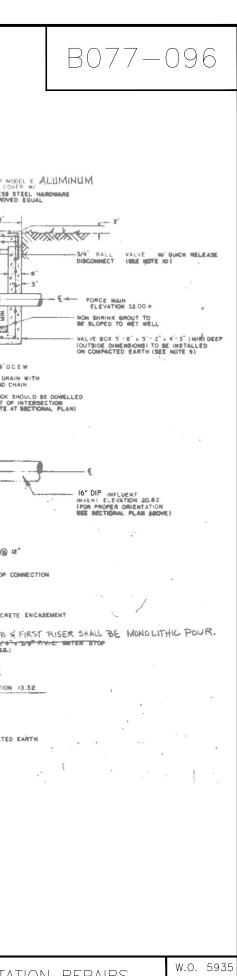
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MISCELLANEOUS PUMPING STATION REPAIRS

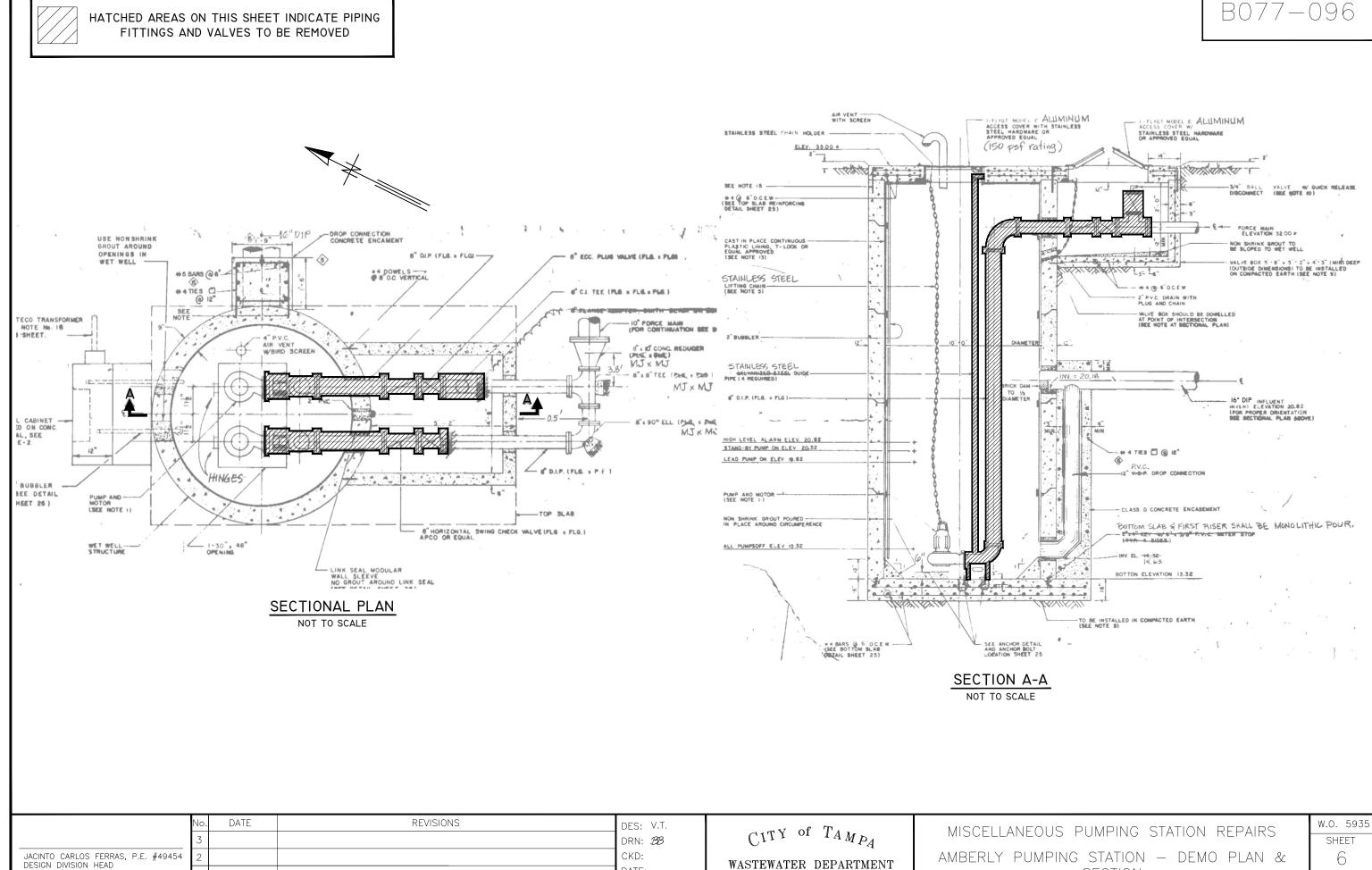
AMBERLY PUMPING STATION — SITE PLAN

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F 61

SECTION

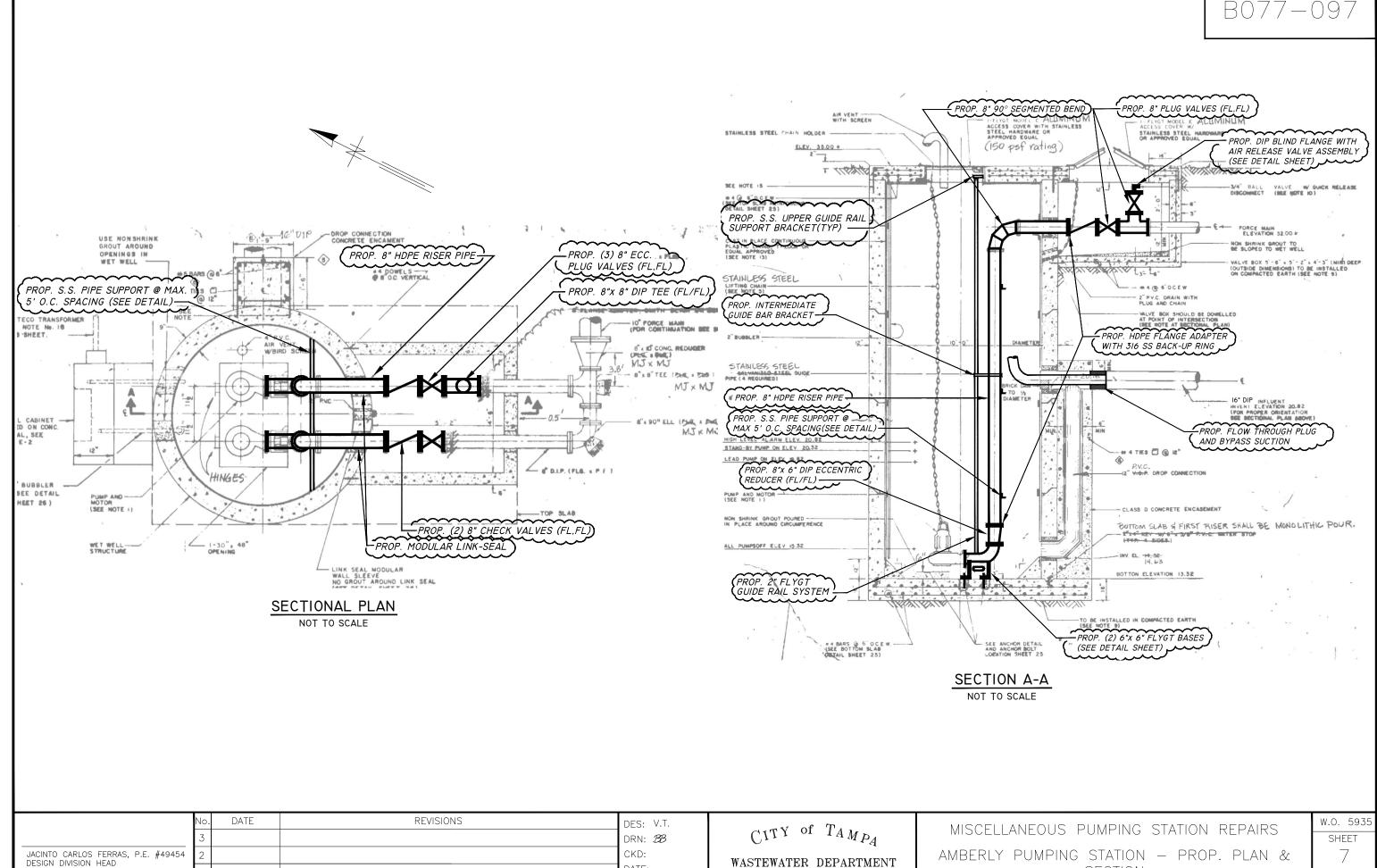


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DESIGN DIVISION HEAD

WASTEWATER DEPARTMENT

F 61



DATE:

WASTEWATER DEPARTMENT

A) CONTRACTOR SHALL PROVIDE AN ADDITIONAL DAY OF BYPASS FOR CITY TO INSTALL NEW RAIL ADAPTORS.

B) THE CHEMICAL FEED DISCHARGE LÓCATION WILL NEED TO BE TEMPORARILY RELOCATED DURING THE BYPASS OPERATION AND RESTORED AFTER COMPLETION. CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY.

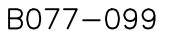
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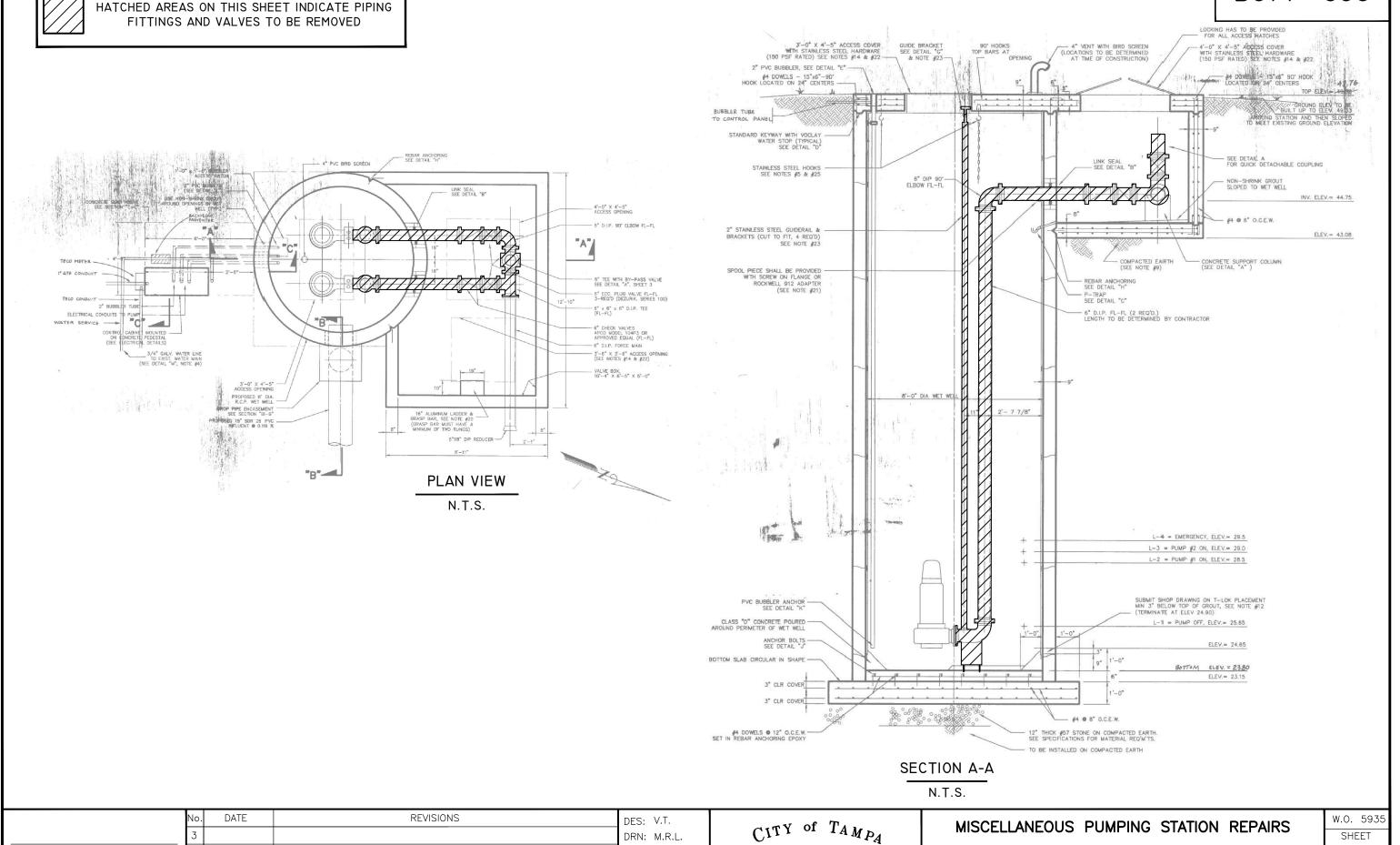
CITY of TAMPA WASTEWATER DEPARTMENT MISCELLANEOUS PUMPING STATION REPAIRS ARBOR GREEN PUMPING

W.O. 5935 SHEET 8 F 61



F 61

ARBOR GREEN PUMPING STATION - DEMOLITION



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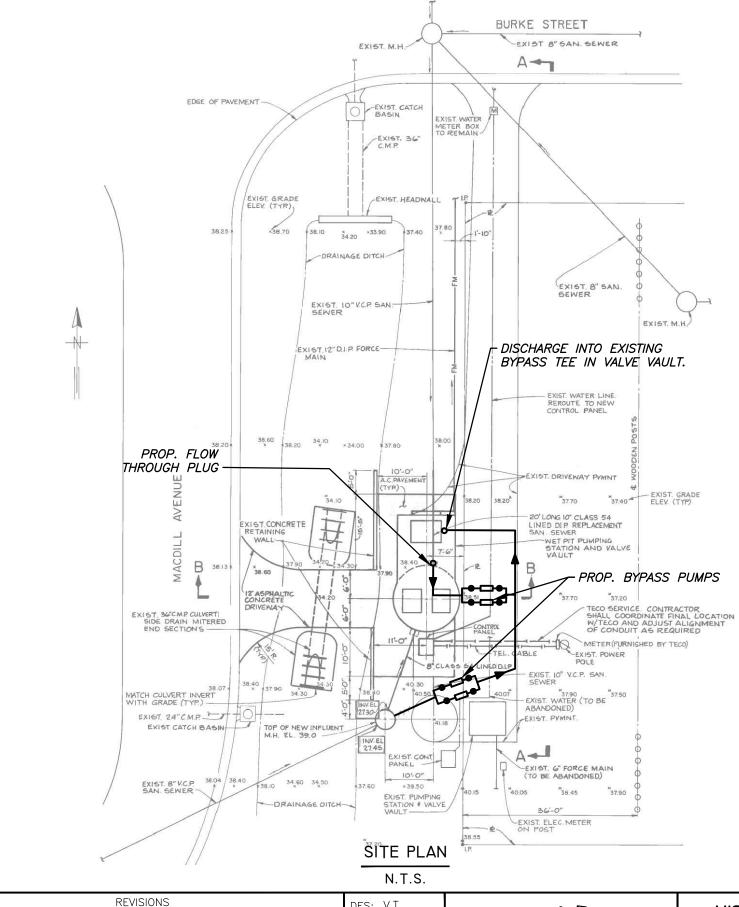
DATE:

WASTEWATER DEPARTMENT

DESIGN DIVISION HEAD WASTEWATER DEPARTMENT

61

WASTEWATER DEPARTMENT



NOTE:

- A) CONTRACTOR SHALL PROVIDE AN ADDITIONAL DAY OF BYPASS FOR CITY TO INSTALL NEW RAIL ADAPTORS.
- B) THE CHEMICAL FEED DISCHARGE LOCATION WILL NEED TO BE TEMPORARILY RELOCATED DURING THE BYPASS OPERATION AND RESTORED AFTER COMPLETION. CONTRACTOR SHALL COORDINATE THIS WORK WITH THE CITY.

No. DATE REVISIONS

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

DATE

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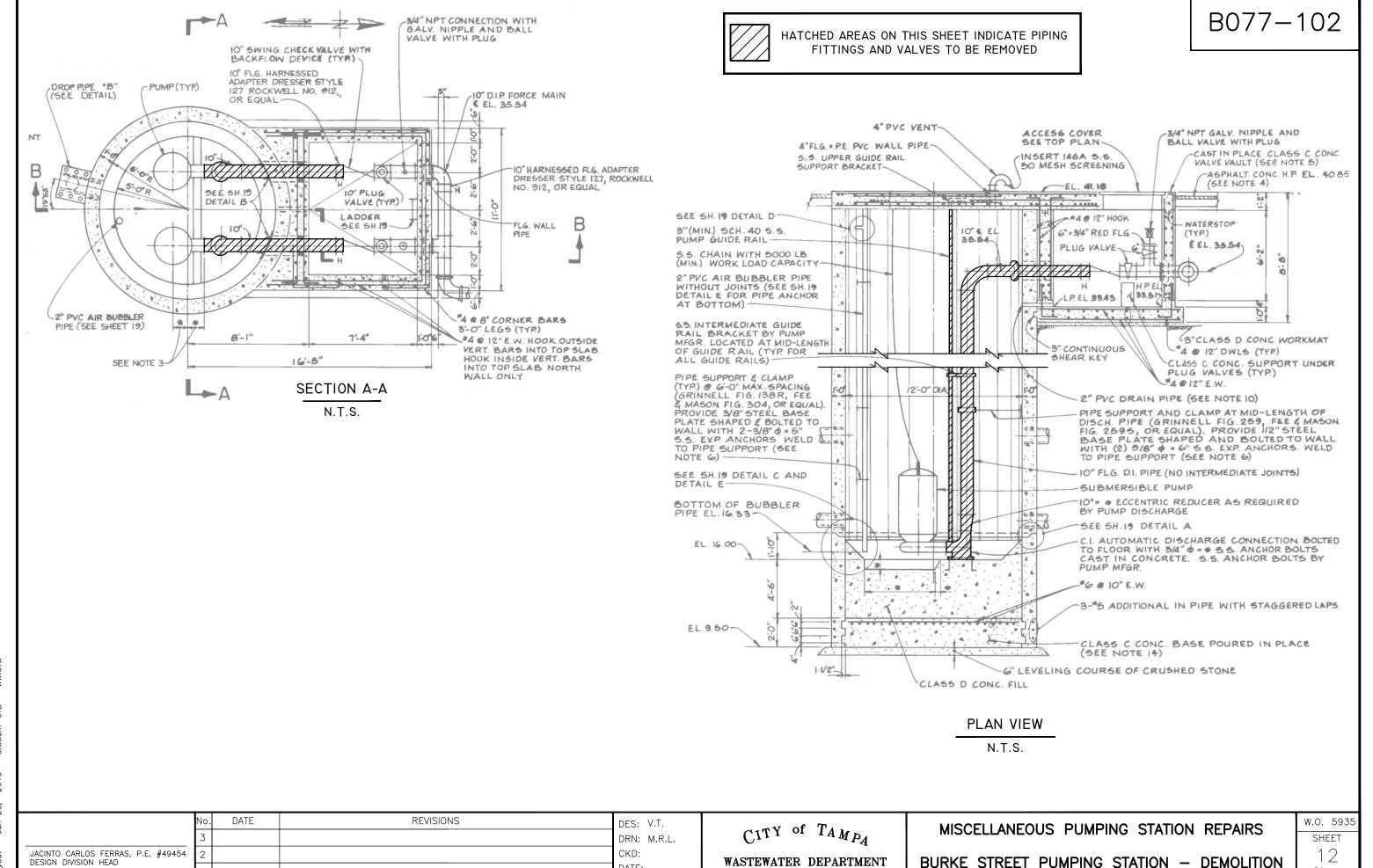
 C^{1TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

BURKE STREET PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 1 1 of 61

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61

WASTEWATER DEPARTMENT

No. DATE REVISIONS

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DES: V.T.

DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

DATE

REVISIONS

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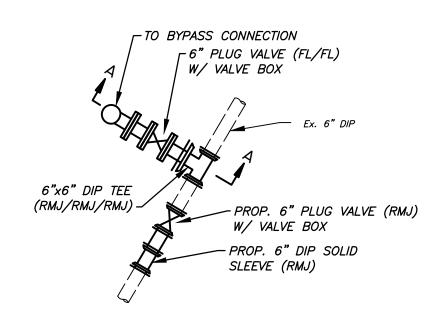
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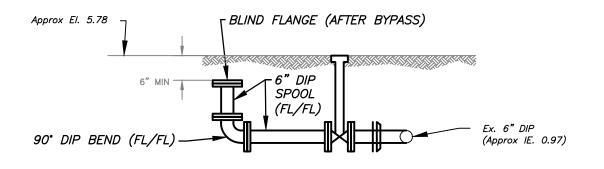
MISCELLANEOUS PUMPING STATION REPAIRS

BURKE STREET PUMPING STATION — PROPOSED

W.O. 5935 SHEET 1 3 of 61



 $\frac{\text{BYPASS PLAN}}{\text{N.T.S.}}$



BYPASS PROFILE A-A

N.T.S.

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 C^{1TY} of T_{AMP_A} wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

EPPS PARK PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 14 OF ##

HATCHED AREAS ON THIS SHEET INDICATE PIPING FITTINGS AND VALVES TO BE REMOVED

Emergency by-pass line 4"x4"x4" Tee, 4" Plug Valve, Blind flange and air See Top Slab release valve 4° Air Vent Sheet 24 w/Screen Top Slab 5.18 El. 5.09 Guide Bracket Valve Box (See Detail F) 5'-0"x5'-6"x5'-6" 2"PVC Bubbler tube with Chain S.S. hardware (See Detail Sheet 24) #4 Bars @ 6" O.C.E.W.-2" PVC Sloped to wet well B" Inlet whubber plug & chain-Inv. El. 7-12.10-Pump#20n El-(-)2.00 Pump#10n E1.(-) 2.50 Concrete Grout all around Pump Off E1.(-)4.00 El.(-)5.16 Pour 6" Bottom slob See Detail Sheet 24 _Fill existing Sump with non-shrink grout. Pump Anchor bolt location (See Detail H, - Sheet 24) Exist Sump

> SECTION A-A N.T.S.

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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:
WASTEWATER DEPARTMENT	1			DATE:

Ex. 6" F.M.

6"CIP

Link Seal, See Detail G, Sh. 3.

Blind Flange

Drill %"x 3" holes in existing RCP@ 12" ctrs Embed Epoxy coated # 4 rebar w/nonshrinK grout

4"DIPX30"FI-PE

4" x43" FI-FI

Existing Sump.

PLAN VIEW

N.T.S.

Thrust blocking

(Typ.) See Detail 6)

4"x/3"

4"x 6". Reducer (PE-PE) -

6"-45° Elbow

(RMJ-RMJ) -

FL-PE-

4"x4"x4"Tee (RM)-

RMJ-RMJ)

4"Blind Flange

Electrical Panel (See Sheet 25)

8"Influent

"Bubbler

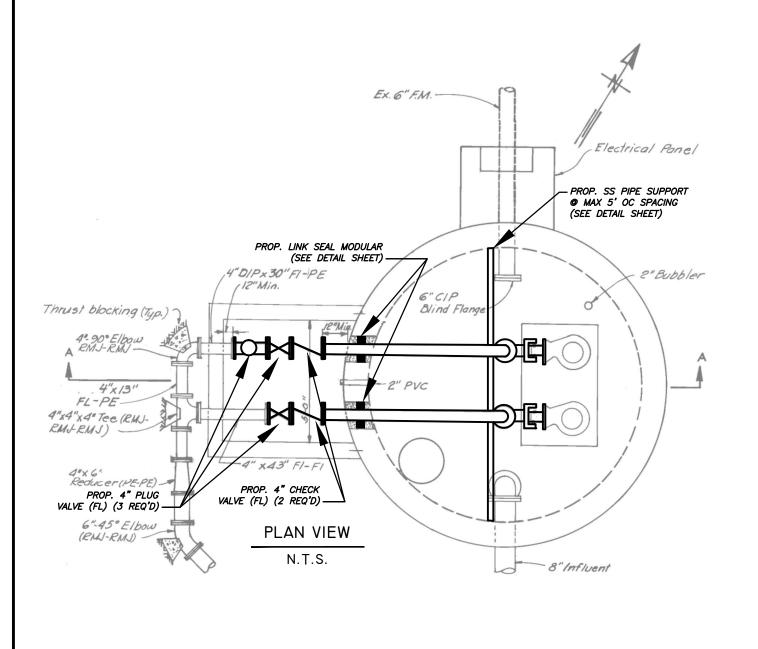
(See Detail "A", Sheet 24)

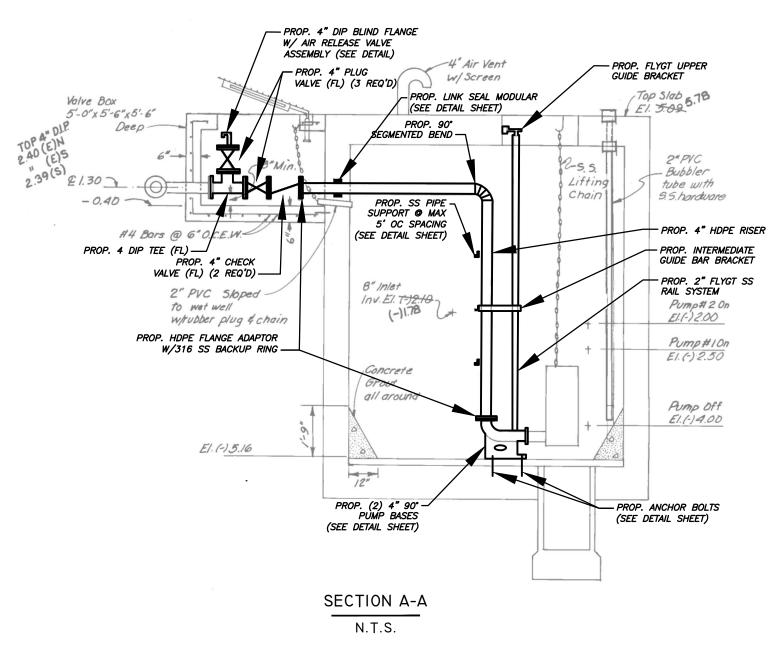
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MISCELLANEOUS PUMPING STATION REPAIRS

EPPS PARK PUMPING STATION — DEMOLITION

W.O. 5935 SHEET 15 of ##





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WASTEWATER DEPARTMENT	1			DATE:	

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MISCELLANEOUS PUMPING STATION REPAIRS

EPPS PARK PUMPING STATION — PROPOSED

W.O. 5935 SHEET 16 of ##

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PROP. 6"
LINE STOP

PROP. 6" PLUG VALVE (FL)

W/ VALVE BOX

6" 90' BEND (BLIND FLANGE
TO BE INSTALLED AFTER
BYPASS IS COMPLETED)

PROP. 6" DIP SOLID

SLEEVE (RMJ)

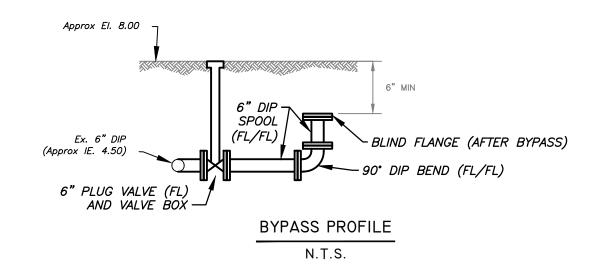
PROP. 6" PLUG VALVE WITH VALVE BOX (RMJ)

PROP. 6" DIP SOLID

SLEEVE (RMJ)

BYPASS PLAN

N.T.S.



SITE PLAN N.T.S.

*CONTRACTOR SHALL BE REQUIRED TO OBTAIN R/W PERMIT TO CLOSE TYSON AVE FROM LIPSCOMB ST. TO INTERBAY BLVD.

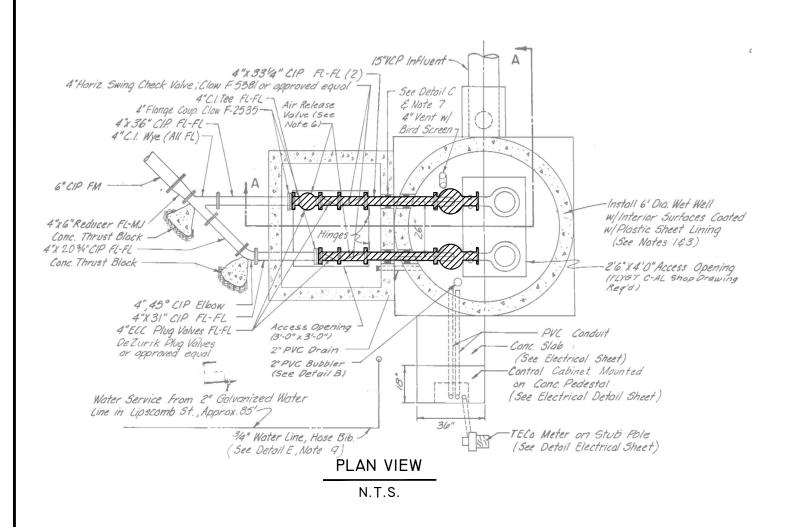
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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
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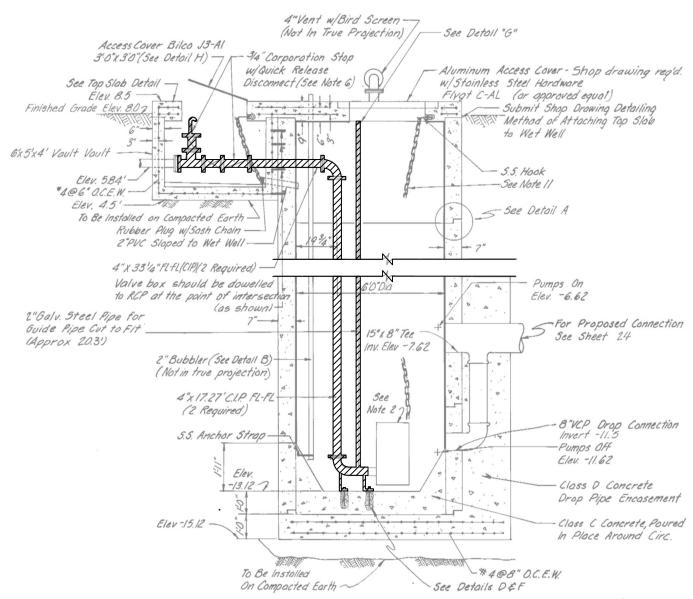
 $C^{\Upsilon\Upsilon}$ of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

INTERBAY PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 17 of 61





SECTION A-A
N.T.S.

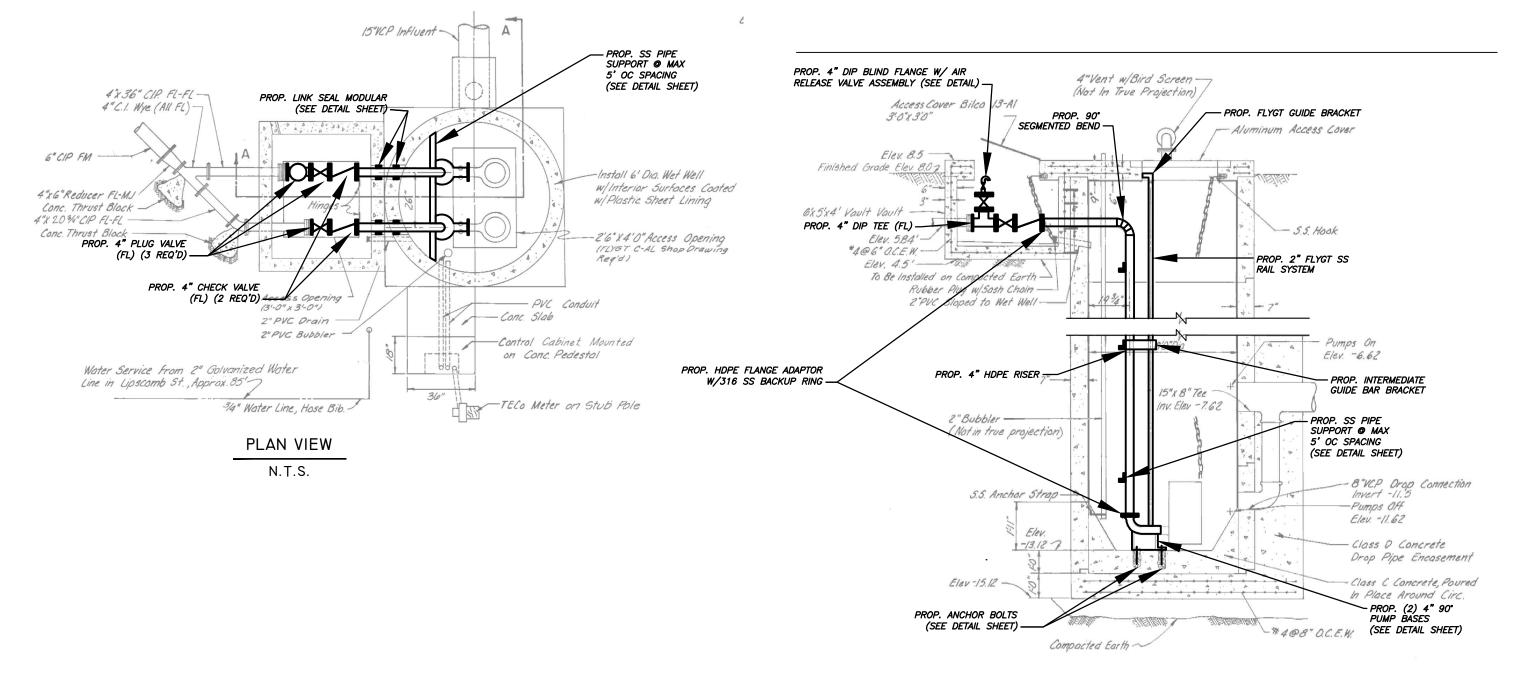
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	3			DRN: 1	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

 C^{1TY} of T_{AMP_A} WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS

INTERBAY PUMPING STATION — DEMOLITION

W.O. 5935 SHEET 18 of 61



	No.	DATE	REVISIONS	DES: V.T.
	3			DRN: M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:
WASTEWATER DEPARTMENT	1			DATE:

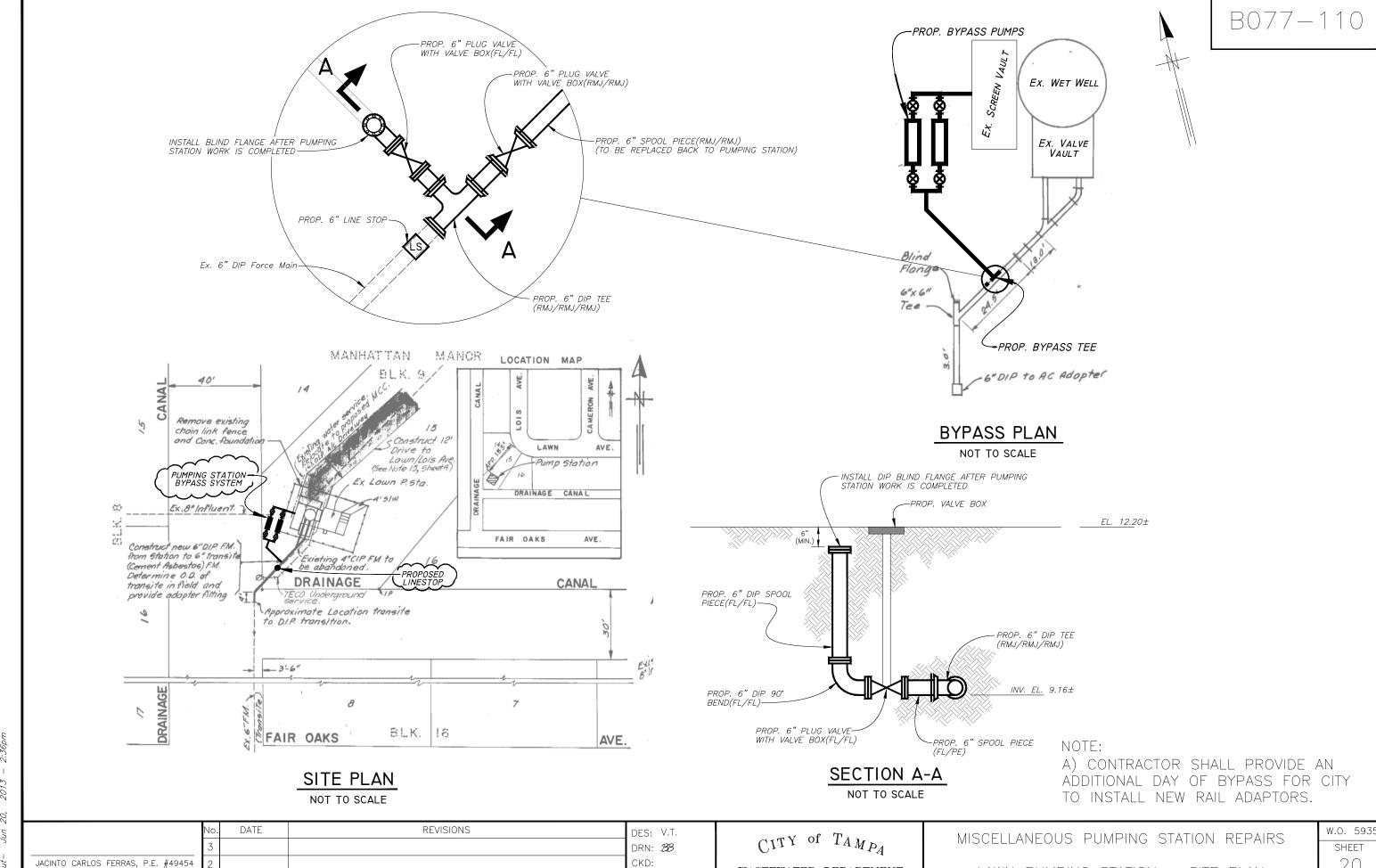
 $C^{\Upsilon\Upsilon}$ of $T_{AMP_{A}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

INTERBAY PUMPING STATION - PROPOSED

SECTION A-A N.T.S.

> W.O. 5935 SHEET 1 9 of 61



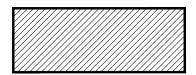
DATE:

WASTEWATER DEPARTMENT

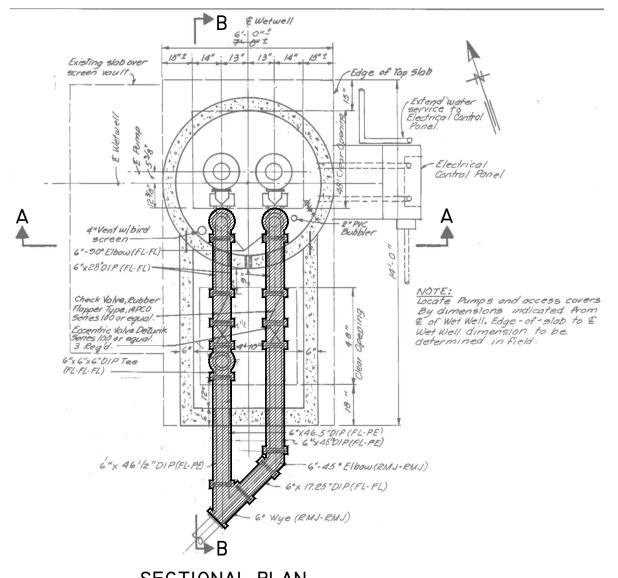
LAWN PUMPING STATION - SITE PLAN

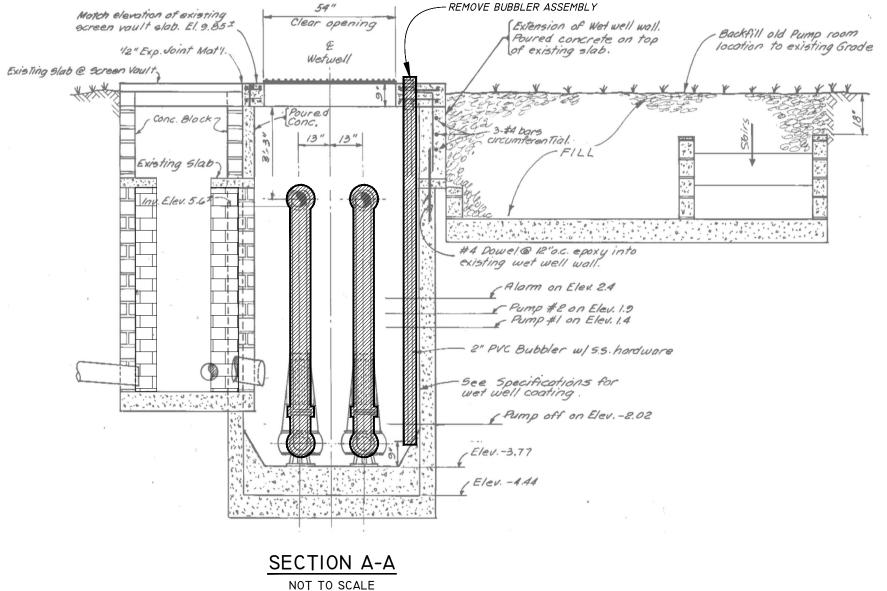
61

DESIGN DIVISION HEAD WASTEWATER DEPARTMENT



HATCHED AREAS ON THIS SHEET INDICATE PIPING, FITTINGS AND VALVES TO BE REMOVED





SECTIONAL PLAN

NOT TO SCALE

No. DATE REVISIONS DES: V.T.

3 DEN: 23

JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD WASTEWATER DEPARTMENT 1 DATE:

No. DATE REVISIONS

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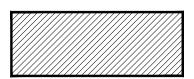
DES: V.T

 \mathbb{C}^{TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

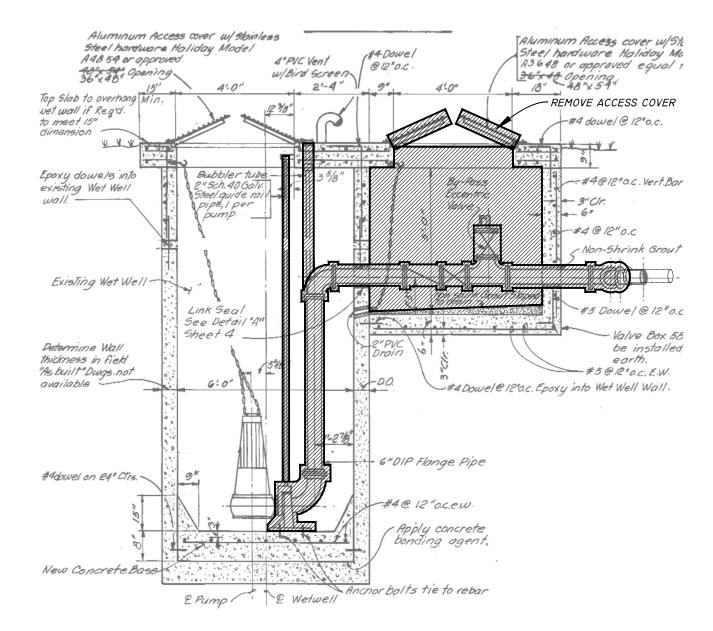
MISCELLANEOUS PUMPING STATION REPAIRS

LAWN PUMPING STATION — DEMOLITION SECTIONS

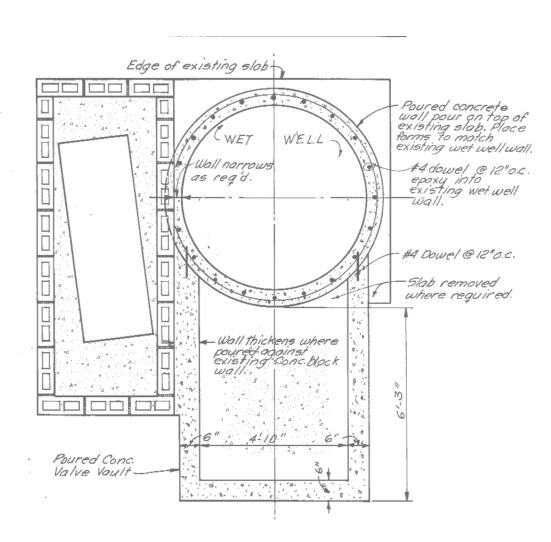
W.O. 5935 SHEET 21 of 61



HATCHED AREAS ON THIS SHEET INDICATE PIPING, FITTINGS AND VALVES TO BE REMOVED

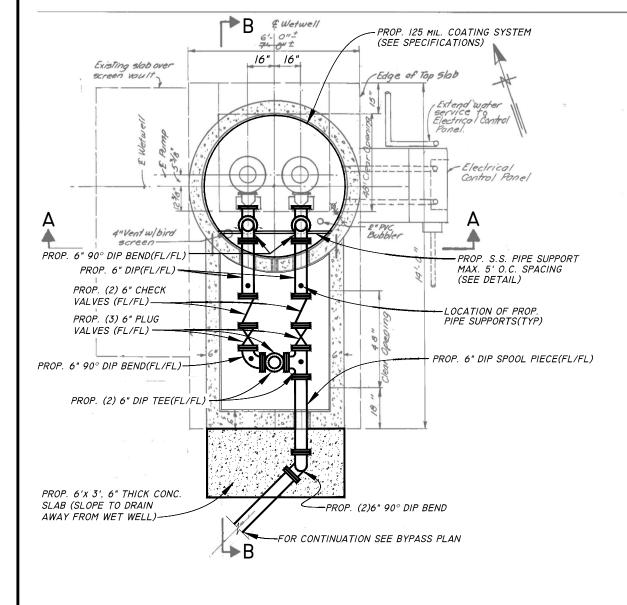


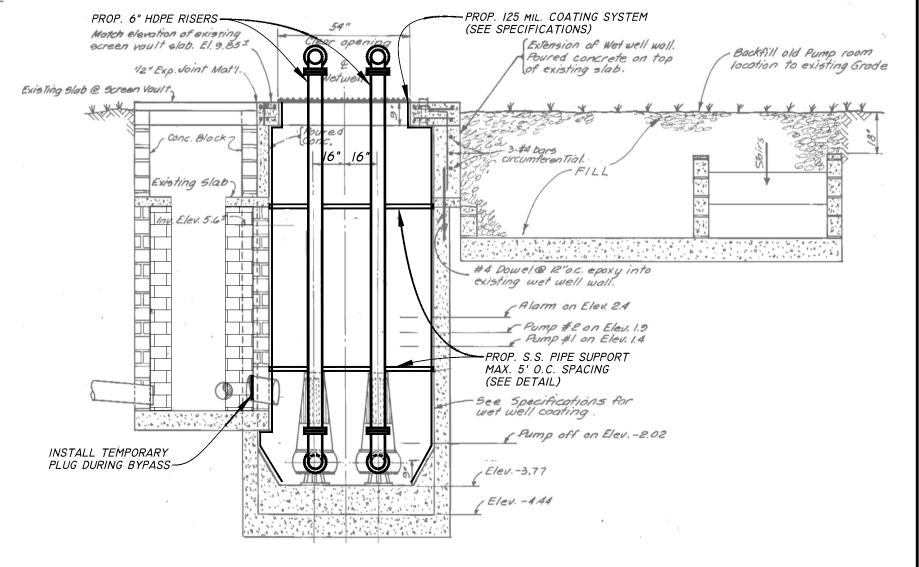




SECTIONAL PLAN NOT TO SCALE

	No.	DATE	REVISIONS	DES: V.T.	CITY Of TAME	MISCELLANEOUS PUMPING STATION REPAIRS	W.O. 5935
	3			DRN: <i>B</i> B	$CITY$ of T_{AMP_A}	WISCLEANEOUS I OWI ING STATION RELAINS	SHEET
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	WASTEWATER DEPARTMENT	LAWN PUMPING STATION - DEMOLITION SECTIONS 2	22
WASTEWATER DEPARTMENT	1			DATE:	WASTEWATER DELARMENT	LAWN FOMFING STATION - DEMOLITION SECTIONS 2	of 61





SECTIONAL PLAN NOT TO SCALE

SECTION A-A

NOT TO SCALE

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

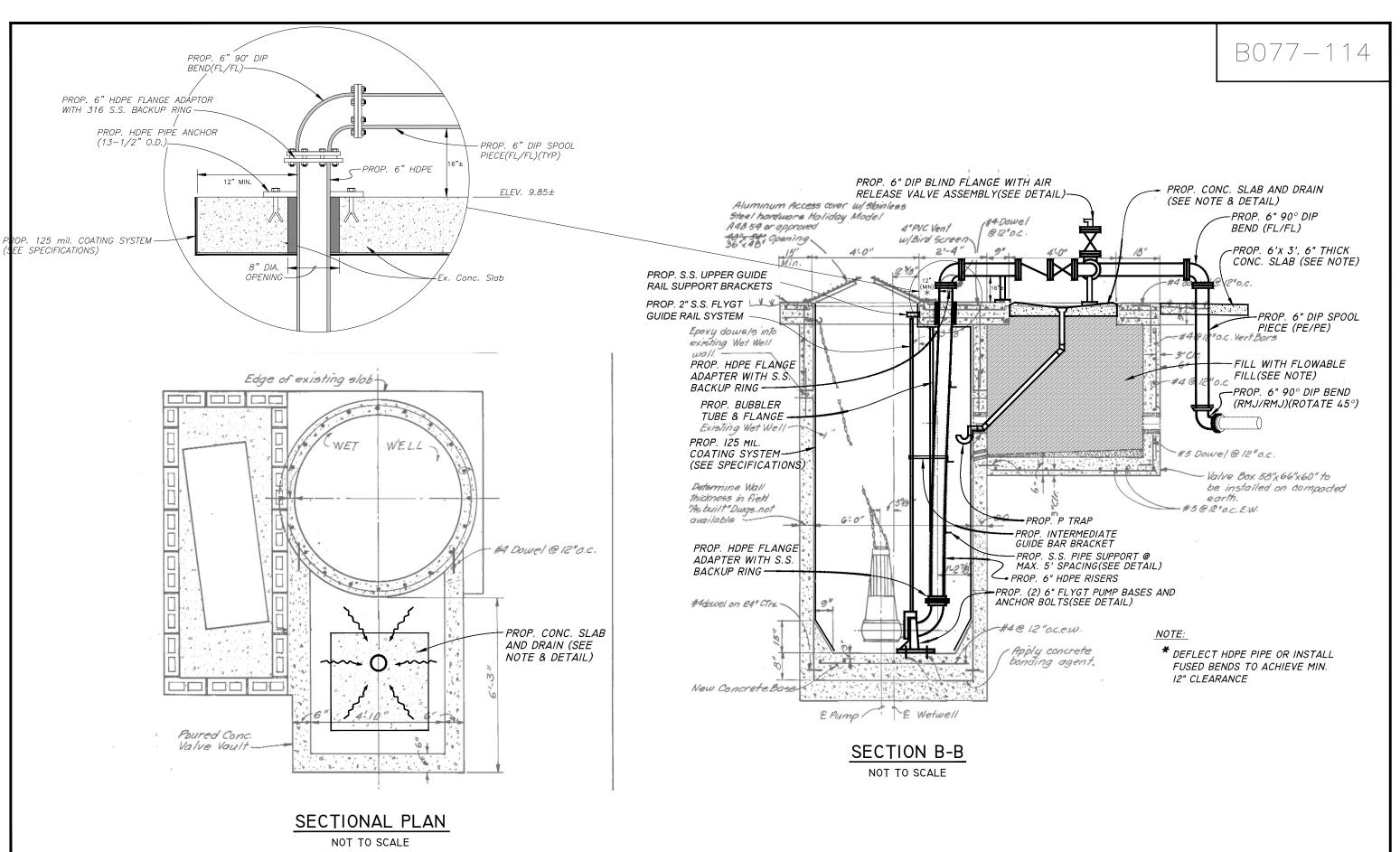
No.	DATE	REVISIONS	DES:	V.T.
3			DRN:	$B\!\!B$
2			CKD:	
1			DATE:	

 \mathbb{C}^{TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

LAWN PUMPING STATION - PROPOSED SECTIONS

W.O. 5935 SHEET 1 2 3 of 61



	No.	DATE	REVISIONS	DES: V.T.
	3			DRN: <i>BB</i>
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:
WASTEWATER DEPARTMENT	1			DATE:

 \mathbb{C}^{TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

LAWN PUMPING STATION — PROPOSED SECTIONS

W.O. 5935 SHEET 24

User: ss8k Drawing Name: K:\WW_Projects\2012\2012_5935_Various Pumping Station Improve Layout— Jun 21, 2013 - 3:35pm

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

No. DATE REVISIONS

3 2 1

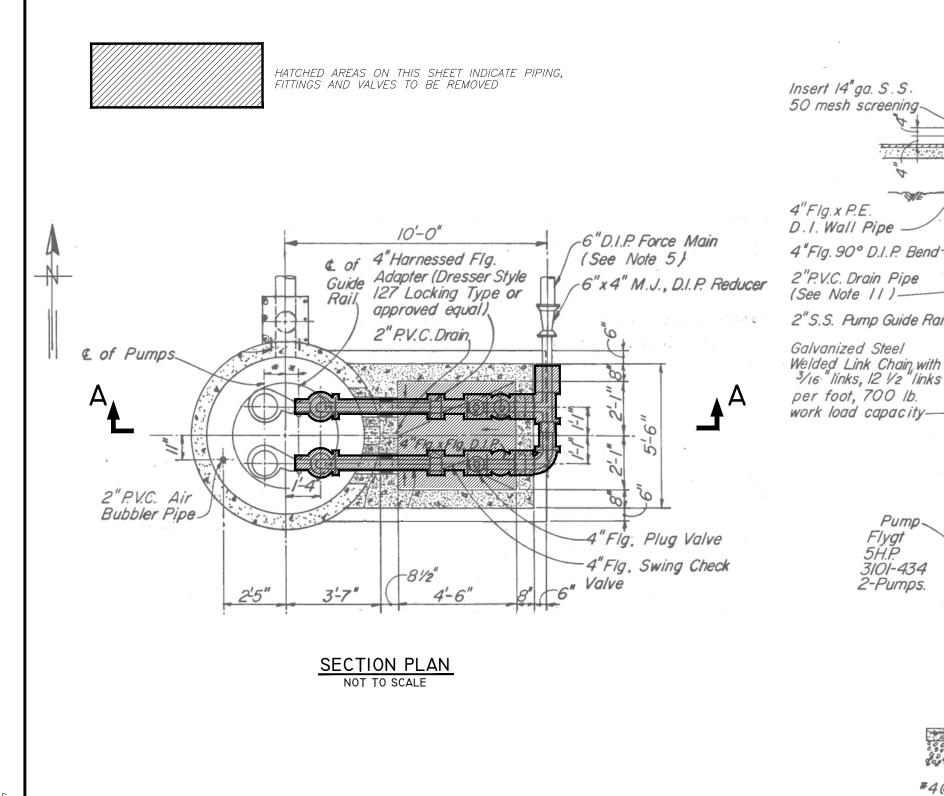
DES: V.T.
DRN: 2B
CKD:
DATE:

 $\mathbb{C}^{1\mathsf{T}^{\mathsf{Y}}}$ of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

PRICE PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 25 of 61



S.S. Upper Guide REMOVE VALVE VAULT COVER Rail Support Bracket (Typ.) Top Of Slab Elev. 7.83 3/4" Hose 806 4"P.V.C. Waterstop in Keyway (Typ. all joints) 3 Million States - 4"x 4" x 4" Flg. D.I. Tee -4"Flg. x Flg. D.I. Wall Altha thia Pipe (Tapped for studs) 2"S.S. Pump Guide Rail-·3"Class D Conc. Workmat H.P. El. 1.58 (Typ.) Welded Link Chain with 3/16 "links, 12 1/2 links 2"x4" Class C Concrete Support under Check Valves Continuous Shear Key NOTE: Provide #4 corner bars outside face of Valve Vault. 4"Flg. D.I.P. (No intermediate joints) C.I. Automatic Discharge Connection bolted to floor with 3/4"x 10" S.S. Anchor Bolts cast in concrete #4@12" E.W.-

SECTION A-A

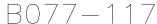
	No.	DATE	REVISIONS	DES: V.T.
	3			DRN: <i>B</i> B
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:
WASTEWATER DEPARTMENT	1			DATE:

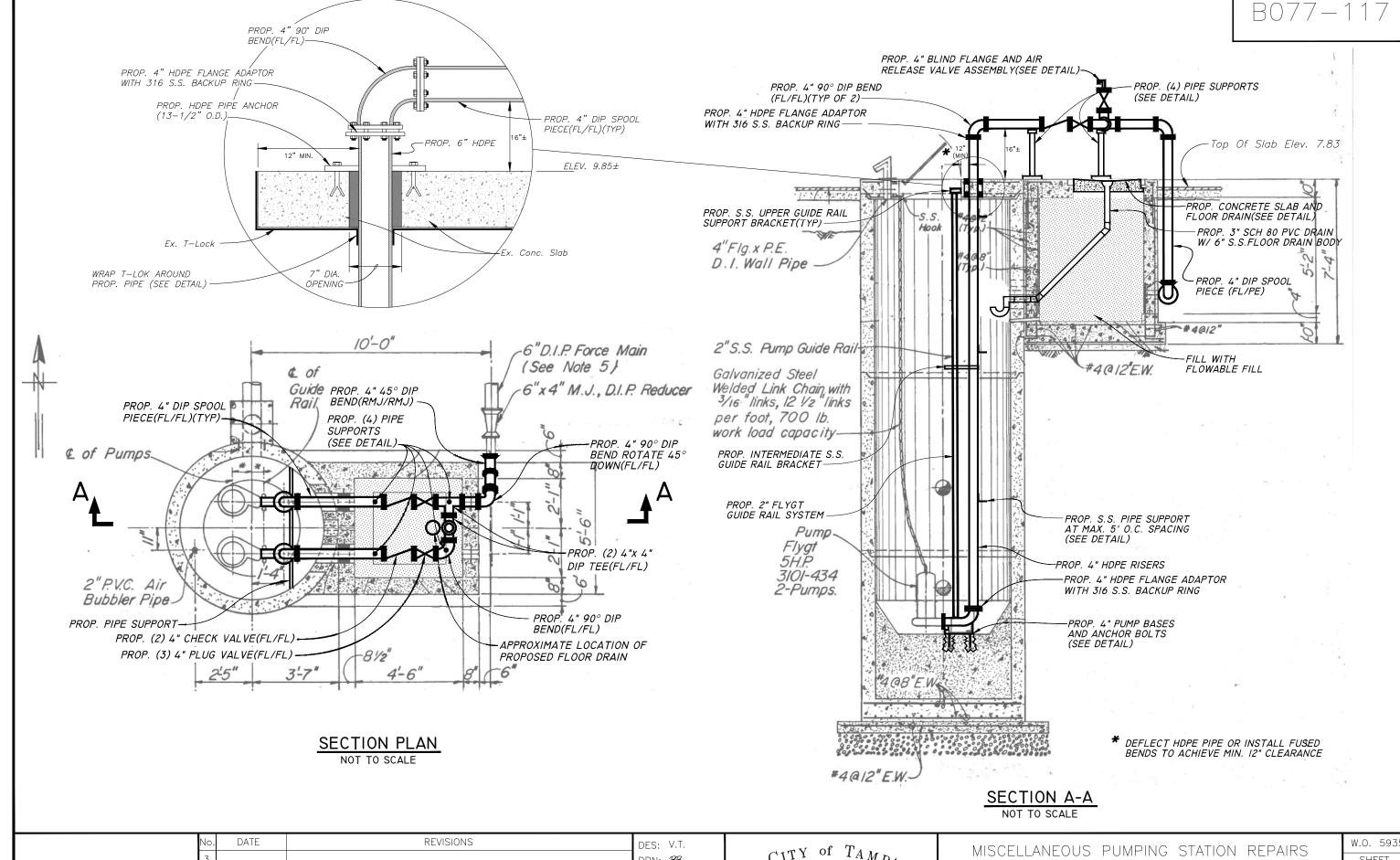
 $\mathbb{C}^{\mathrm{T}\mathrm{Y}}$ of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

PRICE PUMPING STATION — EXISTING SECTIONS

W.O. 5935 SHEET 26 of 61





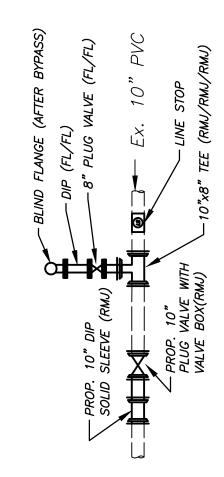
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT

DRN: BB CKD: DATE:

CITY of TAMPA WASTEWATER DEPARTMENT PRICE PUMPING STATION - PROPOSED SECTIONS

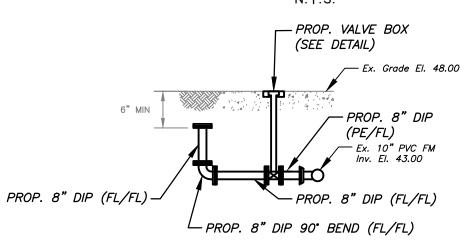
SHEET

SITE PLAN N.T.S.



BYPASS PLAN

N.T.S.



BYPASS PROFILE

N.T.S.

NOTE:

A) CONTRACTOR SHALL PROVIDE AN ADDITIONAL DAY OF BYPASS FOR CITY TO INSTALL NEW RAIL ADAPTORS.

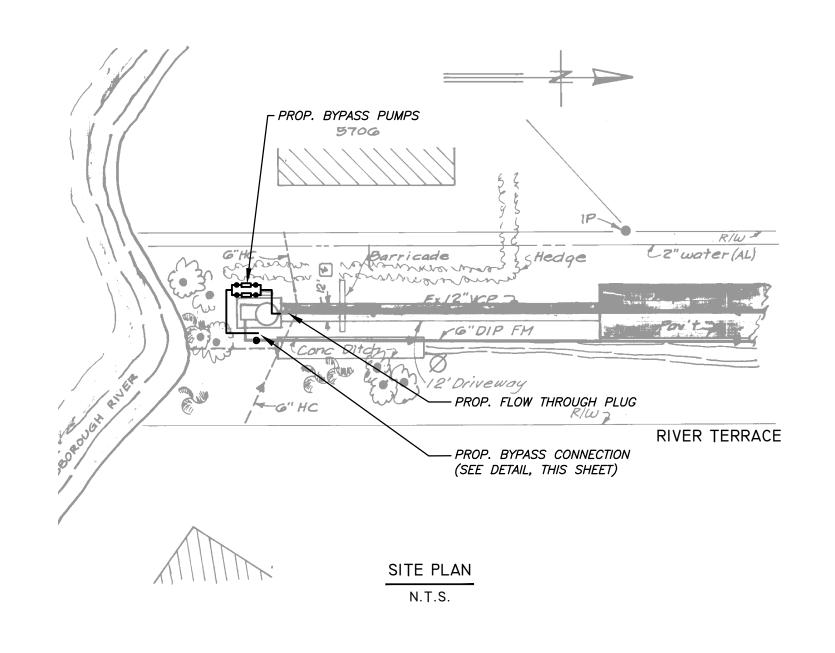
	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	2			CKD:	
	1			DATE:	

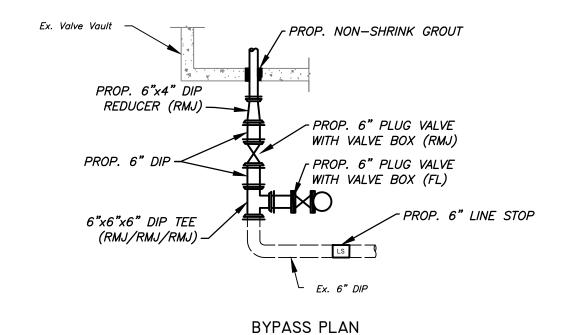
 C^{1TY} of T_{AMP_A} WASTEWATER DEPARTMENT

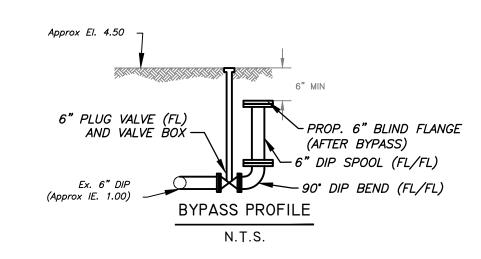
MISCELLANEOUS PUMPING STATION REPAIRS

RICHMOND PLACE PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 28 of 61







N.T.S.

	NO.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

 $C^{\Upsilon\Upsilon}$ of $T_{AMP_{A}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

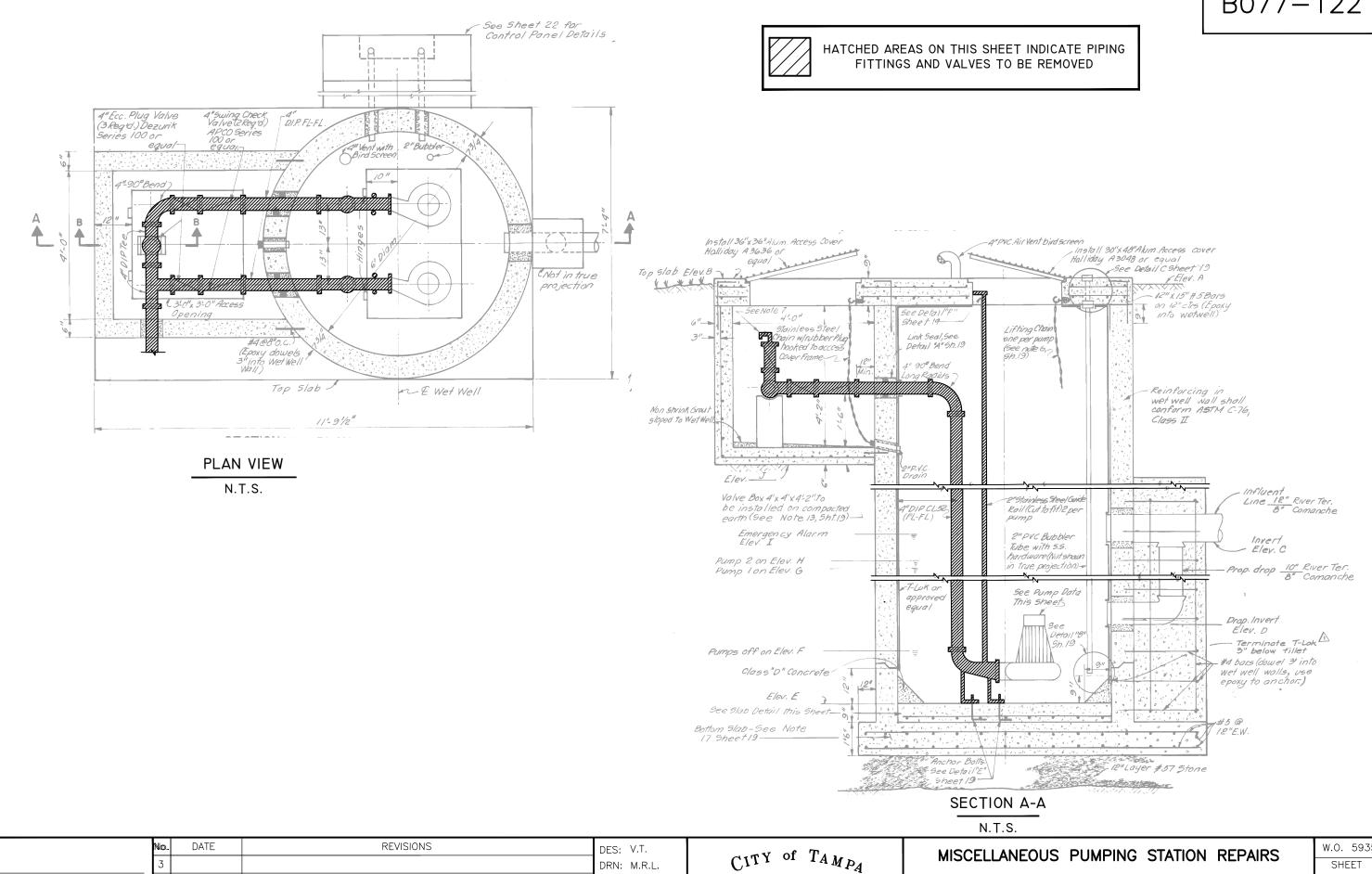
RIVER TERRACE PUMPING STATION — SITE PLAN

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32

F 61

RIVER TERRACE PUMPING STATION - DEMOLITION



CKD:

DATE:

WASTEWATER DEPARTMENT

JACINTO CARLOS FERRAS, P.E. #49454

DESIGN DIVISION HEAD WASTEWATER DEPARTMENT

JACINTO CARLOS FERRAS, P.E. #494 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT 3 DRN: M.R.L.

CKD:

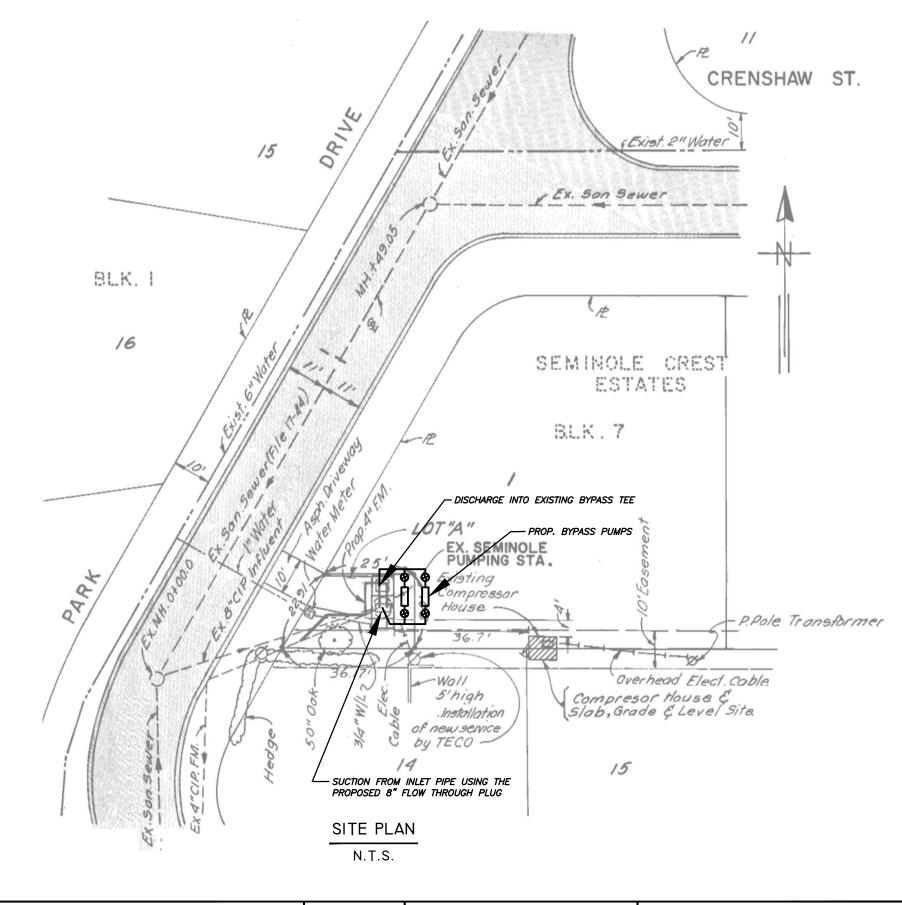
DATE:

 \mathbb{C}^{TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

RIVER TERRACE PUMPING STATION — PROPOSED

W.O. 5935 SHEET 33 of 61



User: ss8k Drowing Name: K:\WW_Projects\2012\2012_5935_Various Pumping Station Layout- Jun 20, 2013 - 3:08pm CTB - WW.CTB

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

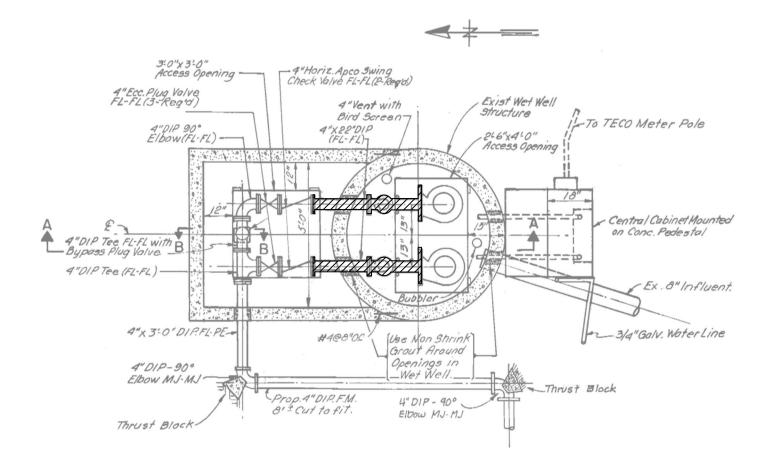
	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
54	2			CKD:	
	1			DATE:	

 C^{1TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

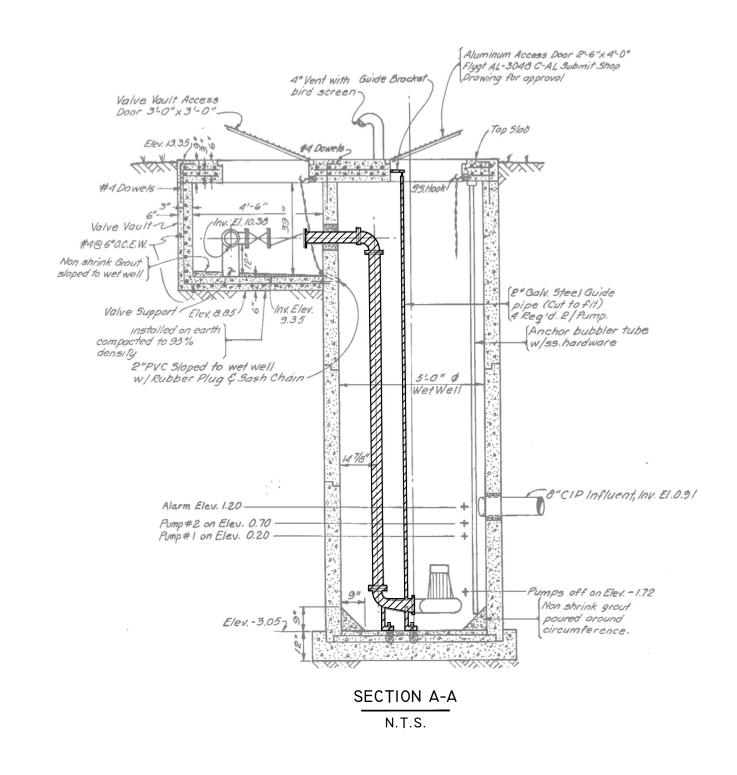
MISCELLANEOUS PUMPING STATION REPAIRS

SEMINOLE PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 34 of 61



PLAN VIEW N.T.S.

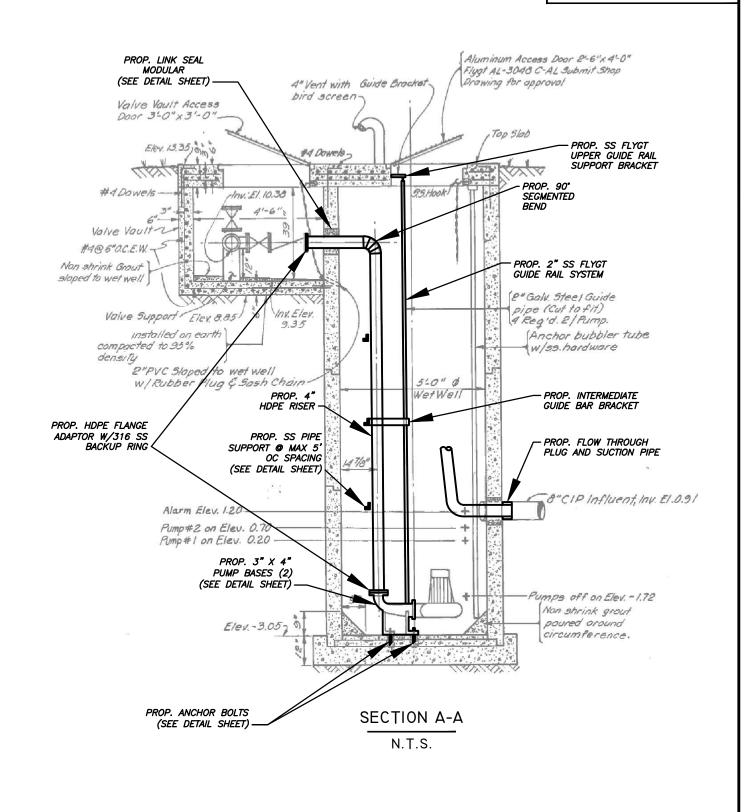


	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

CITY of TAMPA WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS SEMINOLE PUMPING STATION - DEMOLITION

W.O. 593 SHEET 35 61



	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

 C^{TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS
SEMINOLE PUMPING STATION - PROPOSED

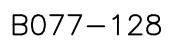
W.O. 5933 SHEET 36 of 61 Drawing Name: K:\WW_Projects\2012\2012_5935_Vai Jun 20, 2013 — 3:09pm CTB — WW.CTB

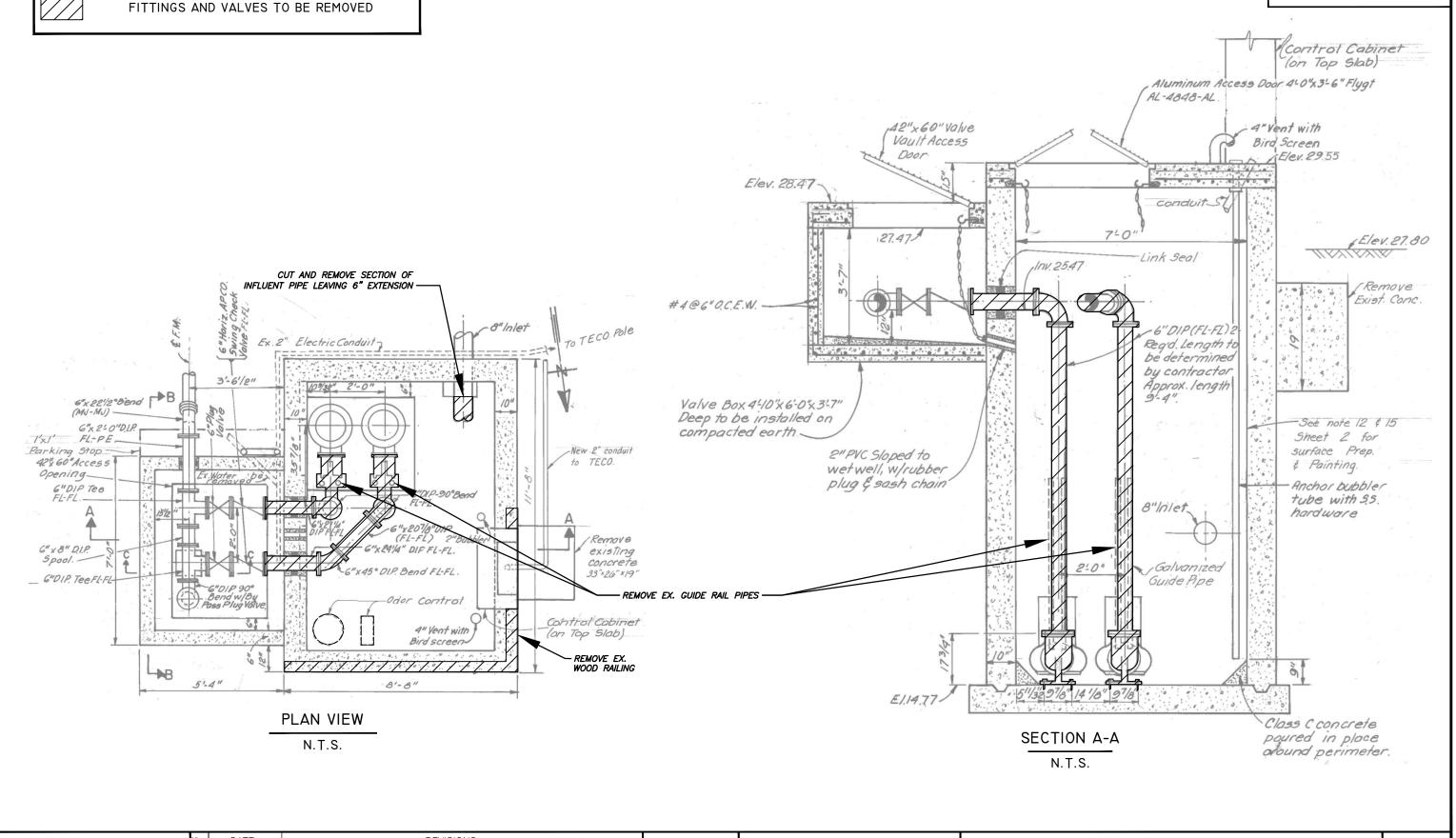
	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

 C^{1} of $T_{A}{}_{M}{}_{P_{A}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS
SHERWOOD HEIGHTS PUMPING STATION
SITE PLAN

W.O. 5935 SHEET 37 of 61





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

HATCHED AREAS ON THIS SHEET INDICATE PIPING

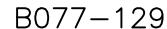
No. DATE REVISIONS

3 DES: V.T.
DRN: M.R.L.
CKD:
1 DATE:

 \mathbb{C}^{TY} of $T_{AMP_{A}}$ wastewater department

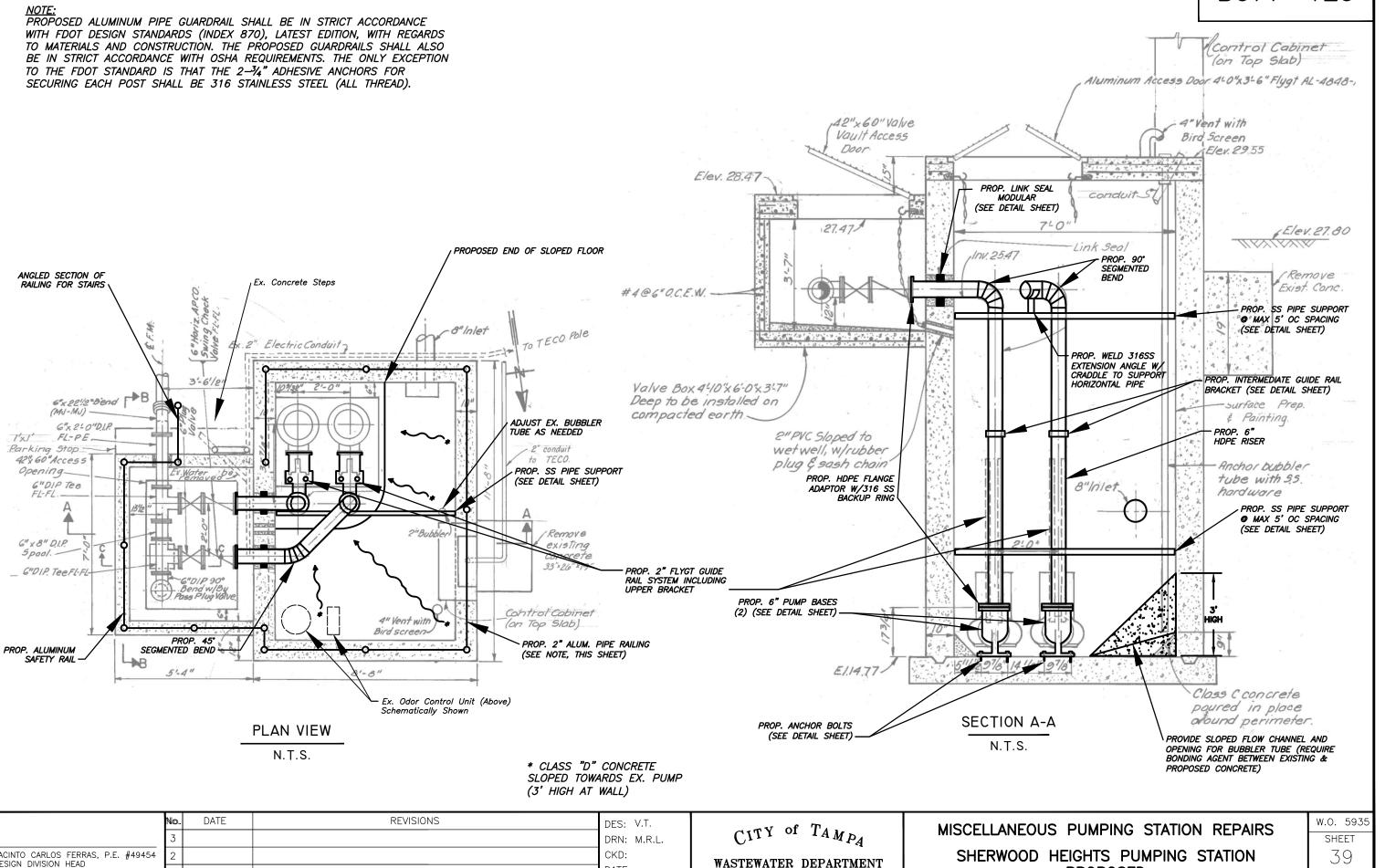
MISCELLANEOUS PUMPING STATION REPAIRS
SHERWOOD HEIGHTS PUMPING STATION
DEMOLITION

W.O. 5935 SHEET 38 of 61



PROPOSED

61



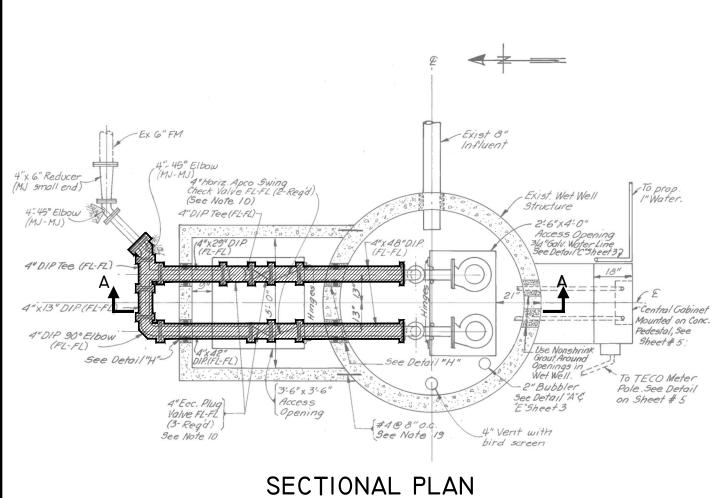
DATE:

DESIGN DIVISION HEAD WASTEWATER DEPARTMENT

W.O. 5935 SHEET 40 OF 61

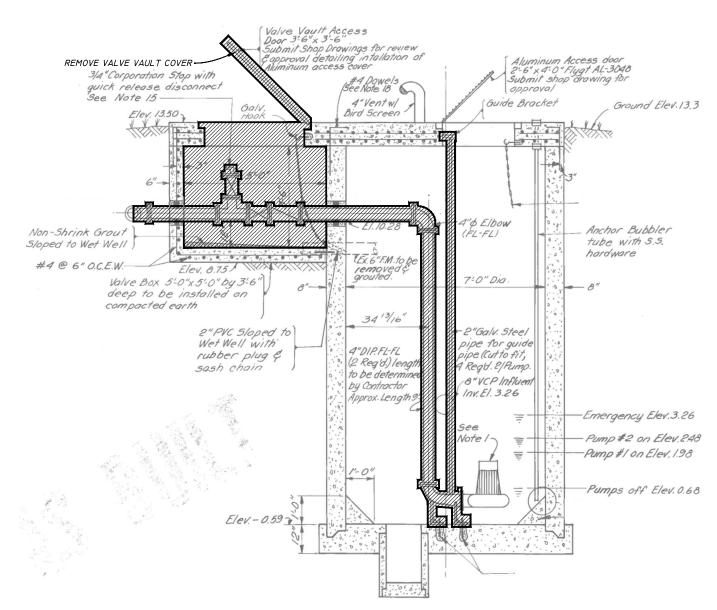
SITE PLAN NOT TO SCALE

	No. DATE	REVISIONS	DES: V.T.	CITY Of TARE	MISCELLANEOUS PUMPING STATION REPAIRS
	3		DRN: <i>BB</i>	$CITY$ of T_{AMP_A}	MISCELLANEOUS I OWI ING STATION INCLAINS
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2		CKD:	WASTEWATER DEPARTMENT	STERLING PUMPING STATION — SITE PLAN
WASTEWATER DEPARTMENT	1		DATE:	WASTEWATER DELAKTMENT	STEINE FOMFING STATION - SITE FEAN



HATCHED AREAS ON THIS SHEET INDICATE PIPING,

FITTINGS AND VALVES TO BE REMOVED



SECTION A-A NOT TO SCALE

	No.	DATE	REVISIONS	DES: V	√.T.
	3			DRN: 2	BB
JACINTO CARLOS FERRAS, P.E. #49454	2			CKD:	
DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	1			DATE:	

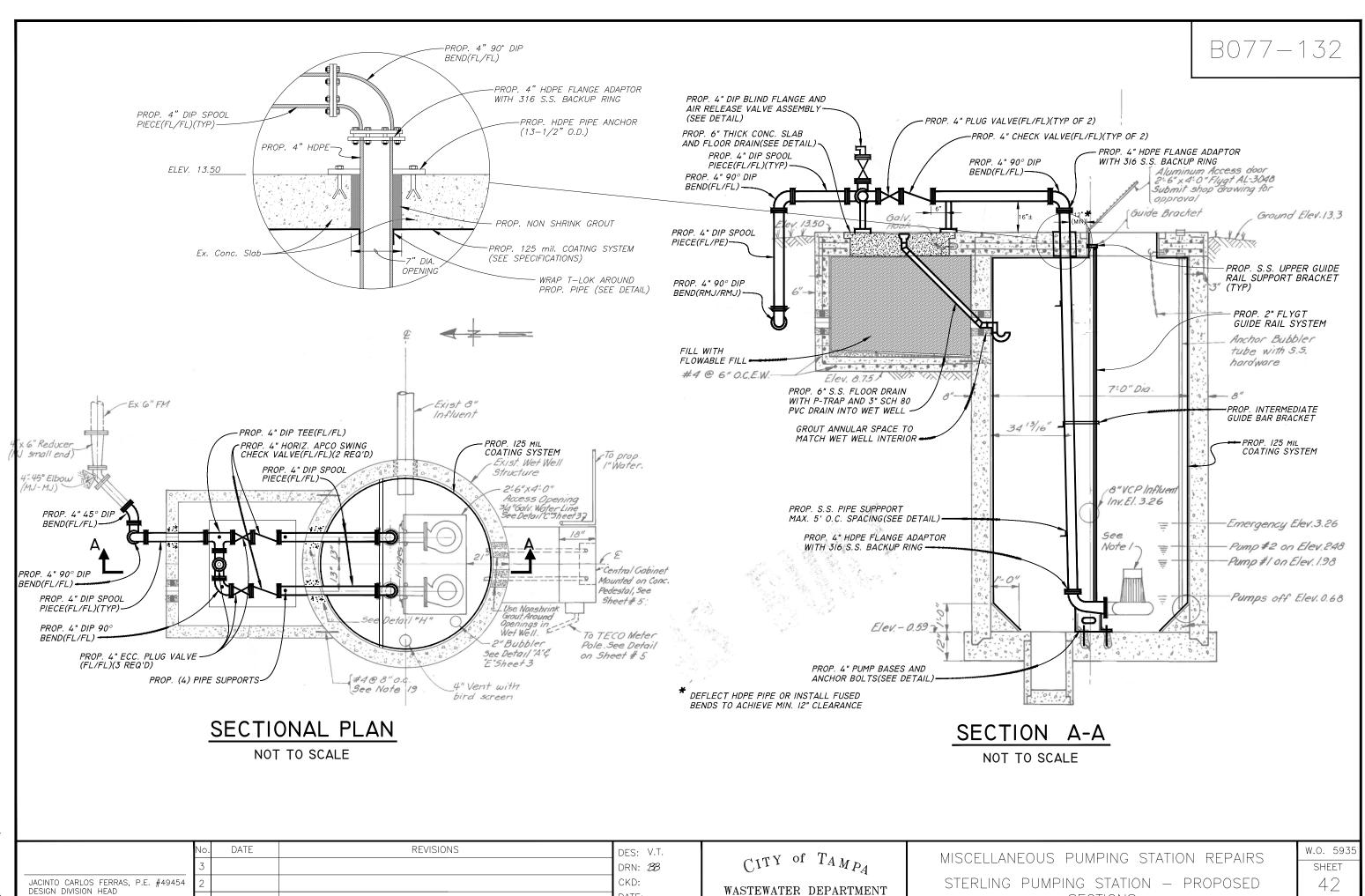
NOT TO SCALE

 $\mathbb{C}^{\mathsf{T}^{\mathsf{Y}}}$ of $T_{AMP_{\mathcal{A}}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

STERLING PUMPING STATION — EXISTING SECTIONS

W.O. 5935 SHEET 41 of 61

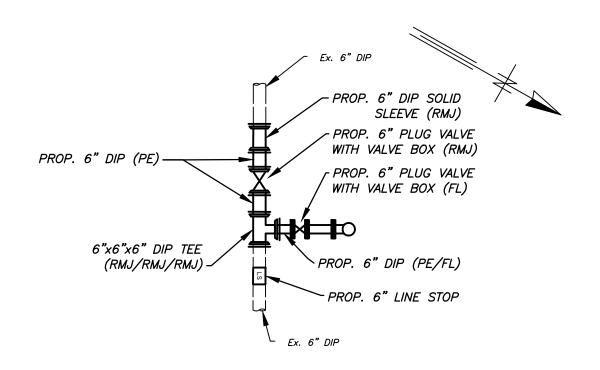


DATE:

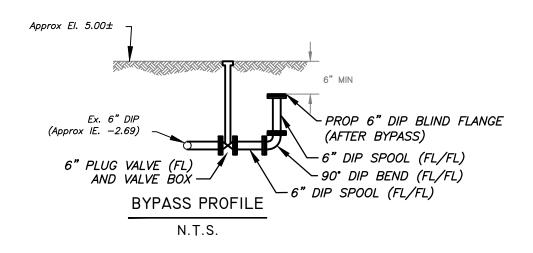
SECTIONS

61

WASTEWATER DEPARTMENT



BYPASS PLAN N.T.S.



	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

 C^{1TY} of $T_{AMP_{A}}$ WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS

SUNSET PARK PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 43 of 61

SHEET

44

61

SUNSET PARK PUMPING STATION - DEMOLITION

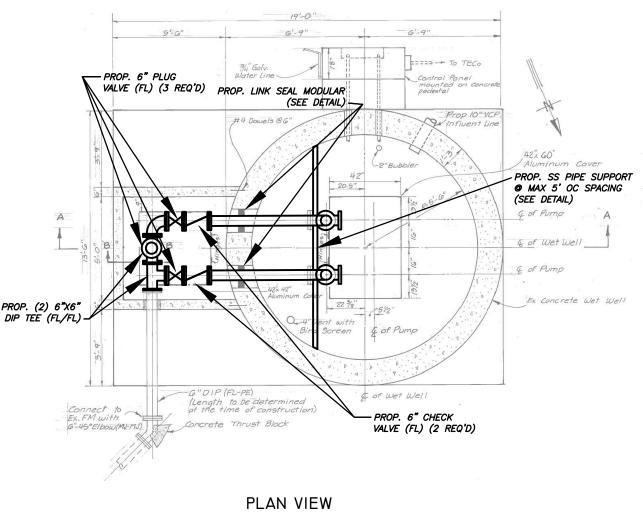
DRN: M.R.L.

WASTEWATER DEPARTMENT

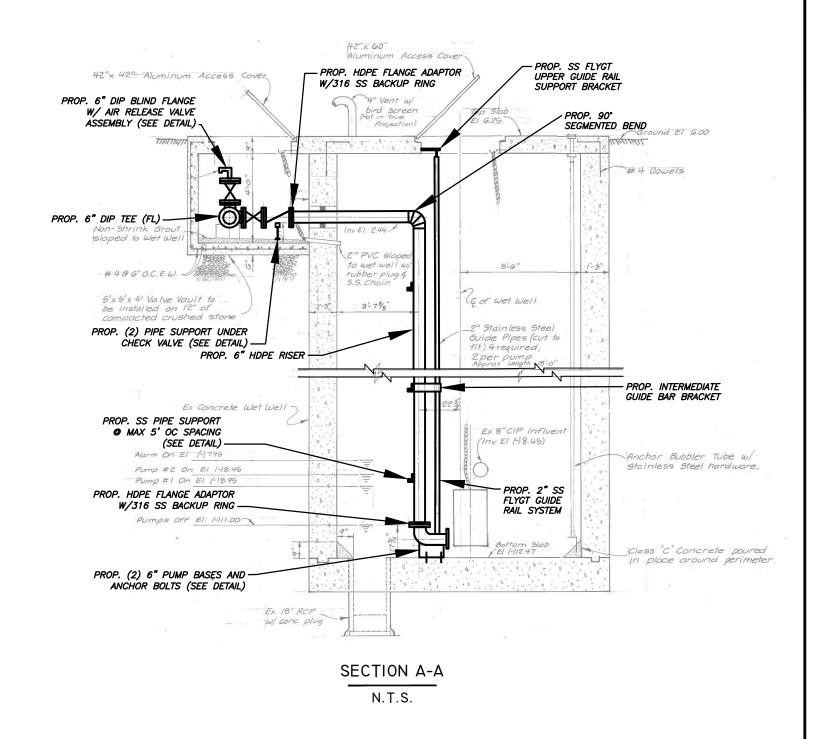
CKD:

DATE:

DESIGN DIVISION HEAD WASTEWATER DEPARTMENT



PLAN VIEW



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

DATE

REVISIONS

DES: V.T.

DRN: M.R.L.

CKD:
DATE:

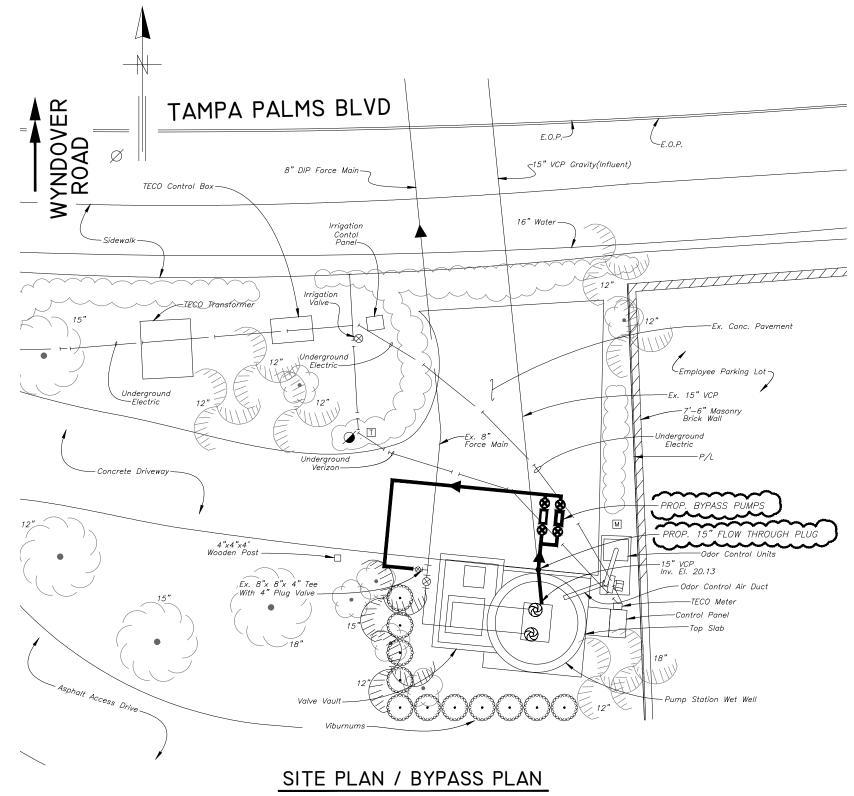
DATE:

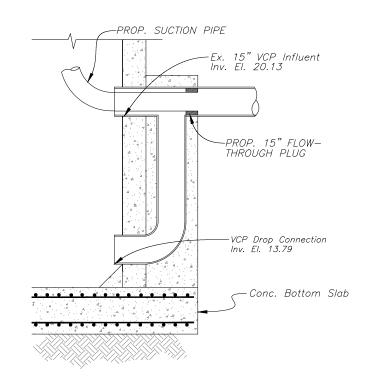
 C^{1TY} of T_{AMP_A} wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

SUNSET PARK PUMPING STATION — PROPOSED

W.O. 5935 SHEET 45 of 61





EX. DROP CONNECTION DETAIL

NOT TO SCALE

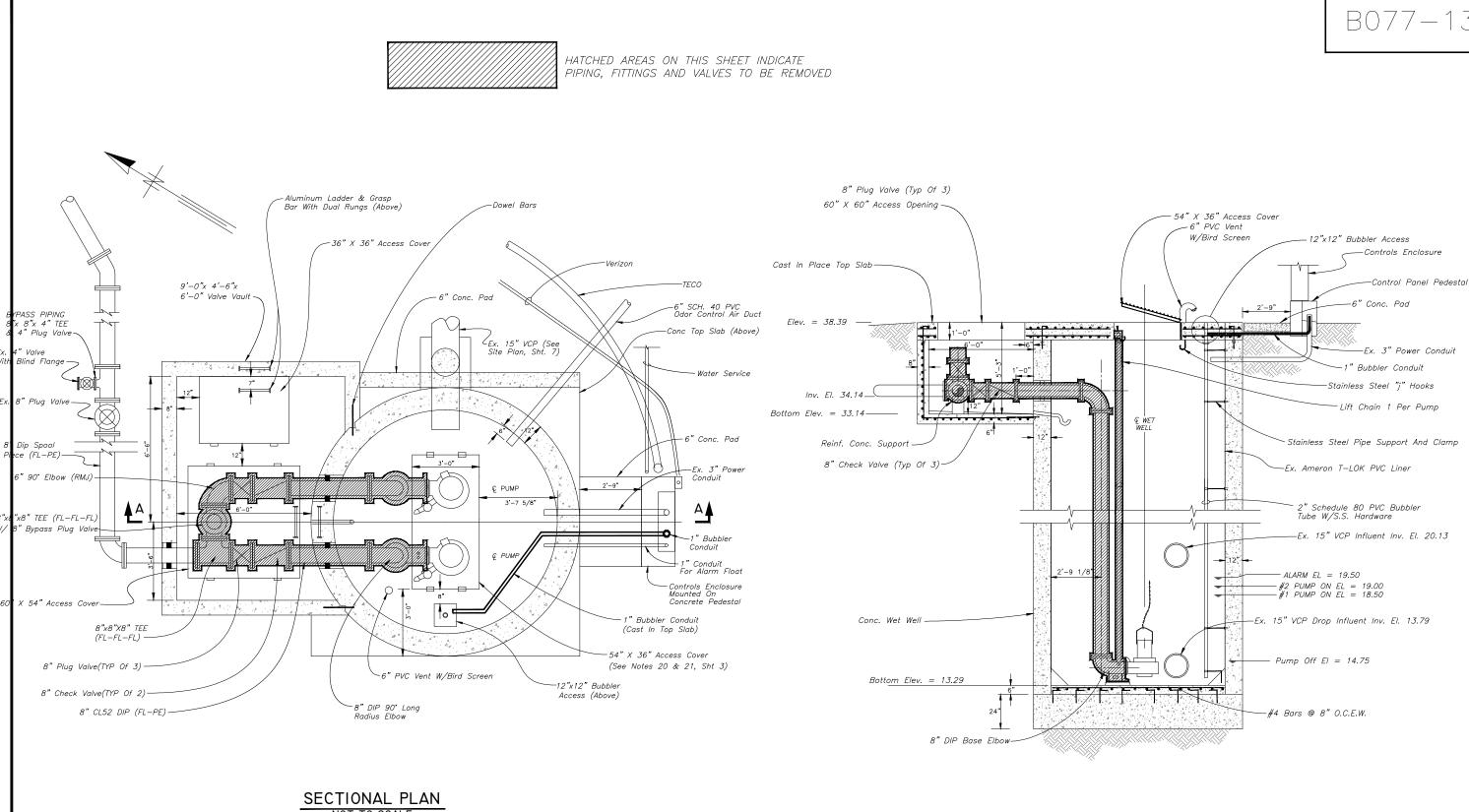
NOT TO SCALE

	No.	DATE	REVISIONS	DES: V
	3			DRN: \mathcal{Z}
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	2			CKD:
	1			DATE:

CITY of TAMPA WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS TAMPA PALMS PUMPING STATION - SITE PLAN

W.O. 5935 SHEET 46 61



NOT TO SCALE

SECTION A-A

NOT TO SCALE

I		No.	DATE	REVISIONS	DES: '	V.T.
		3			DRN: 3	BB
	JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
	WASTEWATER DEPARTMENT	1			DATE:	

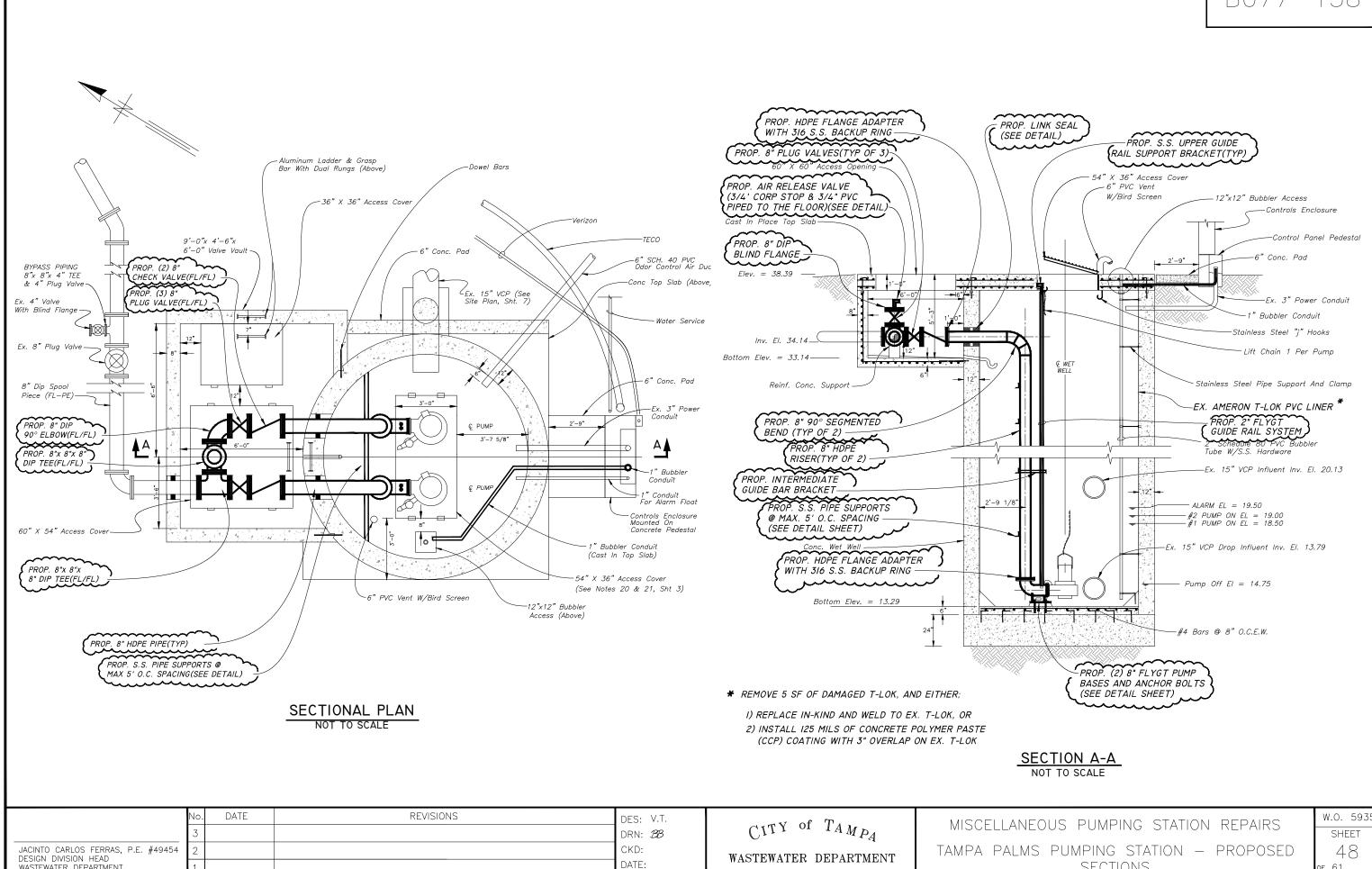
CITY of TAMPA WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS TAMPA PALMS PUMPING STATION - EXISTING SECTIONS

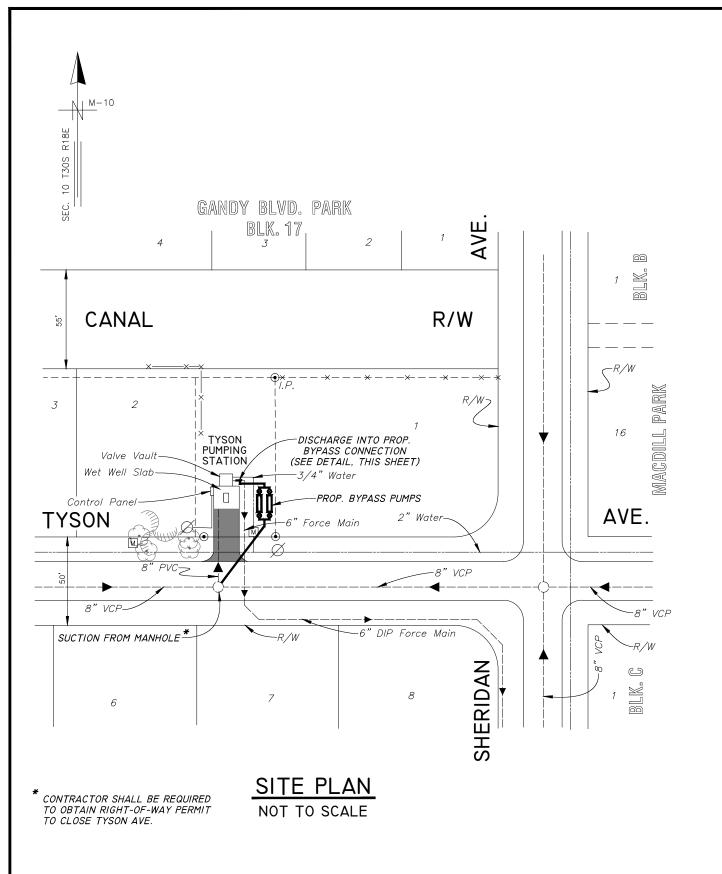
W.O. 5935 SHEET 47 of 61

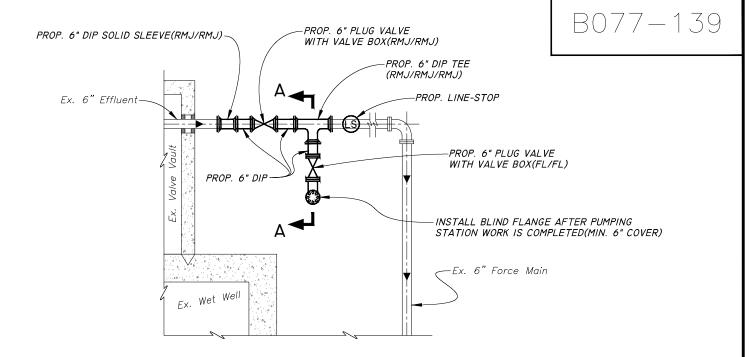
61

SECTIONS

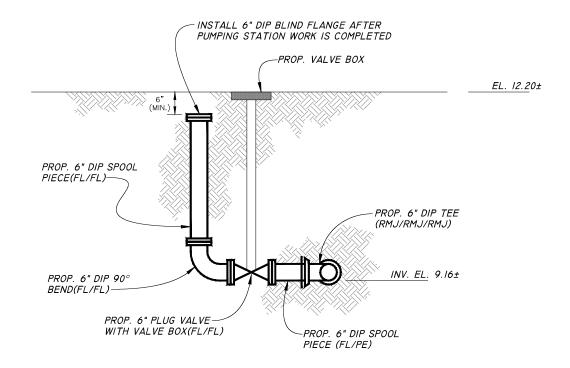


WASTEWATER DEPARTMENT





BYPASS CONNECTION DETAIL NOT TO SCALE



SECTION A-A

NOT TO SCALE

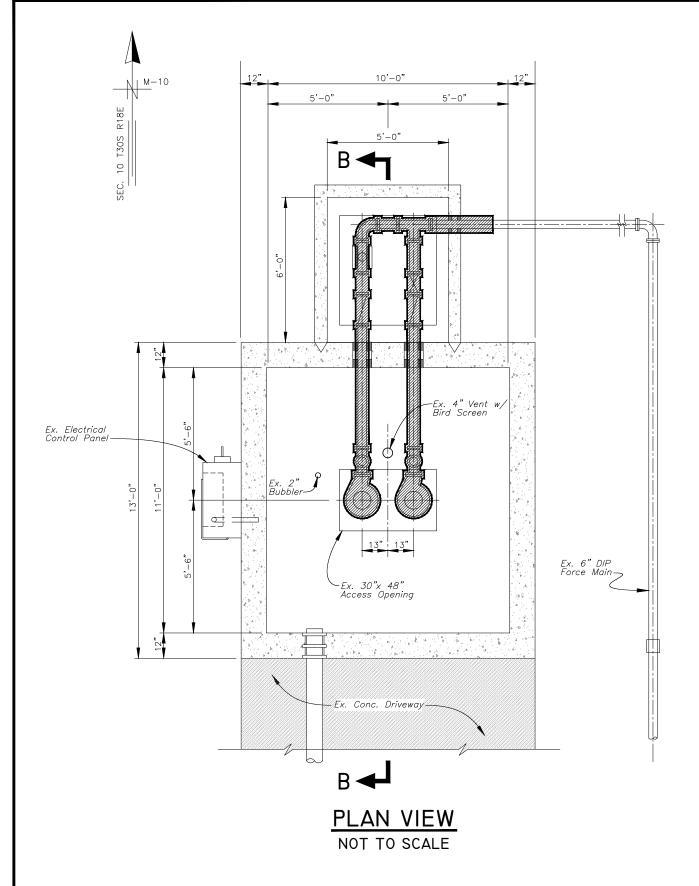
	No.	DATE	REVISIONS	DES: V	√.T.
	3			DRN: 2	BB
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	2			CKD:	
	1			DATE:	

 $\mathbb{C}^{\mathrm{T}\mathrm{Y}}$ of $T_{AMP_{\mathcal{A}}}$ wastewater department

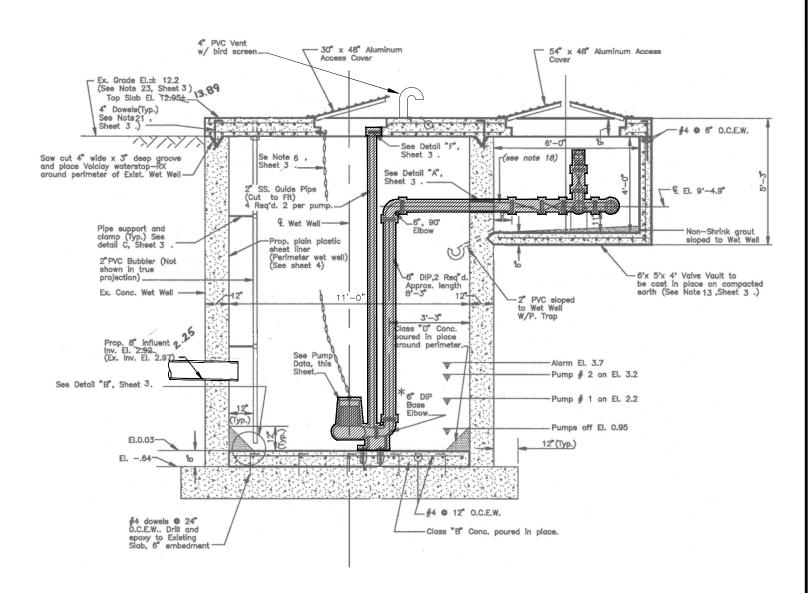
MISCELLANEOUS PUMPING STATION REPAIRS

TYSON PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 49 of 61



HATCHED AREAS ON THIS SHEET INDICATE PIPING, FITTINGS AND VALVES TO BE REMOVED



SECTION B-B
NOT TO SCALE

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

DES: V.T.

DRN: \mathcal{B} CKD:

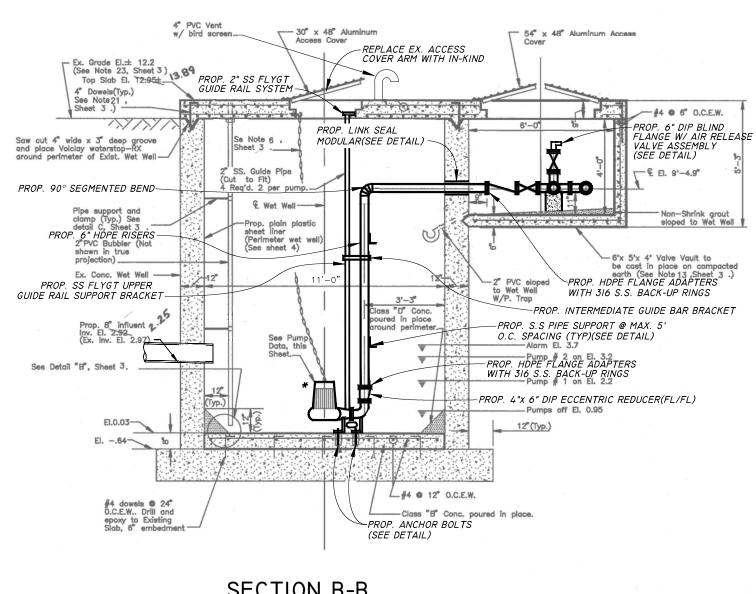
DATE: CITY of T_{AMP_A} WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS

TYSON PUMPING STATION — EXISTING SECTIONS

W.O. 5935 SHEET 50 of 61





SECTION B-B NOT TO SCALE

* CITY TO PROVIDE (2) FLYGT PUMPS (NP3102.181) AND (2) 4" PUMP BASES

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

No. DATE REVISIONS DES: V.T.
3 DRN: 2B
CKD:
1 DATE:

PROP. 6" DIP SPOOL PIECE(FL/FL)

PROP. NON

–Ex. 4" Vent w/ Bird Screen

SHRINK GROUT

PROP. 6" DIP SPOOL PIECE(FL/PE)

(RMJ/RMJ)

PROP. 6" DIP SOLID SLEEVE

—PROP. 6" DIP SPOOL PIECE
PROP. 6" PLUG VALVE
WITH VALVE BOX(RMJ/RMJ)

——PROP. 6" DIP TEE

(RMJ/RMJ/RMJ)

PROP. 6" DIP SPOOL

PIECE(FL/PE)

WITH VALVE BOX(FL/FL)

PROP. 6" PLUG VALVE

(TO BE INSTALLED AFTER PUMPING

STATION WORK IS COMPLETED)

PROP. S.S. PIPE SUPPORT @ MAX.

5' O.C. SPACING (SEE DETAIL)

Force Main -

PROP. BLIND FLANGE

PROP. LINE STOP

12'-0"

10'-0"

5'-0"

*\\ \

-Ex. 30"x 48" Access Opening

– Ex. Conc. Driveway –

PLAN VIEW
NOT TO SCALE

B◀

PROP. LINK SEAL

닼

MODULAR(SEE DETAIL)

Bubbler

PROP. 6" DIP 90°

BEND(FL/FL)

PROP. (3) 6" PLUG

VALVES(FL/FL) -

PROP. (2) 6" CHECK VALVES(FL/FL)

Ex. Electrical Control Panel PROP. (2) 6" DIP

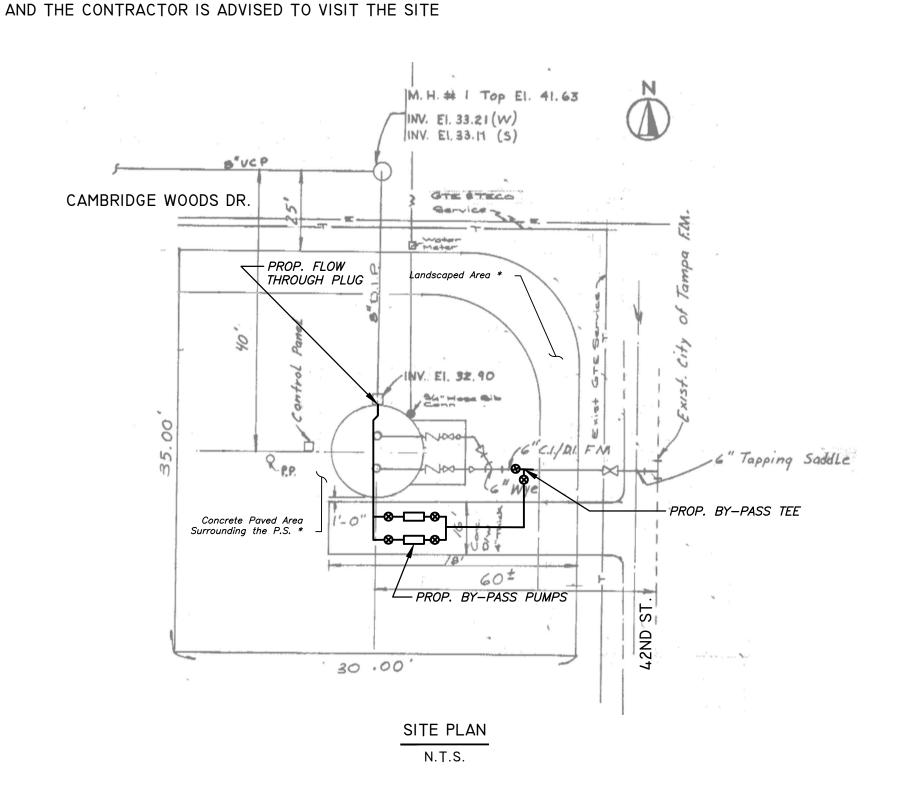
TEE(FL/FL/FL) -

 $\mathbb{C}^{\mathrm{T}\mathrm{Y}}$ of $T_{AMP_{\mathcal{A}}}$ wastewater department

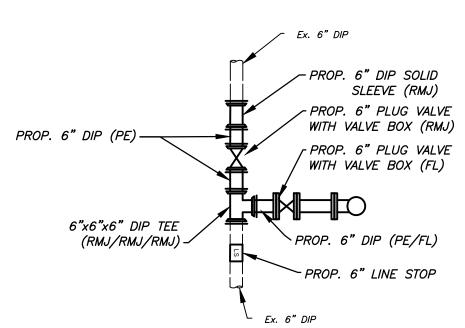
MISCELLANEOUS PUMPING STATION REPAIRS

TYSON PUMPING STATION — PROPOSED SECTIONS

W.O. 5935 SHEET 5 1



* THERE HAVE BEEN CONSIDERABLE SITE MODIFICATION SINCE THE PUMPSTATION'S ORIGINAL CONSTRUCTION.
THIS SITE PLAN DOES NOT DEPICT THESE MODIFICATION



BYPASS PLAN

N.T.S. PROP. DOUBLE LID CI MH FRAME AND COVER (SEE DETAIL) REPLACE WITH 6" THICK CONCRETE SLAB (THICKEN Approx El. 42.00± TO 7" AROUND COVER) 6" PLUG VALVE (FL) AND VALVE BOX -BLIND FLANGE (AFTER BYPASS) 6" DIP SPOOL (FL/FL) Ex. 6" DIP 90° DIP BEND (FL/FL) (Approx IE. 39.45) -6" DIP SPOOL (FL/FL)

BYPASS PROFILE N.T.S.

No. DATE REVISIONS

DES: V.T.

DRN: M.R.L.

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

DATE:

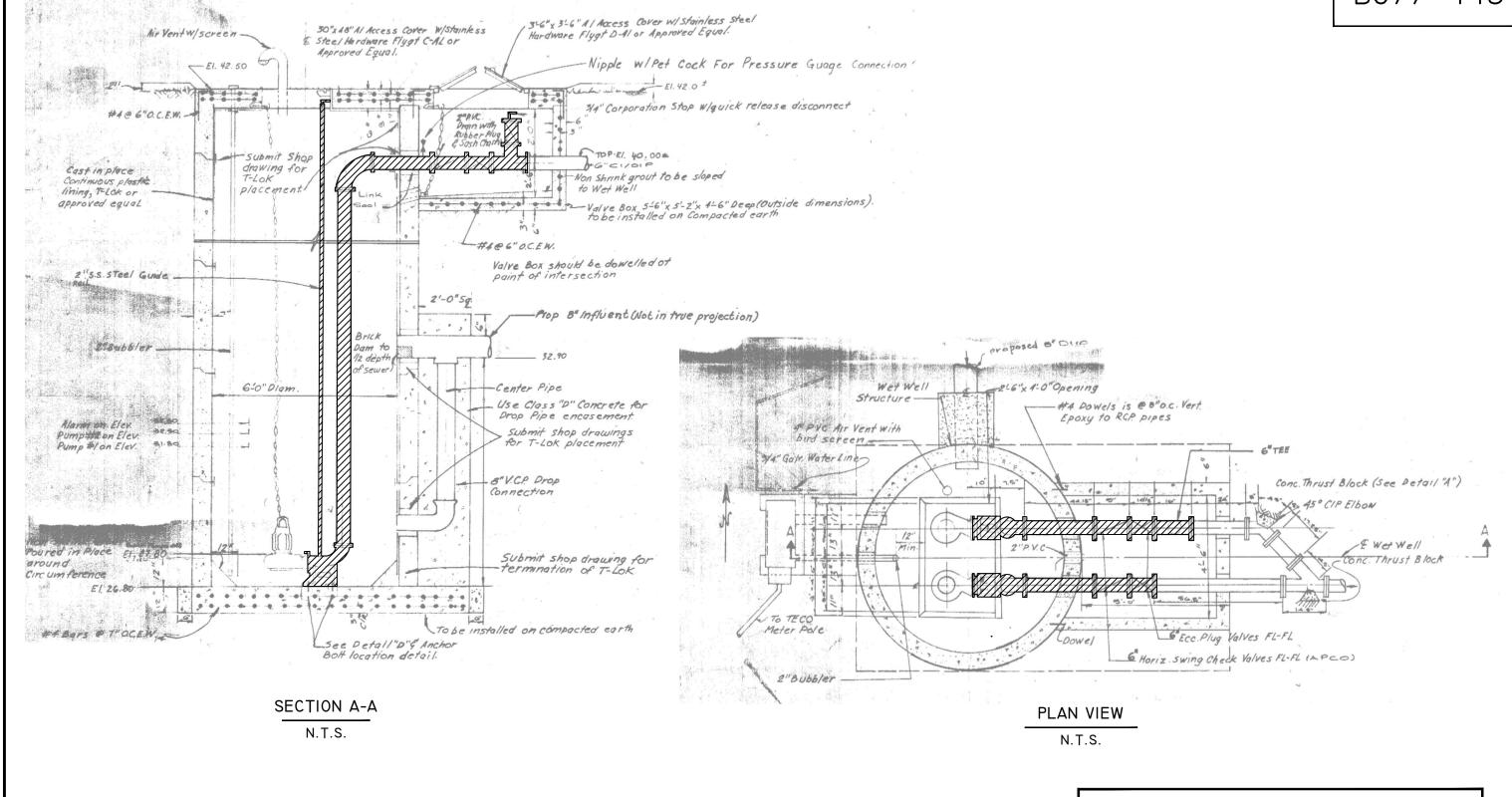
DATE

DA

 \mathbb{C}^{TY} of $T_{AMP_{A}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS
UNIVERSITY WOODS PUMPING STATION — SITE PLAN

W.O. 5939 SHEET 52 OF 61





HATCHED AREAS ON THIS SHEET INDICATE PIPING FITTINGS AND VALVES TO BE REMOVED

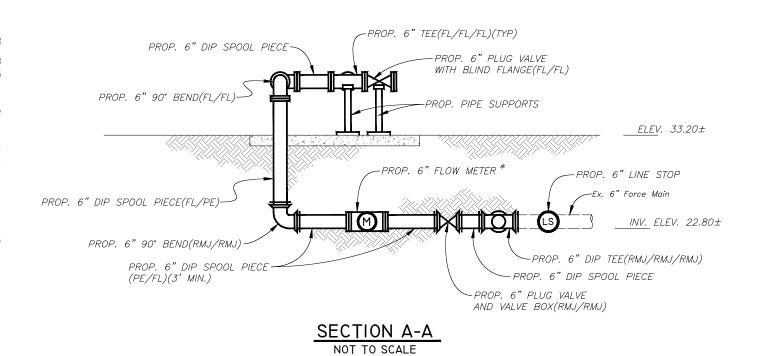
	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

 C^{1TY} of $T_{AMP_{A}}$ wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

UNIVERSITY WOODS PUMPING STATION —
DEMOLITION

W.O. 5939 SHEET 53 of 61



* ABB ELECTROMAGNETIC FLOW METER MODEL #FEV121150VIS4A1B1H1A2A3B3A1

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

No. DATE REVISIONS

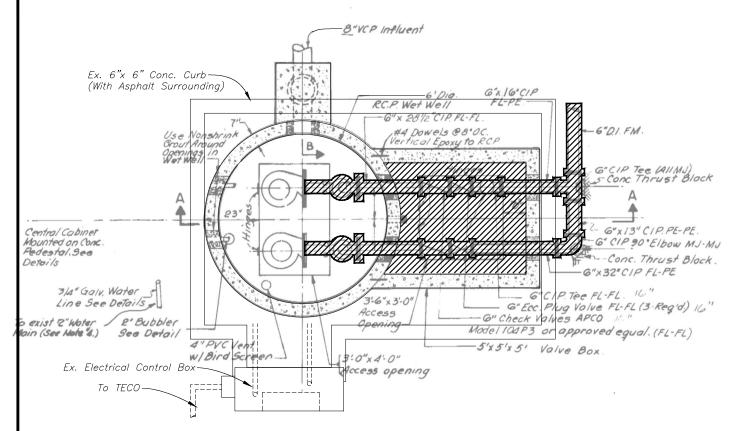
DES: V.T.
DRN: 2B
CKD:
DATE:

 \mathbb{C}^{TY} of $T_{AMP_{\mathcal{A}}}$ wastewater department

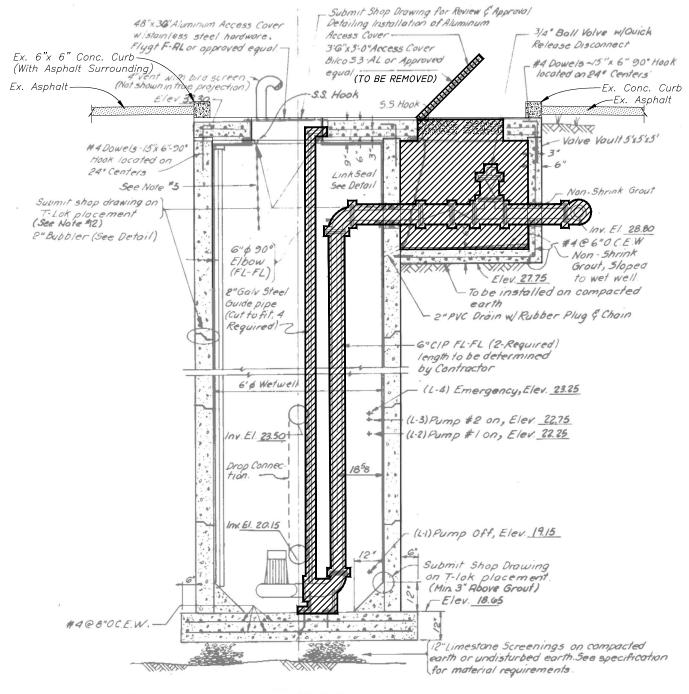
MISCELLANEOUS PUMPING STATION REPAIRS

WILDWOOD ACRES PUMPING STATION — SITE PLAN

W.O. 5935 SHEET 55 HATCHED AREAS ON THIS SHEET INDICATE PIPING, FITTINGS AND VALVES TO BE REMOVED



SECTIONAL PLAN NOT TO SCALE



BUBBLER LINE CONTROLS

BOTH PUMPS OFF CHANGE PUMP SEQUI

SECTION A-A

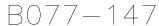
	No.	DATE	REVISIONS	DES: V.T.
	3			DRN: <i>BB</i>
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:
WASTEWATER DEPARTMENT	1			DATE:

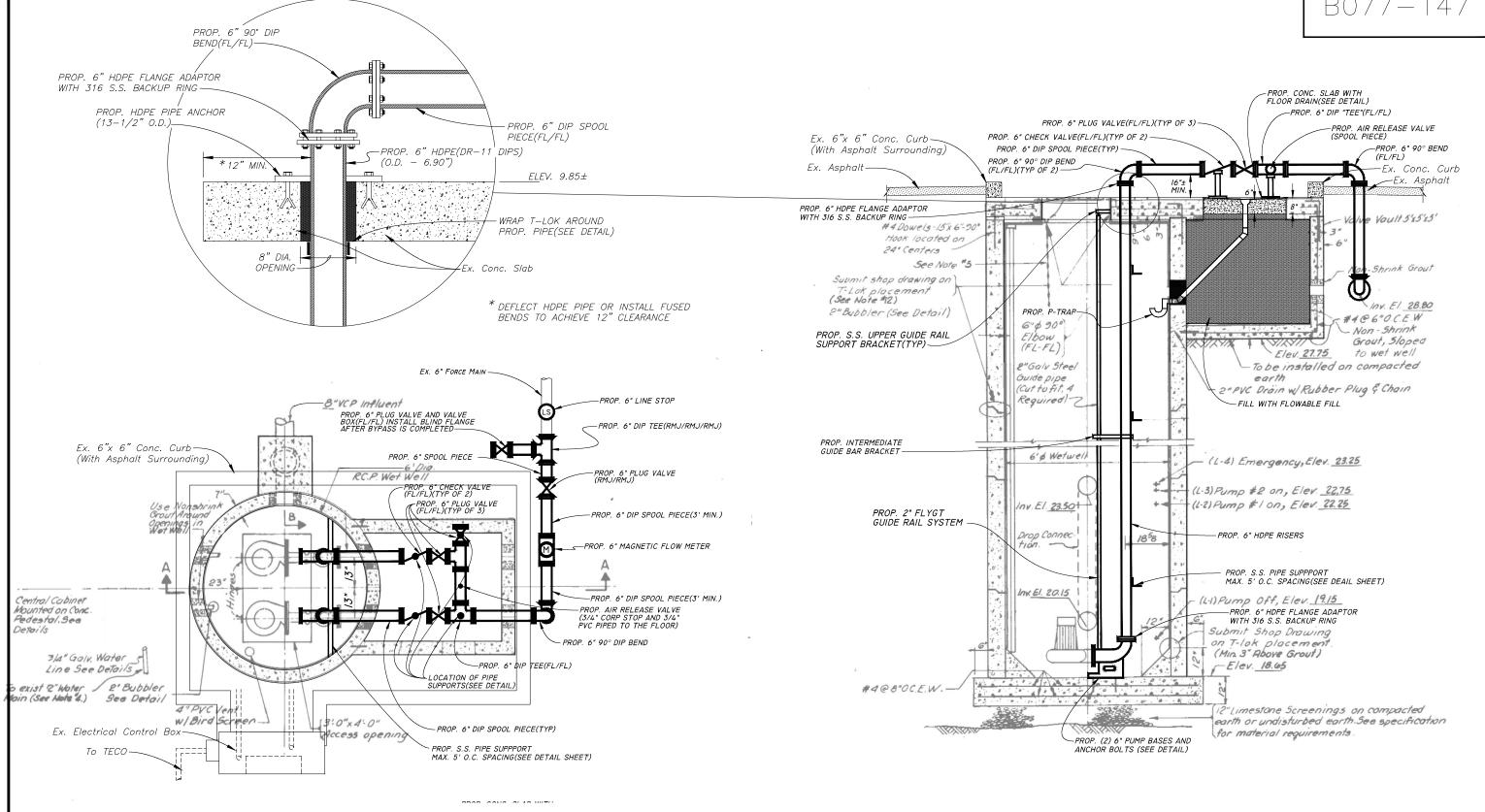
 $\mathbb{C}^{\mathrm{LTY}}$ of $T_{AMP_{\mathcal{A}}}$ WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS

WILDWOOD ACRES PUMPING STATION — EXISTING SECTIONS

W.O. 5935 SHEET 56 of 61





SECTIONAL PLAN

NOT TO SCALE

	No.	DATE	REVISIONS	DES: V.T.
	3			DRN: <i>BB</i>
JACINTO CARLOS FERRAS, P.E. #49454	2			CKD:
DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	1			DATE:

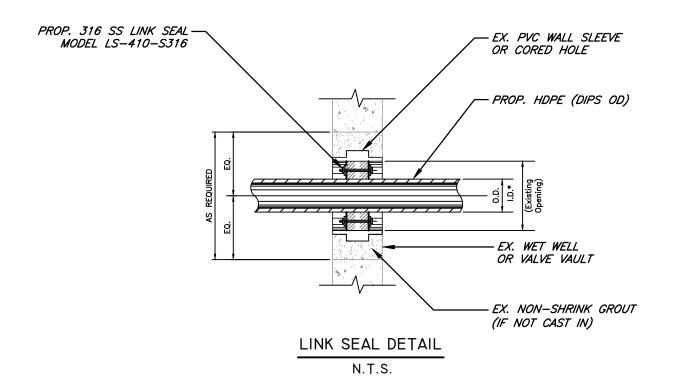
CITY of TAMPA WASTEWATER DEPARTMENT MISCELLANEOUS PUMPING STATION REPAIRS WILDWOOD ACRES PUMPING STATION -PROPOSED SECTIONS

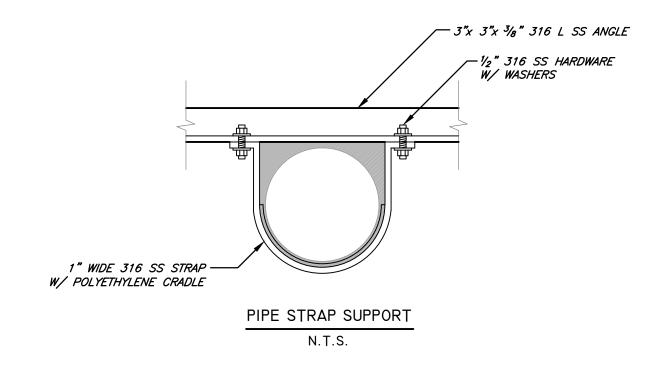
SECTION A-A

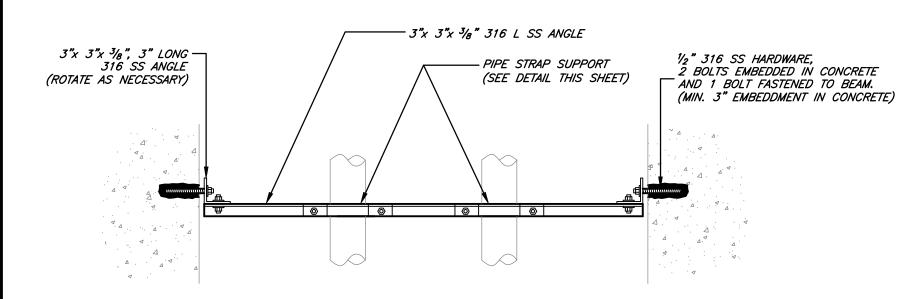
NOT TO SCALE

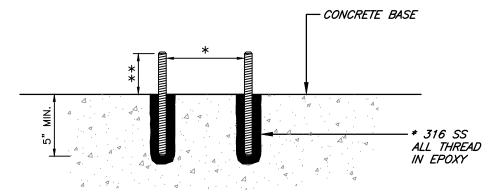
W.O. 5935 SHEET 57

61









ANCHOR BOLTS SIZE AND ALIGNMENT SHALL BE AS ** RECOMMENDED BY PUMP MANUFACTURER. (SEE TABLE FOR PUMP MODEL)

** CONTRACTOR SHALL PROVIDE A MINIMUM $^{1\!\!/_{\!2}}$ INCH BOLT PROTRUSION ABOVE THE FINAL NUT LOCATION AFTER THE NUT IS TIGHTENED TO MANUFACTURE'S RECOMMENDATION.

> ANCHOR BOLT DETAIL N.T.S.

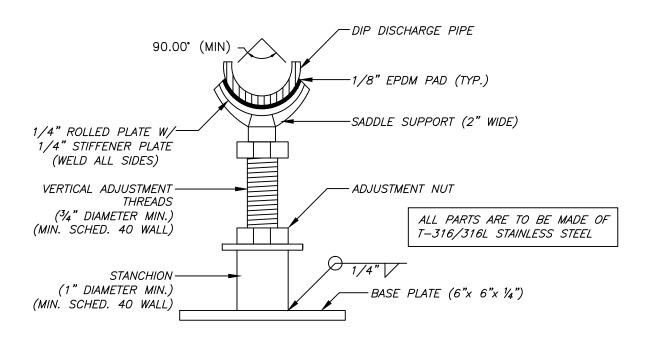
	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD	2			CKD:	
WASTEWATER DEPARTMENT	1			DATE:	

RISER PIPE SUPPORT ASSEMBLY

N.T.S.

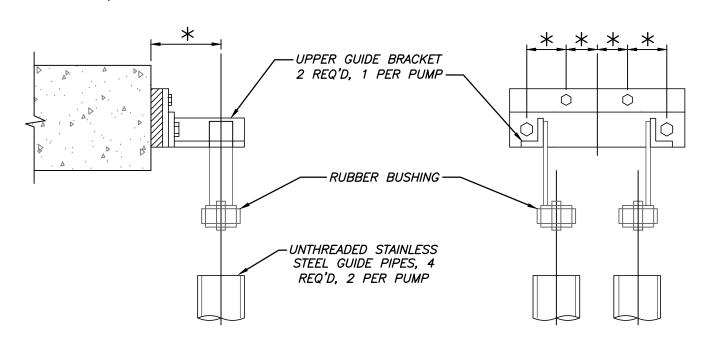
CITY of TAMPA WASTEWATER DEPARTMENT MISCELLANEOUS PUMPING STATION REPAIRS **DETAILS SHEET 1**

W.O. 5935 SHEET 61

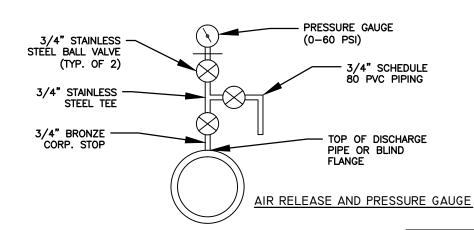


SECTION VIEW - STAINLESS STEEL STANCHION SADDLE SUPPORT N.T.S.

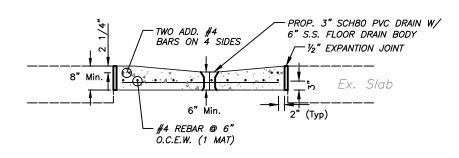
* PER PUMP MANUFACTURER'S RECOMMENDATION



GUIDE BRACKET DETAIL NOT TO SCALE



CONTRACTOR SHALL TAP AND DRILL ONE 3/4" CORPORATION STOP WITH AIR RELEASE VALVE AND PRESSURE GAUGE ASSEMBLY. PVC PIPE AND FITTINGS (SCH80) SHALL BE PROVIDED TO DIRECT FLOW FROM THE BALL VALVE DOWNWARD TO THE FLOOR.



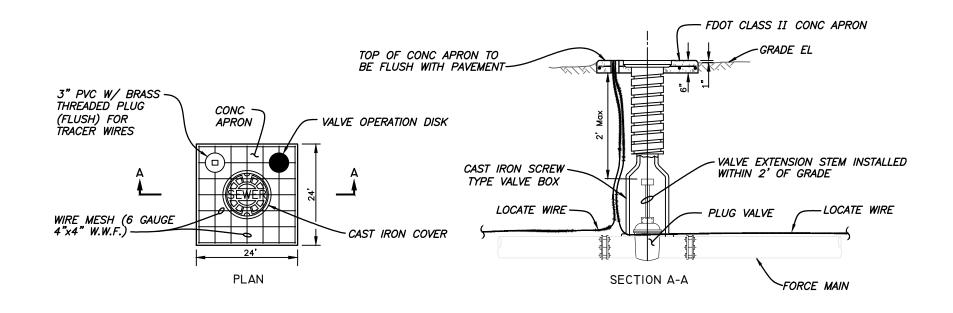
	No	DATE	REVISIONS	DES: V.T.
	3			DRN: M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454	2			CKD:
DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	1			DATE:

 C^{ITY} of $T_{AMP_{A}}$ WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS

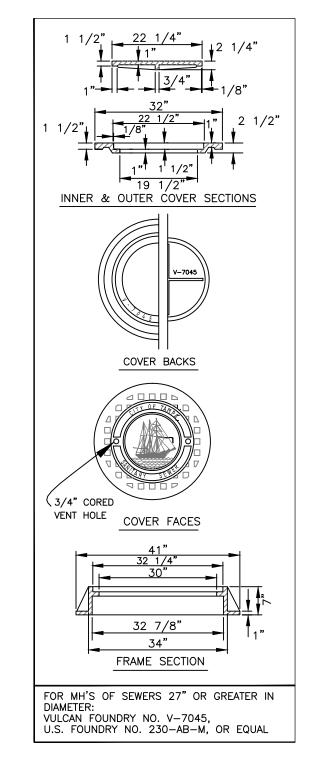
DETAILS SHEET 2

W.O. 5935 SHEET 59 of 61



VALVE BOX DETAIL

NOT TO SCALE



HEAVY DUTY CAST IRON MANHOLE
FRAME & COVER DETAILS
N.T.S.

	No.	DATE	REVISIONS	DES:	V.T.
	3			DRN:	M.R.L.
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	2			CKD:	
	1			DATE:	

 C^{1TY} of $T_{AMP_{\mathcal{A}}}$ Wastewater department

MISCELLANEOUS PUMPING STATION REPAIRS

DETAILS SHEET 3

W.O. 5935 SHEET 60 of 61

PIPE TO LINED STRUCTURE
NOT TO SCALE

* ALTERNATIVE CONTRACTOR MAY COAT WITH 125MILS C.P.P. AND OVERLAP EXISTING T-LOCK BY 3"

No.DATEREVISIONSDES: V.T.3DRN: M.R.L.JACINTO CARLOS FERRAS, P.E. #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT2CKD:1DATE:

 C^{1TY} of $T_{AMP_{\mathcal{A}}}$ WASTEWATER DEPARTMENT

MISCELLANEOUS PUMPING STATION REPAIRS

DETAILS SHEET 4

W.O. 5935 SHEET 61 of 61