

ABBREVIATIONS PLUMBING LEGEND

ABV ABOVE
AFG ABOVE FINISH GRADE
AFF ABOVE FINISH FLOOR
BF BLIND FLANGE
BLW BELOW
CLG CEILING
CO CLEANOUT
CW COLD WATER
DN DOWN
FD FLOOR DRAIN
RD ROOF DRAIN
FE FIRE EXTINGUISHER
FL FLOOR
GV GATE VALVE
HW HOT WATER
HB HOSE BIBB
VTR VENT THROUGH ROOF
W SANITARY WASTE

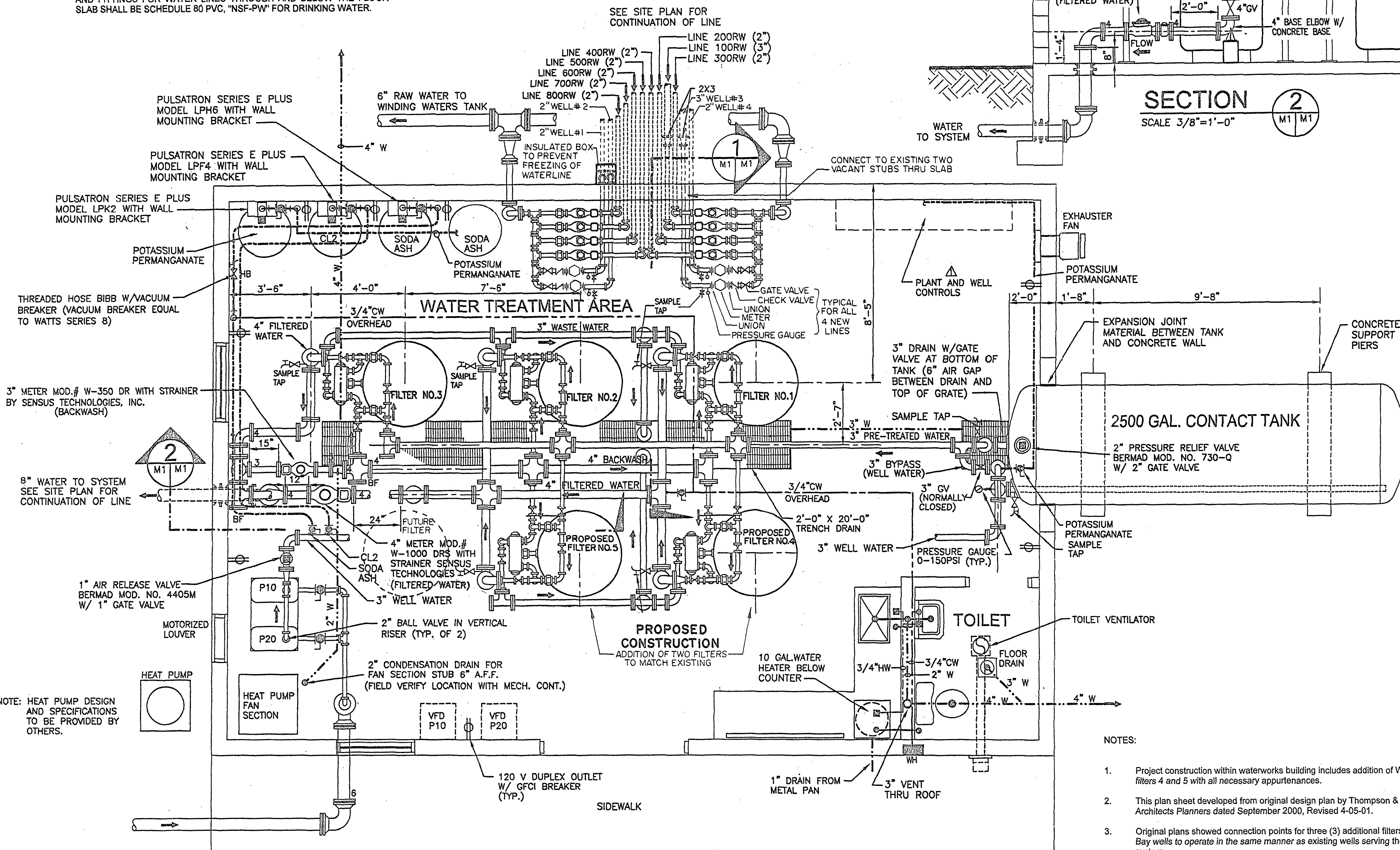
WASTEWATER PIPE
COLD WATER PIPE
HOT WATER PIPE
SANITARY VENT STACK
SANITARY WASTE CONNECTION
CLEANOUT
COLD WATER CONNECTION
HOT WATER CONNECTION
FLOOR DRAIN
WALL HYDRANT

GREEN SAND FILTER SPECIFICATIONS

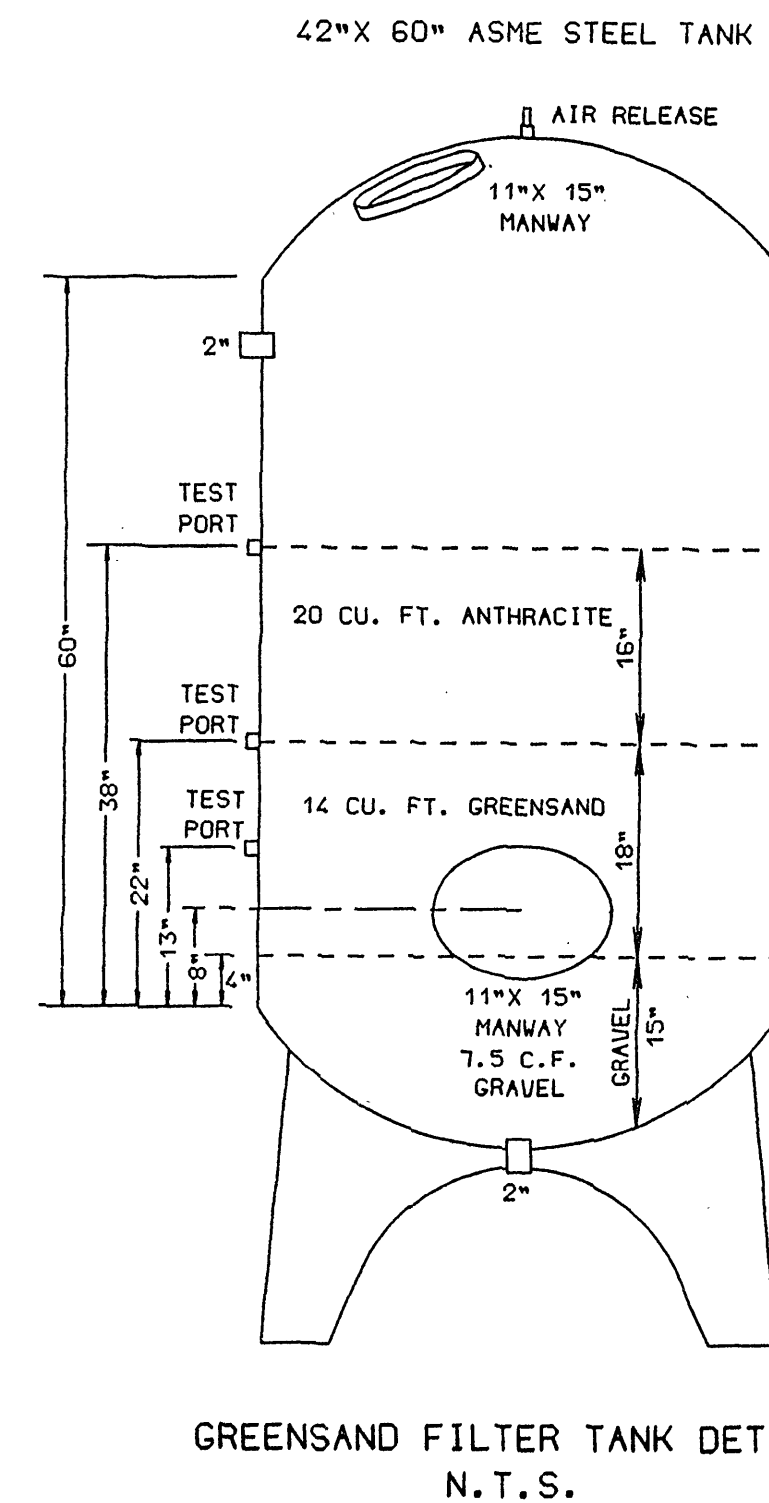
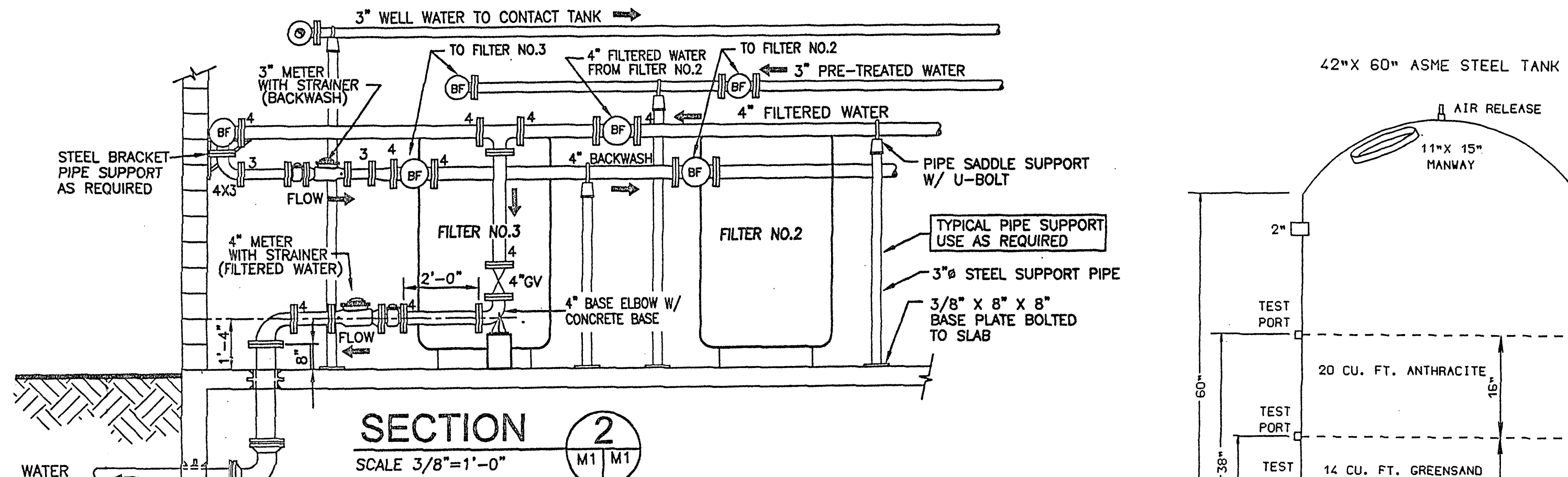
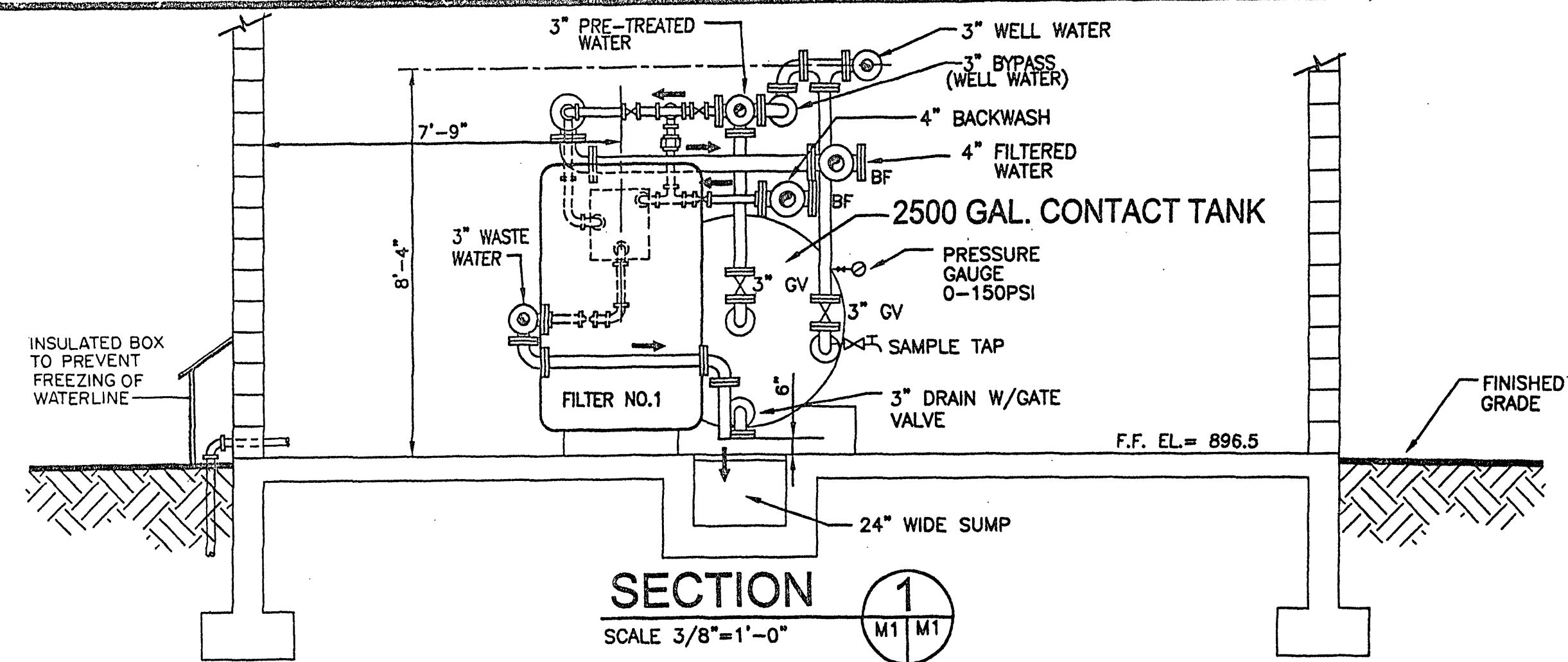
- DESIGN
 - THREE EXISTING FILTERS PLUS TWO NEW (TO MATCH EXISTING)
 - FILTER RATE = 3 GPM PER SQUARE FEET - EACH FILTER = 3.5 FEET IN DIAMETER
 - FILTER CAPACITY = 28.8 GPM - EACH
 - TOTAL FILTERING CAPACITY = 144 GPM
 - OPERATING INLET PRESSURE TO FILTER = 20 PSI (MIN.)
 - CHEMICAL REGENERATION - AS PER MANUFACTURERS RECOMMENDATIONS
 - BACKWASH:
 - RATE = 10 GPM PER SQUARE FEET OR 100 GPM
 - OPERATING PRESSURE = 20 PSI MIN.
 - INTERVAL - FILTERS SHALL BE BACKWASHED INDIVIDUALLY, NO MORE THAN ONE PER DAY PER MANUFACTURERS RECOMMENDATION.
- EQUIPMENT
ALL EQUIPMENT TO BE INSTALLED AS PER MANUFACTURERS RECOMMENDATIONS. EQUIPMENT SHALL BE NSF 61 APPROVED.
 - PRESSURE FILTERS (2 REQUIRED)
 - FILTERS SHALL BE A 42 MANGANESE GREEN SAND/ANTHROCITE FILTERS WITH 42"X60" STEEL PRESSURE VESSELS ASME CERTIFIED. SYSTEM SHALL INCLUDE AIR RELEASE, 2-11" X 15" MANWAYS, BACKWASH FLOW CONTROL AND MANUAL VALVING FOR NORMAL FILTRATION AND BACKWASH OPERATION.
 - ALL FILTERS SHALL HAVE A MINIMUM SIDE WALL DEPTH OF 5 FEET AND FILTER WASHWATER TROUGH LOCATED 18" (MIN.) ABOVE THE MEDIA.
 - FILTER MEDIA SHALL CONSIST OF A 20 CUBIC FEET LAYER OF GRADED ANTHROCITE COAL ON TOP OF 14 CUBIC FEET OF MANGANESE GREEN SAND (16.6 MESH). FORMULATED FROM A GLAUCONITE GREEN SAND WITH IRON REMOVAL CAPACITY OF 12,000 PPM PER CUBIC FOOT AND UNIFORMITY COEFFICIENT OF 1.5. GRAVEL SUPPORT MEDIA - QUARTZ GRAVEL 400 LBS OF 1/4" X 1/8" AND 500 LBS OF #20.
 - EACH FILTER SHALL BE FITTED WITH SAMPLE TAPS AT THE TOP AND MIDPOINT OF THE GREEN SAND MEDIA.

GENERAL NOTES - WATERWORKS BUILDING

- PIPING LAYOUT FOR SCHEMATIC AND SIZING PURPOSES ONLY, ACTUAL PIPE AND VALVE ARRANGEMENT MAY VARY.
- ELECTRICAL PANELS AND CONTROLS SHALL BE AS REQUIRED FOR THE PROPOSED SERVICE. ALL ELECTRICAL WORK SHALL BE ACCOMPLISHED PER NEC.
- WELL PUMP CONTROLS SHALL BE INSTALLED TO OPERATE SIMILAR TO EXISTING WELL PUMP CONTROLS.
- SECURE ALL PUMP HOUSE PIPING TO WALL, CEILINGS OR FLOOR AS NECESSARY TO PROVIDE PIPE THRUST RESTRAINT AND SUPPORT. USE GRINNEL PIPE SUPPORTS OR EQUAL.
- WATERWORKS BUILDING - PIPE AND FITTINGS:
ALL INTERIOR PIPE AND FITTINGS FOR WATER SHALL BE SCHEDULE 80 PVC. SOLVENT JOINTS, MARKED "NSF-PW" FOR DRINKING WATER. PIPE AND FITTINGS FOR WATER LINES THROUGH AND BELOW THE FLOOR SLAB SHALL BE SCHEDULE 80 PVC, "NSF-PW" FOR DRINKING WATER.



FLOOR PLAN
SCALE 3/8"=1'-0"



GENERAL SPECIFICATIONS - WATERWORKS BUILDING

PVC PIPE INSIDE WATERWORKS BUILDING

WATER LINE PIPE AND FITTINGS USED IN THE WATER TREATMENT BUILDING SHALL BE SCHEDULE 80 PVC, MEETING ASTM STANDARD D-1784 AND D-1785 AND NSF STANDARD 61. STANDARD FITTINGS FOR SCHEDULE 80 PIPE SHALL ALSO BE USED. PIPE SHALL BE PRESSURE RATED AT NOT LESS THAN 300 PSI.

SAMPLE TAP

1/2" BRONZE ANGLE STOP VALVE COPPER TO COPPER WITH 2" EXTENSION. SMOOTH BORE WITH NO THREADS. VALVES BY NIBCO OR EQUAL.

GATE/BALL VALVE

WHERE GATE VALVES OR BALL VALVES ARE NOTED, PVC BALL VALVES SHALL BE USED FOR ON/OFF CONTROL AND BLOCKING VALVES FOR DOWNSTREAM REPAIR. SEALS AND O-RINGS SHALL BE EPDM. USE TRUE UNION BALL (TUB) VALVES AS MANUFACTURED BY NIBCO OR EQUAL.

IN-LINE CHECK VALVES

THE IN-LINE CHECK VALVES SHALL BE MANUFACTURED OF PVC MATERIAL WITH EPDM SEALS AND SEATS. THE CONNECTIONS SHALL BE EITHER FLANGED OR THREADED. THE CHECK VALVES SHALL BE TRUE UNION BALL CHECK VALVES (TUC) AS MANUFACTURED BY NIBCO OR EQUAL.

PRESSURE GAUGE

PRESSURE GAUGES SHALL BE LIQUID FILLED GAUGES, 1 1/2" DIAMETER WITH A RANGE OF 0-200 PSI. INSTALL PRESSURE GAUGE WITH AN INLINE STOP COCK VALVE.

PRESSURE GAUGES SHALL BE SIMILAR TO ASHCROFT SERIES 1009 INDUSTRIAL GAUGES WITH A 1/4" NPT LOWER CONNECTION, STAINLESS STEEL SOCKET, POLYCARBONATE WINDOW IN A LIQUID FILLED POLISHED STAINLESS STEEL CASE; OR EQUAL.

GENERAL

ALL WATERWORKS EQUIPMENT SHALL BE NSF 61 RATED

WATER METERS

WELL #1 BADGER MODEL 70
WELL #2 BADGER MODEL 70
WELL #3 BADGER MODEL 70
WELL #4 BADGER MODEL 70

NOTES:

- Project construction within waterworks building includes addition of Wells 1, 2, 3, 4 and filters 4 and 5 with all necessary appurtenances.
- This plan sheet developed from original design plan by Thompson & Litton Engineering Architects Planners dated September 2000, Revised 4-05-01.
- Original plans showed connection points for three (3) additional filters. New 4 Montego Bay wells to operate in the same manner as existing wells serving the Park Place water system.
- chemical feed pumps and rates to be adjusted by the operator to match new conditions.

BERKLEY HOWELL & ASSOC., P.C.
ENGINEERS • SURVEYORS • PLANNERS
306 ENTERPRISE DRIVE, SUITE C
FOREST, VIRGINIA 24551
PH: (434) 385-7548 FAX: (434) 385-6778



PARK PLACE WATER SYSTEM
IMPROVEMENTS FOR
ADDITION OF MONTEGO BAY
GILLS CREEK DISTRICT FRANKLIN CO., VA.

WATERWORKS BUILDING

DATE: 3-9-04

TECHNICIAN:

CHECKED BY:

REVISIONS

NO. DATE

SCALES
AS SHOWN

PROJ. NO. DIV.
030192

SHEET NO.
8 OF 10

DRAWING NO.
OVERALL

SURVEY DATUM USED:

FIELDBOOK IDENTIFICATION:

VIEWS TO CREATE THIS DRAWING:

MANUSCRIPT DRAWING NUMBER: