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Contract Administration Department
306 E. Jackson St. #280A4N
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(813)274-8456

CITY of TAMPA

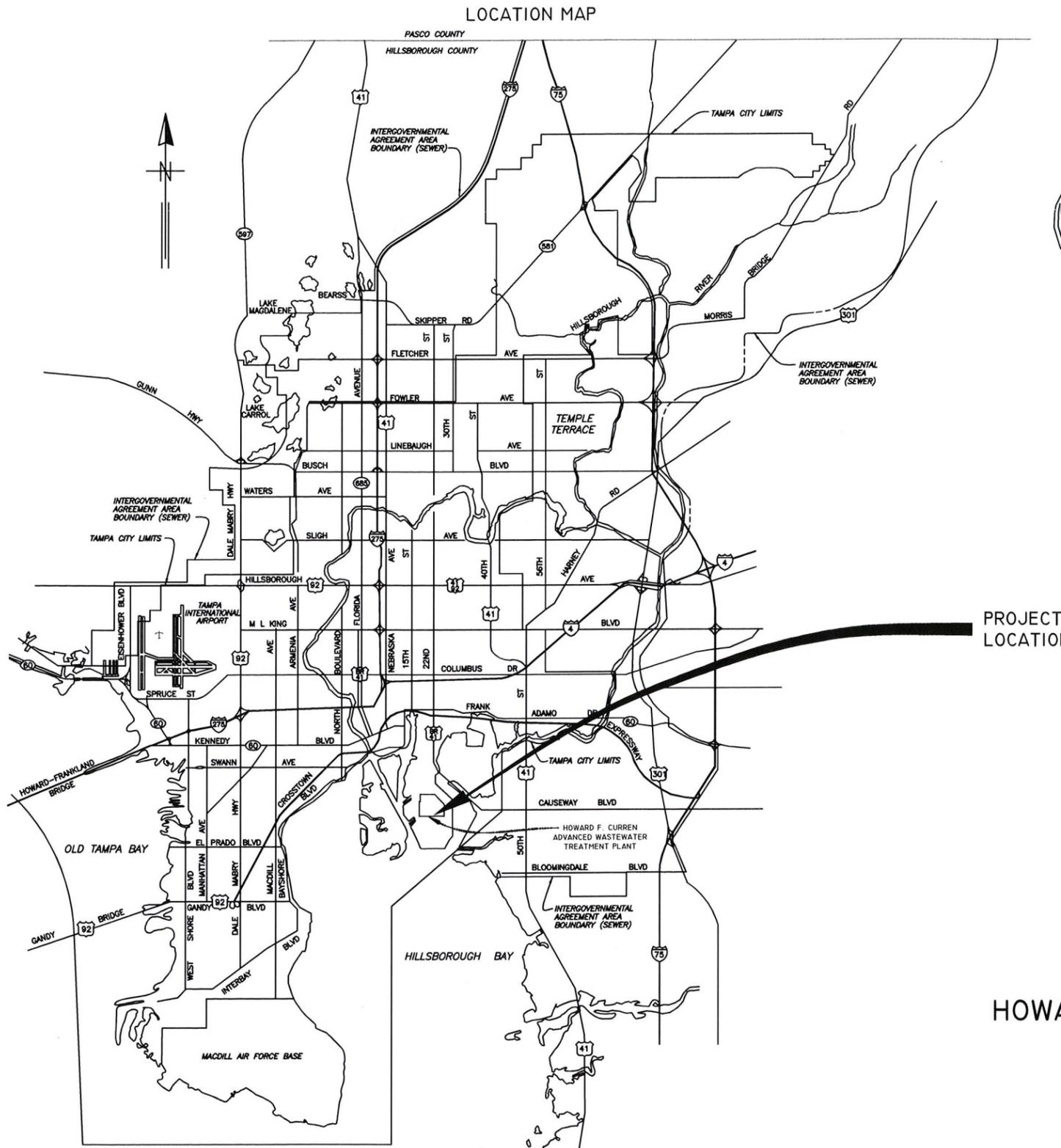


WASTEWATER DEPARTMENT

PLANS FOR

HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT DENITRIFICATION FILTERS MEDIA REPLACEMENT

CONTRACT No. 15-C-00008



PROJECT LOCATION

NOTE:

ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.

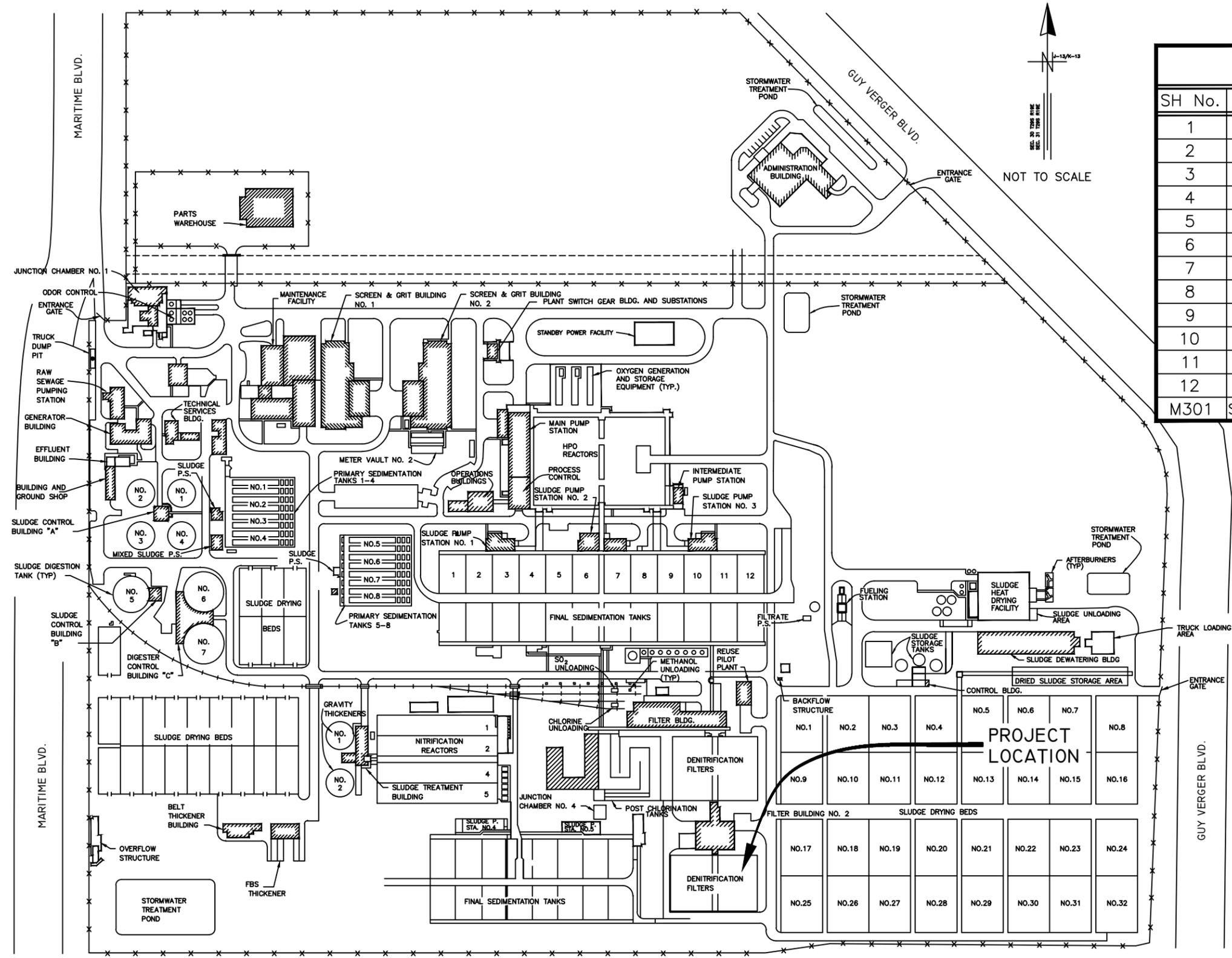
Jacinto Carlos Ferras 12/5/14
 JACINTO CARLOS FERRAS, P.E. #49454
 DESIGN DIVISION HEAD
 WASTEWATER DEPARTMENT

DES:	No.	DATE	REVISIONS
CB	3		
DRN: BB	2		
CKD:	1		
DATE:			

CITY of TAMPA
 HOWARD F. CURREN
 ADVANCED WASTEWATER TREATMENT PLANT

• COVER SHEET •

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CITY of TAMPA
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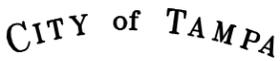
HOWARD F. CURREN A.W.T.P.
 DENITRIFICATION FILTERS MEDIA REPLACEMENT
 PROJECT MAP & INDEX

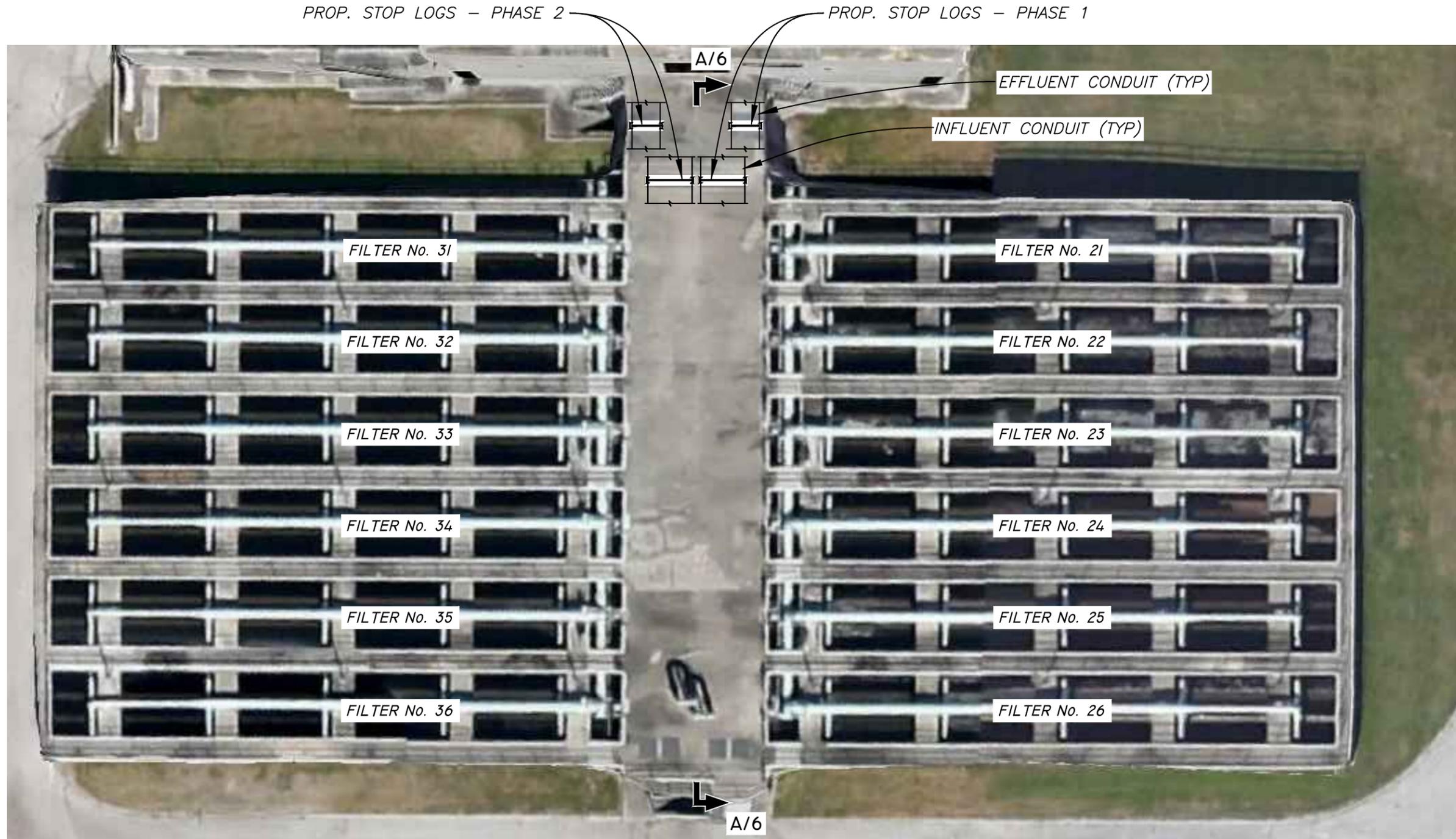
GENERAL NOTES

- G-1. EXISTING DIMENSIONS ARE BASED ON THE BEST INFORMATION AVAILABLE. TRUE DIMENSIONS SHALL BE DETERMINED IN THE FIELD.
- G-2. SHOP DRAWINGS SHALL BE SUBMITTED AND APPROVED BY THE CITY FOR ALL 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.
- G-3. OSHA STANDARD SAFETY EQUIPMENT FOR CONFINED SPACE AREA SUCH AS, BUT NOT LIMITED TO, SAFETY HARNESSSES, GAS MONITORS, LOWER EXPLOSIVE LIMIT (LEL) DETECTORS, BREATHING APPARATUS, ETC. SHALL BE UTILIZED WHERE THE WORK DICTATES THEIR USE.
- G-4. CONTRACTOR SHALL REPLACE 12 DUAL CELL DENITRIFICATION FILTER TANKS UNDERDRAIN BLOCKS, FILTER MEDIA AND SUPPORT GRAVEL WITHIN THE EXISTING CONCRETE FILTER TANKS. SALVAGEABLE MATERIALS AS DETERMINED BY THE WASTEWATER DEPARTMENT PERSONNEL SHALL BE DELIVERED TO AN ONSITE LOCATION AT THE HFC AWP. NON- SALVAGEABLE MATERIALS ARE TO BE REMOVED FROM THE SITE AND PROPERLY DISPOSED OF AT THE CONTRACTOR'S EXPENSE. IN GENERAL, THE SUPPORT GRAVEL AND FILTER MEDIA SHALL REMAIN THE PROPERTY OF THE CITY. APPROXIMATELY, 3,000 TONS OF FILTER BLOCKS SHALL BE REMOVED AND PROPERLY DISPOSED OF FROM THE EXISTING 12 FILTER TANKS. REFER TO DISPOSAL OF DEBRIS SECTION IN THE SPECIFICATIONS.
- G-5. THE PROPOSED UNDERDRAIN FILTER BLOCKS SHALL BE THE SNAP-T UNDERDRAIN BLOCK AS MANUFACTURED BY SEVERN TRENT WATER PURIFICATION, INC. THE PROPOSED FILTER MEDIA, SUPPORT GRAVEL AND SNAP-T UNDERDRAIN BLOCK SHALL BE SUPPLIED BY ONE MANUFACTURER SEVERN TRENT SERVICES. THE FILTER UNDERDRAIN BLOCK IS A SOLE SOURCE ITEM AND NO "OR EQUAL" SUBMITTALS WILL BE CONSIDERED. REFER TO SPECIFICATIONS.
- G-6. BYPASS PUMPING WILL NOT BE REQUIRED. ISOLATION OF THE FILTER TANKS SHALL BE PROVIDED BY INSTALLATION OF STOP LOGS, REFER TO PLAN SHEET 5 FOR EXACT LOCATIONS. AFTER STOP LOGS ARE INSTALLED, THE CONTRACTOR WILL BE REQUIRED TO SUPPLY DEWATERING PUMPS NECESSARY TO REMOVE THE REMAINING WATER IN THE EFFLUENT CONDUIT. ACCESS TO EACH FILTER TANK UNDERDRAIN SUMP AREA SHALL BE THROUGH THE 30" ACCESS MANHOLE.
- G-7. THIS WORK REQUIRES TAKING ONE SET OF FILTER TANKS (6 TOTAL) OUT OF SERVICE AT ONE TIME. CONTRACTOR SHALL COORDINATE ALL CONSTRUCTION ACTIVITIES WITH TREATMENT PLANT PERSONNEL AND THE CONTRACT ADMINISTRATION DEPARTMENT. NO WORK SHALL COMMENCE UNTIL ALL FILTER BLOCKS, MEDIA, GRAVEL, PIPING, EQUIPMENT AND APPURTENANCES ARE LOCATED ON SITE.
- G-8. THE CONTRACTOR SHALL ALLOW 3 WEEKS IN BETWEEN PHASE 1 AND PHASE 2 OF THE DENITRIFICATION FILTER MEDIA REPLACEMENT TO ALLOW SEEDING OF THE NEW FILTER MEDIA COMPONENTS.
- G-9. KNIFE GATE VALVES WITH HAND WHEEL OPERATORS SHALL BE SIZE 20-INCH DEZURIK KGC-HD HEAVY DUTY CAST STAINLESS STEEL, OR APPROVED EQUAL.
- G-10. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED ITEMS DURING THE REPLACEMENT PROJECT, IN KIND OR BETTER.

STOP LOG NOTES

- S-1) CONTRACTOR WILL BE REQUIRED TO FABRICATE AND INSTALL (2) 304 STAINLESS STEEL STOP LOGS.
- S-2) STOP LOGS SHALL BE CONSTRUCTED WITH 304 SS STRUCTURAL MEMBERS AND PLATES.
- S-3) (1) STOP LOG SHALL BE DESIGNED FOR THE DENITRIFICATION FILTER TANK EFFLUENT CONDUIT TO RESIST A MAXIMUM WATER HEIGHT OF 15' WITH A MAXIMUM DEFLECTION OF .125" AND SHALL BE AS WATERTIGHT AS POSSIBLE WITH RUBBER MATERIAL SECURELY ATTACHED TO ITS "WETTED" PERIMETER. APPROXIMATE HEIGHT OF STOP LOG IS 30'-0" AND WIDTH OF THE STOP LOG GROOVE OPENING IS APPROXIMATELY 5'-2". CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL. FABRICATION DRAWINGS MUST REFLECT FIELD VERIFIED MEASUREMENTS. THE CONTRACTOR IS ENCOURAGED TO MEASURE THE CITY'S STOP LOG FOR THE EFFLUENT CONDUIT FOR MEASUREMENT GUIDANCE PRIOR TO FABRICATION OF PROPOSED STOP LOG.
- S-4) (1) STOP LOG SHALL BE DESIGNED FOR THE DENITRIFICATION FILTER TANK INFLUENT CONDUIT TO RESIST A MAXIMUM WATER HEIGHT OF 4' WITH A MAXIMUM DEFLECTION OF .125" AND SHALL BE AS WATERTIGHT AS POSSIBLE WITH RUBBER MATERIAL SECURELY ATTACHED TO ITS "WETTED" PERIMETER. APPROXIMATE HEIGHT OF STOP LOG IS 5'-0" AND WIDTH OF THE STOP LOG GROOVE OPENING IS APPROXIMATELY 8'-2". CONTRACTOR SHALL SUBMIT FABRICATION DRAWINGS TO THE ENGINEER FOR REVIEW AND APPROVAL. FABRICATION DRAWINGS MUST REFLECT FIELD VERIFIED MEASUREMENTS.
- S-5) THE EXISTING STOP LOG GROOVES ARE 1/4" THICK FRP CHANNELS. THE SIZE OF THE GROOVE IS ONLY 6" WIDE BY 1 5/8" DEEP. IT IS RECOMMENDED THAT THE CONTRACTOR MEASURE THE STOP LOG GROOVE IN MULTIPLE LOCATIONS FOR UNIFORMITY PRIOR TO STOP LOG FABRICATION.
- S-6) CONTRACTOR SHALL INSTALL STOP LOGS AS REQUIRED. AFTER STOP LOGS ARE INSTALLED, THE CONTRACTOR WILL BE REQUIRED TO SUPPLY DEWATERING PUMPS NECESSARY TO REMOVE THE REMAINING WATER IN THE EFFLUENT CONDUIT.
- S-7) CONTRACTOR SHALL MINIMIZE ANY STOP LOG LEAKAGE AS NECESSARY TO FACILITATE THE WORK REQUIRED IN THIS CONTRACT. LEAKAGE MAY BE REDUCED BY INSTALLING VISQUEEN ROLLS BEHIND (WATER SIDE) OF STOP LOGS, OR INJECT OAKUM. ALL ITEMS LISTED SHALL BE CONTAINED, REMOVED AND PROPERLY DISCARDED OF AFTER WORK HAS COMPLETED.
- S-8) AT THE COMPLETION OF THIS PROJECT THE (2) STOP LOGS SHALL BECOME THE PROPERTY OF THE CITY OF TAMPA.

No.	DATE	REVISIONS	No.	DATE	REVISIONS	DES: <i>CB</i>	 <p>HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT</p>	<p>HOWARD F. CURREN A.W.T.P. DENITRIFICATION FILTERS MEDIA REPLACEMENT GENERAL NOTES</p>	W.O.1000390
3			6			DRN: <i>BB</i>			SHEET
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DENITRIFICATION FILTER TANKS - AERIAL VIEW

NOT TO SCALE



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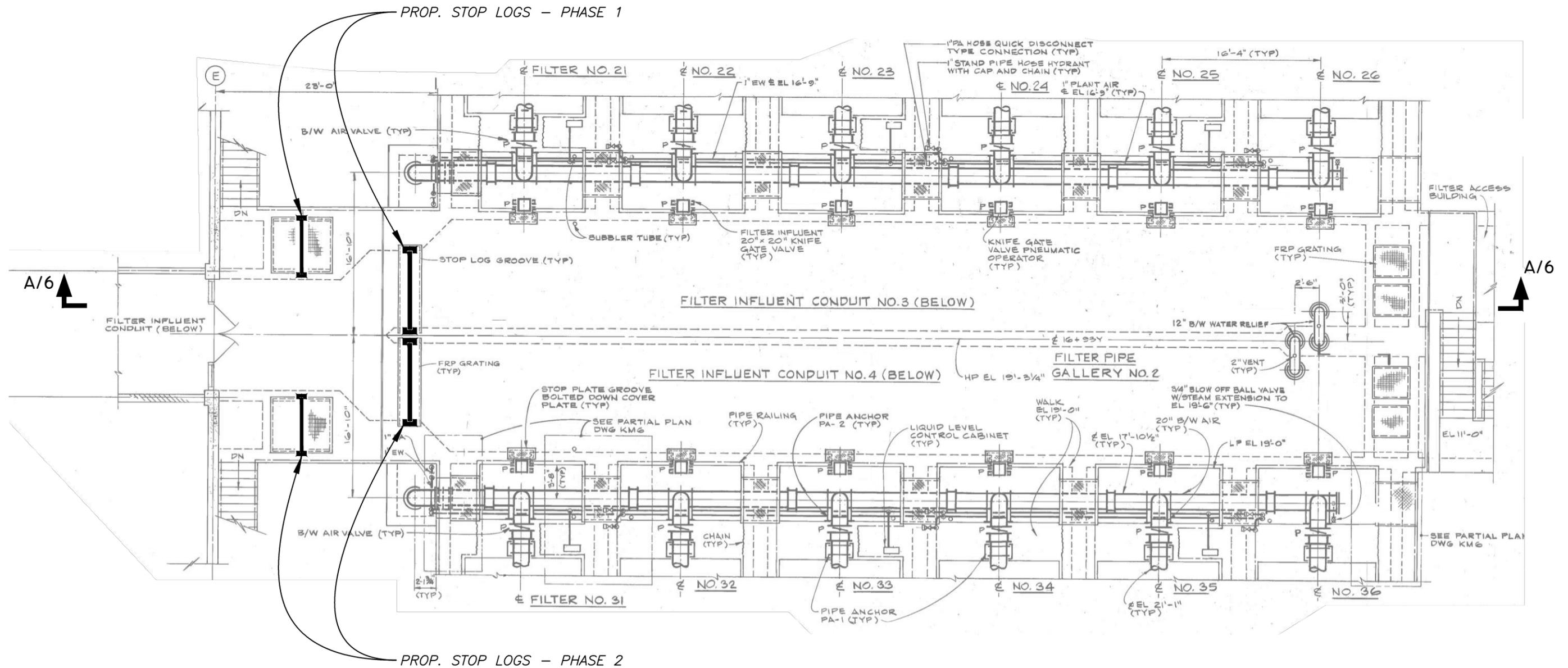
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CITY of TAMPA
 HOWARD F. CURREN
 ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN A.W.T.P.
 DENITRIFICATION FILTERS MEDIA REPLACEMENT
 AERIAL VIEW

W.O.1000390
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J-13
K-13
SEC. 30 T29S R19E
SEC. 31 T29S R19E



PLAN VIEW AT ELEV. 19'-0"

APPROX. SCALE: 3/32" = 1'-0"

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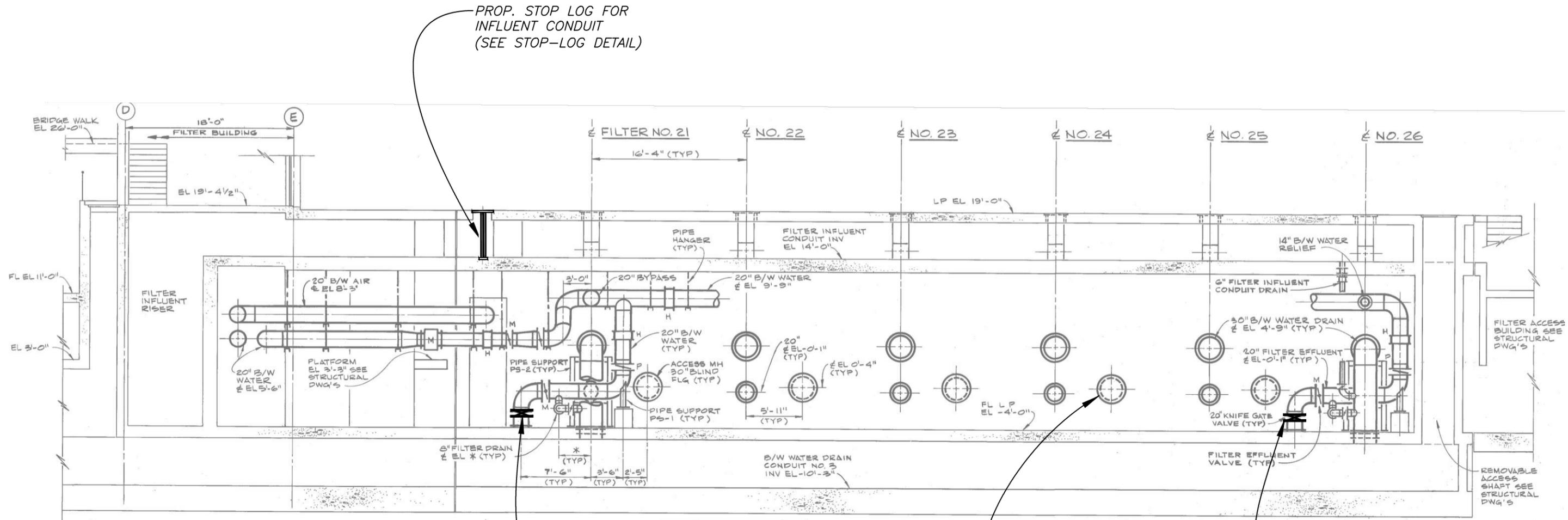
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CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN A.W.T.P.
DENITRIFICATION FILTERS MEDIA REPLACEMENT
PLAN VIEW AT ELEV. 19'-0"

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PROP. STOP LOG FOR INFLUENT CONDUIT (SEE STOP-LOG DETAIL)

PROP. 20" KNIFE-GATE VALVE (TYP. OF 12)

PROP. 20" KNIFE-GATE VALVE (TYP. OF 12)

30" BLIND FLANGE TO BE REMOVED TO GAIN ACCESS TO EACH FILTER TANK (TO BE REINSTALLED AFTER WORK IS COMPLETED USING NEW 30" NEOPRENE RUBBER GASKET)(TYP. OF 12)

SECTION VIEW A/5
APPROX. SCALE: 3/32" = 1'-0"

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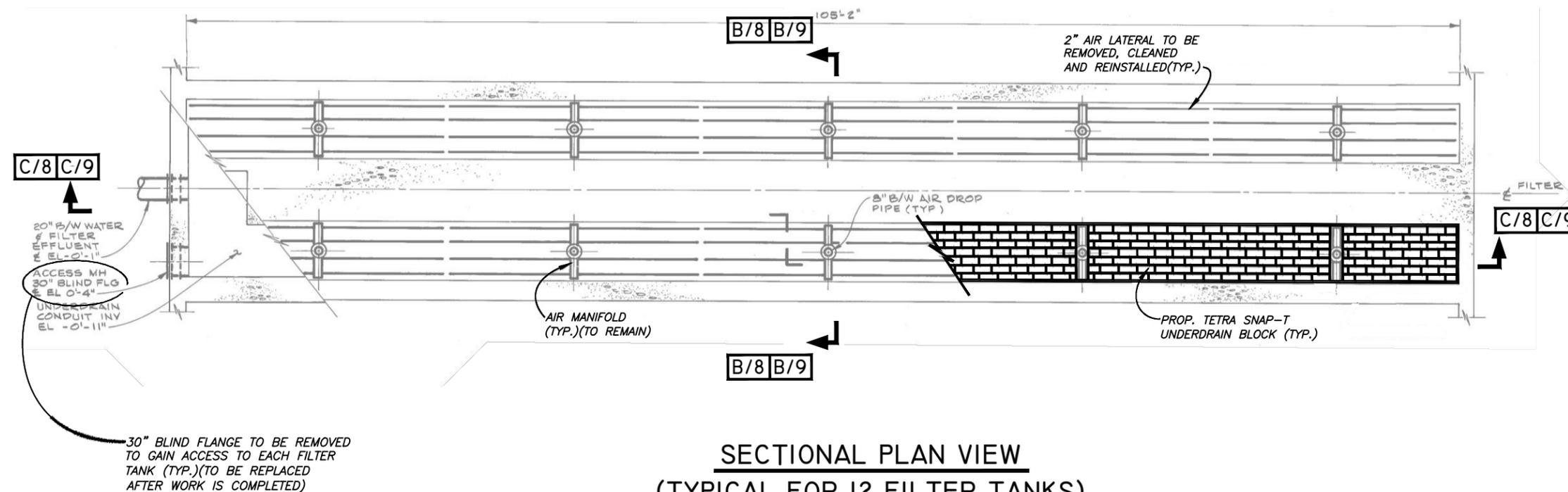
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CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN A.W.T.P.
DENITRIFICATION FILTERS MEDIA REPLACEMENT
SECTION VIEW - EAST SIDE TANKS

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



**SECTIONAL PLAN VIEW
(TYPICAL FOR 12 FILTER TANKS)**
APPROX. SCALE: 3/32" = 1'-0"

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DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT

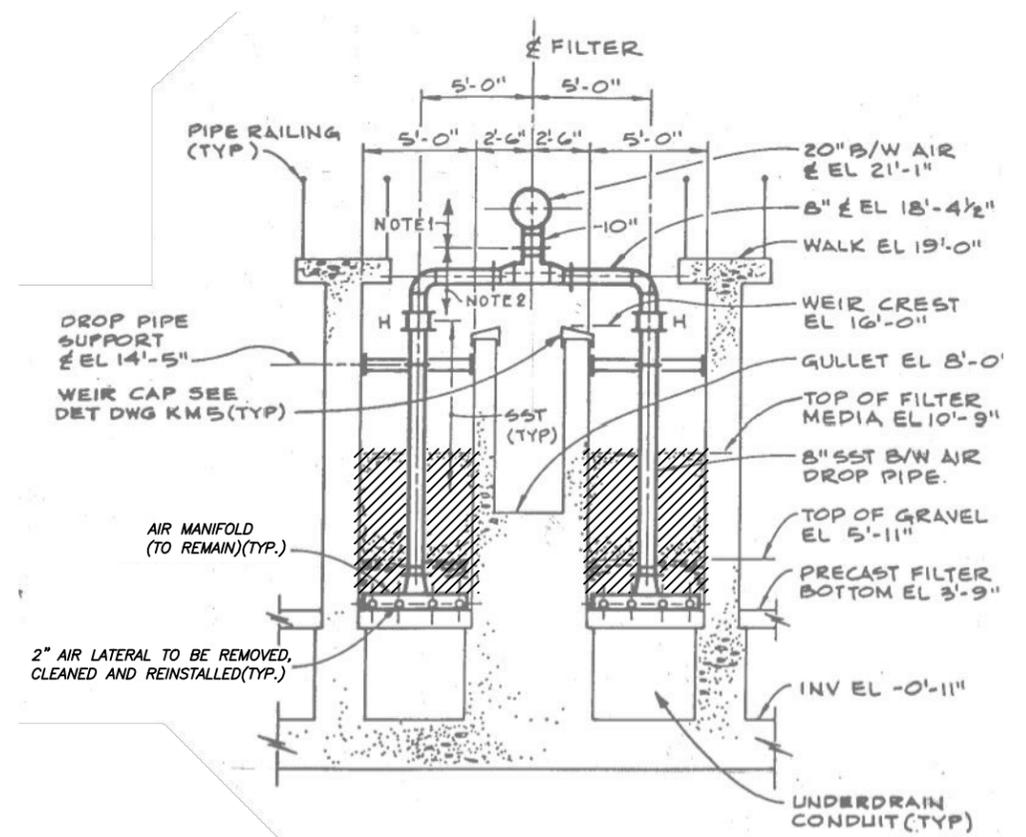
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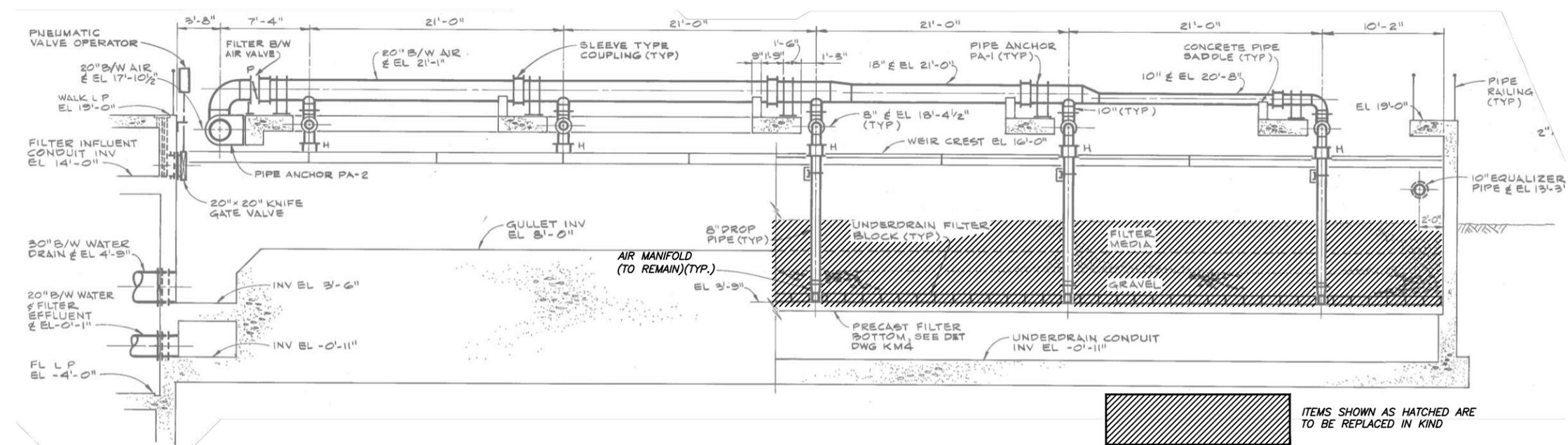
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HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN A.W.T.P.
DENITRIFICATION FILTERS MEDIA REPLACEMENT
TYPICAL SECTIONAL PLAN VIEW

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DEMOLITION SECTION B/7
APPROX. SCALE: 1/8" = 1'-0"

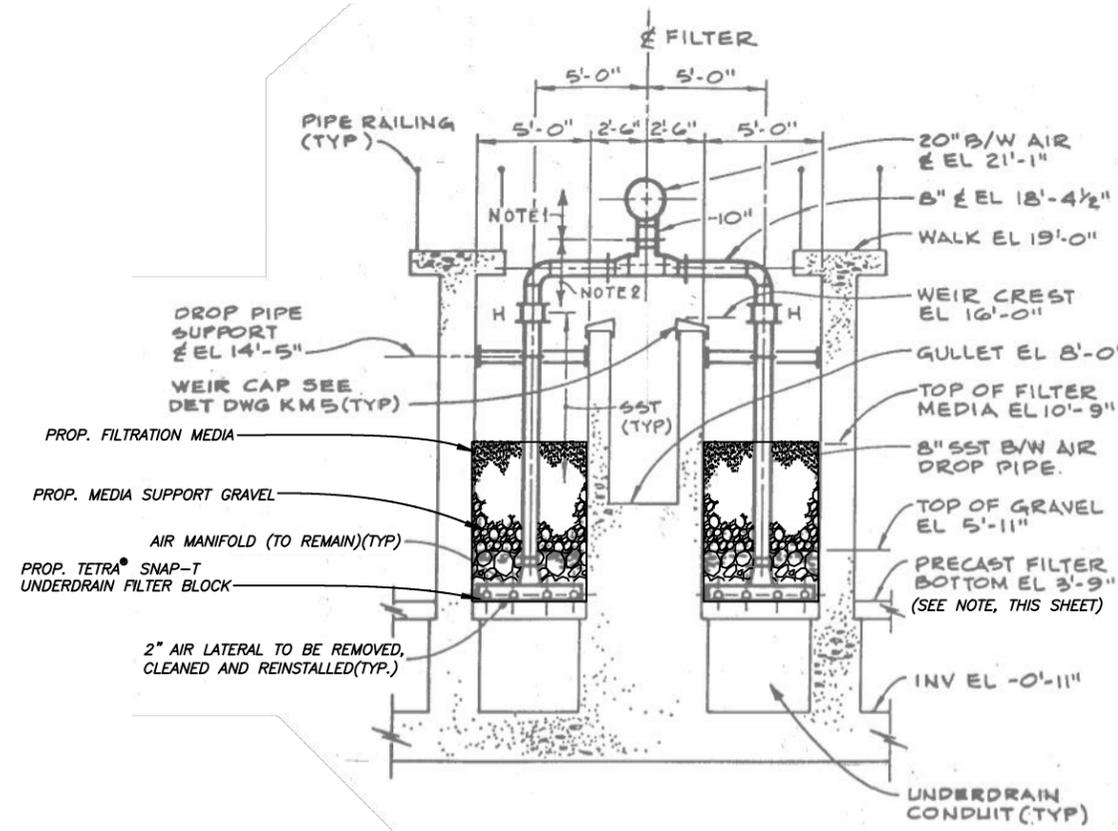


DEMOLITION SECTION C/7
APPROX. SCALE: 3/32" = 1'-0"

ITEMS SHOWN AS HATCHED ARE TO BE REPLACED IN KIND

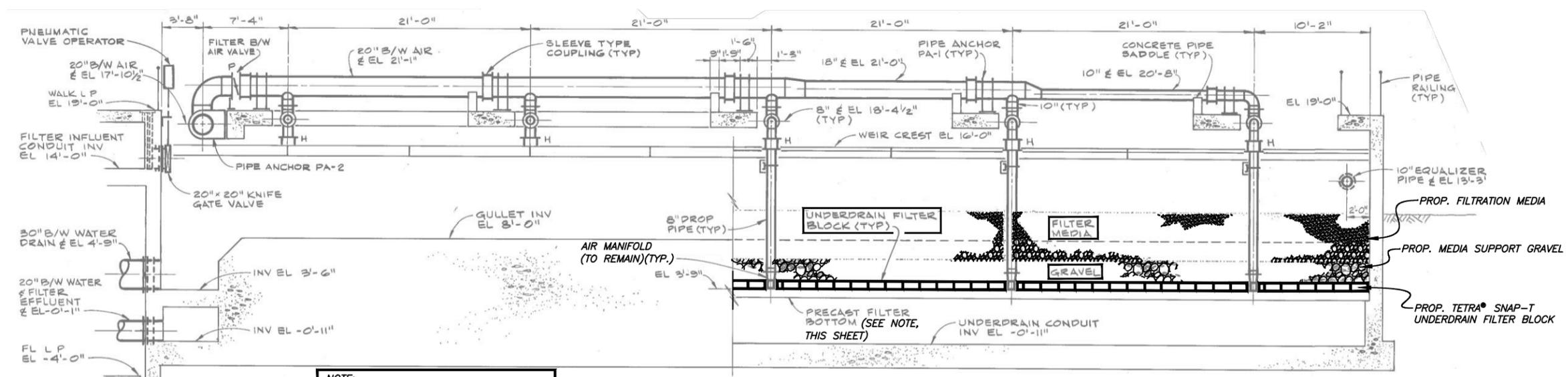
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JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: <i>CB</i>	CITY of TAMPA HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT	HOWARD F. CURREN A.W.T.P. DENITRIFICATION FILTERS MEDIA REPLACEMENT DEMOLITION SECTIONS	W.O.1000390
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NOTE:
 THE CONTRACTOR SHALL REMOVE AND REPLACE ONE TYPE A OR TYPE B PRECAST FILTER BOTTOM IN EACH FILTER FOR ADDITIONAL ACCESS TO SUMP AREA FOR CLEANING. THE CONTRACTOR CAN REMOVE (2) PRECAST FILTER BOTTOMS PER TANK FOR A TOTAL OF (24) PRECAST FILTER BOTTOMS TO BE REPLACED. THE PRECAST FILTER BOTTOM SHALL BE REPLACED IN ACCORDANCE WITH THE AS-BUILT DETAILS ON SHEET 12.

PROPOSED SECTION B/7
 APPROX. SCALE: 1/8" = 1'-0"



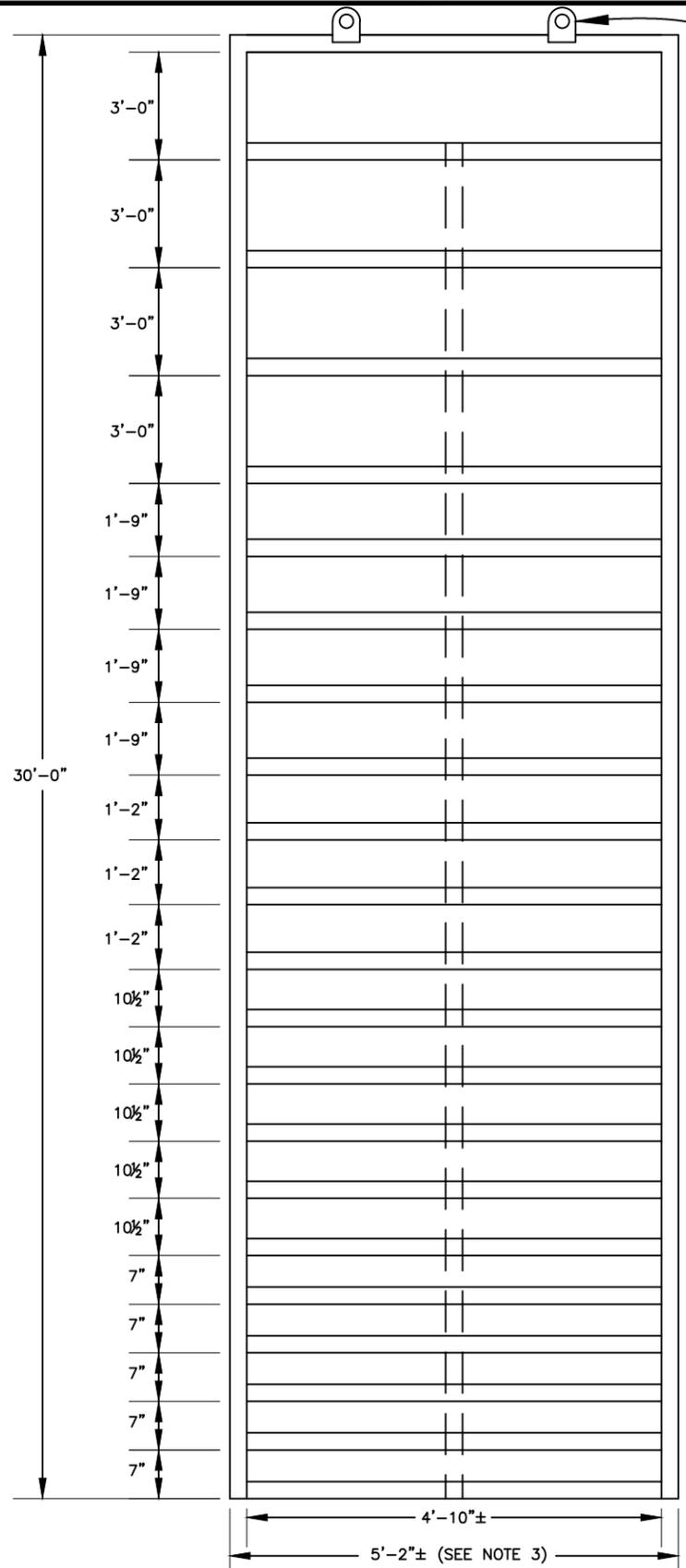
NOTE:
 SECTION C SHOWS HALF OF A FILTER TANK. SIMILAR WORK IS REQUIRED FOR THE OTHER HALF.

PROPOSED SECTION C/7
TYPICAL FOR 12 TANKS
 APPROX. SCALE: 3/32" = 1'-0"

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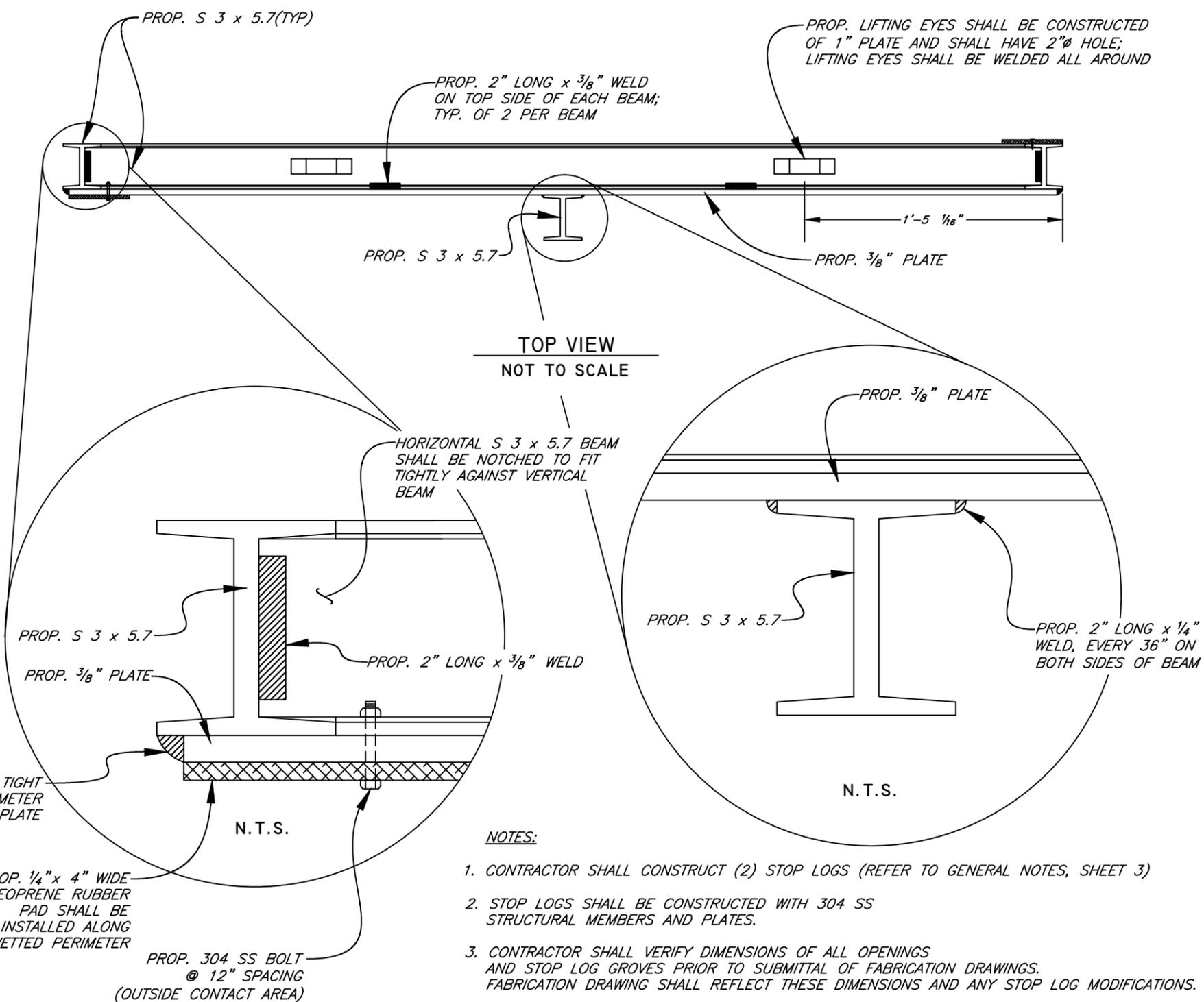
JACINTO CARLOS FERRAS, P.E. #49454 DESIGN DIVISION HEAD WASTEWATER DEPARTMENT	No.	DATE	REVISIONS	DES: <i>CB</i>	CITY of TAMPA HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT	HOWARD F. CURREN A.W.T.P. DENITRIFICATION FILTERS MEDIA REPLACEMENT PROPOSED SECTIONS AND DETAILS	W.O.1000390
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FRONT VIEW
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PROP. LIFTING EYES SHALL BE CONSTRUCTED OF 1" PLATE AND SHALL HAVE 2"Ø HOLE; LIFTING EYES SHALL BE WELDED ALL AROUND

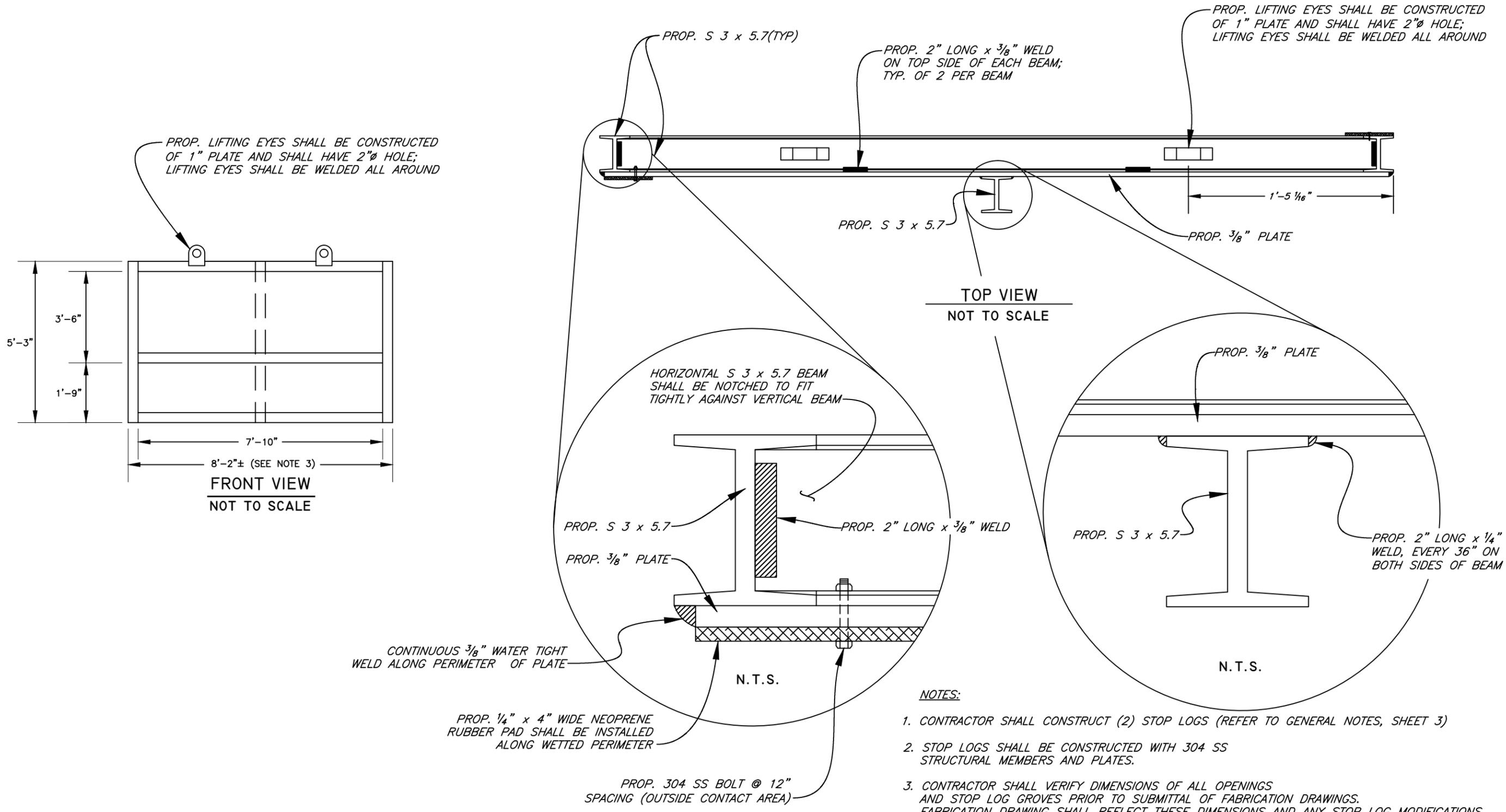


- NOTES:**
1. CONTRACTOR SHALL CONSTRUCT (2) STOP LOGS (REFER TO GENERAL NOTES, SHEET 3)
 2. STOP LOGS SHALL BE CONSTRUCTED WITH 304 SS STRUCTURAL MEMBERS AND PLATES.
 3. CONTRACTOR SHALL VERIFY DIMENSIONS OF ALL OPENINGS AND STOP LOG GROVES PRIOR TO SUBMITTAL OF FABRICATION DRAWINGS. FABRICATION DRAWING SHALL REFLECT THESE DIMENSIONS AND ANY STOP LOG MODIFICATIONS.

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DES: CB	CITY of TAMPA HOWARD F. CURREN ADVANCED WASTEWATER TREATMENT PLANT	HOWARD F. CURREN A.W.T.P. DENITRIFICATION FILTERS MEDIA REPLACEMENT STOP LOG DETAILS - EFFLUENT CONDUIT	W.O.1000390
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JACINTO CARLOS FERRAS, PE #49454
DESIGN DIVISION HEAD
WASTEWATER DEPARTMENT



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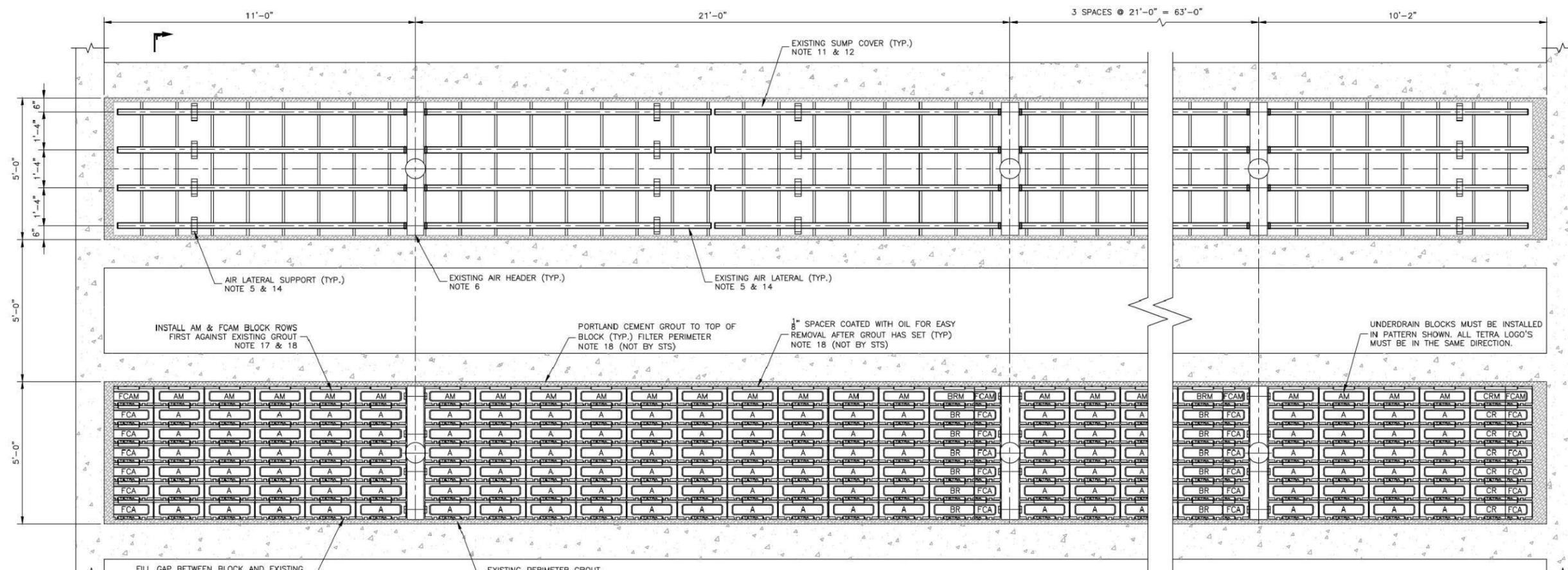
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CITY of TAMPA
HOWARD F. CURREN
ADVANCED WASTEWATER TREATMENT PLANT

HOWARD F. CURREN A.W.T.P.
DENITRIFICATION FILTERS MEDIA REPLACEMENT
STOP LOG DETAILS - INFLUENT CONDUIT

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FILTER PLAN AT TOP OF UNDERDRAIN
 FILTER CELLS ARE SIMILAR
 SCALE: N.T.S.

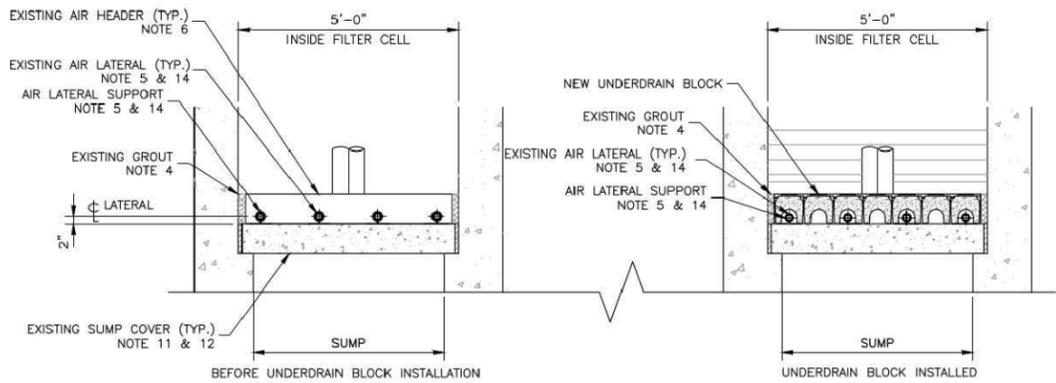
EXISTING FILTER DEMOLITION & REBUILD NOTES:

1. COMPLETELY DRAIN FILTER.
 2. REMOVE ALL OLD MEDIA AND GRAVEL AND DELIVER TO THE CITY.
 3. REMOVE ALL OLD UNDERDRAIN BLOCK AND DELIVER TO THE CITY.
 4. THE GROUT AROUND THE PERIMETER OF THE EXISTING UNDERDRAIN IS NOT TO BE DISTURBED NOR BROKEN OUT.
 5. CAREFULLY REMOVE ALL AIR LATERALS AND AIR LATERAL SUPPORTS. CLEAN. MAKE SURE ALL AIR DISTRIBUTION HOLES ARE CLEAR AND INTERNALS ARE DIRT AND DEBRIS FREE. COVER AND STORE IN A CLEAN ENVIRONMENT. MAKE SURE AIR LATERALS HAVE CENTER PUNCH MARK ON TOP LOCATION. TEMPORARILY COVER HEADER COUPLINGS WITH MASKING TAPE OR PLASTIC PLUGS TO PREVENT DEBRIS FROM ENTERING AIR HEADER.
 6. OMITTED BY CITY
 7. OMITTED BY CITY
 8. OMITTED BY CITY
 9. OMITTED BY CITY
 10. MAKE SURE 1" GAPS BETWEEN SUMP PLATES ARE TOTALLY CLEAR FROM OBSTRUCTIONS SO WATER CAN PASS THROUGH FREELY. IF NOT, THESE MUST BE THOROUGHLY CLEANED AND INSPECTED AS DIRECTED BY THE SERVICE ENGINEER.
 11. OMITTED BY CITY
 12. OMITTED BY CITY
 13. CLEAN FILTER FLOOR OF ANY DEBRIS.
 14. REMOVE TEMPORARY TAPE OR PLUGS ON AIR HEADER AND INSTALL CLEANED AIR LATERALS. SCREW AIR LATERAL INTO COUPLING ON AIR HEADER USING TEFLON TAPE OR THREAD LUBRICANT ON THREADS AND TIGHTEN SECURELY WITH PIPE WRENCH TO APPROX. 100# TORQUE. CENTER PUNCH MARK ON THREADED END OF AIR LATERAL MUST BE ON TOP TO ASSURE ALIGNMENT OF HOLES ON BOTTOM OF AIR LATERAL. DO NOT BLOCK HOLES IN AIR LATERALS.
 15. FILL FILTER WITH 3" INCHES OF WATER COVERING AIR LATERALS AND TURN AIR ON TO FILTERS FOR AN AIR PATTERN TEST. CHECK AIR PATTERN. MAKE SURE THERE ARE NO DEAD SPOTS IN FILTERS AIR GRID. IF A DEAD SPOT IS PRESENT, MARK LATERALS, SHUT OFF AIR, DRAIN FILTER, REMOVE, CLEAN AND REPLACE CLOGGED LATERALS. REPEAT AIR PATTERN TEST UNTIL NO DEAD SPOTS APPEAR.
 16. SHUT OFF AIR AND DRAIN FILTER.
 17. BLOCKS MUST BE INSTALLED IN THE PATTERN SHOWN.
- a. BLOCKS MUST BE PLACED ONE ROW AT A TIME, COMPLETING THAT ROW BEFORE STARTING THE NEXT ROW.
 - b. BEGIN PLACEMENT AGAINST AIR HEADER BEGINNING WITH AM, BRM, CRM & FCAM BLOCK. THESE BLOCKS DO NOT HAVE THE MALE LUGS ON SIDE OF BLOCK. THEN WORK TO THE OUTER PERIMETER OF THE CELL LAYING ONE COMPLETE ROW AT A TIME. SOME BLOCKS MAY NEED TO BE SAW CUT TO FIT LENGTHWISE. REVIEW REBUILD UNDERDRAIN DRAWINGS.
 - c. IF STEPS A AND B ARE NOT FOLLOWED EXACTLY, THE UNDERDRAIN BLOCKS WILL NOT FIT.
 18. INSTALL NEW GROUT TO ANY DAMAGED AREAS. DISTANCE FROM UNDERDRAIN BLOCK TO GROUT TO BE 1/4".
 19. INSTALLATION INSTRUCTIONS FOR NEW GRAVEL AND MEDIA.
 - a. THE FILTER UNDERDRAIN SYSTEM INSTALLATION MUST BE INSPECTED AND APPROVED BY A STS REPRESENTATIVE BEFORE GRAVEL LAYERS AND MEDIA ARE INSTALLED. THE GRAVEL LAYERS AND MEDIA MUST BE INSTALLED UNDER THE SUPERVISION OF A STS REPRESENTATIVE.
 - b. MEASURE FROM THE TOP OF THE UNDERDRAIN BLOCKS AND SCRIBE LINES AROUND THE INTERIOR FILTER SIDE WALLS TO LOCATE THE TOP OF EACH LAYER.
 - c. SEE CHART ON DRAWING FOR TOTAL VOLUME (CU. FT.) FOR EACH LAYER BEING INSTALLED. FROM THE CHART AND SIZE OF BAGS BEING USED, ESTIMATE THE NUMBER OF BAGS REQUIRED FOR EACH LAYER.
 - d. CAREFULLY PLACE GRAVEL OR MEDIA ON TOP OF UNDERDRAIN BLOCKS OR PREVIOUS LAYER, SO THAT MINIMUM LATERAL SPREADING AND INTERMIXING OF LAYERS OCCURS.
 - e. USING A STRAIGHT EDGE AND THE SCRIBED LINES, BUILD UP EACH LAYER TO THE REQUIRED HEIGHT. THE TOP OF EACH LAYER IS TO BE LEVEL IN TWO DIRECTIONS ACROSS THE FILTER. WHILE INSTALLING AND LEVELING LAYERS, THE LAYERS MUST NOT BE WALKED ON - USE BOARDS FOR WORKING SURFACES. REMOVE BOARDS FROM BETWEEN LAYERS WHEN INSTALLING THE NEXT LAYER.
 - f. COVER THE FINAL LAYER WITH PLASTIC UNTIL THE FILTERS ARE PLACED INTO SERVICE TO KEEP THE MEDIA FROM BEING CONTAMINATED WITH FOREIGN MATERIAL.

GRAVEL & MEDIA MATERIAL LIST		
LAYER No.	GRAIN SIZE	TOTAL VOLUME FOR ONE FILTER
LAYER #1	1 1/2" x 3/4" GRAVEL	193 CU. FT.
LAYER #2	3/4" x 1/2" GRAVEL	106 CU. FT.
LAYER #3	1/2" x 1/4" GRAVEL	175 CU. FT.
LAYER #4	3/4" x 1/8" GRAVEL	175 CU. FT.
LAYER #5	1/2" x 1/4" GRAVEL	175 CU. FT.
LAYER #6	TETRA #5 SAND	2366 CU. FT.
LAYER #7		

ONE CUBIC FOOT OF GRAVEL OR SAND WEIGHS 100 LBS.

BLOCK MATERIAL LIST FOR ONE FILTER CELL (BY STS)		
MARK	LENGTH	QUANTITY
A	1'-9 3/8"	294
AM	1'-9 3/8"	49
FCA	FIELD CUT MARK A	36
FCAM	FIELD CUT MARK AM	6
BR	1'-3"	24
BRM	1'-3"	1
CR	1'-7 1/4"	6
CRM	1'-7 1/4"	1



SECTION A-A
 SCALE: N.T.S.

NO.	REVISIONS	BY	DATE	APP'D	NO.	REVISIONS	BY	DATE	APP'D
A	FOR PROPOSAL	SS	11/14/2014	NPK					
B	FOR PROPOSAL	SS	12/3/2014	NPK					

SCALE	AS NOTED
APP'D	
DATE	
DESIGNED	
DRAFTED	SS
CHECKED	

FOR PROPOSAL ONLY

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**HOWARD CURREN WWTP
 CITY OF TAMPA, FLORIDA
 (24) 5'-0" x 105'-2" FILTER CELLS- REBUILDS
 FILTER FIELD INSTALLATION
 GENERAL ARRANGEMENT**



FILTRATION PRODUCTS		
CONTRACT No.	DWG No.	REV.
E34512-M301		B