The Enclosed Document Is Provided For Your Convenience.

Please Email ALL Questions:

MailTo:ContractAdministration@TampaGov.net

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

CONSTRUCTION DRAWINGS
FOR THE

INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

SECTION 9, TOWNSHIP 30 SOUTH, RANGE 18 EAST
TAMPA, HILLSBOROUGH COUNTY, FLORIDA

PREPARED FOR

CITY OF TAMPA WATER DEPARTMENT

City of Tampa Water Department
306 E. Jackson Street, 5N
Tampa, FL 33602

ISSUED FOR BID DRAWINGS

JULY 2019

REI Project No. 0817

REISS ENGINEERING, INC.
CONSULTING ENGINEERS

REISS ENGINEERING, INC.
3507 EAST FRONTAGE ROAD
SUITE 180
TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

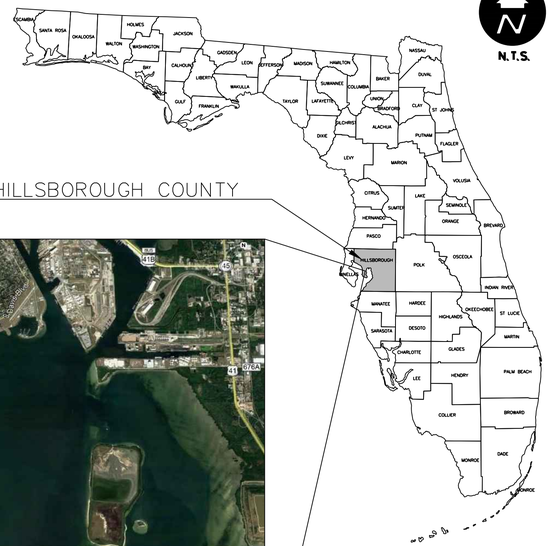
REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

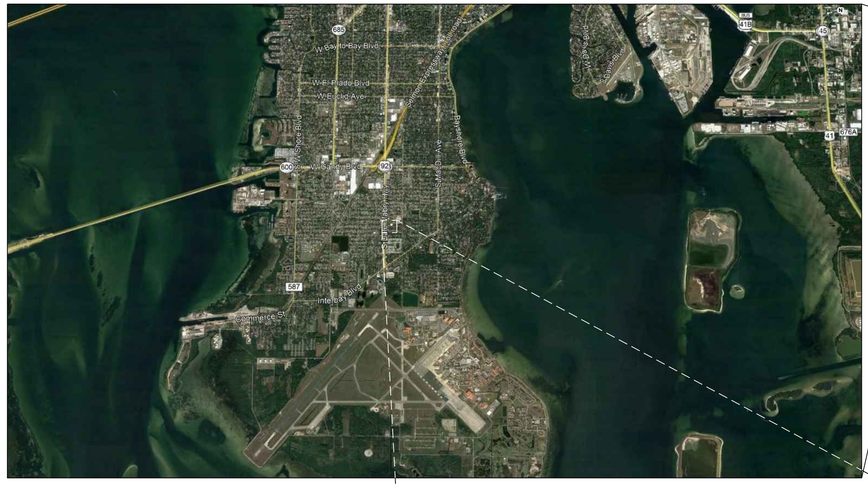
GENERAL NOTES

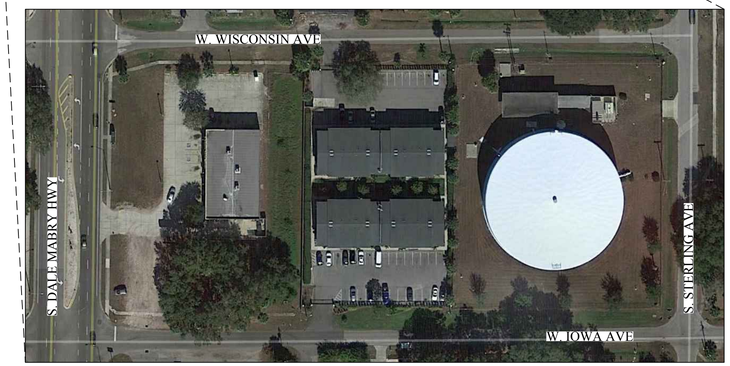
1. LOCATION, ELEVATIONS, AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES, AND OTHER FEATURES ARE SHOWN IN ACCORDANCE WITH THE BEST INFORMATION AVAILABLE AT TIME OF THE PREPARATION OF THESE PLANS, BUT DO NOT PURPORT TO BE ABSOLUTELY CORRECT.
2. THE CONTRACTOR SHALL VERIFY THE LOCATION, ELEVATION AND DIMENSIONS OF EXISTING UTILITIES, STRUCTURES AND OTHER FEATURES AFFECTING HIS WORK AND SHALL COMPLY WITH ALL STATE, AND LOCAL ORDINANCES AND OBTAIN ANY NECESSARY WORK PERMITS THAT MAY BE REQUIRED PRIOR TO CONSTRUCTION.
3. CONTRACTOR'S OPERATIONS, INCLUDING STAGING, PARKING, STORAGE OF MATERIALS, ETC, SHALL BE CONFINED TO THE PROJECT SITE. THE PROVISION OF ADDITIONAL SPACE FOR SUCH USE SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
4. THE CONTRACTOR SHALL ENDEAVOR TO PROTECT PRIVATE PROPERTY. ANY DAMAGE CAUSED BY THE CONTRACTOR IN THE PERFORMANCE OF HIS WORK SHALL BE CORRECTED TO THE SATISFACTION OF THE OWNER AT THE CONTRACTOR'S EXPENSE. PAYMENT SHALL NOT BE MADE FOR THIS WORK.
5. ANY DISTURBANCE CAUSED BY CONTRACTOR'S OPERATIONS TO ROADS, SIDEWALKS, GUTTERS OR OTHER STRUCTURES SHALL BE REPAIRED BY THE CONTRACTOR TO THE SATISFACTION OF THE OWNER. NO PAYMENT SHALL BE MADE FOR SUCH WORK.
6. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY WHEN CONFLICTS BETWEEN DRAWINGS AND ACTUAL CONDITIONS ARE DISCOVERED.
7. CONTRACTOR SHALL SUBMIT SHOP DRAWINGS TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING EQUIPMENT OR MATERIALS. ALL SUBMITTALS SHALL BE STAMPED AND SIGNED BY THE CONTRACTOR TO INDICATE CONFORMANCE WITH THE DRAWINGS AND SPECIFICATIONS. SUBMITTALS THAT ARE NOT STAMPED AND SIGNED WILL BE RETURNED WITHOUT REVIEW. PROCUREMENT OF ANY EQUIPMENT OR MATERIALS PRIOR TO ENGINEER'S REVIEW AND ACCEPTANCE OF SHOP DRAWINGS SHALL BE AT CONTRACTOR'S OWN RISK.
8. "SCREENED" (LIGHT) DELINEATION INDICATED ON THE DRAWINGS DENOTES EXISTING FACILITIES. "SCREENED" INFORMATION WAS TAKEN FROM EXISTING CONSTRUCTION DRAWINGS AND DATA, IS FOR REFERENCE ONLY, AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR PRIOR TO THE ORDERING OF MATERIALS AND BEGINNING OF CONSTRUCTION. "BOLD" DELINEATION IS NEW WORK TO BE CONSTRUCTED UNDER THIS CONTRACT.
9. THE CONTRACTOR'S OPERATIONS SHALL CONFORM TO THE RULES AND REGULATIONS OF THE STATE CONSTRUCTION SAFETY ORDERS PERTAINING TO EXCAVATION AND TRENCHING.
10. THE DRAWINGS INDICATE TYPES OF PIPE SUPPORT SYSTEMS AT VARIOUS LOCATIONS. HOWEVER, ALL PIPE SUPPORTS, HANGERS, BRACKETS, INSERTS OR BRACES ARE NOT SHOWN. CONTRACTOR SHALL REFER TO THE SPECIFICATIONS AND PROVIDE A COMPLETE SUPPORT SYSTEM AS REQUIRED.
11. PRIOR TO COMMENCING WITH WORK ASSOCIATED WITH CONNECTIONS TO EXISTING INFRASTRUCTURE, CONTRACTOR SHALL FIELD VERIFY PRECISE LOCATION, ELEVATION, AND REQUIRED ARRANGEMENT OF CONNECTIONS. THIS SHALL INCLUDE EXPOSING EXISTING INFRASTRUCTURE TO THE EXTENT NECESSARY TO CONDUCT THESE INVESTIGATIONS. CONTRACTOR SHALL PROVIDE ALL FITTINGS, ADAPTERS, CLOSURE ASSEMBLIES, OFFSETS (TO ACCOUNT FOR DIFFERING CENTERLINE ELEVATIONS), ETC REQUIRED TO SUCCESSFULLY MAKE THE SUBJECT CONNECTION AS PER THE DESIGN INTENT.
12. ALL WORK ON THE CITY OF TAMPA'S POTABLE WATER INFRASTRUCTURE SHALL BE PERFORMED IN ACCORDANCE WITH THE PROJECT'S TECHNICAL SPECIFICATIONS, CONSTRUCTION DETAILS, AND THE TAMPA WATER DEPARTMENT TECHNICAL MANUAL (LATEST EDITION). IN THE EVENT OF A DISCREPANCY, THE MOST STRINGENT CRITERIA SHALL APPLY.
13. NORMAL WORKING HOURS SHALL BE WEEKDAYS FROM 7:30 AM TO 4:00 PM UNLESS OTHERWISE APPROVED BY THE ENGINEER/INSPECTOR.
14. CONSTRUCTION OF POTABLE WATER INFRASTRUCTURE SHALL BE COORDINATED WITH THE WATER DEPARTMENT PRIOR TO THE START OF THE CONSTRUCTION. CONTRACTOR TO CONTACT CITY OF TAMPA CONTRACT ADMINISTRATION DEPARTMENT @ 813-635-3432 TO COORDINATE/SCHEDULE A PRE-CONTRUCTION MEETING WITH THE CITY FOR REVIEW OF INSTALLATION TECHNIQUES AND PROCEDURES A MINIMUM OF 10 WORKING DAYS PRIOR TO THE PLANNED CONSTRUCTION.
15. VALVES ON EXISTING PUBLIC WATER MAINS TO BE OPERATED BY CITY PERSONNEL ONLY.
16. THE CONTRACTOR WILL BE RESPONSIBLE FOR SALVAGING EXISTING INFRASTRUCTURE TO THE CITY IF REQUESTED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DISPOSAL OF ALL MATERIAL NOT RETURNED TO THE CITY.
17. CONTRACTOR SHALL CONFORM TO 2017 FLORIDA BUILDING CODE, SIXTH EDITION.

DRAWING INDEX

SHEET #	DWG NO.	DESCRIPTION
GENERAL		
01	G01	COVER SHEET
02	G02	LOCATION MAP, GENERAL NOTES, AND DRAWING INDEX
03	G03	STANDARD LEGEND AND ABBREVIATIONS
CIVIL		
04	C01	EXISTING SITE
05	C02	DEMOLITION PLAN AND PROFILE
06	C03	PLAN AND PROFILE
07	C04	STORAGE TANK COATING PLAN AND SECTION
DETAILS		
08	C05	COATING IMPROVEMENTS
09	C06	DETAILS
10	C07	DETAILS
ELECTRICAL		
11	E01	EXISTING ELECTRICAL PLAN PROVIDED FOR REFERENCE







LOCATION MAP
NTS

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

GENERAL

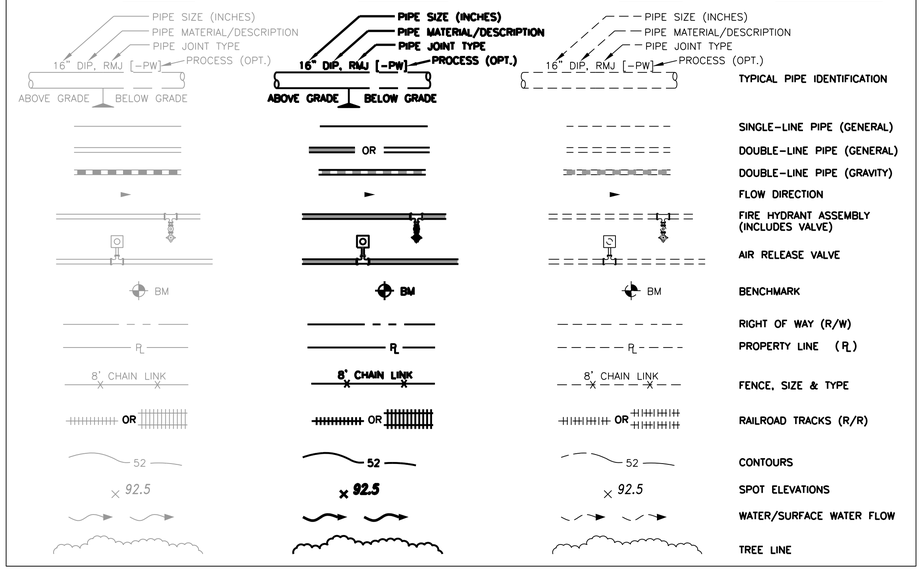
LOCATION MAP, GENERAL NOTES, AND DRAWING INDEX

PROJECT NO.:	0817
SCALE: NOTED	REVISION: C
DRAWING NO. G02	SHEET NO.: 02 OF 11

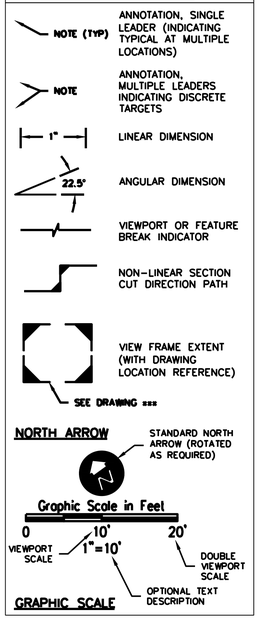
REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181

Parent Sheet Set: 5460PINEDATM Rev/Plot by: PAUL HELLER Rev on: 6/27/2019 2:31 PM Individual File Path: 0817_G02.DWG

CIVIL SYMBOLS LEGEND



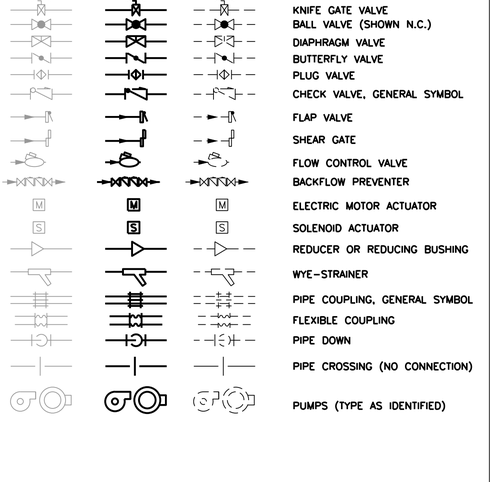
DRAFTING LEGEND



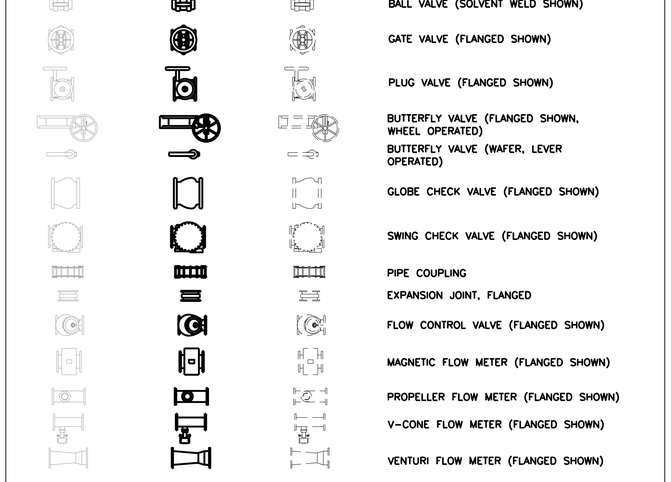
STANDARD ABBREVIATIONS

(A)ARV	(AUTOMATIC) AIR RELEASE VALVE	EGO	ELEVATED GEAR OPERATOR	ML	MIXED LIQUOR	SDR	STANDARD DIMENSION RATIO
A/C	AIR CONDITIONING	EJ	EXPANSION JOINT	MPH	MILES PER HOUR	SE	SOUTHEAST
A/VV	AIR/VACUUM AIR VALVE	EL(EV)	ELEVATION	MRPP	METAL REINFORCED PLASTIC PIPE	SEC	SECTION
AAV	AUTOMATIC AIR VENT	ELAST	ELASTOMERIC	MTD	MOUNTED	SEFF	SECONDARY EFFLUENT
ABAN	ABANDON(ED)	ELL	ELBOW	MV	MOTORIZED VALVE	SF	SQUARE FOOT OR FEEET
ABFV	ACTUATED BUTTERFLY VALVE	EMER	EMERGENCY	MW	MANWAY	SHT	SHEET(ED)(ING)
ABRSV	ABRASIVE	EOP	EDGE OF PAVEMENT	MWL	MEAN WATER LEVEL	SIM	SIMILAR
ABS	ACRYLONITRILE BUTADIENE STYRENE	EPDM	ETHYLENE PROPYLENE DIENE MONOMER	N	NORTH(ING)	SL	SLUDGE
AB-xx	AUGER BORING (e.g. AB-1)	EQUIP	EQUIPMENT	N.C.	NORMALLY CLOSED	SLV	SLEEVE
ACCMP	ASPHALT-COATED CORRUGATED METAL PIPE	EST	ESTIMATE(D)	N.I.C.	NOT IN CONTRACT	SM	SHEET METAL
ACCV	AIR CUSHION CHECK VALVE	EVA	ELECTRIC VALVE ACTUATOR	N.O.	NORMALLY OPEN	SOL	SOLUTION
ACP	ASBESTOS CEMENT PIPE	EX(IST)	EXISTING	N/A	NOT APPLICABLE	SP	SOIL PIPE
ADH	ADHESIVE	EXP	EXPANSION	NaOCl	SODIUM HYPOCHLORITE	SPEC(S)	SPECIFICATION(S)
ADJ	ADJUSTABLE	EXT	EXTERIOR	NE	NORTHEAST	SPT-xx	STANDARD PENETRATION TEST BORING (e.g. SPT-1)
AFF	ABOVE FINISHED FLOOR	F/F	FACE TO FACE	NF	NANOFILTRATION		
AFG	ABOVE FINISHED GRADE	FAB	FABRICATE(D)	NIC	NOT IN CONTRACT	SQ	SQUARE
AFS	ABOVE FINISHED SLAB	FC	FLEXIBLE COUPLING	NO., #	NUMBER	SS	SANITARY SEWER
AG	AMMONIA GAS	FCA	FLANGED COUPLING ADAPTER	NOM	NOMINAL	SSE	SUBSTANDARD EFFLUENT
AIR	AIR PIPE	FCV	FLOW-CONTROL VALVE	NPT	NATIONAL PIPE TAPER	ST	SAMPLE TAP
AL	ALUMINUM	FD	FLOOR DRAIN	NPW	NON-POTABLE WATER	STA	STATION
ALT	ALTERNATE	FE	FILTER(ED) EFFLUENT	NSFC	NOT SHOWN FOR CLARITY	STD	STANDARD
AMM	AMMONIATOR	FF	FINISH FLOOR	NTS,N.T.S.	NOT TO SCALE	STL	STEEL
AOD	ANGLE OF DEFLECTION	FH	FIRE HYDRANT	NW	NORTHWEST	STORM	STORMWATER
APPROX	APPROXIMATE	FIG	FIGURE	O&M	OPERATION AND MAINTENANCE	STR	STRAIGHT
AS	AMMONIA SOLUTION	FIN	FINISH(ED)	O.C.	ON CENTERS	SUP	SUPERNATANT
ASSY	ASSEMBLY	FL	FLUORIDE	O/E	OR EQUAL	SV	SOLENOID VALVE
B/W	BOTH WAYS	FLEX	FLEXIBLE	O/O	OUTSIDE TO OUTSIDE	SVC	SERVICE
BCV	BALL CHECK VALVE	FLG	FLANGE(D)	O2	OXYGEN	SVW	SERVICE WATER
BF	BLIND FLANGE	FLR	FLOOR	OD	OUTSIDE DIAMETER	SW	SOUTHWEST
BFP	BACKFLOW PREVENTER	FM	FORCE MAIN	OF	OUTSIDE FACE	SWD	SIDEWATER DEPTH
BFV	BUTTERFLY VALVE	FO(L)©	FIBER OPTIC (LINE)(CONDUIT)	OFF	OFFSET	SYM	SYMBOL
BGO	BURIED GEAR OPERATOR	FPM	FEET PER MINUTE	OH	OVER HEAD	SYMM	SYMMETRICAL
BI	BLACK IRON	FPS	FEET PER SECOND	OP	ORIFICE PLATE	T&B	TOP AND BOTTOM
BIP	BLACK IRON PIPE	FRP	FIBERGLASS REINFORCED PLASTIC	OPER	OPERATOR	T.O.C.	TOP OF CONCRETE
BITUM	BITUMINOUS OR BITUMASTIC	FT	FOOT OR FEET	OPP	OPPOSITE	T.O.S.	TOP OF SLAB
BLDG	BUILDING	FV	FOOT VALVE	OPT	OPTION(AL)	T.S.	TAPPING SLEEVE
BM	BENCH MARK	FW	FINISHED WATER	OVF	OVERFLOW	T.V.	TAPPING VALVE
BOC	BACK OF CURB	GA	GAUGE	P/L	PROPERTY LINE	TAN	TANGENT
BOS	BOTTOM OF SLAB	GAL	GALLON(S)	PA	PROCESS AIR	TBM	TEMPORARY BENCH MARK
BOT	BOTTOM	GALV	GALVANIZED	PBV	PLASTIC BALL VALVE	TB-xx	TEST BORING-xx (e.g. TB-1)
BSP	BLACK STEEL PIPE	GBW	GAC BACKWASH	PC	POINT OF CURVE	TDH	TOTAL DYNAMIC HEAD
BTWN	BETWEEN	GIP	GALVANIZED IRON PIPE	PE	PLAIN END	TEL	TELEPHONE
BV	BALL VALVE	GJ	GROOVE JOINT	PEP	POLYETHYLENE PIPE	TEMP	TEMPORARY
BW	BUTT WELD	GND	GROUND	PERM	PERMEATE	TH	TEST HOLE
BWW	BACKWASH WATER	GO	GEAR OPERATED	PG	PRESSURE GAUGE	THD	THREAD(ED)
B-xx	BORING (e.g. B-1)	GPD	GALLONS PER DAY	PGL	PROPOSED GRADE LINE	THK	THICK(NESS)
C&G	CURB AND GUTTER	GPH	GALLONS PER HOUR	PJ	PUSH-ON JOINT	TJ	TIED JOINT
C.F.	CUBIC FOOT	GPM	GALLONS PER MINUTE	PM	PROCESS MECHANICAL	TOB	TOP OF BANK
C.I.	CUBIC INCH	GPS	GALLONS PER SECOND	PNV	PINCH VALVE	TOC	TOP OF CURB
C.Y.	CUBIC YARD	GR	GRADE	POB	POINT OF BEGINNING	TOS	TOE OF SLOPE
C/C	CENTER TO CENTER	GS	GALVANIZED STEEL	POI	POINT OF INTERSECTION	TS	THICKENED SLUDGE
CA	COMPRESSED AIR	GSP	GALVANIZED STEEL PIPE	POJ	PUSH-ON JOINT	TV	TELEVISION
CAP	CAPACITY	GSR	GROUND STORAGE RESERVOIR	POL	POLYMER	TWP	TOWNSHIP
CATV	CABLE TELEVISION	GST	GROUND STORAGE TANK	PPD	POUNDS PER DAY	TYP	TYPICAL
CAV	COMBINATION AIR VALVE	GV	GATE VALVE	PPM	PARTS PER MILLION	UD	UNDERDRAIN
CBP	CHLORINE BOOSTER PUMP	HB	HOSE BIBB	PREFAB	PREFABRICATED	UG	UNDERGROUND
CCC	CHLORINE CONTACT CHAMBER	HD	HEAVY-DUTY	PRES	PRESSURE	UGE	UNDERGROUND ELECTRIC
CE	CHLORINATED EFFLUENT	HDD	HORIZ. DIRECTIONAL DRILL	PROP	PROPOSED	UON	UNLESS OTHERWISE NOTED
CFM	CUBIC FEET PER MINUTE	HDPE	HIGH-DENSITY POLYETHYLENE	PRV	PRESSURE REDUCING VALVE	UTC	UNDERGROUND TELEPHONE CABLE
CFS	CUBIC FEET PER SECOND	HFA	HYDROFLUOSILICIC ACID	PRW	PROCESS WATER	UTIL	UTILITY
CI	CAST IRON	HFCA	HARNESSED FLANGED COUPLING ADAPTER	PSF	POUNDS PER SQUARE FOOT	UV	ULTRAVIOLET
CIP	CAST IRON PIPE	HORIZ	HORIZONTAL	PSI	POUNDS PER SQUARE INCH	VAC	VACUUM
CISP	CAST IRON SOIL PIPE	HP	HORSEPOWER	PT	POINT OF TANGENCY	VAR	VARIES
CJ	CONSTRUCTION JOINT	HPA	HIGH PRESSURE AIR	PV	PLUG VALVE	VB	VALVE BOX
CL, ℄	CENTER LINE	HR	HOUR	PVC	POLYVINYL CHLORIDE	VC	VERTICAL CURVE
CL2	CHLORINE GAS	HSP	HIGH SERVICE PUMP	PVC-D	POLYVINYLCHLORIDE (DOUBLE CONTAINED)	VCP	VITRIFIED CLAY PIPE
CLF	CHAIN LINK FENCE	HT	HEIGHT	PVDF	POLYVINYLIDENE FLUORIDE (KYNAR)	VEL	VELOCITY
CLR	CLEAR(ANCE)	HVA	HYDRAULIC VALVE ACTUATOR	PVMT	PAVEMENT	VERT	VERTICAL
CMP	CORRUGATED METAL PIPE	HVAC	HEATING, VENTILATION, AND AIR CONDITIONING	PW	POTABLE WATER	VFD	VARIABLE FREQUENCY DRIVE
CMPA	CORRUGATED METAL PIPE ARCH	HW	HOT WATER	Q	FLOW	VOL	VOLUME
CO	CLEAN OUT	HWL	HIGH WATER LEVEL	QTY	QUANTITY	VTR	VENT THROUGH ROOF
CO2	CARBON DIOXIDE	HYD	HYDRAULIC	R,RT	RIGHT	W	WEST
COAG	COAGULANT	ID	INSIDE DIAMETER	R/W, R.O.W.	RIGHT OF WAY	W.L.	WATER LEVEL
CONC	CONCENTRATE	IN	INCH(ES)	RAD., R.	RADIUS	W.P.	WALL PIPE (WITH WATER STOP)
CONN	CONNECTION	INF	INFLUENT	RAS	RETURN ACTIVATED SLUDGE	W/	WITH
CONSTR	CONSTRUCT(ION)	INV	INVERT	RAW	RAW WATER	W/O	WITHOUT
CONT	CONTINUATION	IP	IRON PIPE	RCB	REINFORCED CONCRETE BOX	WAS	WASTE ACTIVATED SLUDGE
COP	COPPER PIPE	IPS	INTERNATIONAL PIPE STANDARD	RCP	REINFORCED CONCRETE PIPE	WCO	WALL CLEAN OUT
CP	CONCRETE PIPE	IR	INTERNAL RECYCLE	RCPA	REINFORCED CONCRETE PIPE ARCH	WF	WIDE FLANGE
CPA	CONCRETE PIPE ARCH	IW	IRRIGATION WATER	RCW	RECLAIMED WATER	WH	WALL HYDRANT
CPLG	COUPLING	JB	JUNCTION BOX	REBAR	REINFORCING STEEL	WM	WATER MAIN
CPP	CONCRETE PRESSURE PIPE	JT	JOINT	RED	REDUCER	WPR	WORKING PRESSURE
CPVC	CHLORINATED POLYVINYL CHLORIDE	KGV	KNIFE GATE VALVE	REEW	REUSE EFFLUENT WATER	WS(P)	WELDED STEEL (PIPE)
CR	CONCENTRIC REDUCER	L,LT	LEFT	REF	REFERENCE	WT	WEIGHT
CS	CHLORINE SOLUTION	LAB	LABORATORY	REINF	REINFORCE(D)(ING)(MENT)	WTF	WATER TREATMENT FACILITY
CV	CHECK VALVE	LAM	LAMINATE OR LAMINATION	REJ	RO REJECT	WTP	WATER TREATMENT PLANT
CYL	CYLINDER	LAT	LATERAL	REQ'D	REQUIRED	WW	WASTEWATER
D	DRAIN	LB(S)	POUND(S)	REW	RETURN EFFLUENT WATER	WWF	WELDED WIRE FABRIC
DEG	DEGREE	LEN	LENGTH	RJ	RESTRAINED JOINT (BELL)	WWM	WELDED WIRE MESH
DEMO	DEMOLITION	LF	LINEAR FEET	RMJ	RESTRAINED MECHANICAL JOINT	WWTF	WASTEWATER TREATMENT FACILITY
DF	DIESEL FUEL	LHDPE	LINEAR HIGH-DENSITY POLYETHYLENE	RNG	RANGE	WWTP	WASTEWATER TREATMENT PLANT
DI	DUCTILE IRON	LS	LIME SLURRY	RO	REVERSE OSMOSIS	XFER	TRANSFER
DIA	DIAMETER	LSS	LIME STABILIZED SLUDGE	ROC	RADIUS OF CURVATURE	XLHDPE	CROSS LINKED HIGH-DENSITY POLYETHYLENE
DIAG.	DIAGONAL	LWL	LOW WATER LEVEL	RPM	REVOLUTIONS PER MINUTE	YD	YARD(S)
DIM	DIMENSION	MAINT	MAINTAIN OR MAINTENANCE	RPZBP	REDUCED PRESSURE ZONE BACKFLOW PREVENTER	YH	YARD HYDRANT
DIP	DUCTILE IRON PIPE	MAN	MANUAL(LY)	RR	RAILROAD	YR	YEAR(S)
DIR	DIRECTION	MAX	MAXIMUM	RS	RAW SEWAGE		
DISCH	DISCHARGE	MCC	MOTOR CONTROL CENTER	RW	RECLAIMED WATER		
DJ	DISMANTLING JOINT	ME(S)	MITERED END (SECTION)	RWW	RAW WASTEWATER		
DMH	DROP MANHOLE	MECH	MECHANICAL	S	SOUTH		
DN	DOWN	MF	MICROFILTRATION	S.F.	SQUARE FOOT		
DR	DIMENSION RATIO	MFR	MANUFACTURE(R)	S.I.	SQUARE INCH		
DV	DIAPHRAGM VALVE	MG	MILLION GALLONS	S.O.	SIDE OPERATED		
DW	DISINFECTED WATER	MGD	MILLION GALLONS PER DAY	S.STL	STAINLESS STEEL		
DWG	DRAWING	MH	MANHOLE	S.Y.	SQUARE YARD		
DWV	DRAIN, WASTE, AND VENT	MI	MILE(S)	SA	SAMPLE LINE		
E	EAST(ING)	MIN	MINIMUM	SAN	SANITARY		
E.F.	EACH FACE	MISC	MISCELLANEOUS	SB-xx	SOIL BORING (e.g. SB-1)		
E.W.	EACH WAY	MJ	MECHANICAL JOINT	SCH	SCHEDULE		
EA	EACH			SCV	SILENT CHECK VALVE		
ECC	ECCENTRIC			SD	STORM DRAIN		
EFF	EFFLUENT						

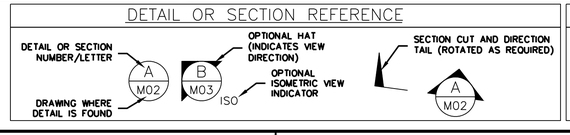
PROCESS PIPING LEGEND (SINGLE-LINE, PLAN VIEW)



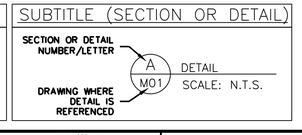
PROCESS PIPING LEGEND (DOUBLE-LINE OR 3D, PLAN VIEW)



DETAIL OR SECTION REFERENCE



SUBTITLE (SECTION OR DETAIL)



NOTE: THIS LEGEND IS FOR GENERAL REFERENCE. NOT ALL ABBREVIATIONS, SYMBOLS, PROCESSES, MATERIALS, OR FITTINGS MAY BE USED IN THIS DESIGN, NOR IS THIS LEGEND COMPREHENSIVE. REFER TO INDIVIDUAL DRAWING LEGEND(S) IF SYMBOLS ARE NOT LISTED. INDIVIDUAL DISCIPLINE STANDARD LEGENDS SUPERCEDE THIS GENERAL LEGEND, IF PROVIDED.

City of Tampa Florida

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

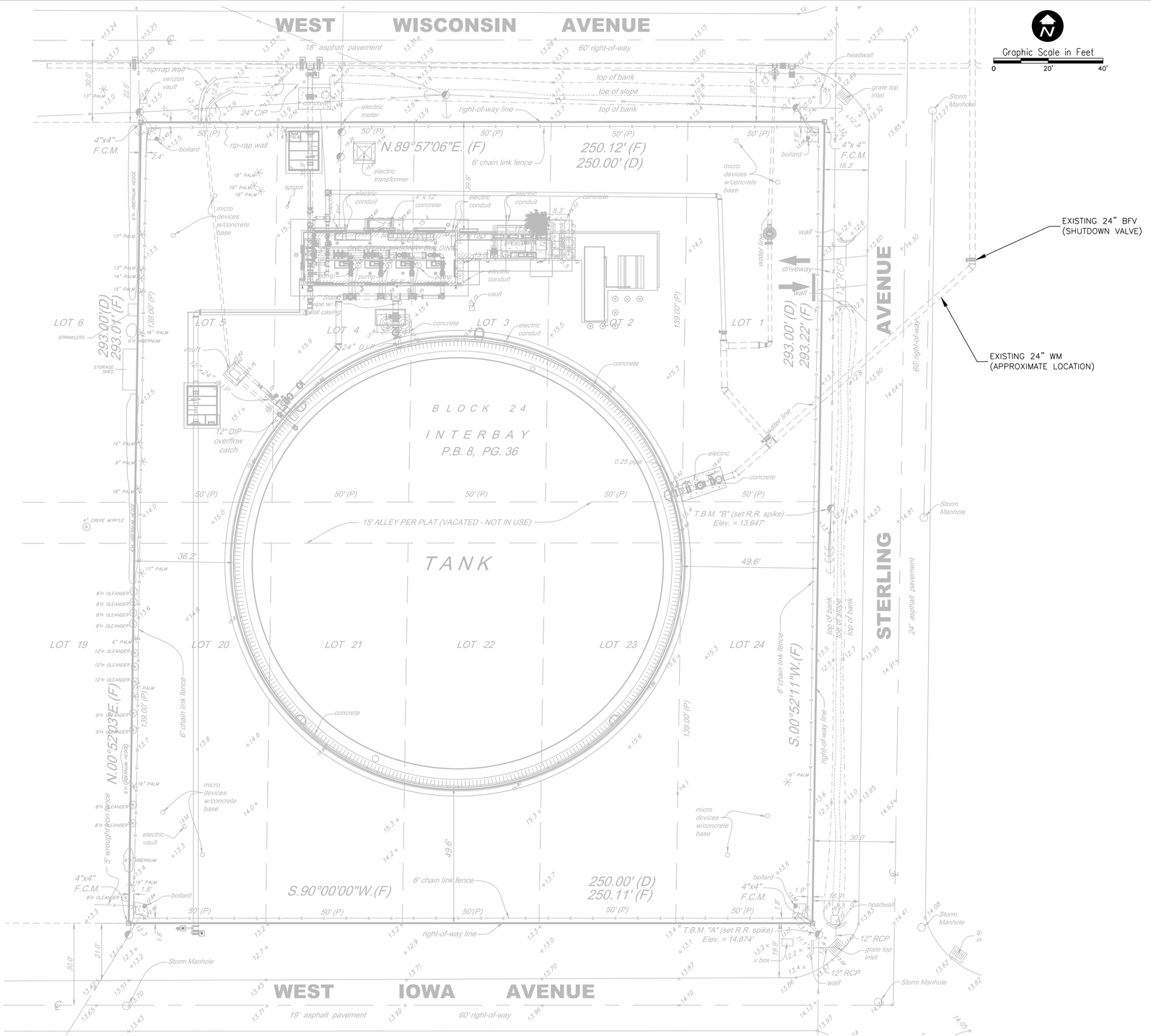
CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

GENERAL

STANDARD LEGEND AND ABBREVIATIONS

PROJECT NO.:	0817
SCALE: NOTED	REVISION: C
DRAWING NO.	G03
SHEET NO.:	03 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181



Parent Sheet Set:5460PINEDATM Rev/Plot by:PAUL HELLER Rev on: 7/2/2019 12:59 PM Individual File Path:0817_DESIGN.DWG

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

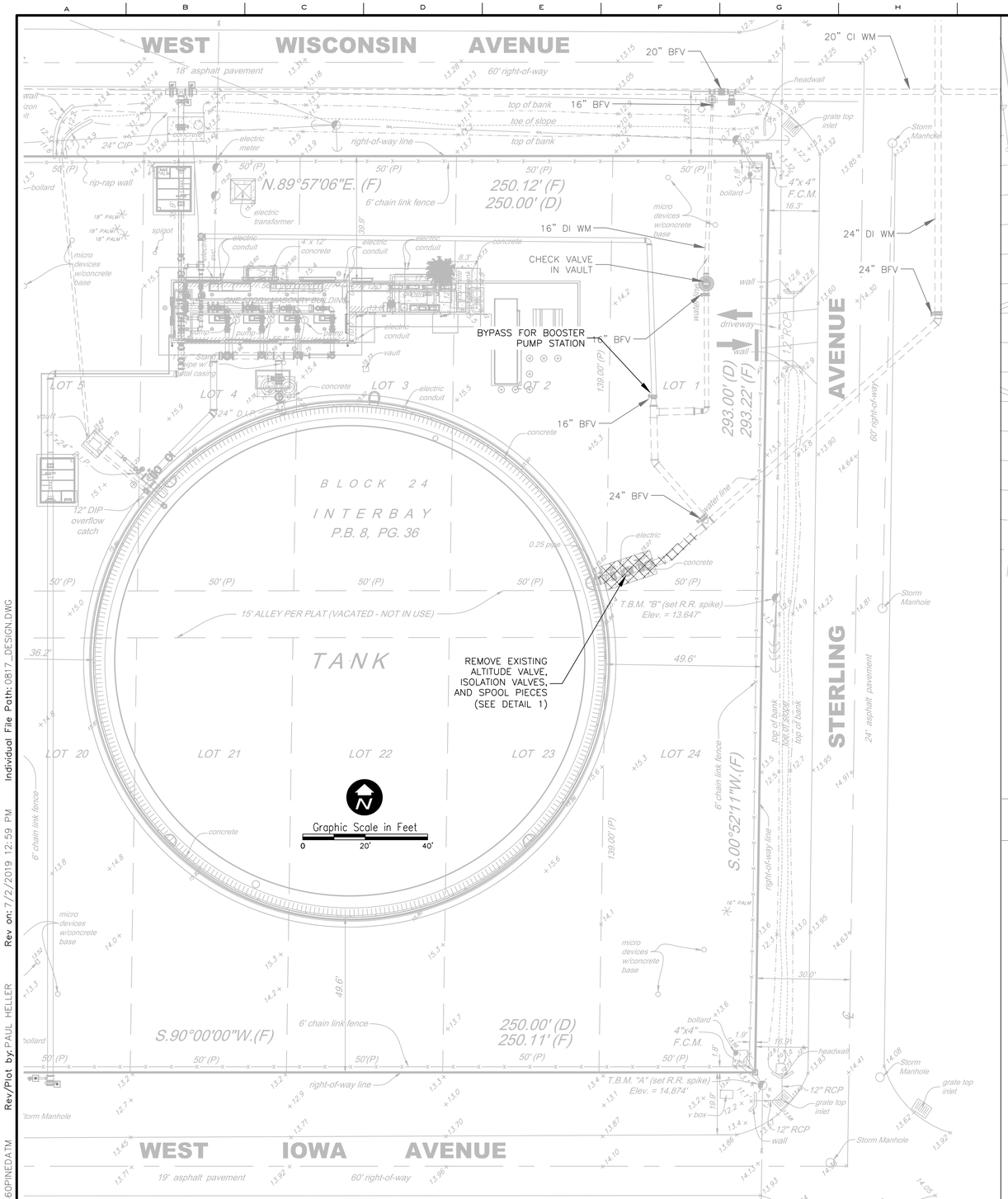
CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

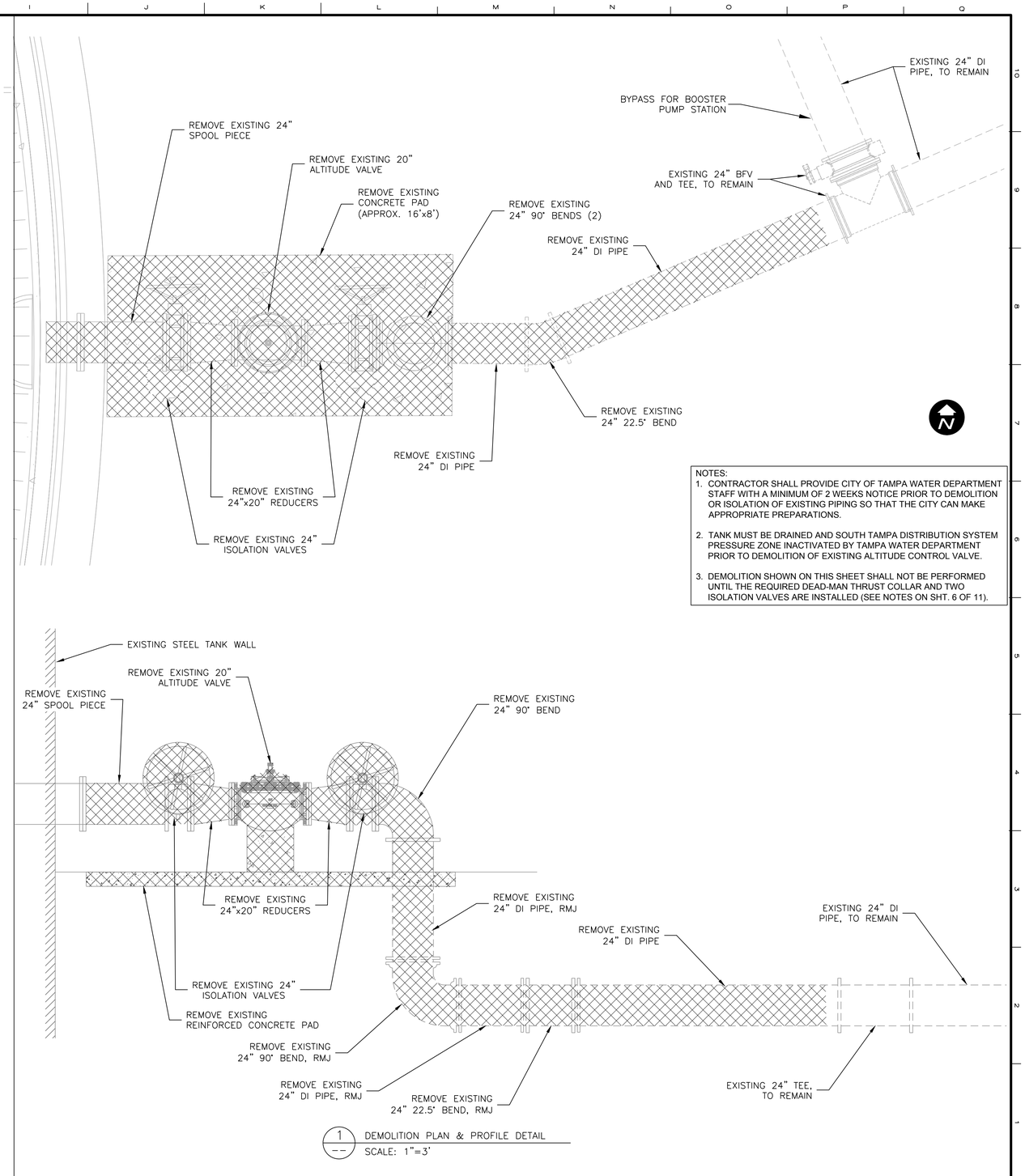
CIVIL

EXISTING SITE

PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C01	SHEET NO.: 04 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181





NOTES:
1. CONTRACTOR SHALL PROVIDE CITY OF TAMPA WATER DEPARTMENT STAFF WITH A MINIMUM OF 2 WEEKS NOTICE PRIOR TO DEMOLITION OR ISOLATION OF EXISTING PIPING SO THAT THE CITY CAN MAKE APPROPRIATE PREPARATIONS.
2. TANK MUST BE DRAINED AND SOUTH TAMPA DISTRIBUTION SYSTEM PRESSURE ZONE INACTIVATED BY TAMPA WATER DEPARTMENT PRIOR TO DEMOLITION OF EXISTING ALTITUDE CONTROL VALVE.
3. DEMOLITION SHOWN ON THIS SHEET SHALL NOT BE PERFORMED UNTIL THE REQUIRED DEAD-MAN THRUST COLLAR AND TWO ISOLATION VALVES ARE INSTALLED (SEE NOTES ON SHT. 6 OF 11).

1 DEMOLITION PLAN & PROFILE DETAIL
SCALE: 1"=3'

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

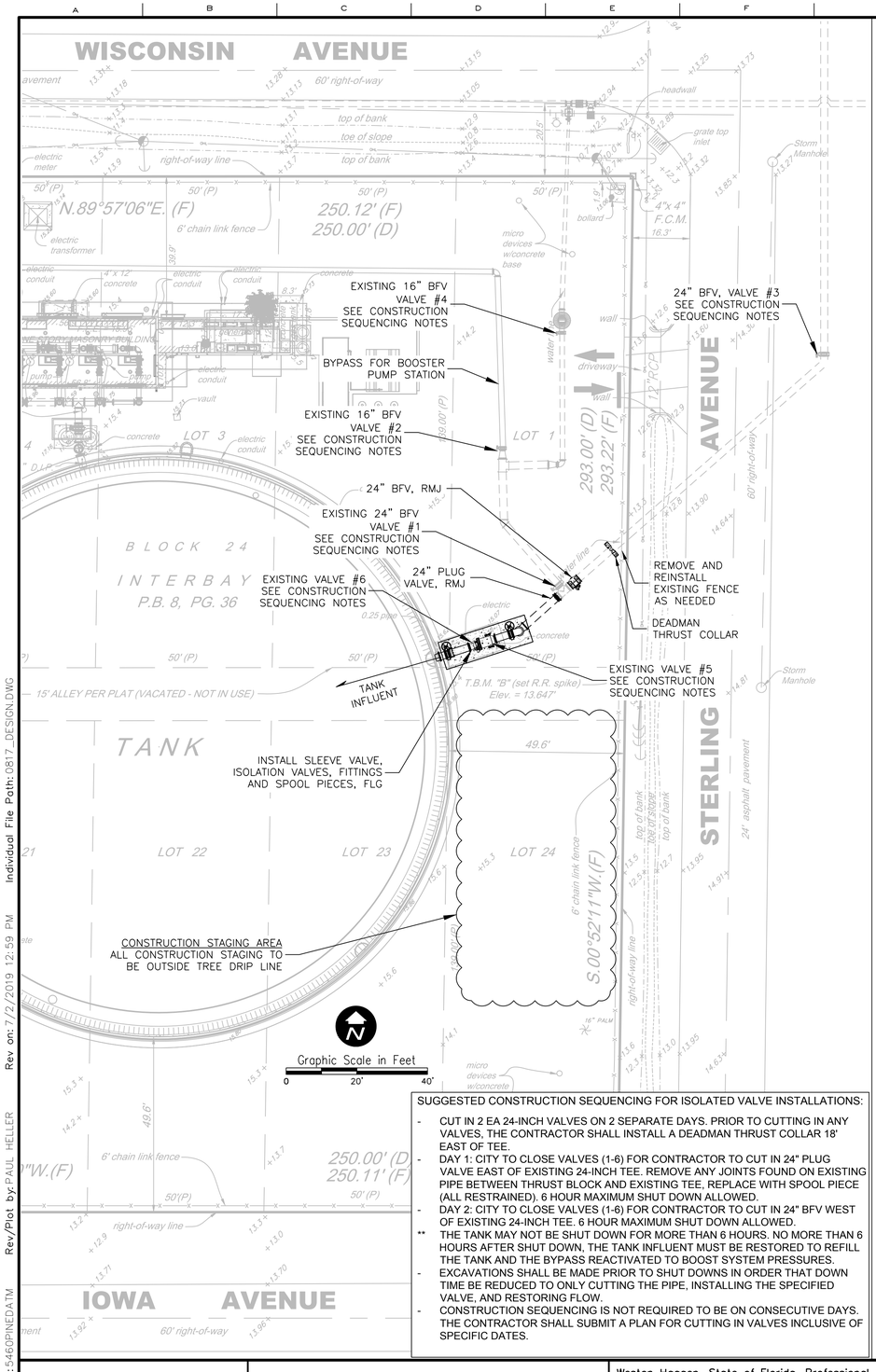
CIVIL

DEMOLITION PLAN AND PROFILE

PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C02	SHEET NO.: 05 OF 11

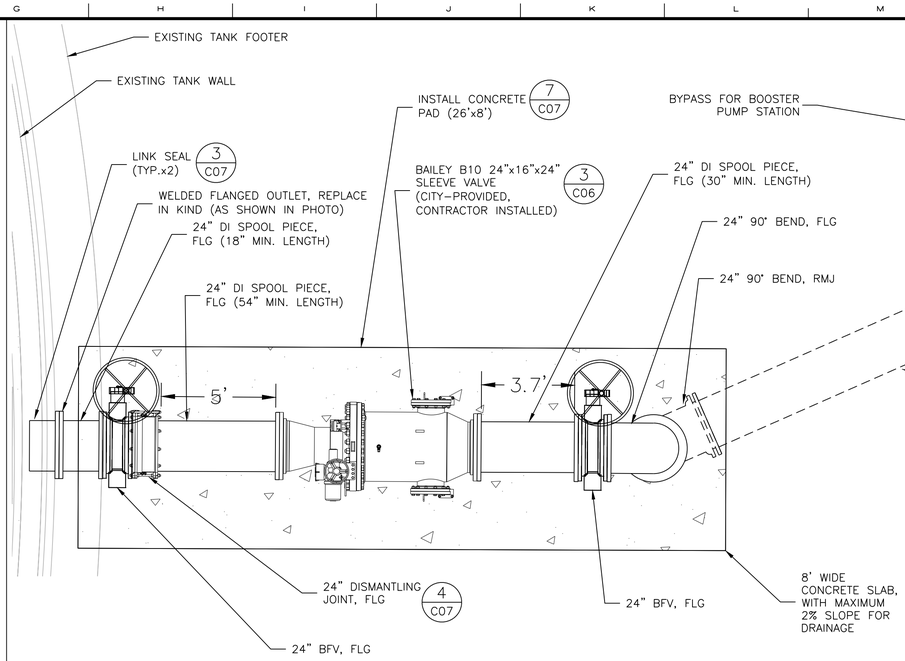
REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181

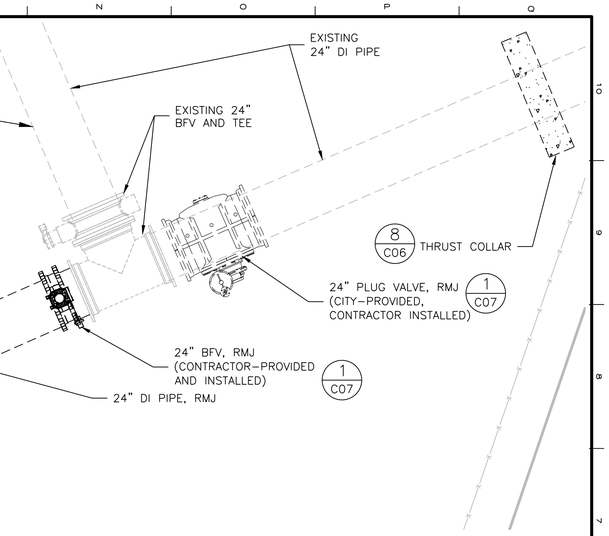
Parent Sheet Set:5460PINEDATM Rev/Plot by:PAUL HELLER Rev on:7/2/2019 12:59 PM Individual File Path:0817_DESIGN.DWG

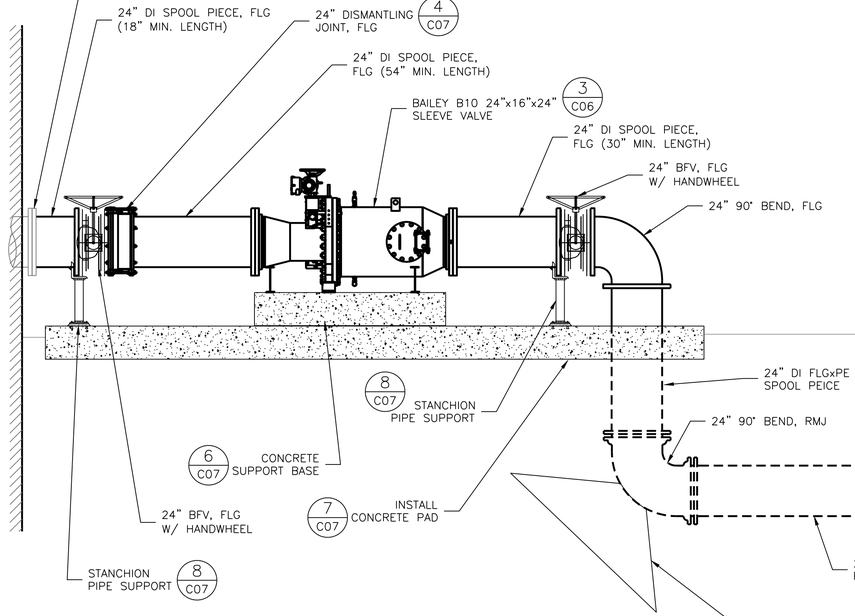


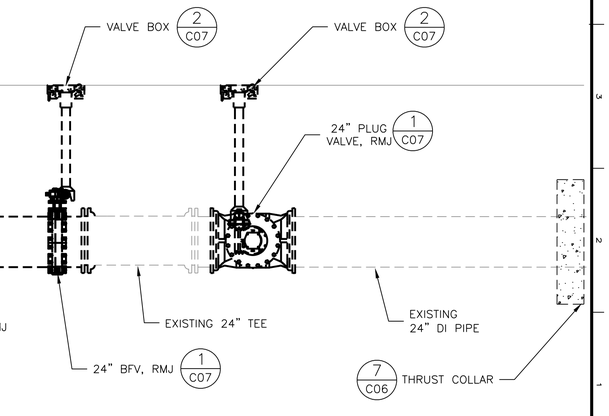
SUGGESTED CONSTRUCTION SEQUENCING FOR ISOLATED VALVE INSTALLATIONS:

- CUT IN 2 EA 24-INCH VALVES ON 2 SEPARATE DAYS. PRIOR TO CUTTING IN ANY VALVES, THE CONTRACTOR SHALL INSTALL A DEADMAN THRUST COLLAR 18' EAST OF TEE.
- DAY 1: CITY TO CLOSE VALVES (1-6) FOR CONTRACTOR TO CUT IN 24" PLUG VALVE EAST OF EXISTING 24-INCH TEE. REMOVE ANY JOINTS FOUND ON EXISTING PIPE BETWEEN THRUST BLOCK AND EXISTING TEE, REPLACE WITH SPOOL PIECE (ALL RESTRAINED). 6 HOUR MAXIMUM SHUT DOWN ALLOWED.
- DAY 2: CITY TO CLOSE VALVES (1-6) FOR CONTRACTOR TO CUT IN 24" BFV WEST OF EXISTING 24-INCH TEE. 6 HOUR MAXIMUM SHUT DOWN ALLOWED.
- ** THE TANK MAY NOT BE SHUT DOWN FOR MORE THAN 6 HOURS. NO MORE THAN 6 HOURS AFTER SHUT DOWN, THE TANK INFLUENT MUST BE RESTORED TO REFILL THE TANK AND THE BYPASS REACTIVATED TO BOOST SYSTEM PRESSURES.
- EXCAVATIONS SHALL BE MADE PRIOR TO SHUT DOWNS IN ORDER THAT DOWN TIME BE REDUCED TO ONLY CUTTING THE PIPE, INSTALLING THE SPECIFIED VALVE, AND RESTORING FLOW.
- CONSTRUCTION SEQUENCING IS NOT REQUIRED TO BE ON CONSECUTIVE DAYS. THE CONTRACTOR SHALL SUBMIT A PLAN FOR CUTTING IN VALVES INCLUSIVE OF SPECIFIC DATES.









NOTES:
1. CONTRACTOR SHALL PROVIDE THE TAMPA WATER DEPARTMENT STAFF WITH A MINIMUM OF 2 WEEKS NOTICE PRIOR TO DEMOLITION OR ISOLATION OF EXISTING PIPING SO THAT THE CITY CAN MAKE APPROPRIATE PREPARATIONS.

2. EXISTING WATER MAIN FEED SYSTEM TO THE TANK AND PUMPS MAY BE ISOLATED BY THE WATER DEPARTMENT FOR UP TO 6-HRS AT A TIME FOR CONTRACTOR INSTALLATION OF THE TWO 24-IN. ISOLATION VALVES. (SEE SUGGESTED "CONSTRUCTION SEQUENCING FOR VALVE INSTALLATIONS" ON THIS SHEET)

3. CONCRETE THRUST COLLAR SHALL BE INSTALLED AND DEEMED FULLY FUNCTIONAL PRIOR TO COMMENCEMENT OF ANY EXCAVATION OR PIPE MODIFICATION.

4. TANK MUST BE DRAINED AND SOUTH TAMPA DISTRIBUTION SYSTEM PRESSURE ZONE INACTIVATED BY TAMPA WATER DEPARTMENT PRIOR TO DEMOLITION OF EXISTING ALTITUDE CONTROL VALVE.

5. AFTER ISOLATION VALVES ARE INSTALLED, THE NEW 24 -IN. BFV WEST OF THE EX. TEE WILL BE CLOSED, AND EX. VALVES 1, 2, & 3 OPENED, ALLOWING THE SYSTEM TO OPERATE IN BOOSTER PUMP STATION MODE, BY-PASSING THE EX. GROUND STORAGE TANK. STATION WILL OPERATE IN BOOSTER PUMP MODE UNTIL THE TANK IS RESTORED TO SERVICE.

6. ALL BELOW GRADE JOINTS SHALL BE MECHANICAL JOINT AND RESTRAINED. ALL ABOVE GRADE JOINTS SHALL BE FLANGED UNLESS OTHERWISE NOTED.

7. ALL BURIED DUCTILE IRON PIPE SHALL BE POLY WRAPPED AS PER THE SPECIFICATIONS.

8. ALL ABOVE GRADE PIPING, FITTING AND ISOLATION VALVES SHALL BE FACTORY PRIMED COATED AND PAINTED IN FIELD PER THE SPECIFICATIONS.

9.CONTACT RICH GEIBERT OR BOBBIE WHRITENOUR WITH FLOUID CONTROL SPECIALTIES, INC. IN SANFORD, FLORIDA @ 407-302-5611 TO ORDER 24" PLUG VALVE REQUIRED: DEZURIK MODEL PEF, 24, MJ, CI, NBR, CR, TR6-1401D0,MGB-WR5L-N,OL. FLUID CONTROL INVENTORIES THIS MODEL PLUG VALVE IN SANFORD FLORIDA. DELIVERY CAN BE EXPECTED 2-3 WEEKS AFTER ORDER IS PLACED.

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

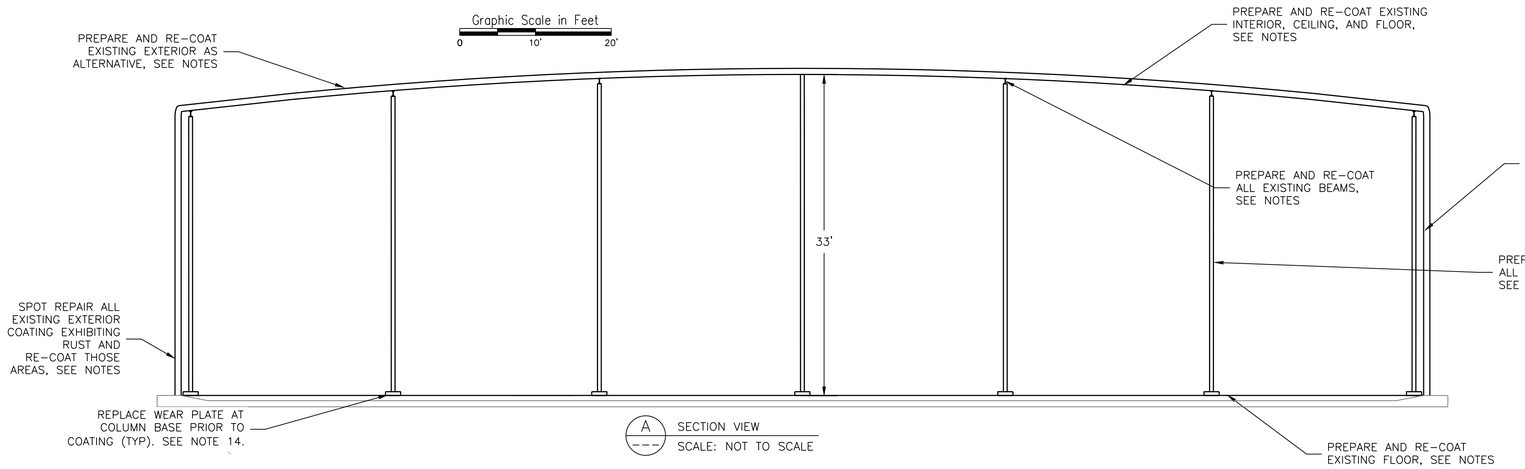
CIVIL

PLAN AND PROFILE

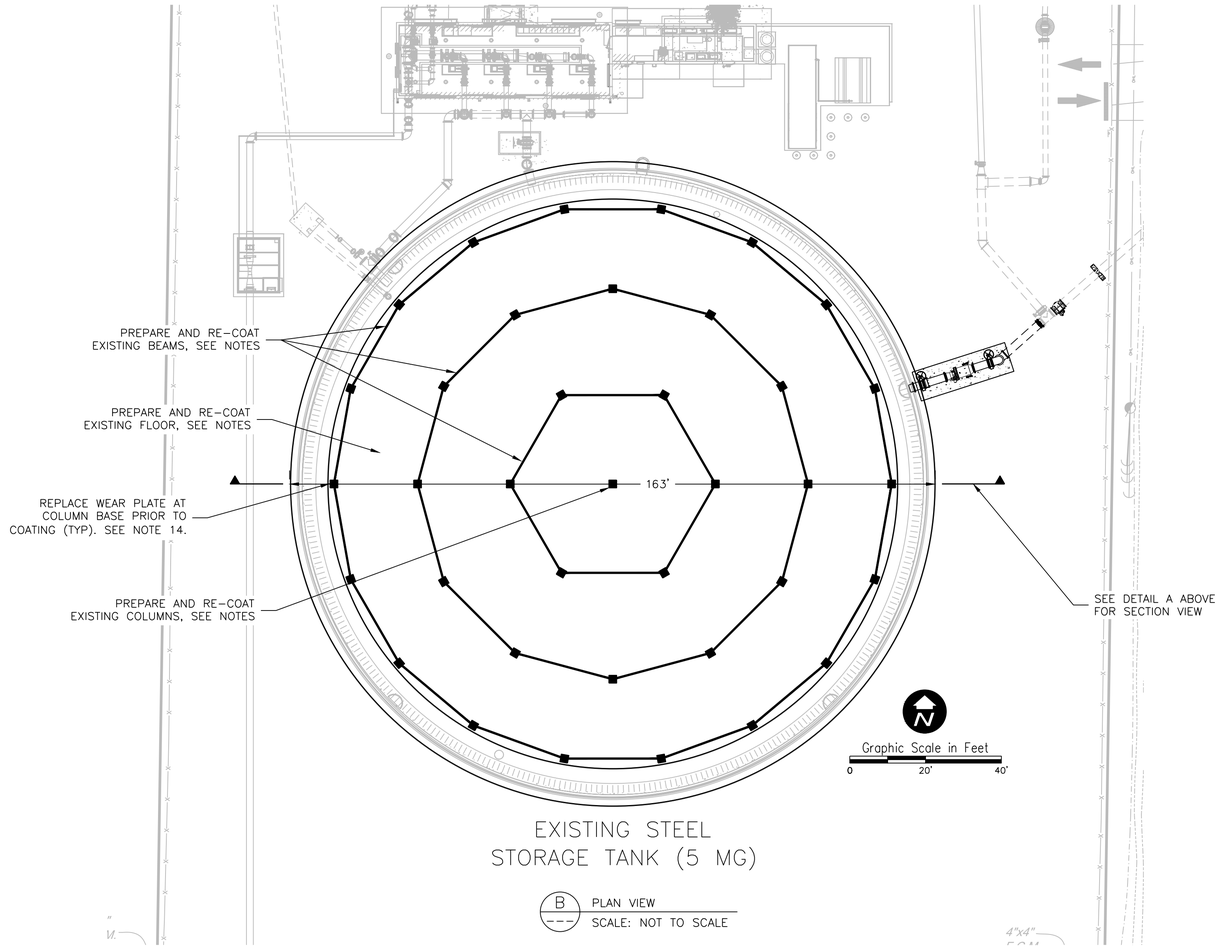
PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C03	SHEET NO.: 06 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181

Parent Sheet Set:5460PINEDATM Rev/Plot by:PAUL HELLER Rev on:7/2/2019 12:59 PM Individual File Path:0817_DESIGN.DWG



A SECTION VIEW
SCALE: NOT TO SCALE



EXISTING STEEL
STORAGE TANK (5 MG)

B PLAN VIEW
SCALE: NOT TO SCALE

NOTES:

1. NOTES ARE INTENDED TO COMPLEMENT EXTERIOR AND INTERIOR COATING SPECIFICATIONS AND ARE FURNISHED FOR CONVENIENCE. THE CONTRACTOR SHALL REFER TO THE TECHNICAL SPECIFICATIONS.
2. THE CONTRACTOR PERFORMING COATING SERVICES SHALL HOLD CURRENT AND VALID SSPC QP2 CERTIFICATION.
3. ALL WORK PERFORMED SHALL BE IN ACCORDANCE WITH OSHA REQUIREMENTS.
4. THE CONTRACTOR SHALL TEST FOR THE PRESENCE OF LEAD IN MULTIPLE LOCATIONS ON THE EXTERIOR AND INTERIOR OF THE TANK PRIOR TO MOBILIZATION
5. IF THE CONTRACTOR'S TESTS INDICATE LEAD IS PRESENT IN THE EXISTING COATING, THE CONTRACTOR SHALL SUBMIT A LEAD REMOVAL PLAN TO THE ENGINEER AND CITY FOR APPROVAL. THIS LEAD REMOVAL PLAN SHALL INCLUDE BUT NOT BE LIMITED TO A SAFETY PLAN, PROVISION OF TRAINING RECORDS OF EMPLOYEES WHO WILL PERFORM HAZARDOUS MATERIAL REMOVAL, HAZARDOUS WASTE DISPOSAL PLAN, AND PROVISION OF ALL STATE AND LOCAL LICENSES AND PERMITS REQUIRED TO COMPLETE THE WORK.
6. LEAD REMOVAL SHALL BE IN STRICT ADHERENCE TO OSHA 1926.62. DURING REMOVAL ACTIVITIES, THE CONTRACTOR SHALL PROTECT AGAINST CONTAMINATION OF BUILDING AND PROPERTY AND SHALL ENSURE THAT THERE IS NO AIRBORNE RELEASE OF HAZARDOUS MATERIALS AND DUSTS. THE CITY MAY COLLECT AIR AND WIPE SAMPLES IN THE WORK AREA TO EVALUATE THE CONTRACTOR'S PERFORMANCE FOR CONTAINING LEAD. EVIDENCE OF SETTLED DUST OR AIRBORNE LEVELS OF CONTAMINANTS WILL REQUIRE IMPLEMENTATION OF ADDITIONAL CONTROLS AT NO EXTRA COST TO THE CITY.
7. HAZARDOUS MATERIAL REMOVED DURING ABATEMENT ACTIVITIES SHALL BE DISPOSED OF IN AN APPROVED MANNER COMPLYING WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS.
8. UPON COMPLETION OF HAZARDOUS MATERIAL REMOVAL, THE CONTRACTOR SHALL PROVIDE A DETAILED PROJECT SUMMARY TO INCLUDE BUT NOT BE LIMITED TO PROVISION OF ALL SAFETY LOGS SHOWING NAMES OF PERSONS WHO ENTERED THE WORKSPACE INCLUDING DATE AND TIMES OF ENTRY AND EXIT, RECORD OF ANY EMERGENCIES, SAFETY OR HEALTH INCIDENTS, WASTE MANIFESTS, INVENTORY OF LOCATIONS WHERE HAZARDOUS MATERIAL WAS REMOVED, DISPOSAL METHOD, AND PROOF OF DISPOSAL. THE PROOF OF DISPOSAL SHALL ALSO INCLUDE THE NAME, LOCATION, CONTACT INFORMATION, AND EPA REGISTRATION.
9. THE CONTRACTOR SHALL PERFORM HOLIDAY TESTING IN ACCORDANCE WITH NACE RPO 188, DISCONTINUITY (HOLIDAY) TESTING OF PROTECTIVE COATINGS
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPERLY PROTECTING AREAS NOT TO BE COATED DURING ALL PHASES OF THE PROJECT INCLUDING REPAIR, WASHING, BLASTING, AND PAINTING OPERATIONS. ITEMS NOT TO BE COATED SHALL BE RELOCATED IF POSSIBLE OR PROTECTED AS REQUIRED. ANY DAMAGE CAUSED BY NOT PROPERLY PROTECTING SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
11. SURFACES TO BE COATED SHALL BE CLEANED IN ACCORDANCE WITH SSPC-SP I (SOLVENT CLEANING). BEFORE APPLYING COATING OR SURFACE TREATMENTS, OIL, GREASE, RUST, LOOSE MILL SCALE, OLD WEATHERING COATINGS, AND OTHER FOREIGN SUBSTANCES SHALL BE REMOVED, EXCEPT AS SPECIFIED.
12. INTERIOR COATING
    a. THE INTERIOR COATING RECOMMENDATIONS SHALL ONLY BE APPLICABLE TO THE INTERIOR FLOOR, CEILING, COLUMNS, AND RAFTERS. THIS MAY BECOME APPLICABLE TO THE ENTIRE INTERIOR INCLUDING THE WALLS SHOULD THE BID ALTERNATE BE APPROVED.
    b. ALL MOLD, MILDEW, CHALK, LOOSE PAINT, ORGANIC DEPOSITS, OR OTHER SURFACE CONTAMINATION FROM THE ENTIRE INTERIOR WET AREA SHALL BE REMOVED USING LOW PRESSURE WASHER CLEANING (MIN 4000 PSI, OSCILLATING TIP, USING POTABLE WATER) PRIOR TO ABRASIVE BLASTING. CLEANER SUCH AS TSP OR SIMILAR SHALL BE USED IN THE WATER.
    c. ALL SPECIFIED INTERIOR SURFACES SHALL BE SWEEP ABRASIVE BLAST CLEANED IN ACCORDANCE WITH SSPC-SP10/NACE NO. 2 (NEAR WHITE BLAST CLEANING) TO REMOVE ALL COATINGS AND PROVIDE A UNIFORM MINIMUM 1.5 MIL ANGULAR ANCHOR PROFILE.
    d. ALL PIPING AND DRAINS SHALL BE SUFFICIENTLY COVERED TO KEEP BLAST MEDIA FROM ENTERING THE PIPING.
    e. TANK COATING: TWO (2) COAT HIGH BUILD, HIGH SOLIDS EPOXY LINING SYSTEM WITH ZINC-RICH PRIMER, NSF 61- APPROVED.
    f. LADDER COATING: THREE (3) COAT HIGH BUILD, HIGH SOLIDS EPOXY LINING SYSTEM WITH ZINC RICH PRIMER, NSF 61 APPROVED. COATING SHALL BE NON SKID.
    g. CAULKING: SIKA-FLEX IA, ONE COMPONENT POLYURETHANE SEALANT, NSF 61 APPROVED.
13. EXTERIOR COATING
    a. THIS SHALL ONLY BE APPLICABLE TO THE TANK CHIME (BASE). THIS MAY BECOME APPLICABLE TO THE ENTIRE EXTERIOR OF THE TANK SHOULD THE BID ALTERNATE BE APPROVED.
    b. ALL SPECIFIED EXTERIOR SURFACES SHALL BE PRESSURE WASHED (MIN 4000 PSI, OSCILLATING TIP, USING POTABLE WATER) TO REMOVE ALL OILS, GREASE, MOLD, MILDEW, CHALK, LOOSE PAINT, DIRT, AND OTHER SOLUBLE CONTAMINANTS.
    c. ALL SURFACES SHALL BE ABRADED TO REMOVE ALL LOOSE COATINGS AND REMAINING CONTAMINANTS. ALL PREEXISTING WELL-ADHERED COATINGS SHALL BE THOROUGHLY AND UNIFORMLY SCARIFIED AND DE-GLOSSED WITH A MINIMUM BLAST PROFILE OF 1.5 MILS DFT.
    d. SPOT BLAST BARE AND RUSTED AREAS TO A MINIMUM OF COMMERCIAL GRADE FINISH IN ACCORDANCE WITH SSPC-SP6
    e. TANK COATING SHALL BE HIGH BUILD INORGANIC WATER-BASED EPOXY SPOT PRIMER WITH INTERMEDIATE FLUOROPOLYMER FINISH COAT.
    f. LADDER COATING SHALL BE THE SAME AS TANK COATING.
    g. EXTERIOR SURFACES EXHIBITING RUST SHALL BE CLEANED WITH A POWER TOOL TO BARE METAL SSPC SP11 WITH THE APPLICATION OF A MODIFIED POLYAMIDOAMINE EPOXY PRIMER.
14. WEAR PLATES: REPLACE WEAR PLATE PRIOR TO COATING IN KIND PER MANUFACTURER'S RECOMMENDATIONS.

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

CIVIL

STORAGE TANK COATING PLAN AND SECTION

PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C04	SHEET NO.: 07 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181

Parent Sheet Set:5460PINEDATM Rev/Plot by:PAUL HELLER Rev on:7/2/2019 12:59 PM Individual File Path:0817_DESIGN.DWG

Figure 1 - Remove and replace existing altitude valve and piping as specified. New valves, piping and fittings shall be factory and field coated as specified.

Figure 2 - All exterior surfaces exhibiting paint peeling shall be cleaned and re-coated as specified.

Figure 3 - Coat exterior ladder rungs with non-skid coating as specified.

Figure 4 - All exterior chime surfaces exhibiting rust shall be cleaned and re-coated as specified.

Figure 5 - All floor surfaces exhibiting rust shall be cleaned and re-coated as specified.

Figure 6 - All floor surfaces exhibiting rust shall be cleaned and re-coated as specified.

Figure 7 - All rafter surfaces exhibiting rust shall be cleaned and re-coated as specified.

Figure 8 - All rafter surfaces exhibiting rust shall be cleaned and re-coated as specified.

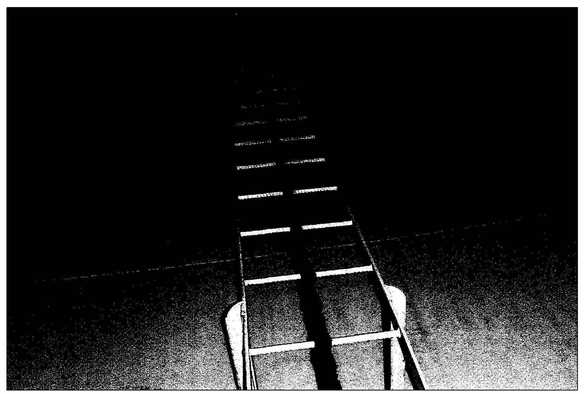


Figure 9 - Coat interior ladder rungs with non-skid coating as specified.

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

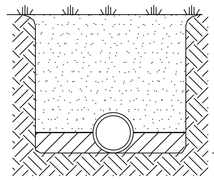
CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

DETAILS

COATING IMPROVEMENTS

PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C05	SHEET NO.: 08 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181



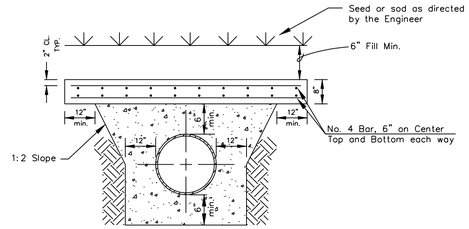
Suitable backfill compacted in 12-inch lifts to a minimum 98% of the maximum modified proctor density

Compaction by hand in layers of 6 inches, lightly consolidated to centerline

NOTES:

1. Type 2 trench is defined as a flat-bottom trench. Lightly consolidate backfill to centerline of pipe.
2. This standard shall be utilized in the absence of specific standards. The standard of the agency controlling the Right-of-Way shall govern unless otherwise directed by the Engineer.
3. Suitable backfill shall be defined as material free from cinders, ashes, refuse, clay, organic matter, boulders, rocks or stones, or other material that in the opinion of the Engineer is unsuitable.

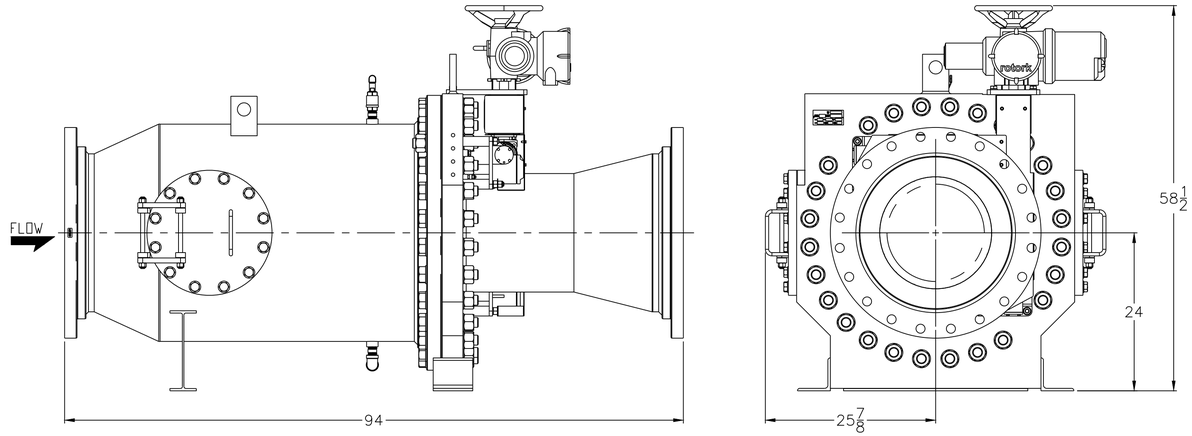
1 — TRENCHING, BEDDING AND BACKFILL DETAIL FOR NON-PAVED AREAS
SCALE: NTS



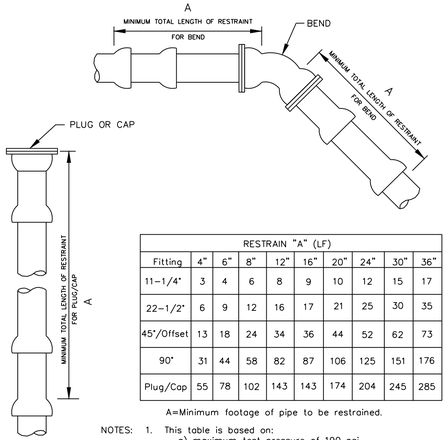
GRASSED SECTION

NOTES:
1. Shock pads for mains too shallow for the above configuration shall be designed on a case-by-case basis.

2 — REINFORCED CONCRETE SHOCK PAD (FOR COVER LESS THAN 2.5')
SCALE: NTS



3 — BAILEY B10 24"x16"x24" SLEEVE VALVE
SCALE: NTS

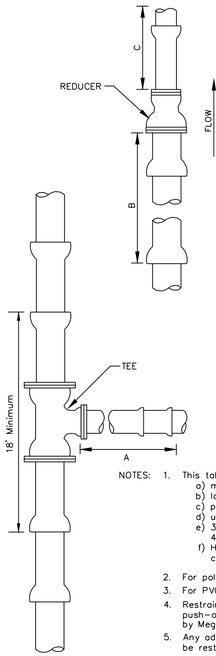


RESTRAIN "A" (LF)									
Fitting	4"	6"	8"	12"	16"	20"	24"	30"	36"
11-1/4°	3	4	6	8	9	10	12	15	17
22-1/2°	6	9	12	16	17	21	25	30	35
45°/Offset	13	18	24	34	36	44	52	62	73
90°	31	44	58	82	87	106	125	151	176
Plug/Cap	55	78	102	143	143	174	204	245	285

A=Minimum footage of pipe to be restrained.

NOTES:
1. This table is based on:
   a) maximum test pressure of 190 psi
   b) laying condition type 2 (see Details 2.01 and 2.02)
   c) poor soil conditions
   d) using D.I.P.
   e) 3 feet of cover for 12" and smaller mains; 4 feet of cover for 16" and larger mains
   f) Horizontal bends only – Engineer to submit calculations for vertical restraints
2. For polywrapped D.I.P., multiply the footage by 1.25
3. For PVC pipe, multiply footage by 1.2.
4. Restrained pipe shall be manufactured restrained pipe, push-on restraints or mechanical joint pipe restrained by Megalug or equivalent.
5. Any additional fittings within the restrained section shall be restrained accordingly.

4 — RESTRAINED JOINT STANDARD FOR BENDS, PLUGS, AND CAPS
SCALE: NTS



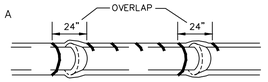
Fitting Size	Restrain (LF) Tee "A"	Reducer "B"	Unrestrained Straight Run (LF) Reducer "C"
4x4	25	*	*
6x4	11	40	59
6x6	48	*	*
8x4	A.T.	73	142
8x6	38	43	56
8x8	72	*	*
12x4	A.T.	124	364
12x6	19	104	208
12x8	57	76	115
12x12	114	*	*
16x6	A.T.	121	321
16x8	27	104	212
16x12	77	61	82
16x16	118	*	*
20x6	A.T.	156	527
20x8	14	144	369
20x12	68	109	186
20x16	111	61	77
20x20	149	*	*
24x6	A.T.	189	777
24x8	A.T.	179	560
24x12	59	150	313
24x16	104	111	172
24x20	144	61	74
24x24	179	*	*
30x6	A.T.	234	1227
30x8	A.T.	226	904
30x12	45	204	542
30x16	94	173	341
30x20	135	134	208
30x24	172	86	110
30x30	220	*	*
36x6	A.T.	276	1784
36x8	A.T.	269	1328
36x12	30	251	824
36x16	83	226	551
36x20	127	195	373
36x24	165	156	245
36x30	215	86	106
36x36	261	*	*

A.T.–Restraint required at Tee only.
*–not applicable

NOTES:
1. This table is based on:
   a) maximum test pressure of 190 psi
   b) laying condition type 2 (see Details 2.01 and 2.02)
   c) poor soil conditions
   d) using D.I.P.
   e) 3 feet of cover for 12" and smaller mains; 4 feet of cover for 16" and larger mains
   f) Horizontal bends only – Engineer to submit calculations for vertical restraints
2. For polywrapped D.I.P., multiply the footage by 1.25
3. For PVC pipe multiply footage by 1.2.
4. Restrained pipe shall be manufactured restrained pipe, push-on restraint or mechanical joint pipe restrained by Megalug or equivalent.
5. Any additional fittings within the restrained section shall be restrained accordingly.
6. For Reducers: If "C" straight run of pipe downstream of reducer not available, then restrain "B" upstream of reducer.

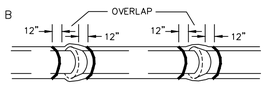
5 — RESTRAINED JOINT STANDARD FOR TEES AND REDUCERS
SCALE: NTS

METHOD A



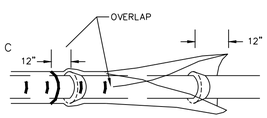
Polyethylene tube is cut into lengths approximately two feet longer than the pipe section and placed around it. After the pipe joint is assembled, the polyethylene tube is made to overlap the joint and the overlap secured in place. Since the tube is considerably larger than the barrel of pipe, it is made to fit snugly by folding over at the top and securing at quarter points along the pipe section.

METHOD B



Polyethylene tube is cut one foot shorter than the length of the pipe section. After placement of the pipe, it is folded and secured snugly overall. A three foot length of polyethylene tube placed over the end of the preceeding section is then pulled in place over the joint after assembly and secured.

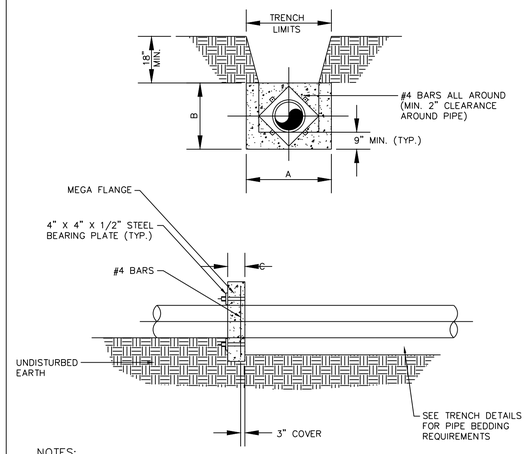
METHOD C



Polyethylene sheet is cut to a length two feet longer than the pipe section. The sheet is wrapped around the pipe so that it overlaps circumferentially over the top quadrant of the pipe, then secured. After joint assembly, the surplus length of polyethylene film is secured around the joint, providing an overlap of each joint. Tape at each joint or at 3' intervals in between.

NOTES: 1. Use blue polyethylene film and tape only.
2. Polyethylene film shall be a minimum of 8 mil. thickness.

6 — INSTALLATION OF POLYETHYLENE ENCASEMENT
SCALE: NTS



NOTES:
1. ADDITIONAL REINFORCEMENTS SHALL BE SPECIFIED BY THE ENGINEER.
2. MINIMUM COMPRESSIVE STRENGTH FOR CONCRETE SHALL BE 3000 PSI.
3. BEDDING, BACKFILL AND COMPACTION SHALL BE SPECIFIED IN THE STANDARD DRAWING.
4. ALL FORM BOARDS SHALL BE REMOVED PRIOR TO BACKFILLING.
5. NO ALLOWANCE SHALL BE MADE FOR FRICTION BETWEEN THE PIPE WALL.
6. DESIGN PRESSURE: 150 PSI.
7. REQUIRED FOR LINE STOP OPERATIONS WHERE APPLICABLE, OR AS DIRECTED IN THE PLANS.

SCHEDULE OF DIMENSIONS AND MATERIALS						
PIPE SIZE (INCHES)	DIMENSIONS (FT.) A	B	C	D	TIE RODS REQ'D DIA.	NO.
6	2.0	2.0	1.0		3/4	2
8	2.5	2.5	1.0		3/4	2
10	3.5	3.0	1.0		3/4	2
12	5.0	3.0	1.0		3/4	2
16	6.0	4.0	1.5		3/4	4
20	8.0	5.0	1.5		3/4	6
24	9.0	6.0	1.5		3/4	8

NOTE: THRUST COLLAR AREAS TO BE COMPUTED ON BASIS OF 2000 LBS/SF SOIL RESTRAINT BEARING.

7 — THRUST COLLAR DETAIL
SCALE: NTS

BRONZE DISK DETAIL

SECTION A-A

NOTES:
1. CIRCULAR OR SQUARE CONCRETE PAD REQUIRED FOR ALL VALVE BOX INSTALLATIONS.
2. CAST IRON VALVE BOXES SHALL BE FIRMLY SUPPORTED AND CENTERED AND PLUMB OVER THE OPERATING NUT OF THE VALVE. VALVE BOX COVER SHALL BE FLUSH WITH THE SURFACE OF THE FINISHED PAVEMENT, OR GRADE OR AT SUCH OTHER LEVEL AS MAY BE DIRECTED BY THE DEPARTMENT.
3. "BLUE" WATER VALVE LOCATE MARKERS REQUIRED FOR ALL VALVE INSTALLATIONS.
4. EMBED BRONZE VALVE INFO DISK INTO CONCRETE VALVE BOX COLLAR.
5. ALL MATERIALS SHALL BE IN ACCORDANCE WITH THE LATEST T.W.D. APPROVED MATERIAL SPECIFICATIONS.
6. IF VALVE IS LOCATED WITHIN A SIDEWALK CONCRETE COLLAR MAY BE ELIMINATED AND DISK SET FLUSH DIRECTLY IN SIDEWALK.
7. BRONZE DISK REQUIRED FOR ALL VALVES AND DUMMY BOXES.

8 — VALVE INSTALLATION W/ VALVE BOX & PAD
SCALE: NTS

Parent Sheet Set: 5460PINEDATM Rev/Plot by: PAUL HELLER Rev on: 6/28/2019 2:53 PM Individual File Path: 0817_C06.DWG

City of Tampa, Florida

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

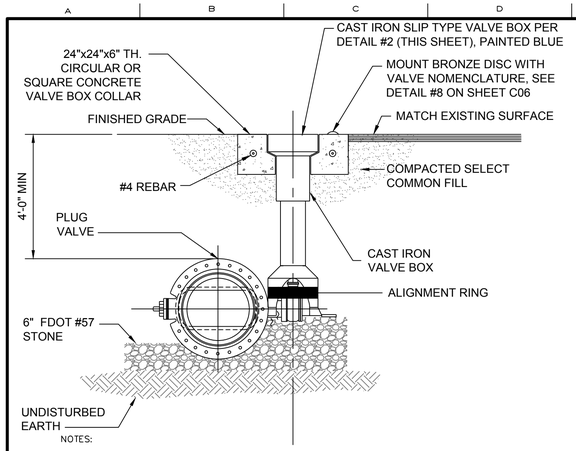
CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

DETAILS

DETAILS

PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C06	SHEET NO.: 09 OF 11

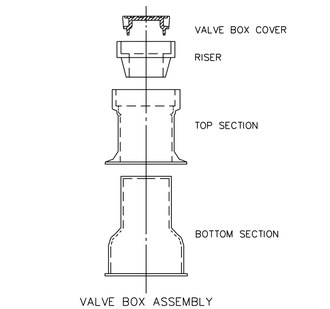
REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181



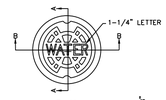
NOTES:

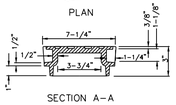
1. WHEN TOP OF OPERATING NUT IS DEEPER THAN 42", A HIGH STRENGTH STEEL EXTENSION WILL BE REQUIRED TO BRING OPERATING NUT 12" BELOW FINISHED GRADE. A STEEL CENTERING PLATE, WELDED TO THE EXTENSION, IS ALSO REQUIRED.
2. COVER SHALL BE PAINTED FEDERAL SAFETY BLUE FOR WATER MAINS AND GREEN FOR SEWER MAINS. BOLT DOWN COVER IN TRAFFIC AREAS.
3. C900 PVC OR DIP RISER PIPE SHALL BE ADDED TO EXTEND THE VALVE BOX.
4. REFLECTIVE PAVEMENT PARKERS (RPM) SHALL BE 6" FROM THE EDGE OF PAVEMENT AS PER DOT INSTALLATION SPECIFICATIONS. WATER RPM'S "BLUE" AND SEWER RPM'S "GREEN."

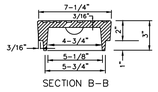
1 PLUG VALVE AND VALVE BOX
SCALE: NTS

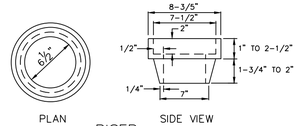


VALVE BOX ASSEMBLY



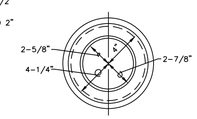


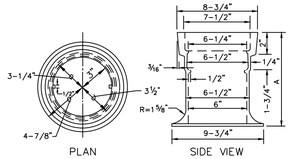




RISER

VALVE BOX COVER

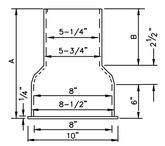




TOP SECTION

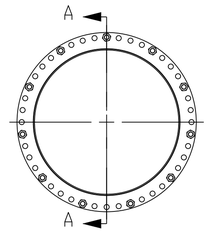
TOP SECTION	SIZE	A
	10"	10"
	16"	16"

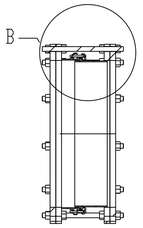
BOTTOM SECTION	SIZE	A	B
	15"	15"	6-1/2"
	24"	24"	15-1/2"
	36"	36"	27-1/2"

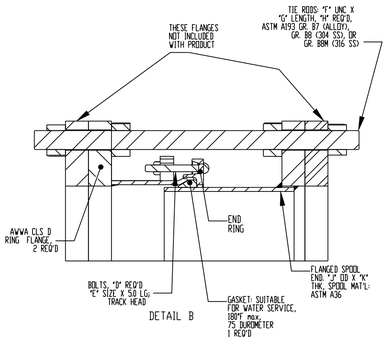


BOTTOM SECTION

2 VALVE BOX
SCALE: NTS



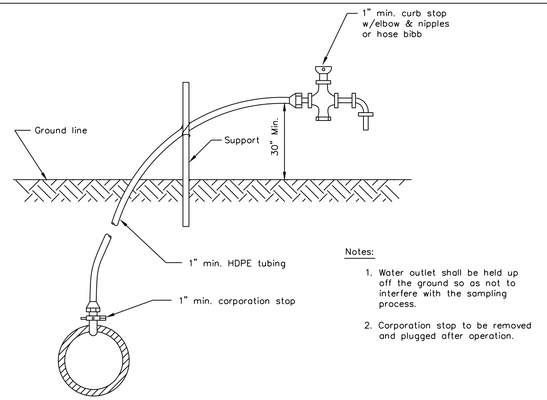




DETAIL B

NOTES:
1. NSF 61 CERTIFIED COATING: FUSION BONDED EPOXY IS STANDARD.
2. FASTENERS: HSLA PER ASTM A588 IS STANDARD. STAINLESS STEEL TYPE 316 PER ASTM A193 AVAILABLE UPON REQUEST.
3. PRESSURE RATED UP TO FLANGES PROVIDED. 14"-72" AWWA CLS D 150 PSIG WORKING, 225 PSIG TEST FOR HIGHER PRESSURES.
4. WHEN INSTALLING, POSITION THE FLANGED COUPLING END IN THE REQUIRED LOCATION & THEN FOLLOW BOLTING INSTRUCTIONS.
5. NOT INTENDED TO PROVIDE LATERAL MOVEMENT IN PIPELINE.

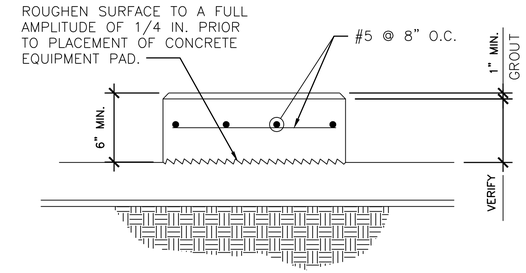
4 DISMANTLING JOINT DETAIL
SCALE: NTS



Notes:

1. Water outlet shall be held up off the ground so as not to interfere with the sampling process.
2. Corporation stop to be removed and plugged after operation.

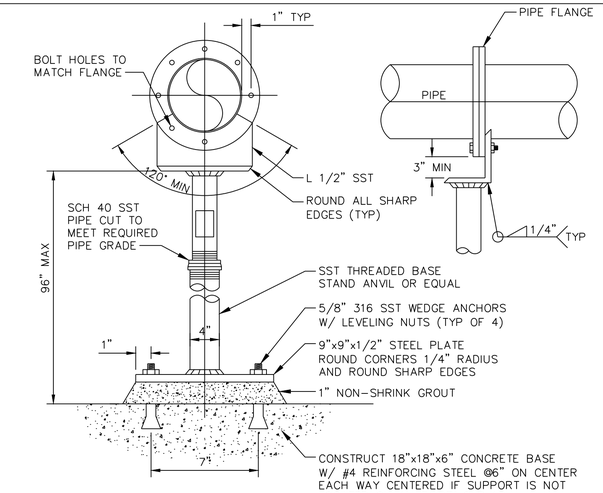
5 TEMPORARY SAMPLE TAP INSTALLATION FOR DISINFECTION
SCALE: NTS



NOTES:

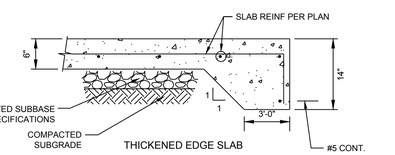
1. EQUIPMENT SHALL BE INSTALLED AS PER THE MANUFACTURER'S INSTRUCTIONS.

6 EQUIPMENT PAD DETAIL
SCALE: 3/4" = 1'-0"



NOTES:
1. THE DRAWINGS INDICATE SUPPORTS FOR DEPICTION ONLY. ALL SUPPORT SPACING AND TYPE SHALL BE IN ACCORDANCE WITH THE SPECIFICATIONS. SUPPORT SPACING SHOWN ON THE DRAWINGS SHALL NOT RELIEVE THE CONTRACTOR OF SUPPLYING AND INSTALLING ADEQUATE SUPPORTS PER THE SPECIFICATIONS.
2. SEE PLANS AND SECTIONS FOR PIPE GRADE REQUIREMENT.
3. PIPE SUPPORT SUITABLE FOR PIPE SIZES 3" THROUGH 24" DIAMETER.

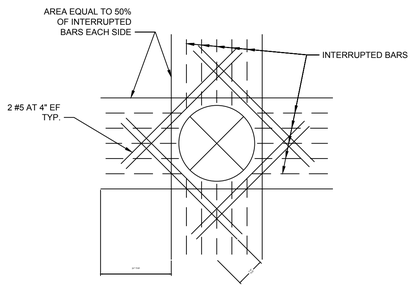
8 STANCHION FLANGE PIPE SUPPORT
SCALE: NTS



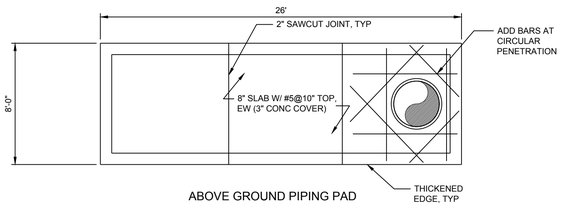
THICKENED EDGE SLAB

SAWCUT NOTE:

1. SAWCUT 2" DEEP JOINTS AS SHOWN ON PLAN.
2. SAWCUTTING TO BE PERFORMED IMMEDIATELY AFTER PLACEMENT, AS SOON AS THE CONCRETE IS FIRM ENOUGH TO SUPPORT THE SAW AND TO NOT BE TORN OR DAMAGED BY THE BLADE.



REINF AT CIRCULAR OPENINGS GREATER THAN 12"



ABOVE GROUND PIPING PAD

7 CONCRETE PAD DETAIL
SCALE: NTS

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Weston Haggen, State of Florida, Professional Engineer License No. 77777

This item has been digitally signed and sealed by Weston Haggen, PE, On

Printed copies of this document are not considered signed and sealed and this signature must be verified on any electronic copies.

WESTON HAGGEN LICENSE No. 77777 STATE OF FLORIDA PROFESSIONAL ENGINEER

Designed	WTH/ECS
Drawn	PFH
Checked	WTH
Reviewed	AWD
Approved	WTH

LINE IS 1" AT FULL SIZE

CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

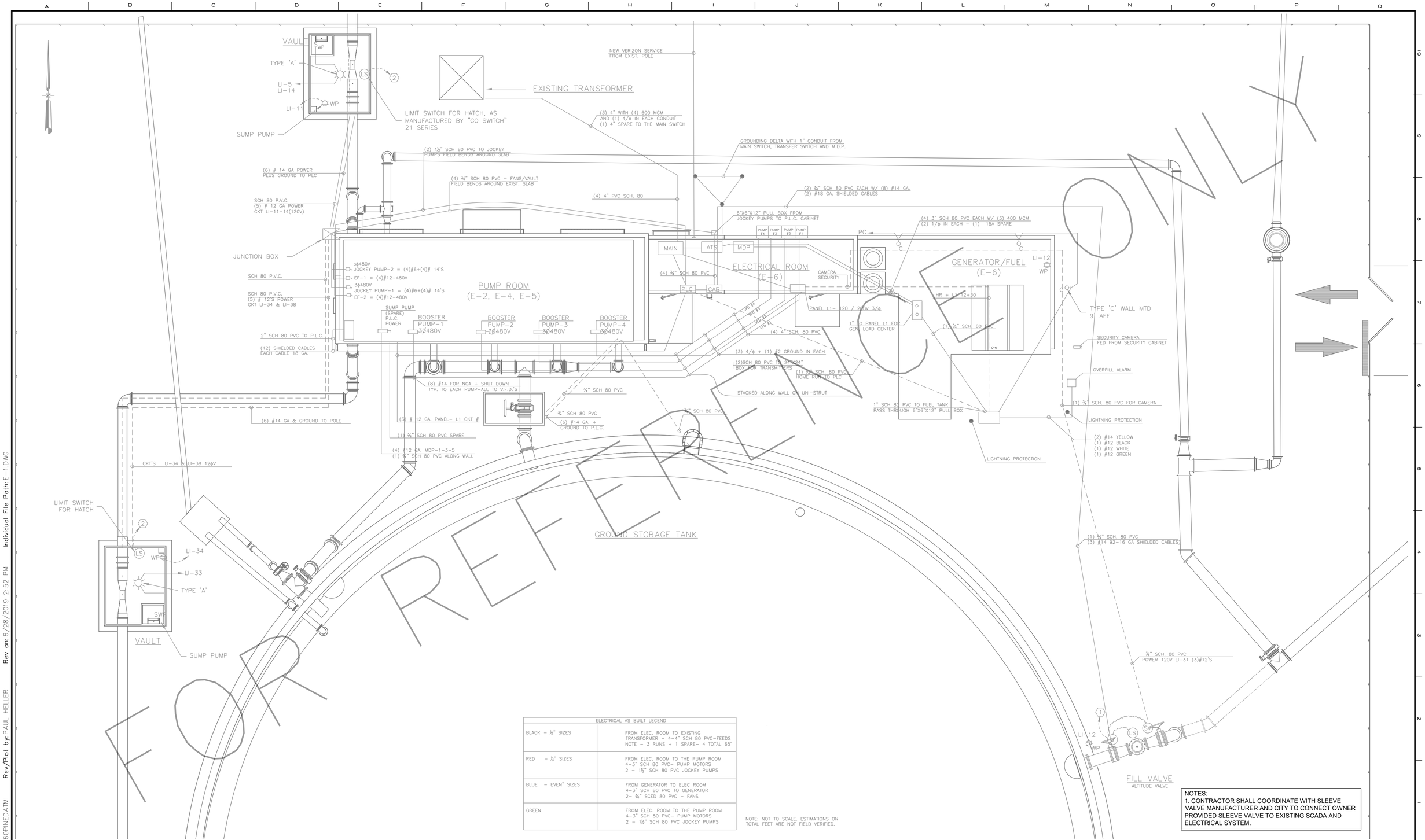
DETAILS

DETAILS

PROJECT NO.: 0817	
SCALE: NOTED	REVISION: C
DRAWING NO. C07	SHEET NO.: 10 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181

Parent Sheet Set:5460PINEDATM Rev/Plot by:PAUL HELLER Rev on:6/28/2019 2:52 PM Individual File Path:0817_C07.DWG



FOR REFERENCE ONLY

ELECTRICAL AS BUILT LEGEND	
BLACK – ½" SIZES	FROM ELEC. ROOM TO EXISTING TRANSFORMER – 4-4" SCH 80 PVC-FEEDS NOTE – 3 RUNS + 1 SPARE- 4 TOTAL 65'
RED – ¼" SIZES	FROM ELEC. ROOM TO THE PUMP ROOM 4-3" SCH 80 PVC- PUMP MOTORS 2 – 1½" SCH 80 PVC JOCKEY PUMPS
BLUE – EVEN" SIZES	FROM GENERATOR TO ELEC ROOM 4-3" SCH 80 PVC TO GENERATOR 2- ¾" SCED 80 PVC – FANS
GREEN	FROM ELEC. ROOM TO THE PUMP ROOM 4-3" SCH 80 PVC- PUMP MOTORS 2 – 1½" SCH 80 PVC JOCKEY PUMPS

NOTE: NOT TO SCALE. ESTIMATIONS ON TOTAL FEET ARE NOT FIELD VERIFIED.

NOTES:
1. CONTRACTOR SHALL COORDINATE WITH SLEEVE VALVE MANUFACTURER AND CITY TO CONNECT OWNER PROVIDED SLEEVE VALVE TO EXISTING SCADA AND ELECTRICAL SYSTEM.

REV	DATE	DESCRIPTION	BY
C	07/2019	ISSUED FOR BID DRAWINGS	PFH

Designed WTH/ECS
Drawn PFH
Checked WTH
Reviewed AWD
Approved WTH

LINE IS 1" AT FULL SIZE

CITY OF TAMPA WATER DEPARTMENT
INTERBAY CONTROL VALVE AND COATING IMPROVEMENTS

ELECTRICAL

EXISTING ELECTRICAL PLAN PROVIDED FOR REFERENCE

PROJECT NO.: 0817
SCALE: NOTED
REVISION: C
DRAWING NO. E01
SHEET NO.: 11 OF 11

REISS ENGINEERING, INC.
3030 NORTH ROCKY POINT DR
SUITE 161 TAMPA, FL 33607
(813) 549-0919
CERTIFICATE OF AUTH. 8181