

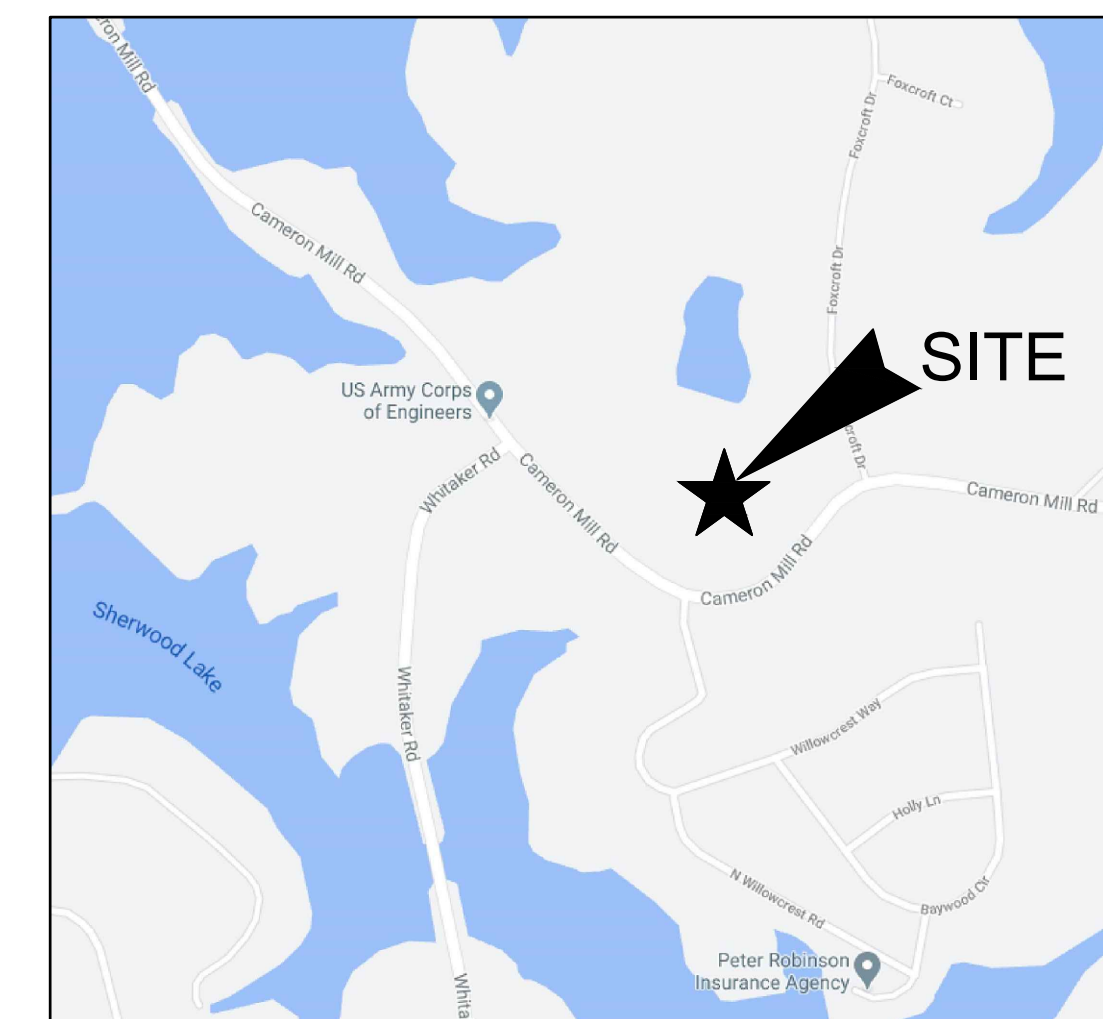
# WALT WILLIAMS FILTRATION PLANT FILTER REHABILITATION

980 CAMERON MILL RD, LAGRANGE, GEORGIA 30240



1201 Front Avenue // Suite F // Columbus, GA 31901  
PHONE (706) 321-4590

JULY 2022  
ISSUED FOR BID



LOCATION MAP

NOT TO SCALE

DRAWINGS MAY NOT HAVE BEEN PRINTED AT ORIGINAL FULL-SIZE SCALE

1 INCH



Know what's below.  
Call before you dig.

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**PIPING LABELING AND COATING SCHEDULE**

PIPING SYSTEM	LABEL	COATING COLOR
DRAIN/WASTE	DRAIN	LIGHT BROWN
BACKWASH/WASH	BACKWASH	BLUE
REWASH	REWASH	LIGHT GREEN
SURFACE SWEEP	SURFACE SWEEPS	DARK BLUE
INFLUENT	SETTLED	LIGHT LIGHT BLUE
EFFLUENT	FILTERED	LIGHT BLUE

**VALVE SCHEDULE**

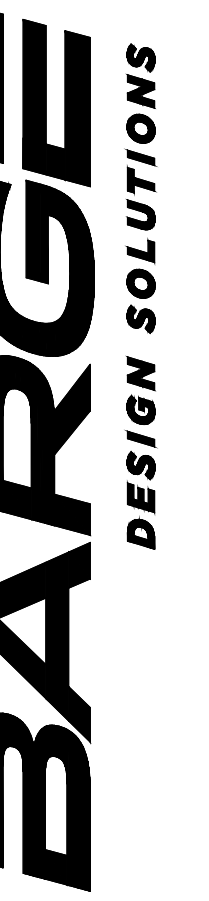
TAG NUMBER	NUMBER	DESCRIPTION	TYPE	SERVICE	NOMINAL SIZE (IN.)	OPERATOR	POSITION
<b>1949 Building</b>							
FV-4911/21/31/41	4	BUTTERFLY VALVE, FLANGED	Type V500	SETTLED (FILTER INFLUENT)	16	ELECTRIC	OPEN/CLOSE
FCV-4912/22/32/42	4	BUTTERFLY VALVE, FLANGED	Type V500	FILTERED (FILTER EFFLUENT)	8	ELECTRIC	MODULATING
FV-4912/23/33/43	4	BUTTERFLY VALVE, FLANGED	Type V500	BACKWASH (WASH)	18	ELECTRIC	OPEN/CLOSE
FV-4914/24/34/44	4	BUTTERFLY VALVE, FLANGED	Type V500	DRAIN (WASTE)	18	ELECTRIC	OPEN/CLOSE
FV-4915/25/35/45	4	BUTTERFLY VALVE, FLANGED	Type V500	REWASH (WASTE)	4	ELECTRIC	OPEN/CLOSE
FV-4916/26/36/46	4	BUTTERFLY VALVE, FLANGED	Type V500	SURFACE SWEEP	4	ELECTRIC	OPEN/CLOSE
<b>1969 Building</b>							
FV-6951/61/71/81	4	BUTTERFLY VALVE, FLANGED	Type V500	SETTLED (FILTER INFLUENT)	20	ELECTRIC	OPEN/CLOSE
FCV-6952/62/72/82	4	BUTTERFLY VALVE, FLANGED	Type V500	FILTERED (FILTER EFFLUENT)	12	ELECTRIC	MODULATING
FV-6953/63/73/83, FV-6953A/63A/73A/83A & FV-6953B/63B/73B/83B	12	BUTTERFLY VALVE, FLANGED	Type V500	BACKWASH (WASH)	16	ELECTRIC	OPEN/CLOSE
FV-6954/64/74/84	4	BUTTERFLY VALVE, FLANGED	Type V500	DRAIN (WASTE)	20	ELECTRIC	OPEN/CLOSE
FV-6955/65/75/85	4	BUTTERFLY VALVE, FLANGED	Type V500	REWASH (WASTE)	6	ELECTRIC	OPEN/CLOSE
FV-6956A/66A/76A/86A & FV-6956B/66B/76B/86B	8	BUTTERFLY VALVE, FLANGED	Type V500	SURFACE SWEEP	8	ELECTRIC	OPEN/CLOSE
FCV-6900	1	BUTTERFLY VALVE, FLANGED	Type V500	BACKWASH (WASH)	20	(ELECTRIC - EXISTING)	MODULATING
FV-6900	1	PLUG VALVE, FLANGED	Type V201	BACKWASH (WASH)	12	MANUAL	OPEN/CLOSE
FV-6902	1	PLUG VALVE, FLANGED	Type V201	SURFACE SWEEP	6	MANUAL	OPEN/CLOSE

**VENTURI SCHEDULE**

NUMBER	DESCRIPTION	TYPE	PIPE SERVICE	NOMINAL SIZE (IN.)
<b>1949 Building</b>				
4	VENTURI	VENTURI	FILTERED (FILTER EFFLUENT)	8
<b>1969 Building</b>				
4	VENTURI	VENTURI	FILTERED (FILTER EFFLUENT)	12

**INSTRUMENTATION LIST**

TAG NUMBER	NUMBER	DESCRIPTION	TYPE
AE-4910/20/30/40 & AE-6950/60/70/80 & AE-9209/10/11/12/13/14	14	HACH TURBIDIMETER	TU5300SC
AIT-4910/30 & AIT-6950/70 & AIT-9209/11/13	7	HACH CONTROLLER	SC4500



1201 Front Avenue / Suite F / Columbus, GA 31901  
PHONE (706) 321-4500



**GENERAL INFORMATION**

**WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION**  
LAGRANGE, GEORGIA

REV.	CHK.	DATE	DESCRIPTION
0	MA	JULY 12, 2022	ISSUED FOR BID

**00-G001**

FILE NO. 36432-11

USER:MPARKER  
FILE:36432-11\_00-G001.dwg  
SAVED:6/30/2022  
PLOT:6/30/2022

### VALVE DESIGNATIONS

SYMBOLS		TYPE
DOUBLE LINE	SINGLE LINE	
		FOOT VALVE
		VACUUM RELIEF VALVE
		PRESSURE RELEASE VALVE
		HOSE BIBB
		GATE VALVE
		ALTITUDE VALVE, PRESSURE CONTROL REGULATING VALVE, SURGE OR PRESSURE RELIEF
		BUTTERFLY VALVE
		BALL CONTROL VALVE
		BALL VALVE
		DIAPHRAGM VALVE
		FLOODWATER (DUCKBILL) VALVE
		CHECK VALVE
		WAFER CHECK VALVE
		CONE VALVE
		GLOBE VALVE
		PLUG VALVE
		MUD VALVE
		PINCH VALVE
		TAPPING SLEEVE AND VALVE
		TELESCOPIC VALVE

### SYMBOL LEGEND

DOUBLE LINE	SINGLE LINE	TYPE
		90° FLANGE BEND
		FLANGE TEE
		REDUCER CONCENTRIC
		FLOW METER
		FLEXIBLE CONNECTION
		PRESSURE INDICATOR
		SOLENOID OPERATED
		MOTOR OPERATED
		QUICK CONNECT COUPLING

### JOINT DESIGNATIONS

SYMBOL	TYPE
	FLANGED JOINT
	MECHANICAL JOINT
	THREADED JOINT
	PUSH ON JOINT
	BOLTED FLEXIBLE COUPLING
	GROOVED COUPLING
	SHOP WELDED JOINT (STEEL PIPE)
	FIELD WELDED JOINT (STEEL PIPE)
	SOCKET TYPE JOINT (FRP OR PVC PIPE)
	EXPANSION JOINT
	FLANGE ADAPTER COUPLING
	BLIND FLANGE
	DISMANTLING JOINT
	RESTRAINED FLANGE ADAPTOR

### PIPE DESIGNATIONS

SYMBOL	TYPE
	CORED HOLE IN EXISTING WALL
	WALL SLEEVE W/ WATER COLLAR (STANDARD)
	FLANGE X FLANGE WALL PIPE
	FLANGE X PLAIN END WALL PIPE
	FLANGE X PLAIN END WALL PIPE (TAPPED FOR STUDS)
	MECHANICAL JOINT X MECHANICAL JOINT WALL PIPE (TAPPED FOR STUDS)
	MECHANICAL JOINT X PLAIN END WALL PIPE (TAPPED FOR STUDS)
	PUSH ON BELL JOINT X PLAIN END WALL PIPE

### PIPING AND VALVES GENERAL NOTES

- INSTALL ALL PIPING SUPPORTS AND PIPING IN ACCORDANCE WITH THE LATEST EDITION OF THE ASME ANSI POWER PIPING CODE B 31.1.
- LOCATE PRESSURE TAPS ON THE TOP OF PROCESS PIPES, UNLESS OTHERWISE INDICATED ON DWGS.
- LOCATE SAMPLE TAPS ON THE SIDE OF PROCESS PIPES.
- LOCATE DRAIN TAPS ON THE BOTTOM OF PROCESS PIPES.
- UNLESS OTHERWISE NOTED, PIPE ELEVATIONS SHOWN ON PIPING DRAWINGS REFER TO CENTERLINE OF THE PIPE.
- ALL GROUND BURIED PIPING TO HAVE A MINIMUM OF 36" OF EARTH COVER OR AS DETAILED ON THE DRAWINGS. MAINTAIN MINIMUM CLEARANCE BETWEEN PIPES OF 6".
- INSTALL ALL PLUG, BUTTERFLY AND BALL VALVES WITH THE SHAFT IN THE HORIZONTAL POSITION, UNLESS OTHERWISE DIRECTED.

### SITE PLAN LEGEND

	NEW BUILDING
	EXISTING BUILDING
	NEW STRUCTURE (TANKS, ETC.)
	EXISTING STRUCTURE (TANKS, ETC.)
	FUTURE STRUCTURE
	NEW PIPING SINGLE LINE
	NEW PIPING DOUBLE LINE
	EXISTING PIPING SINGLE LINE
	EXISTING PIPING DOUBLE LINE
	NEW MANHOLE
	EXISTING MANHOLE
	NEW VALVE BOX
	EXISTING VALVE BOX
	NEW VALVE MANHOLE AND NUMBER
	EXISTING VALVE MANHOLE
	NEW YARD HYDRANT ASSEMBLY
	EXISTING FIRE HYDRANT ASSEMBLY
	NEW UNDERGROUND ELECTRICAL CONDUIT
	EXISTING UNDERGROUND ELECTRICAL CONDUIT
	NEW CATCH BASIN
	EXISTING CATCH BASIN
	PIPING OR EQUIPMENT TO BE DEMOLISHED
	STRUCTURE (TANKS, ETC.) OR PAVEMENT TO BE REMOVED
	STRUCTURE/ BUILDING TO BE RENOVATED
	ABANDON PIPE
	NEW CONCRETE PAVEMENT
	EXISTING CONCRETE PAVEMENT
	NEW ASPHALT PAVEMENT
	EXISTING ASPHALT PAVEMENT
	NEW GRAVEL DRIVE
	EXISTING GRAVEL DRIVE
	STRAW BALES
	RIP-RAP
	NEW CONTOURS
	EXISTING CONTOURS
	NEW FENCE
	EXISTING FENCE
	PROPERTY LINE
	NEW POWER POLE
	EXISTING POWER POLE
	STRUCTURE IDENTIFIER
	SILT FENCE
	EASEMENT BOUNDARY



### GENERAL LEGEND

### WALT WILLIAMS FILTRATION PLANT FILTER REHABILITATION LAGRANGE, GEORGIA

REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID



# ABBREVIATIONS

## GENERAL ABBREVIATIONS

AB	ANCHOR BOLTS
ABAN	ABANDON
ABC	AGGREGATE BASE COURSE
ABS	ACRYLONITRILE BUTADIENE STYRENE
AC	ASBESTOS CEMENT
ACST	ACOUSTIC
ADDL	ADDITIONAL
ADJ	ADJUSTABLE
ADPT	ADAPTER
AFF	ABOVE FINISHED FLOOR
ALT	ALTERNATE
ALUM	ALUMINUM
APPROX	APPROXIMATE
ASCE	AMERICAN SOCIETY OF CIVIL ENGINEERS
ASPH	ASPHALT
ASSY	ASSEMBLY
AUTO	AUTOMATIC
AUX	AUXILIARY
AVE	AVENUE
AVG	AVERAGE
BC	BACK OF CURB
BLDG	BUILDING
BKGD	BACKGROUND
BLT	BUILT
BM	BENCHMARK
BT	BLOWOFF
BOT	BOTTOM
BTWN	BETWEEN
BY	BY PASS
C&G	CURB AND GUTTER
CAP	CAPACITY
CAT	CATALOG
CB	CATCH BASIN
COW	COUNTER CLOCKWISE
CER	CERAMIC
CFM	CUBIC FEET PER MINUTE
CFS	CUBIC FEET PER SECOND
CHKR	CHECKER
CJ	CONSTRUCTION JOINT
CL	CENTER LINE
CL2	CHLORINE
CLG	CEILING
CLR	CLEAR
CM	CONCRETE MONUMENT
CMU	CONCRETE MASONRY UNIT
CNT	CONTAINMENT
CO	CLEAN OUT
COL	COLUMN
COM	COMMON
CONC	CONCRETE
CONC FLR	CONCRETE FLOOR
CONN	CONNECT
CONSTR	CONSTRUCT
CONT	CONTINUOUS
CP	CONTROL PANEL
CPG	COPPING
CTR	CENTER
CU	COPPER
CU FT	CUBIC FEET
CU IN	CUBIC INCHES
CU YD	CUBIC YARD
CLCW	CLOCKWISE
dB	DECIBEL
dB	UNIT OF SOUND LEVEL
DBL	DOUBLE
DEG	DEGREE
DEMO	DEMOLITION
DHW	DESIGN HIGH WATER
DIA	DIAMETER
DIAG	DIAGONAL
DIM	DIMENSION
DISC	DISCONNECT
DISCH	DISCHARGE
DIST	DISTANCE
DN	DOWN
DW	DOUBLE WALL
DWG	DRAWING
E	EAST
EA	EACH
ECC	ECCENTRIC
ECC RDCR	ECCENTRIC REDUCER
ED	EQUIPMENT DRAIN
EF	EACH FACE
EFF	EFFLUENT
EJ	EXPANSION JOINT
EL	ELEVATION
ELC	ELECTRIC
ELEC DR OP	ELECTRIC DOOR OPENER
EMER SHR	EMERGENCY SHOWER
ENCL	ENCLOSURE
EP	EDGE OF PAVEMENT (PAVING)
EQ	EQUAL
EQUIP	EQUIPMENT
EQUIV	EQUIVALENT
ESMT	EASEMENT
ET	ELAPSED TIME
EW	EACH WAY
EXP	EXPANSION
EXST	EXISTING
EXST GR	EXISTING GRADE
EXT	EXTERNAL
F	FAHRENHEIT
FB	FLAT BAR
FCO	FLOOR CLEANOUT
FD	FLOOR DRAIN
FE	FIRE EXTINGUISHER
FF EL	FINISHED FLOOR ELEVATION
FIG	FIGURE
FIN FLR	FINISH FLOOR
FIN GR	FINISH GRADE
FLEX	FLEXIBLE
FLR	FLOOR LINE
FN	FENCE
FRP	FIBER REINFORCED PLASTIC
FT	FEET
FTG	FOOTING
G	NATURAL GAS
GA	GAUGE
GALV	GALLON
GALVZ	GALVANIZED
GBT	GRAVITY BELT THICKENER
GEN	GENERAL
GL	GLASS
GPD	GALLONS PER DAY

GPH	GALLONS PER HOUR
GPM	GALLONS PER MINUTE
GRTG	GRATING
GSKT	GASKET
H	HIGH
HB	HOSE BIBB
HGR	HANGER
HOA	HAND-OFF-AUTOMATIC
HORIZ	HORIZONTAL
HP	HIGH POINT
HS	HIGH SERVICE
HT	HEIGHT
HWA	HIGH WATER ALARM
HWL	HIGH WATER LEVEL
HWY	HIGHWAY
HYD	HYDRANT OR HYDRAULIC
Hz	HERTZ
ID	INSIDE DIAMETER
INCH	INCH
IND	INDICATOR
INF	INFLENT
INFO	INFORMATION
INSTR	INSTRUMENT
INSUL	INSULATION
INV	INVERT
INV EL	INVERT ELEVATION
IR	IRON ROD
JCT	JUNCTION
JT	JOINT
KWY	KEY WAY
L	ANGLE
LAB	LABORATORY
LAT	LATITUDE
LATL	LATERAL
LBS	POUND
LF	LINEAR FEET (FOOT)
LF	LEFT HAND
LIM SW	LIMIT SWITCH
LN	LINEAR
LQ	LIQUID
LLH	LONG LEG HORIZONTAL
LLV	LONG LEG VERTICAL
LNG	LONGITUDE
LOC	LOCATION
LOG	LOGARITHM
LONG	LONGITUDINAL
LP	LIGHT POLE
LT	LIGHT
LVR	LOUVER
LW	LOW WATER
LWA	LOW WATER ALARM
LWL	LOW WATER LEVEL
M	METER
MACH	MACHINE
MAINT	MAINTENANCE
MAN	MANUAL
MATL	MATERIAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER
MEAS	MEASURE
MECH	MECHANICAL
MED	MEDIUM
MFG	MANUFACTURED
MFG	MANUFACTURING
MFR	MANUFACTURER
MFR REC	MANUFACTURER'S RECOMMENDATION
MGD	MILLION GALLONS PER DAY
MGL	MILLIGRAMS PER LITER
MH	MANHOLE
MID	MIDDLE
MIN	MINIMUM
MISC	MISCELLANEOUS
MON	MONUMENT
MOT	MOTOR
MSL	MEAN SEA LEVEL
MTD	MOUNTED
MTL	METAL
N	NORTH
NA	NOT APPLICABLE
NC	NORMALLY CLOSED
NEC	NATIONAL ELECTRIC CODE
NIC	NOT IN CONTRACT
NO	NORMALLY OPEN
NO	NUMBER
NOM	NOMINAL
NORM	NORMAL
NTS	NOT TO SCALE
NUM	NUMBER
OA	OVERALL
OC	ON CENTER
OC EW	ON CENTER EACH WAY
OD	OUTSIDE DIAMETER
OIE	OR EQUAL
OH	OVERHEAD
OHE	OVERHEAD ELECTRIC
OL	OVERLOAD
OPNG	OPENING
OPP	OPPOSITE
OPT	OPTIONAL
ORIG	ORIGINAL
OVFL	OVERFLOW
PC	POINT OF CURVE
PERF	PERFORATED
PERIM	PERIMETER
PERM	PERMANENT
PERP	PERPENDICULAR
pH	ACID/ALKALINE SCALE
PI	POINT OF INTERSECTION
PKG	PACKAGE
PL	PROPERTY LINE OR PLATE
PLAT	PLATFORM
POS	POSITIVE
PPM	PARTS PER MILLION
PR	PAIR
PRESS	PRESSURE
PREV	PREVIOUS
PRI	PRIMARY
PRKG	PARKING
PS	PIPE SUPPORT
PSI	POUNDS PER SQUARE INCH
PSIA	POUNDS PER SQUARE INCH ABSOLUTE
PSIG	POUNDS PER SQUARE INCH, GAUGE
PSL	PIPE SLEEVE
PT	POINT OF TANGENCY
PVG	PAVING
PWR	POWER
Q	RATE OF FLOW
QTR	QUARTER

QTY	QUANTITY
R	RADIUS
RD	ROAD
RECD	RECEIVED
RECM	RECOMMENDATION
RED	REDUCER
REF	REFRIGERATOR OR REFERENCE
REINF	REINFORCE
REM	REMOVABLE
REP	REPAIR
REPL	REPLACE
REQD	REQUIRED
RESIL	RESILIENT
RM	ROOM
RND	ROUND
ROW	RIGHT OF WAY
RPM	REVOLUTIONS PER MINUTE
RPZ	REDUCED PRESSURE ZONE
RR	RAILROAD
S	SOUTH
S/S	START/STOP
SALV	SALVAGE
SANT	SANITARY
SCFM	STANDARD CUBIC FEET PER MINUTE
SCHED	SCHEDULE
SD	STORM DRAIN
SDMH	STORM DRAIN MANHOLE
SECT	SECTION
SED	SEDIMENTATION
SEG	SEGMENT
SF	SQUARE FOOT (FEET)
SGL	SINGLE
SHLDR	SHOULDER
BLV	SHELVING
SIM	SIMILAR
SL	SLUDGE
SLDR	SOLDER
SLV	SLEEVE
SOLN	SOLUTION
SOLV	SOLENOID VALVE
SPEC	SPECIFICATION
SQ	SQUARE
SQ IN	SQUARE INCH
SQ YD	SQUARE YARD
SST	STAINLESS STEEL
STA	STATION
STD	STANDARD
STF	STIFFENER
STK	STOCK
STRUCT	STRUCTURAL
SWD	SIDE WATER DEPTH
SWR	SEWER
SYM	SYMBOL
SYMM	SYMMETRICAL
T	TOP AND BOTTOM
T&B	TOP AND BOTTOM
TAN	TANGENT
TBM	TEMPORARY BENCHMARK
TDH	TOTAL DYNAMIC HEAD
TECH	TECHNICAL
TEL	TELEPHONE
TEMP	TEMPERATURE
TEMP	TEMPORARY
THK	THICKNESS
TOB	TOP OF BERM
TOS	TOP OF SLAB
TOW	TOP OF WALL
TYP	TYPICAL
UGND	UNDERGROUND
UNO	UNLESS NOTED OTHERWISE
UV	ULTRAVIOLET
V	VENT
VA	VOLT AMPERE
VAC	VACUUM
VAR	VARIABLE
VB	VACUUM BREAKER
VB	VALVE BOX
VERT	VERTICAL
VOC	VOLATILE ORGANIC COMPOUND
VOL	VOLUME
VTR	VENT THROUGH ROOF
W	WEST
W	WITH
WO	WITHOUT
WAS	WASTE ACTIVATED SLUDGE
WD	WOOD
WHTR	WATER HEATER
WL	WATER LINE
WLD	WELDED
WM	WATER METER
WSFT	WATER SOFTENER
WT	WATER TABLE
WW	WASTE WATER
XFMR	TRANSFORMER
YD	YARD DRAIN
YH	YARD HYDRANT
YI	YARD INLET
YR	YEAR

## PIPE MATERIALS

ABS	ACRYLONITRILE BUTADIENE STYRENE PIPE
ACP	ASBESTOS CEMENT PIPE
BSP	BLACK STEEL PIPE
CIP	CAST IRON PIPE
CISP	CAST IRON SOIL PIPE
CMP	CORRUGATED METAL PIPE
CP	CONCRETE PIPE
CPP	CONCRETE PRESSURE PIPE
CPVC	CHLORINATED POLYVINYL CHLORIDE PIPE
CU P	COPPER PIPE/TUBING
DIP	DUCTILE IRON PIPE
FT	FLEXIBLE TUBING
PVF	FIBERGLASS REINFORCED PLASTIC PIPE
GSP	GALVANIZED STEEL PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PE	POLYETHYLENE (PLASTIC) PIPE
PVC	POLYVINYL CHLORIDE (PLASTIC) PIPE
PVF	POLYVINYL FLUORIDE (PLASTIC) PIPE
RCCP	REINFORCED CONCRETE PIPE
RCP	REINFORCED CONCRETE PIPE
SSTL	STAINLESS STEEL PIPE
STL	STEEL PIPE
VCP	VITRIFIED CLAY PIPE

## VALVES AND JOINTS

AC CHKV	AIR CUSHION CHECK VALVE
ARV	AIR RELEASE VALVE
B CHKV	BALL CHECK VALVE
BLF	BLIND FLANGE
BFP	BACKFLOW PREVENTER
BFV	BUTTERFLY VALVE
BO	BURIED GEAR OPERATOR
BV	BALL VALVE
C CHKV	COMPRESSION JOINT
C CHKV	CUSHION CHECK VALVE
CHKV	CHECK VALVE
CV	CHECK VALVE
DC	DOUBLE CONTAINED PIPE
DMJ	DISMANTLING JOINT
EJ	EXPANSION JOINT
EL VA	ELECTRIC VALVE ACTUATOR
FAC	FLANGED ADAPTER COUPLING
FH	FIRE HYDRANT
FLG	FLANGED
GR	GROOVED END
GTV	GATE VALVE
HU	HUB AND SPIGOT
K GTV	KNIFE GATE VALVE
LR	LONG RADIUS
MJ	MECHANICAL JOINT
NV	NEEDLE VALVE
OC CHKV	OIL CUSHIONED CHECK VALVE
P CHKV	PRESSURE CHECK VALVE
PE	PLAIN END
PHV	PINCH VALVE
PNEU VA	PNEUMATIC VALVE ACTUATOR
PO	PUSH ON JOINT
PRV	PRESSURE REGULATING VALVE
PV	PLUS VALVE
RJ	RESTRAINED JOINT
RPBP	REDUCED PRESSURE BACKFLOW PREVENTER
RS GTV	RESILIENT SEAT GATE VALVE
S	SOLDERED JOINT
SAV	SURGE ANTICIPATOR VALVE
SOLV	SOLENOID VALVE
SW	SOLVENT WELDED
THD	THREADED
TS&V	TAPPING SLEEVE AND VALVE
W	WELDED
WSLV	WALL SLEEVE

## PROCESS FLUIDS

ACS	CARBON SLURRY
AER	AERATION
AHP	HIGH PRESSURE AIR
ALP	LOW PRESSURE AIR
ALUM	ALUM
ANE	ANAEROBIC EFFLUENT
ANI	ANAEROBIC INFLUENT
ARCY	ANOXIC RECYCLE
ARE	AERATION EFFLUENT
ARI	AERATION INFLUENT
ASH	INCINERATOR ASH
ASR	AERATED SUPERNATANT RETURN
AWR	ACID WASH RETURN
AWS	ACID WASH SUPPLY
AXE	ANOXIC EFFLUENT
AXI	ANOXIC INFLUENT
BISULFITE	SODIUM BISULFITE
BISULFITE SOL	SODIUM BISULFITE SOLUTION
BW	BACKWASH
BWW	BACKWASH WASTE
CKK	CENTRIFUGE BIOSOLIDS CAKE
CEN	CENTRATE
CFS	CENTRIFUGE FEED SOLIDS
CIP	CLEAN-IN PIPE
CL2	CHLORINE GAS
CLO2	CHLORINE DIOXIDE
CLS	CHLORINE SOLUTION
CN SCUM	CONCENTRATED SCUM
CNFS	CONDITIONING TANK FEED SOLIDS
CON	CONCENTRATE
CORH	CORROSION INHIBITOR
CRW	CLARIFIED RAW WATER
CS	CONDITIONED SLUDGE
CTE	DISINFECTION CONTACT TANK EFFLUENT
CTS	CENTRIFUGE THICKENED BIOSOLIDS
CW	COLD WATER (POTABLE)
CYCL INF	CYCLONE INFLUENT
CYCL RCY	CYCLONE RECYCLE
D AL	DISSOLVED ALUM
DA	POLYMER DRY AIR
DEC	DECANT
DF	DIESEL FUEL
DFR	DIESEL FUEL RETURN
DFS	DIESEL FUEL SUPPLY
DGAS	DIGESTER GAS
DGR	DEWATERED GRIT
DPOLY	DRY POLYMER
DPDSD	DRAINAGE PUMP STATION DISCHARGE
DRN	DRAIN
DRS	DIGESTER RECIRCULATION SOLIDS
DS	DIGESTED SLUDGE
DSR	DECANT SUPERNATANT RETURN
DW FL	DEWATERING FLOCCULATION
DWS	DEWATERED SLUDGE
EI	EQUALIZATION INFLUENT
F	FILTRATE
FD	FLOOR DRAIN
FD SCUM	FEED SCUM
FE	FINAL EFFLUENT
FECL	FERRIC CHLORIDE
FES	FERROUS SULFATE
FIRE	FIRE PROTECTION
FL	HYDROFLUOROSILICIC ACID
FLS	FOREIGN BIOSOLIDS LOADING
FLW	FILTERED WATER
FO	FUEL OIL
FOR	FUEL OIL RETURN
FOS	FUEL OIL SUPPLY
FOV	FUEL OIL VENT
FSB	FLOTATION THICKENER SUBNATANT
FTFS	FLOTATION THICKENER FEED SOLIDS
FTRCY	FLOTATION THICKENER RECYCLE
FTS	FLOTATION THICKENED SOLIDS
FUS	FOREIGN BIOSOLIDS UNLOADING
GBFL	GRAVITY BELT THICKENER FILTRATE
GBV	GRAVITY BELT THICKENER FEED SOLIDS
GBTS	GRAVITY BELT THICKENED SOLIDS
GRIT	GRIT
GSP	GRAVITY THICKENER OVERFLOW/SUPERNATANT
GTFS	GRAVITY THICKENER FEED SOLIDS
GTS	GRAVITY THICKENED SOLIDS
H2O2	PEROXIDE
HCL	HYDROCHLORIC ACID
HDO	HYDRAULIC OIL
HPSA	SERVICE AIR (HIGH PRESSURE)
HPW	HOT POTABLE WATER
HTFS	HOLDING TANK FEED SOLIDS
HVAC	HVAC
HW	HOT WATER (POTABLE)
HW REV RET	HOT WATER REVERSE RETURN
HWR	HOT WATER RETURN
HWS	HOT WATER SUPPLY
HYPOL	SODIUM HYPOCHLORITE
HYPOL SOL	SODIUM HYPOCHLORITE SOLUTION
ICE	INTERMEDIATE CLARIFIER EFFLUENT
ICL	INTERMEDIATE CLARIFIER INFLUENT
IFC	INCINERATOR FEED CAKE
INS	INTERMEDIATE BIOSOLIDS
ISE	INCINERATOR SCRUBBER WATER EFFLUENT
LO	LUBE OIL
LP	PROPANE
LPOLY	LIQUID POLYMER
LPSA	SERVICE AIR (LOW PRESSURE)
LS	LIME SLURRY
MIT	MEMBRANE INTEGRITY TEST AIR
ML	MIXED LIQUOR
NAOCL	SODIUM HYPOCHLORITE
NAOH	CAUSTIC
NAOH SOL	CAUSTIC SOLUTION
NAT GAS	NATURAL GAS
NG	NATURAL GAS
NH4	AMMONIA

NPW	NOT POTABLE WATER
NPWW	NOT POTABLE WELL WATER
NRCY	NITRIFIED RECYCLE
O3	OZONE
OA	ODOROUS AIR
OTE	OXIDATION TOWER EFFLUENT
OTI	OXIDATION TOWER INFLUENT
PA	PROCESS AIR
PACL	POLYALUMINUM CHLORIDE
PCE	PRIMARY CLARIFIER EFFLUENT
PCI	PRIMARY CLARIFIER INFLUENT
PFS	PRIMARY CLARIFIER SOLIDS
PERM	PERMEATE
PDFS	PRIMARY DIGESTER FEED SOLIDS
PDS	PRIMARY DIGESTED SOLIDS
PDPS	PRIMARY DIGESTER SUPERNATANT
PDXS	PRIMARY DIGESTER TRANSFER SOLIDS
PO4	PHOSPHATE COMPOUNDS
PP	POTASSIUM PERMANGANATE
PW	POTABLE WATER
PY	POLYMER SOLUTION
RAS	RETURN ACTIVATED SLUDGE
RCW	RECYCLE WATER
RD	ROOF DRAIN
REJ	REJECT
RW	RAW WATER
RWW	RAW WASTEWATER INFLUENT
SAMP	SAMPLE
SBD	SCRUBBER BLOWDOWN
SCB	SCUM CONCENTRATOR SUBNATANT
SCE	SECONDARY CLARIFIER EFFLUENT
SCF	SCRUBBER CHEMICAL FEED
SCI	SECONDARY CLARIFIER INFLUENT
SCRUB EXH	SCRUBBER EXHAUST
SCRUB INTK	SCRUBBER INTAKE
SCUM	SCUM
SD	STORM DRAIN
SDS	SECONDARY DIGESTED SOLIDS
SDSP	SECONDARY DIGESTER SUPERNATANT
SE	SCREENED EFFLUENT
SE	SCRUBBER EXHAUST
SEPT UNLDG	SEPTIC TANK UNLOADING
SL	ALUM SLUDGE
SO	SULFUR DIOXIDE
SOA	S



**CODES AND STANDARDS**

THE FOLLOWING CODES AND STANDARDS HAVE BEEN USED AS THE BASIS FOR DESIGN AND/OR SHALL BE UTILIZED BY THE CONTRACTOR TO ESTABLISH MINIMUM LEVELS OF QUALITY AND CONSTRUCTION TECHNIQUES.

1. GENERAL:
  - A. INTERNATIONAL BUILDING CODE (IBC) 2018, WITH GEORGIA STATE AMENDMENTS
  - B. ASCE 7-16, "MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES"
2. CONCRETE:
  - A. AMERICAN CONCRETE INSTITUTE (ACI) 318-14, "BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE"
  - B. ACI 350-06, "CODE REQUIREMENTS FOR ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
  - C. ACI 350, "TIGHTNESS TESTING OF ENVIRONMENTAL ENGINEERING CONCRETE STRUCTURES"
  - D. ACI 301, LATEST EDITION, "SPECIFICATIONS FOR STRUCTURAL CONCRETE FOR BUILDINGS"
  - E. ACI 117, LATEST EDITION, "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS"
  - F. ACI 308.1, LATEST EDITION, "SPECIFICATION FOR CURING CONCRETE"
  - G. ACI 302.1, LATEST EDITION, "GUIDE FOR CONCRETE FLOOR AND SLAB CONSTRUCTION"
  - H. ACI 315, LATEST EDITION, "DETAILS AND DETAILING OF REINFORCED CONCRETE STRUCTURES"
  - I. ACI SP-66, LATEST EDITION, "ACI DETAILING MANUAL"
  - J. CONCRETE REINFORCING STEEL INSTITUTE (CRSI), "MANUAL OF STANDARD PRACTICE" LATEST EDITION.
  - K. AMERICAN SOCIETY OF TESTING AND MATERIALS (ASTM) A615, LATEST EDITION, "STANDARD SPECIFICATION FOR DEFORMED AND PLAIN CARBON-STEEL BARS FOR CONCRETE REINFORCEMENT"
4. STRUCTURAL STEEL:
  - A. AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC), "MANUAL OF STEEL CONSTRUCTION, 15TH EDITION"
  - B. AMERICAN WELDING SOCIETY (AWS) D1.1, "STRUCTURAL WELDING CODE- STEEL"
5. ALUMINUM:
  - A. ALUMINUM DESIGN MANUAL - 2010
  - B. AWS D1.2, "STRUCTURAL WELDING CODE- ALUMINUM"

**DESIGN CRITERIA**

1. RISK CATEGORY: III
2. DEAD LOADS: ACTUAL WEIGHTS OF BUILDING MATERIALS, STRUCTURAL COMPONENTS, AND EQUIPMENT.
3. LIVE LOADS: IN ACCORDANCE WITH ASCE 7
  - A. GUARDRAILS/HANDRAILS:
    - i. 50 PLF FOR AREAS W/ OCCUPANT LOAD GREATER THAN OR EQUAL TO 50.
    - ii. OR 20 PLF FOR AREAS W/ OCCUPANT LOAD LESS THAN 50.
    - iii. OR 200 LB CONCENTRATED LOAD APPLIED IN ANY DIRECTION AT ANY POINT.
  - C. LADDERS (FIXED): 300 LB CONCENTRATED LOAD FOR EVERY 10 FT OF HEIGHT
  - D. CATWALKS: 40 PSF
  - E. STAIRS/PLATFORMS: 100 PSF
5. WIND LOADS: IN ACCORDANCE WITH ASCE 7
  - A. ULTIMATE WIND SPEED = 115 MPH
  - B. NOMINAL WIND SPEED = 89.1 MPH
  - C. RISK CATEGORY: III
  - D. EXPOSURE CATEGORY: C
6. SEISMIC LOADS: IN ACCORDANCE WITH IBC
  - A. IMPORTANCE FACTOR, I: 1.25
  - B. SOIL SITE CLASS: D (ASSUMED)
  - C. SHORT-TERM ACCELERATIONS, Ss: 0.147
  - D. 1-SECOND ACCELERATIONS, S1: 0.079
  - E. SHORT-TERM RESPONSE COEFFICIENT, Sds: 0.156
  - F. 1-SECOND RESPONSE COEFFICIENT, Sd1: 0.126
  - G. SEISMIC DESIGN CATEGORY: B
  - H. ANALYSIS PROCEDURE: EQUIVALENT LATERAL FORCE
  - I. BASIC SEISMIC FORCE RESISTING SYSTEM: STEEL SYSTEMS NOT SPECIFICALLY DETAILED FOR SEISMIC RESISTANCE
  - J. RESPONSE MODIFICATION FACTOR, R: 3
  - K. SEISMIC RESPONSE COEFFICIENT, Cs: 0.065
  - L. DESIGN BASE SHEAR: 0.065 x W
7. SNOW LOADS: IN ACCORDANCE WITH ASCE 7
  - A. IMPORTANCE FACTOR, I: 1.10
  - B. GROUND SNOW LOAD, PG: 5 PSF
  - C. EXPOSURE FACTOR, Ce: 0.9
  - D. THERMAL FACTOR, Ct: 1.0
8. RAIN LOADS
  - A. RAIN INTENSITY: 7.02 IN/H

**FOUNDATIONS**

1. CONTRACTOR IS RESPONSIBLE FOR LOCATING AND PROTECTING OR RELOCATING, AS APPLICABLE, ALL EXISTING UNDERGROUND UTILITIES AND OTHER STRUCTURES FROM DAMAGE DURING CONSTRUCTION.
2. FOUNDATION DESIGN WAS BASED ON THE PRESUMPTIVE LOAD-BEARING VALUES PROVIDED IN TABLE 1806.2 OF THE 2018 INTERNATIONAL BUILDING CODE.
  - A. ALLOWABLE DESIGN BEARING CAPACITY = 1,500 PSF
3. ALLOWABLE BEARING PRESSURES ARE BASED ON BEARING AGAINST FIRM, UNDISTURBED SOIL AND OR ENGINEERED BACKFILL. WHERE UNACCEPTABLE MATERIAL OCCURS, EXCAVATE AND REPLACE WITH ENGINEERED FILL AS DIRECTED BY THE GEOTECHNICAL ENGINEER.
4. SURFACE WATER SHALL NOT BE ALLOWED TO POND OR SATURATE SOILS DURING OR AFTER CONSTRUCTION.
5. HIGH PLASTICITY CLAYS AND ELASTIC SILTS SHOULD NOT BE USED FOR BACKFILL MATERIALS.
6. DISCHARGE FROM ROOF DRAINS SHALL BE CHanneled WELL AWAY FROM FOUNDATIONS.
7. FOUNDATION SOILS SHALL BE ISOLATED FROM HEAT SOURCES TO PREVENT DRYING OF THE FOUNDATION SOILS.
8. PLANTINGS WITH HIGH WATER DEMANDS SHALL NOT BE PLANTED NEAR FOUNDATIONS.

**CONCRETE**

1. STRUCTURAL CONCRETE SHALL HAVE A MINIMUM SPECIFIED COMPRESSIVE STRENGTH OF 4,000 PSI AT 28-DAYS. SEE SPECIFICATIONS FOR ADDITIONAL MIX DESIGN REQUIREMENTS
2. CONCRETE SHALL BE PROPORTIONED, BATCHED, MIXED, PLACED, CONSOLIDATED, AND CURED IN ACCORDANCE WITH THE REFERENCED CODES AND STANDARDS AND IN ACCORDANCE WITH THE SPECIFICATIONS.
3. FOR HYDRAULIC STRUCTURES, CONTRACTOR SHALL PROVIDE A MINIMUM OF 7-DAYS BETWEEN ADJACENT POURS. ADDITIONALLY, CONCRETE STRENGTH SHALL MEET OR EXCEED 70% OF THE SPECIFIED DESIGN COMPRESSIVE STRENGTH PRIOR TO PLACING ADJACENT POURS.
4. CONCRETE STRENGTH SHALL MEET OR EXCEED 100% OF THE SPECIFIED DESIGN COMPRESSIVE STRENGTH PRIOR TO APPLYING ANY LOAD TO THE MEMBER.
5. TREMIES ARE REQUIRED ON ALL POURS HIGHER THAN 10-FEET.
6. ALL HYDRAULIC STRUCTURES SHALL HAVE A 72-HOUR LEAKAGE TEST PERFORMED, AS OUTLINED IN THE SPECIFICATIONS, PRIOR TO BACKFILLING OR OPERATION OF THE FACILITY.
7. ALL EXPOSED CONCRETE EDGES SHALL BE CHAMFERED 3/4-INCH.

**REINFORCING STEEL**

1. REINFORCEMENT DETAILING SHALL BE AS SHOWN ON THE DRAWINGS AND IN ACCORDANCE WITH THE REFERENCED CODES AND STANDARDS.
2. CONCRETE AND CMU REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ASTM A615 GRADE 60 (DEFORMED BARS).
3. REINFORCING STEEL SHALL NOT BE WELDED OR FIELD BENT IN ANY MANNER, UNLESS SPECIFICALLY SHOWN ON THE DRAWINGS. REINFORCING STEEL SHALL BE DRY AND FREE OF CONTAMINANTS SUCH AS DIRT, GREASE, EPOXY, AND OTHER PROTECTIVE COATINGS SHALL NOT BE APPLIED UNLESS SPECIFICALLY NOTED ON THE DRAWINGS.
4. ALL REINFORCING STEEL BAR SPLICES SHALL BE CLASS "B" TENSION LAP SPLICES IN ACCORDANCE WITH THE DRAWINGS AND THE REFERENCED CODES AND STANDARDS.
5. REINFORCING STEEL CLEAR COVER SHALL BE IN ACCORDANCE WITH THE DRAWINGS AND THE REFERENCED CODES AND STANDARDS.

**STRUCTURAL STEEL/ANCHORS**

1. STRUCTURAL STEEL SHAPES SHALL BE AS FOLLOWS, U.N.O.:
  - A. L-SHAPES, PLATES, BARS: ASTM A36
2. ALL BOLTED CONNECTIONS NOT SPECIFICALLY DETAILED ON THE DRAWINGS FOR STRUCTURAL MEMBERS SHALL BE AS FOLLOWS:
  - A. STEEL BOLTS: ASTM A325 WITH A 3/4-INCH MINIMUM DIAMETER
  - B. STAINLESS STEEL BOLTS: ASTM F593, TYPE 316, WITH A 3/4-INCH MINIMUM DIAMETER.
3. ALL WELDING SHALL BE IN ACCORDANCE WITH THE REFERENCED CODES AND STANDARDS AND SHALL BE PERFORMED BY CERTIFIED WELDERS.
  - A. WELDING ELECTRODES: E70XX
4. REMOVE ALL RUST, DIRT, PAINT, AND GALVANIZING FROM STEEL PRIOR TO WELDING.
5. NO OPENINGS SHALL BE CUT IN STRUCTURAL STEEL MEMBERS UNLESS SPECIFICALLY DETAILED ON THE STRUCTURAL DRAWINGS OR APPROVED BY THE ENGINEER.
6. BOLTED CONNECTIONS SHALL BE BEARING TYPE WITH THREADS INCLUDED IN THE SHEAR PLANE. BOLTS SHALL BE TIGHTENED USING THE "SNUG TIGHT" METHOD. USE ONE HARDENED WASHER UNDER THE TURNED ELEMENT.
7. ALL BOLTED CONNECTION HOLES ARE TO BE STANDARD HOLES. SHORT SLOTTED HOLES ARE NOT PERMITTED (I.E. HOLE DIA. = BOLT DIA. + 1/16")
8. THE STRUCTURE IS DESIGNED FOR A COMPLETED CONDITION ONLY AND THEREFORE MAY REQUIRE ADDITIONAL SUPPORT TO MAINTAIN STABILITY BEFORE COMPLETION.

**CONCRETE/CMU ANCHORS**

1. REFER TO SPEC SECTION 05 50 00 METAL FABRICATIONS FOR ADDITIONAL REQUIREMENTS AND MATERIAL TYPE.
2. SUBSTITUTION OF EXPANSION OR DRILLED AND GROUTED-IN ANCHORS FOR EMBEDDED ANCHORS SHOWN ON THE DRAWINGS WILL NOT BE PERMITTED UNLESS APPROVED BY THE ENGINEER.
3. CARE SHALL BE TAKEN WHEN PLACING POST-INSTALLED ANCHORS TO AVOID CONFLICTS WITH REINFORCING WHERE POSSIBLE. HOLES SHALL BE DRILLED AND CLEANED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS.
4. ANCHORS SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S INSTRUCTIONS AT NOT LESS THAN MINIMUM EDGE DISTANCES AND/OR SPACINGS INDICATED IN THE MANUFACTURER'S LITERATURE.
5. EXCEPT WHERE INDICATED ON THE DRAWINGS, POST-INSTALLED ANCHORS SHALL CONSIST OF THE FOLLOWING ANCHOR TYPES AS PROVIDED BY HILTI, INC.
  - A. ANCHORAGE TO CONCRETE
    - i. ADHESIVE (EPOXY) ANCHORS FOR CRACKED AND UNCRACKED CONCRETE USE:
      1. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HIT-Z-R 316 SS ROD.
      2. HILTI HIT-HY 200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM WITH HAS-316 SS THREADED ROD PER ICC ESR-3187.
    - ii. MECHANICAL (EXPANSION) ANCHORS FOR CRACKED AND UNCRACKED CONCRETE
      1. HILTI KWIK BOLT-TZ SS 316 EXPANSION ANCHORS.
  - B. REBAR DOWELING INTO CONCRETE
    - i. ADHESIVE FOR CRACKED AND UNCRACKED CONCRETE USE:
      1. HILTI HIT-HY200 SAFE SET SYSTEM WITH HILTI HOLLOW DRILL BIT SYSTEM

**ALUMINUM FRAMING/GRATING**

1. ALL ALUMINUM SURFACES IN CONTACT WITH CONCRETE OR DISSIMILAR METALS SHALL BE COATED WITH BITUMINOUS PAINT.
2. ALUMINUM ALLOYS SHALL BE AS FOLLOWS, OR APPROVED EQUAL:
  - A. PLATE/SHEET: ASTM B209, ALLOY 6061-T6
  - B. EXTRUSIONS/STRUCTURAL SHAPES: ASTM B221, ALLOY 6061-T6
  - C. CASTINGS: ASTM B26, ALLOY 443.0-F

**MISCELLANEOUS**

1. THE STRUCTURE SHOULD NOT BE CONSIDERED TO BE STABLE DURING CONSTRUCTION UNTIL ALL ELEMENTS ARE IN PLACE AND CONNECTED. THE CONTRACTOR IS RESPONSIBLE FOR DESIGNING ALL TEMPORARY CONSTRUCTION BRACING, AS REQUIRED.
2. CONSTRUCTION METHODS, PROCEDURES, AND SEQUENCES ARE THE CONTRACTOR'S RESPONSIBILITY. THE CONTRACTOR SHALL TAKE ALL NECESSARY MEANS TO MAINTAIN AND PROTECT THE STRUCTURAL INTEGRITY OF ALL CONSTRUCTION, NEW AND EXISTING, AT ALL STAGES.
3. CONTRACTOR SHALL FIELD VERIFY ALL EXISTING DIMENSIONS AND CONDITIONS PRIOR TO ANY PERTINENT WORK. ALL EXISTING CONDITIONS AND DIMENSIONS SHALL BE NOTED ON THE SHOP DRAWINGS.
4. THE CONTRACTOR IS RESPONSIBLE FOR REVIEWING THE DRAWINGS AND EXISTING CONDITIONS TO DETERMINE WHERE OPENINGS ARE REQUIRED IN WALLS AND SLABS.
5. COORDINATE WITH THE ARCHITECTURAL, CIVIL, MECHANICAL, STRUCTURAL, AND ELECTRICAL DRAWINGS, AND VERIFY THE LOCATIONS AND SIZES OF THE OPENINGS, INSERTS, SLEEVES, FINISHES, CONDUITS, CHASES, DEPRESSIONS AND OTHER PROJECT REQUIREMENTS.
6. CONTRACTOR SHALL COMPLY WITH LOCAL, STATE, FEDERAL AND OWNER'S SAFETY REGULATIONS WHILE WORKING. STRUCTURAL ENGINEER DOES NOT ASSUME ANY RESPONSIBILITY FOR CONSTRUCTION SITE SAFETY.
7. STANDARD DETAILS APPLY UNLESS INDICATED OTHERWISE ON SPECIFIC STRUCTURE DRAWINGS.
8. CONTRACTOR SHALL REFER TO THE PROJECT SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

**BARGE**  
DESIGN SOLUTIONS

615 3rd Avenue South // Suite 700 // Nashville, Tennessee 37210  
Phone: 615.254.1500 // Fax: 615.255.0572



STRUCTURAL GENERAL NOTES

WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

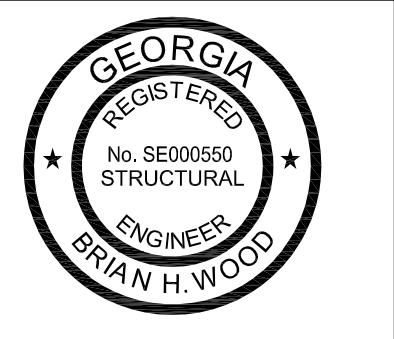
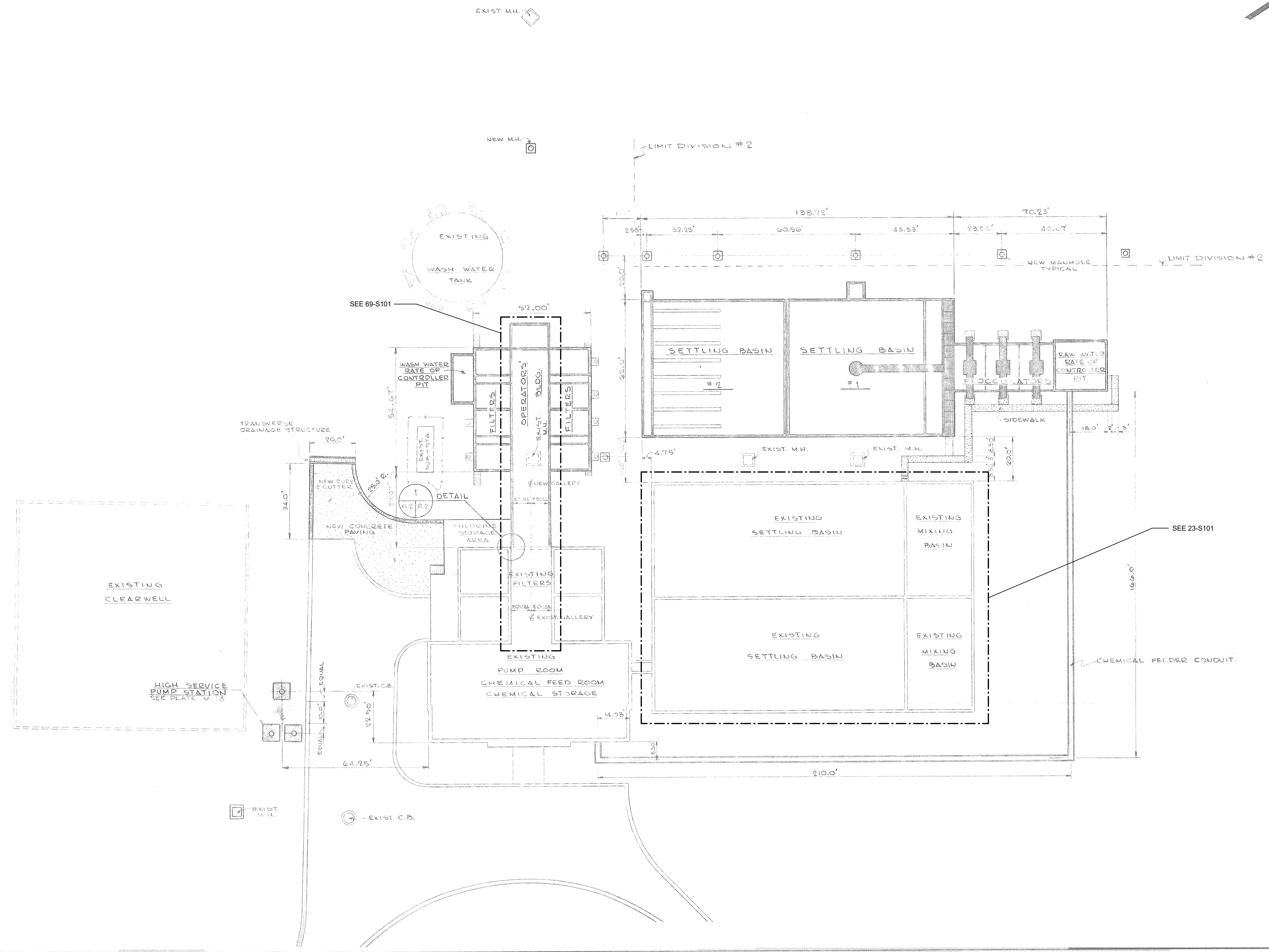
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REV	CHK	DATE	DESCRIPTION
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00-S001

FILE NO. 3643211

Drawing Set: 00-S001 - STRUCTURAL GENERAL NOTES  
 Drawing: 00-S001-0000 - Walt Williams Filtration Plant Filter Valves Replacement  
 File: 00-S001-0000.rvt  
 Date: 07/12/2022

Drawing Set: 00-S100 STRUCTURAL OVERALL PLAN  
 Drawing: 00-S100-01  
 File: 00-S100-01.dwg  
 Date: 07/12/2022

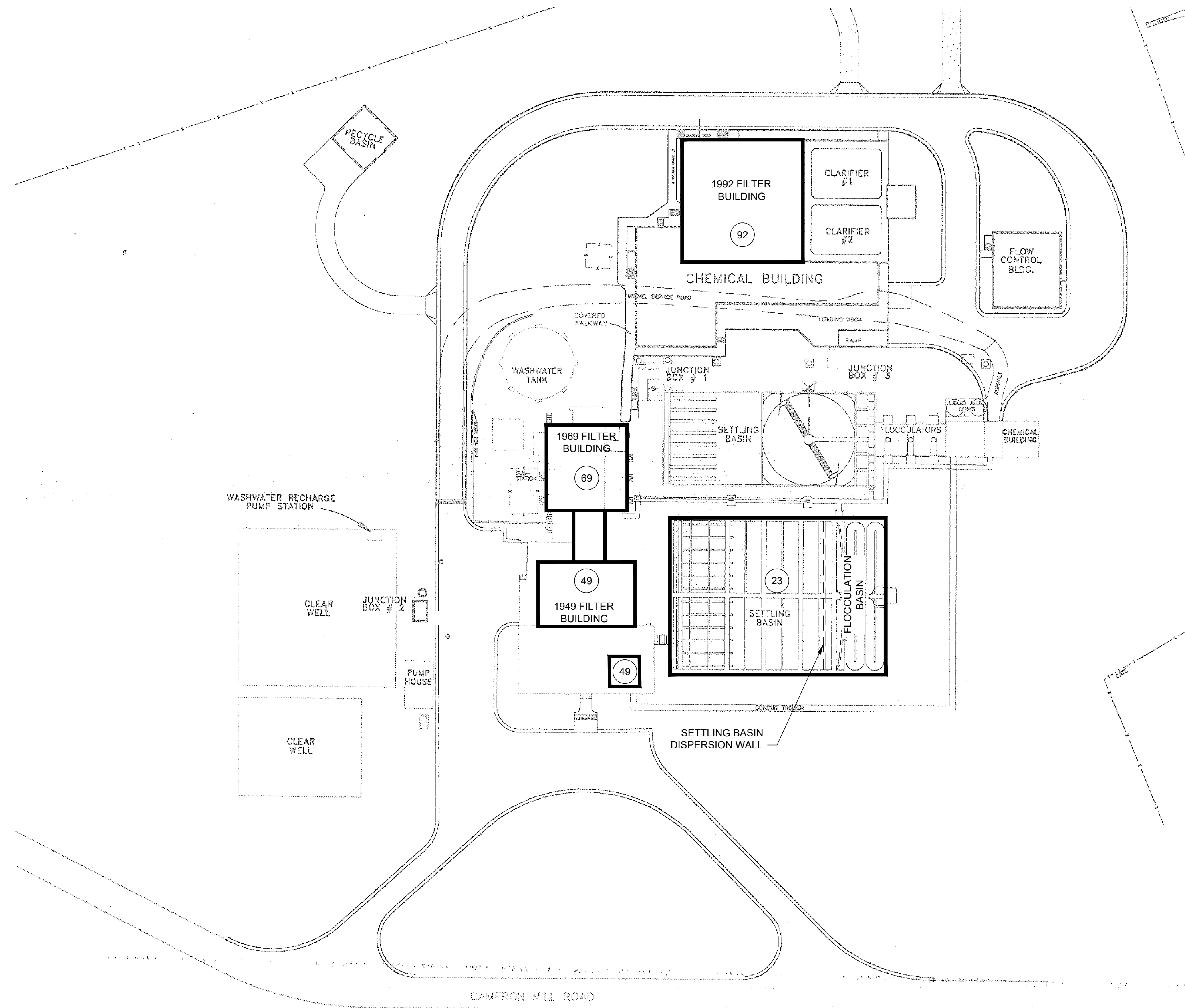


STRUCTURAL OVERALL PLAN  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT  
 LAGRANGE, GEORGIA

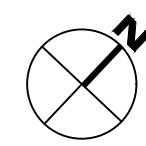
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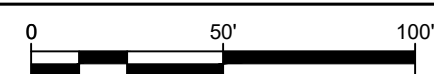


- NOTES:**
- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS, PREPARED BY WELKER AND ASSOCIATES INC.

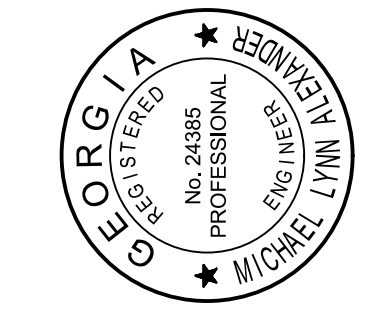


**OVERALL SITE PLAN**

SCALE: 1 INCH = 50 FEET



**OVERALL SITE - AERIAL**



**BARGE**  
 DESIGN SOLUTIONS

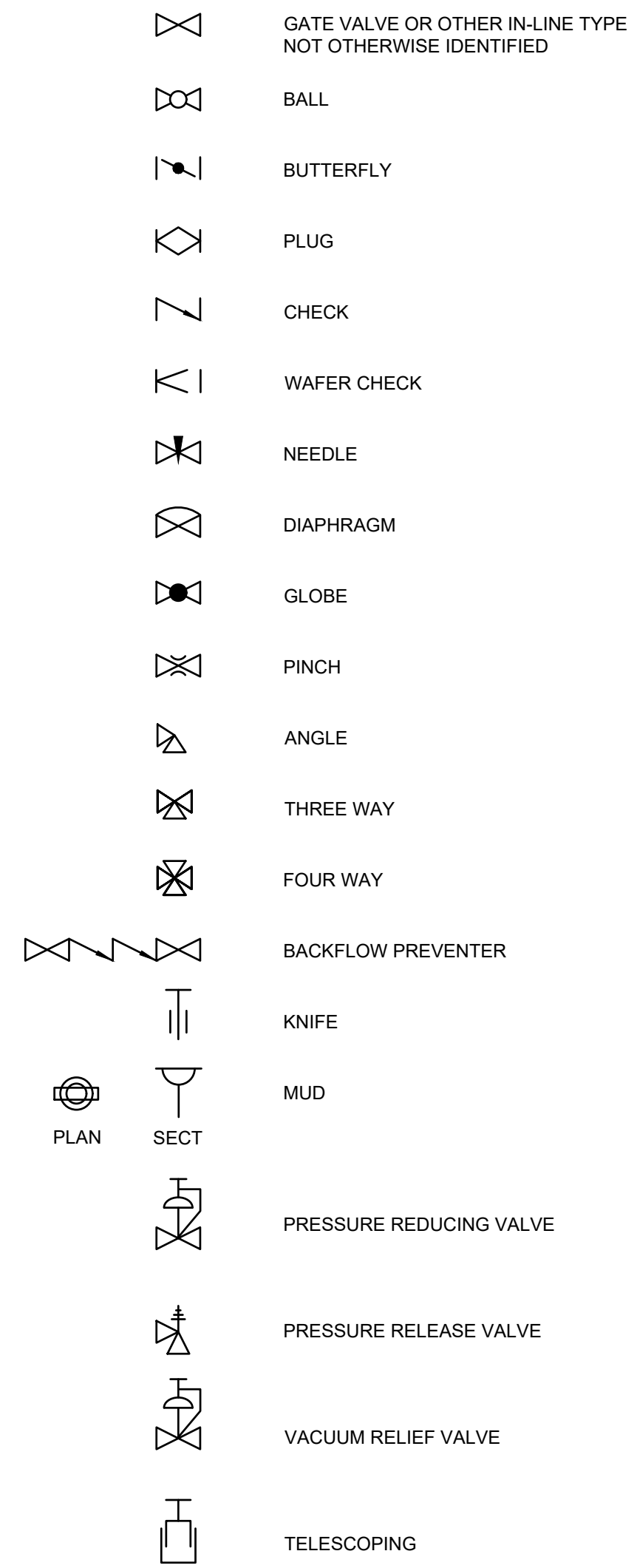
1021 Front Avenue, Suite F-11 Columbus, GA 31901  
 PHONE (706) 321-4829

**OVERALL SITE PLAN**  
**WALT WILLIAMS FILTRATION PLANT**  
**FILTER REHABILITATION**  
 LAGRANGE, GEORGIA

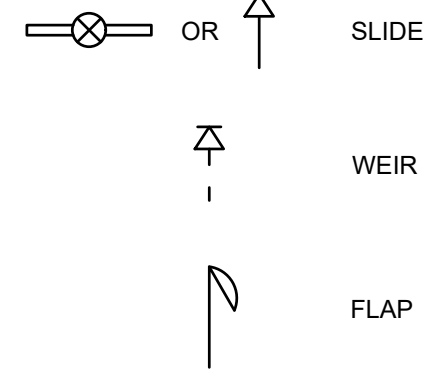
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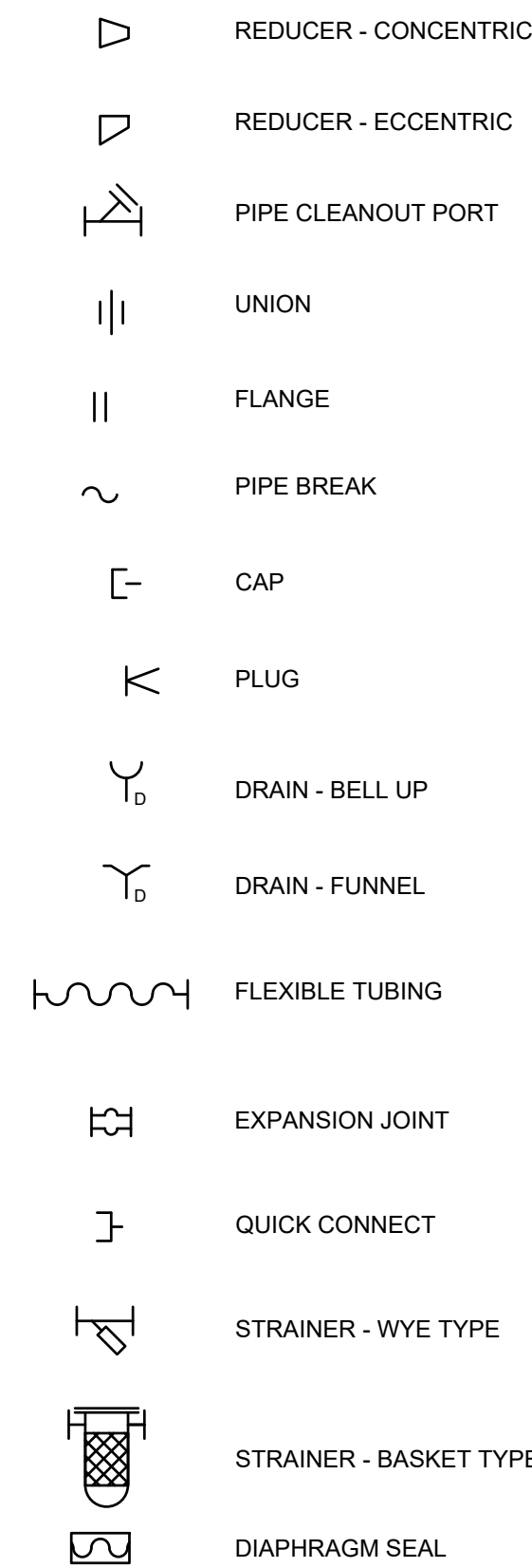
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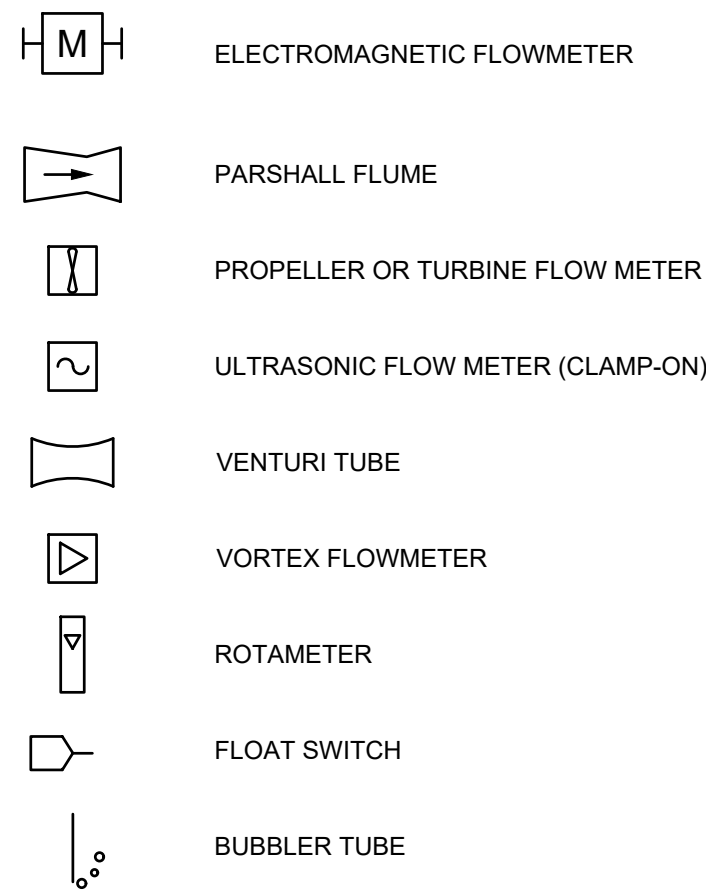
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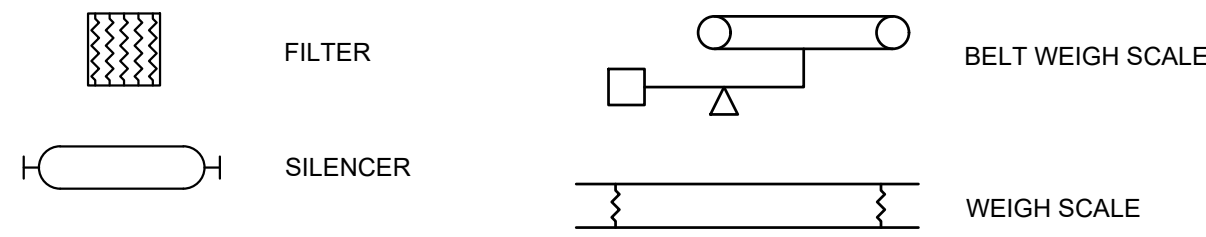
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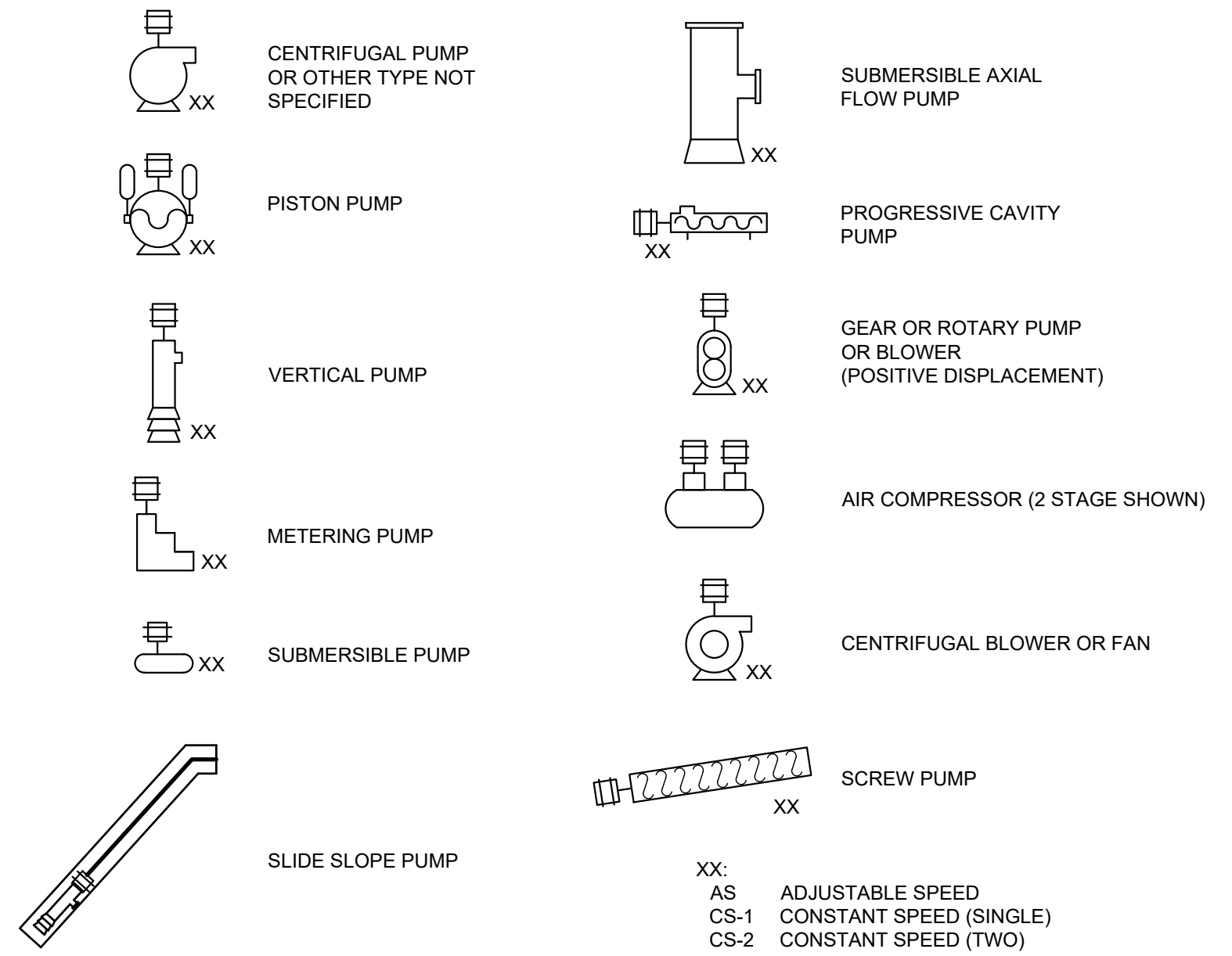
**PRIMARY ELEMENT**



**MISCELLANEOUS SYMBOLS**

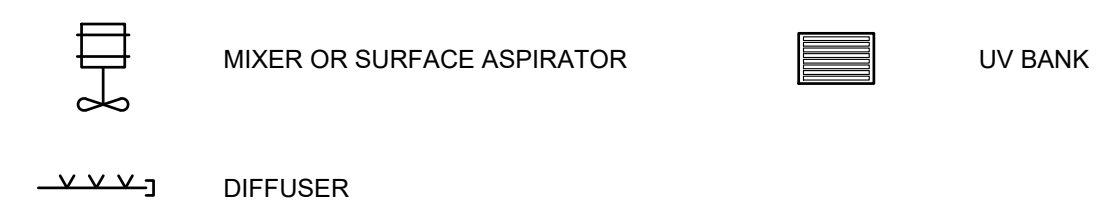


**PUMP & BLOWER SYMBOLS**

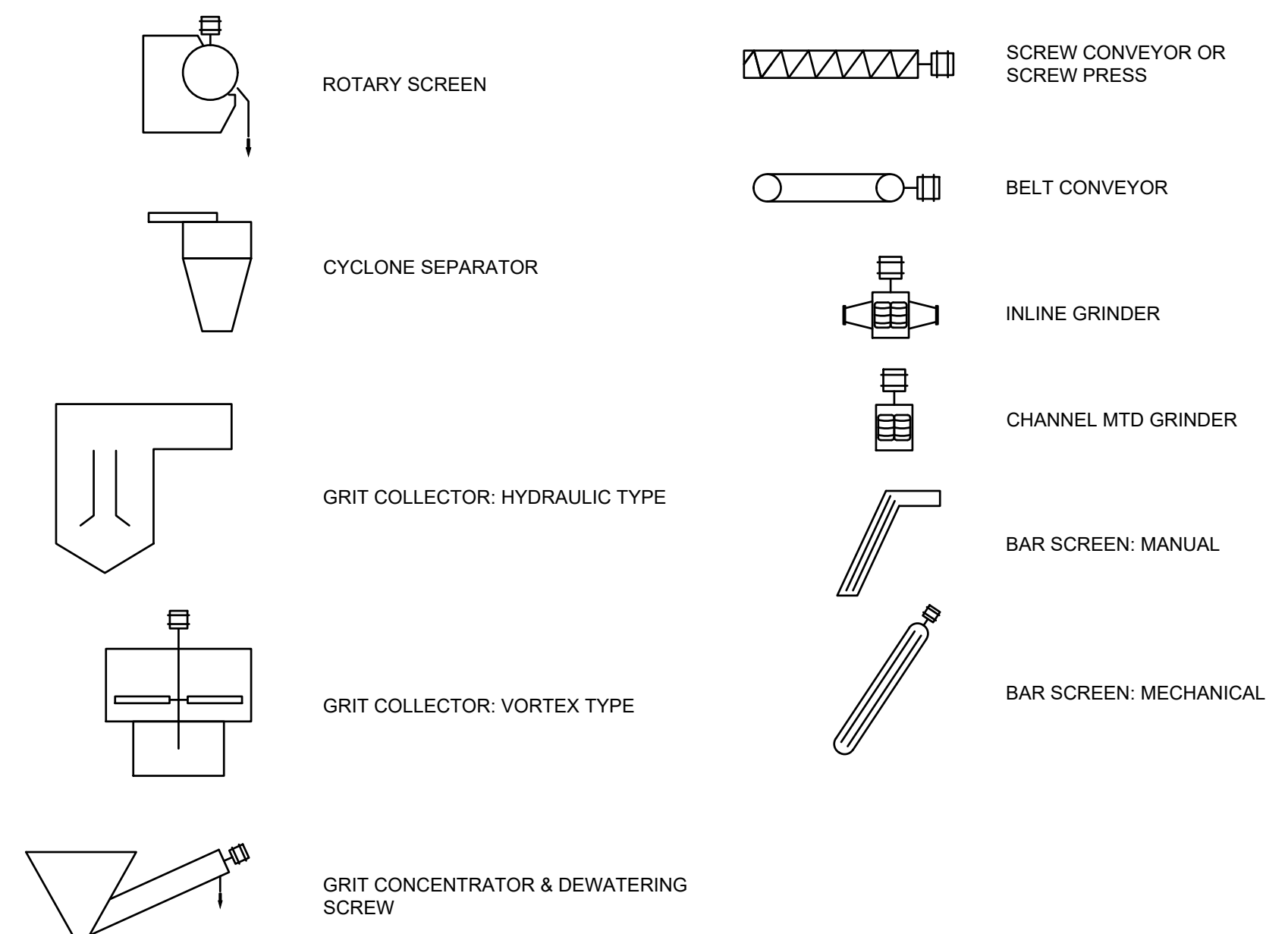


XX:  
AS ADJUSTABLE SPEED  
CS-1 CONSTANT SPEED (SINGLE)  
CS-2 CONSTANT SPEED (TWO)

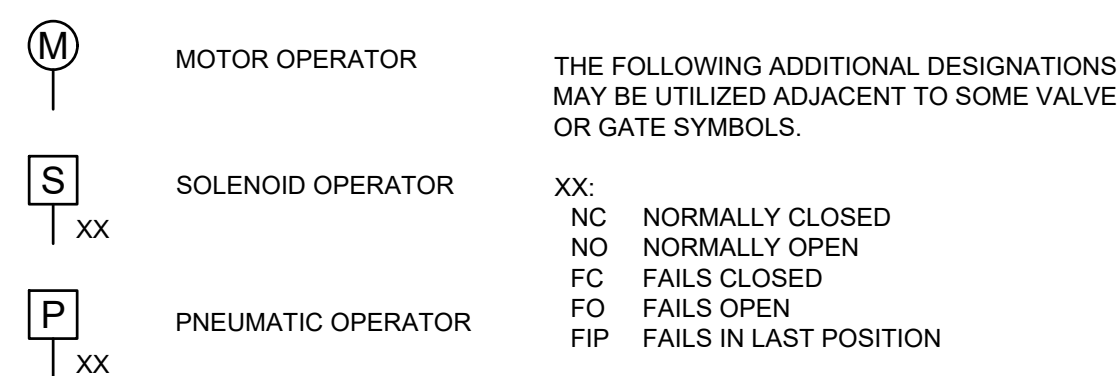
**WASTEWATER PROCESS SYMBOLS**



**SOLIDS HANDLING EQUIPMENT SYMBOLS**



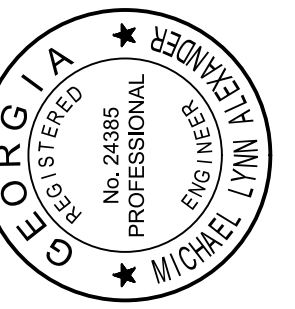
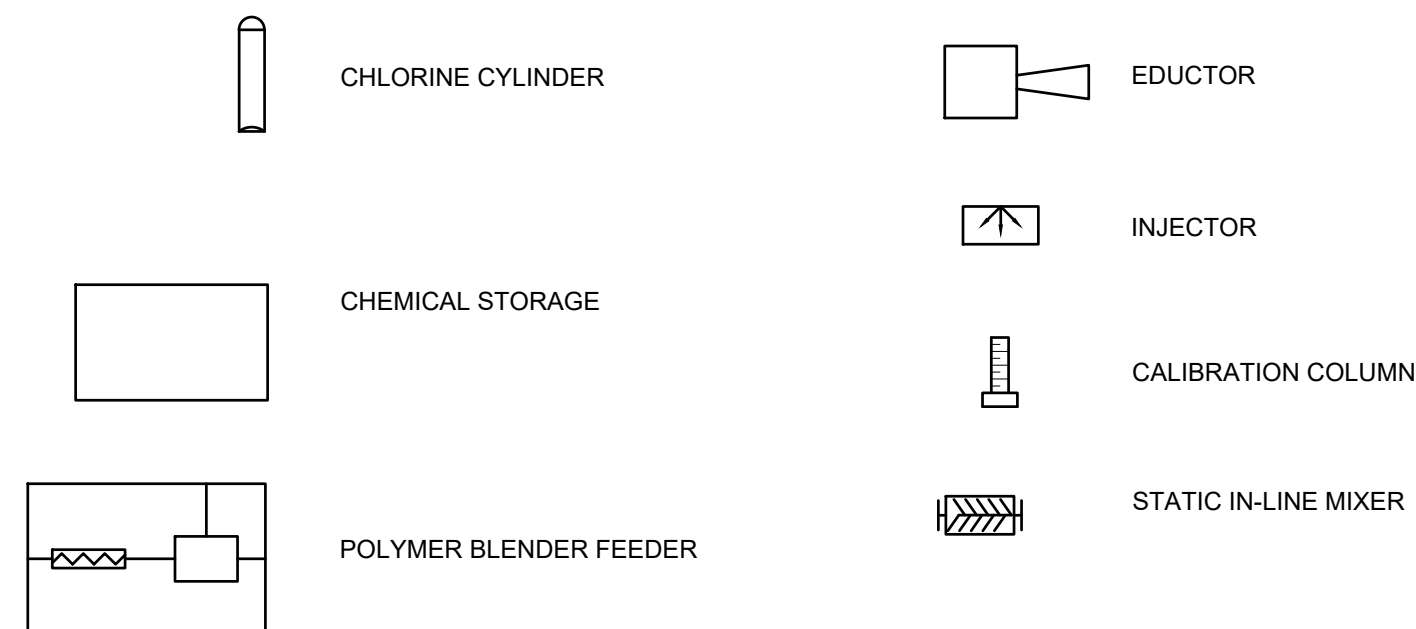
**VALVE & GATE ACTUATOR SYMBOLS**



THE FOLLOWING ADDITIONAL DESIGNATIONS MAY BE UTILIZED ADJACENT TO SOME VALVE OR GATE SYMBOLS.

XX:  
NC NORMALLY CLOSED  
NO NORMALLY OPEN  
FC FAILS CLOSED  
FO FAILS OPEN  
FIP FAILS IN LAST POSITION

**CHEMICAL FEED EQUIPMENT SYMBOLS**



P&ID - STANDARD SYMBOLS

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION

LAGRANGE, GEORGIA

REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID

03-DI001

FILE NO. 36432-11



**P&ID - INSTRUMENTATION LEGEND**  
**WALT WILLIAMS FILTRATION PLANT**  
**FILTER REHABILITATION**  
LAGRANGE, GEORGIA

	PRIMARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR (NOTE 1)	FIELD MOUNTED (NOTE 2)	AUXILIARY LOCATION NORMALLY ACCESSIBLE TO OPERATOR (NOTE 1)
DISCRETE INSTRUMENTS			
SHARED DISPLAY, SHARED CONTROL (SCADA)			
COMPUTER FUNCTION			
PROGRAMMABLE LOGIC CONTROL (PLC)			
INSTRUMENT WITH LONG TAG NUMBER			
INSTRUMENT SHARING COMMON HOUSING			
PILOT LIGHT			
PURGE OR FLUSHING DEVICE			
RESET FOR LATCH-TYPE ACTUATOR			
DIAPHRAGM SEAL			
NOTE 4 NOTE 3			
UNDEFINED INTERLOCK LOGIC			
TOTAL			

### INSTRUMENT DESIGNATIONS

CL2	CHLORINE RESIDUAL
CO2	CARBON DIOXIDE
DO	DISSOLVED OXYGEN
LEL	LOWER EXPLOSIVE LIMIT
MCC	MOTOR CONTROL CENTER
MLSS	MIXED LIQUOR SUSPENDED SOLIDS
O2	OXYGEN (PURITY)
ORP	OXIDATION REDUCTION POTENTIAL
OVLD	OVERLOAD
pH	pH CELL
SD	SLUDGE DENSITY
TURB	TURBIDITY
UV	UV TRANSMITTANCE
LOR	LOCAL - OFF - REMOTE
EOT	END OF TRAVEL
RM	REVERSE MOTION

### ELECTRICAL LINE FUNCTIONS


### ELECTRICAL LINE FUNCTIONS

--- QY ---  
 - SIGNAL TYPE  
 - SIGNAL QUANTITY

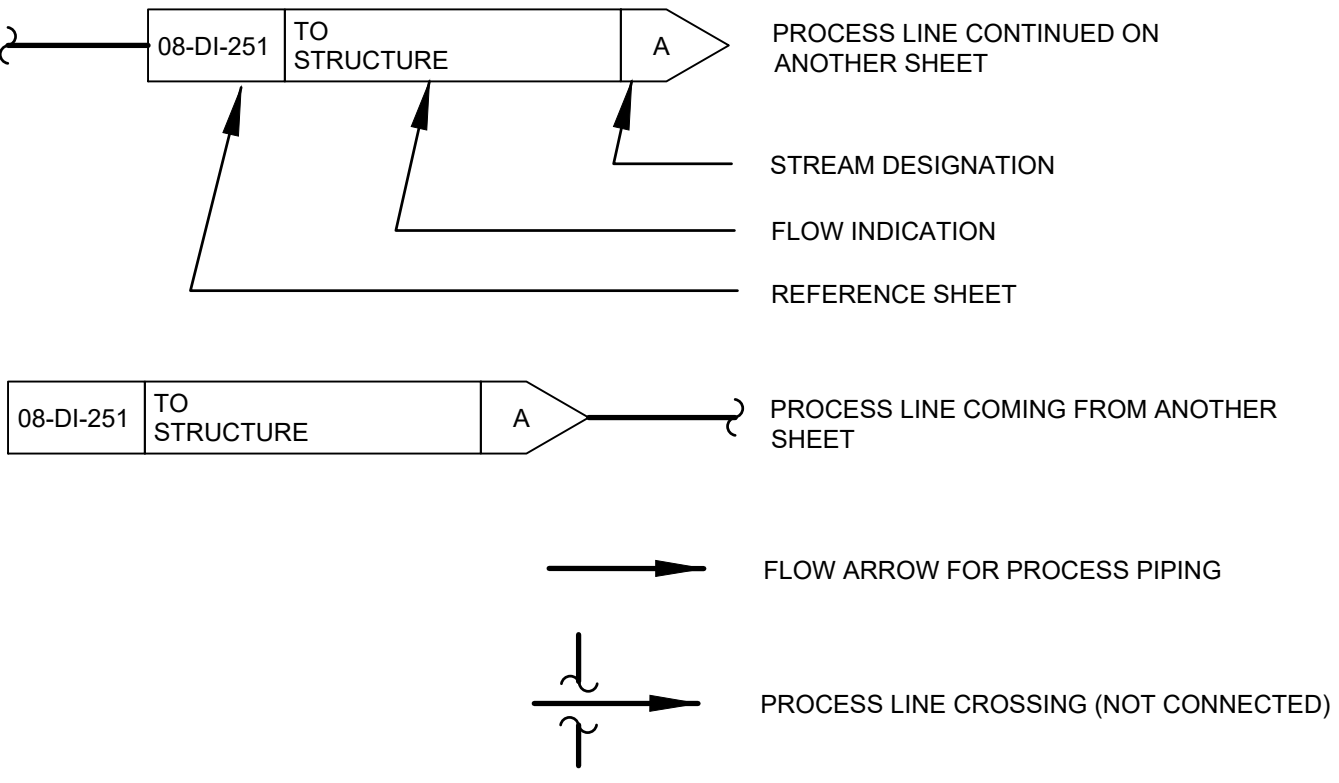
### SIGNAL TYPE

A - ANALOG - #16 TWISTED SHIELDED PAIR  
 A1 - ANALOG - #16 3 CONDUCTOR TWISTED SHIELDED TRIAD  
 AS - ANALOG - SPECIAL (EIA-432, EIA-485...)  
 D - #14 2 CONDUCTOR  
 DS - DISCRETE - SPECIAL (24 VOLT ...)  
 M - WIRING BY MANUFACTURER  
 P - POWER  
 C6 - COMMUNICATIONS - CAT 6 ETHERNET  
 P(V) - POWER (SHIELDED VFD CABLE)


SYMBOL	LINE DESCRIPTION
	FURNISHED BY OTHERS, INSTALLED BY CONTRACTOR
	INSTRUMENT SUPPLY OR CONNECTION TO PROCESS
	UNDEFINED SIGNAL
	PNEUMATIC SIGNAL
	ELECTRIC SIGNAL
	ELECTRONIC SIGNAL
	ANALOG SIGNAL
	HYDRAULIC SIGNAL
	CAPILLARY TUBE
	ELECTROMAGNETIC OR SONIC SIGNAL (GUIDED)
	ELECTROMAGNETIC OR SONIC SIGNAL (NOT GUIDED)
	INTERNAL SYSTEM LINK (SOFTWARE OR DATA LINK)
	MECHANICAL LINK
	PNEUMATIC BINARY SIGNAL
	ELECTRIC BINARY SIGNAL
	PRIMARY PROCESS LINE
	PROCESS OR MECHANICAL EQUIPMENT
	LIMITS OF EQUIPMENT SUPPLIED BY MANUFACTURE
	PROCESS SECONDARY LINE
	ELECTRICALLY TRACED AND INSULATED LINE
	DOUBLE CONTAINMENT LINE
	EXISTING LINE OR DEVICE

### INSTRUMENT IDENTIFICATION LETTERS

	FIRST-LETTER		SUCCEEDING-LETTERS		
	PROCESS VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
C	CONDUCTIVITY			CONTROL	CLOSED
D	DENSITY	DIFFERENTIAL			
E	VOLTAGE		SENSOR PRIMARY ELEMENT		
F	FLOW RATE	RATIO			
G	USER'S CHOICE		GLASS		
H	HAND (MANUAL)				HIGH
I	CURRENT		INDICATE		
J	POWER	SCAN			
K	TIME / SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		LIGHT		LOW
M	MOISTURE	MOMENTARY			MIDDLE
N	USER'S CHOICE		USER'S CHOICE	USER'S CHOICE	USER'S CHOICE
O	USER'S CHOICE		ORIFICE (RESTRICTION)		OPEN
P	PRESSURE, VACUUM		POINT (TEST) CONNECTION		
Q	QUANTITY	TOTALIZE			
R	RADIATION		RECORD		
S	SPEED / FREQ.	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBR/MECH ANALYSIS			VALVE, DAMPER	
W	WEIGHT / FORCE		WELL		
X	UNCLASSIFIED	X-AXIS	UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT/STATE/PREF	Y-AXIS		RELAY/COMPUTE	
Z	POSITION	Z-AXIS		DRIVER/ACTUATOR	

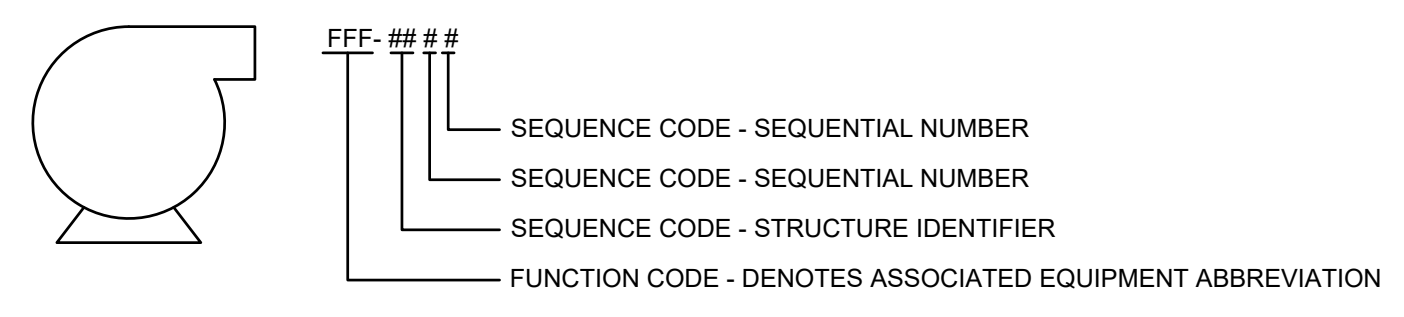


- ### NOTES:
- THIS IS A GENERAL LEGEND SHEET. SOME SYMBOLS AND ABBREVIATIONS MAY NOT BE UTILIZED ON THIS SPECIFIC PROJECT. PIPING AND EQUIPMENT LEGEND APPLIES TO PROCESS AND INSTRUMENTATION SHEETS ONLY AND MAY DIFFER FROM LEGENDS ON OTHER SHEETS.

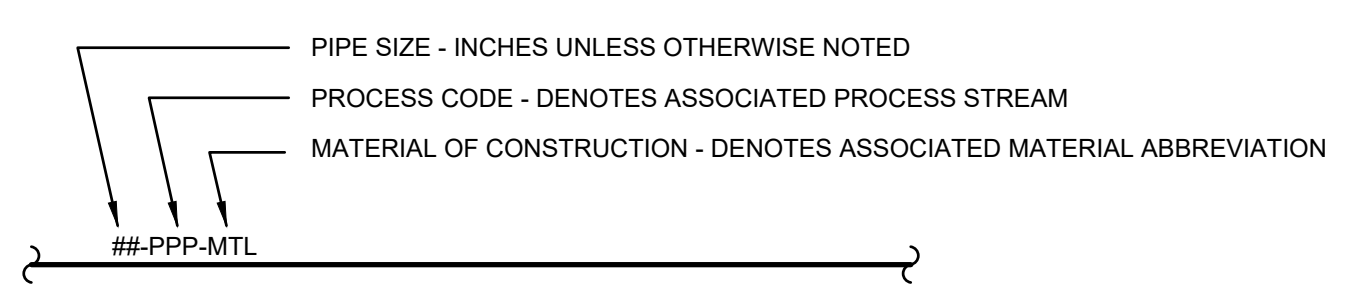
REV.	DR.	CHK.	DATE	DESCRIPTION
0			JULY 12, 2022	ISSUED FOR BID



### EQUIPMENT IDENTIFICATION DESCRIPTION



### PIPELINE IDENTIFICATION DESCRIPTION



#### FUNCTION CODE ABBREVIATIONS

AER	AERATOR / AERATION
ASP	SURFACE ASPIRATOR
ASU	AUTOMATIC SWITCHOVER UNIT
BLR	BLOWER
BSN	BASIN
CLR	CLARIFIER
CMP	COMPRESSOR
CNV	CONVEYOR
COB	CONVEYOR: BELT
CRN	CRANE
DEC	SLUDGE DECANter
DIF	DIFFUSER
DWS	DEWATERING SCREW PRESS
DWB	DEWATERING BOX
EDC	EDUCTOR
FIL	FILTER
G	GATE
GF	GAS FEEDER
GRB	GRIT BASIN
GRT	GRIT
HST	HOIST
INJ	INJECTOR
MXR	MIXER
P	PUMP
PMX	POLYMER MIX SKID
SB	SPLITTER BOX
SC	SCUM COLLECTOR
SCL	SCALE
SCR	SCREEN
SLC	SLUDGE COLLECTOR
SRS	SEPTAGE RECEIVING STATION
TNK	TANK
UV	ULTRAVIOLET
V	VALVE
WCMP	WASHER/COMPACTOR

#### PROCESS CODE ABBREVIATIONS

AER	AERATION
AHP	AIR HIGH PRESSURE
ALP	AIR LOW PRESSURE
BWS	BACKWASH SUPPLY
BWW	BACKWASH WASTE
CEN	CENTRATE
CIP	CLEAN-IN PIPE
CL2	CHLORINE GAS
CLS	CHLORINE SOLUTION
CMS	COMPRESSED AIR-SERVICE
CON	CONCENTRATE
CS	CONDITIONED SLUDGE
CW	COLD WATER (POTABLE)
DAL	DISSOLVED ALUM
DEC	DECANT
DF	DIESEL FUEL
DG	DIGESTER GAS
DR	DRAIN
DS	DIGESTED SLUDGE
DWFL	DEWATERING FLOCCULATION
EI	EQUALIZATION TANK INFLUENT
ER	EQUALIZATION TANK RETURN
F	FILTRATE
FACD	FACILITY DRAIN
FE	FINAL EFFLUENT
FM	FORCE MAIN
FO	FUEL OIL
FOV	FUEL OIL VENT
FOGS	FATS, OILS, GREASE & SEPTAGE
FS	FINAL TANK SLUDGE
FW	FILTERED WASTEWATER
GRT	GRIT
IA	INSTRUMENT AIR
IR	IRRIGATION

HW	HOT WATER
LP	LIQUID PETROLEUM GAS (PROPANE)
MLSS	MIXED LIQUOR
NG	NATURAL GAS
NPW	NON POTABLE WATER
OF	OVERFLOW
PA	PROCESS AIR
PD	PLANT DRAIN
PE	PRIMARY EFFLUENT
PFM	PLANT FORCE MAIN
PI	PRIMARY INFLUENT
POL	POLYMER (NEAT)
POLD	POLYMER (DILUTED)
PS	PRIMARY SLUDGE
PTE	SCREENED SEWAGE
PW	POTABLE WATER
RAS	RETURN ACTIVATED SLUDGE
RCS	RECIRCULATED SLUDGE
RS	RAW SEWAGE
S	SAMPLE
SC	SCUM
SCR	SCREENINGS
SD	STORM DRAIN
SE	SECONDARY EFFLUENT
SEP	SEPTAGE
SNT	SUPERNATANT
SS	SANITARY SEWER
TDS	THICKENED DIGESTED SLUDGE
TWAS	THICKENED WASTE ACTIVATED SLUDGE
UW	UTILITY WATER
V	VENT
WAS	WASTE ACTIVATED SLUDGE
WW	WASTE WATER

#### PIPELINE MATERIAL OF CONSTRUCTION ABBREVIATIONS

ACP	ASBESTOS CEMENT PIPE
BSP	BLACK STEEL PIPE
CI	CAST IRON
CISP	CAST IRON SOIL PIPE
CMP	CORRUGATED METAL PIPE
CPP	CONCRETE PRESSURE PIPE
CPVC	CHLORINATED POLY (VINYL CHLORIDE) PIPE
CU	COPPER PIPE
CUP	COPPER TUBING
DIP	DUCTILE IRON PIPE
FRH	FLEXIBLE RUBBER HOSE
FRP	FIBERGLASS REINFORCED PIPE
GSP	GALVANIZED STEEL PIPE
HDPE	HIGH DENSITY POLYETHYLENE PIPE
PE	POLYETHYLENE PIPE
PP	SANTOPRENE TUBING
PVC	POLY (VINYL CHLORIDE) PIPE
PVT	PVC TUBING
RCP	REINFORCED CONCRETE PIPE
STL	STEEL PIPE
SST	STAINLESS STEEL PIPE
VCP	VITRIFIED CLAY PIPE
(HT/INS)	HEAT TRACED AND INSULATED LINE

### P&ID - ABBREVIATIONS

### WALT WILLIAMS FILTRATION PLANT FILTER REHABILITATION

LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

03-DI003

FILE NO. 36432-11



P&ID - 1949 FILTER BASIN  
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REV.	CHK.	DATE	DESCRIPTION
0	WMS	JUL 12, 2022	ISSUED FOR BID

**03-DI4901**  
FILE NO. 36432-11

**NOTES:**

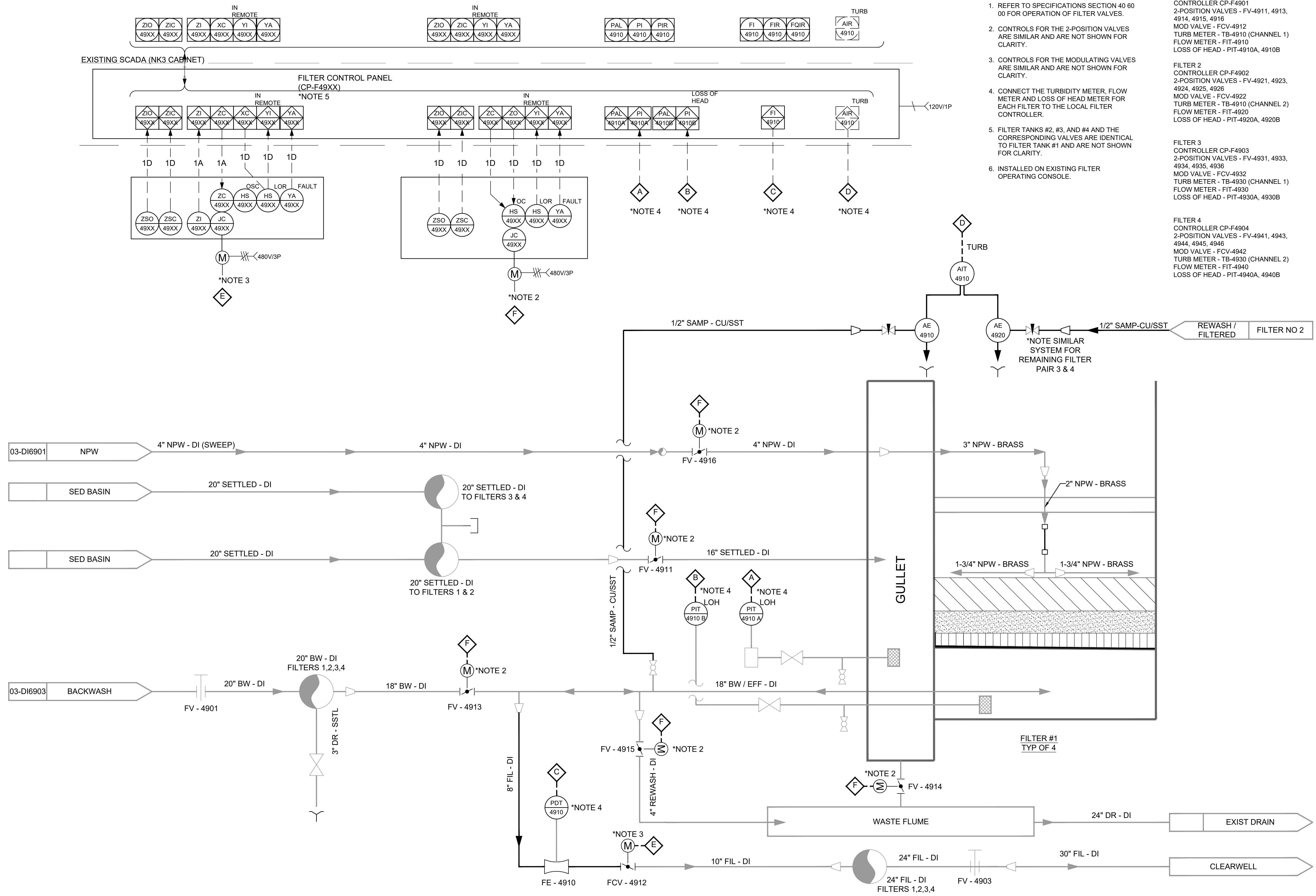
- REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
- CONTROLS FOR THE 2-POSITION VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
- CONTROLS FOR THE MODULATING VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
- CONNECT THE TURBIDITY METER, FLOW METER AND LOSS OF HEAD METER FOR EACH FILTER TO THE LOCAL FILTER CONTROLLER.
- FILTER TANKS #2, #3, AND #4 AND THE CORRESPONDING VALVES ARE IDENTICAL TO FILTER TANK #1 AND ARE NOT SHOWN FOR CLARITY.
- INSTALLED ON EXISTING FILTER OPERATING CONSOLE.

**FILTER 1**  
CONTROLLER CP-F4901  
2-POSITION VALVES - FV-4911, 4913, 4914, 4915, 4916  
MOD VALVE - FCV-4912  
TURB METER - TB-4910 (CHANNEL 1)  
FLOW METER - FIT-4910  
LOSS OF HEAD - PIT-4910A, 4910B

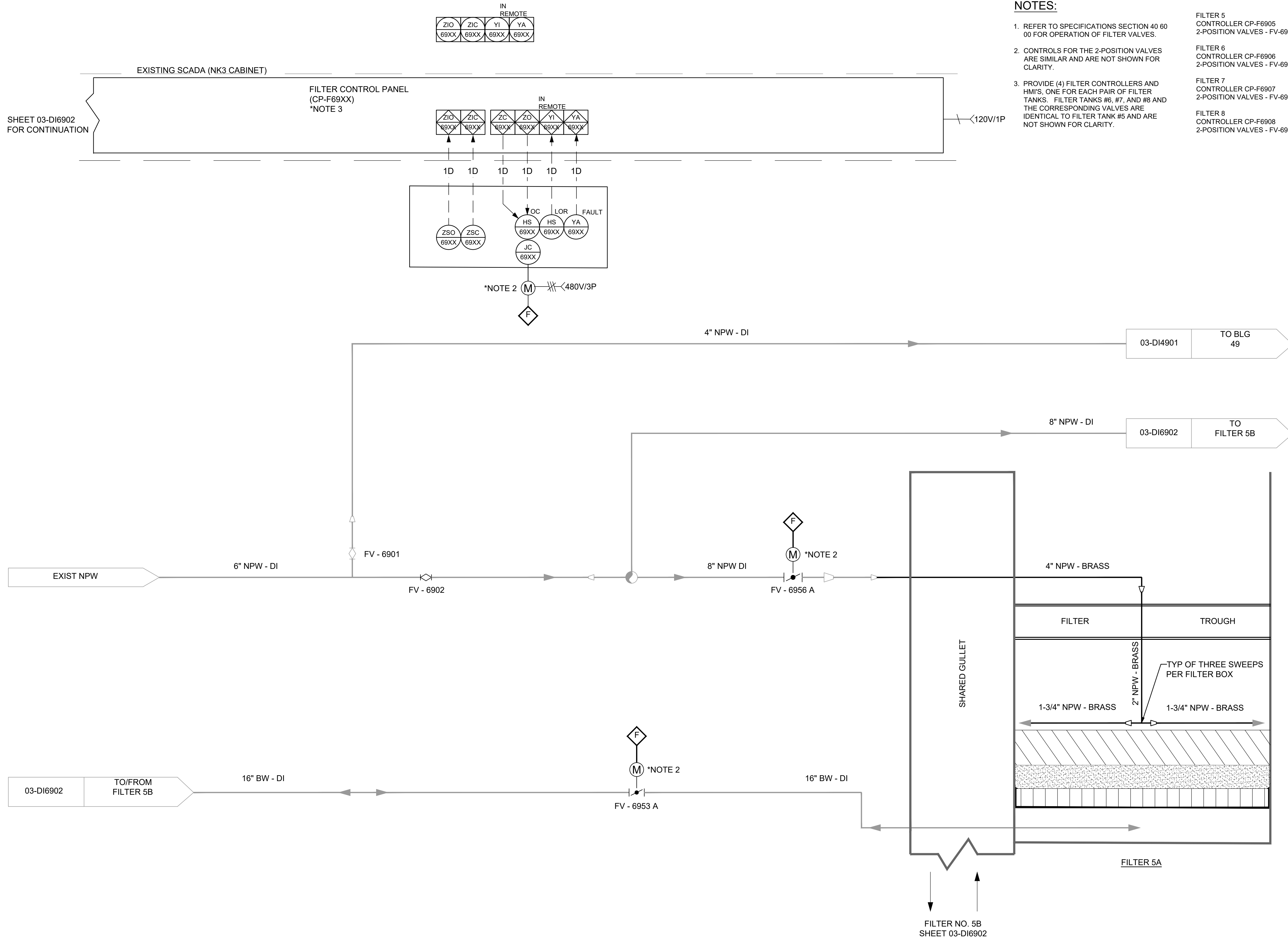
**FILTER 2**  
CONTROLLER CP-F4902  
2-POSITION VALVES - FV-4921, 4923, 4924, 4925, 4926  
MOD VALVE - FCV-4922  
TURB METER - TB-4910 (CHANNEL 2)  
FLOW METER - FIT-4920  
LOSS OF HEAD - PIT-4920A, 4920B

**FILTER 3**  
CONTROLLER CP-F4903  
2-POSITION VALVES - FV-4931, 4933, 4934, 4935, 4936  
MOD VALVE - FCV-4932  
TURB METER - TB-4930 (CHANNEL 1)  
FLOW METER - FIT-4930  
LOSS OF HEAD - PIT-4930A, 4930B

**FILTER 4**  
CONTROLLER CP-F4904  
2-POSITION VALVES - FV-4941, 4943, 4944, 4945, 4946  
MOD VALVE - FCV-4942  
TURB METER - TB-4930 (CHANNEL 2)  
FLOW METER - FIT-4940  
LOSS OF HEAD - PIT-4940A, 4940B



USER: AMPARKER  
FILE: P:\03\036432\03643211\03\_DI4901.dwg  
SAVED: 03/02/2022  
PLOT: 03/02/2022



**NOTES:**

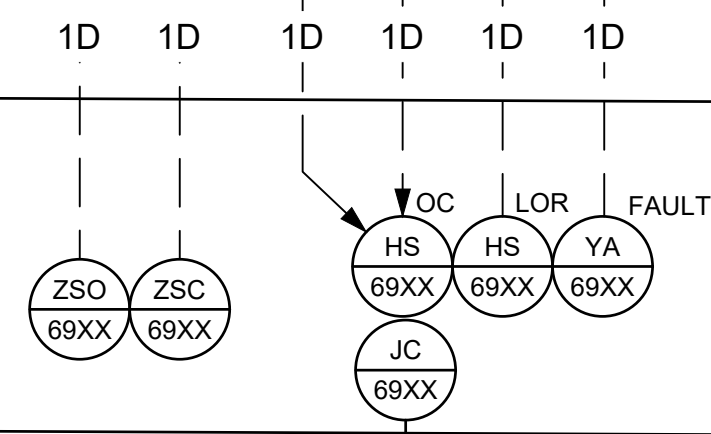
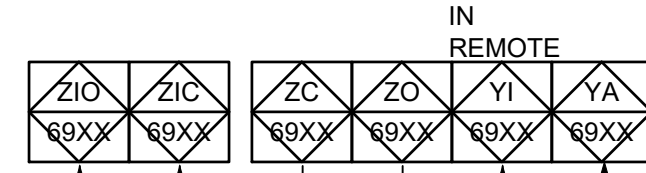
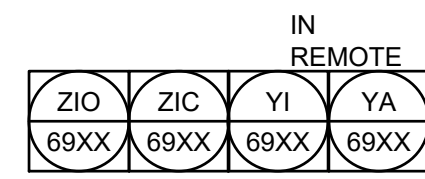
- REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
- CONTROLS FOR THE 2-POSITION VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
- PROVIDE (4) FILTER CONTROLLERS AND HM'S, ONE FOR EACH PAIR OF FILTER TANKS. FILTER TANKS #6, #7, AND #8 AND THE CORRESPONDING VALVES ARE IDENTICAL TO FILTER TANK #5 AND ARE NOT SHOWN FOR CLARITY.

- FILTER 5  
CONTROLLER CP-F6905  
2-POSITION VALVES - FV-6956A, 6956B
- FILTER 6  
CONTROLLER CP-F6906  
2-POSITION VALVES - FV-6966A, 6966B
- FILTER 7  
CONTROLLER CP-F6907  
2-POSITION VALVES - FV-6976A, 6976B
- FILTER 8  
CONTROLLER CP-F6908  
2-POSITION VALVES - FV-6986A, 6986B

SHEET 03-DI6902  
FOR CONTINUATION

EXISTING SCADA (NK3 CABINET)

FILTER CONTROL PANEL  
(CP-F69XX)  
\*NOTE 3



\*NOTE 2 M 480V/3P  
F

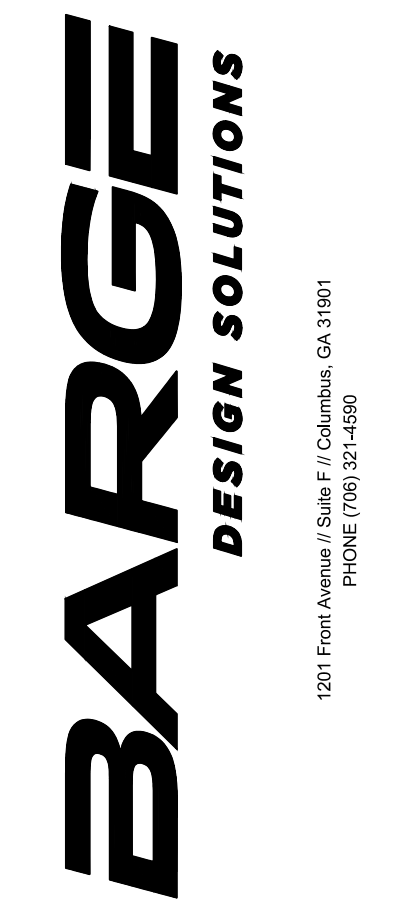
03-DI4901 TO BLG 49

03-DI6902 TO FILTER 5B

EXIST NPW

03-DI6902 TO/FROM FILTER 5B

FILTER NO. 5B  
SHEET 03-DI6902

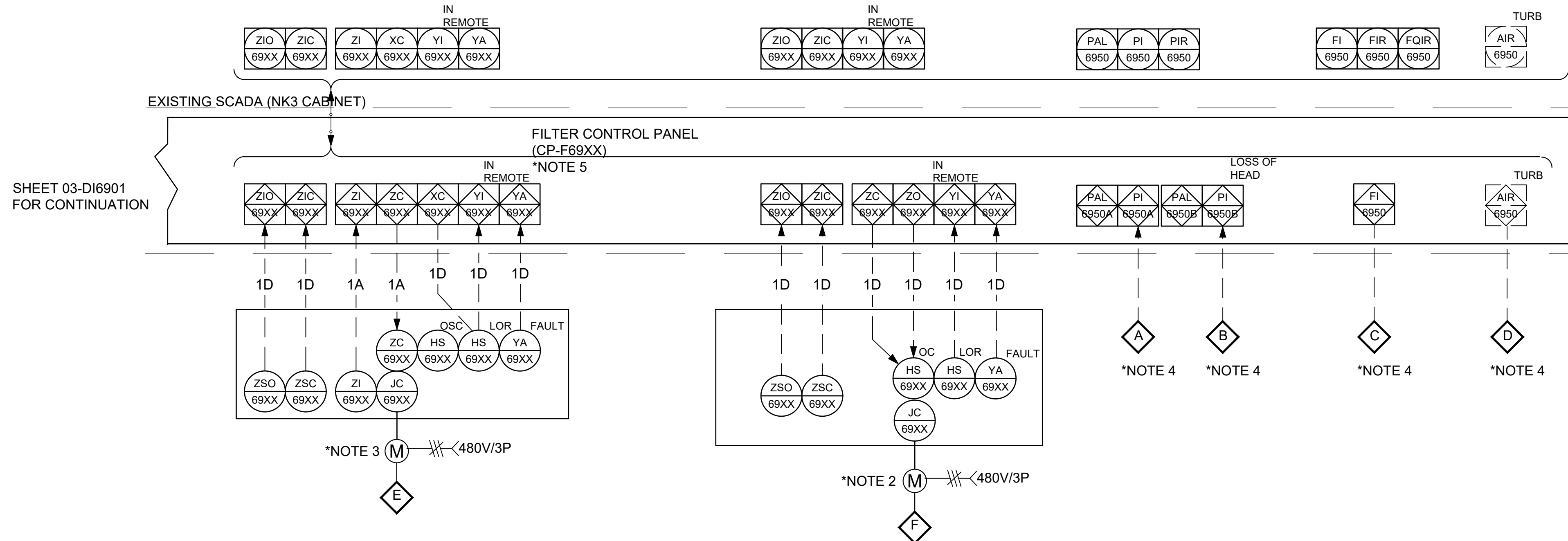


P&ID - 1969 FILTER BASIN  
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID

03-DI6901  
FILE NO. 36432-11

USER: AMPARKER  
FILE: F:\36432\364321104\_CAD\WATRINS\3643211\_03-DI6901\_118.dwg  
SAVED: 05/20/22  
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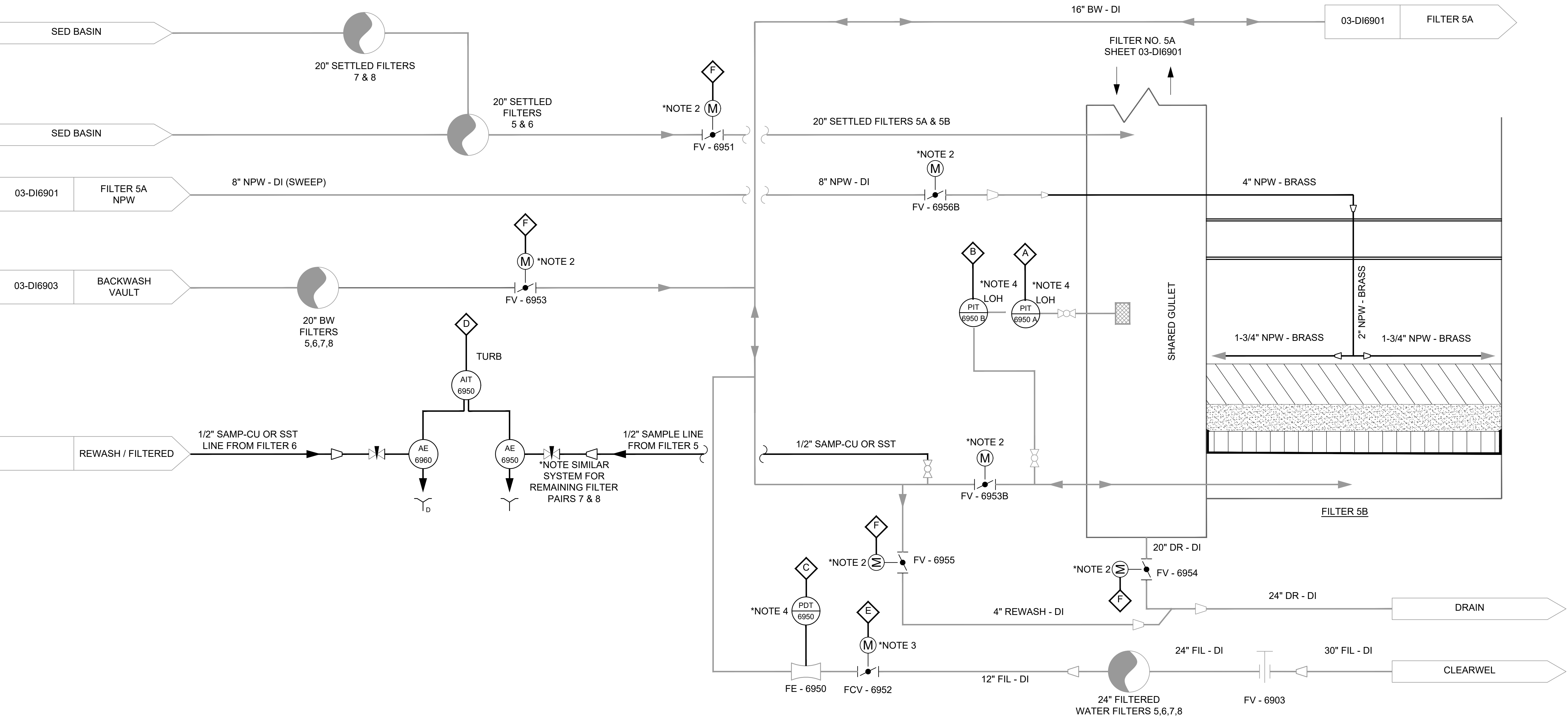
- REFER TO SPECIFICATIONS SECTION 40.60 FOR OPERATION OF FILTER VALVES.
- CONTROLS FOR THE 2-POSITION VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
- CONTROLS FOR THE MODULATING VALVES ARE SIMILAR AND ARE NOT SHOWN FOR CLARITY.
- CONNECT THE TURBIDITY METER, FLOW METER AND LOSS OF HEAD METER FOR EACH FILTER TO THE LOCAL FILTER CONTROLLER.
- PROVIDE (4) FILTER CONTROLLERS AND HMI'S, ONE FOR EACH PAIR OF FILTER TANKS. FILTER TANKS #6, #7, AND #8 AND THE CORRESPONDING VALVES ARE IDENTICAL TO FILTER TANK #5 AND ARE NOT SHOWN FOR CLARITY.

**FILTER 5**  
 CONTROLLER CP-F6905  
 2-POSITION VALVES - FV-6951, 5953, 6953A, 6953B, 6954, 6955, 6956A, 6956B  
 MOD VALVE - FV-6952  
 TURB METER - TB-6950 (CHANNEL 1)  
 FLOW METER - FIT-6950  
 LOSS OF HEAD - PIT-6950A, 6950B

**FILTER 6**  
 CONTROLLER CP-F6906  
 2-POSITION VALVES - FV-6961, 5963, 6963A, 6963B, 6964, 6965, 6966A, 6966B  
 MOD VALVE - FV-6962  
 TURB METER - TB-6960 (CHANNEL 2)  
 FLOW METER - FIT-6960  
 LOSS OF HEAD - PIT-6960A, 6960B

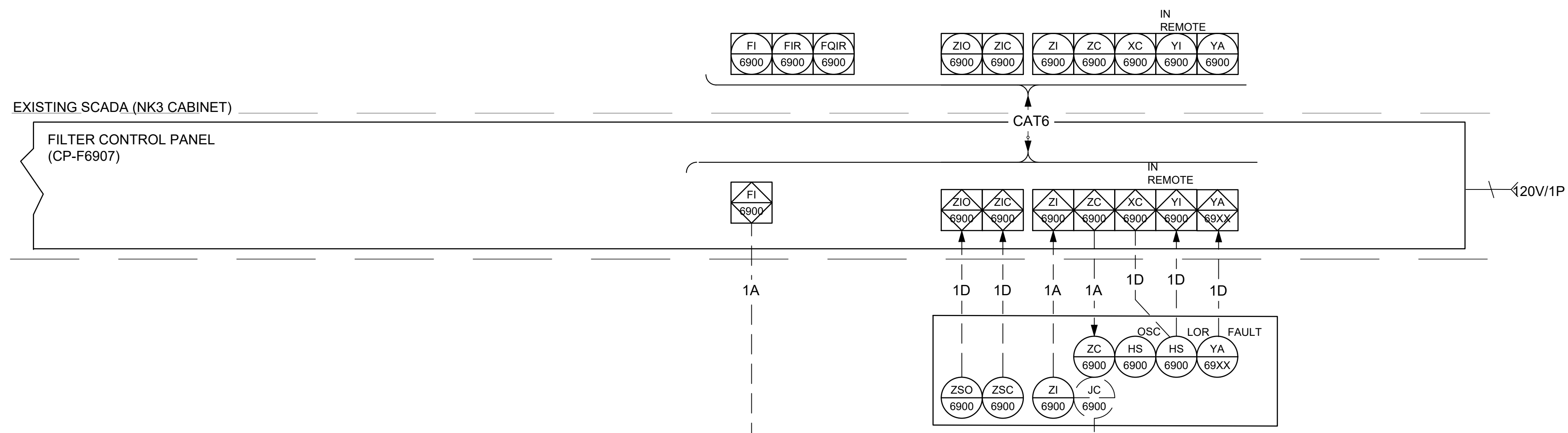
**FILTER 7**  
 CONTROLLER CP-F6907  
 2-POSITION VALVES - FV-6971, 5973, 6973A, 6973B, 6974, 6975, 6976A, 6976B  
 MOD VALVE - FV-6972  
 TURB METER - TB-6970 (CHANNEL 1)  
 FLOW METER - FIT-6970  
 LOSS OF HEAD - PIT-6970A, 6970B

**FILTER 8**  
 CONTROLLER CP-F6908  
 2-POSITION VALVES - FV-6981, 5983, 6983A, 6983B, 6984, 6985, 6986A, 6986B  
 MOD VALVE - FV-6982  
 TURB METER - TB-6980 (CHANNEL 2)  
 FLOW METER - FIT-6980  
 LOSS OF HEAD - PIT-6980A, 6980B

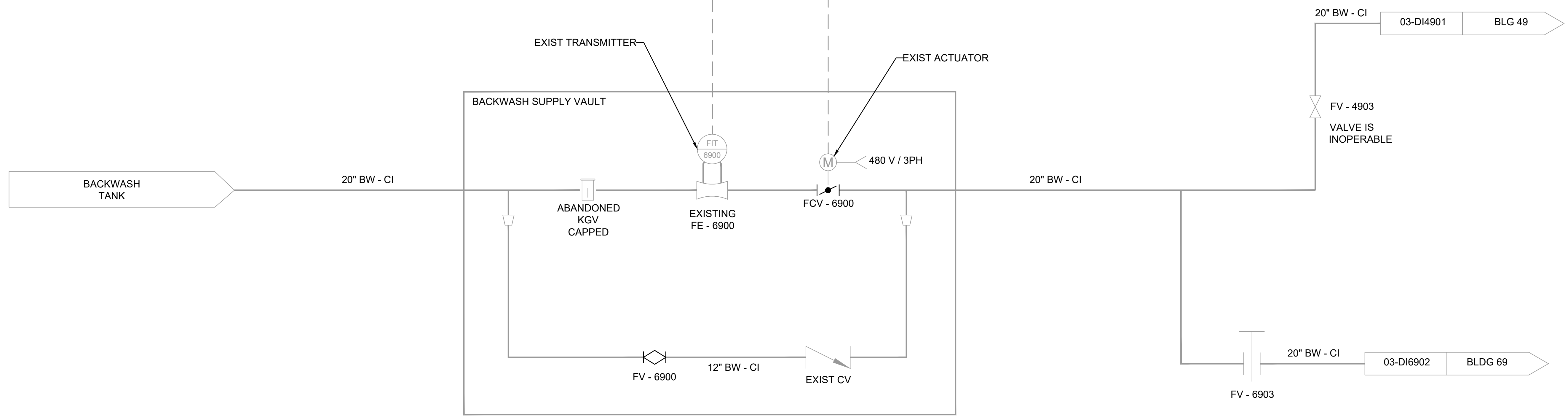


REVISION INFORMATION		
REV.	CHK.	DESCRIPTION
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USER: AMPARKER  
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 SAVED: 03/02/2022  
 PLOTTED: 03/02/2022



- NOTES:**
1. REFER TO SPECIFICATIONS SECTION 40 60 00 FOR OPERATION OF FILTER VALVES.
  2. MODULATING VALVE AND METER SHOWN SHALL BE CONNECTED TO PLC FOR FILTER #7.



USER: AMPARKER  
 FILE: F:\03\DI6903\03-DI6903-1104\_CAD\WATER\INSTR\03-DI6903\_1104.dwg  
 SAVER: 03/10/2022  
 PLOT: 03/10/2022



**P&ID - BACKWASH CONTROL VAULT**  
**WALT WILLIAMS FILTRATION PLANT**  
**FILTER REHABILITATION**  
 LAGRANGE, GEORGIA

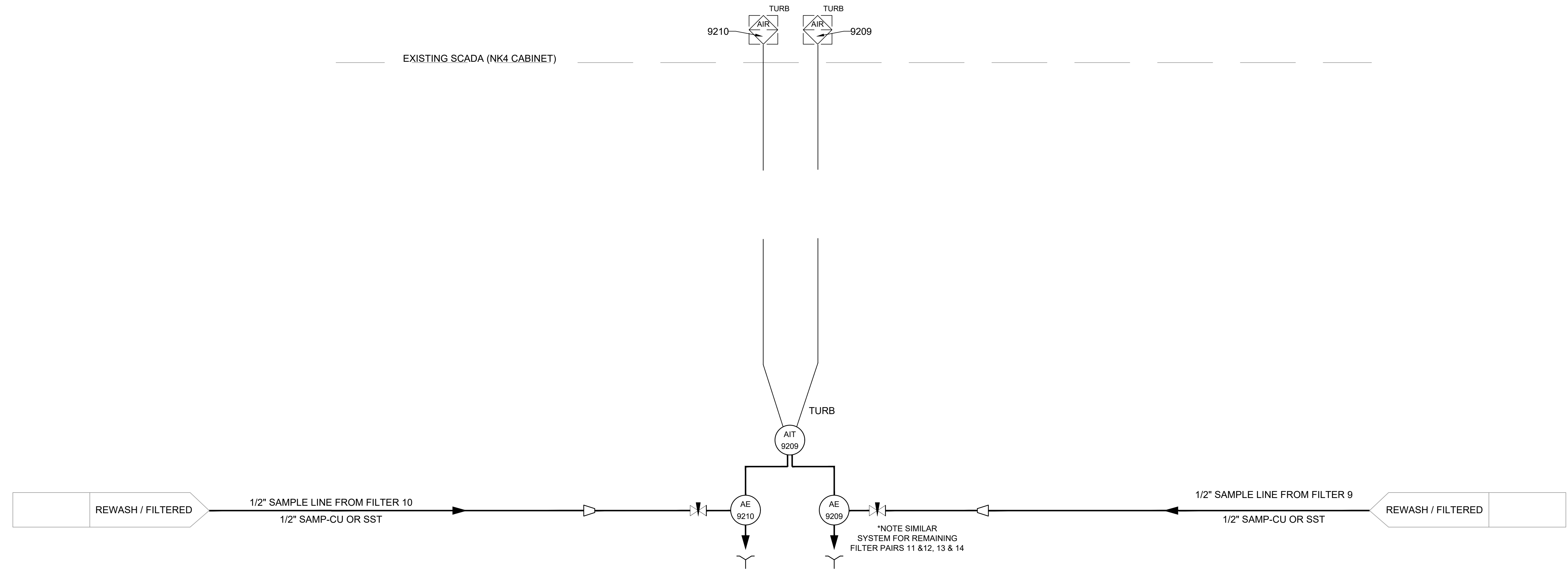
REVISION INFORMATION	
REV.	DESCRIPTION
0	JULY 12, 2022 ISSUED FOR BID





P&ID - 1992 FILTER BASIN

WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION  
 LAGRANGE, GEORGIA

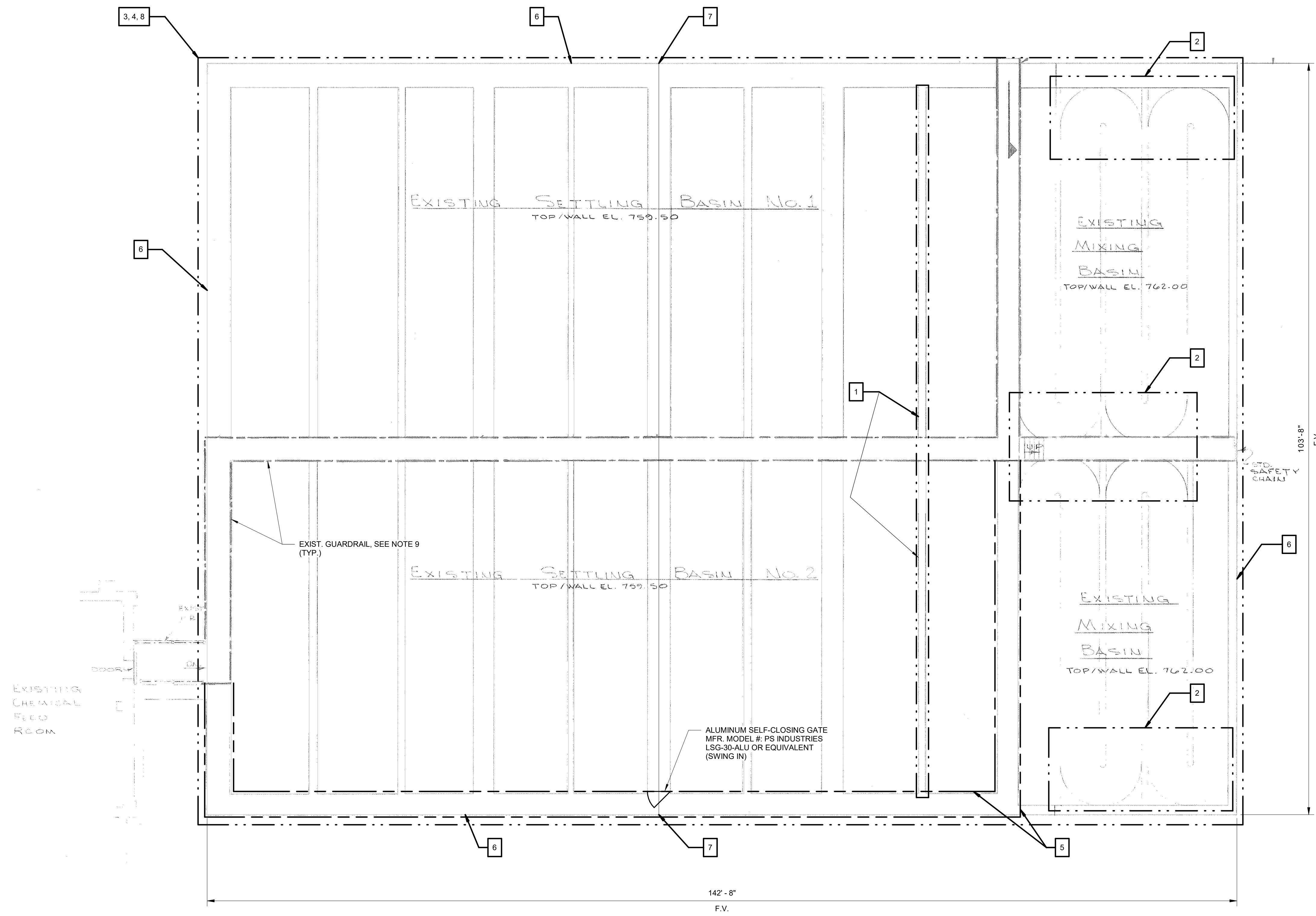


REVISION INFORMATION					
REV.	DR.	CHK.	DATE	DESCRIPTION	
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID	

03-DI9201  
 FILE NO. 36432-11

USER: AMPARKER  
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 SAVE: 03/30/2022  
 PLOT: 03/30/2022

Drawing Set: 23-S101 - 1949 BUILDING - SETTLING BASIN REPAIR PLAN  
 Drawing: 23-S101-01 - 1949 Building - Settling Basins Filter Valve Replacement  
 Date: 07/12/2022  
 File: 23-S101-01.dwg  
 Plot Date: 07/12/2022

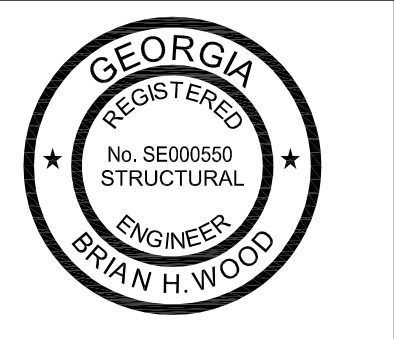
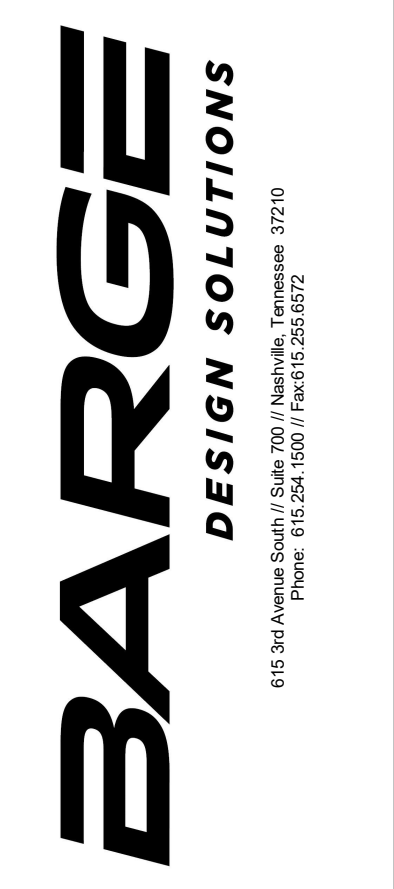


PLAN OF EXISTING SETTLING & MIXING BASINS  
SCALE:

1
**SETTLING BASIN REPAIR PLAN**  
 23-S101 SCALE: 1/8" = 1'-0"

1. REPLACE ENTIRE EXIST. WOODEN STILLING WALL W/ FIBERGLASS STILLING WALL. MEMBER SECTIONS AND SPACING SHALL MATCH EXIST. SEE DETAIL 1/23-S301.
2. REPLACE ALL EXIST. ROUNDED GROUT CORNERS. NEW GROUT TO BE REINFORCED W/ FORTA-FERRO SYNTHETIC FIBERS AT A DOSAGE OF 5 LBS/CY.
3. PREPARE AND REPAIR SURFACE DETERIORATED CONCRETE AND REBAR ON THE BASIN WALLS, COLUMNS, AND PORTIONS OF THE FLOOR AS DIRECTED BY ENGINEER (ENTIRE BASIN, UNIT PRICE).
4. REPAIR ALL CORRODED REINFORCING STEEL AS DIRECTED BY ENGINEER (ENTIRE BASIN, UNIT PRICE).
5. NEW ALUM. GUARDRAIL. SEE DETAIL 2/23-S301.
6. PREPARE AND INJECT POLYURETHANE IN ALL WALL CRACKS, INCLUDING ALL CONSTRUCTION JOINTS AS DIRECTED BY ENGINEER (UNIT PRICE).
7. PREPARE AND RESEAL EXPANSION JOINT.
8. FOLLOWING ALL BASIN REPAIRS, APPLY PROTECTIVE EPOXY COATING TO INTERIOR BASIN WALLS AND FLOOR SLAB (ENTIRE BASIN).
9. ALUM. TOE BOARD TO BE ADDED TO ALL EXISTING GUARDRAILS. SEE DETAIL 2/23-S301 FOR TOE BOARD.

GENERAL NOTE: REFER TO PROJECT SPECIFICATIONS FOR ADDITIONAL INFORMATION ON REPAIR PROCEDURES AND ACCEPTABLE REPAIR MATERIALS.

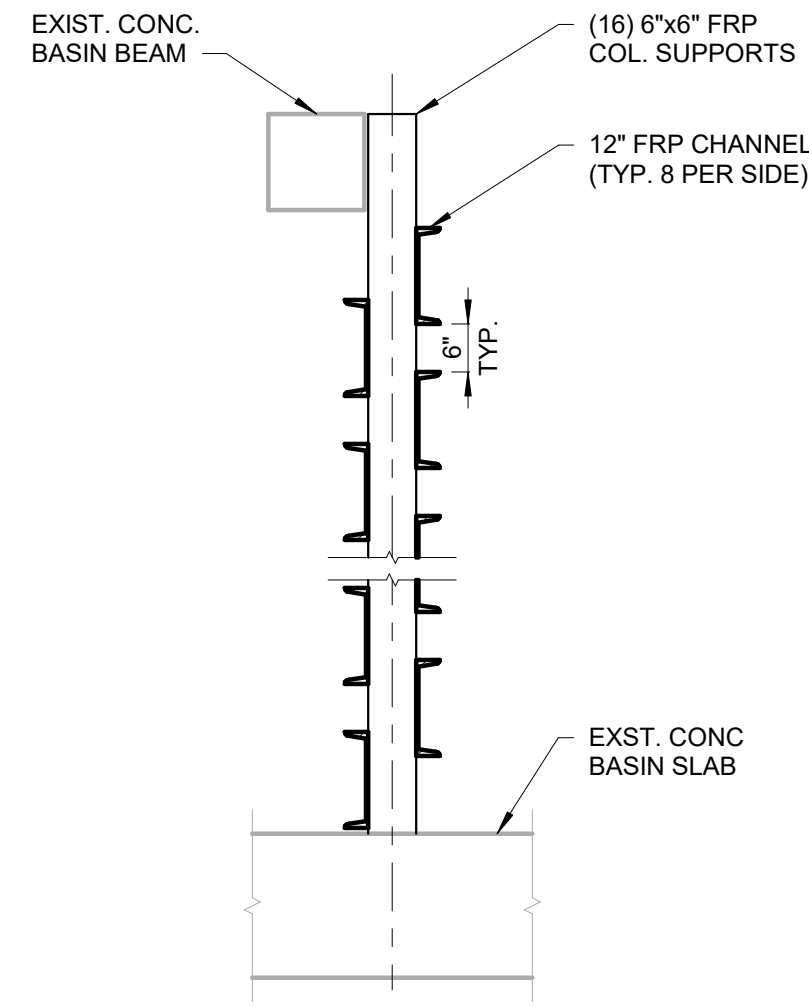


1949 BUILDING - SETTLING BASIN REPAIR PLAN  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT  
 LAGRANGE, GEORGIA

REVISION INFORMATION		DESCRIPTION
REV.	DATE	ISSUED FOR BIDS
0	07/12/2022	

23-S101

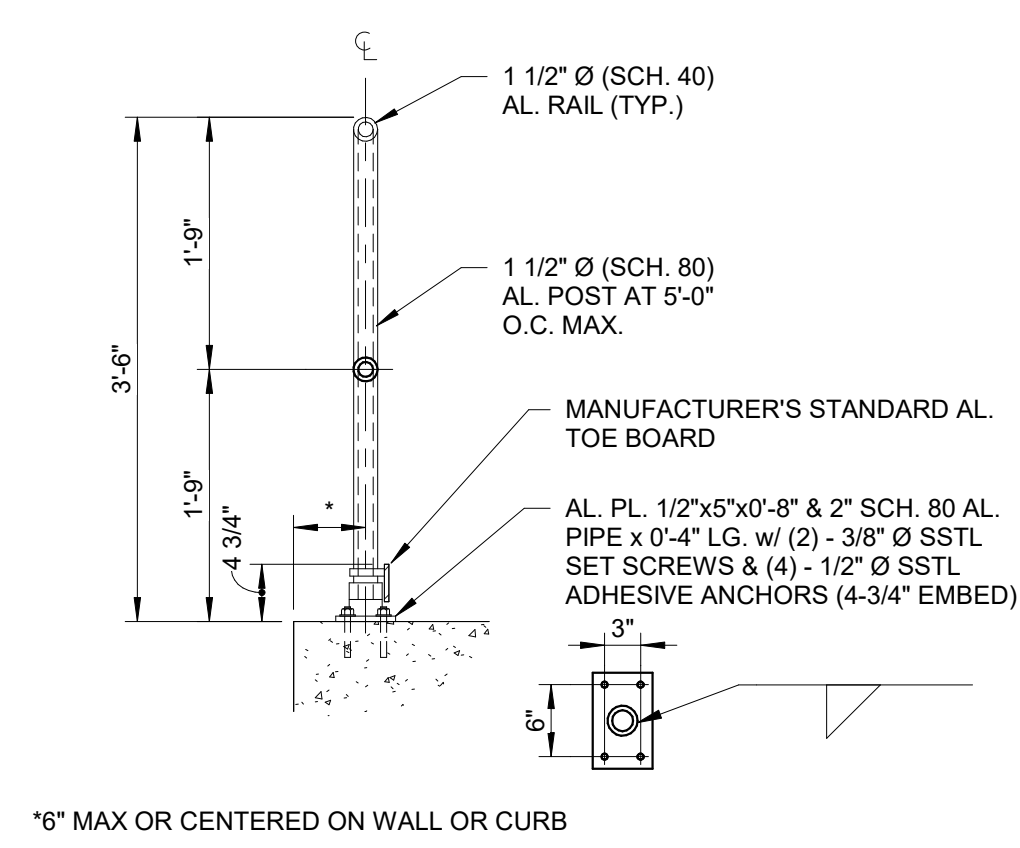
FILE NO. 3643211



NOTES:

1. ALL DIMENSIONS AND MEMBER QUANTITIES SHALL BE FIELD VERIFIED PRIOR TO FABRICATION. MEMBER PROJECTED AREAS AND SPACING SHALL MATCH EXISTING.
2. ALL MEMBERS SHALL BE FRP AND DESIGNED BY A SPECIALTY CONTRACTOR.
3. ALL CONNECTIONS AND BRACKETS SHALL BE STAINLESS STEEL AND DESIGNED BY A SPECIALTY CONTRACTOR.

**1 STILLING WALL DETAIL**  
23-S301 SCALE: 1/2" = 1'-0"

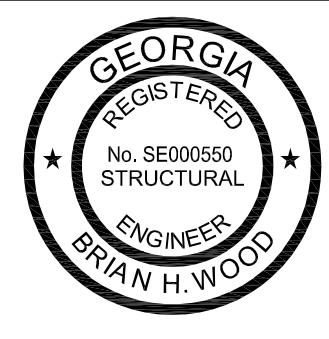


**2 TYPICAL GUARDRAIL ON CONCRETE**  
23-S301 SCALE: 3/4" = 1'-0"

Drawing Set: 0.0  
 Drawing: 23-S301 - 1949 BUILDING - SECTIONS AND DETAILS  
 File: 23-S301-1949-Building-Sections-and-Details.dwg  
 Date: 07/12/2022  
 User: JWB



615 3rd Avenue South // Suite 700 // Nashville, Tennessee 37210  
 Phone: 615.254.1500 // Fax: 615.255.6672



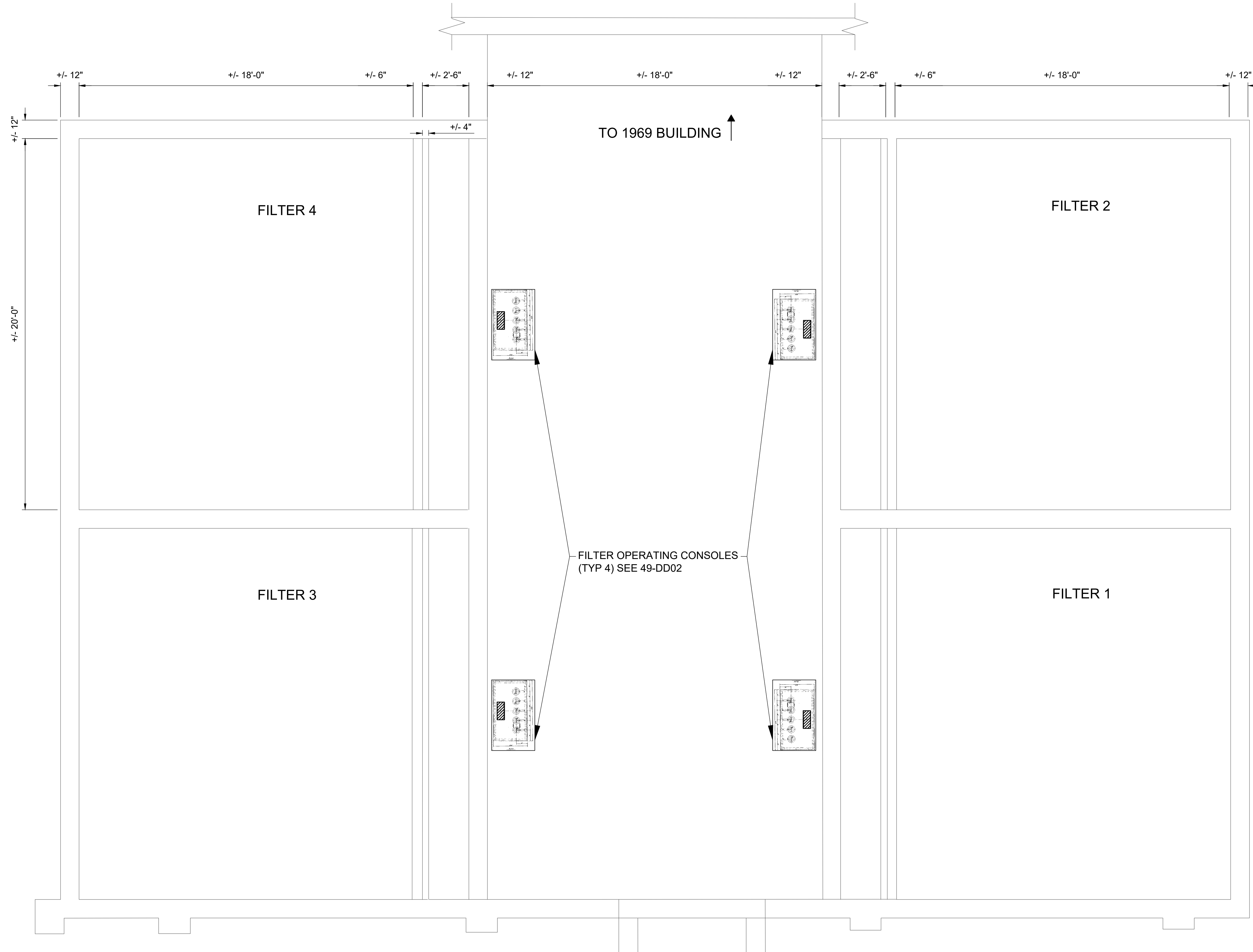
1949 BUILDING - SECTIONS AND DETAILS  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT  
 LAGRANGE, GEORGIA

REVISION INFORMATION		DATE	DESCRIPTION
REV	CHK	DATE	DESCRIPTION
0	CBH	07/12/2022	ISSUED FOR BIDS

23-S301  
FILE NO. 3643211

**NOTES:**

1. OPERATING CONSOLES SHALL BE REHABILITATED, REMOVE INTERNAL COMPONENTS, DIGITAL DISPLAY. PREPARE SURFACES FOR NEW HMI CONTROL PANEL (TYP 4). SEE SHEET 49-E102 AND 95-E701.



**NTS** FILTER OPERATING CONSOLE - DEMO PLAN



1949 BUILDING - FILTER OPERATING  
CONSOLE OVERVIEW - DEMO PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION			
REV.	CHK.	DATE	DESCRIPTION
0	MA	JUL 12, 2022	ISSUED FOR BID

**49-DD01**

FILE NO. 36432-11

USER:MPARKER  
FILE:1949364321104\_CADWATR3643211\_49-DD01\_1949 Filter Operating Console Demo.dwg  
SAVED:06/07/2022  
PLOTTED:06/08/2022

NOTES:

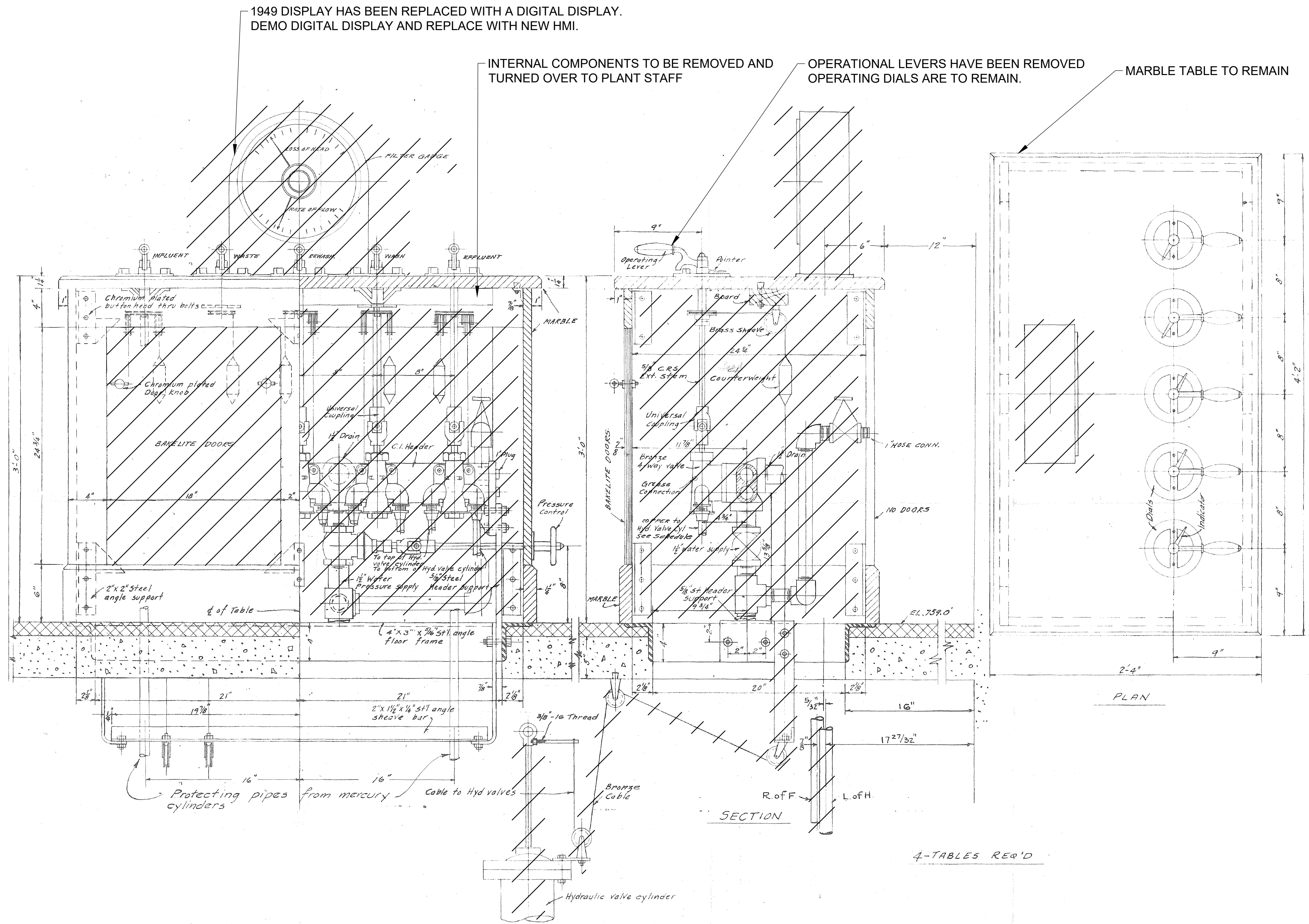
- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWING BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
- OPERATING CONSOLES SHALL BE REHABILITATED, REMOVE INTERNAL COMPONENTS, DIGITAL DISPLAY. PREPARE SURFACES FOR NEW HMI CONTROL PANEL (TYP 4). SEE SHEET 49-E102 AND 95-E701.



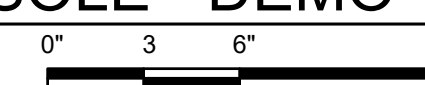
FILTER OPERATING CONSOLE



EXISTING OPERATING CONSOLE  
DIGITAL DISPLAY



1 FILTER OPERATING CONSOLE - DEMO  
49-D101 SCALE: 2" = 1'-0"



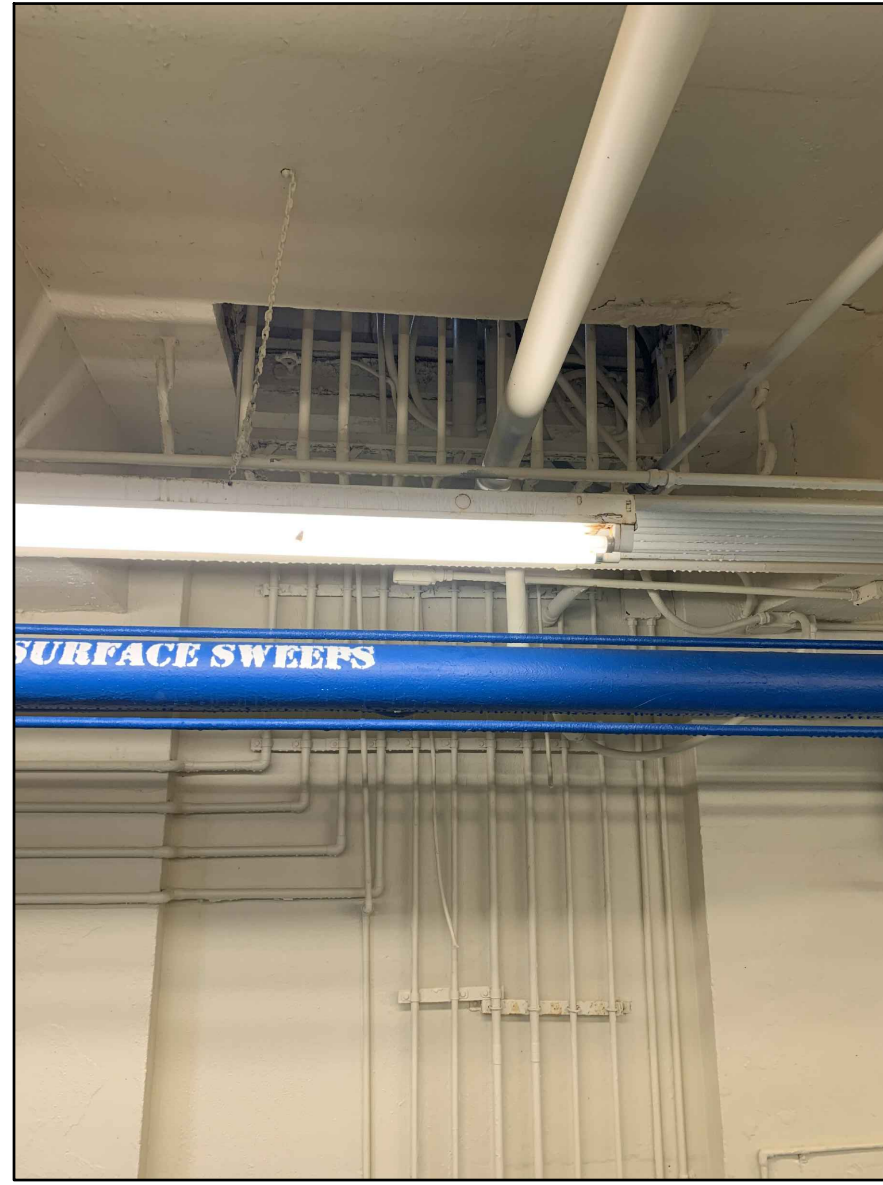
1949 BUILDING - FILTER OPERATING  
CONSOLE DEMO

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

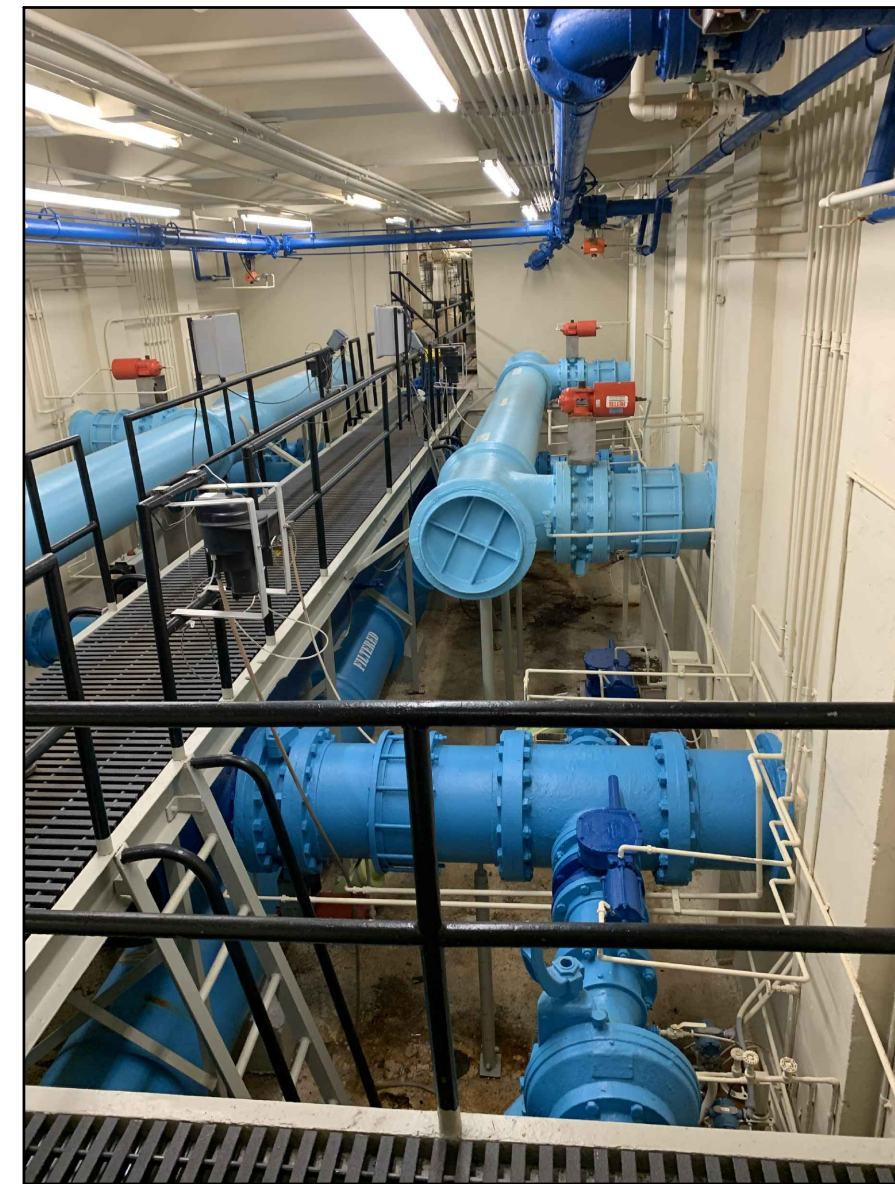
REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JUL 12 2022	ISSUED FOR BID

NOTES:

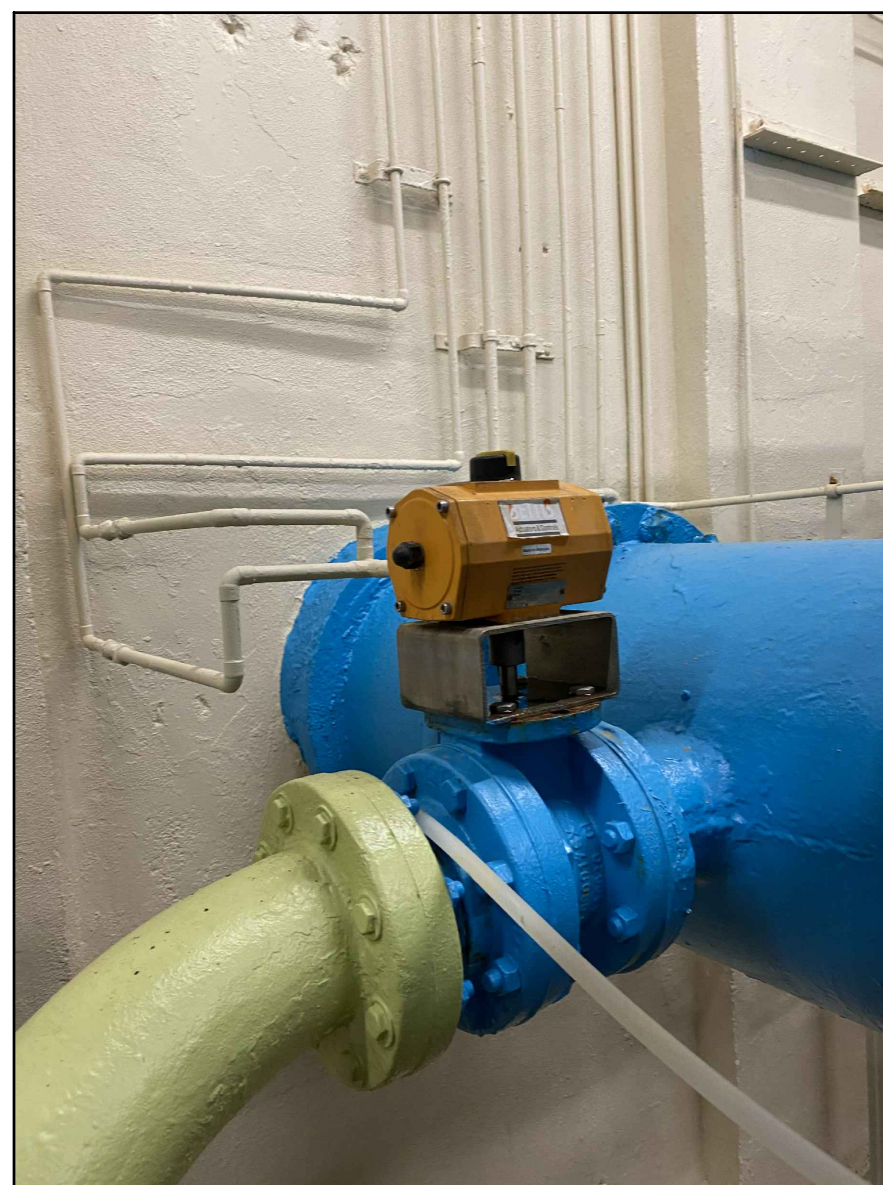
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE FILTER OPERATING CONSOLES TO THE ACTUATORS, INCLUDING SUPPORTS AND HARDWARE.
3. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE MAIN 2" SUPPLY PIPING (PAINTED BLUE) TO THE ACTUATORS. CAP ACTUATOR HYDRAULIC PIPING AT THE ISOLATING VALVE OR TAPPED CONNECTION. THE 2" SUPPLY LINE IS TO REMAIN.
4. REMOVE ALL VALVES IN THE VALVE SCHEDULE AND ASSOCIATED ACTUATORS.
5. REMOVE ALL ACTUATOR HYDRAULIC PIPING WALL SUPPORTS, PATCH AND REPAIR CONCRETE WHERE SUPPORTS ARE REMOVED. RE-COAT PER SPEC SECTION 09 90 15. FINISH COAT COLOR TO MATCH EXISTING.



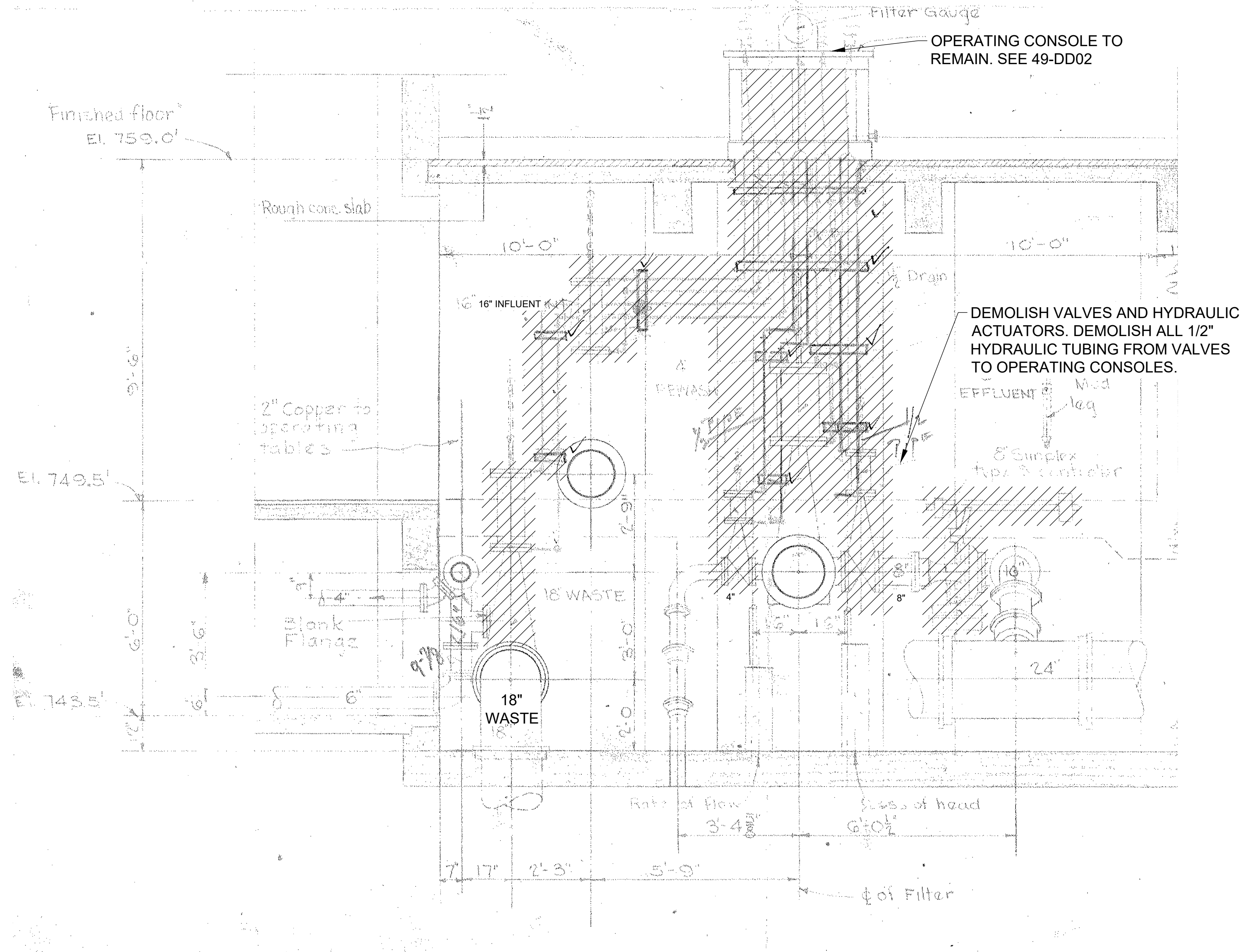
HYDRAULIC ACTUATOR PIPING - ENTERING PIPE GALLERY



PIPE GALLERY HYDRAULIC ACTUATOR PIPING



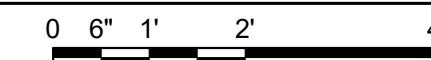
REWASH HYDRAULIC ACTUATOR, PIPING, AND WALL SUPPORTS



C 49-D101

HYDRAULIC ACTUATOR PIPING DEMO - FILTER GALLERY

SCALE: 1/2" = 1'-0"



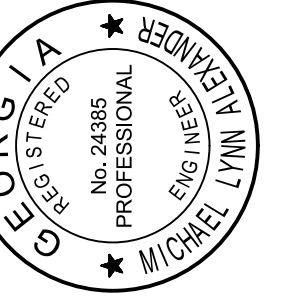
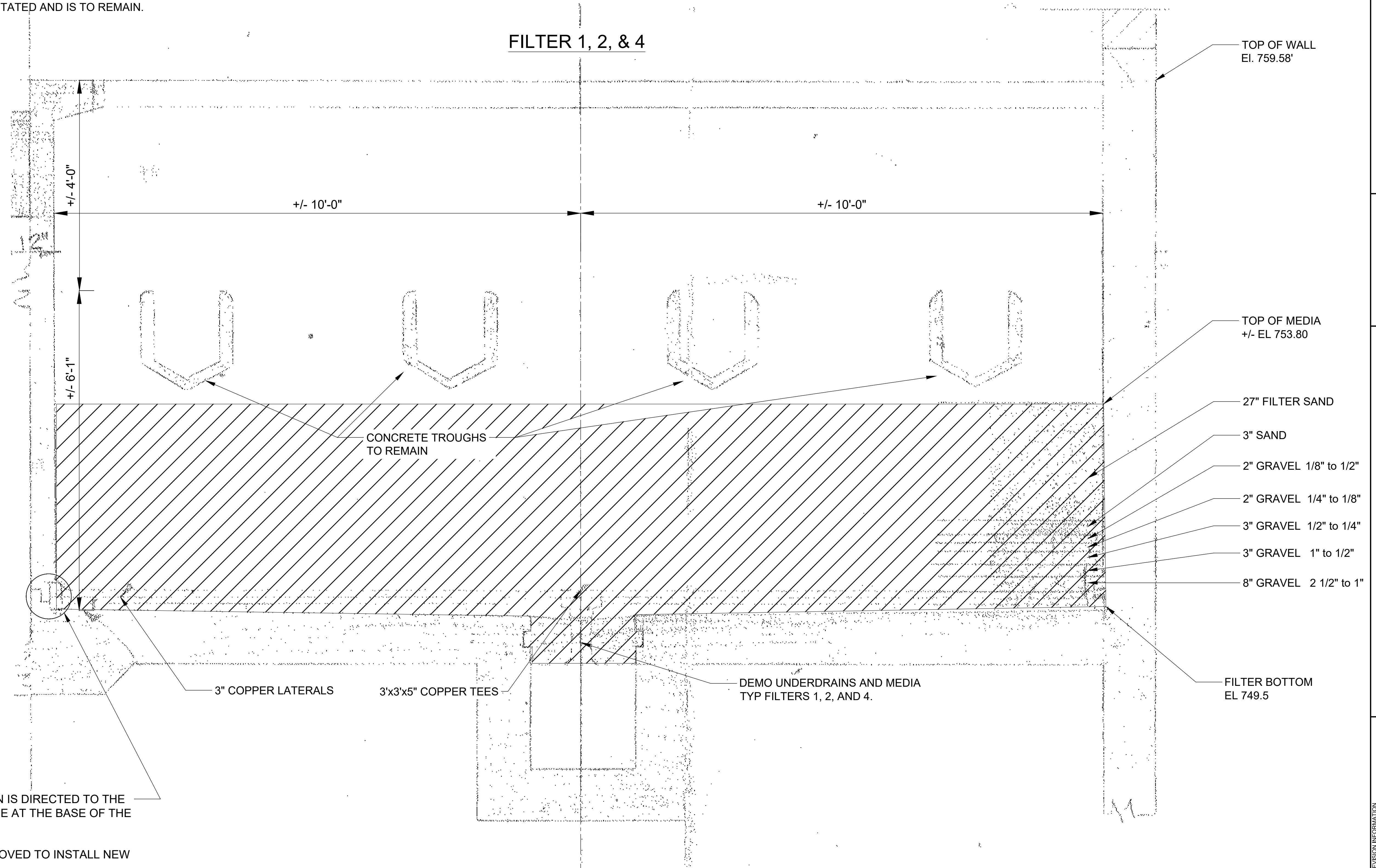
USER: AMPARKER  
 FILE: P:\36342\363421\04\_CAD\WATR363421\_49-DD03\_1949 Hydraulic Piping Demo.dwg  
 SAVE: 06/30/2022  
 PLOTTED: 06/30/2022



REV.	DATE	BY	CHK.	APP.	REVISION INFORMATION
0					ISSUED FOR BID

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FILTERS 1, 2 AND 4 TO UNDERGO FILTER MEDIA REPLACEMENT WITH NEW UNDERDRAINS. FILTER 3 HAS RECENTLY BEEN REHABILITATED AND IS TO REMAIN.



1949 BUILDING - FILTER UNDERDRAIN - DEMO

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

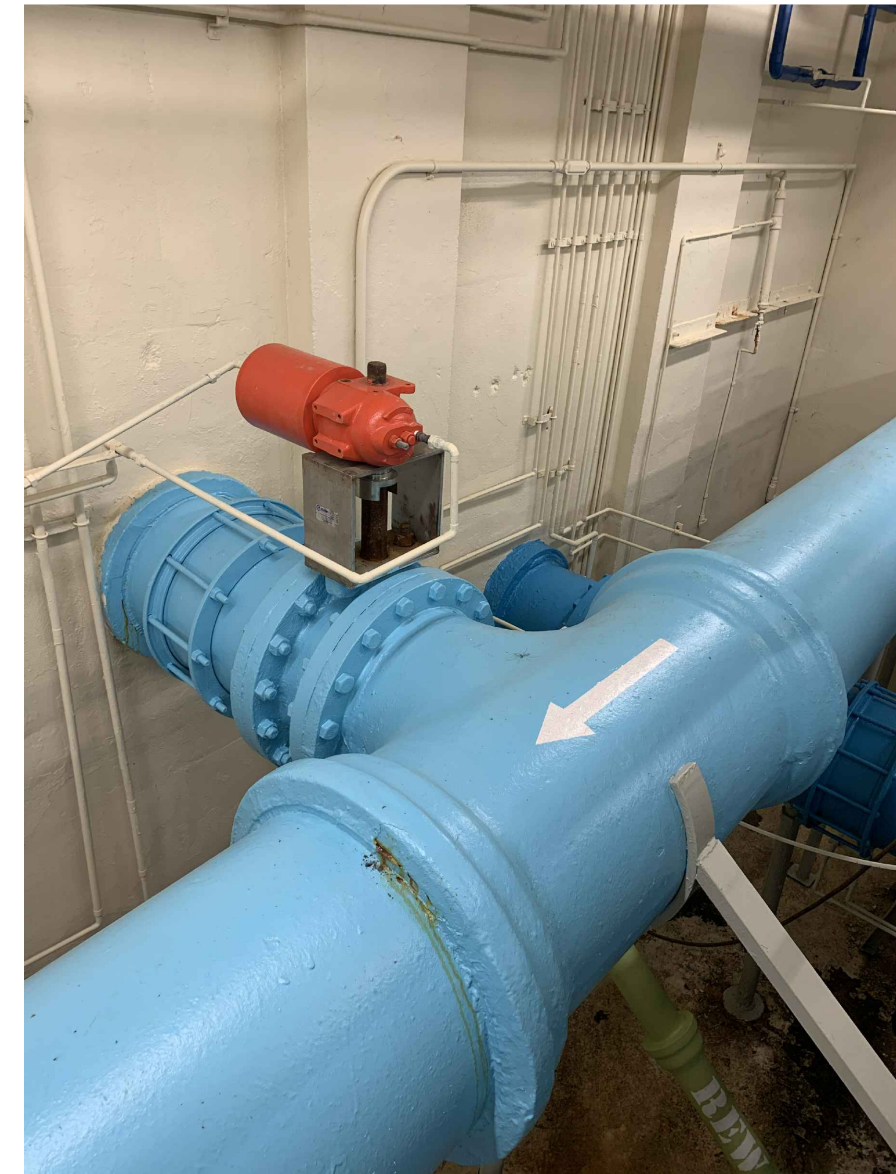
REV.	DATE	BY	CHK.	APP.	REVISION INFORMATION
0		KMS	KMS	JMA	JULY 12, 2022 ISSUED FOR BID

**D** FILTER UNDERDRAIN - DEMO  
49-D101 SCALE: 1" = 1'-0" 0 3" 6" 1" 2"

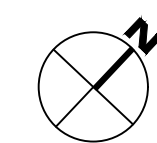
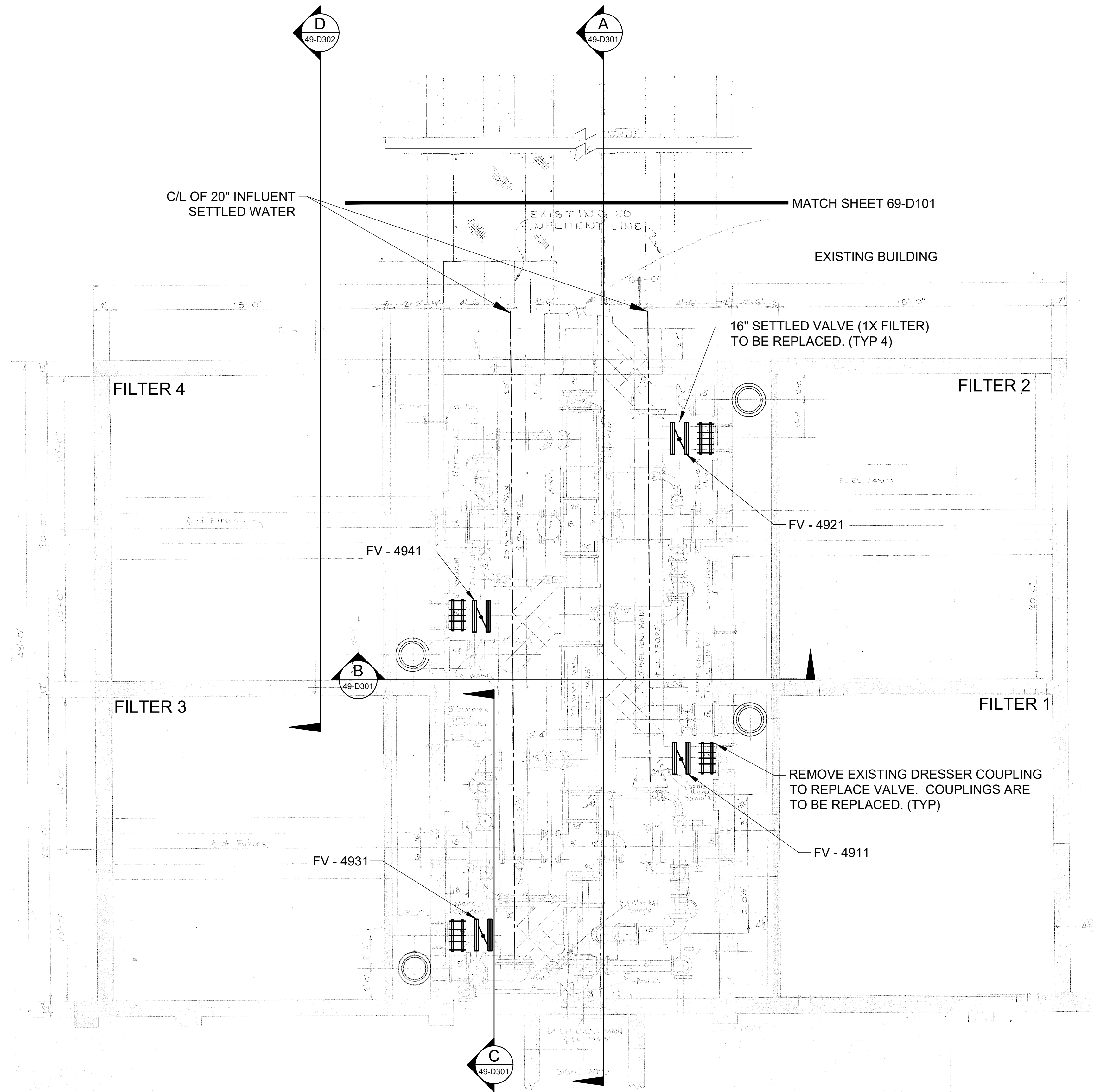
USER: AMPARKER  
FILE: P:\030942\030942\104\_CAD\WATER\364321\_49-DD04\_1949 Filter Underdrain Democ.dwg  
SAVED: 06/30/2022  
PLOT: 06/30/2022

NOTES:

- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
- FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
- PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION AS REQUIRED TO PROTECT EXISTING PUSH ON LEAD JOINTS. SUBMIT A DETAILED PLAN TO ENGINEER PRIOR TO BEGINNING WORK.
- SETTLED BUTTERFLY VALVE (4X) AND EXISTING DRESSER COUPLING (4X) ARE TO BE REPLACED.
- PROVIDE NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



16" SETTLED VALVE



**SETTLED VALVE REPLACEMENT - PLAN**

NTS

USER: AMPARKER  
 FILE: P:\06\62\364321\06\_CAD\WATR\364321\_49-D101\_1949 Settled Valve Replacement Plan.dwg  
 SAVED: 06/02/2022  
 PLOTTED: 06/02/2022



1201 First Avenue / Suite F / Columbus, GA 31901  
 PHONE (706) 321-4890



**1949 BUILDING - SETTLED VALVE REPLACEMENT - PLAN**  
**WALT WILLIAMS FILTRATION PLANT**  
**FILTER REHABILITATION**  
 LAGRANGE, GEORGIA

REV.	CHK.	DATE	DESCRIPTION
0	WAS	JUL 12 2022	ISSUED FOR BID

**49-D101**  
FILE NO. 36432-11



NOTES:

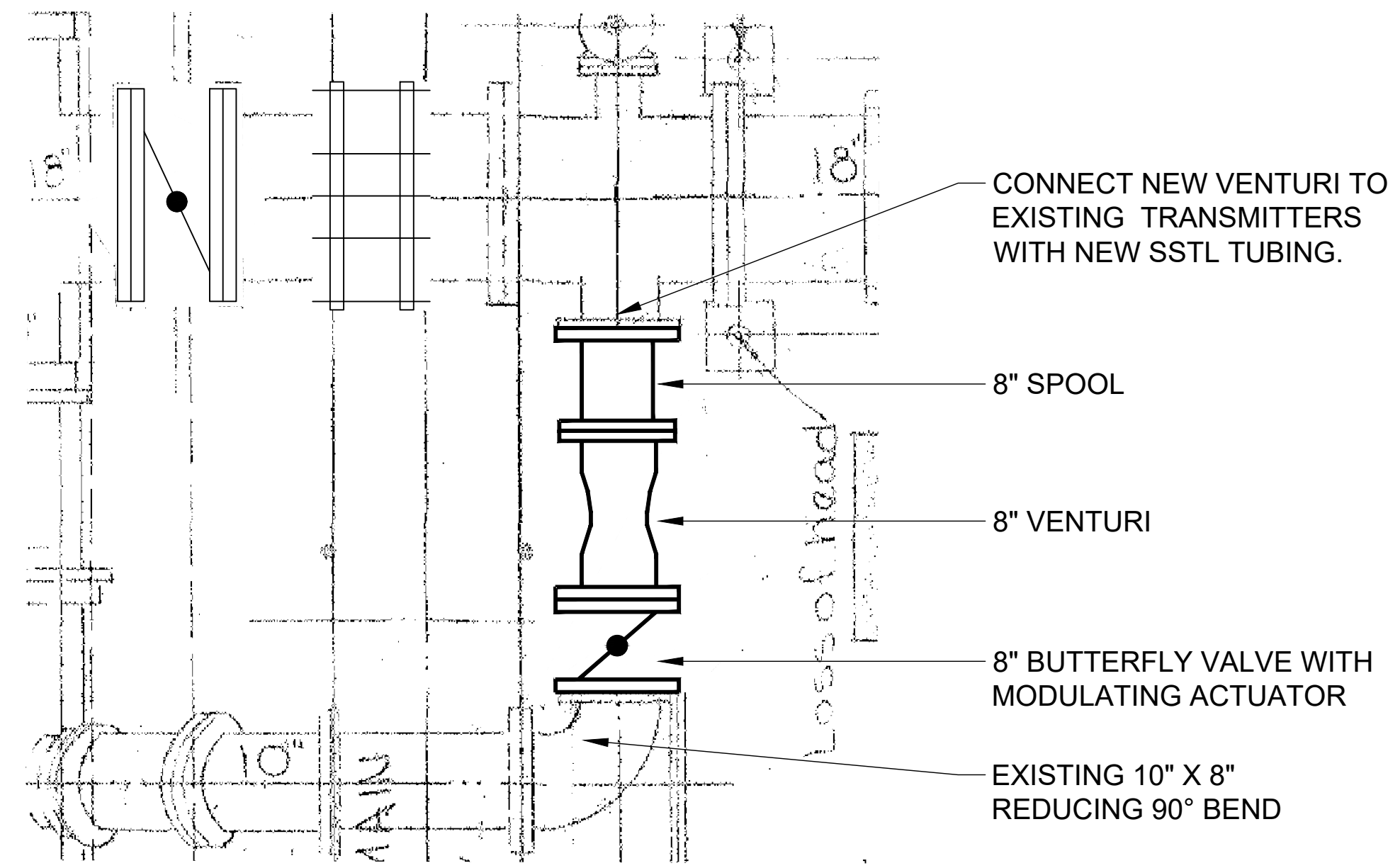
- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
- FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
- PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION AS REQUIRED TO PROTECT EXISTING PUSH ON LEAD JOINTS. SUBMIT A DETAILED PLAN TO ENGINEER PRIOR TO BEGINNING WORK.
- EXISTING FILTERED BUTTERFLY VALVE, SPOOL, VENTURI AND SIMPLEX TYPE S CONTROLLER (4X) ARE TO BE REMOVED.
- NEW FILTERED BUTTERFLY VALVE (4X) AND VENTURI (4X) ARE TO BE INSTALLED. SEE DETAIL 1 ON THIS SHEET.
- BACKWASH (WASH) BUTTERFLY VALVES (4X) AND DRESSER COUPLINGS (4X) ARE TO BE REPLACED.
- NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, FITTING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



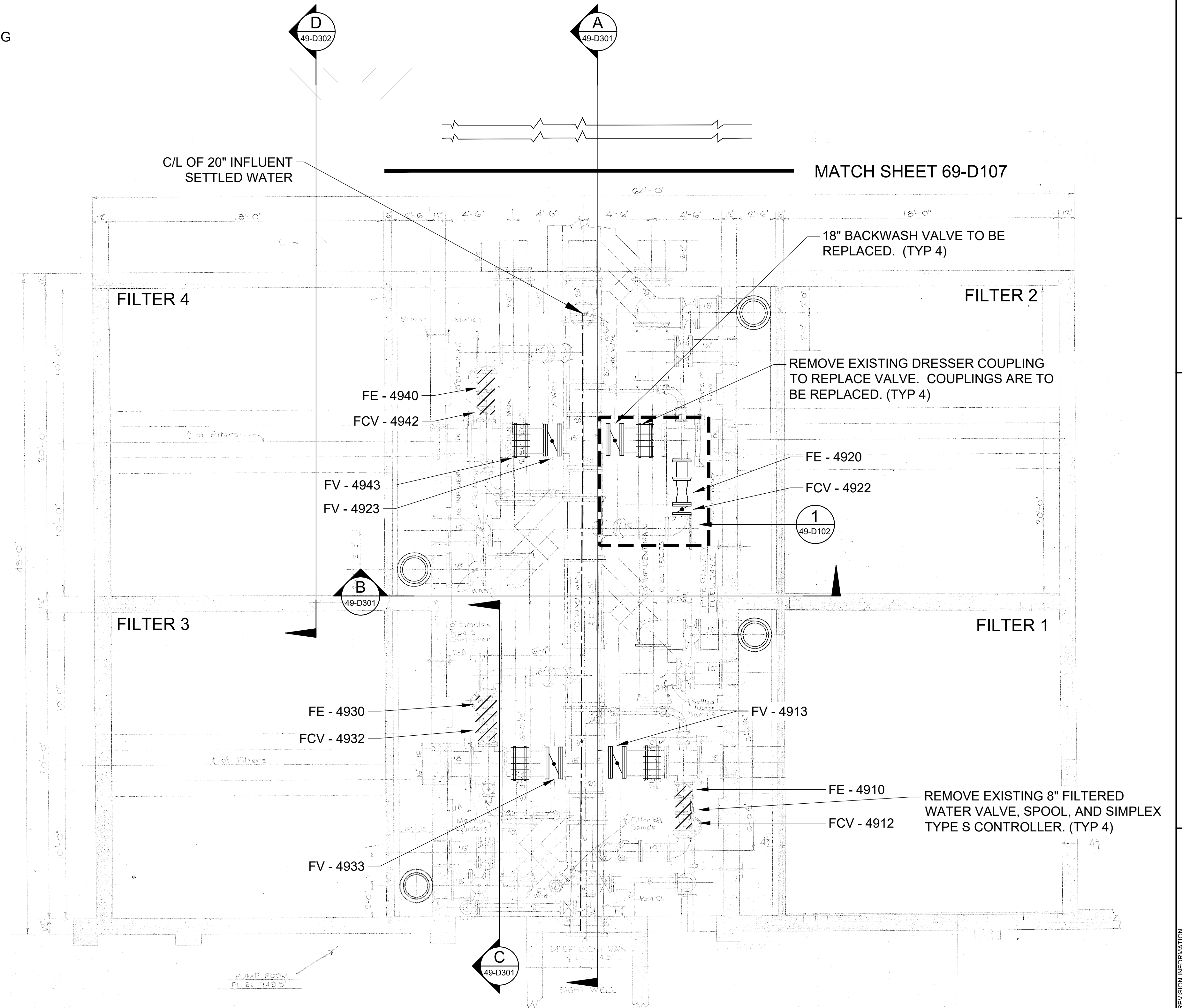
8" FILTERED VALVE,  
VENTURI & CONTROLLER



18" BACKWASH VALVE



1 ROF CONTROLLER DETAIL TYP 4  
49-D102 SCALE: 3/4" = 1'-0"



NTS FILTERED VALVE & BACKWASH VALVE REPLACEMENT - PLAN



1949 BUILDING - FILTERED VALVE & BACKWASH VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REV.	BY	CHK.	DATE	DESCRIPTION
0	AKS	JMA	JULY 12, 2022	ISSUED FOR BID

USER:AMPARKER  
FILE:P:\36432\364321\104\_CAD\WATR\364321\_49-D102\_1949 Filtered Valve Replacement Plan.dwg  
SAVED:06/30/2022  
PLOT:ED:06/30/2022

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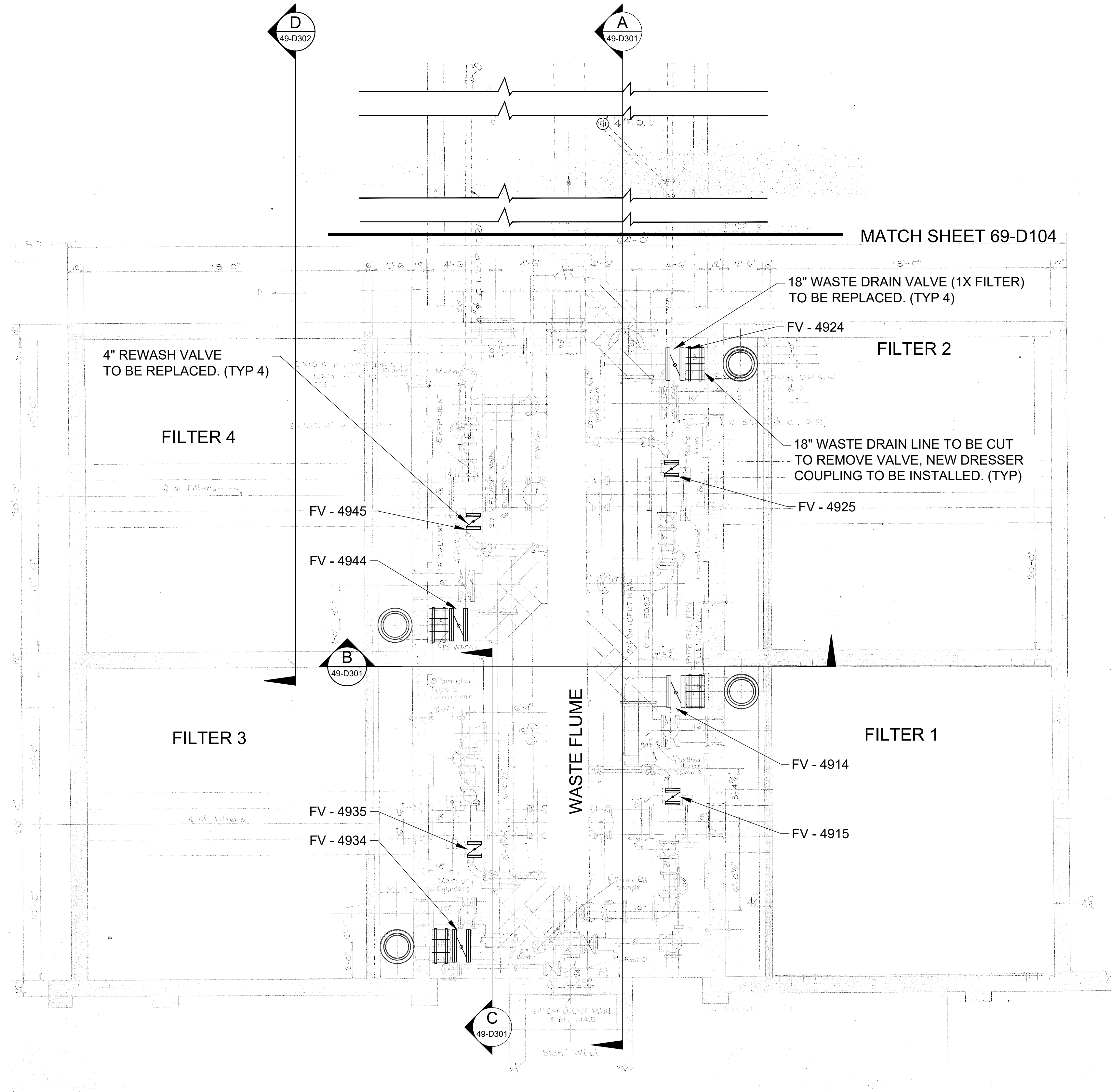
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION AS REQUIRED TO PROTECT EXISTING PUSH ON LEAD JOINTS. SUBMIT A DETAILED PLAN TO ENGINEER PRIOR TO BEGINNING WORK.
4. WASTE DRAIN BUTTERFLY VALVE (4X) ARE TO BE REPLACED.
5. REWASH BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
6. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



18" WASTE DRAIN VALVE



4" REWASH VALVE



WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN

NTS



1949 BUILDING - WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN  
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

49-D103

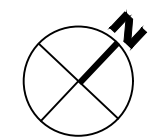
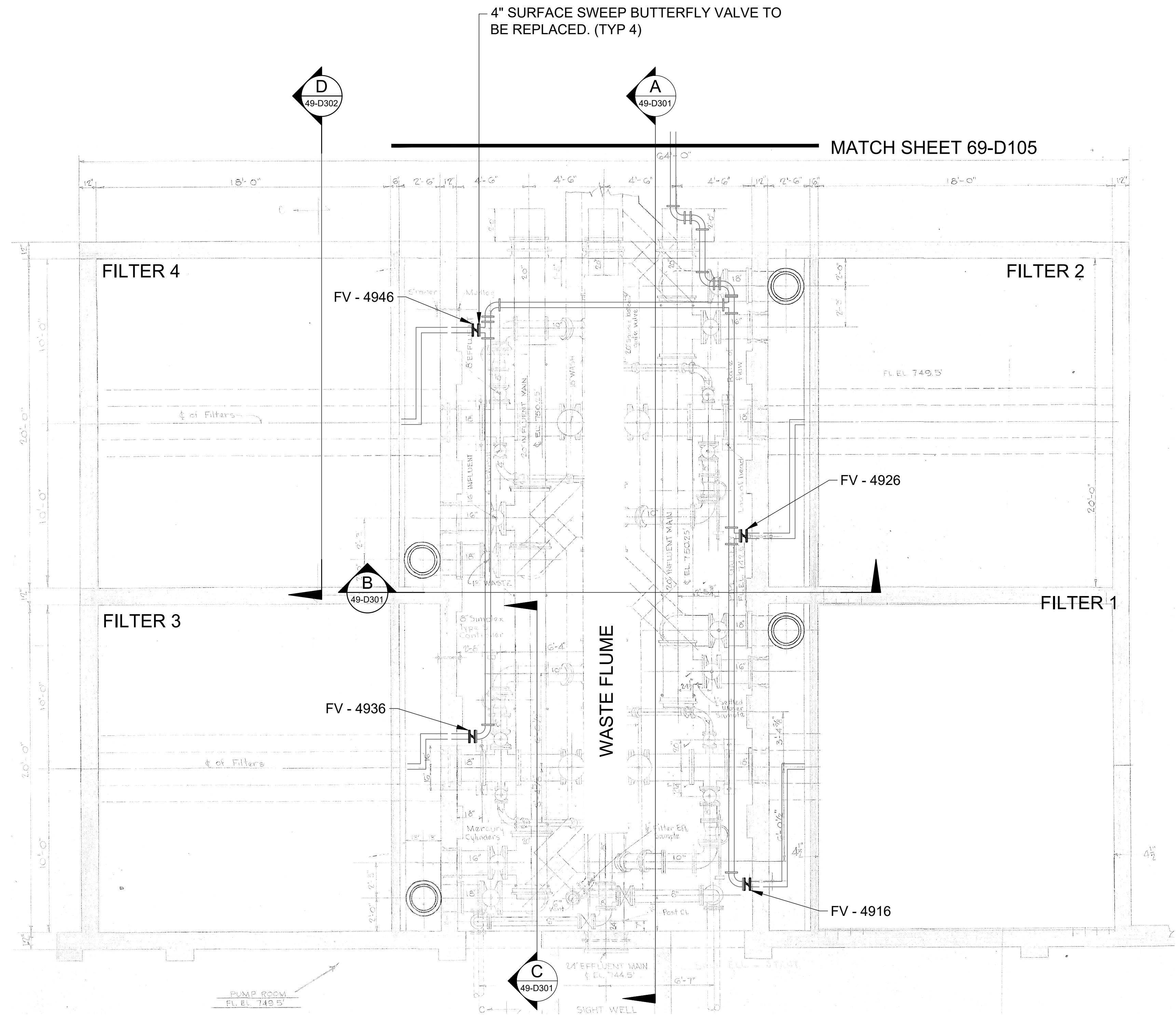
FILE NO. 36432-11

NOTES:

1. BACKGROUND OF DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. SURFACE SWEEP BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
3. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.

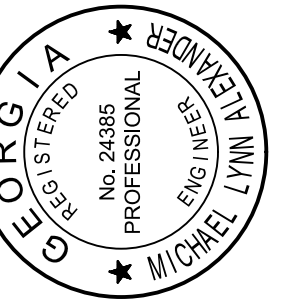


4" SURFACE SWEEP VALVE



**SURFACE SWEEP VALVE REPLACEMENT - PLAN**

NTS



1949 BUILDING - SURFACE SWEEP  
VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

49-D104

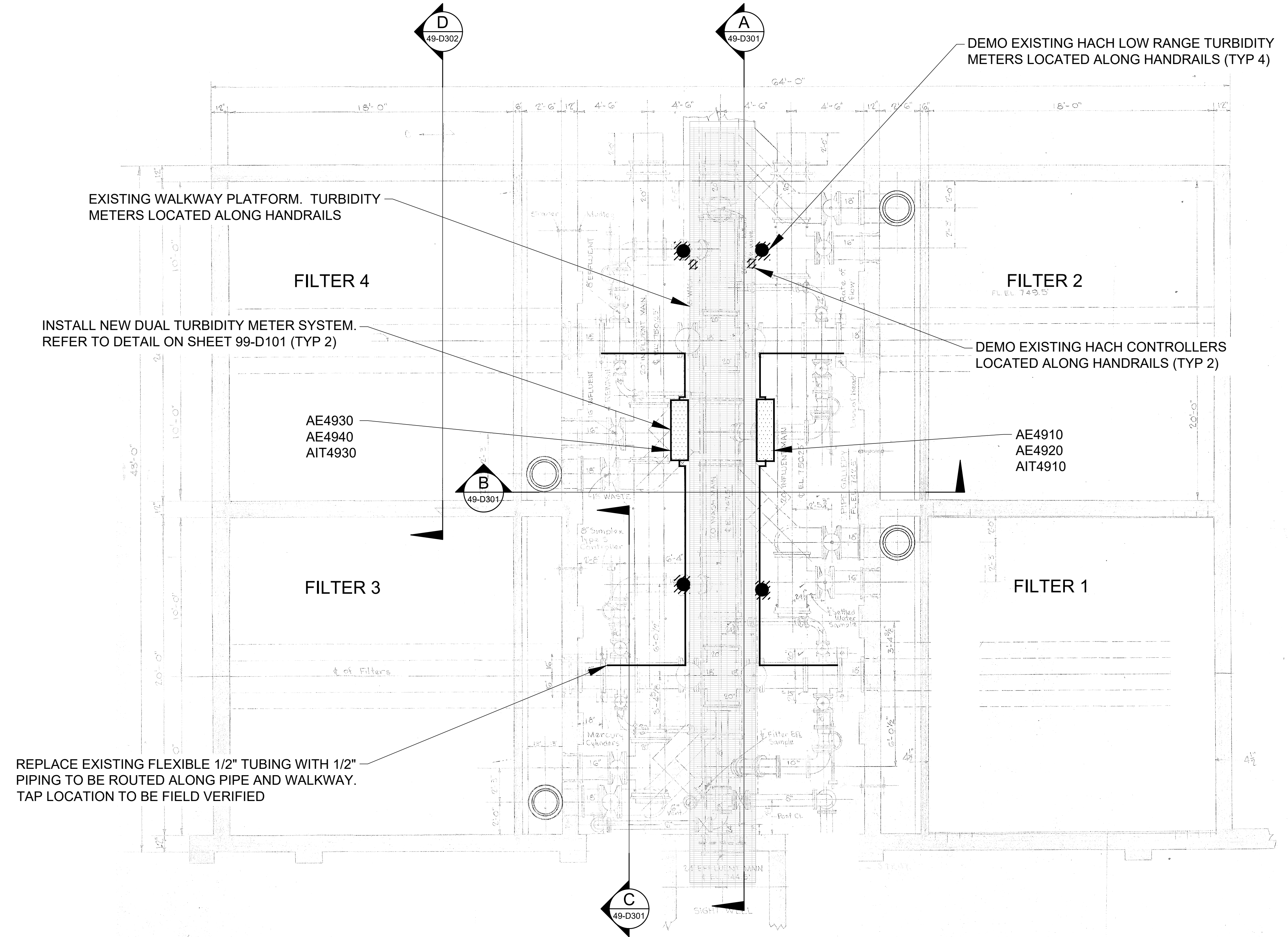
FILE NO. 36432-11

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. IN THE PIPE GALLERY REMOVE FOUR (4) EXISTING HACH TURBIDITY METERS MODEL 1720E, TWO (2) HACH CONTROLLERS MODEL SC200, AND ALL HARDWARE. INSTALL FOUR (4) NEW HACH TURBIDITY METERS MODEL TU5300SC AND TWO (2) NEW HACH CONTROLLERS MODEL SC4500 PROVIDED BY OWNER ON THE NEW TURBIDITY SYSTEM. SEE DETAIL ON SHEET 99-D101.



TURBIDITY METER & CONTROLLER



 **TURBIDITY SYSTEM REPLACEMENT - PLAN**  
NTS

USER: AMPARKER  
FILE: I:\964321\64321\104\_CAD\WATR364321\_48-D105\_1949 Turbidity System Replacement Plan.dwg  
SAVED: 06/20/2022  
PLOTTED: 06/20/2022



1949 BUILDING - TURBIDITY SYSTEM  
REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION

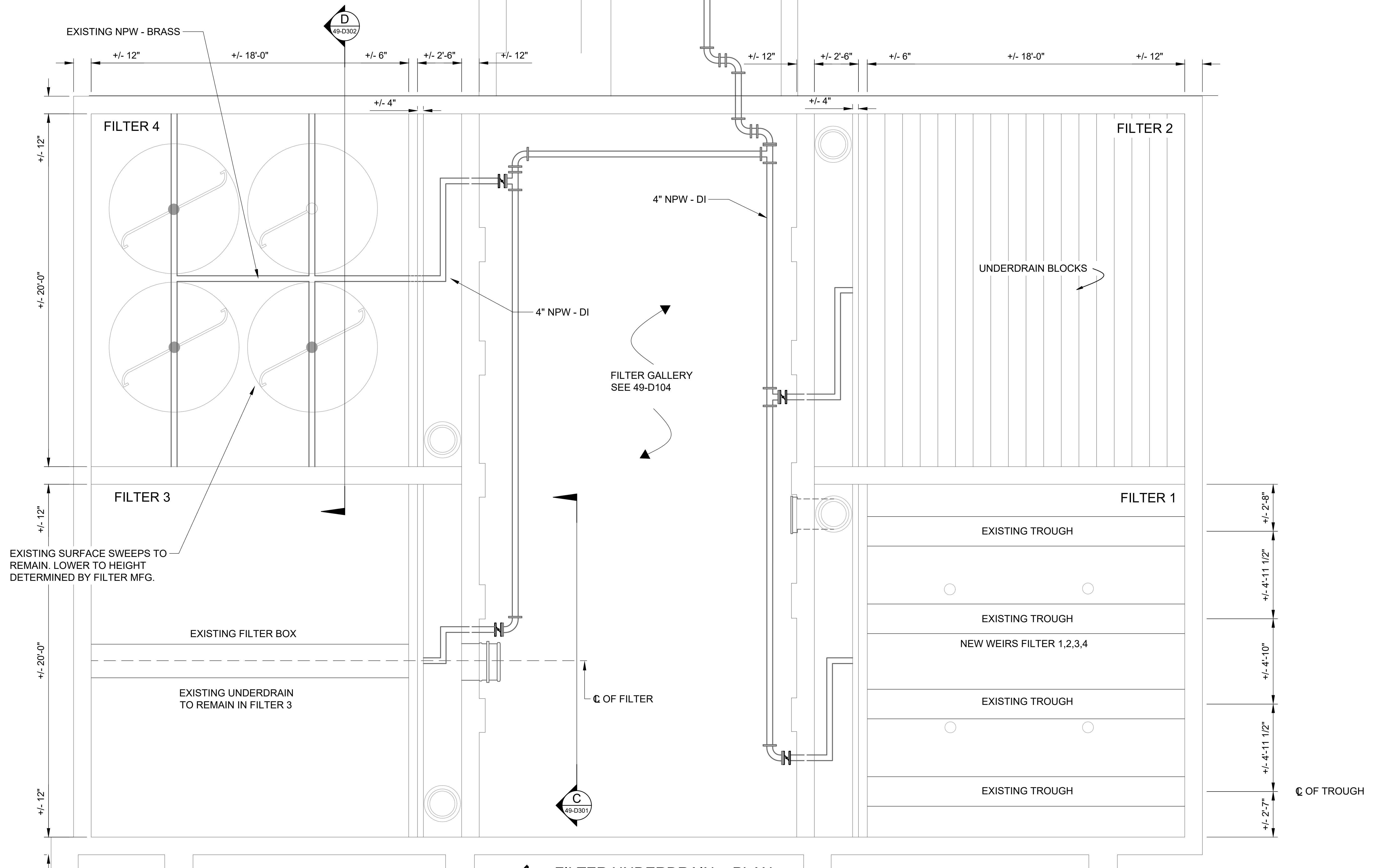
REV.	CHK.	DATE	DESCRIPTION
0	WMS	JUL 12, 2022	ISSUED FOR BID

**49-D105**

FILE NO. 36432-11

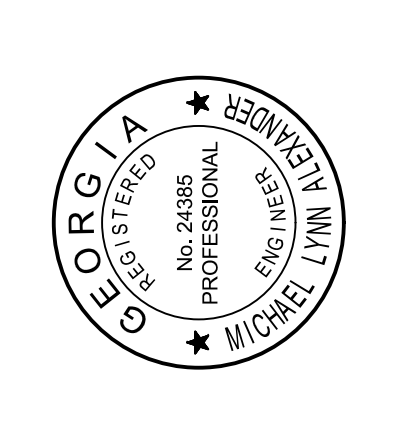
NOTES:

- FILTERS 1, 2 AND 4 TO UNDERGO FILTER MEDIA REPLACEMENT WITH NEW UNDERDRAINS. FILTER 3 HAS RECENTLY BEEN REHABILITATED AND IS TO REMAIN.



USER: AMPARKER  
 FILE: F:\06\04\20\04\02\1104\_CAD\WATER\364321\_49-D106\_1949 Filter Underdrain Plan.dwg  
 SAVED: 06/30/2022  
 PLOTTED: 06/30/2022

**FILTER UNDERDRAIN - PLAN**  
NTS



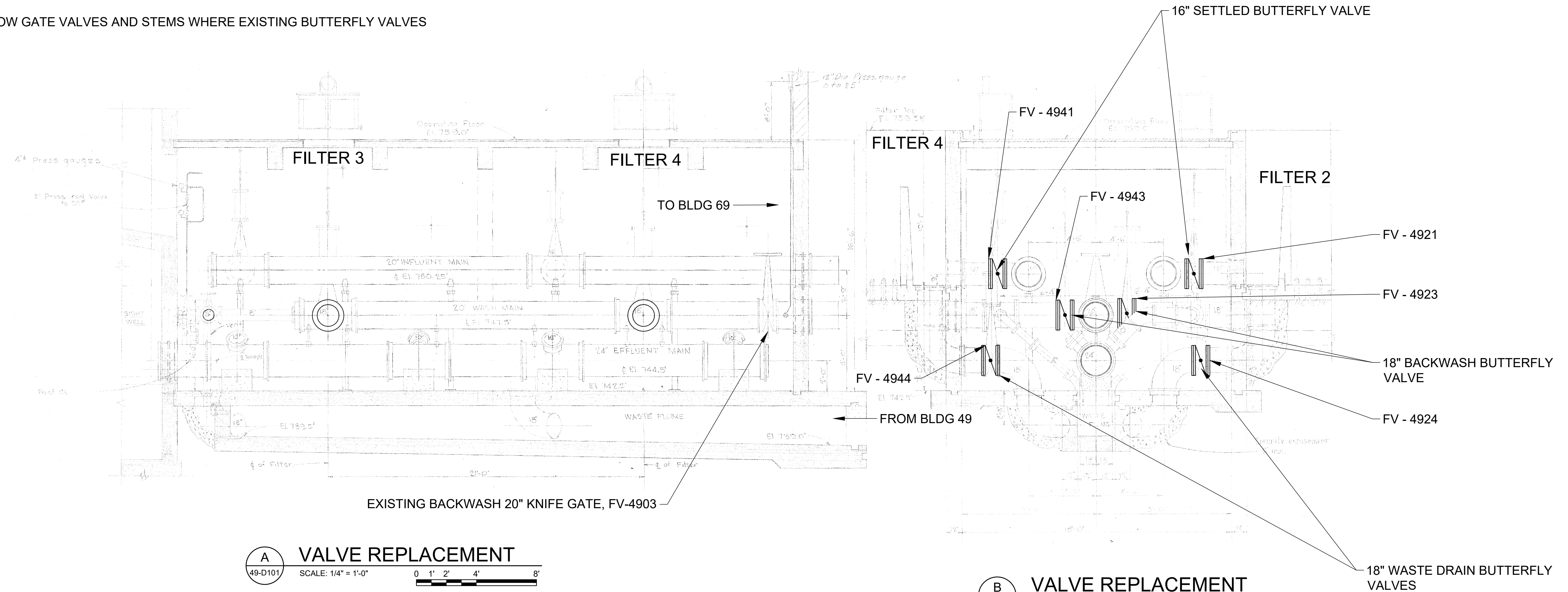
1949 BUILDING - FILTER UNDERDRAIN - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REV.	DATE	BY	CHK.	APP.	REVISION INFORMATION
0		KMS	KMS		JULY 12, 2022 ISSUED FOR BID

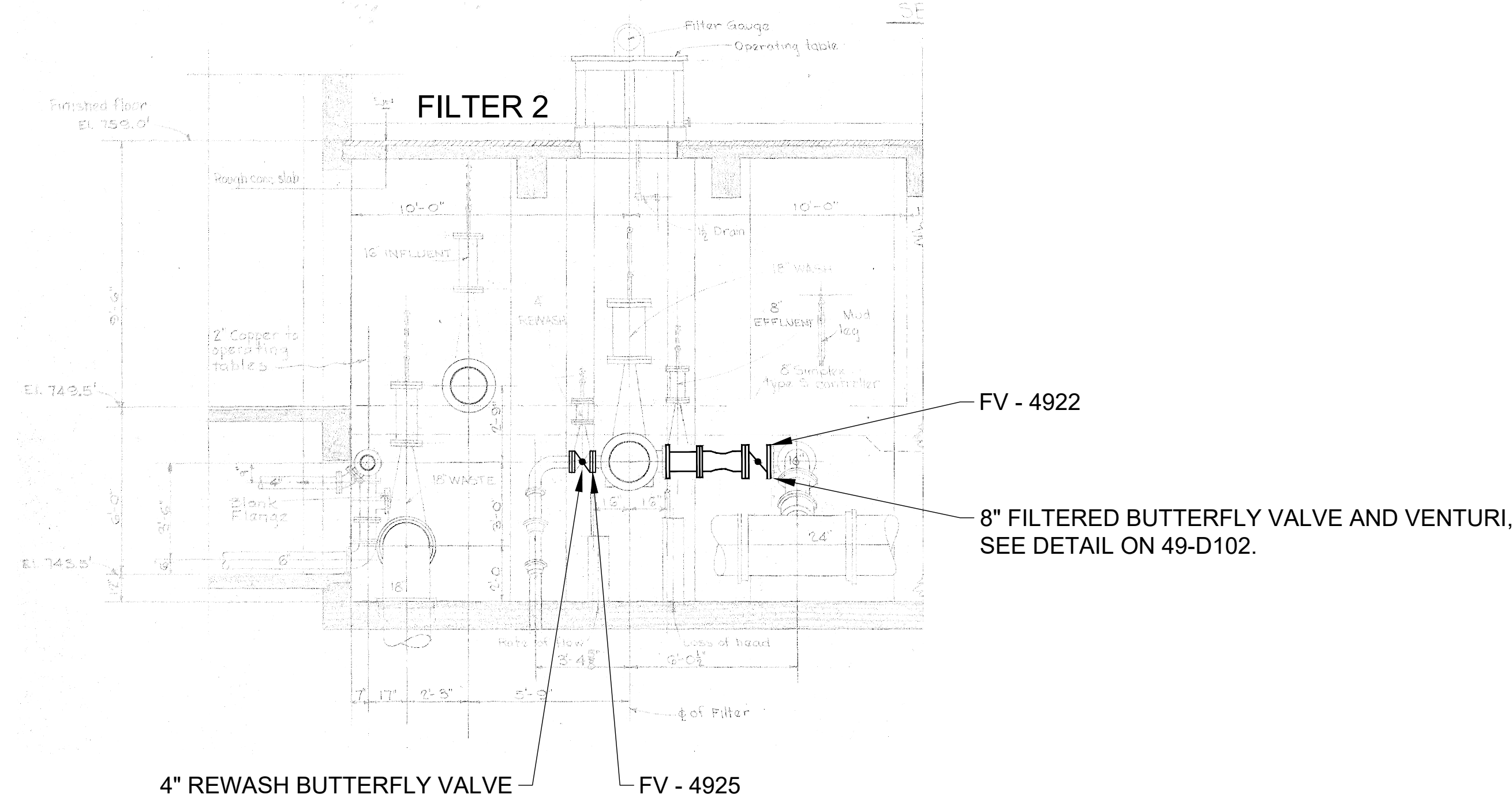
NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1949 RECORD DRAWINGS BY ROBERTS FILTER MFG. CO. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. DRAWING DOES NOT INCLUDE SURFACE SWEEP PIPING AND VALVES. SEE SHEET 49-D104.
3. 1949 RECORD DRAWINGS SHOW GATE VALVES AND STEMS WHERE EXISTING BUTTERFLY VALVES HAVE BEEN INSTALLED.

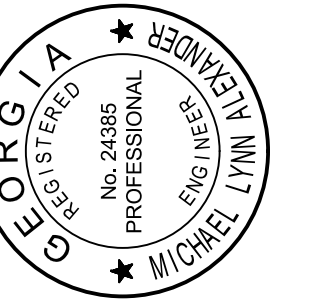


**A VALVE REPLACEMENT**  
49-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'

**B VALVE REPLACEMENT**  
49-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'



**C VALVE REPLACEMENT**  
49-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'

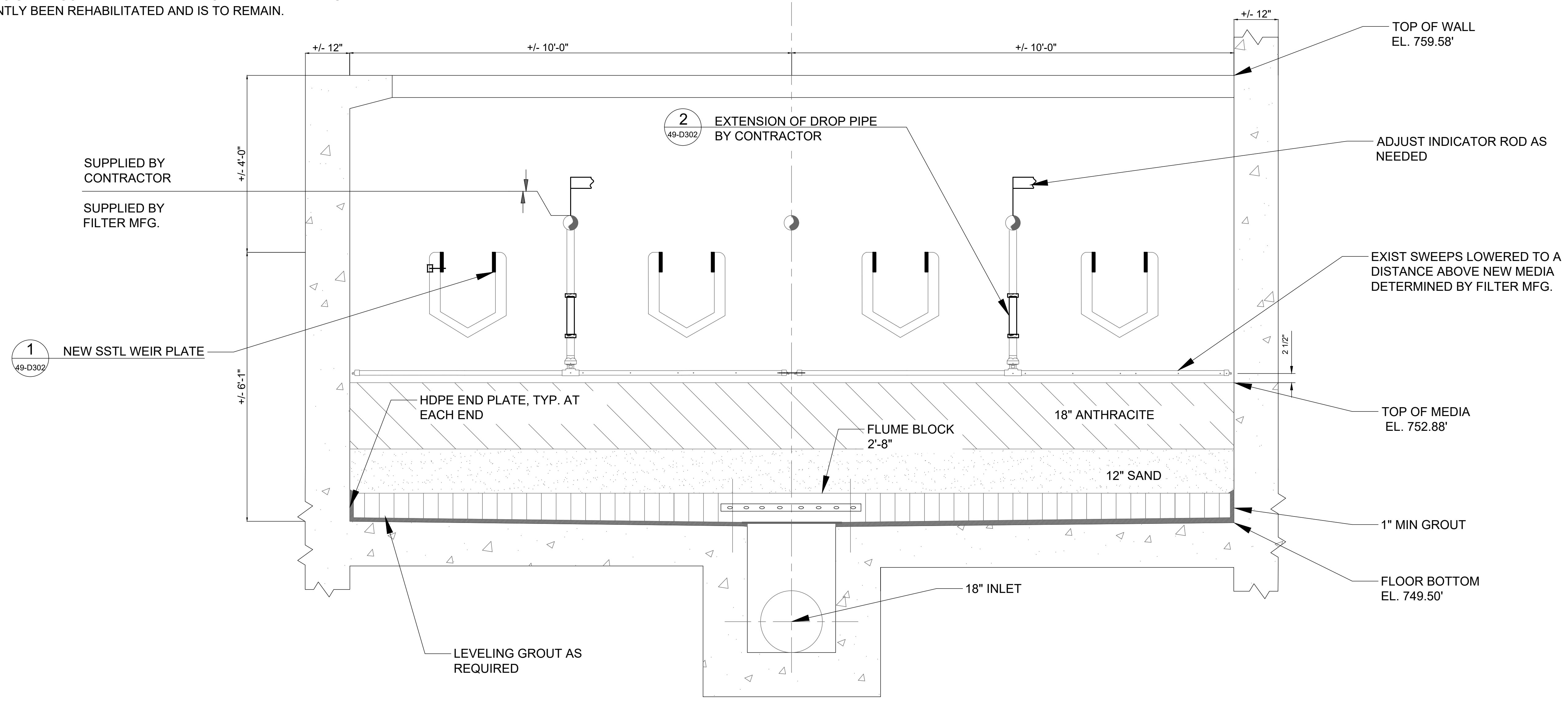


1949 BUILDING - FILTERS & PIPE GALLERY  
VALVE REPLACEMENT - SECTIONS  
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

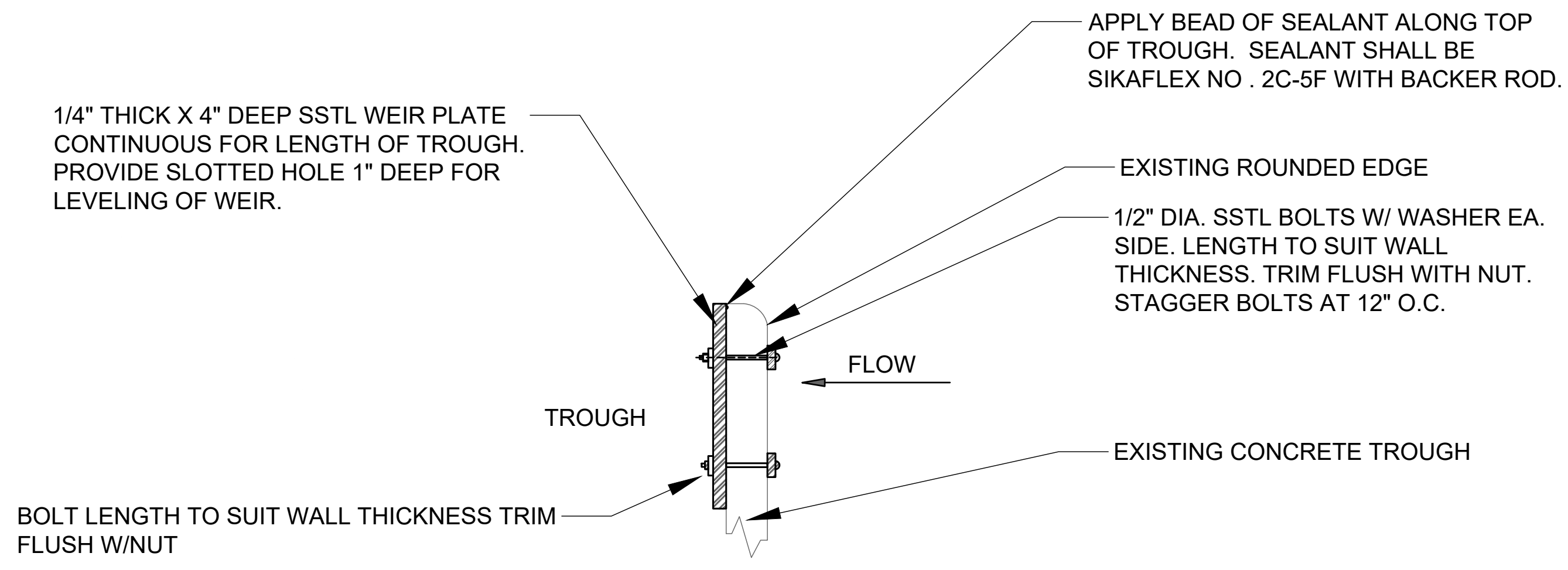
REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID
1	ISSUED FOR BID
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4	ISSUED FOR BID
5	ISSUED FOR BID
6	ISSUED FOR BID
7	ISSUED FOR BID
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9	ISSUED FOR BID
10	ISSUED FOR BID

NOTES:

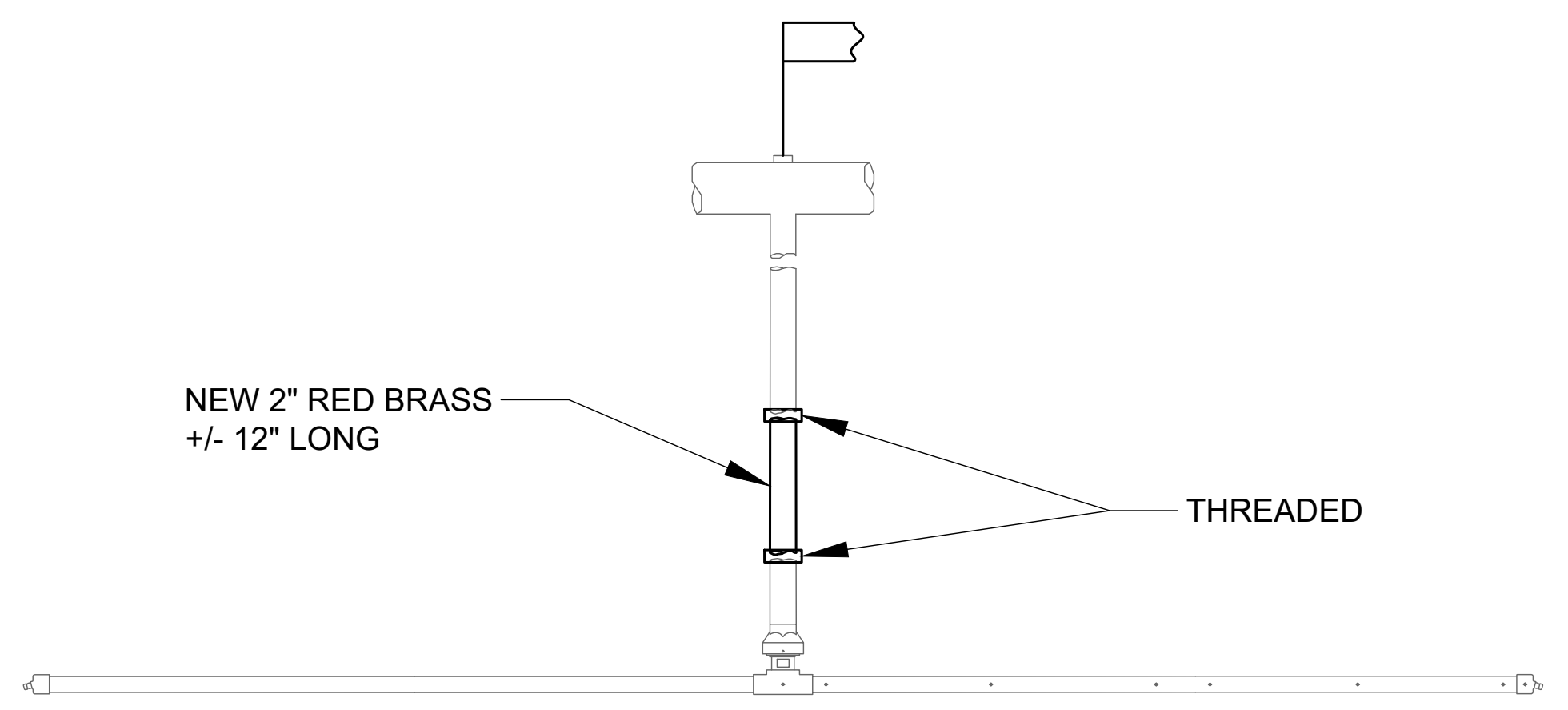
- FILTERS 1, 2 AND 4 TO UNDERGO FILTER MEDIA REPLACEMENT WITH NEW UNDERDRAINS.  
FILTER 3 HAS RECENTLY BEEN REHABILITATED AND IS TO REMAIN.



**D** FILTER UNDERDRAIN SYSTEM - SECTION  
49-D106 SCALE: 3/4" = 1'-0" 0 6" 1' 2'



**1** WEIR PLATE MOUNTING DETAIL  
49-D302 NTS

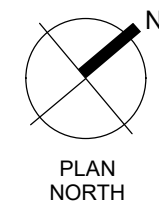
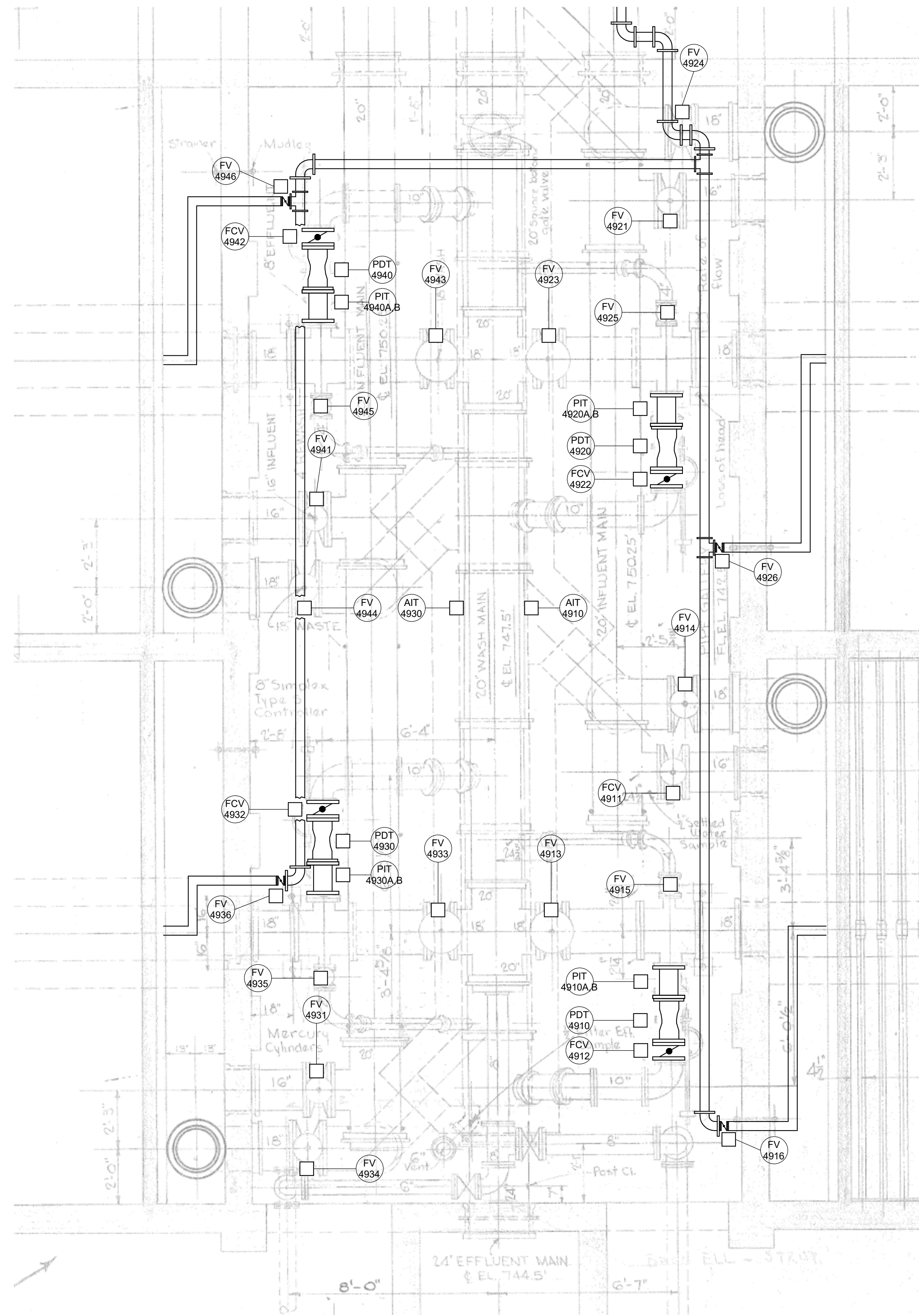


**2** FILTER SWEEP - SECTION  
49-D302 NTS

REV.	DATE	BY	CHK.	APP.	REVISION INFORMATION
0					ISSUED FOR BID
	JULY 12, 2022				

USER: AMPARKER  
 FILE: F:\06\0620\0620\0620\1104\_CAD\WATER\364321\_1\_49-D302\_1949 Filter Underdrain System Section.dwg  
 SAVE: 06/20/2022  
 PLOT: 06/20/2022

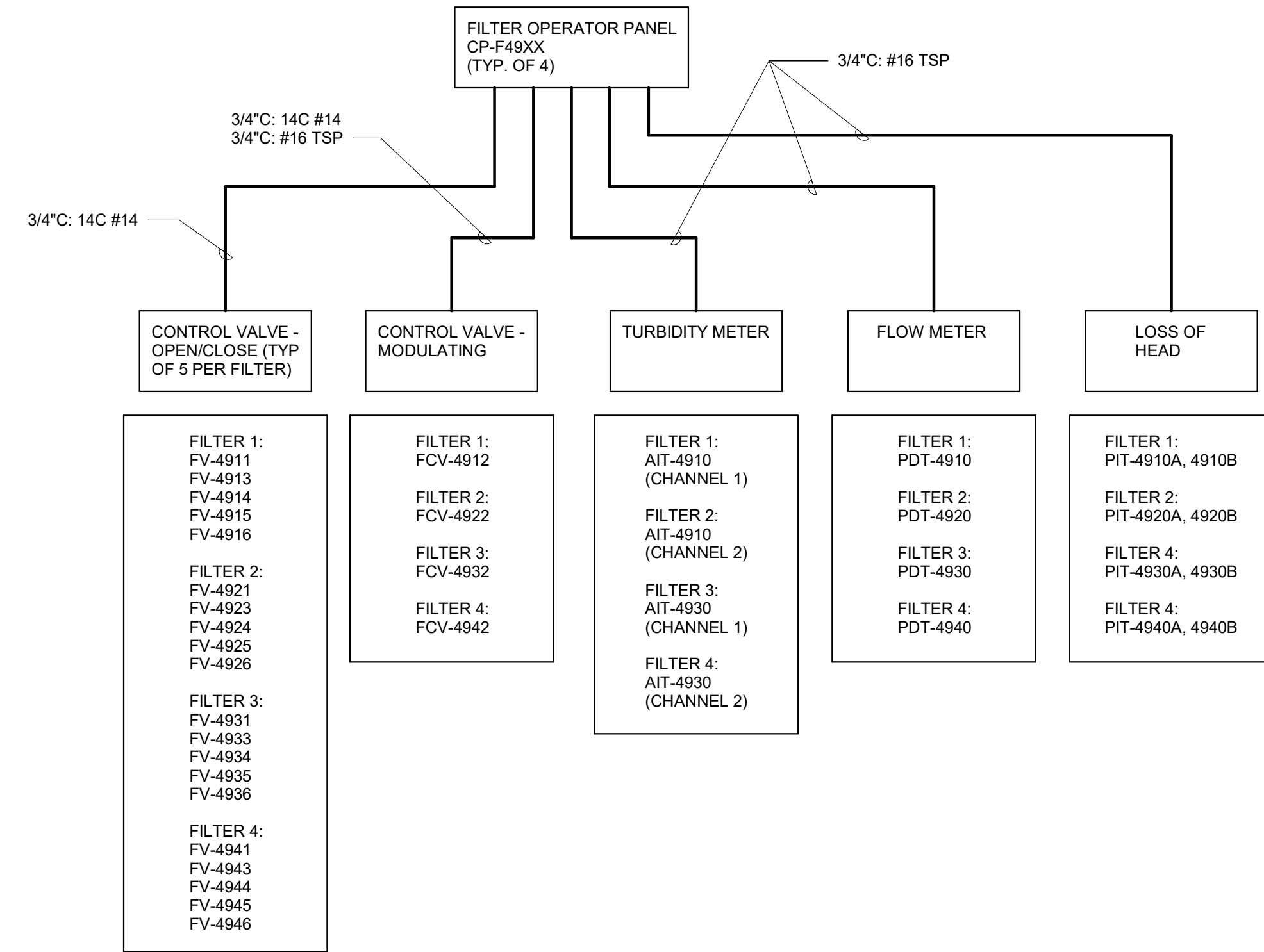
49-E101 1949 BUILDING - PIPE GALLERY - ELECTRICAL PLAN  
Drawing: 49-E101 - WTP Filter & Valve Replacement  
Title: 49-E101 - WTP Filter & Valve Replacement  
Date: 7/12/2022 10:10:14 AM



**1 PIPE GALLERY (ORIGINAL BLDG.) - ELECTRICAL PLAN**  
49-E101 SCALE: 3/8" = 1'-0"

### GENERAL NOTES

- A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.
- B. FOR EACH ELECTRIC ACTUATOR, PROVIDE (3) #10, 1#10G, 3/4 C. CIRCUIT AS INDICATED. PROVIDE A 600V/30A/3P/FAR/ NEMA 4X DISCONNECT SWITCH MOUNTED NEAR THE ACTUATOR ON BACK WALL OR ON CENTER AT RAILING. PROVIDE 3 FT MIN CLEARANCE.
- C. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.
- D. SEE 49-MXX PROCESS PLANS FOR FINAL LOCATIONS OF METERS AND ACTUATORS.
- E. CONDUIT SHALL BE ROUTED AT CEILING LEVEL IN PIPE GALLERY. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.
- F. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER AND FLOW METER.



1949 BUILDING - PIPE GALLERY - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT

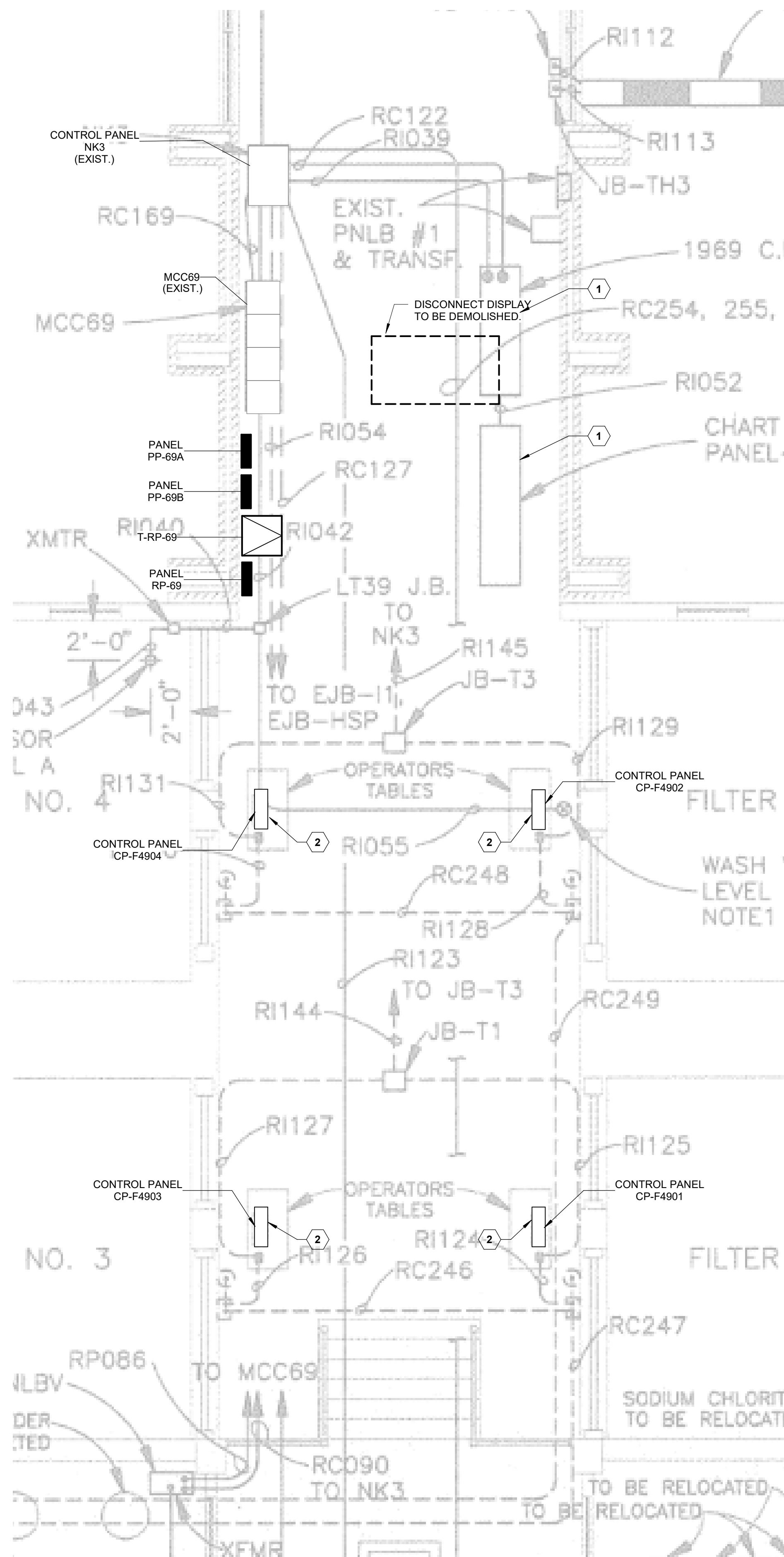
LAGRANGE, GEORGIA

REV	DR	CHK	DATE	DESCRIPTION
0	CSM	BL	JULY 12, 2022	ISSUED FOR BID

49-E101

FILE NO. 3643211







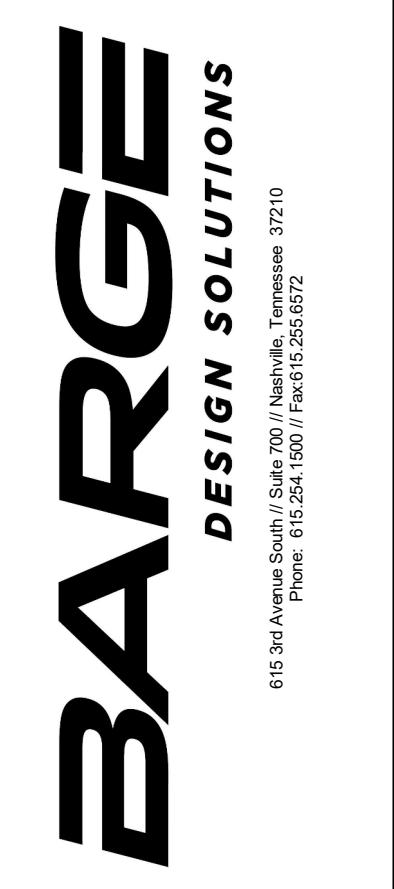
**1949 BLDG - OPERATORS FLOOR - ELETRICAL PLAN**  
 49-E102

**GENERAL NOTES**

- A. OPERATING FLOOR SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.
- B. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

**KEYED NOTES**

- 1. REMOVE EXISTING ABANDONED ELECTRICAL ENCLOSURE. CUT CONDUITS FLUSH WITH FLOOR AND SEAL FLOOR PENETRATIONS.
- 2. PROVIDE ENCLOSURE WITH OPERATOR INTERFACE PANEL (OIT) ON EXISTING 1949 CONTROL ENCLOSURES. PROVIDE PLC IN EXISTING ENCLOSURE. PROVIDE 15" HMI SCREEN IN ENCLOSURE MOUNTED ON TOP OF CONSOLE. PROVIDE 20A CIRCUIT FROM RP-69 USING 3/4" C. 2-#10 W/ #10 GND. PROVIDE 500VA UPS IN ENCLOSURE.



1949 BUILDING - OPERATORS FLOOR - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REV	DR	CHK	DATE	DESCRIPTION
0	CSM	BL	JULY 12, 2022	ISSUED FOR BID

49-E102

FILE NO. 3643211

Drawing: 49-E102 - 1949 BUILDING - OPERATORS FLOOR - ELECTRICAL PLAN  
 Date: 7/12/2022 10:11:04 AM  
 Project: Walt Williams Filtration Plant - Filter Valve Replacement

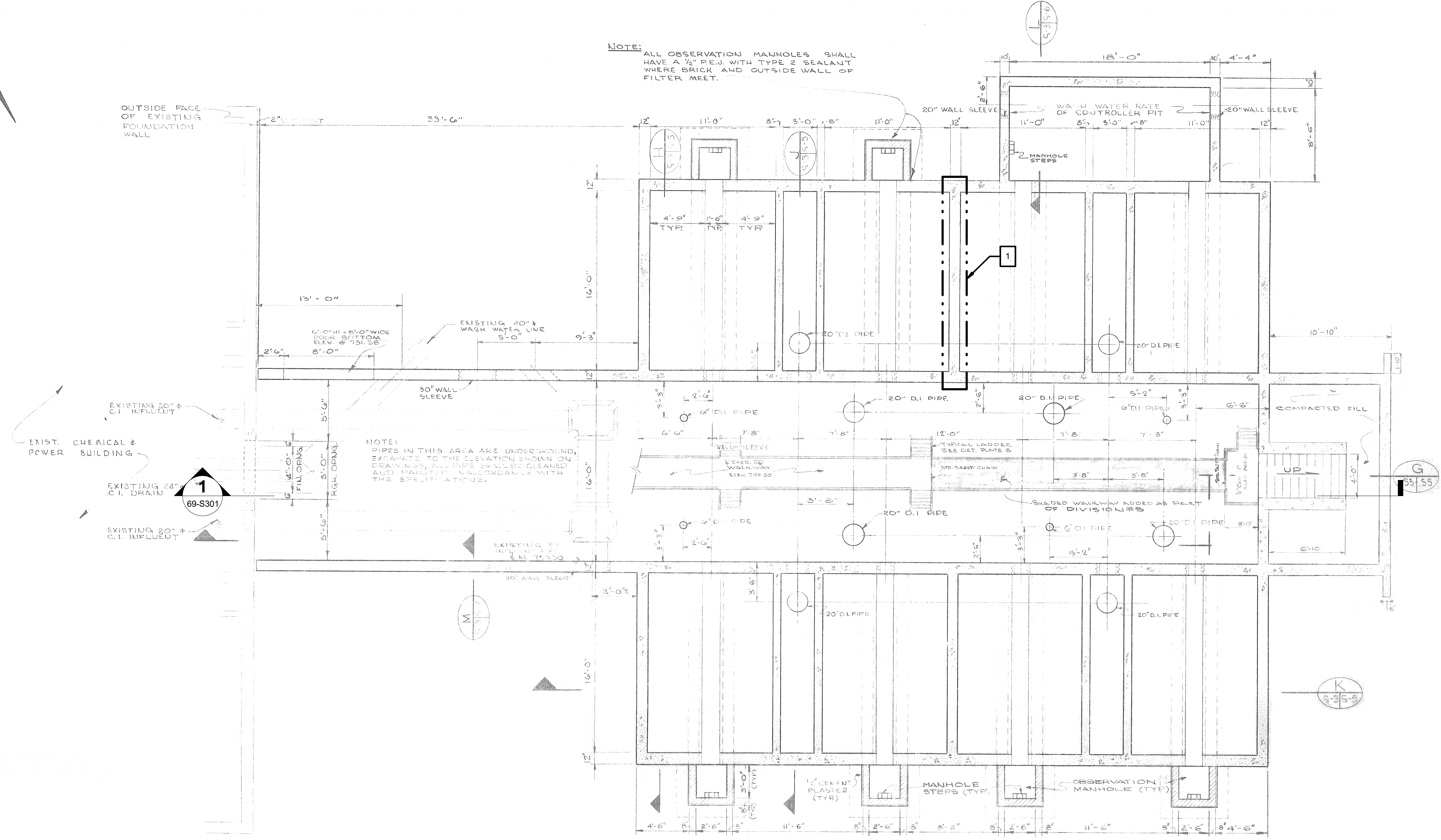
1. PREPARE AND INJECT POLYURETHANE IN ALL WALL CRACKS, INCLUDING ALL CONSTRUCTION JOINTS AS DIRECTED BY ENGINEER (UNIT PRICE).

**BARGE**  
DESIGN SOLUTIONS

615 3rd Avenue South // Suite 700 // Nashville, Tennessee 37210  
Phone: 615.254.1500 // Fax: 615.255.0272



1969 BUILDING - FILTER WALKWAY PLAN  
WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT  
LAGRANGE, GEORGIA



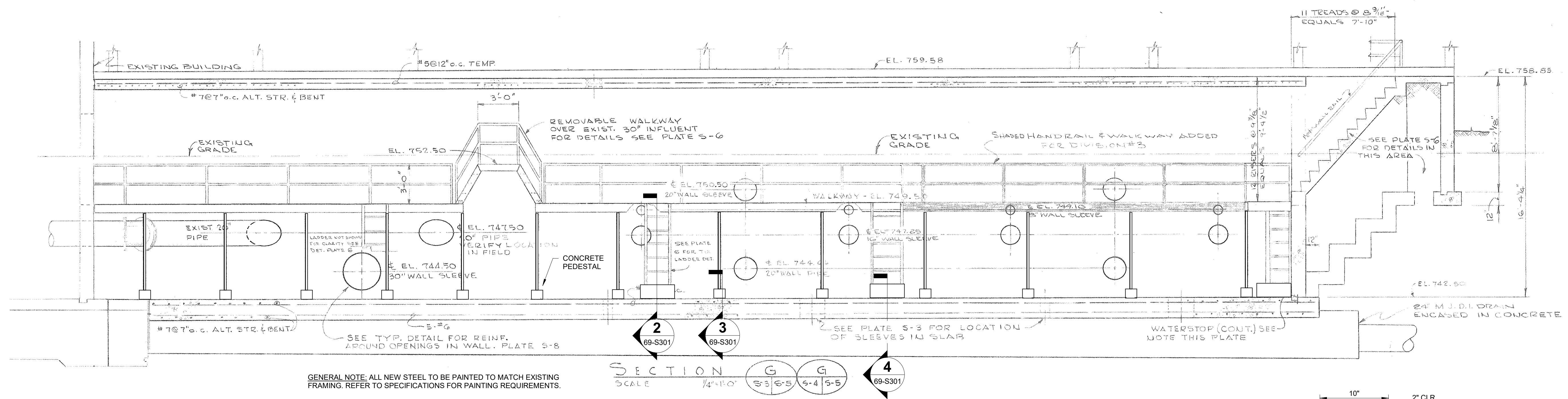
PLAN AT BOTTOM OF FILTERS  
SCALE 3/4" = 1'-0"

1 FILTER WALKWAY PLAN  
SCALE: 3" = 1'-0"

REVISION INFORMATION		DESCRIPTION
REV	CHK	DATE
0	CBH	07/12/2022
	JRT	ISSUED FOR BIDS

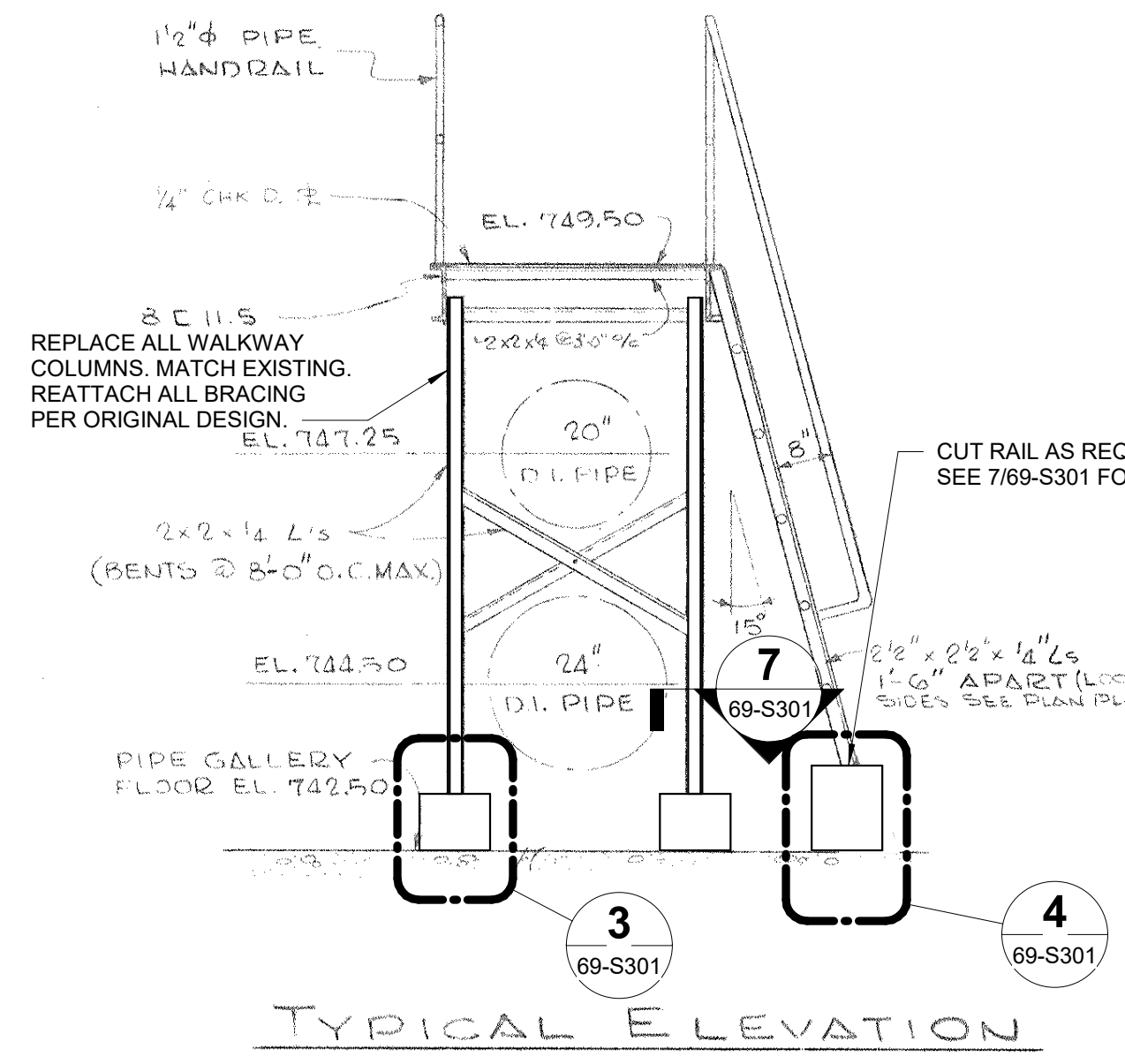
69-S101  
FILE NO. 3643211

Drawing Set: 69-S101 - 1969 BUILDING - FILTER WALKWAY PLAN  
 Drawing: 69-S101-1969-Building-Filter-Walkway-Plan-Repair-042320-WWFL\_S\_020.rvt  
 File: 69-S101-1969-Building-Filter-Walkway-Plan-Repair-042320-WWFL\_S\_020.rvt  
 Date: 07/12/2022

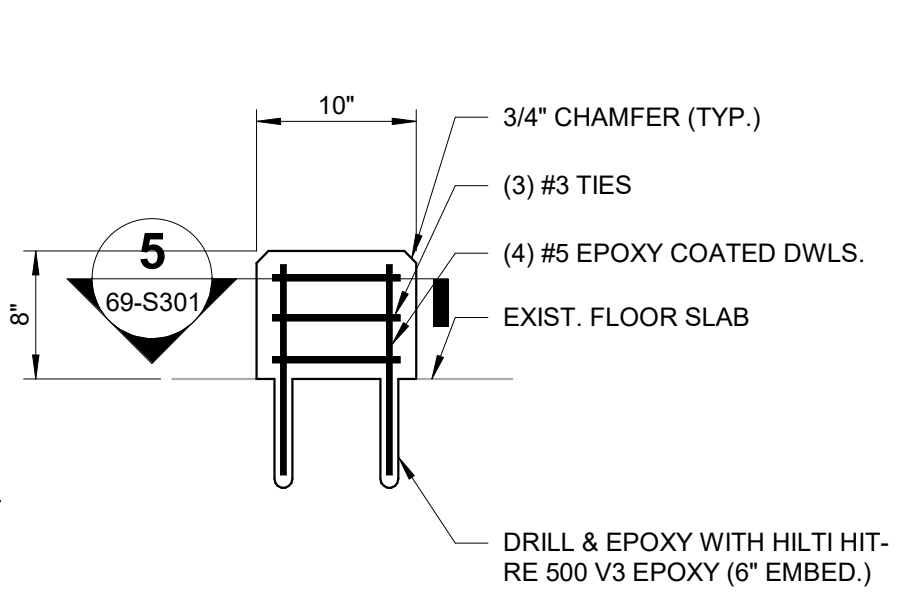


GENERAL NOTE: ALL NEW STEEL TO BE PAINTED TO MATCH EXISTING FRAMING. REFER TO SPECIFICATIONS FOR PAINTING REQUIREMENTS.

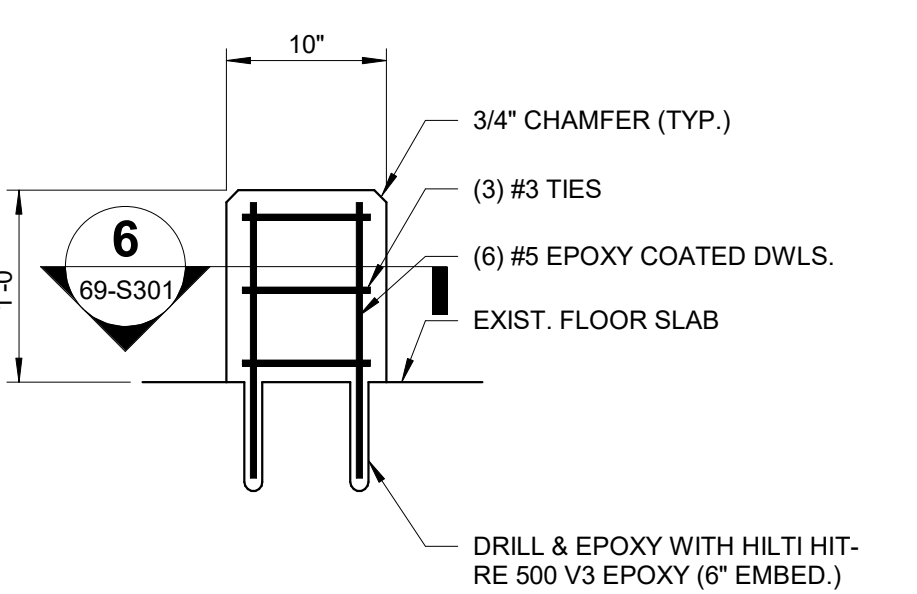
SECTION 1 ELEVATION  
SCALE: 1/4" = 1'-0"



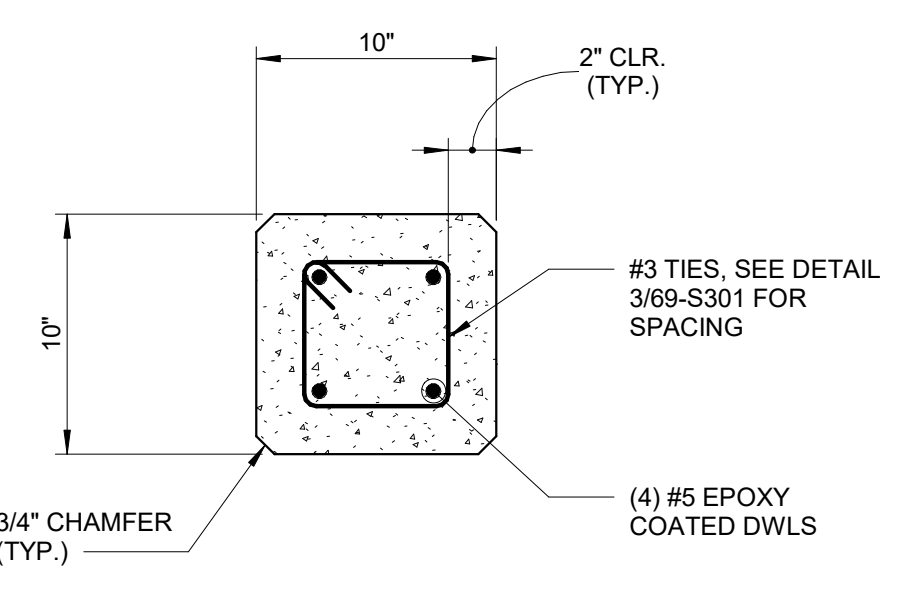
2 SECTION  
69-S301 SCALE: 1/2" = 1'-0"



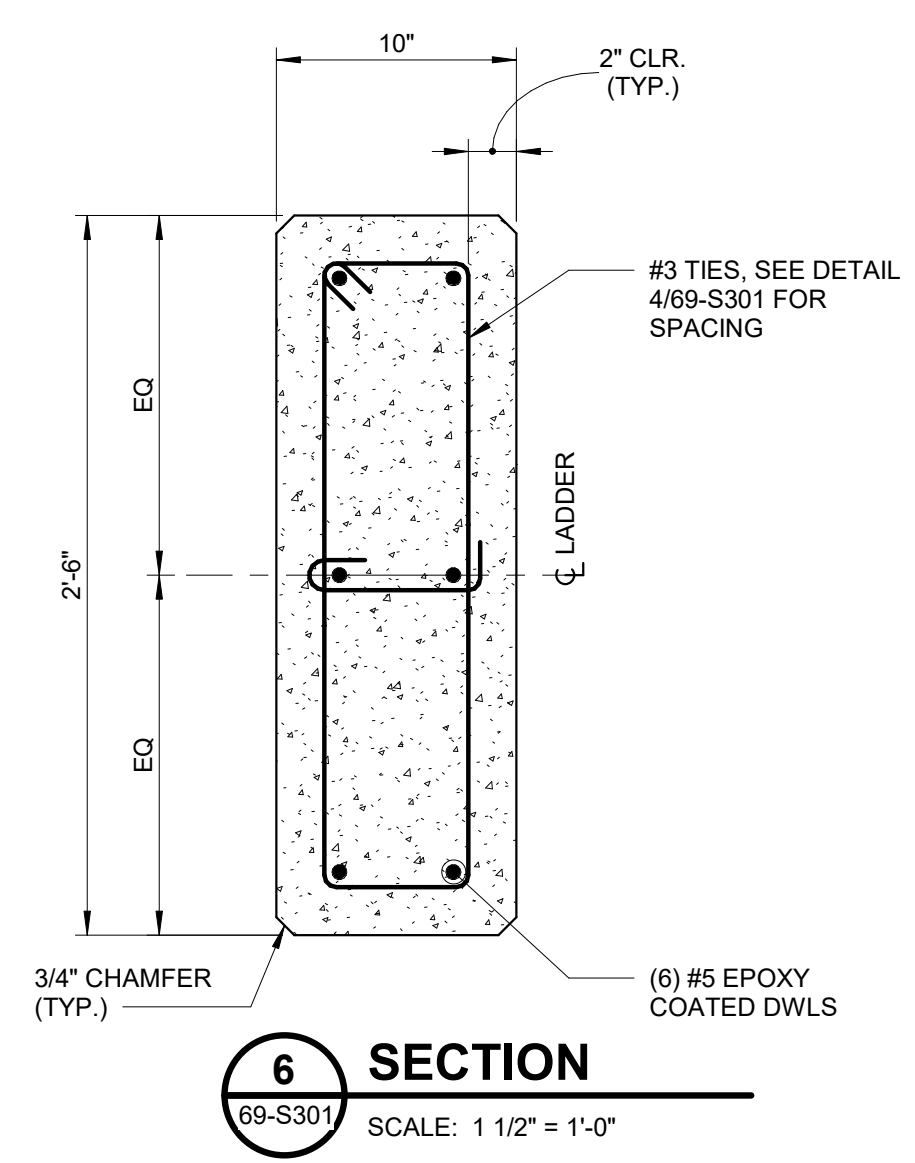
3 DETAIL  
69-S301 SCALE: 1" = 1'-0"



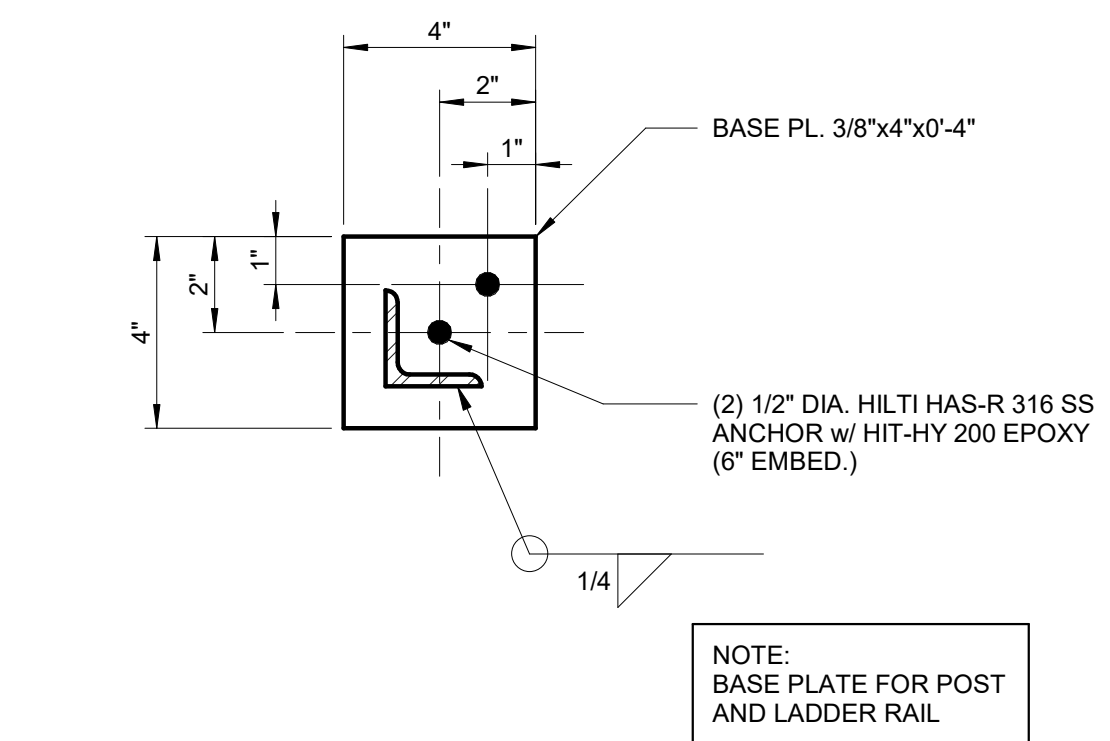
4 DETAIL  
69-S301 SCALE: 1" = 1'-0"



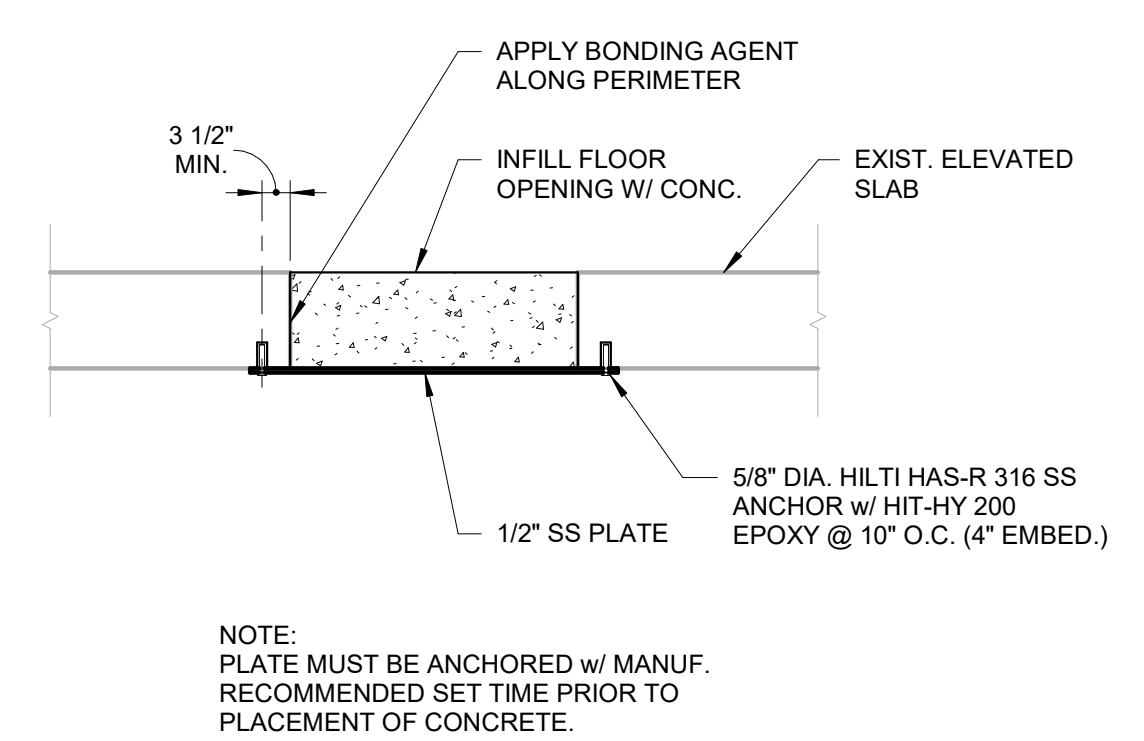
5 SECTION  
69-S301 SCALE: 1 1/2" = 1'-0"



6 SECTION  
69-S301 SCALE: 1 1/2" = 1'-0"



7 TYPICAL BASE PLATE DETAIL  
69-S301 SCALE: 3" = 1'-0"



8 TYP. FLOOR OPENING REPAIR DETAIL  
69-S301 SCALE: 1/2" = 1'-0"

NOTE: BASE PLATE FOR POST AND LADDER RAIL

NOTE: PLATE MUST BE ANCHORED W/ MANUF. RECOMMENDED SET TIME PRIOR TO PLACEMENT OF CONCRETE.

1969 BUILDING - SECTIONS AND DETAILS  
WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT

REVISION INFORMATION		DESCRIPTION
REV	DATE	ISSUED FOR BIDS
0	07/12/2022	
DR	CHK	
CBH	JRT	

69-S301

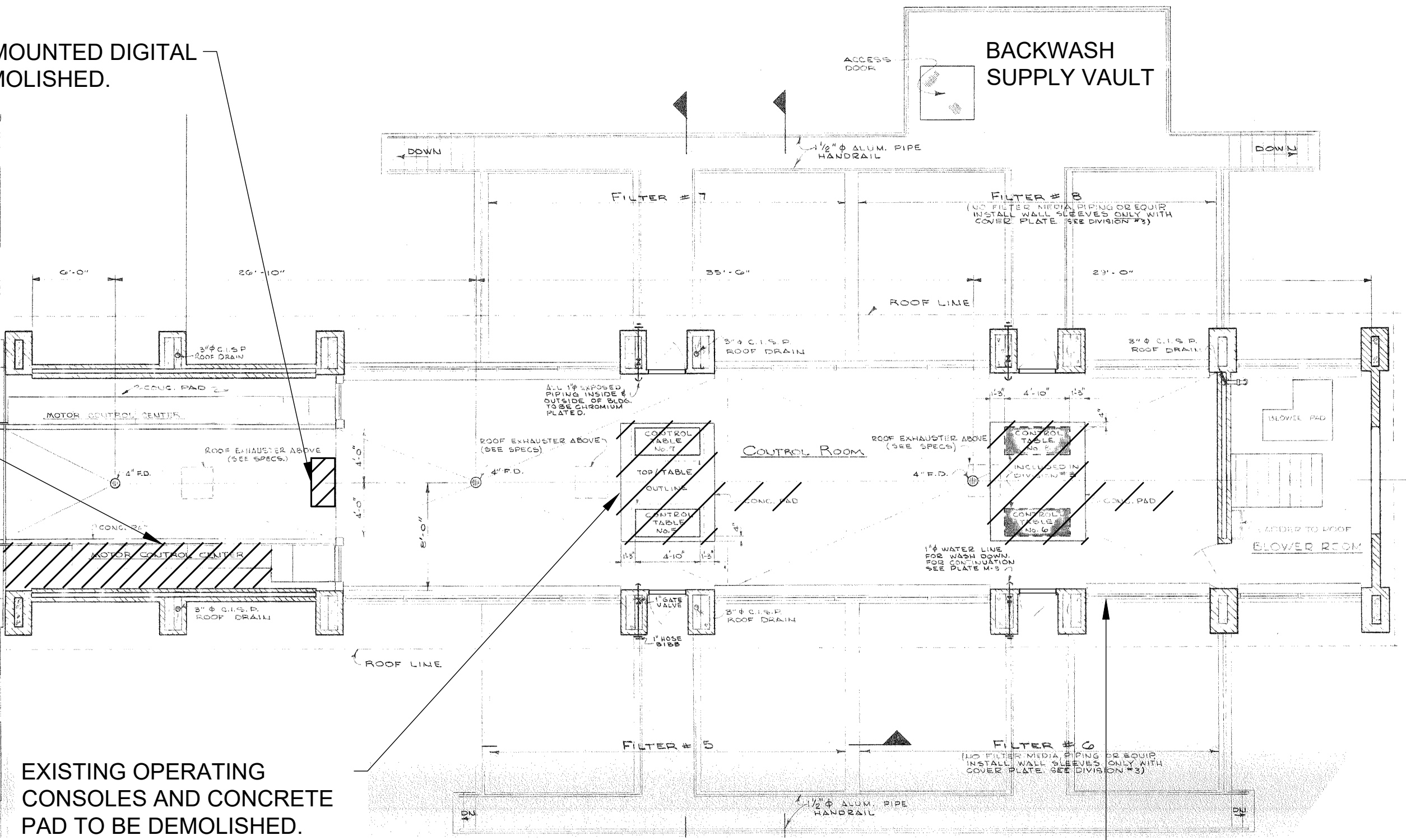
FILE NO. 3643211

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. DEMO ALL FILTER OPERATING CONSOLES AND CURBS (4X.) CONCRETE PLATFORM TO BE REMOVED FLUSH WITH EXISTING CONCRETE FLOOR SLAB. NO PNEUMATIC OR VIBRATING DEVICES ALLOWED FOR DEMO OF CONCRETE CURBS.
3. DEMO TWO (2) EXISTING EMPTY ELECTRICAL CABINETS AND ALL ASSOCIATED WIRING AND CONDUIT. PANELS ARE LOCATED BETWEEN THE 1949 AND 1969 BUILDING. CONCRETE PAD TO BE REMOVED FLUSH WITH EXISTING CONCRETE FLOOR SLAB. NO PNEUMATIC OR VIBRATING DEVICES ALLOWED FOR DEMO OF CONCRETE CURBS.
4. DEMO EXISTING BACKWASH RATE OF FLOW DIGITAL DISPLAY AND ALL ASSOCIATED WIRING AND CONDUIT. DISPLAY IS MOUNTED TO THE CEILING LOCATED BETWEEN THE 1949 AND 1969 BUILDING.
5. CONTRACTOR IS TO CLEAN ALL INTERIOR AND EXTERIOR SURFACES OF THE WINDOWS IN THE 1969 FILTER BUILDING.

EXISTING CEILING-MOUNTED DIGITAL DISPLAY TO BE DEMOLISHED.

EXISTING EMPTY ELECTRICAL CABINETS AND CONCRETE PAD TO BE DEMOLISHED. SEE 69-S301 STR FOR FLOOR OPENING REPAIR.



EXISTING OPERATING CONSOLES AND CONCRETE PAD TO BE DEMOLISHED. SEE 69-S301 STR FOR FLOOR OPENING REPAIR.

1 FILTER OPERATING CONSOLES - DEMO PLAN  
SCALE: 1/8" = 1'-0"

ALL INTERIOR AND EXTERIOR WINDOW SURFACES TO BE CLEANED



FILTER OPERATING CONSOLES



FILTER OPERATING CONSOLE DIGITAL DISPLAY



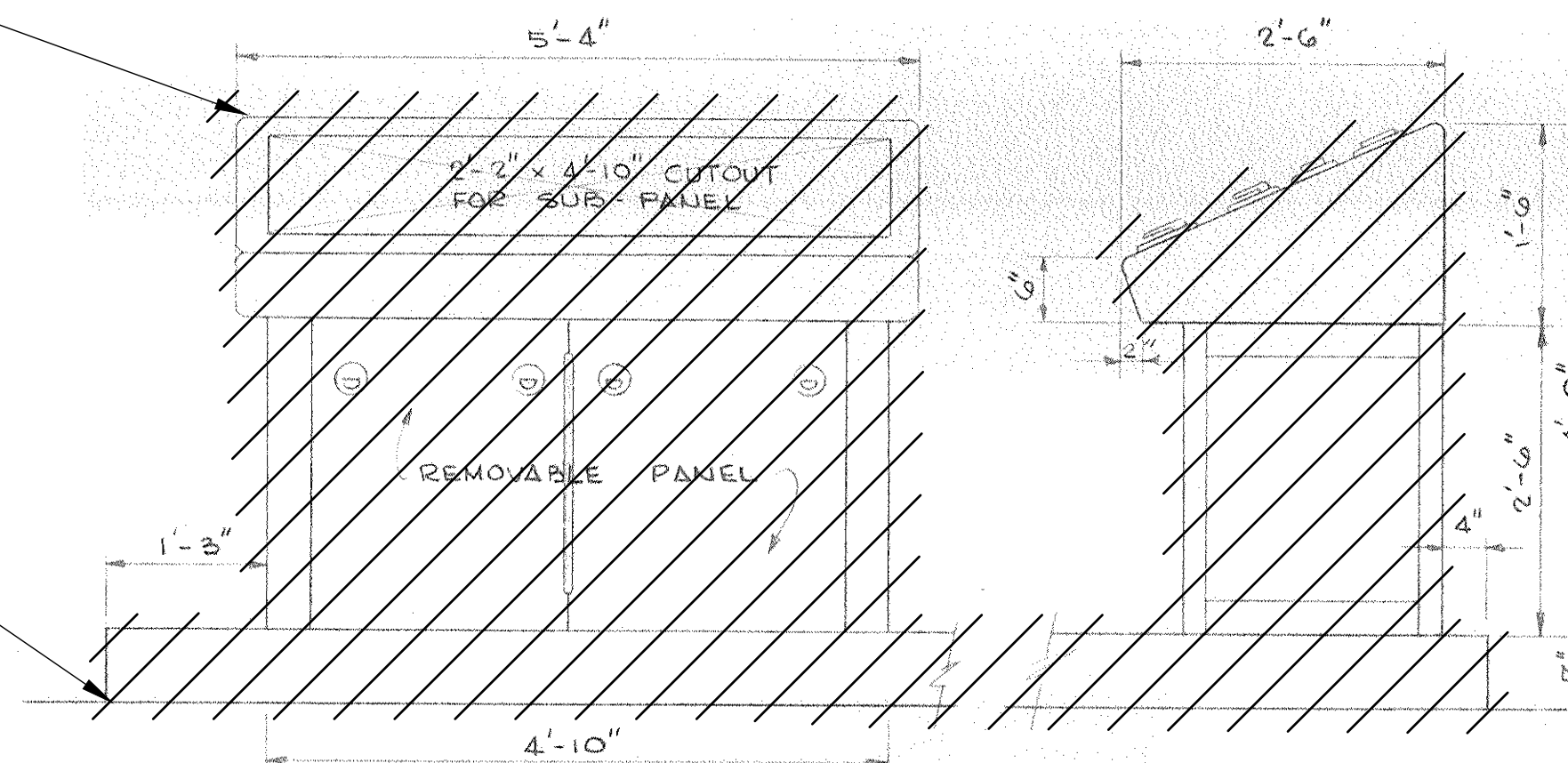
EMPTY ELECTRICAL CABINETS AND CONCRETE PADS



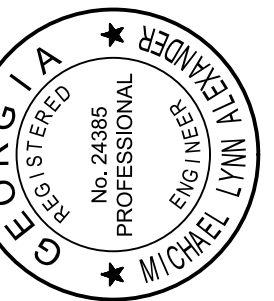
CEILING MOUNTED DIGITAL DISPLAY

DEMO FILTER OPERATING CONSOLE AND REPLACE WITH NEW HMI TO BE LOCATED NEAR THE WINDOWS. REFER TO 69-E103.

DEMO CONCRETE CURB AND PLATFORM FOR THE FILTER OPERATING CONSOLES. SEE NOTE 2 FOR DEMO REQUIREMENTS.



2 FILTER OPERATING CONSOLE - DEMO SECTION  
SCALE: 3/4" = 1'-0"



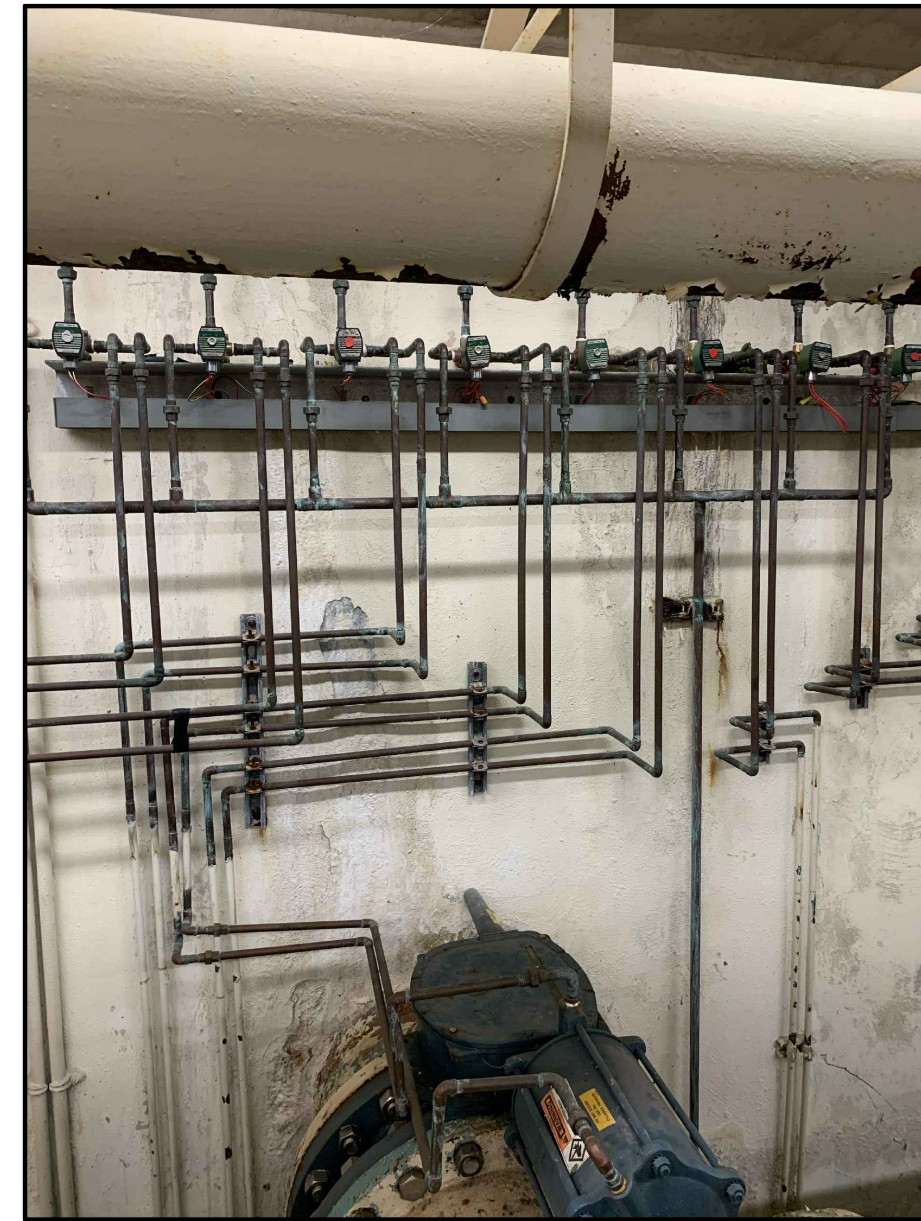
REVISION INFORMATION			
REV.	DATE	BY	DESCRIPTION
0			
1	JULY 12, 2022	MM	ISSUED FOR BID

**NOTES:**

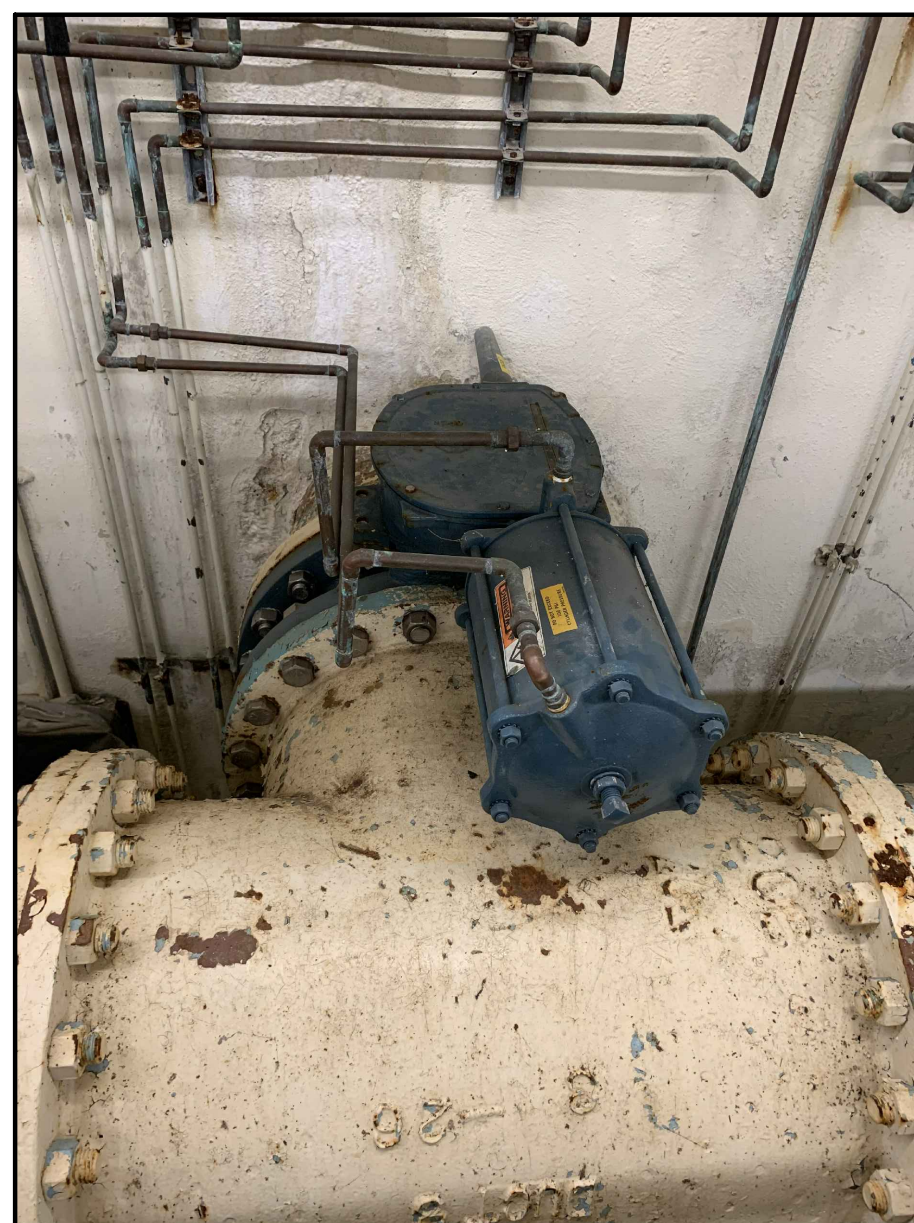
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE FILTER OPERATION CONSOLES TO THE ACTUATORS, INCLUDING SUPPORTS AND HARDWARE.
3. REMOVE ALL ACTUATOR HYDRAULIC PIPING FROM THE MAIN 2" SUPPLY PIPING. CAP ACTUATOR HYDRAULIC PIPING AT THE MAIN ISOLATING VALVE OR TAPPED CONNECTION. THE 2" SUPPLY LINE IS TO REMAIN.
4. REMOVE ALL VALVES IN THE VALVE SCHEDULE AND ASSOCIATED ACTUATORS.
5. REMOVE ALL ACTUATOR HYDRAULIC PIPING WALL SUPPORTS, PATCH AND REPAIR CONCRETE WHERE SUPPORTS ARE REMOVED. RE-COAT PER SPEC SECTION 09 90 15. FINISH COAT COLOR TO MATCH EXISTING. ALONG WITH ALL OTHER SURFACES IN THE 1969 BUILDING WHICH ARE TO UNDERGO COATING REHAB, SEE 69-D101.



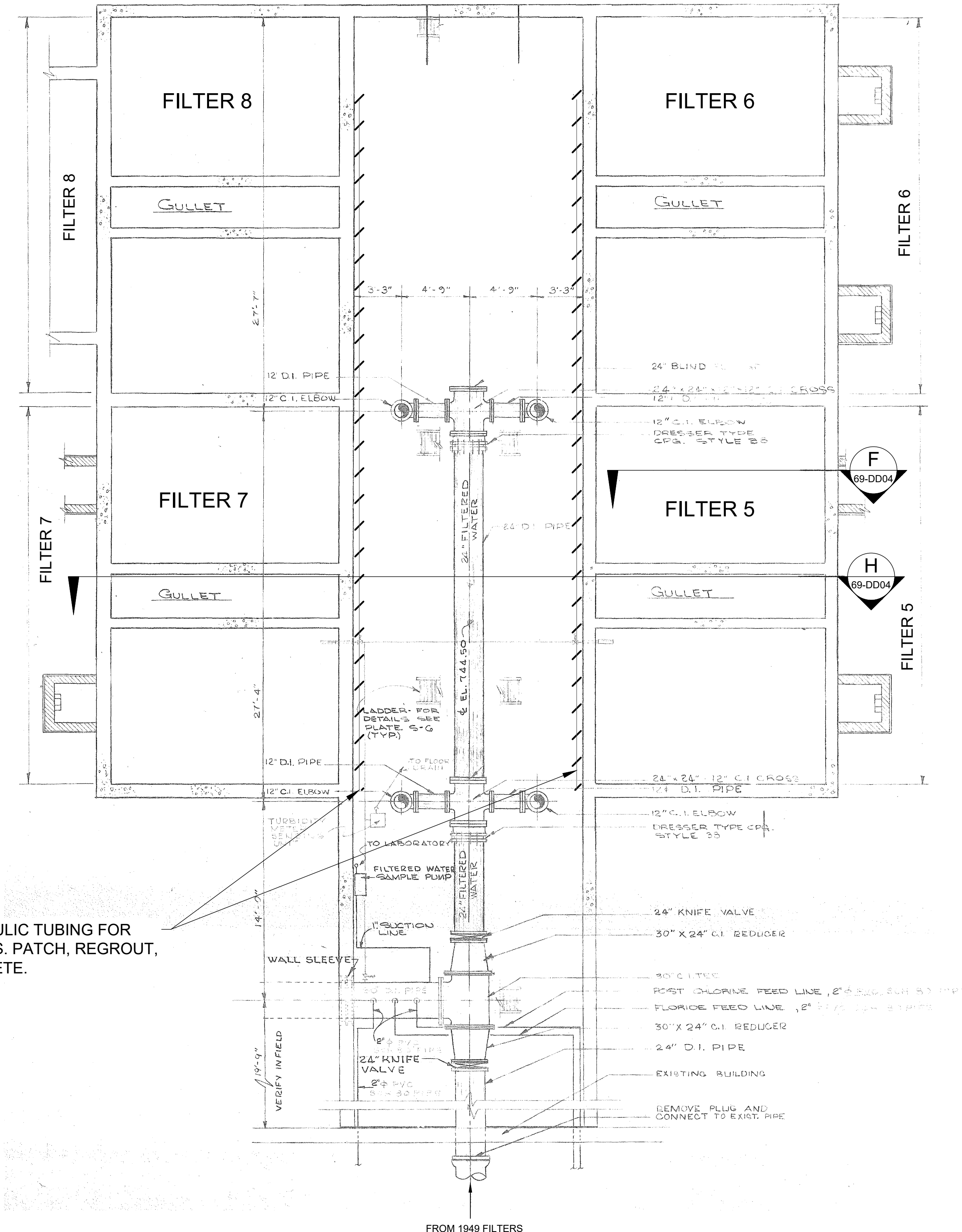
**PIPE GALLERY &  
HYDRAULIC ACTUATOR PIPING**



**HYDRAULIC ACTUATOR & PIPING**



**HYDRAULIC ACTUATOR & PIPING**

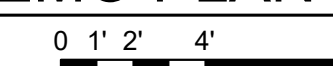


REMOVE ALL HYDRAULIC TUBING FOR THE OLD ACTUATORS. PATCH, REGROUT, AND REPAIR CONCRETE.

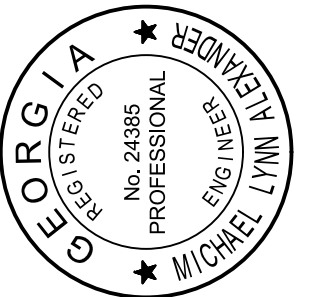


**HYDRAULIC PIPING - DEMO PLAN**

SCALE: 3/16" = 1'-0"



USER: MPARKER  
FILE: \\osha-bas\cadd\cadd\Projects\363432\3634321104\_CAD\WATER\69DD02\_1969 Hydraulic Actuator & Piping Demo.dwg  
SAVED: 7/6/2022  
PLOTTED: 7/6/2022



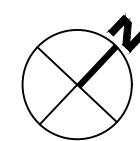
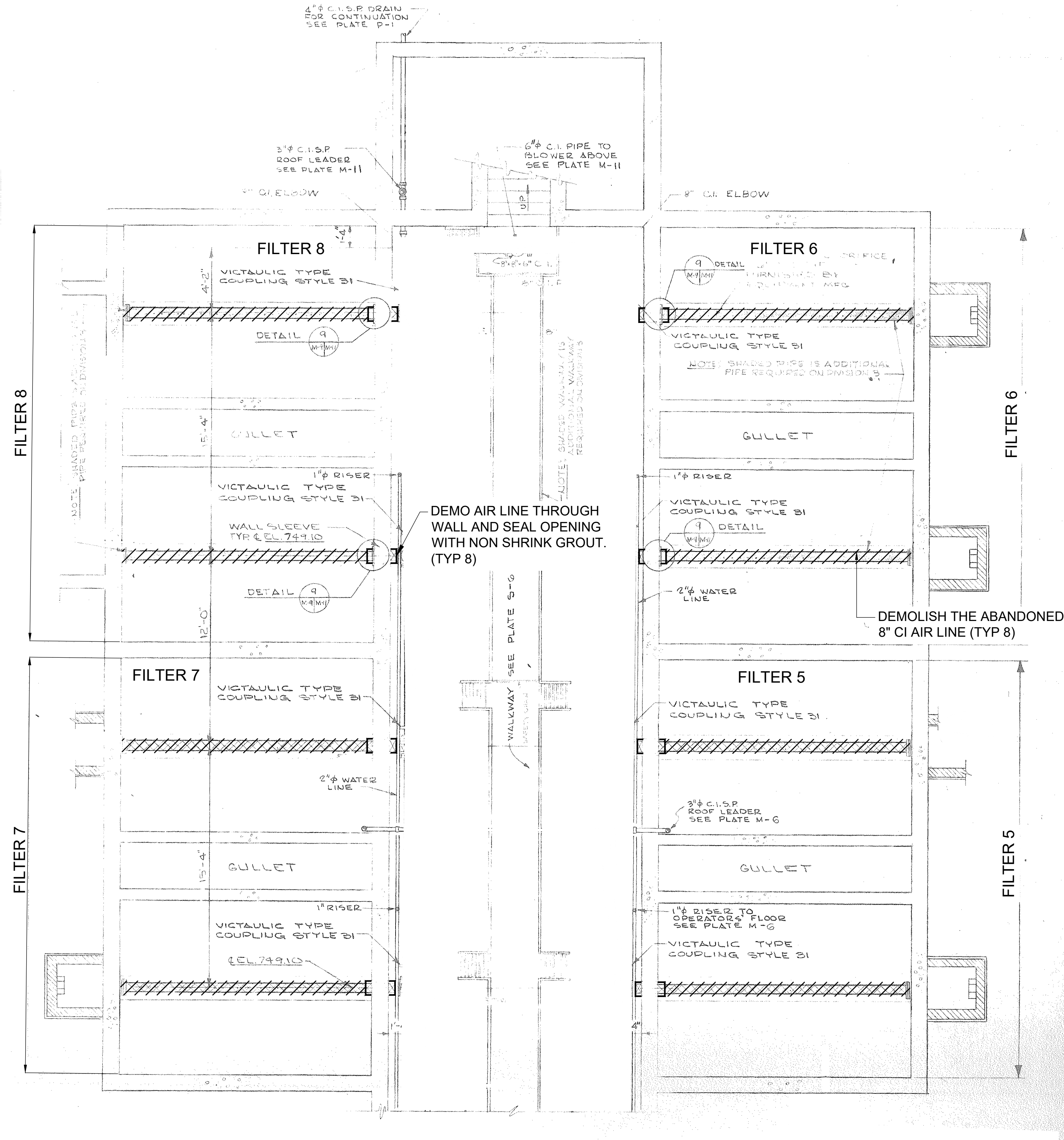
**1969 BUILDING - HYDRAULIC ACTUATORS & PIPING  
DEMO PLAN**

**WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION**  
LAGRANGE, GEORGIA

REV.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022 ISSUED FOR BID

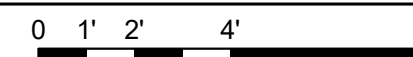
NOTES:

- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.

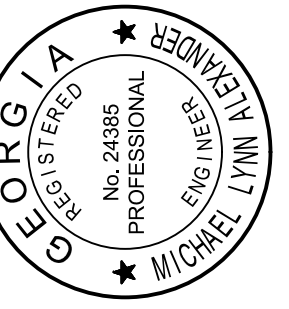


**AIR LINE PIPING - DEMO PLAN**

SCALE: 1/4" = 1'-0"



USER: MPARKER  
 FILE: 363432\3634321104\_CAD\WATER\36343211\_89-DD03\_1969 Air Line Piping Demo.dwg  
 SAVED: 7/12/2022  
 PLOTTED: 7/12/2022

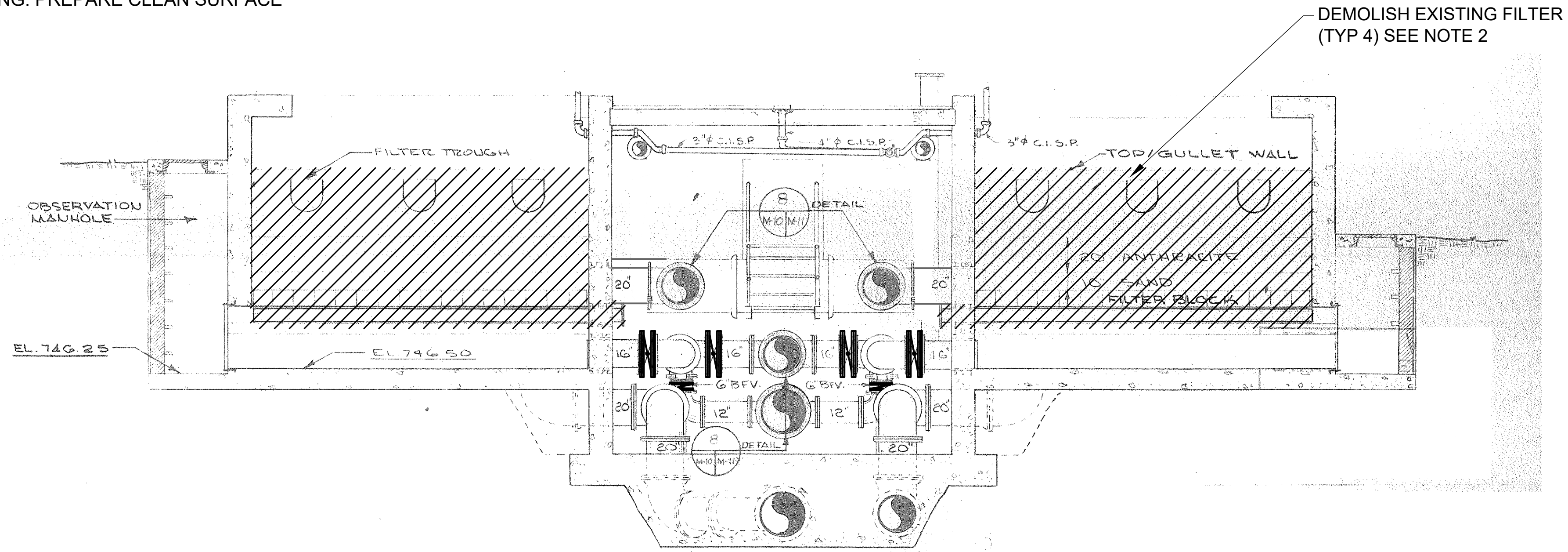


1969 BUILDING - AIR LINE PIPING - DEMO PLAN  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION  
 LAGRANGE, GEORGIA

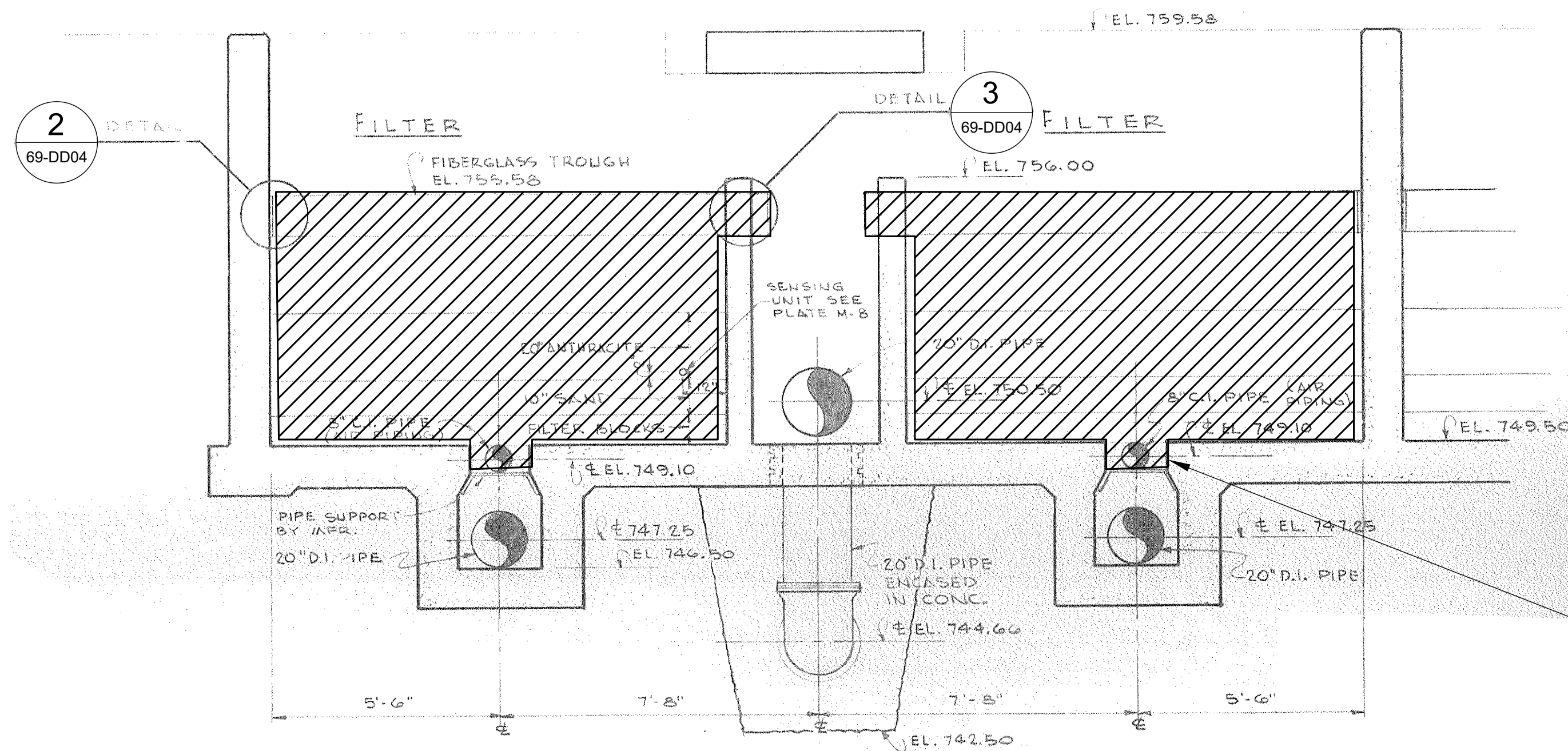
REV.	CHK.	DATE	DESCRIPTION
0	AMS	JULY 12, 2022	ISSUED FOR BID

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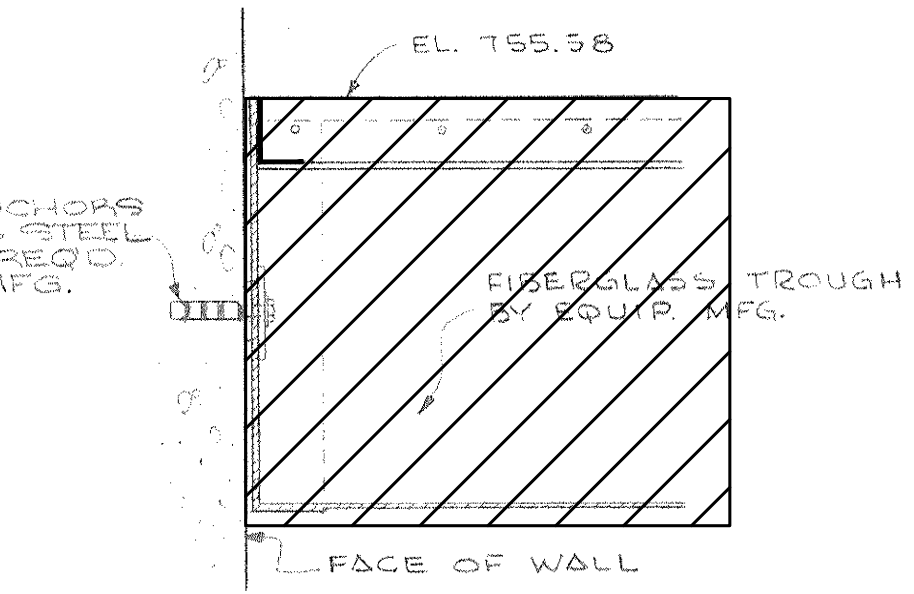
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. DEMOLISH UNDERDRAIN, FILTER MEDIA, TROUGHS, AND AIR PIPING. PREPARE CLEAN SURFACE FOR INSTALLATION OF NEW FILTER EQUIPMENT.



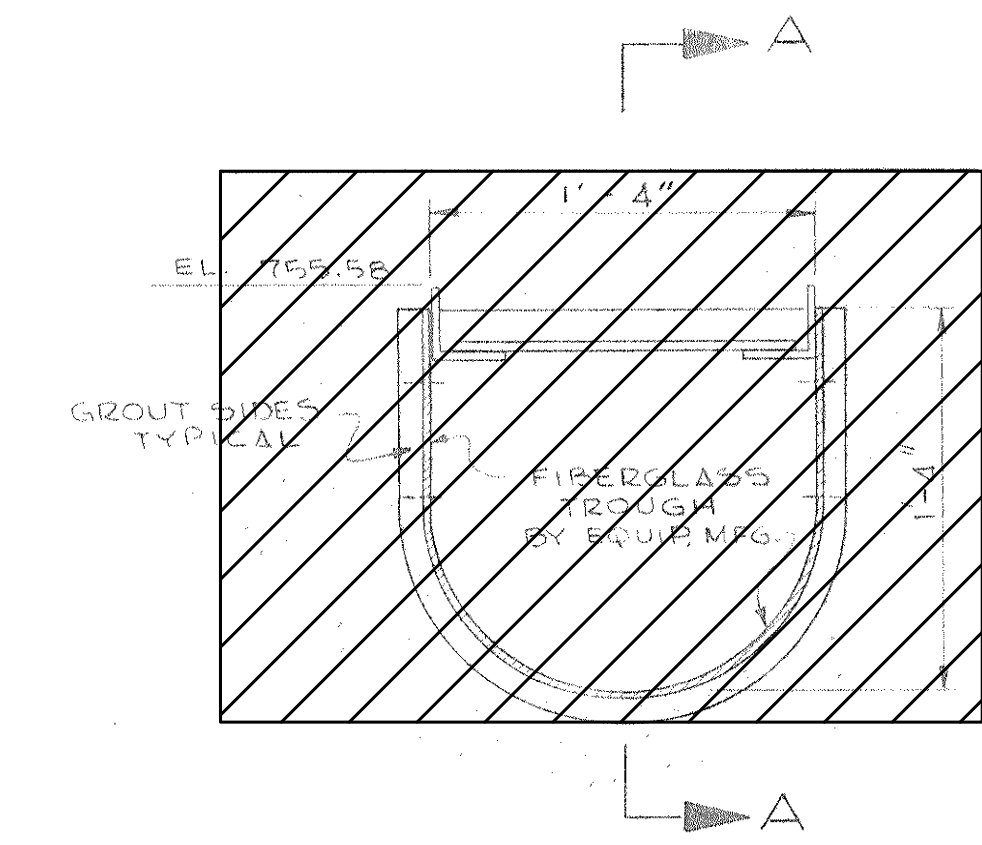
**H** DEMOLITION - SECTION  
 69-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8"



**F** DEMOLITION - SECTION  
 69-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8"

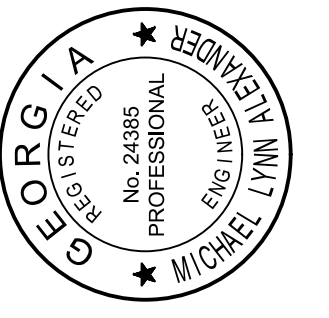


**2** DETAIL  
 69-DD04 NTS



**3** DETAIL  
 69-DD04 NTS

DEMOLISH AIR PIPING AND PIPING SUPPORTS.



1969 BUILDING - DEMO - SECTIONS

WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION  
 LAGRANGE, GEORGIA

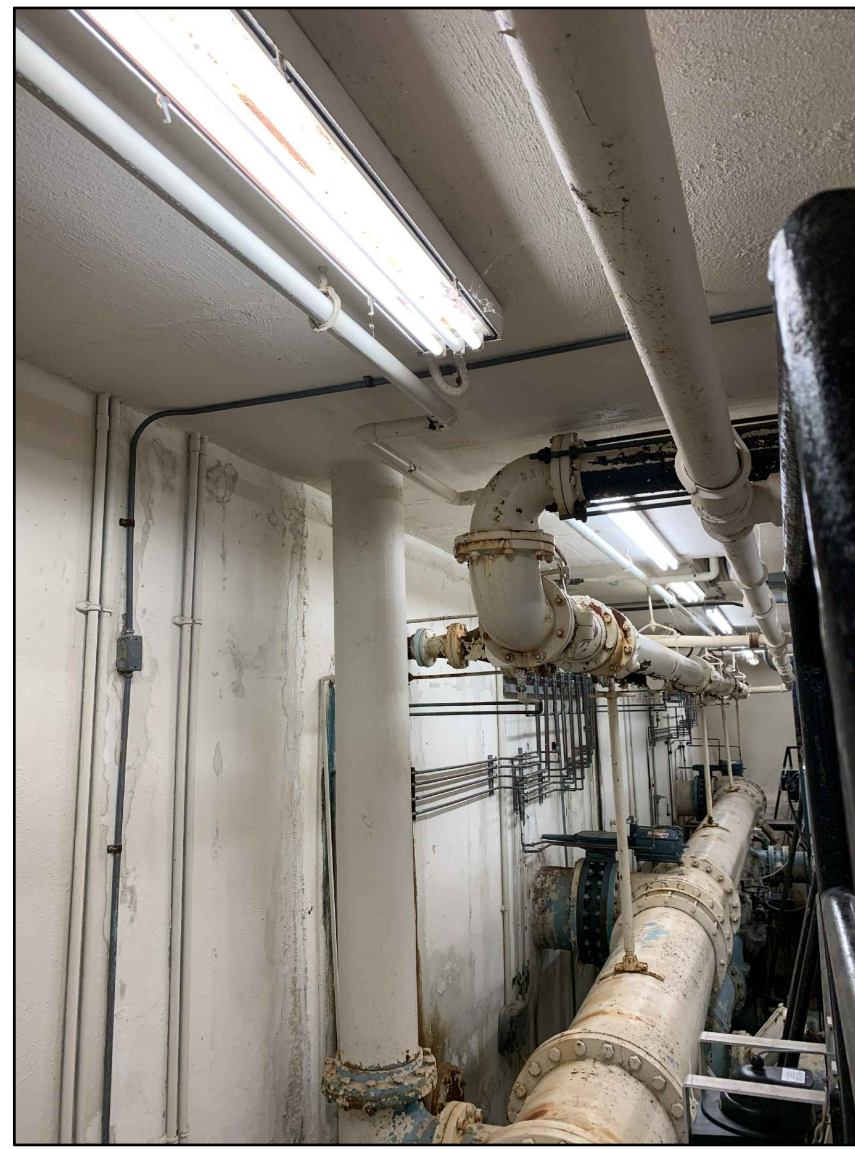
REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

69-DD04

FILE NO. 36432-11

NOTES:

- BACKGROUND OF DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
- 10" DUCTILE IRON STAND PIPE (FLOAT WELL) EXTENDING INTO THE FILTER GALLERY IS TO BE DEMOLISHED.

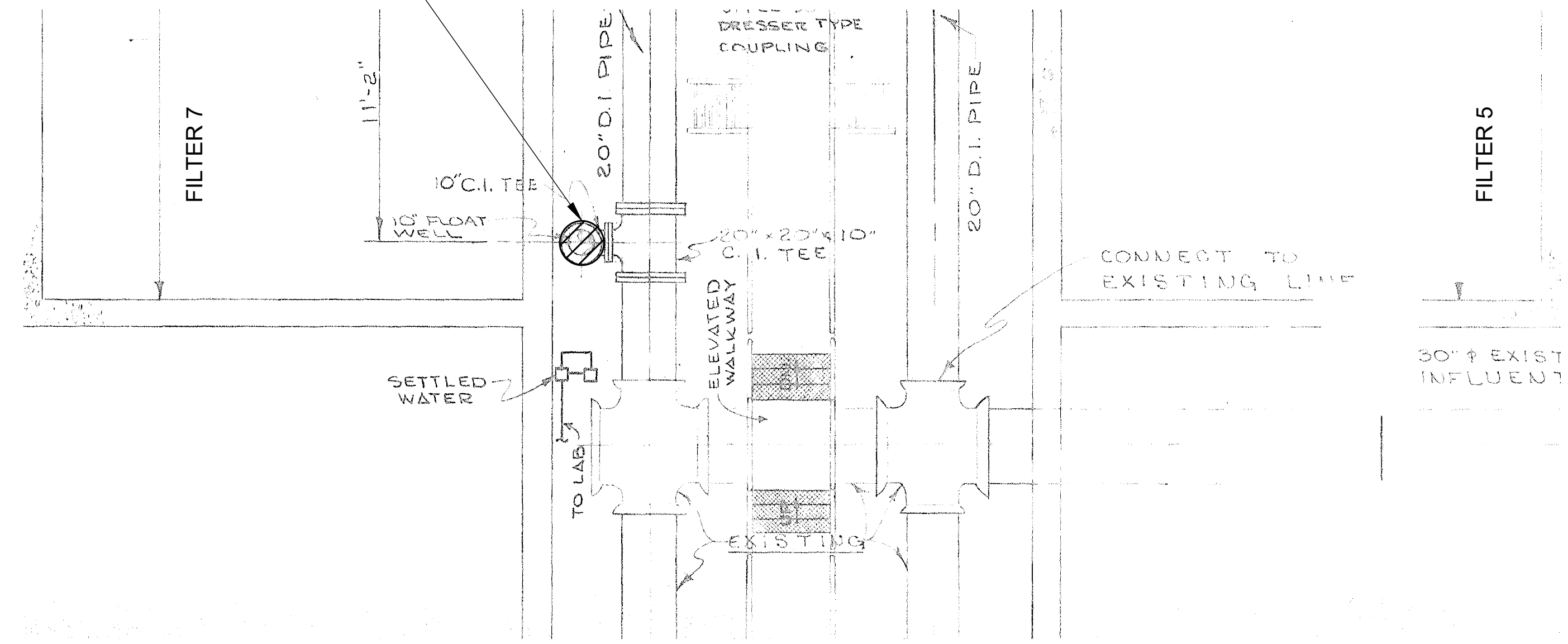


FLOAT WELL IN PIPE GALLERY

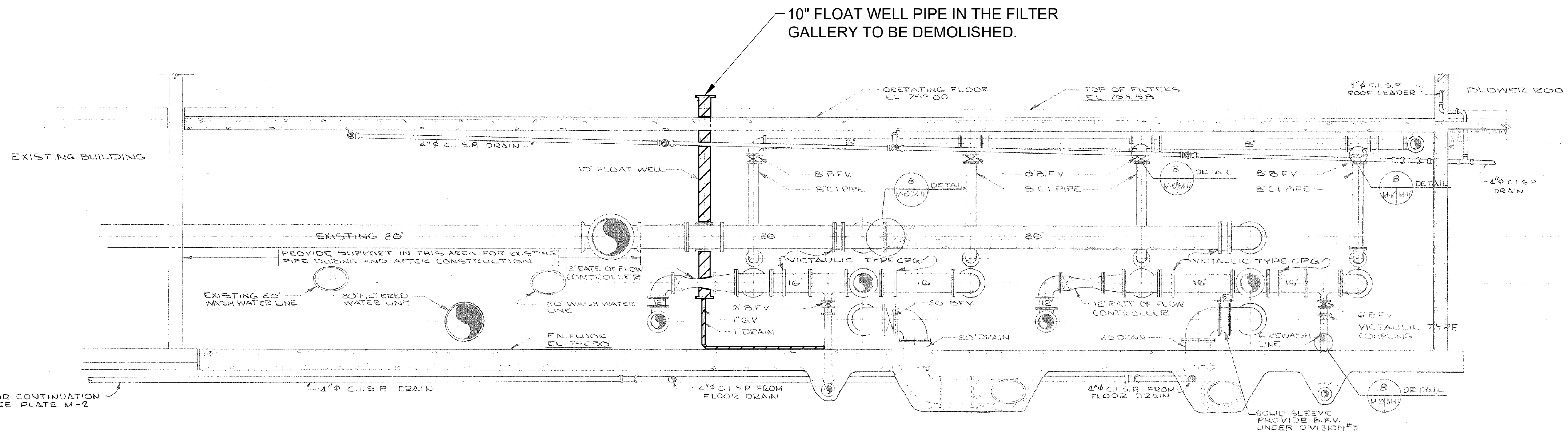


FLOAT WELL IN FILTER GALLERY

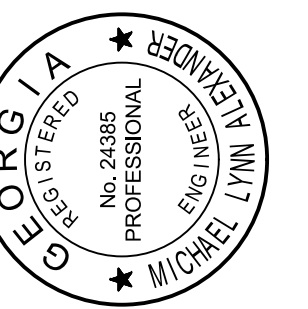
10" SETTLED WATER FLOAT WELL PIPE TO BE DEMOLISHED BACK TO 10" TEE INSTALL BLIND FLANGED AT TEE.



**1** FLOAT WELL PIPE - DEMO PLAN  
SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'



**D** FLOAT WELL PIPE - DEMO SECTION  
SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'



REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID



NOTES:

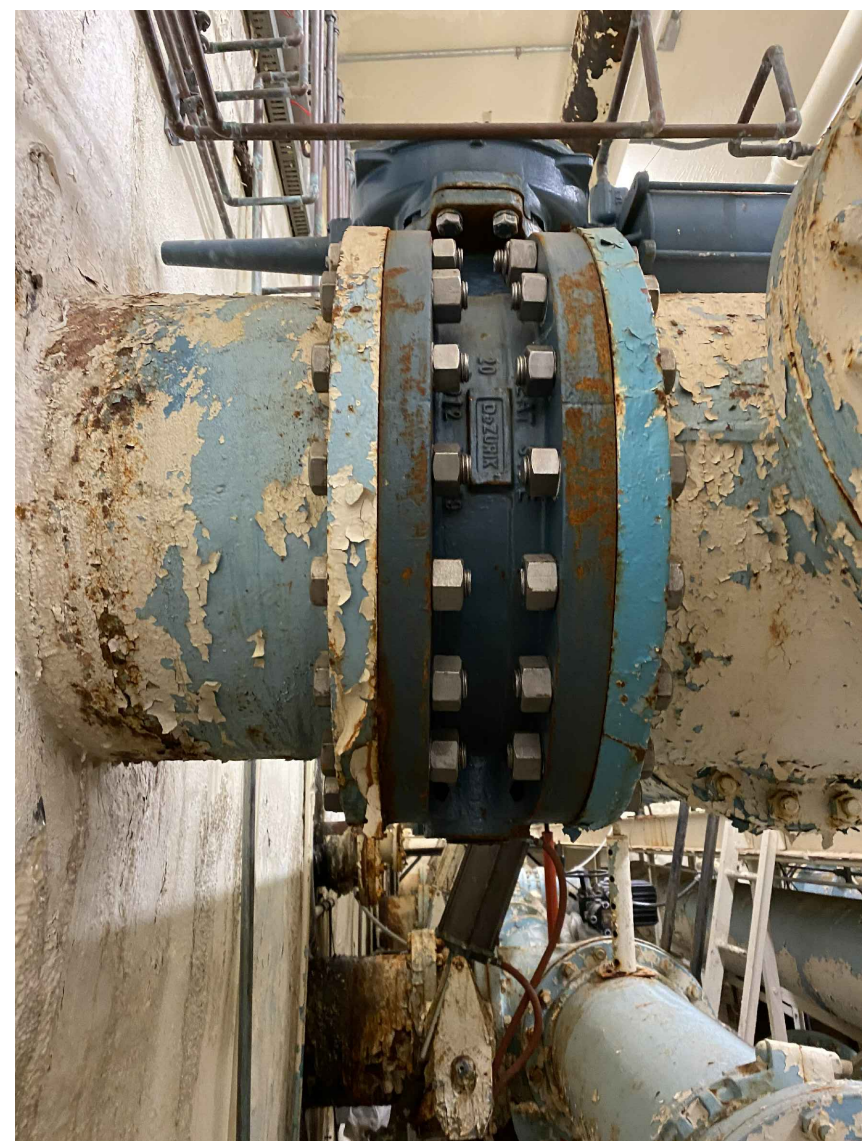
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS. EXISTING HANGERS ARE TO REMAIN.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
6. SETTLED BUTTERFLY VALVES AND DRESSER COUPLINGS (4X) ARE TO BE REPLACED.
7. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



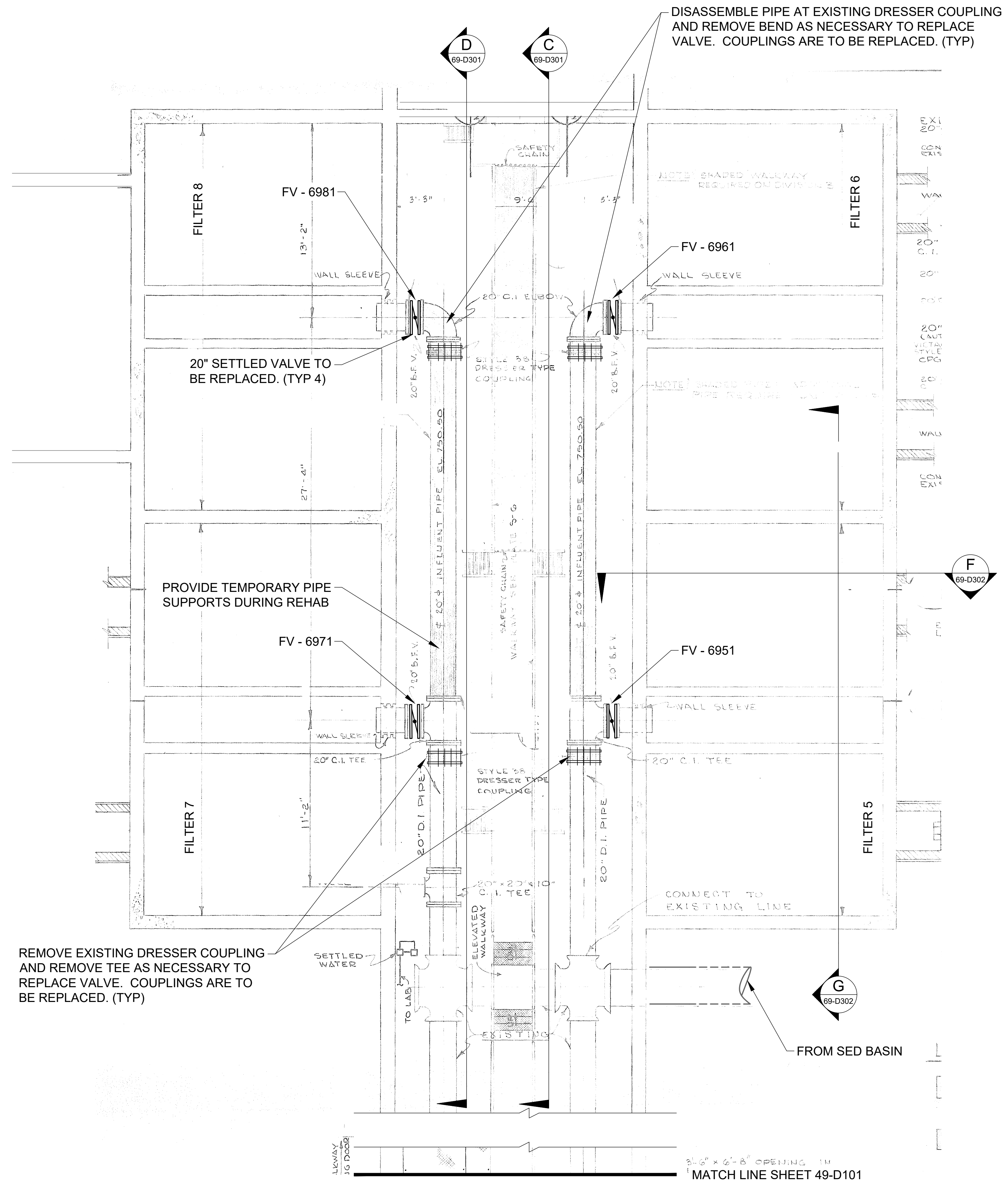
EXISTING PIPE SUPPORTS



20" SETTLED VALVE & COUPLING



20" SETTLED VALVE



SETTLED VALVE REPLACEMENT - PLAN

NTS

1969 BUILDING - SETTLED VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID
1	JULY 12, 2022

69-D101

FILE NO. 36432-11



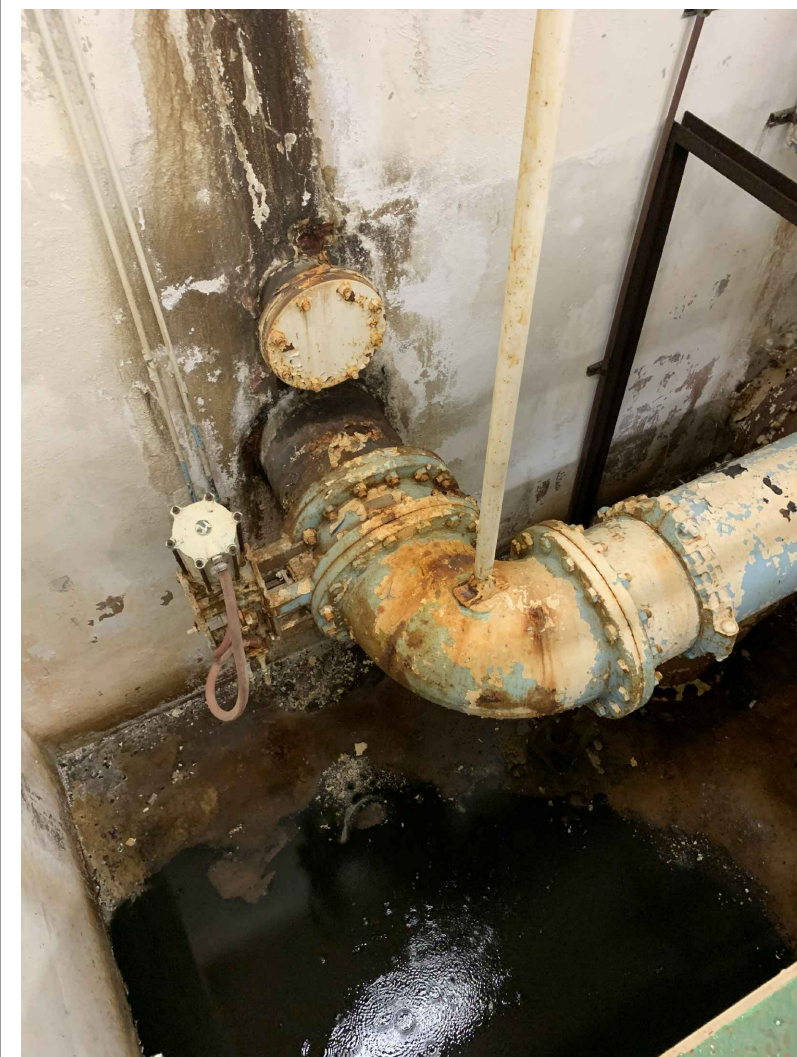
**BARGE**  
DESIGN SOLUTIONS

1201 Peachtree Industrial Blvd., Suite F, Marietta, GA 30151  
PHONE: (770) 521-4680

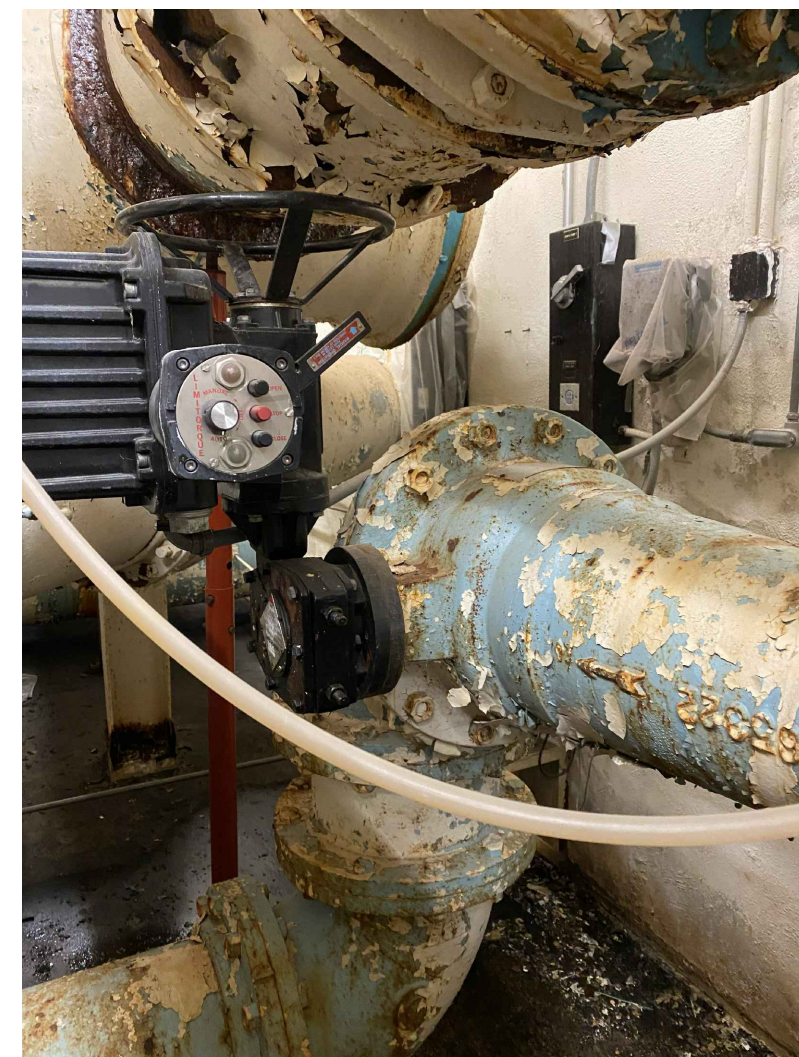
USER: AMPARKER  
FILE: I:\projects\individual\Projects\36432\364321104\_CAD\WATER\69-D101\_1969 Settled Valve Replacement Plan.dwg  
SAVED: 7/6/2022  
PLOTTED: 7/6/2022

**NOTES:**

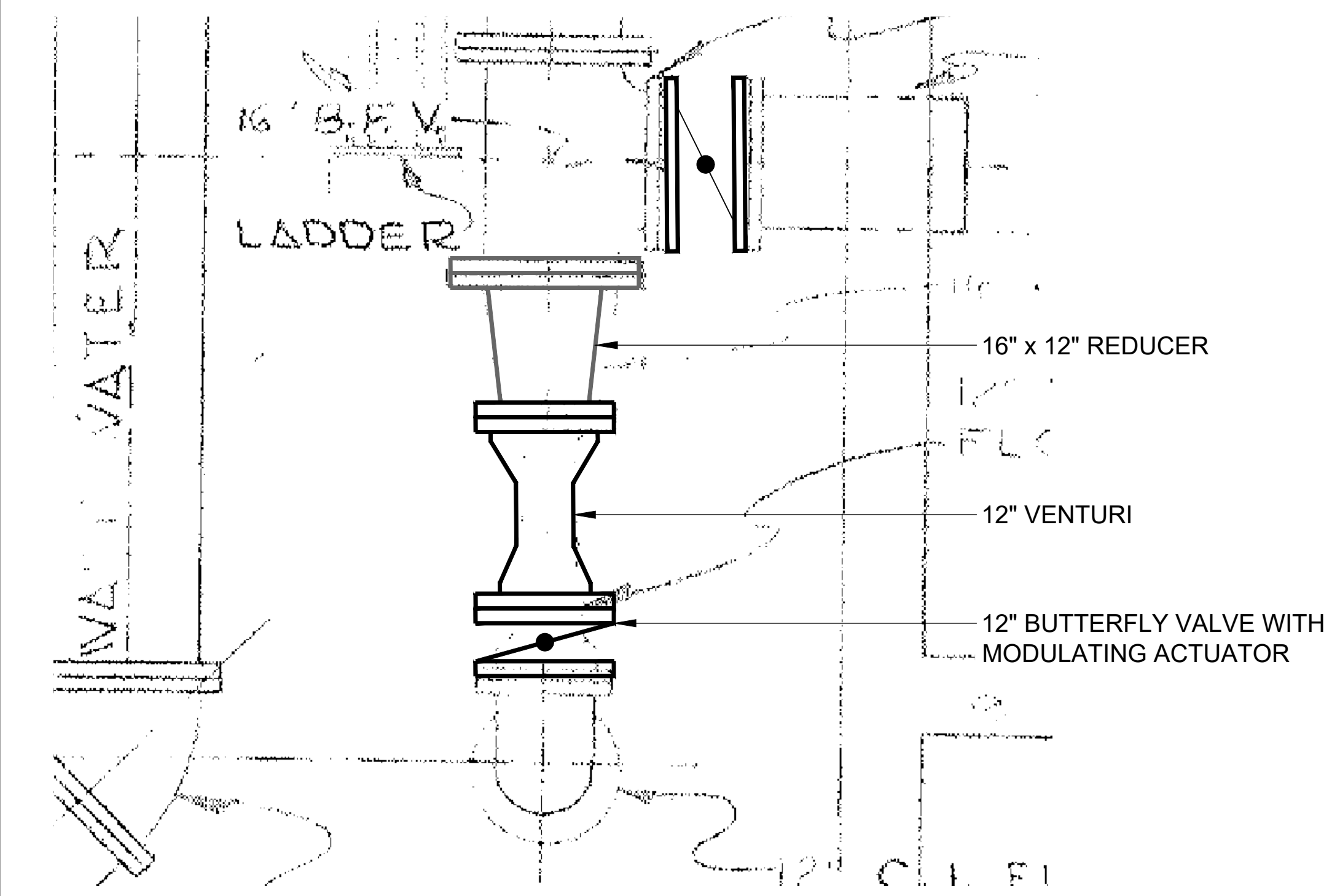
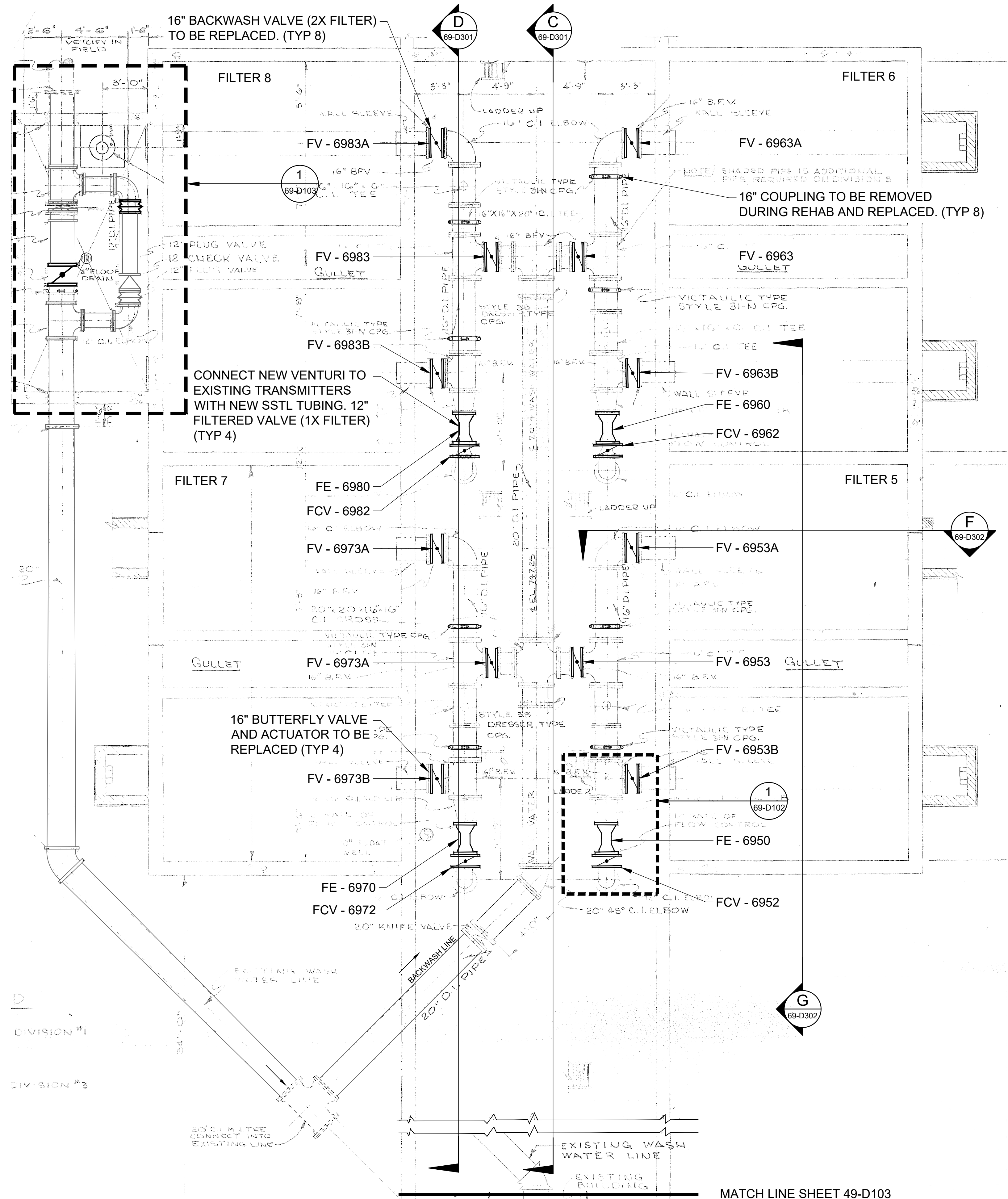
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS. EXISTING HANGERS ARE TO REMAIN.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT
6. EXISTING FILTERED BIF MODEL 603 CONTROLLERS (4X) ARE TO BE REMOVED.
7. NEW FILTERED BUTTERFLY VALVES (4X) AND VENTURI (4X) ARE TO BE INSTALLED.
8. BACKWASH BUTTERFLY VALVES (12X) ARE TO BE REPLACED.
9. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION



**16" BACKWASH VALVE & COUPLING**



**12" EFFLUENT VALVE BUILT INTO BIF CONTROLLER**



**1 ROF CONTROLLER DETAIL TYP 4**  
69-D102 NTS

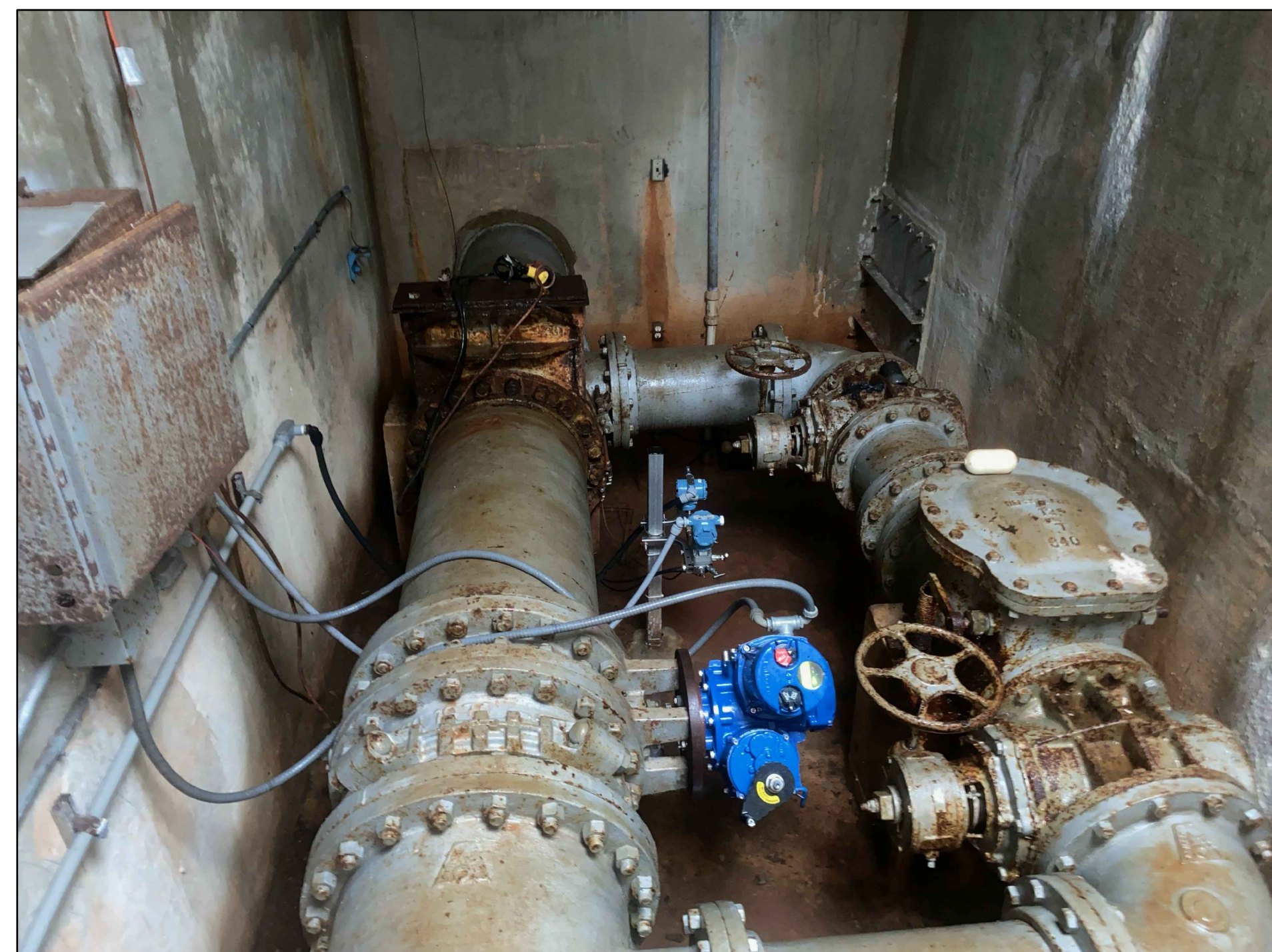
**1 FILTERED & BACKWASH VALVE REPLACEMENT - PLAN**  
NTS

REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

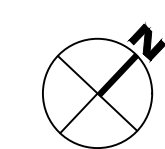
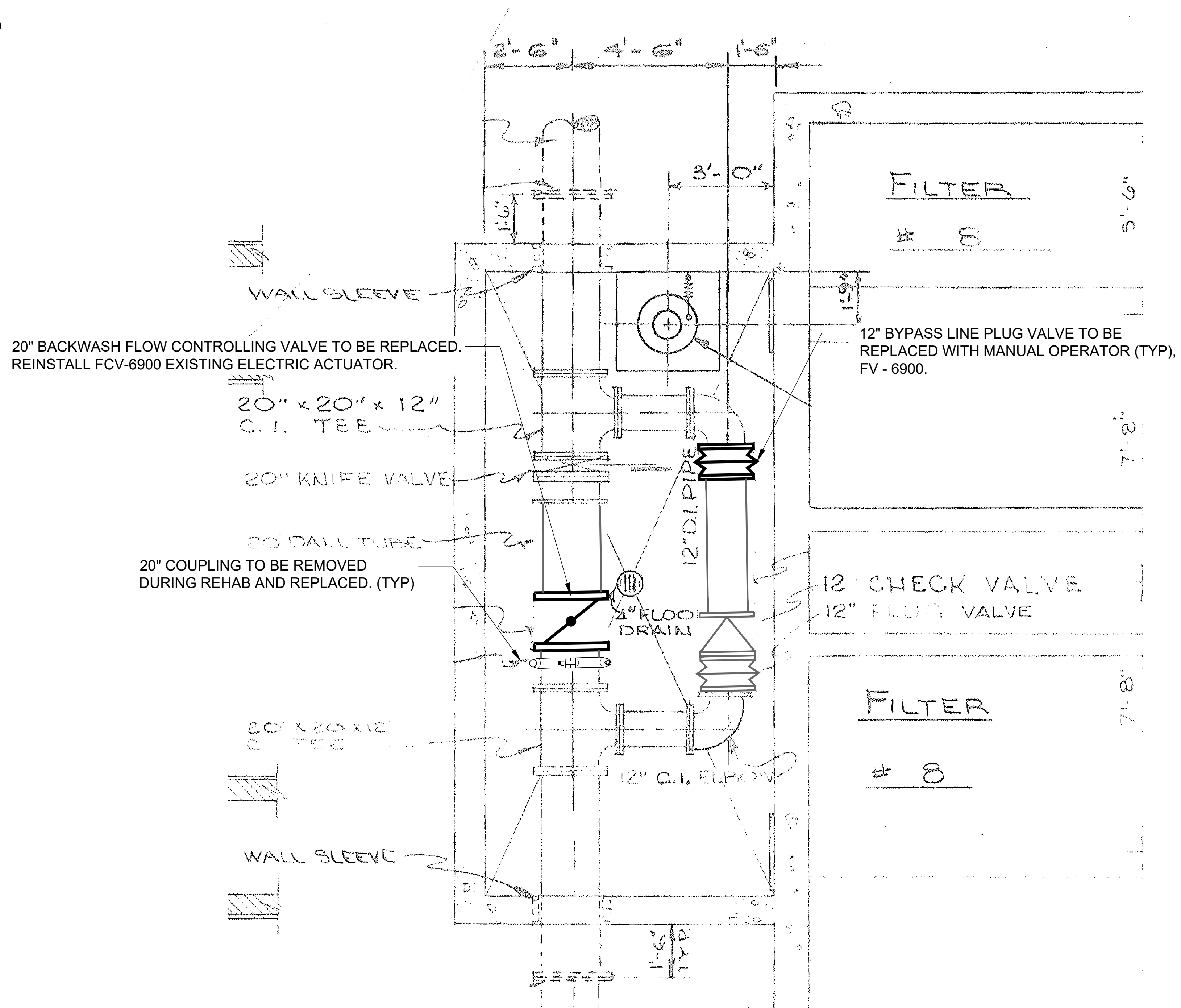
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SAVED: 7/6/2022  
PLOT: 7/6/2022

NOTES:

1. BACKGROUND PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
6. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.
7. BACKWASH FLOW CONTROLLING BUTTERFLY VALVE AND COUPLING (1X) TO BE REPLACED.
8. BACKWASH BYPASS LINE PLUG VALVE (1X) TO BE REPLACED.

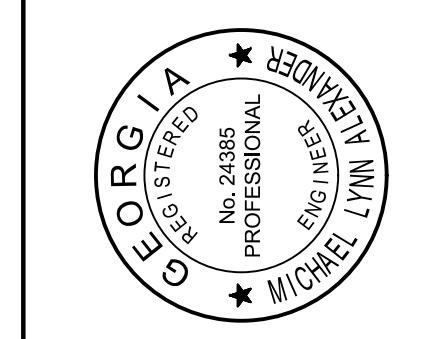


20" BACKWASH CONTROLLING VALVE &  
12" BYPASS PLUG VALVE



1  
69-D103  
NTS

**BACKWASH SUPPLY VAULT REPLACEMENT - PLAN**



1969 BUILDING - BACKWASH SUPPLY  
REPLACEMENT - PLAN  
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

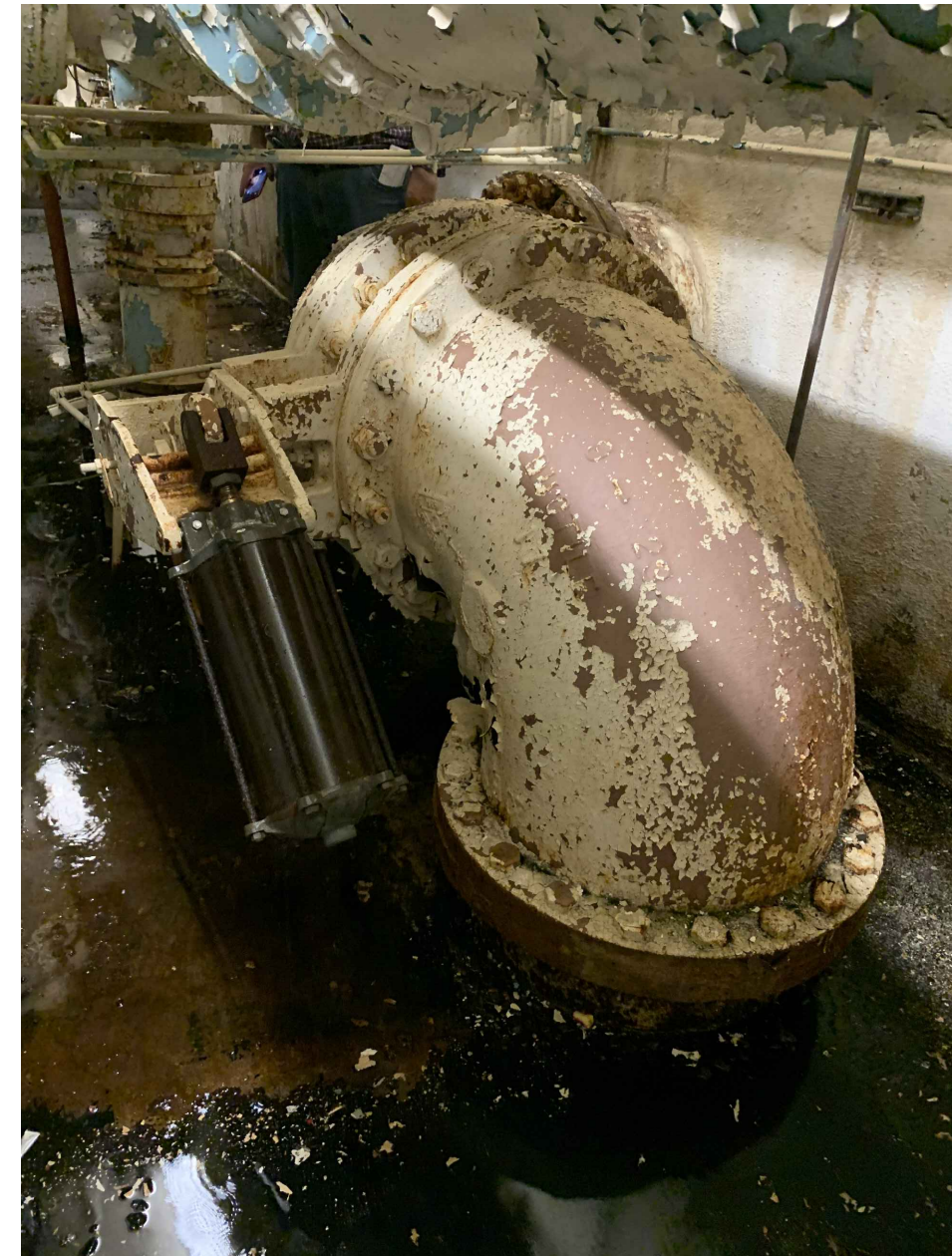
REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

**69-D103**  
FILE NO. 36432-11

USER: AMPARKER  
FILE: F:\06\04\20\04\02\1104\_CAD\WATR\66432\1\_69-D103\_1969 Backwash Valve Replacement Plan.dwg  
SAVED: 06/30/2022  
PLOT: 06/30/2022

NOTES:

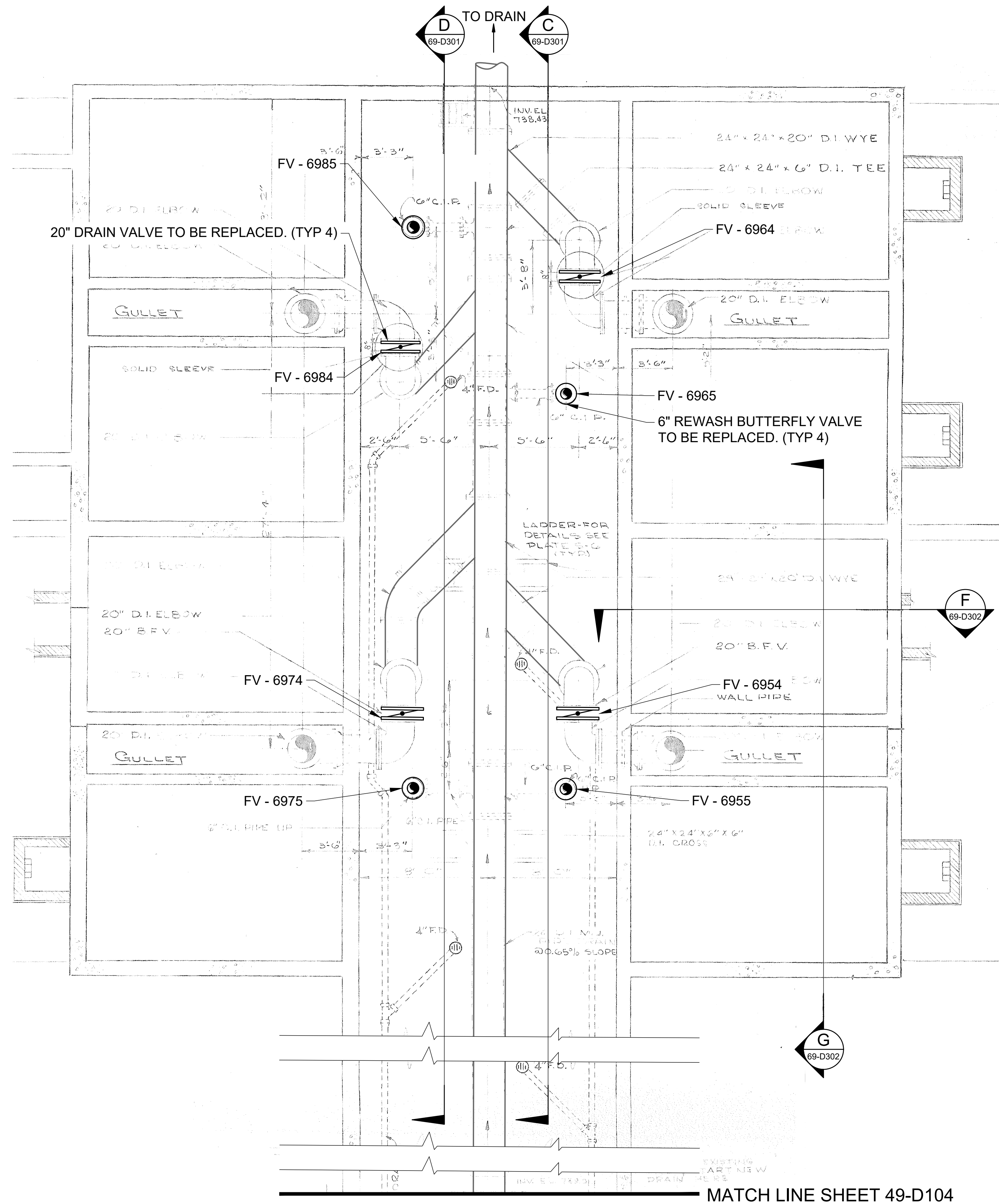
1. BACKGROUND OF DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
5. DRAIN BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
6. REWASH BUTTERFLY VALVES (4X) ARE TO BE REPLACED.
7. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND SLEEVES REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.



20" DRAIN VALVE



6" REWASH VALVE AND ACTUATOR



MATCH LINE SHEET 49-D104

USER: AMPARKER  
 FILE: P:\06\04\2024\04\21\104\_CAD\WATR363271\_09-D104\_1969 Waste (Drain) Valve Replacement Plan.dwg  
 SAVED: 05/20/2022  
 PLOTTED: 05/20/2022



WASTE (DRAIN) & REWASH VALVE REPLACEMENT - PLAN

NTS



1969 BUILDING - WASTE (DRAIN) & REWASH  
VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION

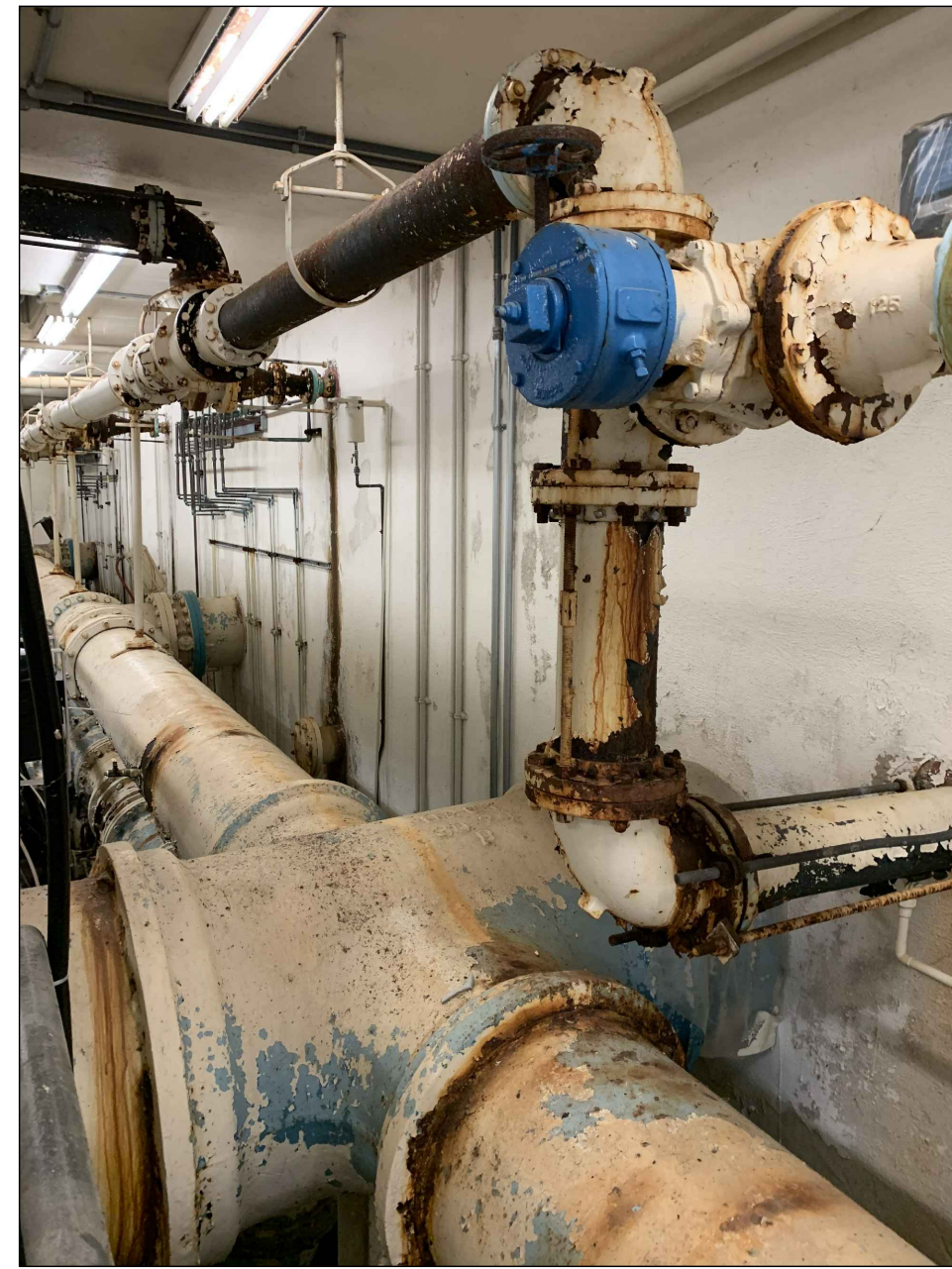
REV.	DATE	CHK.	APP.	DESCRIPTION
0	JUL 12, 2022	AMP	AMP	ISSUED FOR BID

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. FIELD VERIFY MATERIAL TYPE, OUTSIDE DIAMETER (OD), AND DIMENSIONS.
3. PROVIDE TEMPORARY PIPE SUPPORTS DURING REHABILITATION.
4. REPLACE PIPE SUPPORTS AND ANCHOR BOLTS. EXISTING HANGERS ARE TO REMAIN.
5. PIPE GALLERY TO UNDERGO COATING REHABILITATION, INCLUDING CEILING, WALLS, AND EQUIPMENT.
6. SURFACE SWEEP BUTTERFLY VALVES (TYP 8) AND COUPLINGS (TYP 14) ARE TO BE REPLACED.
7. INSTALL A NEW 6" PLUG VALVE ON THE NON-POTABLE WATER SUPPLY LINE TO ISOLATE THE 1969 BUILDING SURFACE SWEEP PIPING SYSTEM.
8. NEW GASKET AND BOLTS FOR ALL PIPING, VALVES, COUPLING, AND FLOW CONTROLLERS REPLACED OR TEMPORARILY REMOVED FOR THE PURPOSES OF CONSTRUCTION.
9. REMOVE AND REPLACE ALL HYDROSTATIC SEALS (TYP 8).



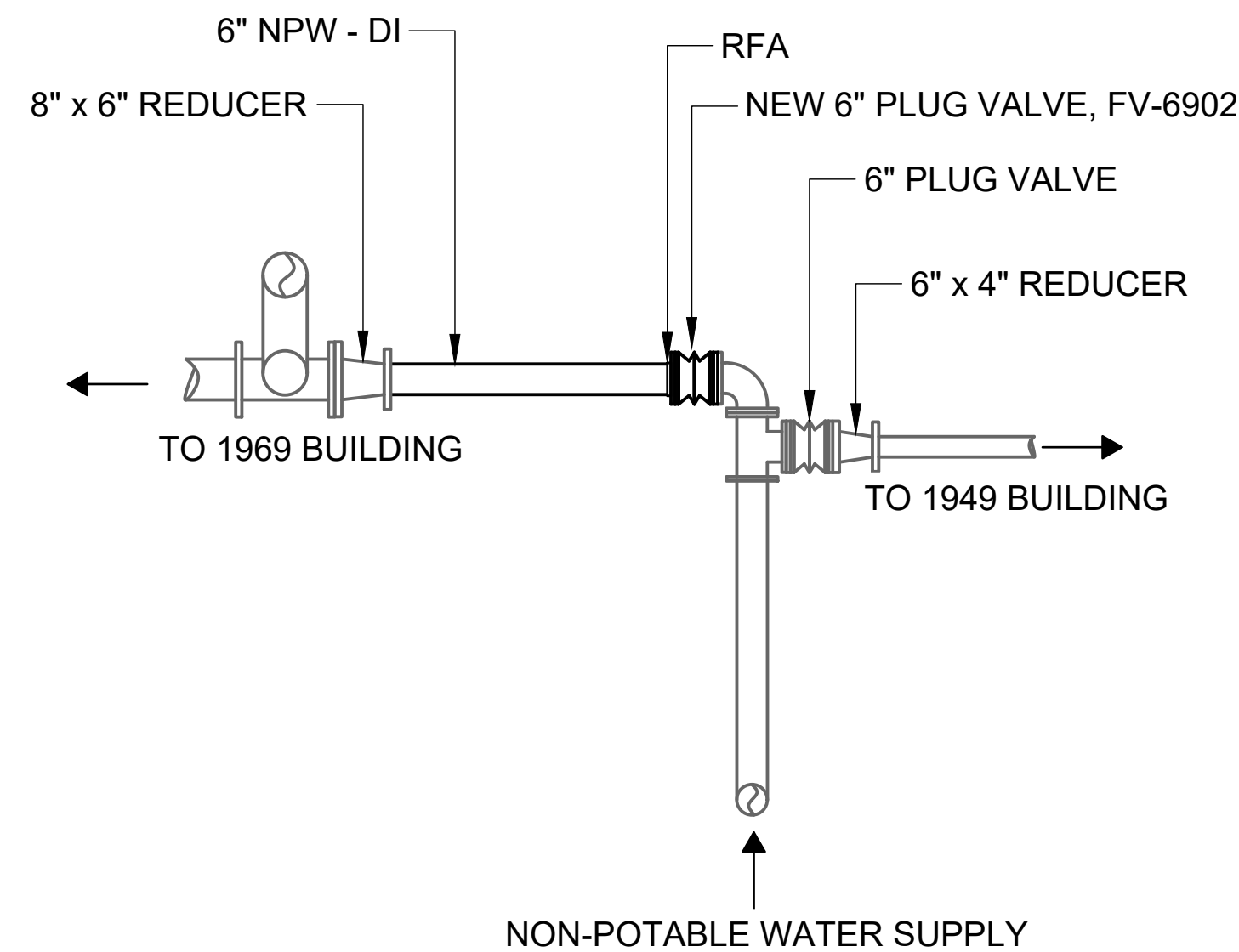
**SURFACE SWEEP PIPING AND SUPPORTS**



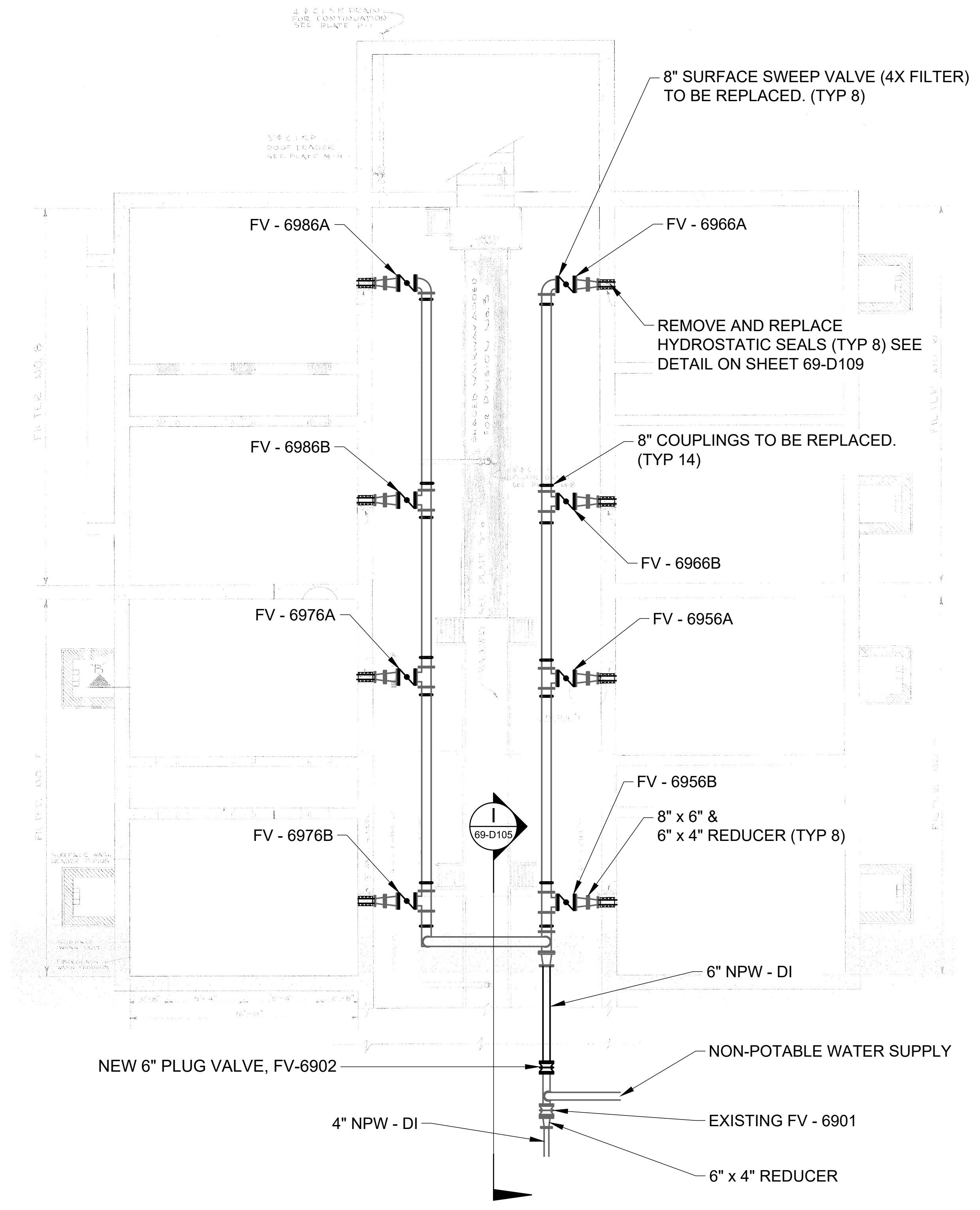
**SWEEP WATER SOURCE**



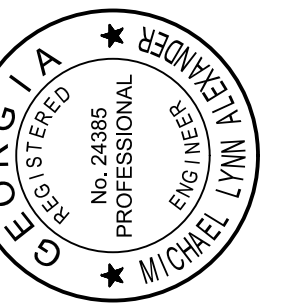
**SURFACE SWEEP COUPLINGS**



**SECTION I**  
69-D105 NTS



**SURFACE SWEEP VALVE REPLACEMENT - PLAN**  
NTS



1969 BUILDING - SURFACE SWEEP VALVE REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

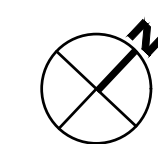
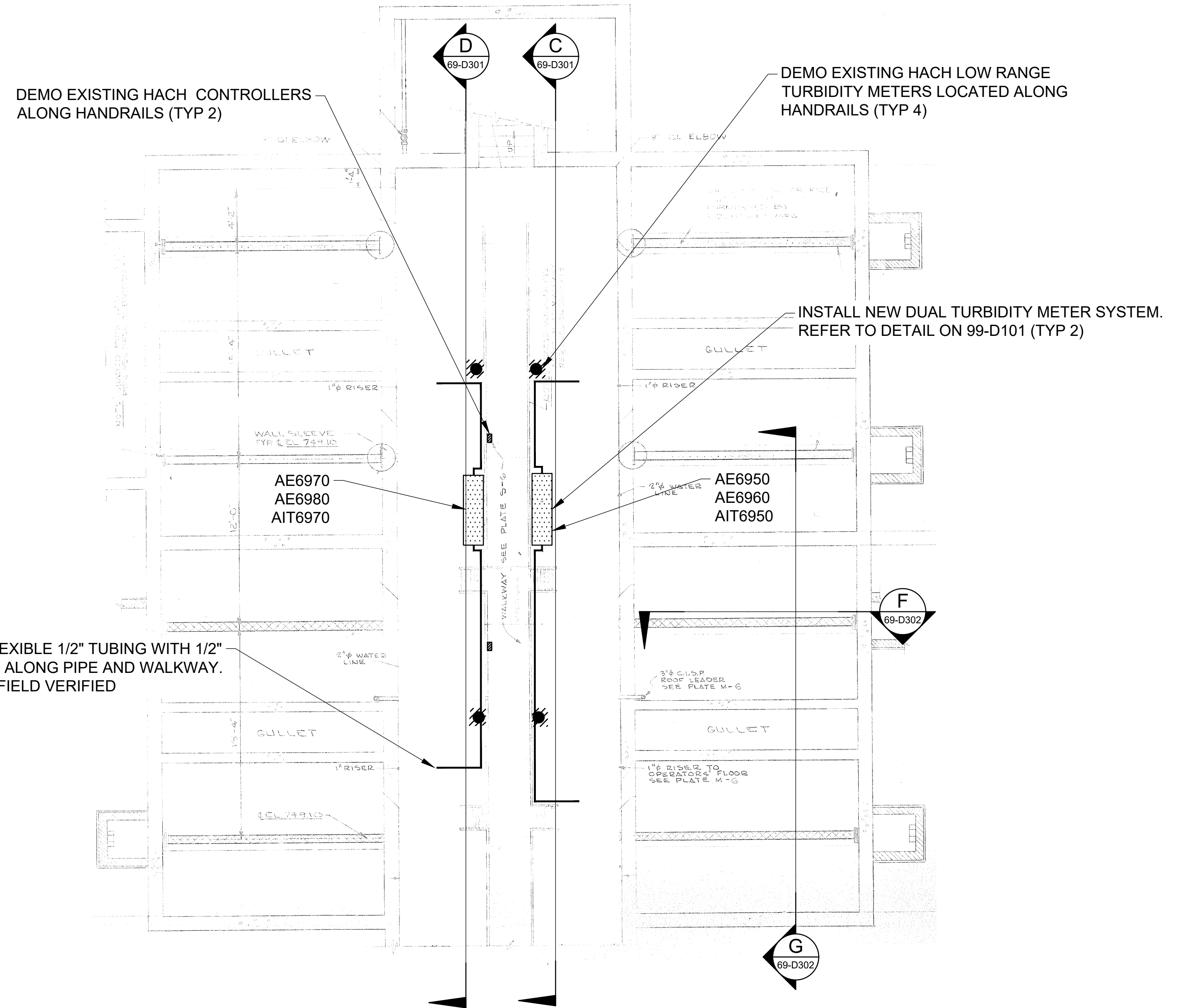
REV.	DATE	BY	CHK.	APP.	REVISION INFORMATION
0		KMS	KMS		JULY 12, 2022 ISSUED FOR BID

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. IN THE PIPE GALLERY REMOVE FOUR (4) EXISTING HACH TURBIDITY METERS MODEL 1720E, TWO (2) HACH CONTROLLERS MODEL SC200, AND ALL HARDWARE. INSTALL FOUR (4) NEW HACH TURBIDITY METERS MODEL TU5300SC AND TWO (2) NEW HACH CONTROLLERS MODEL SC4500 PROVIDED BY OWNER ON THE NEW TURBIDITY SYSTEM. SEE DETAIL ON SHEET 99-D101.



TURBIDITY METER CONTROLLER

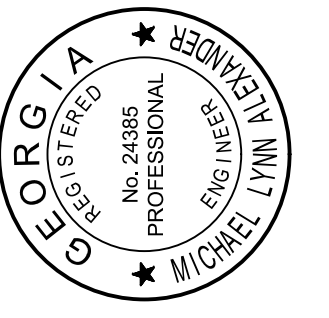


**TURBIDITY SYSTEM REPLACEMENT - PLAN**

NTS

USER:AMPARKER  
 FILE:F:\694321\64321\04\_CAD\WATR364321\_99-D106\_1969 Turbidity System Replacement Plan.dwg  
 SAVED:15/05/2022  
 PLOTTED:05/30/2022

1201 Front Avenue / Suite F / Columbus, GA 31901  
 PHONE: (706) 321-6050



1969 BUILDING - TURBIDITY SYSTEM  
 REPLACEMENT - PLAN

WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION  
 LAGRANGE, GEORGIA

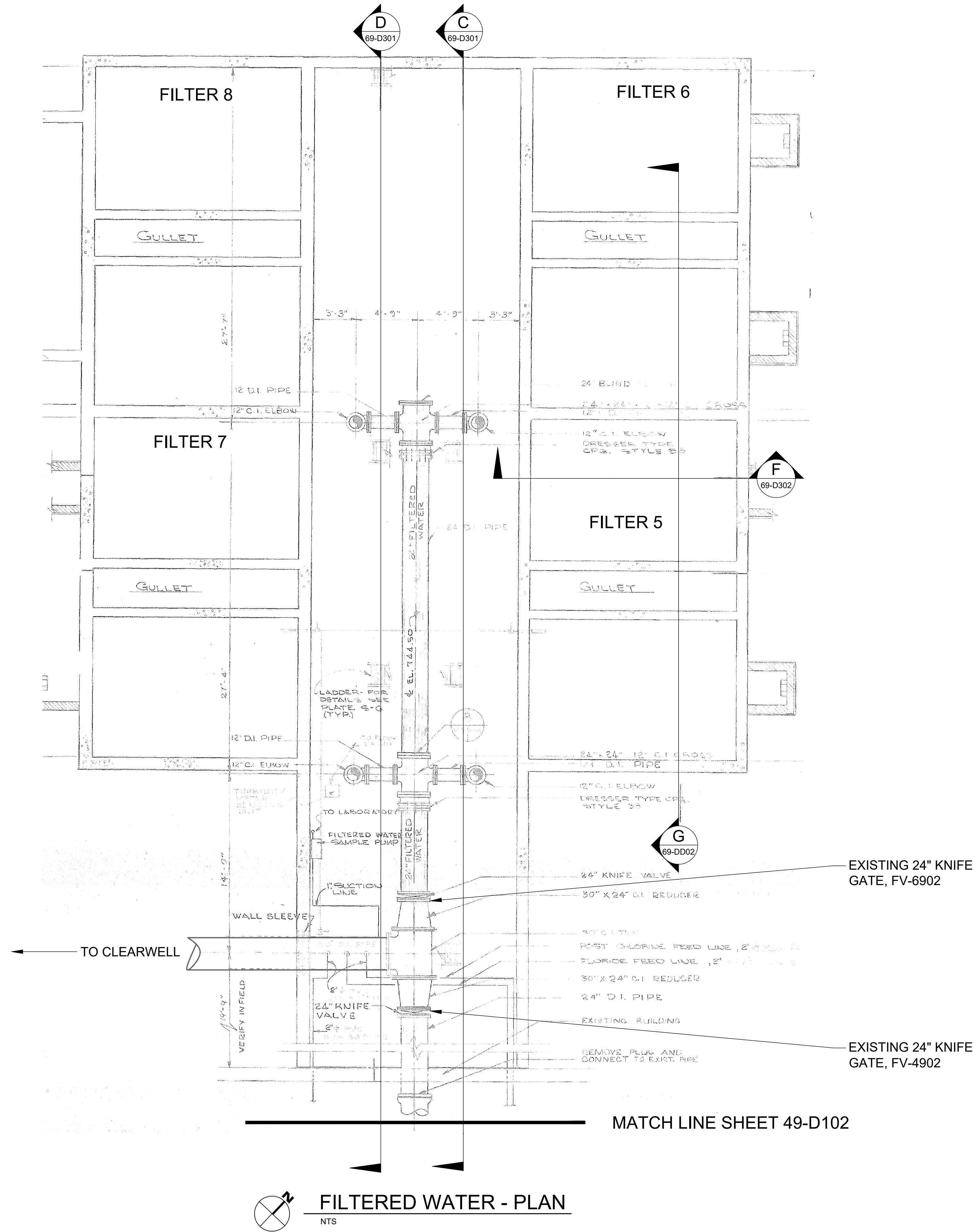
REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID
1	JULY 12, 2022

**69-D106**

FILE NO. 36432-11

NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.



**FILTERED WATER - PLAN**  
NTS



1969 BUILDING - FILTER WATER - PLAN

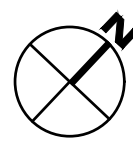
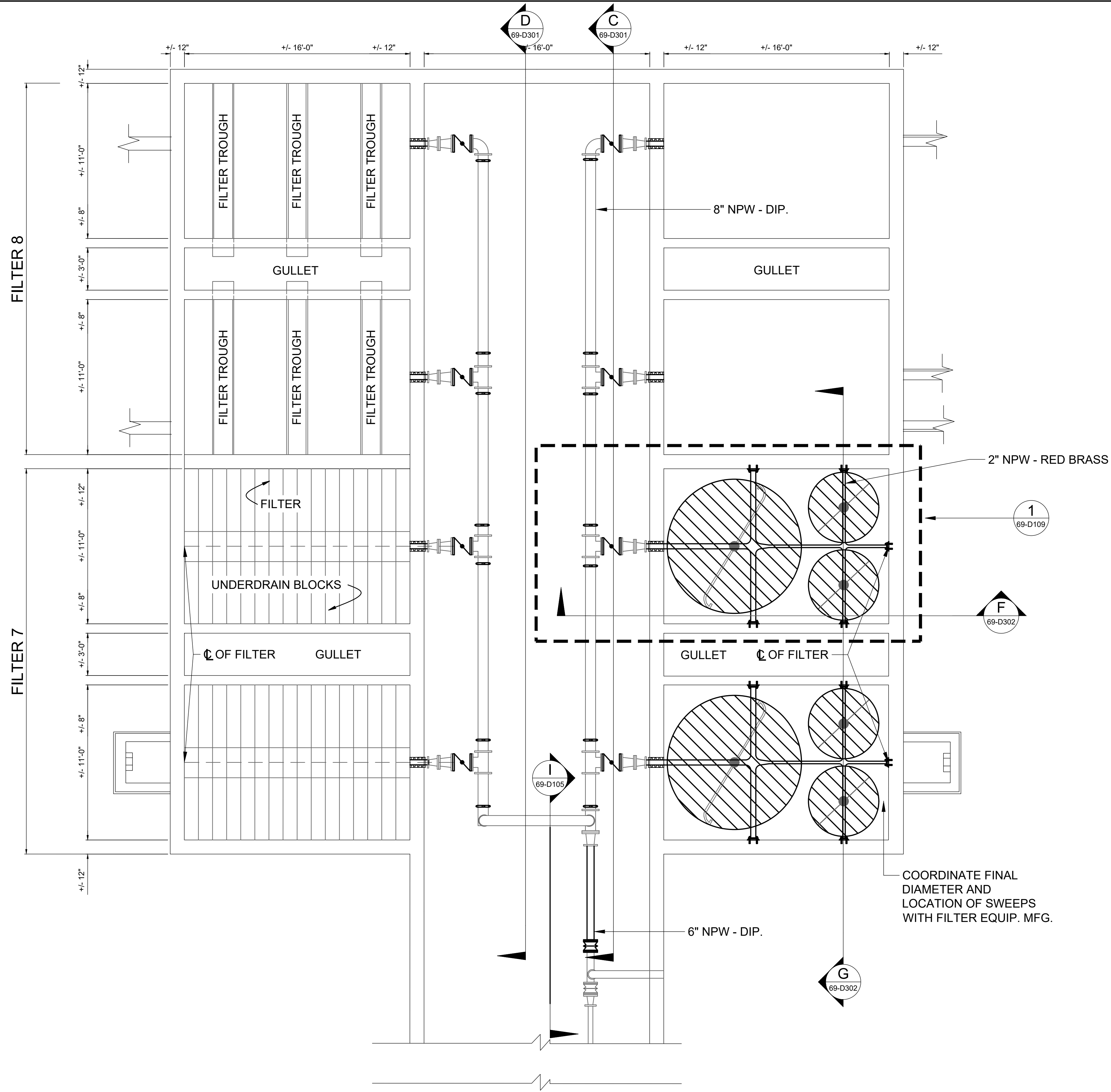
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION

LAGRANGE, GEORGIA

REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID
1	JULY 12, 2022

USER: JWPARKER  
FILE: 36432-11\_69-D107\_1969 Effluent Valve Replacement Plan.dwg  
SAVED: 6/22/2022  
PLOTTED: 6/20/2022

USER: AMPARKER  
 FILE: F:\69\69432\694321104\_CAD\WATER\364321\_69-D108\_1969 Filter Plan.dwg  
 SAVED: 05/25/2022  
 PLOTTED: 06/30/2022



**FILTER - PLAN**

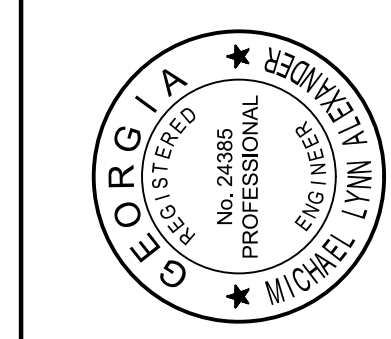
NTS

MATCH SHEET 49-D106

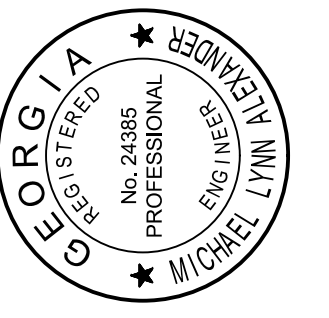
REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

1969 BUILDING - FILTER - PLAN

**WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION**  
 LAGRANGE, GEORGIA







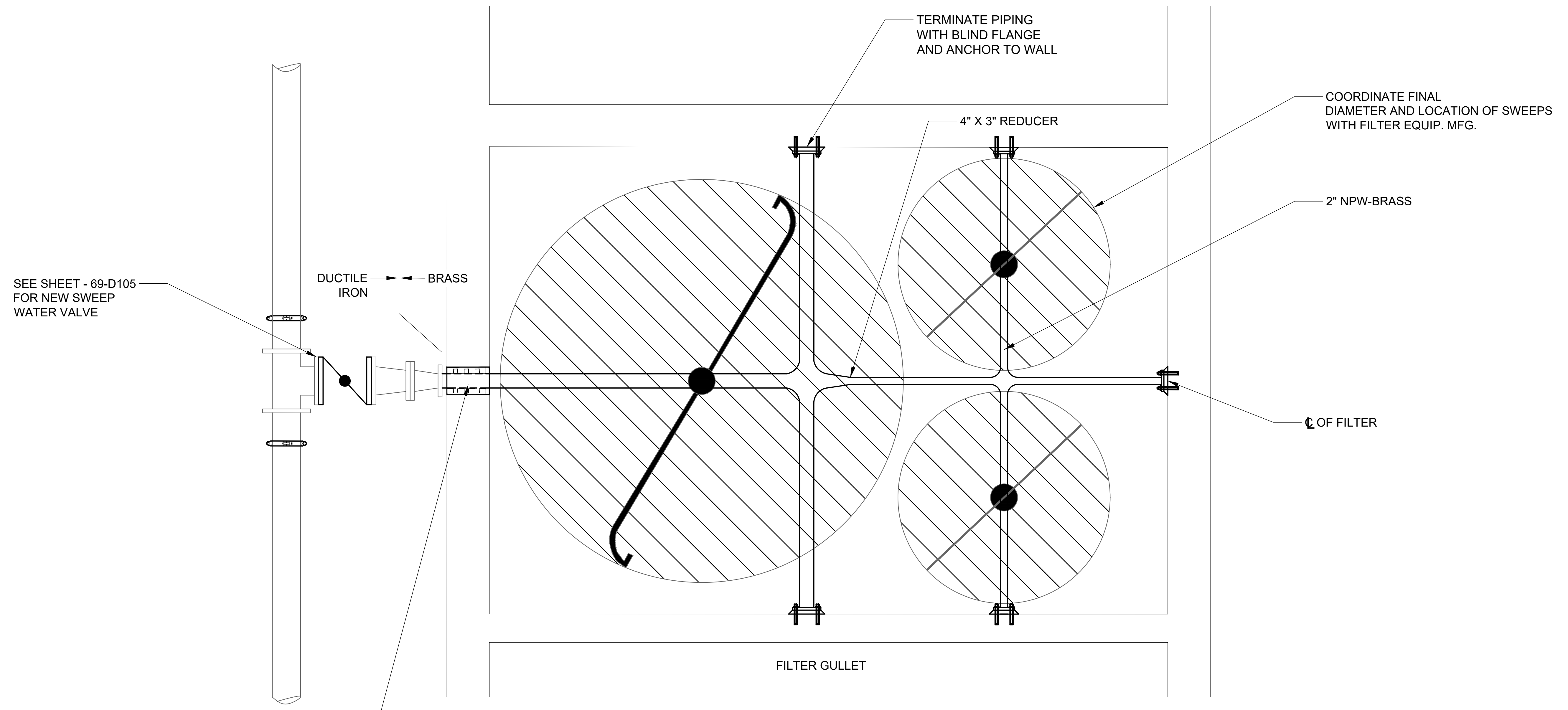
1969 BUILDING - FILTER SWEEP - DETAIL

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION

REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID

**69-D109**  
FILE NO. 36432-11



SEE SHEET - 69-D105  
FOR NEW SWEEP  
WATER VALVE

DUCTILE IRON  
BRASS

TERMINATE PIPING  
WITH BLIND FLANGE  
AND ANCHOR TO WALL

4" X 3" REDUCER

COORDINATE FINAL  
DIAMETER AND LOCATION OF SWEEPS  
WITH FILTER EQUIP. MFG.

2" NPW-BRASS

C OF FILTER

FILTER GULLET

INSTALL NEW 4" BRASS THROUGH EXIST SLEEVE.  
PROVIDE NEW HYDROSTATIC SEAL BETWEEN PIPE  
AND SLEEVE.



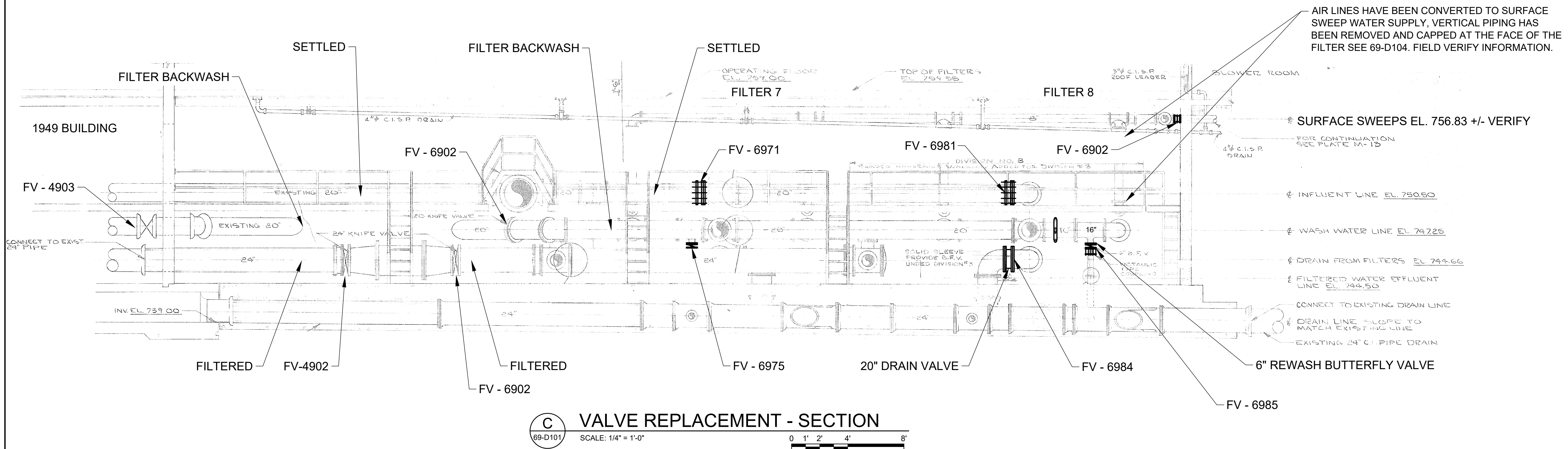
1  
69-D109

**FILTER SWEEP - DETAIL**

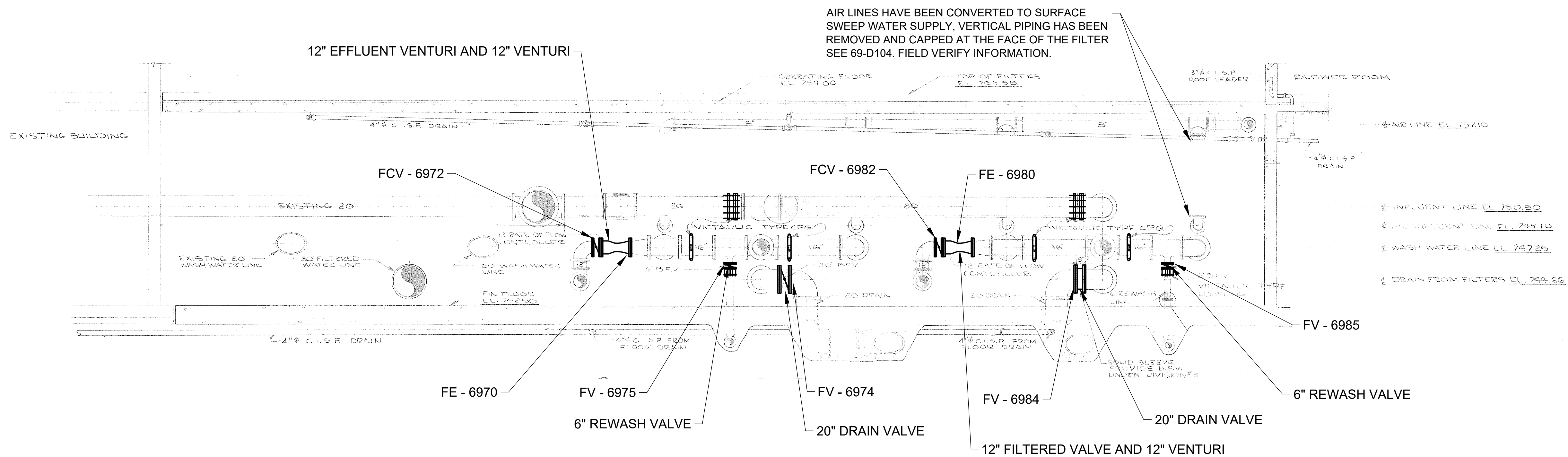
NTS

NOTES:

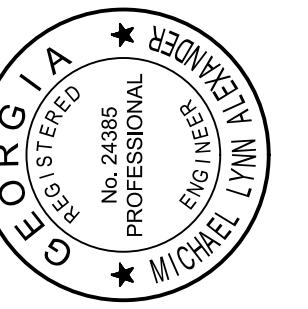
- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1969 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
- DRAWING DOES NOT INCLUDE SURFACE SWEEP PIPING AND VALVES. SEE SHEET 69-D105.



**C** VALVE REPLACEMENT - SECTION  
69-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'



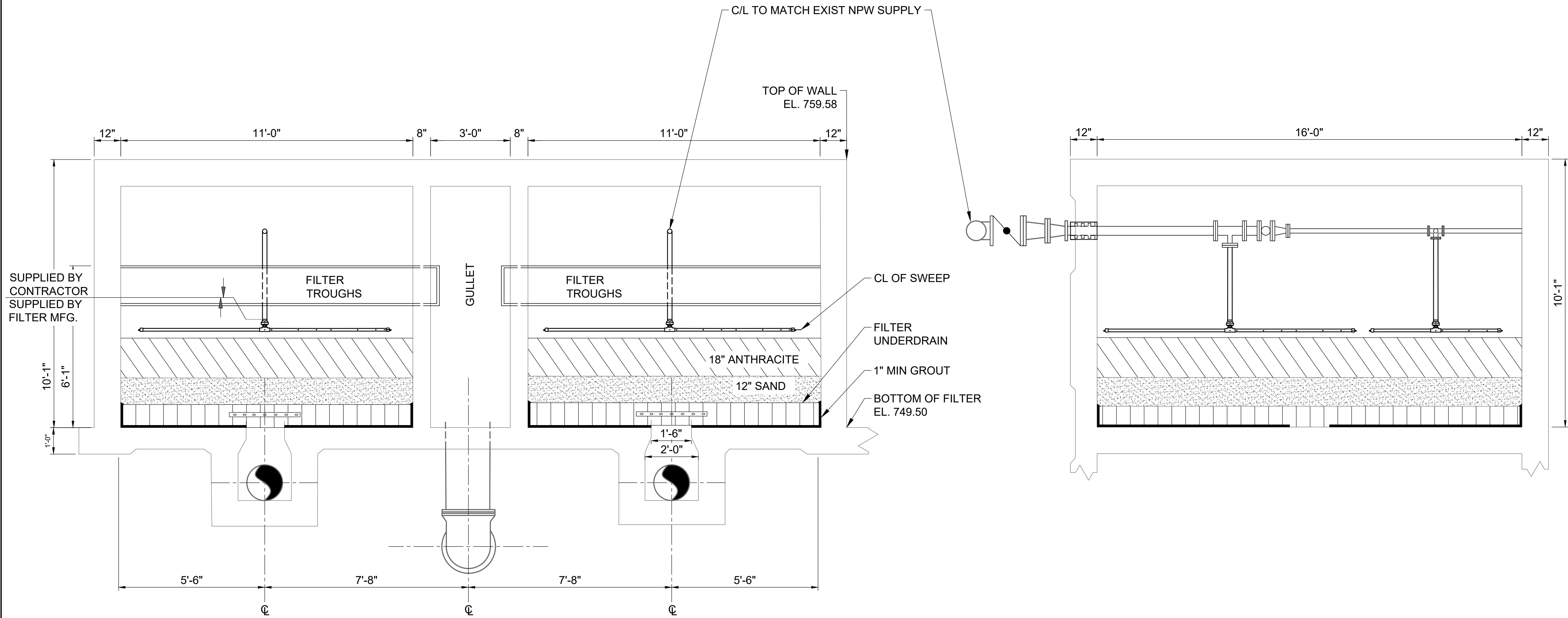
**D** VALVE REPLACEMENT - SECTION  
69-D101 SCALE: 1/4" = 1'-0" 0 1' 2' 4' 8'



REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID
1	JULY 12, 2022

USER: AMPARKER  
FILE: F:\69\69-D301\104\_CAD\WATR364321\_69-D301\_1969 Valve Replacement Sections.dwg  
SAVED: 05/10/2022  
PLOT: 05/10/2022

USER: AMPARKER  
 FILE: F:\69\69-D302\1104\_CAD\WATER\69-D302\_1\_69-D302\_1969 Filter Sections.dwg  
 SAVED: 7/11/2022  
 PLOTTED: 7/11/2022



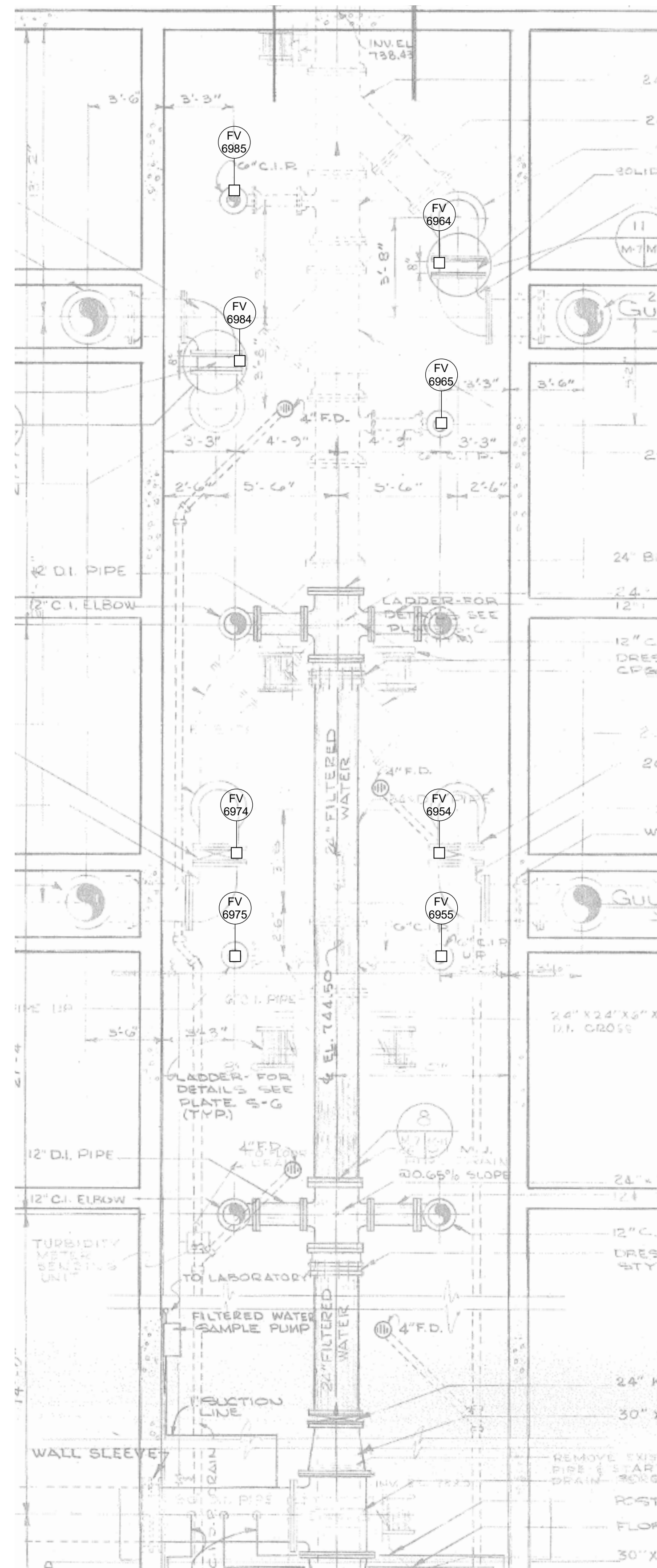
**G** FILTER UNDERDRAIN SYSTEM - SECTION  
 69-D106 SCALE: 1/2" = 1'-0"  
 0 6" 1' 2' 4"

**F** FILTER UNDERDRAIN SYSTEM - SECTION  
 69-D106 SCALE: 1/2" = 1'-0"  
 0 6" 1' 2' 4"

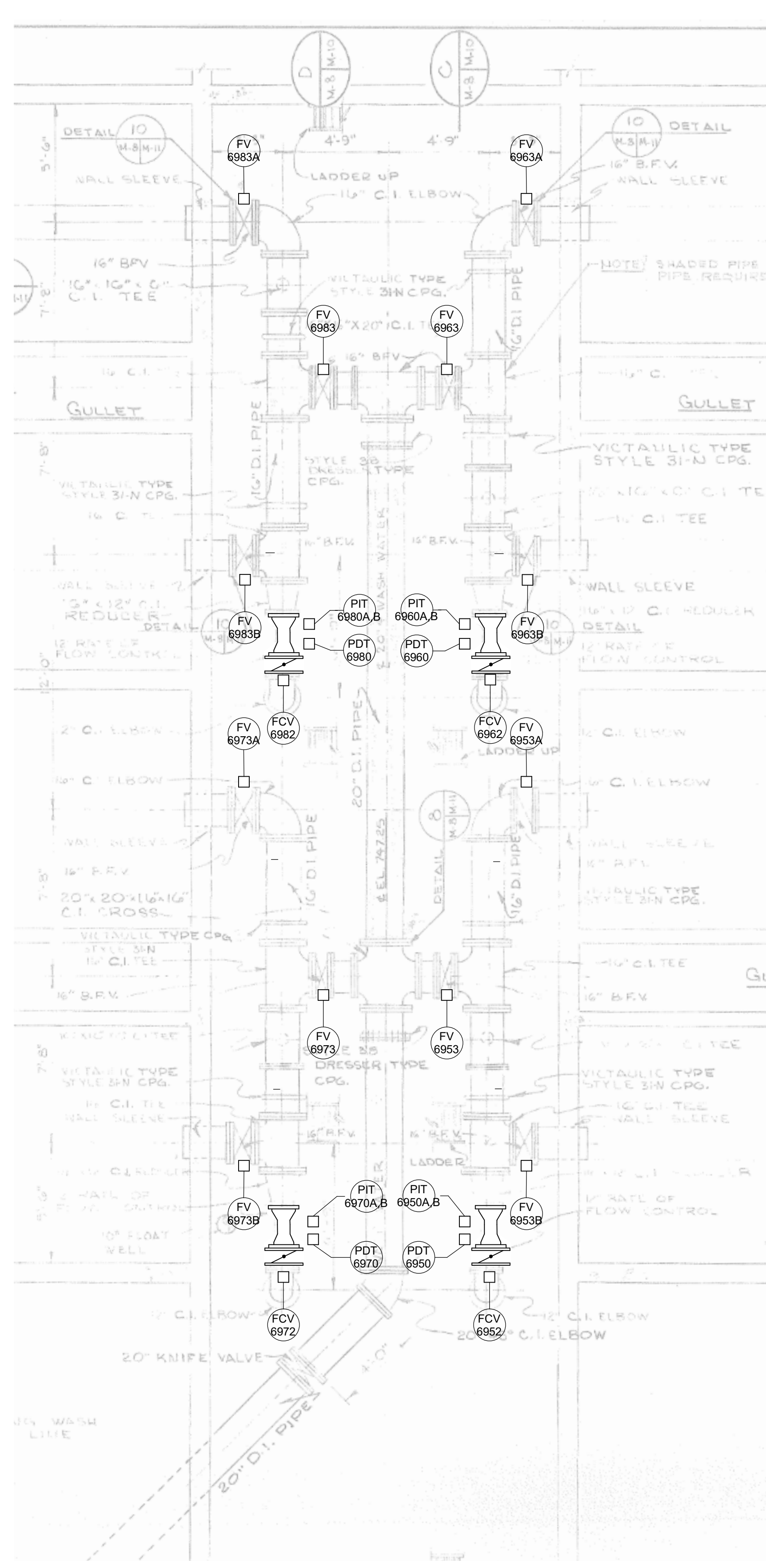


1969 BUILDING - FILTER - SECTIONS  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION  
 LAGRANGE, GEORGIA

REV.	DR.	CHK.	DATE	DESCRIPTION
0	KMS	MA	JULY 12, 2022	ISSUED FOR BID



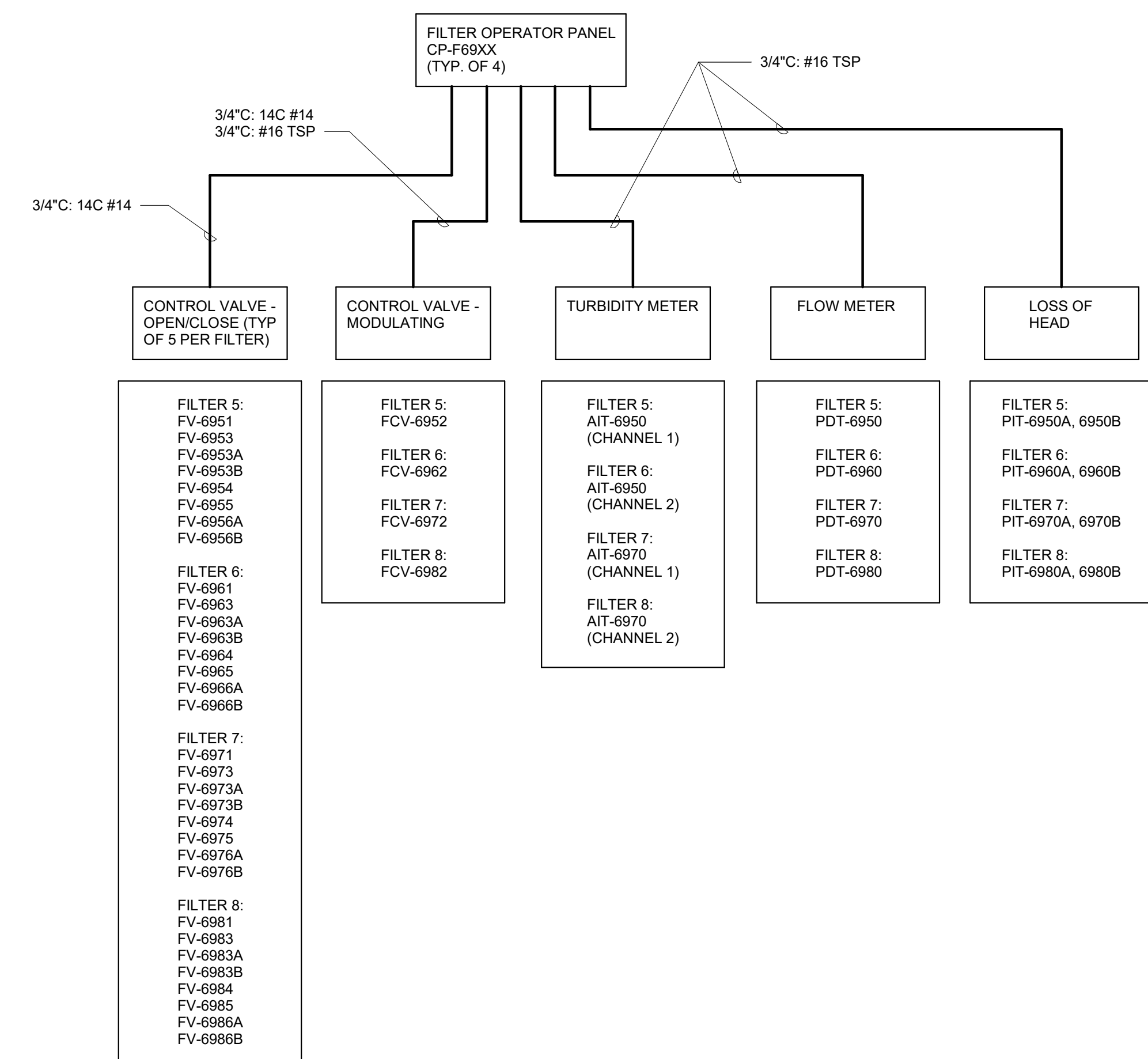
**1 PIPE GALLERY (ELEV. 744.67) - ELECTRICAL PLAN**  
 SCALE: 1/4" = 1'-0"



**2 PIPE GALLERY (ELEV. 747.25) - ELECTRICAL PLAN**  
 SCALE: 1/4" = 1'-0"

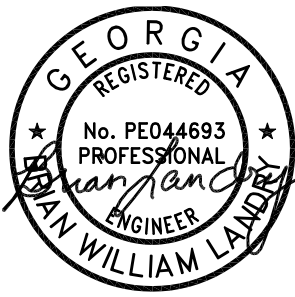
**GENERAL NOTES**

- A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.
- B. FOR EACH ELECTRIC ACTUATOR, PROVIDE (3) #10, 1#10G, 3/4 C. CIRCUIT AS INDICATED. PROVIDE A 600V/30A/3P/FAR/ NEMA 4X DISCONNECT SWITCH MOUNTED NEAR THE ACTUATOR ON BACK WALL OR ON CENTER AT RAILING. PROVIDE 3 FT MIN CLEARANCE.
- C. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.
- D. SEE 49-MXX PROCESS PLANS FOR FINAL LOCATIONS OF METERS AND ACTUATORS.
- E. CONDUIT SHALL BE ROUTED AT CEILING LEVEL IN PIPE GALLERY. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.
- F. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER AND FLOW METER.
- G. CONNECT THE EXISTING BACKWASH FLOW CONTROL VALVE FCV-6900 AND THE BACKWASH FLOW METER FIT-6900 TO THE PLC IN CONTROL CONSOLE 7 (CP-F6907) USING 3/4" TSP #16 AWG CABLE FOR EACH.



**3 TYPICAL CONTROL WIRING DIAGRAM #2**  
 69-E101 NTS

**BARGE**  
 DESIGN SOLUTIONS  
 615 254-1507 / Fax: 615 255-6572



1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT  
 LAGRANGE, GEORGIA

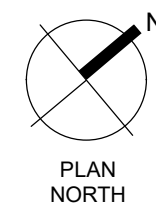
REVISION INFORMATION		DATE	DESCRIPTION
REV	DR	CHK	BL
0	CSM		

69-E101

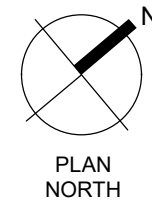
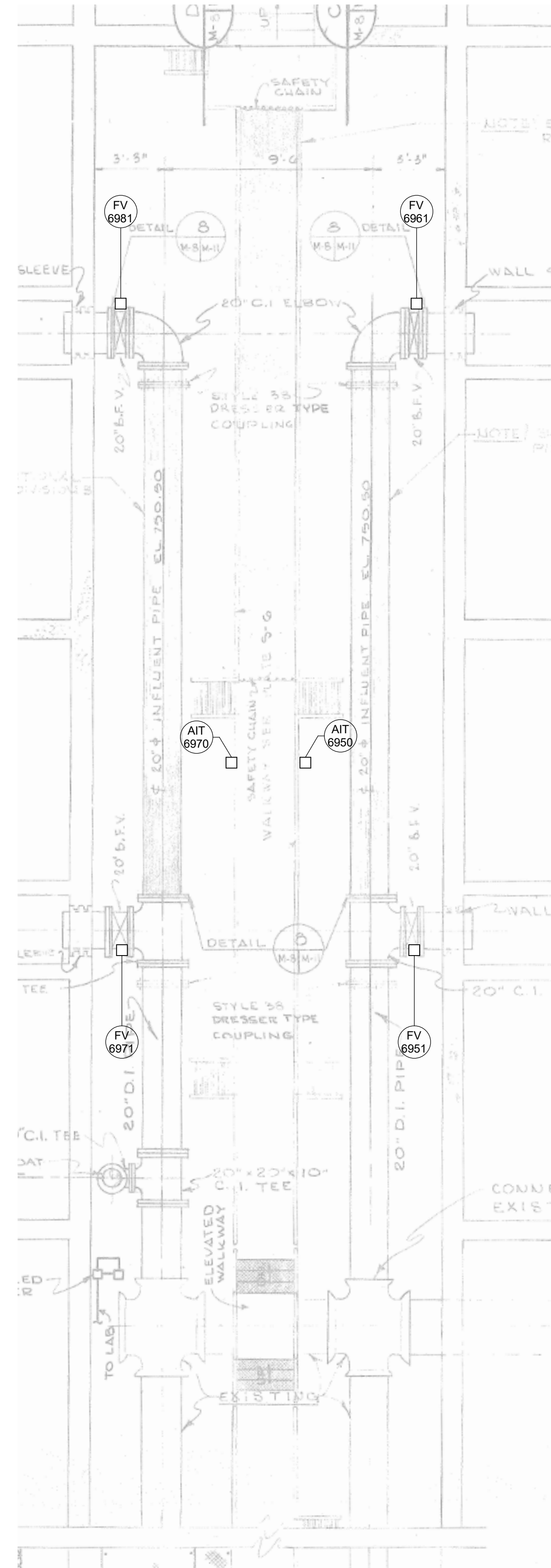
FILE NO. 3643211

Drawing: 69-E101 - 1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN  
 Date: 7/12/2022  
 Title: Filter Valve Replacement  
 Project: 1969-002-13102-04

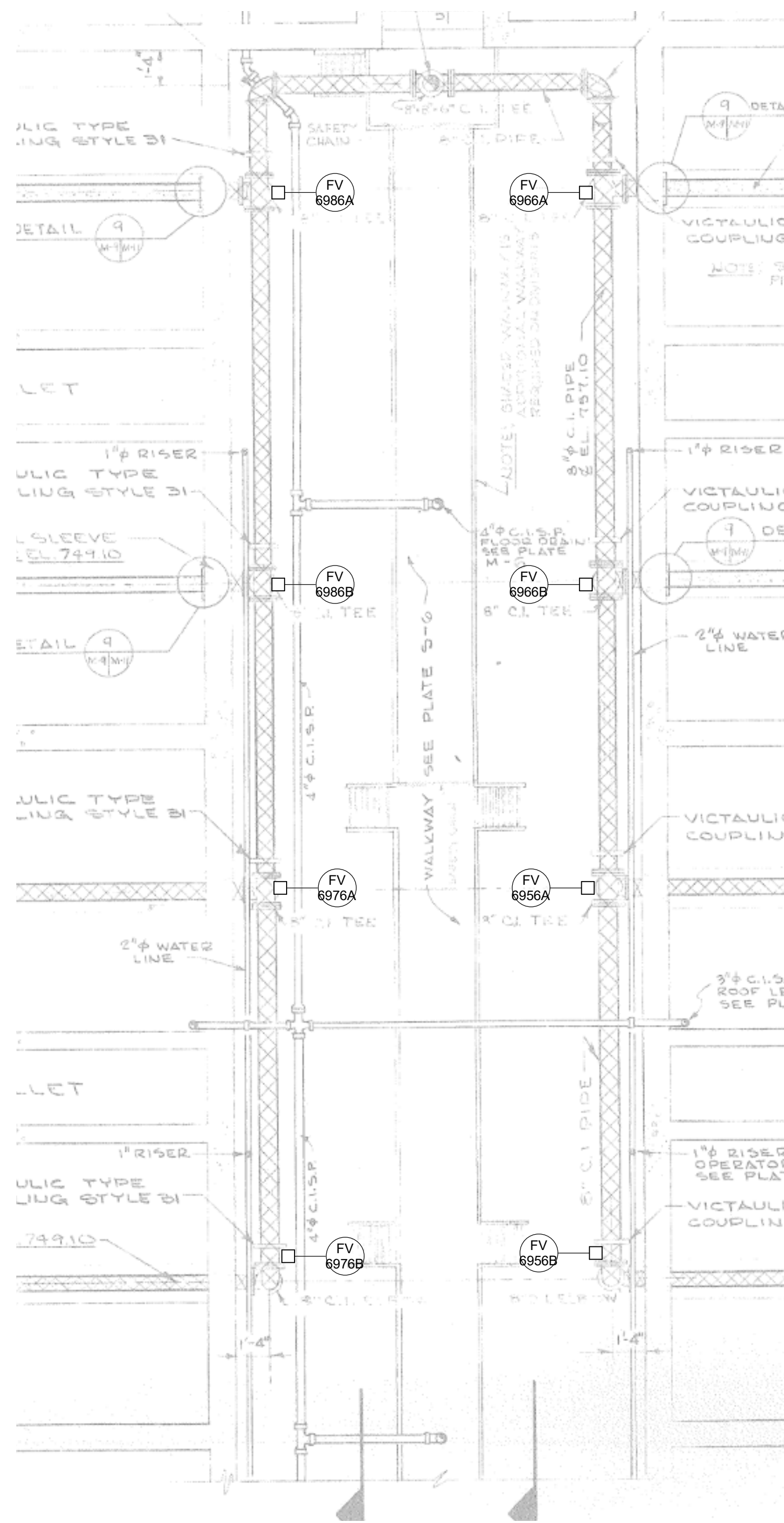
Drawing Set: 69-E102 - 1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN  
 Drawing: 69-E102 - 1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN  
 Title: 69-E102 - 1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN  
 Date: 7/12/2022 10:10:24 AM



**1 PIPE GALLERY (ELEV. 750.50) - ELECTRICAL PLAN**  
 SCALE: 1/4" = 1'-0"



**2 PIPE GALLERY (ELEV. 757.10) - ELECTRICAL PLAN**  
 SCALE: 1/4" = 1'-0"



**GENERAL NOTES**

- A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.
- B. FOR EACH ELECTRIC ACTUATOR, PROVIDE (3) #10, 1#10G, 3/4 C. CIRCUIT AS INDICATED. PROVIDE A 600V/30A/3P/FAR/ NEMA 4X DISCONNECT SWITCH MOUNTED NEAR THE ACTUATOR.
- C. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.
- D. PROVIDE 1" C-14C-#14 CONTROL WIRING FROM EACH FV049XX ACTUATOR TO THE FILTER CONTROL PANEL CP-FPXX.
- E. PROVIDE 3/4" C-TSP #16 AWG TO EACH TURBIDITY METER FROM FILTER CONTROL PANEL CP-FPXX.
- F. PROVIDE 3/4" C-TSP #16 AWG TO EACH FLOW METER FROM FILTER CONTROL PANEL CP-FPXX.
- G. SEE 49-MXX PROCESS PLANS FOR FINAL LOCATIONS OF METERS AND ACTUATORS.
- H. CONDUIT SHALL BE ROUTED AT CEILING LEVEL IN PIPE GALLERY. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.
- I. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER AND FLOW METER.

**BARGE**  
 DESIGN SOLUTIONS  
 615 3rd Avenue South / Suite 700 / Nashville, Tennessee 37210  
 Phone: 615-254-1500 / Fax: 615-255-6572



1969 BUILDING - PIPE GALLERY - ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT

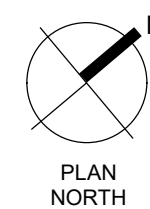
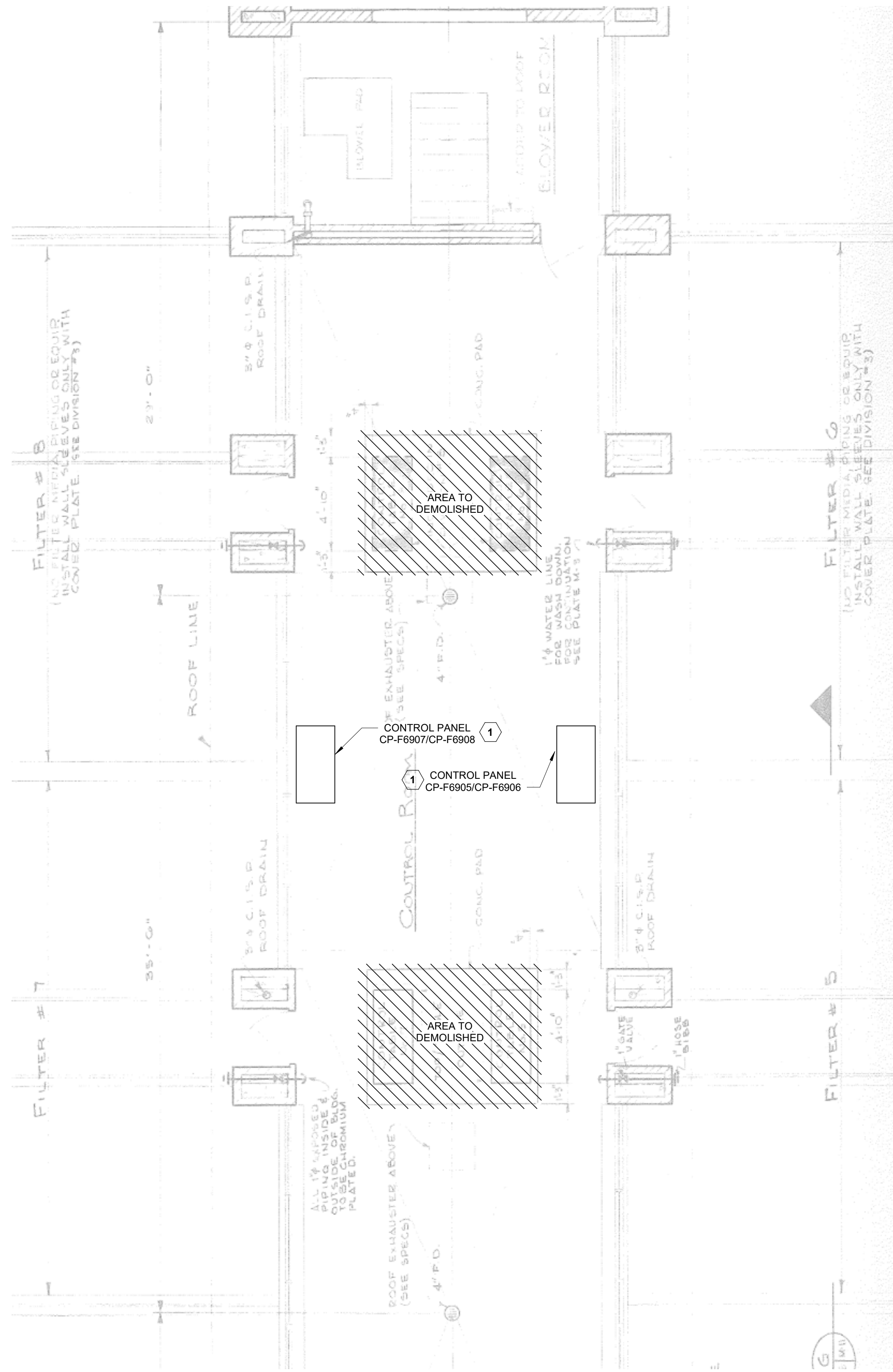
LAGRANGE, GEORGIA

REV	DR	CHK	DATE	DESCRIPTION
0	CSM	BL	JULY 12, 2022	ISSUED FOR BID

**69-E102**

FILE NO. 3643211

Drawing: 69-E103 - 1969 BLDG - FILTER OPERATIONS FLOOR - ELECTRICAL  
 Title: 69-E103 - 1969 BLDG - FILTER OPERATIONS FLOOR - ELECTRICAL  
 Date: 7/12/2022 10:10:04 AM  
 User: WTP File: 69-E103 - 1969 BLDG - FILTER OPERATIONS FLOOR - ELECTRICAL



1  
69-E103

1969 BLDG - OPERATORS FLOOR

SCALE: 1/4" = 1'-0"

**GENERAL NOTES**

- A. OPERATING FLOOR SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.
- B. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.

**KEYED NOTES** ◻

- 1. PROVIDE NEW CONTROL PANEL ENCLOSURE WITH PLC AND OIT FOR TWO FILTERS. SEE DETAIL 1 ON SHEET 95-E701 FOR CONTROL PANEL DETAILS. PROVIDE 19" HMI SCREEN IN ENCLOSURE MOUNTED ON TOP OF CONSOLE. PROVIDE 20A CIRCUIT FROM RP-69 USING 3/4" C, 2-#10 W/ #10 GND. PROVIDE 500VA UPS IN ENCLOSURE. CONTROL PANELS ARE PROVIDED AND INSTALLED BY OTHERS.

**BARGE**  
DESIGN SOLUTIONS

615 3rd Avenue South / Suite 700 / Nashville, Tennessee 37210  
Phone: 615-254-1500 / Fax: 615-255-6572



1969 BUILDING - FILTER OPERATIONS FLOOR - ELECTRICAL PLAN

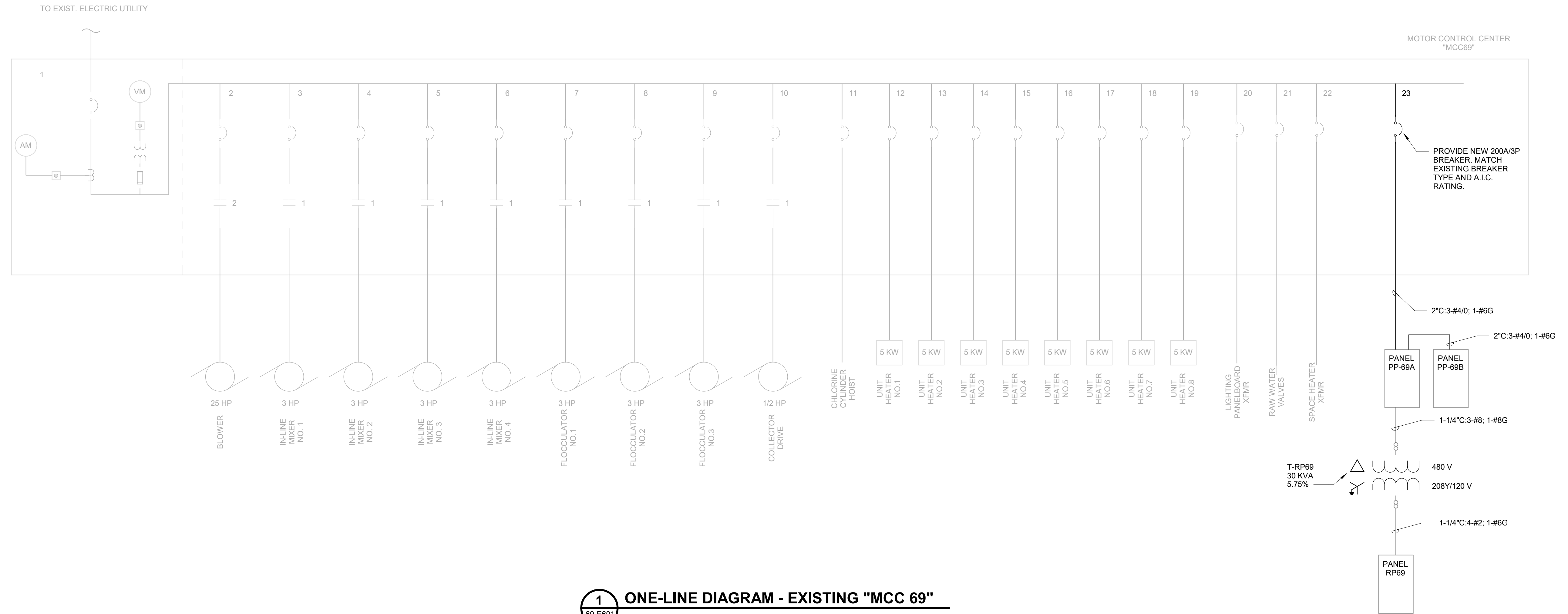
WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

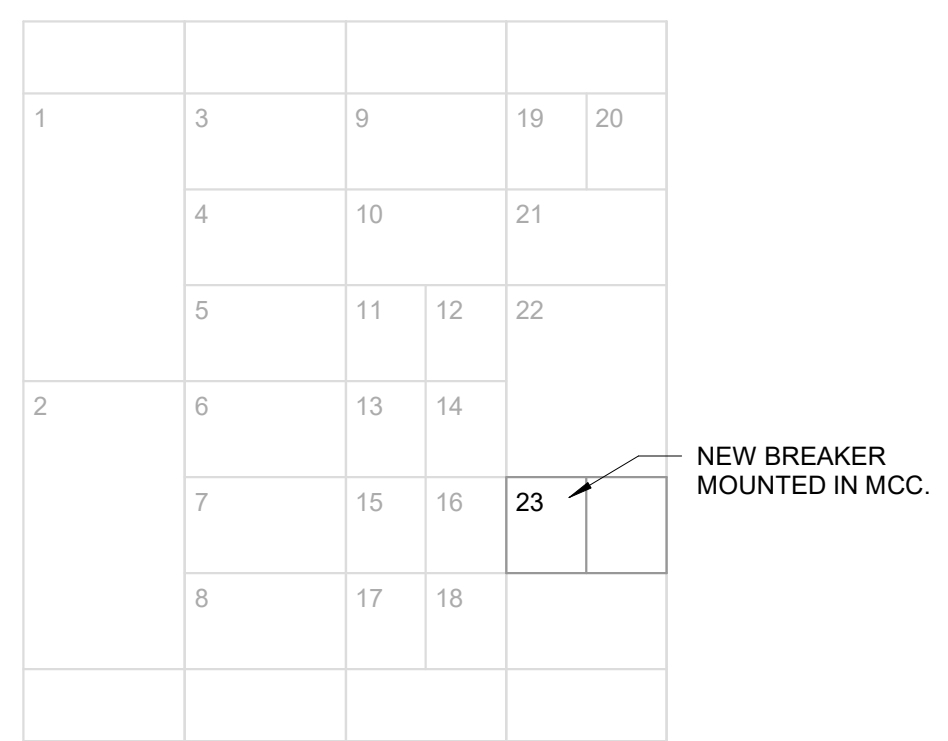
REVISION INFORMATION		DATE	DESCRIPTION
REV	DR	CHK	BL
0	CSM		
		JULY 12, 2022	ISSUED FOR BID

69-E103

FILE NO. 3643211



**1 ONE-LINE DIAGRAM - EXISTING "MCC 69"**  
69-E601 NTS



**2 EXISTING MCC "MCC69" - ELEVATION**  
69-E601 NTS



1969 BUILDING - ELECTRICAL SINGLE LINE DIAGRAM

WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REV	DR	CHK	DATE	DESCRIPTION
0	CSM	BL	JULY 12, 2022	ISSUED FOR BID



1969 BUILDING - ELECTRICAL SCHEDULES

WALT WILLIAMS FILTRATION PLANT  
FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

REVISION INFORMATION		DATE	DESCRIPTION
REV	CHK	DATE	DESCRIPTION
0	CSM	JULY 12, 2022	ISSUED FOR BID

**69-E901**  
FILE NO. 3643211

PANEL: PP-69A												
SERVICE: 480 VOLT, 3 PHASE, 3 WIRE												
LOCATION: FILTER GALLERY												
CKT NO.	DIRECTORY	ACC.	CKT. BKR.	LOAD (KVA)	A	B	C	LOAD (KVA)	CKT. BKR.	ACC.	DIRECTORY	CKT. NO.
1				1	2.0			1				2
3	FV-4911, FV-4912, FV-4913		30 / 3	1		2.0		1			FV-4944, FV-4945, FV-4946	4
5				1			2.0	1				6
7				1	1.5			0.5				8
9	FV-4914, FV-4915, FV-4916		30 / 3	1		1.5		0.5			FCV-4912	10
11				1			1.5	0.5				12
13				1	1.5			0.5				14
15	FV-4921, FV-4922, FV-4923		30 / 3	1		1.5		0.5			FCV-4922	16
17				1			1.5	0.5				18
19				1	1.5			0.5				20
21	FV-4924, FV-4925, FV-4926		30 / 3	1		1.5		0.5			FCV-4932	22
23				1			1.5	0.5				24
25				1	1.5			0.5				26
27	FV-4931, FV-4932, FV-4933		30 / 3	1		1.5		0.5			FCV-4942	28
29				1			1.5	0.5				30
31				1	6.0			5				32
33	FV-4934, FV-4935, FV-4936		30 / 3	1		6.0		5			T-RP-69 TRANSFORMER	34
35				1			6.0	5				36
37				1	1.0							38
39	FV-4941, FV-4942, FV-4943		30 / 3	1		1.0					SPARE	40
41				1			1.0					42
<b>BUS DATA</b>				A B C			TOTAL KVA SHOWN					
AMPERE RATING - CONT: 200A				8.0 8.0 8.0			24.0		SUB-FEED KVA LOAD FROM PANEL PP-69B			
SCCR: 65KA				8.0 8.0 8.0			24.0		TOTAL KVA CONNECTED			
BUS: COPPER/GROUND				8.0 8.0 8.0			48.0					
TOP FEED												
<b>ENCLOSURE</b>				<b>FED FROM:</b>			<b>NOTES:</b>					
<input type="checkbox"/> SURFACE <input type="checkbox"/> FLUSH							PROVIDE FEED-THROUGH LUGS TO PP-69B					
<input type="checkbox"/> NEMA 1 <input type="checkbox"/> NEMA 3R												
<input checked="" type="checkbox"/> NEMA 12 <input type="checkbox"/>												
<b>MANUFACTURER:</b>												
<b>TYPE:</b>												
<b>LOAD CLASSIFICATION</b>		<b>CONNECTED LOAD</b>		<b>DEMAND FACTOR</b>		<b>DIVERSIFIED LOAD</b>						
OTHER		48.0		100%		48.0						
<b>TOTAL</b>		<b>48.0</b>				<b>48.0</b>						

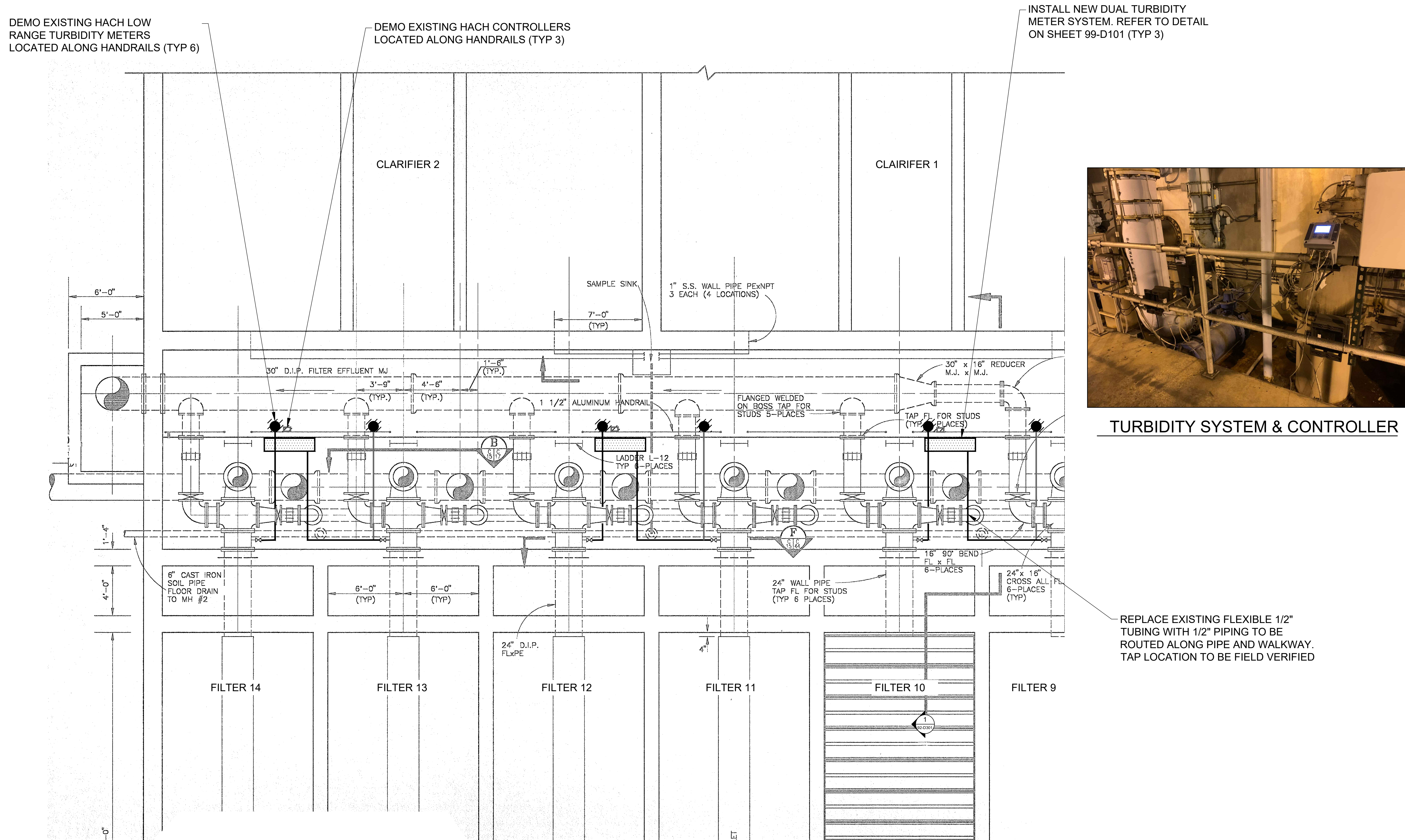
PANEL: RP-69												
SERVICE: 208Y/120 VOLT, 3 PHASE, 4 WIRE												
LOCATION: FILTER GALLERY												
CKT NO.	DIRECTORY	ACC.	CKT. BKR.	LOAD (KVA)	A	B	C	LOAD (KVA)	CKT. BKR.	ACC.	DIRECTORY	CKT. NO.
1	CP-F4901 OPERATOR CONSOLE		20 / 1	1	2.0			1	20 / 1		TURBIDITY METER - FILTER 1/2	2
3	CP-F4902 OPERATOR CONSOLE		20 / 1	1		2.0		1	20 / 1		TURBIDITY METER - FILTER 3/4	4
5	CP-F4903 OPERATOR CONSOLE		20 / 1	1			2.0	1	20 / 1		TURBIDITY METER - FILTER 5/6	6
7	CP-F4904 OPERATOR CONSOLE		20 / 1	1	2.0			1	20 / 1		TURBIDITY METER - FILTER 7/8	8
9	CP-F6905/6 OPERATOR CONSOLE		20 / 1	1		2.0		1	20 / 1		FLOW METERS	10
11	CP-F6907/8 OPERATOR CONSOLE		20 / 1	1			1.0		20 / 1		SPARE	12
13	SPARE		20 / 1		0.0				20 / 1		SPARE	14
15	SPARE		20 / 1			0.0			20 / 1		SPARE	16
17	SPARE		20 / 1				0.0		20 / 1		SPARE	18
19	SPARE		20 / 1		0.0				20 / 1		SPARE	20
21	SPARE		20 / 1			0.0			20 / 1		SPARE	22
23	SPARE		20 / 1				0.0		20 / 1		SPARE	24
25	SPARE		20 / 1		0.0				20 / 1		SPARE	26
27	SPARE		20 / 1			0.0			20 / 1		SPARE	28
29	SPARE		20 / 1				0.0		20 / 1		SPARE	30
31	SPARE		20 / 1		0.0				20 / 1		SPARE	32
33	SPARE		20 / 1			0.0			20 / 1		SPARE	34
35	SPARE		20 / 1				0.0		20 / 1		SPARE	36
37	SPARE		20 / 1		0.0				20 / 1		SPARE	38
39	SPARE		20 / 1			0.0			20 / 1		SPARE	40
41	SPARE		20 / 1				0.0		20 / 1		SPARE	42
<b>BUS DATA</b>				A B C			TOTAL KVA SHOWN					
AMPERE RATING - CONT: 100A				4.0 4.0 3.0			11.0		DEMAND KVA			
SCCR: 10KA				4.0 4.0 3.0								
BUS: COPPER/NEUTRAL/GROUND												
TOP FEED												
<b>ENCLOSURE</b>				<b>FED FROM:</b>			<b>NOTES:</b>					
<input type="checkbox"/> SURFACE <input type="checkbox"/> FLUSH												
<input type="checkbox"/> NEMA 1 <input type="checkbox"/> NEMA 3R												
<input checked="" type="checkbox"/> NEMA 12 <input type="checkbox"/>												
<b>MANUFACTURER:</b>												
<b>TYPE:</b>												
<b>LOAD CLASSIFICATION</b>		<b>CONNECTED LOAD</b>		<b>DEMAND FACTOR</b>		<b>DIVERSIFIED LOAD</b>						
OTHER		11.0		100%		11.0						
<b>TOTAL</b>		<b>11.0</b>				<b>11.0</b>						

Drawing: 69-E901 - 1969 BUILDING - ELECTRICAL SCHEDULES  
 Title: Filter Valve Replacement  
 Date: 7/12/22 10:14:54 AM



NOTES:

1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. IN THE PIPE GALLERY REMOVED SIX (6) EXISTING HACH TURBIDITY METERS MODEL 1720E, THREE (3) HACH CONTROLLERS MODEL SC200, AND THREE (3) NEW HACH CONTROLLERS MODEL SC4500 PROVIDED BY OWNER ON THE NEW TURBIDITY SYSTEM. SEE DETAIL ON SHEET 99-D101.



TURBIDITY SYSTEM & CONTROLLER

REPLACE EXISTING FLEXIBLE 1/2" TUBING WITH 1/2" PIPING TO BE ROUTED ALONG PIPE AND WALKWAY. TAP LOCATION TO BE FIELD VERIFIED

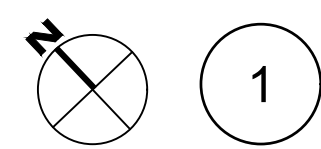
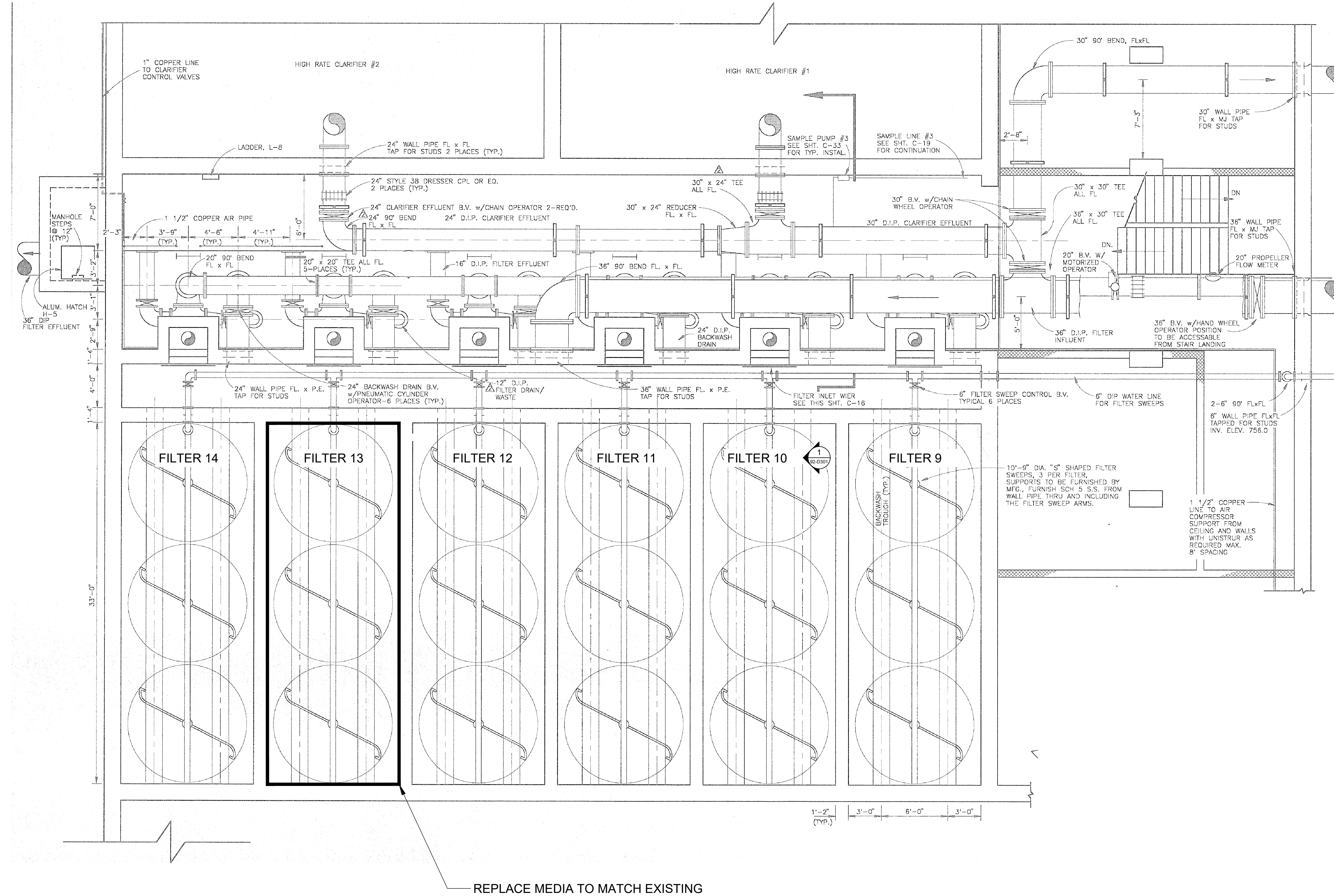
TURBIDITY SYSTEM REPLACEMENT - PLAN  
NTS

REV.	CHK.	DATE	DESCRIPTION
0	XMS	JULY 12, 2022	ISSUED FOR BID

USER: AMPARKER  
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SAVED: 05/05/2022  
PLOT: 05/05/2022

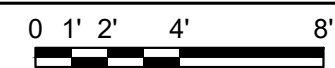
NOTES:

- BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.



**1 FILTER PIPE GALLERY PLAN**

SCALE: 3/16" = 1'-0"



1992 BUILDING - FILTER PIPE GALLERY - PLAN

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

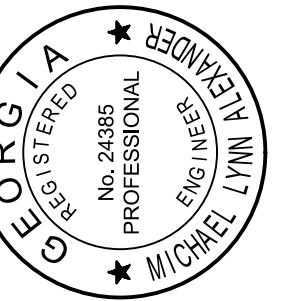
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92-D102

FILE NO. 36432-11

**BARGE**  
DESIGN SOLUTIONS

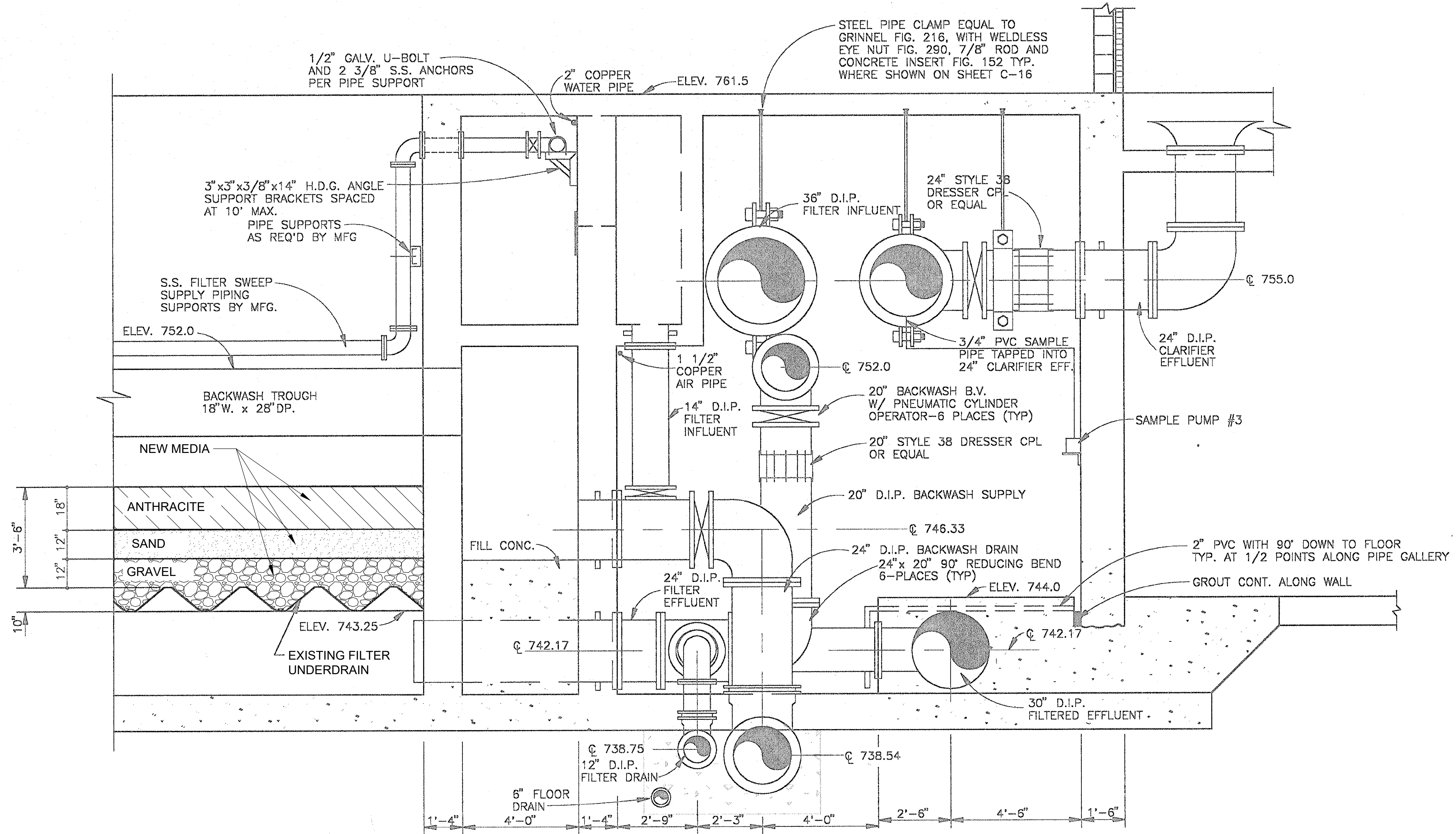
1201 Front Avenue, Suite F, Columbus, GA 31901  
PHONE (706) 321-4800



NOTES:

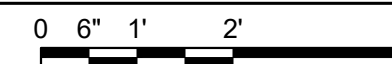
1. BACKGROUND DRAWINGS HAVE BEEN PREPARED FROM 1992 RECORD DRAWINGS BY WELKER AND ASSOCIATES, INC. WHICH PROVIDE ORIGINAL CONSTRUCTION DATA THAT DO NOT PERTAIN TO THIS PROJECT.
2. REPLACE MEDIA IN FILTER 13.

FILTER 13



1 FILTER PIPE GALLERY - SECTION

SCALE: 1/2" = 1'-0"



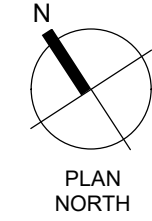
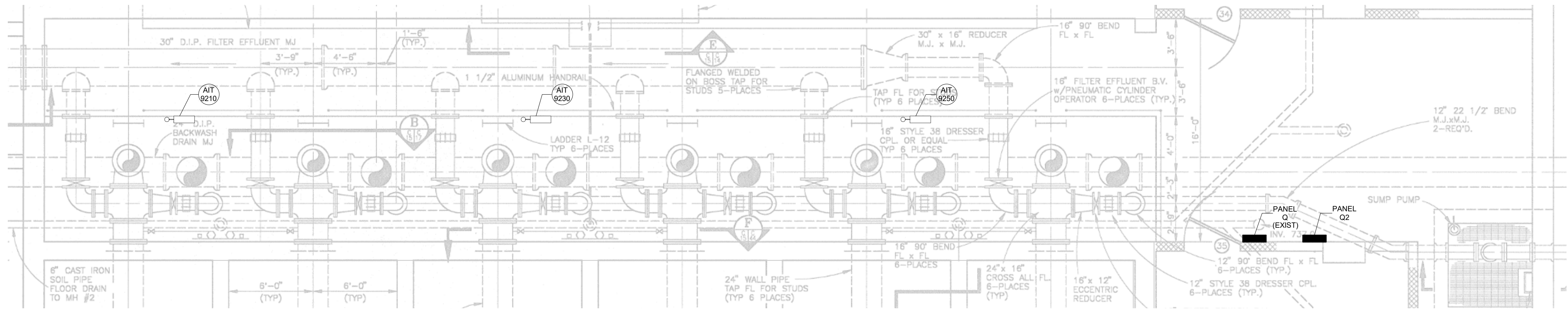
1992 BUILDING - FILTER PIPE GALLERY - SECTION

WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REV.	CHK.	DATE	DESCRIPTION
0	MA	JULY 12, 2022	ISSUED FOR BID

92-D301

FILE NO. 36432-11



**1 PIPE GALLERY (ELEV. 745) - ELECTRICAL PLAN**  
 92-E101 SCALE: 1/4" = 1'-0"

**GENERAL NOTES**

- A. PIPE GALLERY SHALL BE CONSIDERED A WET/DAMP LOCATION. PROVIDE RACEWAY PER SPECIFICATION 26 11 10.
- B. PROVIDE EQUIPMENT GROUNDING AS REQUIRED PER NFPA 70.
- C. PROVIDE CONDUIT ROUTING PLAN TO ENGINEER FOR APPROVAL.
- D. PROVIDE NEW JUNCTION BOX AT EXISTING TURBIDITY METER LOCATION FOR POWER AND CONTROL WIRING. EXTEND CONDUIT FOR POWER AND CONTROL TO NEW METER LOCATION. PROVIDE (2) #10 WITH #10 GND IN 3/4" CONDUIT FROM PANEL RP-69 TO EACH TURBIDITY METER. PROVIDE NEW CONTROL WIRING FROM METER TO NK4 CABINET. PROVIDE (2) #16 TWISTED SHIELDED PAIR (TSP) CABLE FROM EACH TURBIDITY METER TO NK4 CABINET.

Drawing: 92-E101 - 1992 BUILDING - PIPE GALLERY ELECTRICAL PLAN  
 Title: 7/10/2022 10:15:54 AM  
 User: J...



1992 BUILDING - PIPE GALLERY ELECTRICAL PLAN

WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT

LAGRANGE, GEORGIA

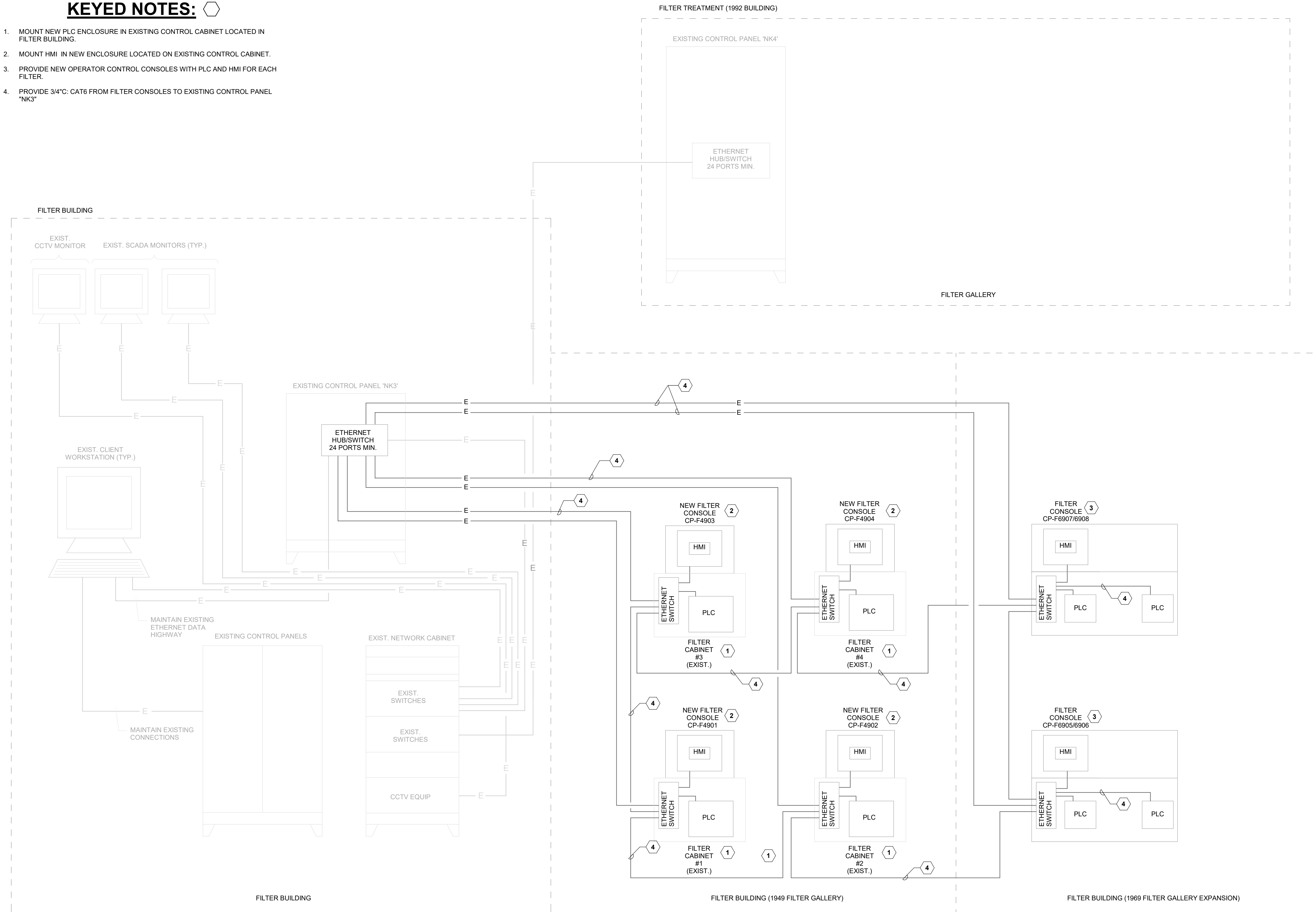
REV	DR	CHK	DATE	DESCRIPTION
0	CSM	BL	JULY 12, 2022	ISSUED FOR BID

**92-E101**

FILE NO. 3643211

**KEYED NOTES:**

1. MOUNT NEW PLC ENCLOSURE IN EXISTING CONTROL CABINET LOCATED IN FILTER BUILDING.
2. MOUNT HMI IN NEW ENCLOSURE LOCATED ON EXISTING CONTROL CABINET.
3. PROVIDE NEW OPERATOR CONTROL CONSOLES WITH PLC AND HMI FOR EACH FILTER.
4. PROVIDE 3/4"C. CAT6 FROM FILTER CONSOLES TO EXISTING CONTROL PANEL "NK3"



**WTP SCADA NETWORK - SINGLE LINE DIAGRAM**  
**WALT WILLIAMS FILTRATION PLANT**  
**FILTER VALVES REPLACEMENT**  
LAGRANGE, GEORGIA

REVISION INFORMATION		DATE	DESCRIPTION
REV	DR	CHK	BL
0	CSM		
		JULY 12, 2022	ISSUED FOR BID

**1 SCADA NETWORK - SINGLE LINE DIAGRAM**  
95-E601 NTS

Drawing: 95-E601 - WTP SCADA NETWORK - SINGLE LINE DIAGRAM  
 Title: Filter & Valve Replacement/3643211\_LGR\_E\_V20.rvt  
 Date: 7/12/2022 13:15:54



REPLACE ENCLOSURE WITH NEW 18"X18" ENCLOSURE WITH HMI SCREEN.

CONTROL CABINET TO REMAIN. PROVIDE PLC IN EXISTING FILTER CONTROL CABINET.

**2** CP-F4901 THROUGH CP-F4904 TYPICAL  
 95-E701

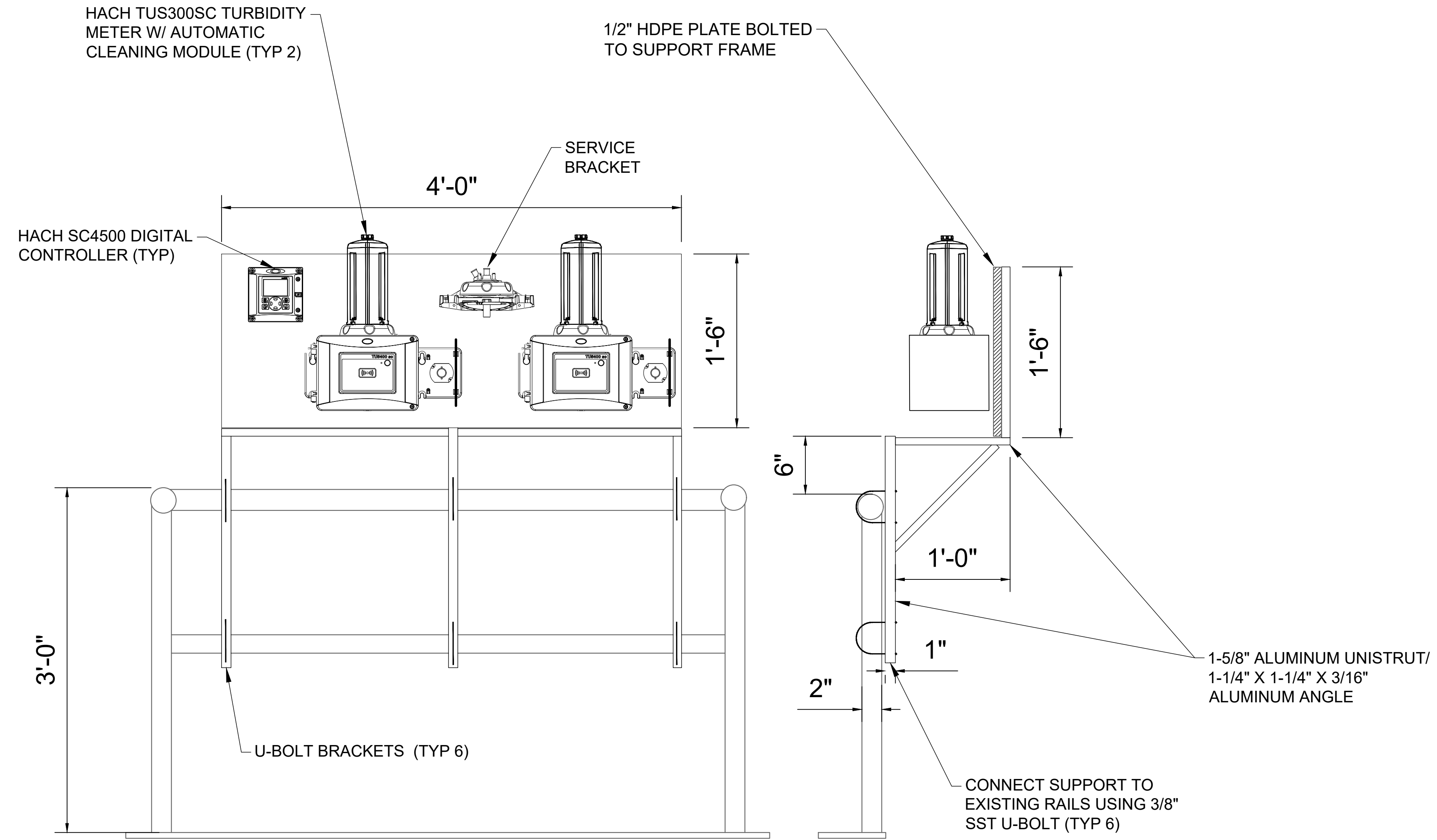


ELECTRICAL DETAILS  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER VALVES REPLACEMENT  
 LAGRANGE, GEORGIA

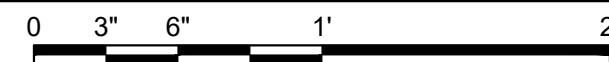
REVISION INFORMATION		DATE	DESCRIPTION
REV	DR	DATE	DESCRIPTION
0	CSM	JULY 12, 2022	ISSUED FOR BID

NOTES:

1. REFER TO SPECIFICATION 40 75 50 AND THE MANUFACTURER'S INSTALLATION MANUAL FOR ADDITIONAL INFORMATION.
2. DRILL PANEL FOR INSTRUMENT MOUNTING BRACKETS.
3. SMOOTH AND ROUND ALL CORNERS AND EDGES AND TRIM ALL FASTENERS.
4. REPLACE ALL SAMPLE PIPING AND APERTURES WITH NEW 1/2" COPPER OR STAINLESS STEEL PIPING. ROUND ALL NEW SAMPLING LINES ALONG PIPING AND WALKWAYS.
5. ROUTE ALL SAMPLE DRAIN LINES FROM THE TURBIDITY METERS TO THE EXISTING FLOOR DRAINS



1 TURBIDITY SYSTEM DETAIL  
SCALE: 1-1/2" = 1'-0"



TURBIDITY SYSTEM DETAIL

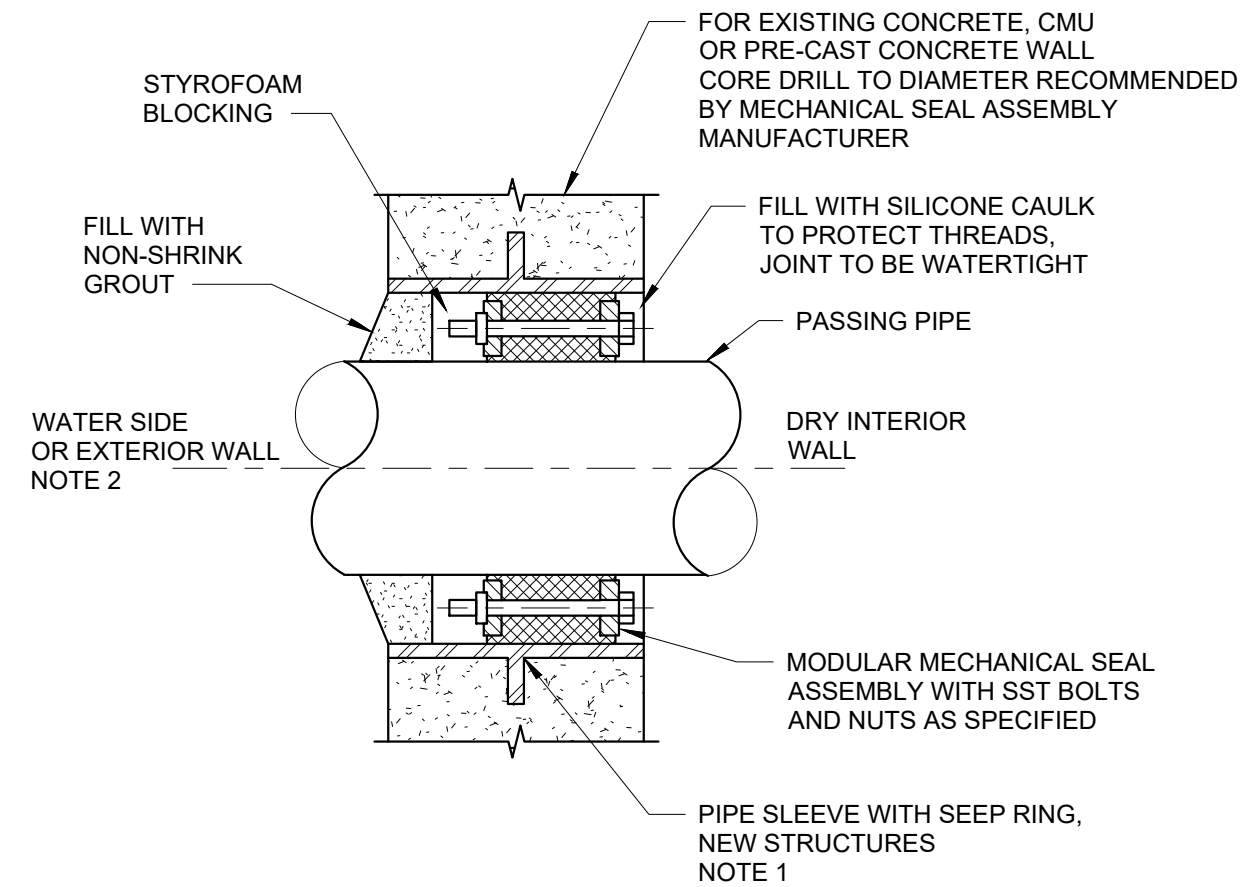
WALT WILLIAMS FILTRATION PLANT  
FILTER REHABILITATION  
LAGRANGE, GEORGIA

REVISION INFORMATION	
REV.	DESCRIPTION
0	ISSUED FOR BID

99-D101

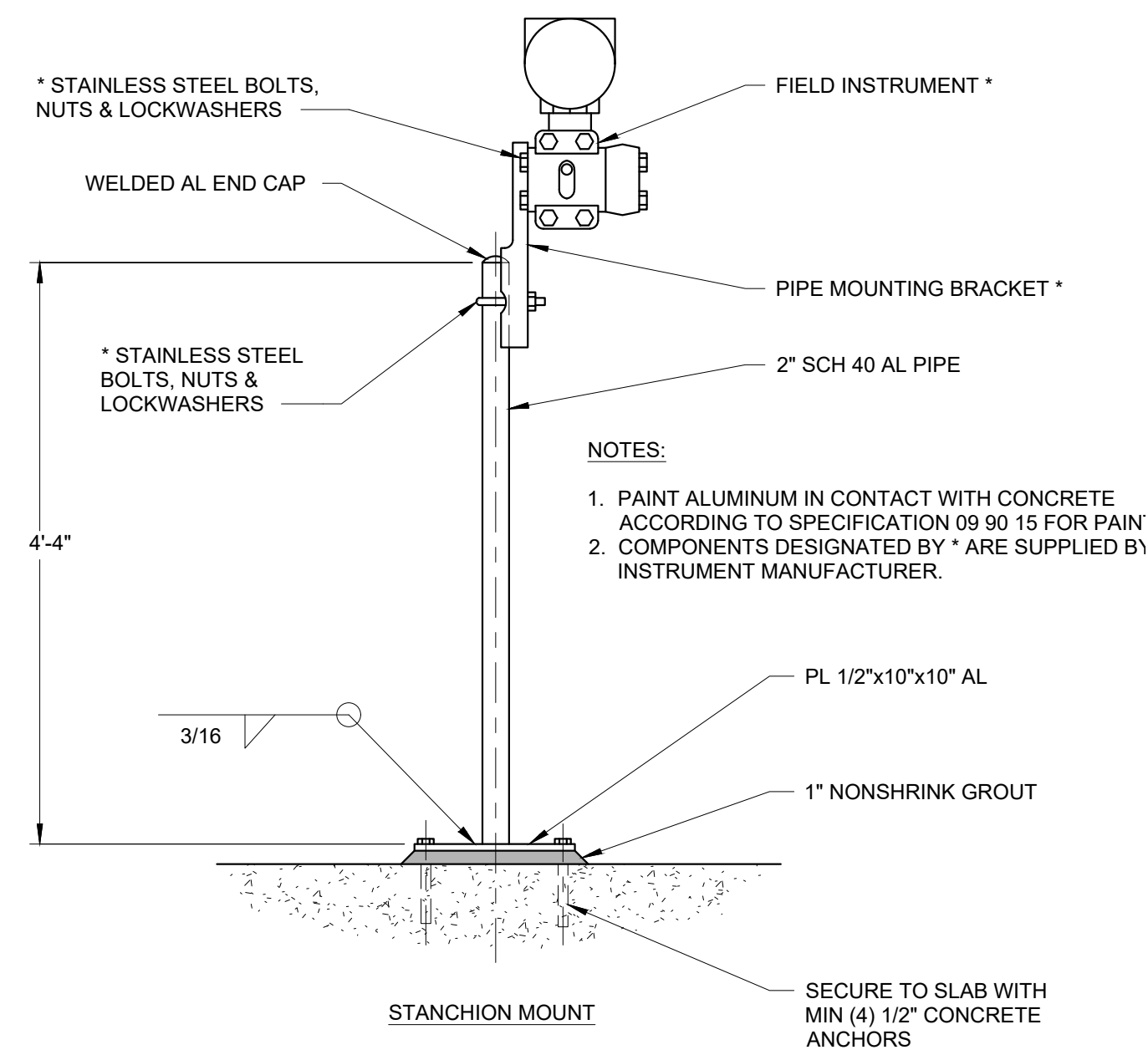
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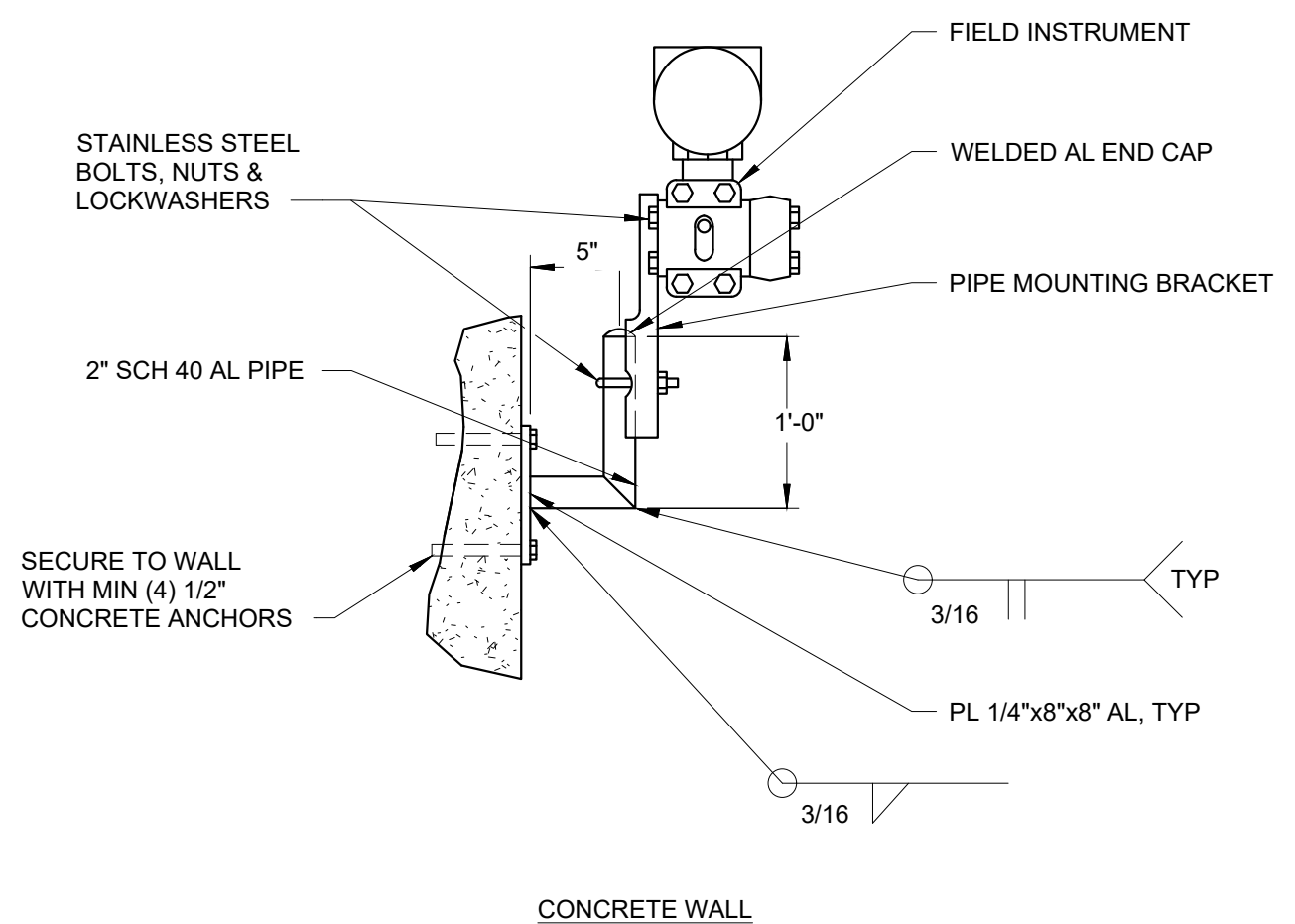


- NOTES:
1. WHERE EXISTING CONCRETE STRUCTURE IS TO BE CORE DRILLED, ULTRASONIC TEST OR X-RAY THE AREA FOR EMBEDDED ITEMS BEFORE CORE DRILLING. IF EMBEDDED ITEMS ARE FOUND, NOTIFY THE ENGINEER IMMEDIATELY.
  2. WHERE PIPE PASSES THROUGH INTERIOR WALL, GROUT IS NOT REQUIRED.

**1 WALL PIPE PENETRATION SEAL**  
 NTS



**2 FIELD INSTRUMENT MOUNTING - STANCHION**  
 NTS



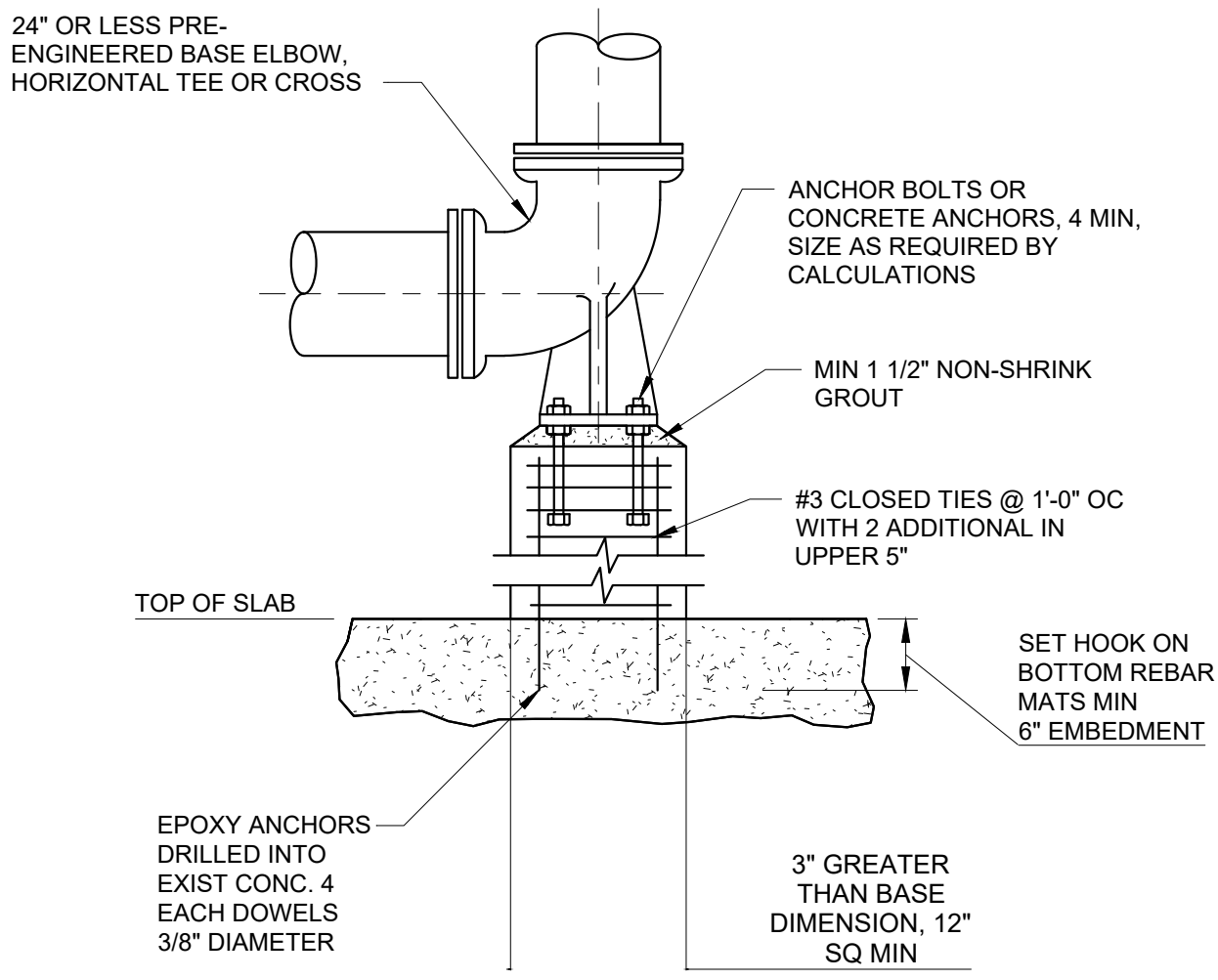
**3 FIELD INSTRUMENT MOUNTING - WALL**  
 NTS



STANDARD DETAILS  
 WALT WILLIAMS FILTRATION PLANT  
 FILTER REHABILITATION  
 LAGRANGE, GEORGIA

REVISION INFORMATION		DATE	DESCRIPTION
REV.	CHK.	DATE	DESCRIPTION
0	MMS	JULY 12, 2022	ISSUED FOR BID

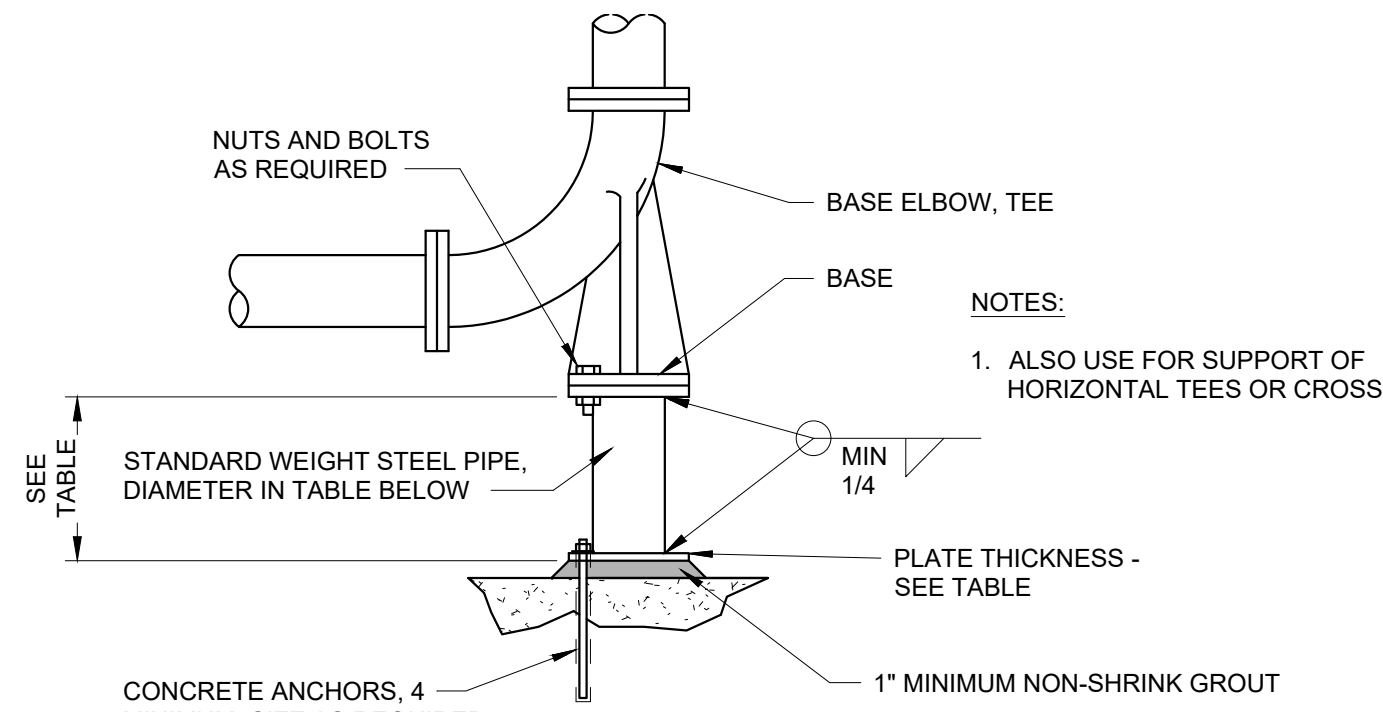




- NOTES:
- SUBMIT FINAL DESIGN DRAWINGS AND CALCULATIONS OF SUPPORTS AND ANCHORAGES AS SPECIFIED.
  - MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES AS REQUIRED BY CALCULATIONS.

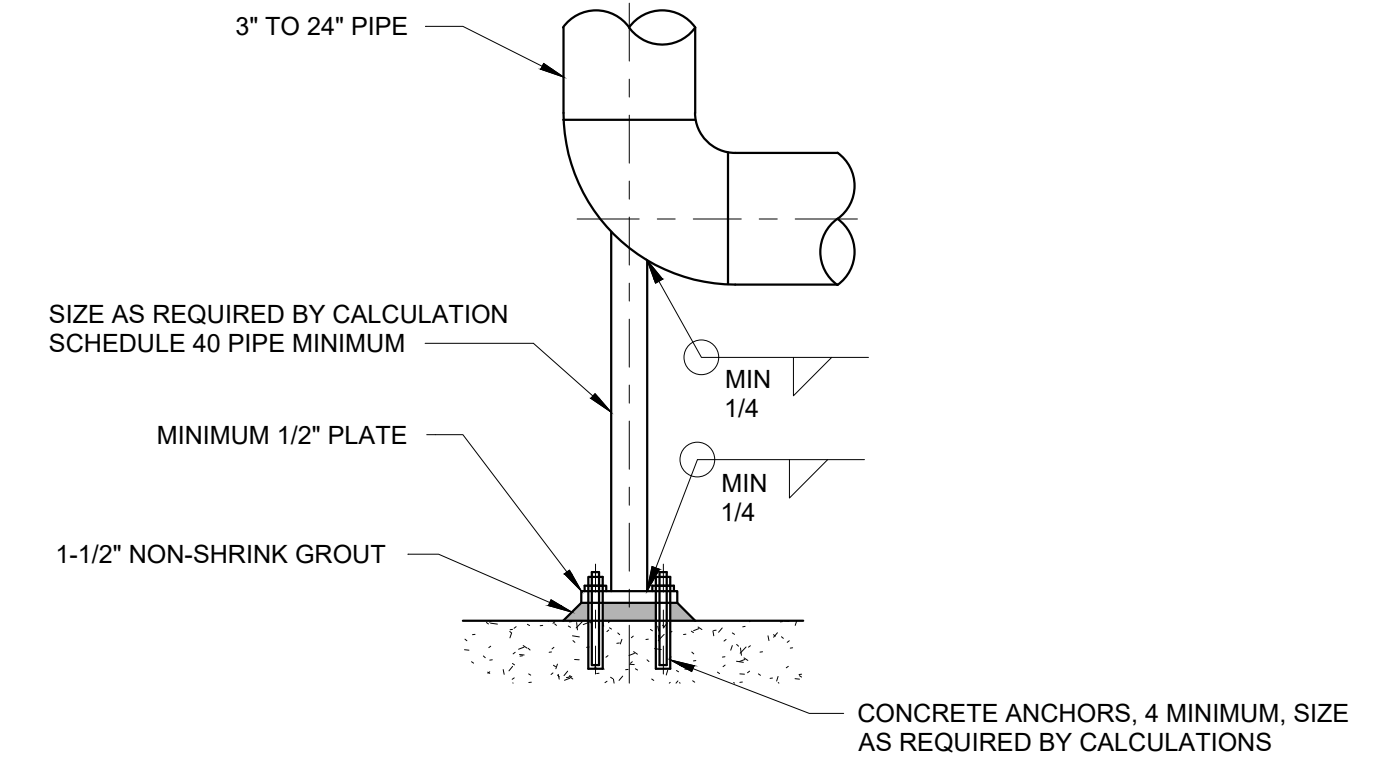
### 1 BASE BEND 1

NTS



- NOTES:
- ALSO USE FOR SUPPORT OF HORIZONTAL TEES OR CROSS.

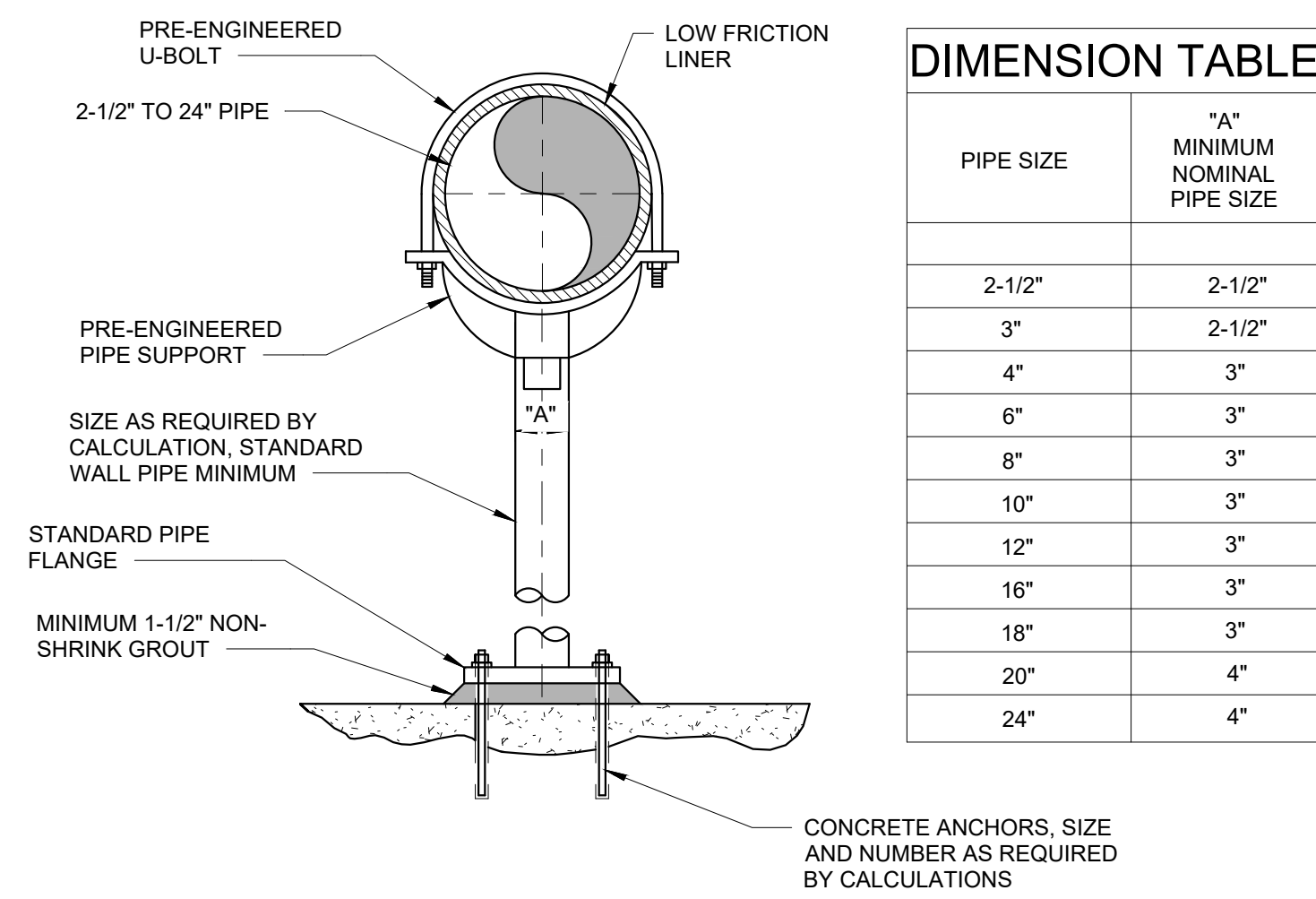
PIPE SIZE	SUPPORT DIAMETER	PLATE		ANCHOR BOLT DIAMETER
		DIAMETER	THICKNESS	
3"	1-1/2"	5"	3/8"	3/8"
4"	2"	6"	3/8"	3/8"
6"	3"	7"	3/8"	3/8"
8" AND 10"	4"	9"	1/2"	1/2"
12" THRU 16"	6"	11"	1/2"	1/2"
18" THRU 24"	8"	13-1/2"	5/8"	5/8"
30"	10"	16"	5/8"	5/8"
36"	12"	19"	5/8"	5/8"
42"	16"	23-1/2"	3/4"	3/4"
48"	18"	25"	3/4"	3/4"
54"	20"	30"	3/4"	3/4" (USE 6)
60"	24"	32"	3/4"	3/4" (USE 6)



- NOTES:
- MINIMUM COMPONENT AND CONNECTION SIZES SHOWN. FURNISH LARGER SIZES IF REQUIRED BY CALCULATIONS.
  - SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

### 3 PIPE SUPPORT

NTS

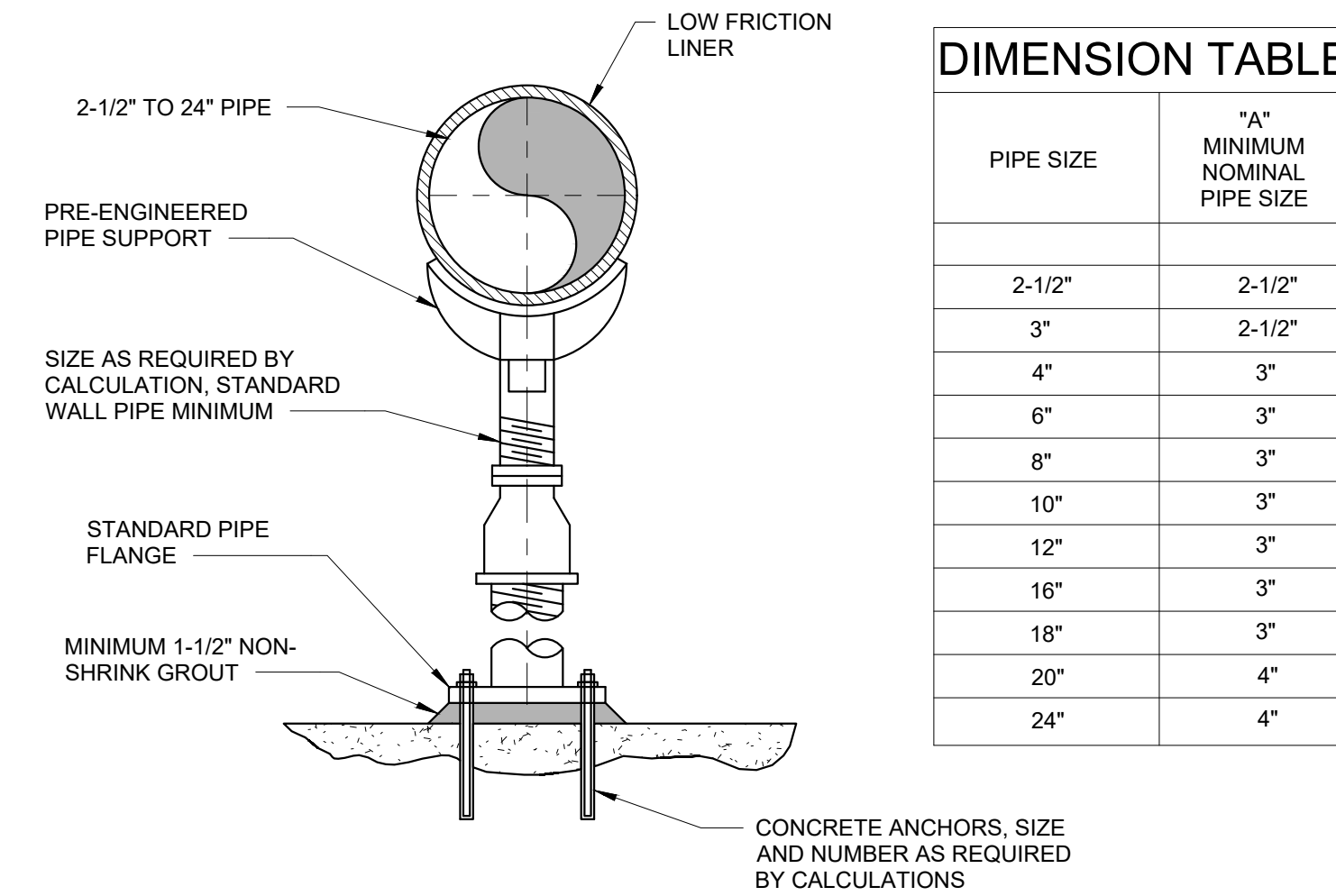


PIPE SIZE	"A" MINIMUM NOMINAL PIPE SIZE
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
16"	3"
18"	3"
20"	4"
24"	4"

- NOTES:
- SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
  - FOR SUPPORTS NOT LOCATED ON SLAB, PROVIDE D" x D" x 8" SQUARE FOOTING, WHERE D IS PIPE DIAMETER, W/ #4@12" E.W. MINIMUM FOOTING DIMENSIONS: 12" x 12" x 8".

### 4 SADDLE SUPPORT PEDESTAL TYPE - NON-ADJUSTABLE

NTS

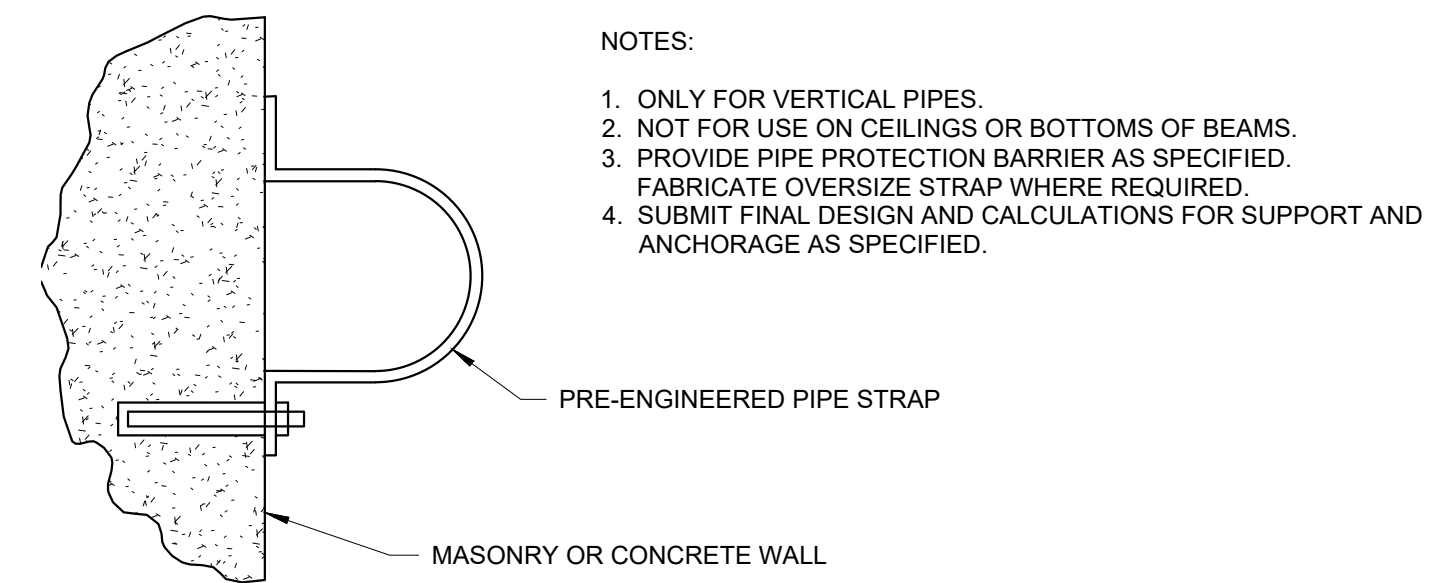


PIPE SIZE	"A" MINIMUM NOMINAL PIPE SIZE
2-1/2"	2-1/2"
3"	2-1/2"
4"	3"
6"	3"
8"	3"
10"	3"
12"	3"
16"	3"
18"	3"
20"	4"
24"	4"

- NOTES:
- SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.
  - FOR SUPPORTS NOT LOCATED ON SLAB, PROVIDE D" x D" x 8" SQUARE FOOTING, WHERE D IS PIPE DIAMETER, W/ #4@12" E.W. MINIMUM FOOTING DIMENSIONS: 12" x 12" x 8".

### 5 SADDLE SUPPORT PEDESTAL TYPE - ADJUSTABLE

NTS



- NOTES:
- ONLY FOR VERTICAL PIPES.
  - NOT FOR USE ON CEILINGS OR BOTTOMS OF BEAMS.
  - PROVIDE PIPE PROTECTION BARRIER AS SPECIFIED. FABRICATE OVERSIZE STRAP WHERE REQUIRED.
  - SUBMIT FINAL DESIGN AND CALCULATIONS FOR SUPPORT AND ANCHORAGE AS SPECIFIED.

### 6 PIPE SUPPORT - WALL MOUNT

NTS

REVISION INFORMATION		CHK.	DATE	DESCRIPTION
REV.	0	MAX	JULY 12, 2022	ISSUED FOR BID