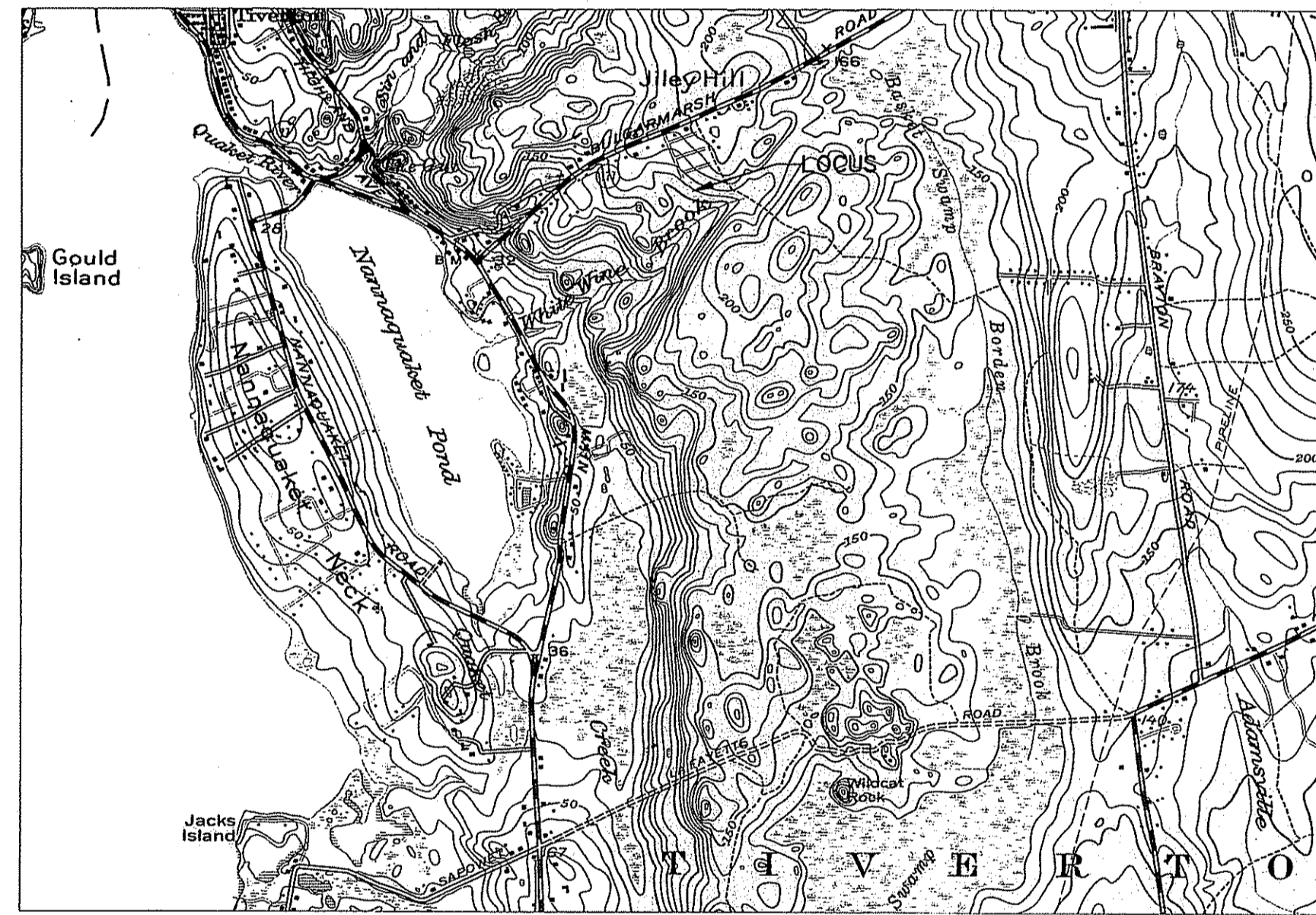


PROPOSED OWTS REPAIR PLAN DADSON ESTATES MOBILE HOME PARK

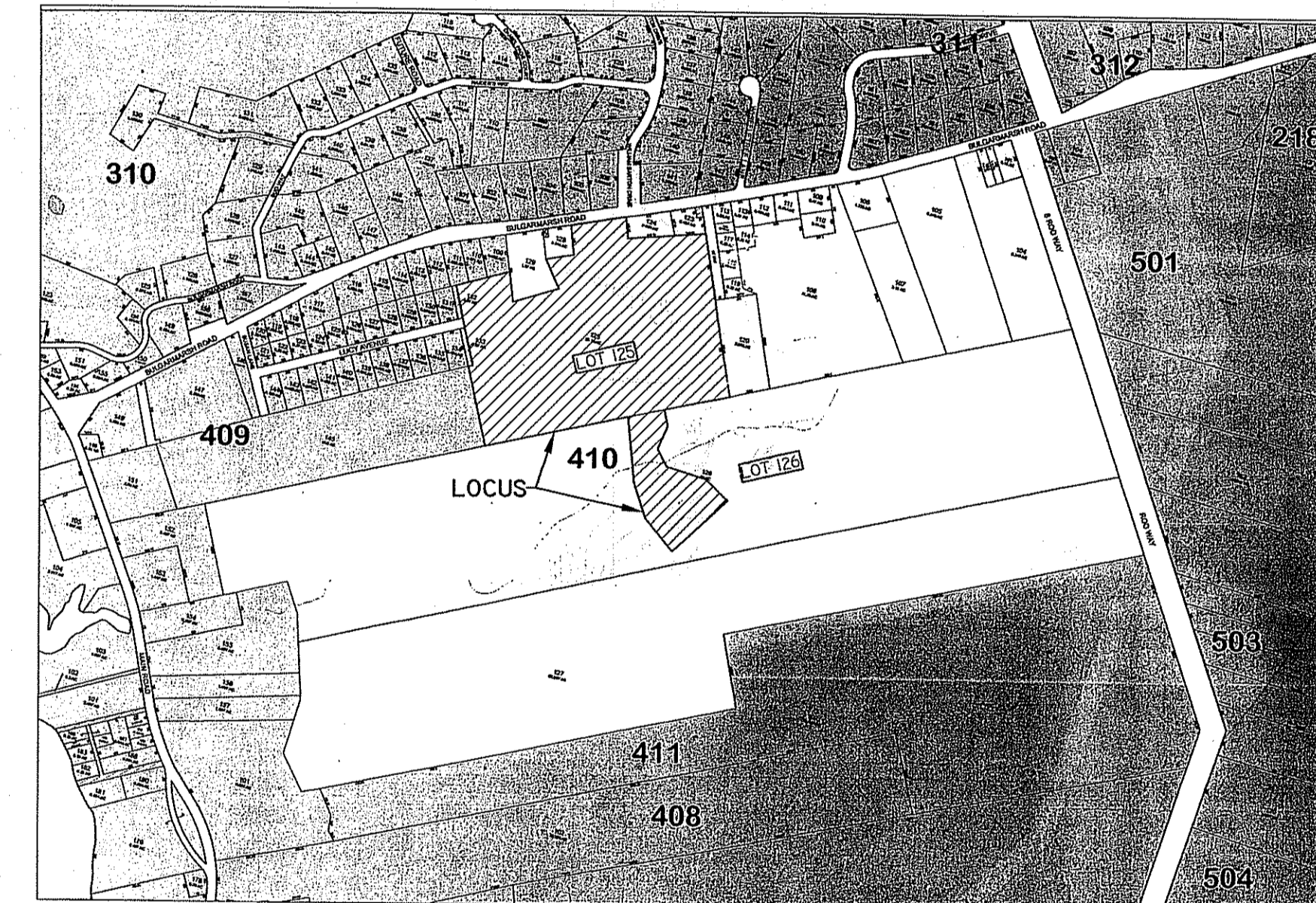
PLAT 410 LOTS 125 & 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND

SHEET INDEX

- SHEET 1 COVER SHEET
- SHEET 2 SITE PLAN OVERVIEW
- SHEET 3 SITE PLAN
- SHEET 4 SITE PLAN
- SHEET 5 SITE PLAN
- SHEET 6 SITE PLAN
- SHEET 7 SITE PLAN - B.S.F.
- SHEET 8 DETAIL SHEET
- SHEET 9 DETAIL SHEET
- SHEET 10 DETAIL SHEET
- SHEET 11 DETAIL SHEET
- SHEET 12 DETAIL SHEET
- SHEET 13 DETAIL SHEET

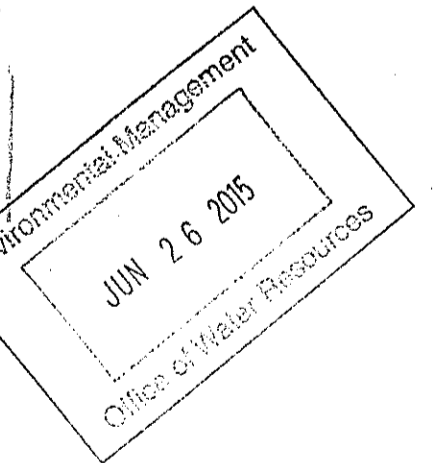


USGS LOCUS MAP
1" = 2080'

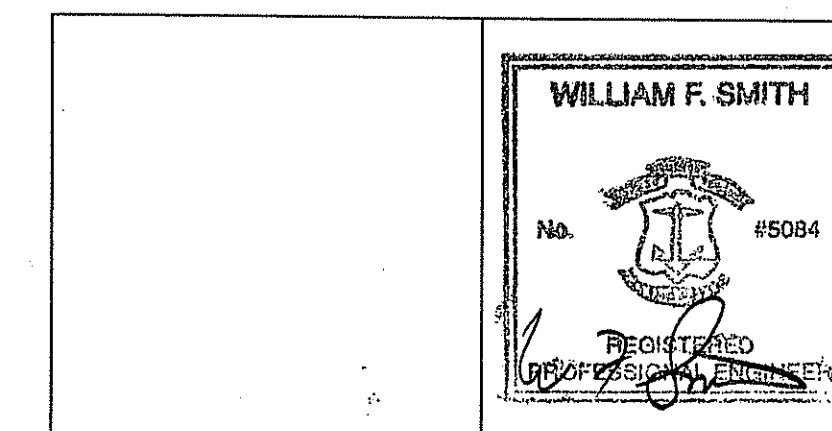


ASSESSORS MAP
NOT TO SCALE

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 23 2015 FILE # 15-0136
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



Kindly be advised that this
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verification of the type or extent
of freshwater wetlands on site.



4/29/15 No changes this sheet

PROPOSED OWTS REPAIR PLAN
COVER SHEET
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
ASSESSOR'S PLAT 410 LOTS 125 & 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND

SCALE: AS NOTED DATE: DECEMBER 29, 2014

Civil Engineering Concepts, Inc.
34A MAIN STREET P.O. BOX 5323
LITTLE COMPTON, RI 02837 NEW BEDFORD, MA. 02742
PH: (401) 592-0177 (508) 990-4900
FAX: (401) 592-0178 EMAIL: wsmithce@aol.com

REFER TO SHEETS #3 - #6 FOR 30-SCALE DETAIL OF EXISTING AND PROPOSED CONDITIONS (INCLUDING TOPOGRAPHIC SURVEY) AND SHEET #7 FOR 20-SCALE DETAIL OF THE BSF AND ADVANCED TREATMENT TANK AREA WITH EXISTING AND PROPOSED CONDITIONS (INCLUDING TOPOGRAPHIC SURVEY).



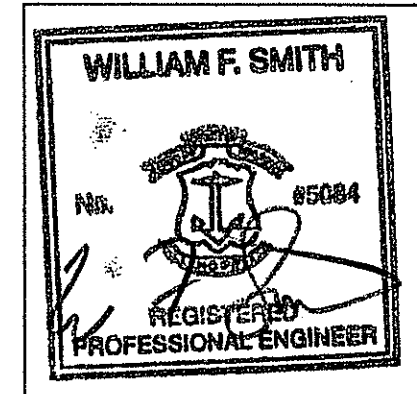
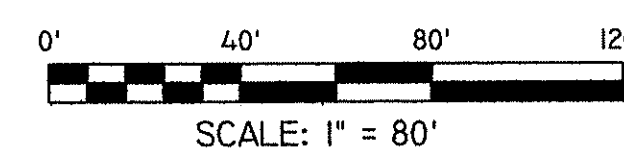
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
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Jonathan D. Wenzel

LEGEND

- | | | | | |
|---------------|--------------------------------|-----------|---|---------------------|
| — W — W — | EXIST. WATER LINE | — 150 — | EXIST. CONTOUR | |
| - - - - - | PROP. WATER LINE | — 150 — | PROP. CONTOUR | |
| HYD. ○ | PROP. HYDRANT | D53 | D54 | DELINEATED WETLANDS |
| — W — W — | PROP. WATER GATE | — X — X — | FENCE | |
| — W — W — | PROP. CORP. STOP | — 030 — | EXIST. MOBILE HOME UNIT | |
| — PH — C.O.P. | PROP. SEWER MAIN CLEANOUT | — 028 — | TEMPORARILY VACANT MOBILE HOME SITE | |
| — PH — | PROP. PRESSURE SEWER MAIN | 032 | ASSESSOR'S ADDRESS NUMBER | |
| — S — S — | PROP. SEPTIC TANK | — 32 — | DADSON MOBILE HOME UNIT NUMBER | |
| — P — P — | PROP. PIPE SLEEVE | — 32 — | EXIST. UTILITY POLE | |
| — C.S. — | PROP. CLEANOUT | — 32 — | EXIST. UTILITY POLE WITH GUYWIRE | |
| — S.H. — | PROP. SEWER (JUNCTION) MANHOLE | — 32 — | PROP. EXTERIOR ELECTRIC METER / ELECT. SERVICE FOR PUMP VAULTS (NO. OF VAULTS SERVICED INDICATED) | |
| — S.T. — | EXIST. SEPTIC TANK | — 32 — | PROP. PUMP VAULT ALARM/CONTROL PANEL (AT INDIVIDUAL TANKS) | |
| — T — T — | EXIST. TREE / SHRUBS | — 32 — | PROP. ELECT. SERVICE LINE (FROM METER TO PUMP VAULT) | |
| — S.W. — | EXIST. STONE WALL | — 32 — | PROP. TELEPHONE LINE | |
| — T.C. — | EXISTING TIMBER CURBING | | | |
| — D — D — | EXISTING DRAIN LINE | | | |

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



4/29/15 NO CHANGES THIS SHEET
 REVISIONS:

PROPOSED OWTS REPAIR PLAN
 PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
 PLAT 410 LOT 125 AND 126
 301 BULGARMARSH ROAD
 TIVERTON, RHODE ISLAND

SCALE: 1" = 80' DATE: DECEMBER 29, 2014
Civil Engineering Concepts, Inc.
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WATER LINE CONNECTION TO EXISTING BULGARMARSH WATER MAIN SHALL COMPLY WITH STONE BRIDGE FIRE DISTRICT INSTALLATION AND INSPECTION REQUIREMENTS (RI DOT PAP UTILITY CONNECTION REQUIRED. POLICE TRAFFIC DETAIL REQUIRED).

ASPHALT TRENCH REPAIR (SEE DETAIL ON SHEET #13)

BULGARMARSH ROAD

EXISTING WATER METER PIT TO BE ABANDONED

EXISTING WATER LINES TO BE ABANDONED

PROPOSED SWEEP ON SEWER MAIN (TO FACILITATE FUTURE PIPE CLEANING)

CEDARFIELD ROAD

PROPOSED SLEEVE (REFER TO NOTE #20 ON SH. #10)

PROPOSED METER PIT FOR 8" WATER MAIN. METER PIT AND CONNECTION TO BULGARMARSH ROAD WATER MAIN SHALL COMPLY WITH NORTH TIVERTON FIRE DISTRICT REGULATIONS.

PROP. UNDERGROUND ELECTRIC SERVICE TO PUMP VAULTS (CODE COMPLIANT)

PROP. ELECTRIC METER / SERVICE PANEL FOR FOUR SEPARATE PUMP CONTROL PANELS

PROP. OSI AUTOMATIC AIR RELEASE AND CLEANOUT MANHOLE AT END OF SEWER MAIN "A". REFER TO DETAIL ON SHEET #12.

SITE BENCHMARK (1 OF 2)
PK NAIL IN ASPHALT
ELEV. 202.76 (ASSUMED DATUM)
BENCHMARKS TO BE ESTABLISHED BY DESIGNER AT VARIOUS LOCATION THROUGHOUT DADSON FOR USE BY CONTRACTOR PRIOR TO ANY UTILITY COMPONENT INSTALLATION

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

10' MINIMUM SEPARATION REQUIRED BETWEEN SEWER AND WATER LINES. LESS THAN 10' SEPARATION (OR AT ANY CROSSING OF LINES) REQUIRES THE USE OF SEAMLESS PIPE SLEEVES WITH RUBBER SEALS AT ENDS WITH RETRACTABLE STAINLESS STEEL CLAMPS (TYPICAL)

"OFFICE" ELECTRICAL SERVICE TO BE USED FOR THE TWO INDICATED PUMP VAULTS (ELECTRICIAN TO VERIFY ADEQUACY OF SERVICE)

PROPOSED TYPICAL PRIMARY TREATMENT SEPTIC TANK / PUMP VAULT. TANK SIZE INDICATED. REFER TO NOTES ON SHEET #10 AND DETAILS ON SHEET #9.

SHEET #4

WATERTIGHT CAP ON STUB FOR REPLACEMENT MOBILE HOME SITE #7

LOCATION FOR CONTRACTOR'S STAGING AREA #1

10' MINIMUM SEPARATION BETWEEN PROP. WATER MAINS AND SEWER MAINS (EXCEPT AT CROSSINGS WHERE SLEEVES ARE REQUIRED)

MAIN WATER GATE VALVES (TYPICAL)

CORPORATION COCK AT WATER SERVICE CONNECTION TO MAIN

EXISTING WATER LINES TO BE ABANDONED

WATERTIGHT CAP ON SEWER STUB FOR REPLACEMENT MOBILE HOME SITE #28

EXISTING SHEDS (TYP)

CAP ON WATER SERVICE LINE TO MOBILE HOME SITE #28

SHEET #4
PROPOSED OSI COMBINED MANUAL AIR RELEASE / CLEAN-OUT MANHOLE AT END OF SEWER MAIN. REFER TO DETAIL ON SHEET #12.

SECOND STREET

ELECTRIC LINES FOR PUMP VAULTS MAY BE BURIED IN SAME TRENCH AS SEWER PIPE (MIN. 2.5' VERTICAL SEPARATION)

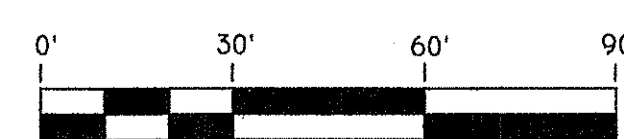
INDIVIDUAL CURB STOPS (W/ STANDARD ROADWAY BOX) REQUIRED AT EACH MOBILE HOME. 3/4" WATER SERVICE LINES INTO INDIVIDUAL UNITS. 1" LINES FROM MAINS WHERE SERVICING MULTIPLE UNITS.

REFER TO ELEVATION CHART ON SHEET #8 FOR PRIMARY SEPTIC / PUMP VAULT TANK ELEVATIONS AND SLOPES / ELEVATIONS OF THE BUILDING SEWERS AND ASSOCIATED MANHOLES.

THERE ARE NO PROPOSED GRADING CHANGES ON THIS SHEET.

LEGEND

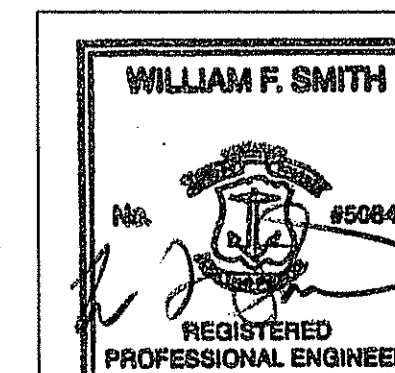
	EXIST. WATER LINE		EXIST. CONTOUR
	PROP. WATER LINE		PROP. CONTOUR
	PROP. HYDRANT		DELINEATED WETLANDS
	PROP. WATER GATE		FENCE
	PROP. CORP. STOP		EXIST. MOBILE HOME UNIT
	PROP. SEWER MAIN CLEANOUT		TEMPORARILY VACANT MOBILE HOME SITE
	PROP. PRESSURE SEWER MAIN		ASSESSOR'S ADDRESS NUMBER
	PROP. SEPTIC TANK		DADSON MOBILE HOME UNIT NUMBER
	PROP. PIPE SLEEVE		EXIST. UTILITY POLE
	PROP. CLEANOUT		EXIST. UTILITY POLE WITH GUY WIRE
	PROP. SEWER (JUNCTION) MANHOLE		PROP. EXTERIOR ELECTRIC METER / ELECT. SERVICE FOR PUMP VAULTS (NO. OF VAULTS SERVICED INDICATED)
	EXIST. SEPTIC TANK		PROP. PUMP VAULT ALARM/CONTROL PANEL (AT INDIVIDUAL TANKS)
	EXIST. TREE / SHRUBS		PROP. ELECT. SERVICE LINE (FROM METER TO PUMP VAULT)
	EXIST. STONE WALL		PROP. TELEPHONE LINE
	EXISTING TIMBER CURBING		
	EXISTING DRAIN LINE		



SCALE: 1"=30'

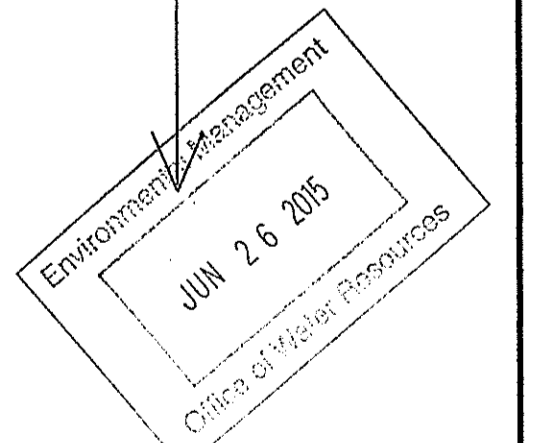
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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William F. Smith



4/29/15 NO CHANGES THIS SHEET

REVISIONS:

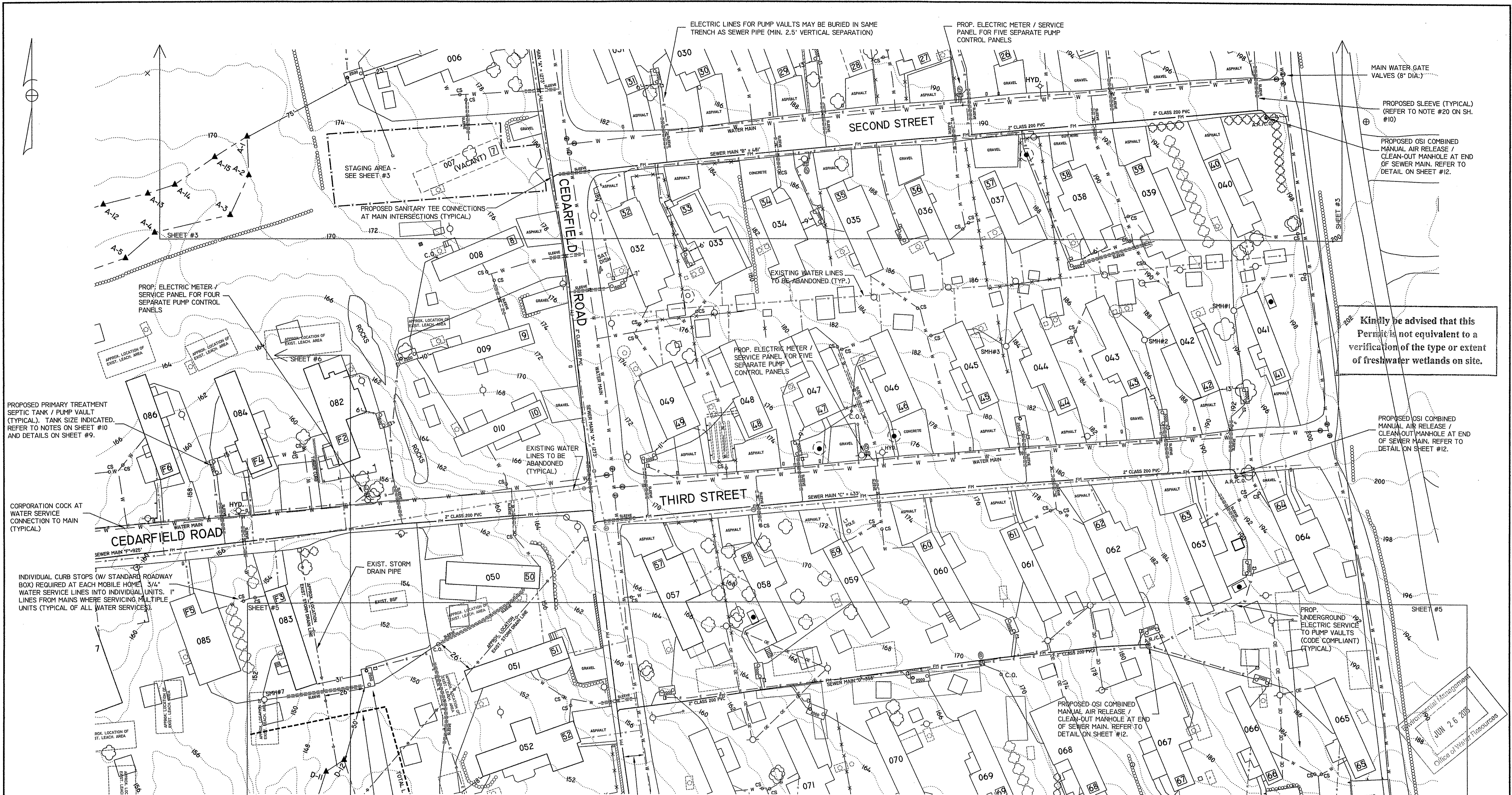


PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND

SCALE: 1" = 30' DATE: DECEMBER 29, 2014

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FAX: (401) 592-0178 EMAIL: wsmithccc@aol.com

SHEET 3 OF 13 JOB#: 06-049



PROPOSED PRIMARY TREATMENT SEPTIC TANK / PUMP VAULT (TYPICAL). TANK SIZE INDICATED. REFER TO NOTES ON SHEET #9 AND DETAILS ON SHEET #9.

CORPORATION COCK AT WATER SERVICE CONNECTION TO MAIN (TYPICAL)

INDIVIDUAL CURB STOPS (W/ STANDARD ROADWAY BOX) REQUIRED AT EACH MOBILE HOME. 3/4" WATER SERVICE LINES INTO INDIVIDUAL UNITS. 1" LINES FROM MAINS WHERE SERVICING MULTIPLE UNITS (TYPICAL OF ALL WATER SERVICES).

LEGEND

- | | | | |
|-----------|--------------------------------|-----------|---|
| - - - - - | EXIST. WATER LINE | - - - - - | EXIST. CONTOUR |
| - - - - - | PROP. WATER LINE | 150 | PROP. CONTOUR |
| HYD. - | PROP. HYDRANT | 150 | DELINEATED WETLANDS |
| - - - - - | PROP. WATER GATE | 150 | FENCE |
| - - - - - | PROP. CORP. STOP | 150 | EXIST. MOBILE HOME UNIT |
| - - - - - | PROP. SEWER MAIN CLEANOUT | 150 | TEMPORARILY VACANT MOBILE HOME SITE |
| - - - - - | PROP. PRESSURE SEWER MAIN | 150 | ASSESSOR'S ADDRESS NUMBER |
| - - - - - | PROP. SEPTIC TANK | 150 | DADSON MOBILE HOME UNIT NUMBER |
| - - - - - | PROP. PIPE SLEEVE | 150 | EXIST. UTILITY POLE |
| - - - - - | PROP. CLEANOUT | 150 | EXIST. UTILITY POLE WITH GUY WIRE |
| - - - - - | PROP. SEWER (JUNCTION) MANHOLE | 150 | PROP. EXTERIOR ELECTRIC METER / ELECT. SERVICE FOR PUMP VAULTS (NO. OF VAULTS SERVICED INDICATED) |
| - - - - - | EXIST. SEPTIC TANK | 150 | PROP. PUMP VAULT ALARM/CONTROL PANEL (AT INDIVIDUAL TANKS) |
| - - - - - | EXIST. TREE / SHRUBS | 150 | PROP. ELECT. SERVICE LINE (FROM METER TO PUMP VAULT) |
| - - - - - | EXIST. STONE WALL | 150 | PROP. TELEPHONE LINE |
| - - - - - | EXISTING TIMBER CURBING | 150 | |
| - - - - - | EXISTING DRAIN LINE | 150 | |

PROPOSED PRIMARY TREATMENT SEPTIC TANK / PUMP VAULT (TYPICAL). TANK SIZE INDICATED. REFER TO NOTES ON SHEET #10 AND DETAILS ON SHEET #9.

10' MINIMUM SEPARATION BETWEEN PROP. WATER MAINS AND SEWER MAINS (EXCEPT AT CROSSINGS WHERE SLEEVES ARE REQUIRED)

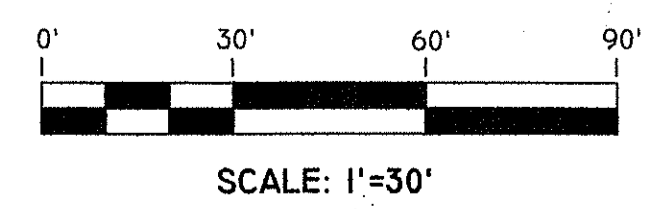
SILTATION FENCE OR HAYBALE CHECKDAM = LIMIT OF CONSTRUCTION. REFER TO NOTES AND DETAILS ON SHEET #13.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
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Martin D. Wenzel

REFER TO ELEVATION CHART ON SHEET #8 FOR PRIMARY SEPTIC / PUMP VAULT TANK ELEVATIONS AND SLOPES / ELEVATIONS OF THE BUILDING SEWERS AND ASSOCIATED MANHOLES.

THERE ARE NO PROPOSED GRADING CHANGES ON THIS SHEET.



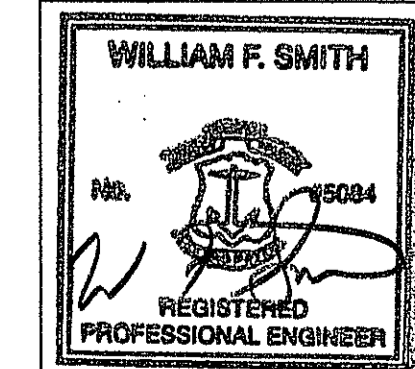
MAIN WATER GATE VALVES (8" DIA.)

PROPOSED SLEEVE (TYPICAL) (REFER TO NOTE #20 ON SH. #10)

PROPOSED OSI COMBINED MANUAL AIR RELEASE / CLEAN-OUT MANHOLE AT END OF SEWER MAIN. REFER TO DETAIL ON SHEET #12.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

PROPOSED OSI COMBINED MANUAL AIR RELEASE / CLEAN-OUT MANHOLE AT END OF SEWER MAIN. REFER TO DETAIL ON SHEET #12.



4/29/15 No Changes This Sheet
REVISIONS:

PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND

SCALE: 1" = 30' DATE: DECEMBER 29, 2014

Civil Engineering Concepts, Inc.
34A MAIN STREET P.O. BOX 5323
LITTLE COMPTON, RI 02837 NEW BEDFORD, MA 02742
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FAX: (401) 592-0178 EMAIL: wsmithcec@aol.com

SHEET 4 of 13 JOB#: 06-049

Office of Water Resources
JUN 26 2015

REFER TO ELEVATION CHART ON SHEET #8 FOR PRIMARY SEPTIC / PUMP VAULT TANK ELEVATIONS AND SLOPES / ELEVATIONS OF THE BUILDING SEWERS AND ASSOCIATED MANHOLES.

INDIVIDUAL CURB STOPS (W/ STANDARD ROADWAY BOX) REQUIRED AT EACH MOBILE HOME. 3/4" WATER SERVICE LINES INTO INDIVIDUAL UNITS. 1" LINES FROM MAINS WHERE SERVING MULTIPLE UNITS.

CORPORATION COCK AT WATER SERVICE CONNECTION TO MAIN (TYPICAL OF ALL SERVICE LINE CONNECTIONS TO MAINS)

PROPOSED SLEEVE (REFER TO NOTE#20 ON SH. #10)

PROPOSED OSI IN-LINE AUTOMATIC AIR RELEASE ACCESS MANHOLE (AT HIGH POINT IN SEWER MAIN "F" BETWEEN UNITS F7 AND F9). REFER TO DETAIL ON SHEET #12.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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Matthew D. Wernick

EXIST. STORM DRAIN PIPE

PROPOSED SILT FENCING OR HAYBALE CHECKDAM = LIMIT OF CONSTRUCTION ACTIVITY (AS SHOWN FULLY ON SHEET #5). REFER TO EROSION CONTROL NOTES ON SHEET #10 AND DETAILS ON SHEET #13.

PROPOSED TYPICAL PRIMARY TREATMENT SEPTIC TANK / PUMP VAULT. TANK SIZE INDICATED. REFER TO NOTES ON SHEET #10 AND DETAILS ON SHEET #9.
10' MINIMUM SEPARATION BETWEEN PROP. WATER MAINS AND SEWER MAINS (EXCEPT AT CROSSINGS WHERE SLEEVES ARE REQUIRED)

PROPOSED OSI COMBINED MANUAL AIR RELEASE / CLEAN-OUT MANHOLE AT END OF SEWER MAIN. REFER TO DETAIL ON SHEET #12.
ELECTRIC LINES FOR PUMP VAULTS MAY BE BURIED IN SAME TRENCH AS SEWER PIPE (MIN. 2.5" VERTICAL SEPARATION)

PROPOSED SILT FENCING OR HAYBALE CHECKDAM = LIMIT OF CONSTRUCTION ACTIVITY. REFER TO EROSION CONTROL NOTES ON SHEET #10 AND DETAILS ON SHEET #13.

PROPOSED SILT FENCING OR HAYBALE CHECKDAM = LIMIT OF CONSTRUCTION ACTIVITY. REFER TO EROSION CONTROL NOTES ON SHEET #10 AND DETAILS ON SHEET #13.

PROPOSED TYPICAL PRIMARY TREATMENT SEPTIC TANK / PUMP VAULT. TANK SIZE INDICATED. REFER TO NOTES ON SHEET #10 AND DETAILS ON SHEET #9.

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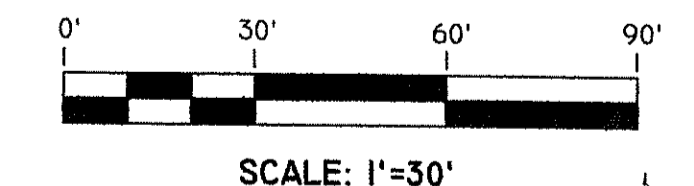
PROP. ELECTRIC METER / SERVICE PANEL FOR FIVE SEPARATE PUMP CONTROL PANELS

PROP. UNDERGROUND ELECTRIC SERVICE TO PUMP VAULTS (CODE COMPLIANT) (TYPICAL)

PROPOSED OSI COMBINED MANUAL AIR RELEASE / CLEAN-OUT MANHOLE AT END OF SEWER MAIN. REFER TO DETAIL ON SHEET #12.

LEGEND

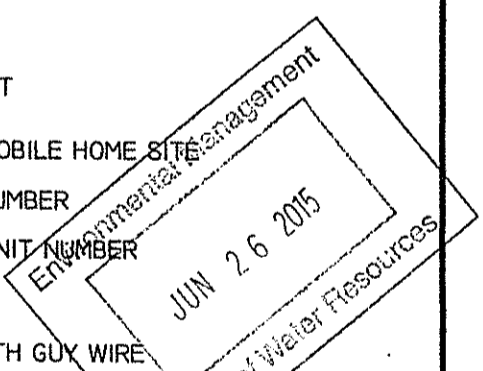
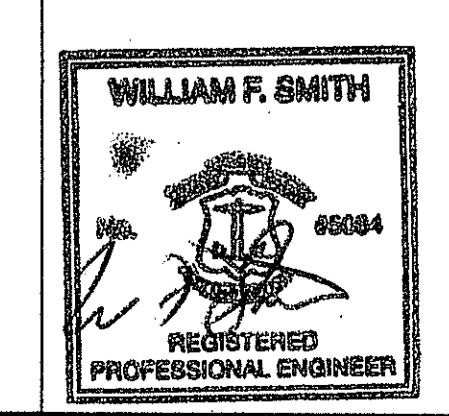
- W — — — — — EXIST. WATER LINE
- W — — — — — PROP. WATER LINE
- HYD. — — — — — PROP. HYDRANT
- W — — — — — PROP. WATER GATE
- W — — — — — PROP. CORP. STOP
- W — — — — — PROP. SEWER MAIN CLEANOUT
- W — — — — — PROP. PRESSURE SEWER MAIN
- W — — — — — PROP. SEPTIC TANK
- W — — — — — PROP. PIPE SLEEVE
- W — — — — — PROP. CLEANOUT
- W — — — — — PROP. SEWER (JUNCTION) MANHOLE
- W — — — — — EXIST. SEPTIC TANK
- W — — — — — EXIST. TREE / SHRUBS
- W — — — — — EXIST. STONE WALL
- W — — — — — EXISTING TIMBER CURBING
- W — — — — — EXISTING DRAIN LINE
- 150 — — — — — EXIST. CONTOUR
- 150 — — — — — PROP. CONTOUR
- D83 D54 — — — — — DELINEATED WETLANDS
- X — X — X — — — — — FENCE
- 030 — — — — — EXIST. MOBILE HOME UNIT
- 028 — — — — — TEMPORARILY VACANT MOBILE HOME UNIT
- 032 — — — — — ASSESSOR'S ADDRESS NUMBER
- 032 — — — — — DADSON MOBILE HOME UNIT NUMBER
- 032 — — — — — EXIST. UTILITY POLE
- 032 — — — — — EXIST. UTILITY POLE WITH GUY WIRE
- 032 — — — — — PROP. EXTERIOR ELECTRIC METER / ELECT. SERVICE FOR PUMP VAULTS (NO. OF VAULTS SERVICED INDICATED)
- 032 — — — — — PROP. PUMP VAULT ALARM/CONTROL PANEL (AT INDIVIDUAL TANKS)
- 032 — — — — — PROP. ELECT. SERVICE LINE (FROM METER TO PUMP VAULT)
- 032 — — — — — PROP. TELEPHONE LINE



PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND
SCALE: 1" = 30' DATE: DECEMBER 29, 2014

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EMAIL: wsmithccc@aol.com

4/29/15 NO CHANGES THIS SHEET
REVISIONS:
SHEET 6 OF 13



PROPOSED SILT FENCING OR HAYBALE CHECKDAM = LIMIT OF CONSTRUCTION ACTIVITY. REFER TO EROSION CONTROL NOTES ON SHEET #10 AND DETAILS ON SHEET #13.

SEWER PIPE AND WATER PIPE REQUIRE 4" OF COVER. PIPING SHALL BE BEDDED IN CLEAN COARSE SAND WITH A MINIMUM OF 6" ON ALL SIDES. ELECTRIC AND TELEPHONE CABLES SHALL BE INSTALLED IN ACCORDANCE WITH APPLICABLE TOWN AND STATE REGULATIONS.

LOW POINT IN CART PATH EL. 125.0

EXISTING GRAVEL CART PATH SHALL BE RESTORED FOLLOWING CONSTRUCTION. TOP 3" OF CART PATH SHALL BE ROLLED. PROCESSED ROAD BASE MATERIAL SUITABLE FOR VEHICLE PASSAGE.

BENCHMARK BENCHM. SET IN 18" TREE ELEV. = 146.78 (ASSUMED DATUM) (BM TO BE RELOCATED BY DESIGNER TO WITHIN 100' OF THE BSF'S)

PROPOSED SILT FENCING OR HAYBALE CHECKDAM = LIMIT OF CONSTRUCTION ACTIVITY. REFER TO EROSION CONTROL NOTES ON SHEET #10 AND DETAILS ON SHEET #13.

PROPOSED DRY LAID STONE RETAINING WALL. SEE DETAIL ON SHEET #10.

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
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APPROVED PLANS MUST BE AT CONSTRUCTION SITE

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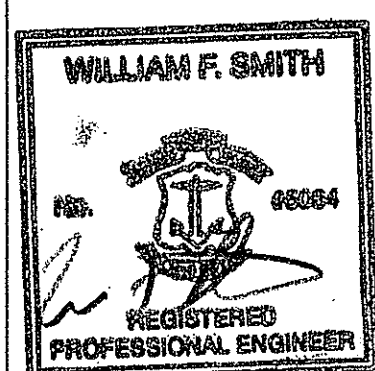
Environmental Management
Office of Water Resources
JUN 26 2015

NOTE: THIS SHEET IS AT A 20 SCALE (REMAINING PLAN VIEW SHEETS ARE AT 30 SCALE)

0' 20' 40' 60'
SCALE: 1" = 20'

PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND
SCALE: 1" = 20' DATE: DECEMBER 29, 2014

Civil Engineering Concepts, Inc.
34A MAIN STREET P.O. BOX 5323
LITTLE COMPTON, RI 02837 NEW BEDFORD, MA 02742
PH: (401) 592-0177 FAX: (401) 592-0178 EMAIL: wsmithccc@aol.com



4/29/15 PUMP CHAMBER, METER PIT, PIPING,
GRADING, FENCING
REVISIONS:

SHEET 7 OF 13 JOB#: 06-049

LEGEND

- W — W — EXIST. WATER LINE
- W — W — PROP. WATER LINE
- HYD. — PROP. HYDRANT
- W — W — PROP. WATER GATE
- W — W — PROP. CORP. STOP
- W — W — PROP. SEWER MAIN CLEANOUT
- W — W — PROP. PRESSURE SEWER MAIN
- W — W — PROP. SEPTIC TANK
- W — W — PROP. PIPE SLEEVE
- W — W — PROP. CLEANOUT
- W — W — PROP. SEWER (JUNCTION) MANHOLE
- W — W — EXIST. SEPTIC TANK
- W — W — EXIST. TREE / SHRUBS
- W — W — EXIST. STONE WALL
- W — W — EXISTING TIMBER CURBING
- W — W — EXIST. CONTOUR
- W — W — PROP. CONTOUR
- W — W — DELINEATED WETLANDS
- W — W — FENCE
- W — W — EXIST. MOBILE HOME UNIT
- W — W — TEMPORARILY VACANT MOBILE HOME SITE
- 032 — ASSESSOR'S ADDRESS NUMBER
- 32 — DADSON MOBILE HOME UNIT NUMBER
- W — W — EXIST. UTILITY POLE
- W — W — EXIST. UTILITY POLE WITH GUY WIRE
- W — W — PROP. EXTERIOR ELECTRIC METER / ELECT. SERVICE FOR PUMP VAULTS (NO. OF VAULTS SERVICED INDICATED)
- W — W — PROP. PUMP VAULT ALARM/CONTROL PANEL (AT INDIVIDUAL TANKS)
- W — W — PROP. ELECT. SERVICE LINE (FROM METER TO PUMP VAULT)
- W — W — PROP. TELEPHONE LINE (TO CONTROL PANEL)

PROPOSED 10' WIDE DOUBLE GATE WITH LOCK ON CART PATH

PROPOSED 2,500 GALLON CONCRETE FINAL DISCHARGE PUMP CHAMBER WITH TRIPLEX PUMPING SYSTEM. REFER TO DETAILS ON SHEETS #9 AND 12.

EXISTING GRAVEL CART PATH

PROPOSED OSI METER PIT

PROPOSED 2' HIGH STONE WALL, 56' LONG

PROPOSED 25,000 GALLON XERES FIBERGLASS ANOXIC TANK WITH OSI DUPLEX SCREENED PUMP VAULT. REFER TO DETAILS ON SHEETS #9 AND 12.

PROPOSED 30,000 GALLON XERES FIBERGLASS RECIRCULATION TANK WITH SIX OSI PUMP TOWERS. REFER TO DETAILS ON SHEETS #9 AND 12.

GWT#1 36' L=62'

PROPOSED 2" CLASS 200 SEWER FORCE MAIN
PROPOSED UNDERGROUND 220V ELECTRIC SERVICE FOR PUMPING SYSTEMS, CONTROL PANEL, AND SERVICE OUTLET. WIRING GAUGE / COMPOSITION TO BE DETERMINED BY LICENSED ELECTRICIAN.
PROPOSED TELEPHONE LINE FOR CONTROL PANEL TELEMETRY SYSTEM

ALL DISTURBED AREAS BEYOND THE CART PATH SHALL BE LOAMED (4" MIN. LAYER) AND HYDROSEED

GWT#4 50' L=95'

GWT#3 36' L=72'

GWT#2 30' L=54'

PROPOSED 6' HIGH CHAIN LINK FENCE WITH 10' WIDE DOUBLE GATE AT SERVICE AREA ENTRANCE

18.5 WIDE x 24.5' LONG BOTTOMLESS SAND FILTER IN TIMBER ENCLOSURE (1 OF 3 INDICATED). REFER TO BSF DETAILS ON SHEET #11

PROPOSED OSI CONTROL PANEL(S) AND WEATHER PROOF 115V SERVICE OUTLET MOUNTED ON 3/4" (MIN. THICKNESS) EXTERIOR PLYWOOD WITH 4"x4" P.T. SUPPORT POSTS

PROPOSED SIX OSI AX100 RECIRC. MEDIA FILTER PODS WITH BLOWER AND AIR VENT (1 OF 6 INDICATED). REFER TO DETAILS ON SHEET #12.

NO FLAG #259

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UNIT #	ADDRESS	BLDG SEWER INV	BLDG SEWER LENGTH (FT)	BLDG SEWER SLOPE (%)	SMH #	SEWER MANHOLE RIM	INVERT @ SMH	LENGTH (TO TANK) (FT)	PIPE SLOPE	TANK SIZE (GAL)	INVERT @ TANK INLET	INVERT @ TANK OUTLET	ELEV. TOP OF TANK	AVG. EXIST GRADE @ TANK	RISER HEIGHT (INCHES)	TANK OUTLET PIPE LENGTH
14	14 FIRST STREET	183.27	22	2												
15	15 FIRST STREET	183.53	35	2						2000	182.83	182.58	184.0	185.0	12	14
16	16 FIRST STREET	185.16	16	2												
17	17 FIRST STREET	185.15	15	2												
18	18 FIRST STREET	187.63	112*	2.5						2500	184.83	184.58	186.0	187.0	12	27
19	19 FIRST STREET	191.43	15	2												
20	20 FIRST STREET	192.63	60	2.5						2000	191.13	190.88	192.30	193.3	12	21
21	21 FIRST STREET	196.12	56	2												
22	22 FIRST STREET	197.65	107*	2.5						2000	195.00	194.75	196.17	197.0	24	16
31	31 SECOND STREET	182.27	12	2												
30	30 SECOND STREET	182.33	15	2						2000	182.03	181.78	183.20	184.2	12	31
29	29 SECOND STREET	187.41	29	2												
28	28 SECOND STREET	186.89	3 (stub)	2						2000	186.83	186.58	188.00	189.0	12	36
27	27 SECOND STREET	189.15	16	2												
26	26 SECOND STREET	189.43	28	2						2000	188.83	188.58	190.00	191.0	12	45
25	25 SECOND STREET	193.77	22	2												
24	24 SECOND STREET	193.83	25	2						2000	193.33	193.08	194.50	195.5	12	43
23	23 SECOND STREET	197.73	43	2						1500	196.87	196.62	197.70	198.7		30
32	32 SECOND STREET	175.89	11	2						1500	175.67	175.42	176.5	177.5	12	26
33	33 SECOND STREET	178.13	8	2						1500	177.97	177.72	178.8	179.8	12	83
34	34 SECOND STREET	184.29	23	2												
35	35 SECOND STREET	184.51	17	4						2000	183.83	183.58	185.00	186.0	12	63
36	36 SECOND STREET	185.21	12	3						1500	184.97	184.72	185.8	186.8	12	82
38	38 SECOND STREET	186.37	16	4												
39	39 SECOND STREET	187.73	50	4						2000	185.73	185.48	186.90	187.9	12	117
40	40 SECOND STREET	193.41	56													
41	41 THIRD STREET	192.63	8	4	SMH # 1	194.00	192.29	48	2%	2000	191.33	191.08	192.50	194.0	18	17
42	42 THIRD STREET	185.37	20	2												
43	43 THIRD STREET	186.05	27	4	SMH # 2	186.90	184.97	47	2%	2000	184.03	183.78	185.20	186.2	12	18
37	37 SECOND STREET	184.05	71	5												
44	44 THIRD STREET	181.18	14	5												
45	45 THIRD STREET	181.83	27	5	SMH # 3	183.80	180.48	49	5%	2500	178.03	177.78	179.20	180.2	12	11
46	46 THIRD STREET	176.28	89*	5												
47	47 THIRD STREET	174.58	55	5						2000	171.83	171.58	173.00	174.0	12	10
48	48 THIRD STREET	173.06	65	5												
49	49 THIRD STREET	172.33	50	5						2000	169.83	169.58	171.00	172.0	12	20
64	64 THIRD STREET	189.38	31	5												
63	63 THIRD STREET	188.15	16	2						2000	187.83	187.58	189.00	190.0	12	83
62	62 THIRD STREET	179.33	25	2												

UNIT #	ADDRESS	BLDG SEWER INV	BLDG SEWER LENGTH (FT)	BLDG SEWER SLOPE (%)	SMH #	SEWER MANHOLE RIM	INVERT @ SMH	LENGTH (TO TANK) (FT)	PIPE SLOPE	TANK SIZE (GAL)	INVERT @ TANK INLET	INVERT @ TANK OUTLET	ELEV. TOP OF TANK	AVG. EXIST GRADE @ TANK	RISER HEIGHT (INCHES)	TANK OUTLET PIPE LENGTH
61	61 THIRD STREET	171.68	27	2												
60	60 THIRD STREET	170.79	27	1.7						2000	170.33	170.08	171.50	172.5	12	16
59	59 THIRD STREET	166.28	73	5												
58	58 THIRD STREET	164.73	42	5						2000	162.63	162.387	163.80	164.8	12	8
57	57 THIRD STREET	159.48	33	5												
72	72 FOURTH STREET	158.27	29	1.5						2000	157.83	157.58	159.00	160.0	12	11
71	71 FOURTH STREET	162.91	35	1.5												
70	70 FOURTH STREET	163.18	40	2						2000	162.38	162.13	163.55	164.8	15	20
69	69 FOURTH STREET	165.76	36	2												
68	68 FOURTH STREET	166.97	91*	2						2000	165.03	164.78	166.20	167.2	12	10
66	66 FOURTH STREET	183.53	15	2												
65	65 FOURTH STREET	184.88	55	3						2000	183.23	182.98	184.40	185.4	12	72
73	73 FOURTH STREET	145.55	36	2												
74	74 FOURTH STREET	146.83	15	5												
75	75 FOURTH STREET	148.73	58	5	SMH # 4	149.50	145.83	20	5%	2500	144.83	144.58	146.00	147.0	12	9
76	76 FOURTH STREET	155.29	23	2												
77	77 FOURTH STREET	165.43	12	5												
78	78 FOURTH STREET	157.73	58	5	SMH # 5	157.90	154.83	28	5%	2500	153.33	153.08	154.50	155.5	12	8
79	79 FOURTH STREET	161.73	18	5												
80	80 FOURTH STREET	165.18	87*	5						2000	160.83	160.58	162.00	163.0	12	100
1	1 CEDARFIELD (office)	179.12	23	3												
3	3 CEDARFIELD	180.71	57	4												
4	4 CEDARFIELD	178.81	25	1.5						2500	178.43	178.18	179.60	180.6	12	110
5	5 CEDARFIELD	175.25	48	4												
6	6 CEDARFIELD	174.97	41	4												
7	7 CEDARFIELD	173.83	25 (stub)	2						2500	173.33	173.08	174.50	175.5	12	145
8	8 CEDARFIELD	169.33	71	5												
9	9 CEDARFIELD	166.98	23	5												
10	10 CEDARFIELD	166.71	59	1.5						2500	165.83	165.58	167.00	168.0	12	136
51	51 CEDARFIELD	147.58	71	5												
52	52 CEDARFIELD	145.33	26	5												
53	53 CEDARFIELD	145.01	49	2						2500	144.03	143.78	145.2	146.2	12	124
54	54 CEDARFIELD	142.77	72	2												
55	55 CEDARFIELD	142.53	18	5												
56	56 CEDARFIELD	143.53	38	5	SMH # 6	144.30	141.63	6	5%	2500	141.33	141.08	142.50	143.5	12	96
F2	82 CEDARFIELD	159.93	42	5						1500	157.83	157.58	159.00	160.0	12	66
F4	84 CEDARFIELD	158.23	43	5												
F6	86 CEDARFIELD	159.73	73	5						2000	156.08	155.83	157.25	158.0	12	47

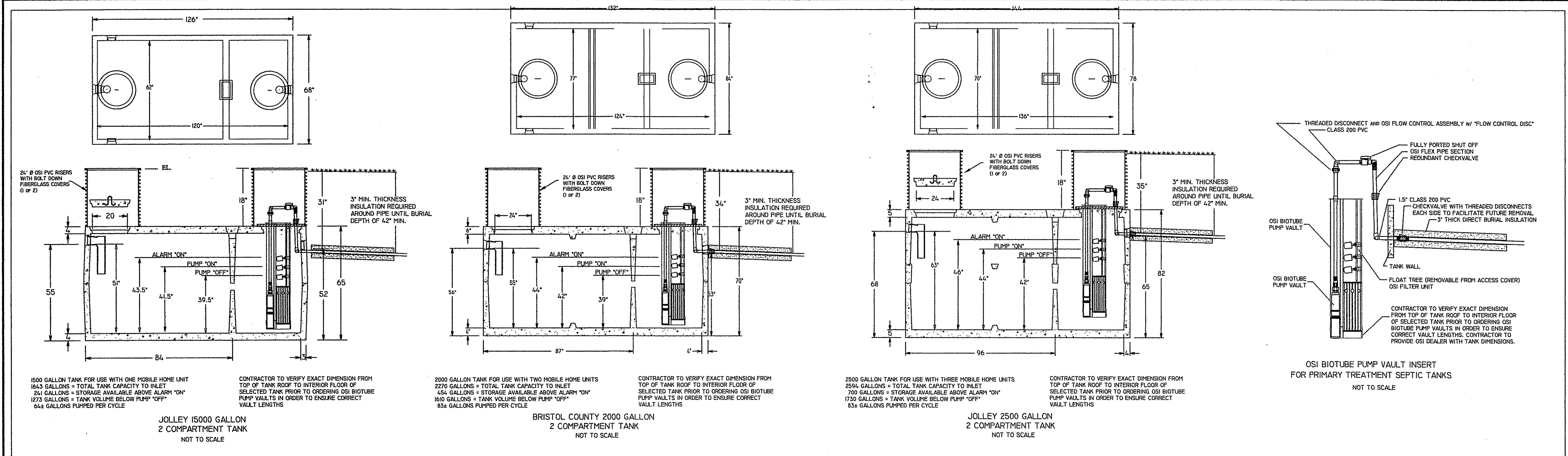
UNIT #	ADDRESS	BLDG SEWER INV	BLDG SEWER LENGTH (FT)	BLDG SEWER SLOPE (%)	SMH #	SEWER MANHOLE RIM	INVERT @ SMH	LENGTH (TO TANK) (FT)	PIPE SLOPE	TANK SIZE (GAL)	INVERT @ TANK INLET	INVERT @ TANK OUTLET	ELEV. TOP OF TANK	AVG. EXIST GRADE @ TANK	RISER HEIGHT (INCHES)	TANK OUTLET PIPE LENGTH
50	50 CEDARFIELD	152.83	120	5				46	5%							
F3	83 CEDARFIELD	150.11	34	5												
F5	85 CEDARFIELD	151.53	42	5	SMH # 7	151.25	149.43	65	4%	2500	146.83	146.58	148.00	149.0	12	53
F7	87 CEDARFIELD	154.43	52	5												
F9	89 CEDARFIELD	153.18	27	5						2000	151.83	151.58	153.00	154.0	12	39
F11	91 "F" ROAD	151.63	46	5												
F13	93 "F" ROAD	150.73	28	5						2000	149.33	149.08	150.5	151.5	12	53
F15	95 "F" ROAD	150.71	97*	4												
F17	97 "F" ROAD	148.67	46	4						2000	146.83	146.58	148.00	149.0	12	64
F19	99 "F" ROAD	146.48	29	5						1500	145.03	144.78	146.20	147.2	12	53
F21	101 "F" ROAD	145.47	41	4						1600	143.83	143.58	145.00	146.0	12	71
F26	106 "F" ROAD	135.48	93*	5												
F24	104 "F" ROAD	132.73	38	5												
F22	102 "F" ROAD	134.43	72	5						2500	129.83	130.58	129.58	131.00	132.0	124
F20	100 "F" ROAD	138.75	49	2												
F18	98 "F" ROAD	141.23	68	5												
F16	96 "F" ROAD	142.23	88*	5						2500	137.83	137.58	139.00	140.0	12	98
F14	94 "F" ROAD	147.83	34	5												
F12	92 "F" ROAD	149.33	34	5												
G9	107 "G" ROAD	147.13	20	5	SMH # 8	149.10	146.13	6	5%	2500	145.83	145.58	147.00	148.0	12	17
G10	108 "G" ROAD	144.43	46	5												
G11	109 "G" ROAD	143.43	26	5												
G12	110 "G" ROAD	145.58	69	5						2900	142.13	141.88	143.30	144.0	12	10

ELEVATION SCHEDULE OF COMBINED PRIMARY TREATMENT SEPTIC / PUMP VAULT TANKS, AND RELATED ELEVATIONS AND SLOPES OF BUILDING SEWERS, COLLECTION SEWER MANHOLES, AND DROP / CLEANOUT MANHOLES. SEE PRIMARY TANK DETAILS ON SHEET #9.

BASIS OF DESIGN:

USAGE: MOBILE HOME PARK
 MAXIMUM DAILY FLOW (per RI DEM OWTS Rule 21 for Mobile Home Units)
 23,460 GPD (102 Mobile Home Sites x 230 gal / mobile home unit)
 30 GPD (one office w/ 1/2 bath staffed by a resident on part time basis)
 23,490 GPD

PRIMARY SEPTIC



THRUST BLOCK FOR BENDS

SIZE	90° BEND	45° BEND	22 1/2° BEND	11 1/4° BEND
4"	8"	7"	8"	7"
6"	11"	10"	11"	10"
8"	15"	14"	15"	14"
10"	20"	19"	20"	19"
12"	26"	25"	26"	25"
14"	33"	32"	33"	32"
16"	40"	39"	40"	39"
18"	48"	47"	48"	47"
20"	57"	56"	57"	56"
24"	71"	70"	71"	70"
30"	91"	90"	91"	90"
36"	111"	110"	111"	110"

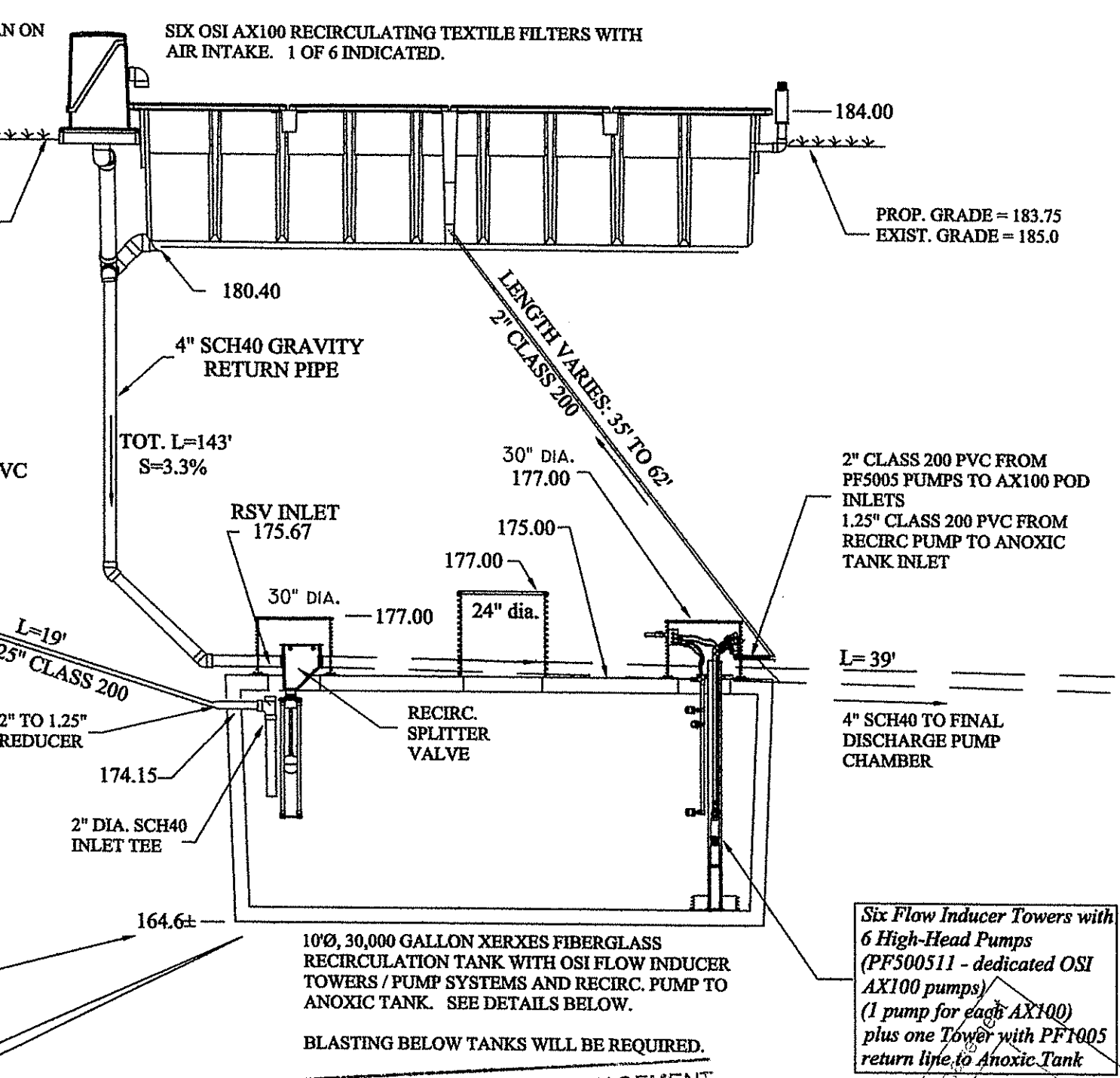
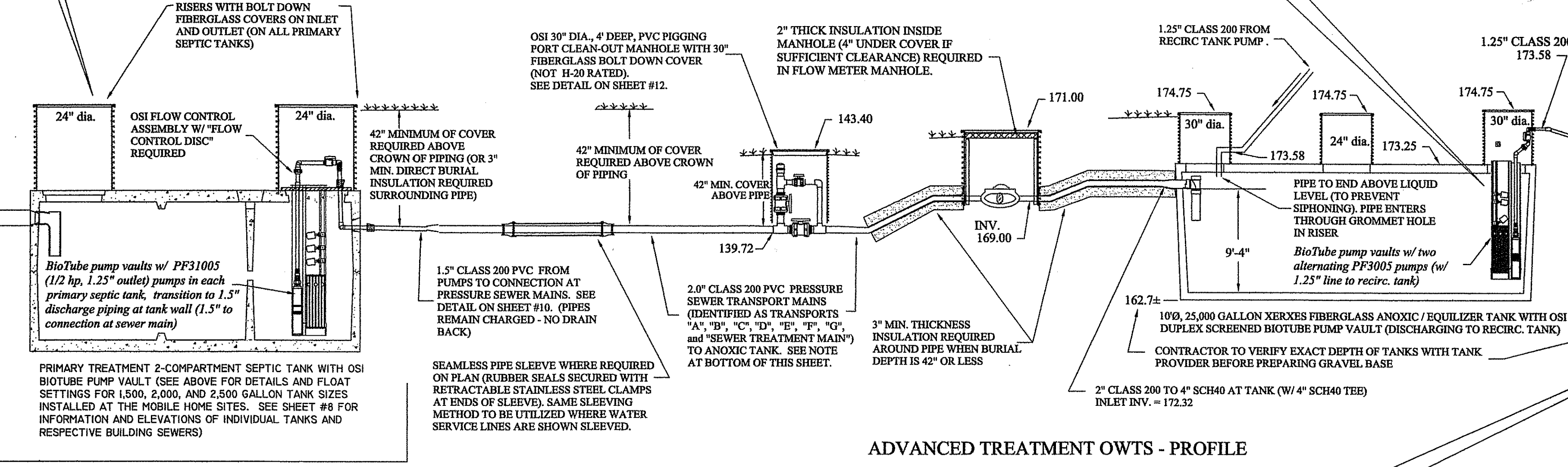
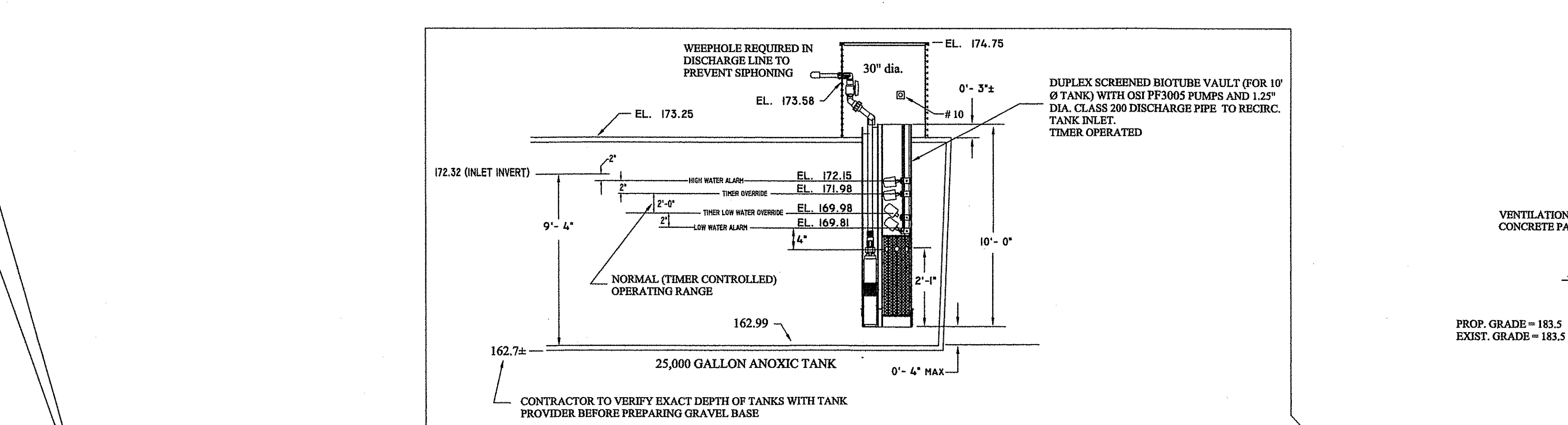
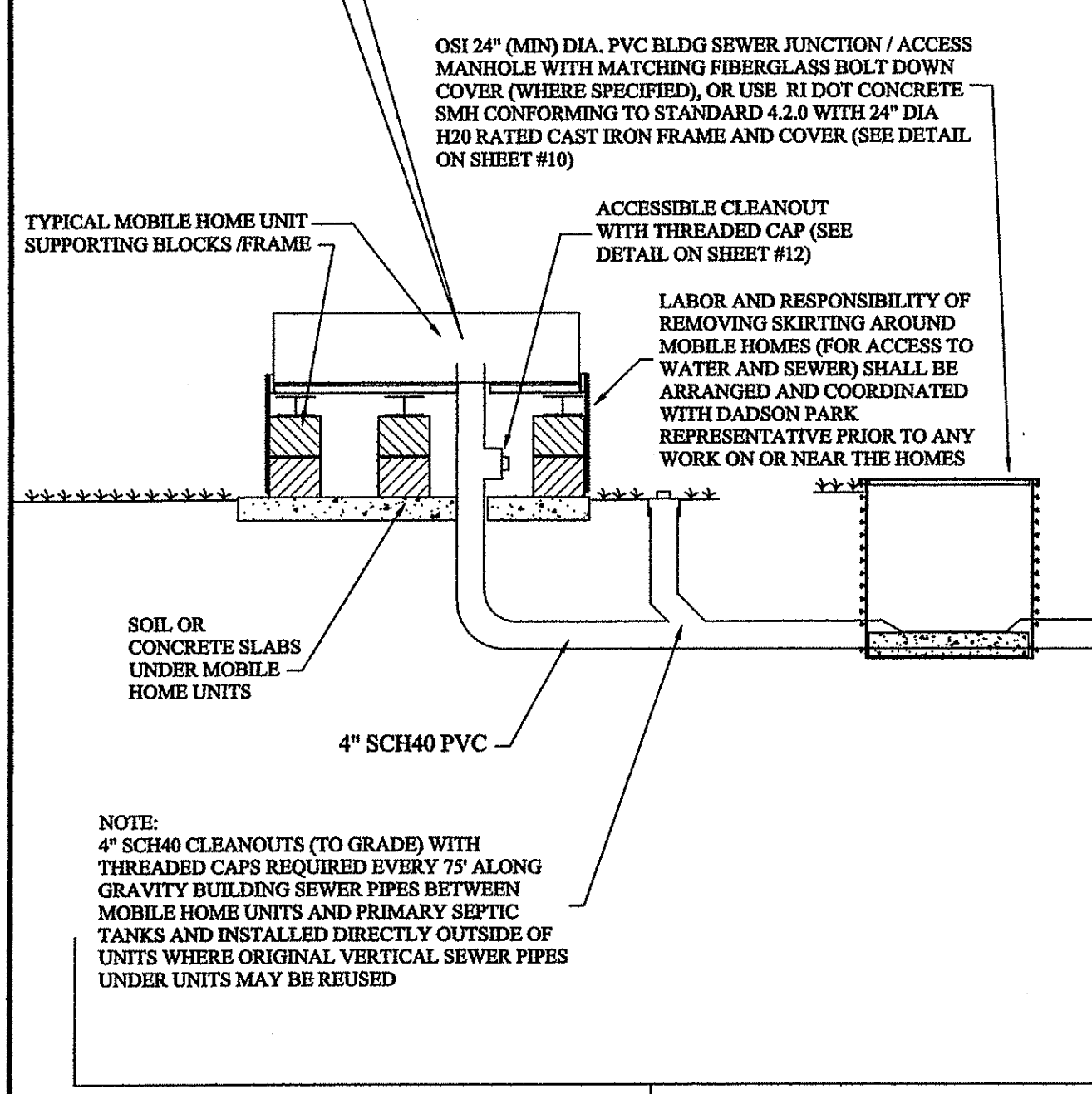
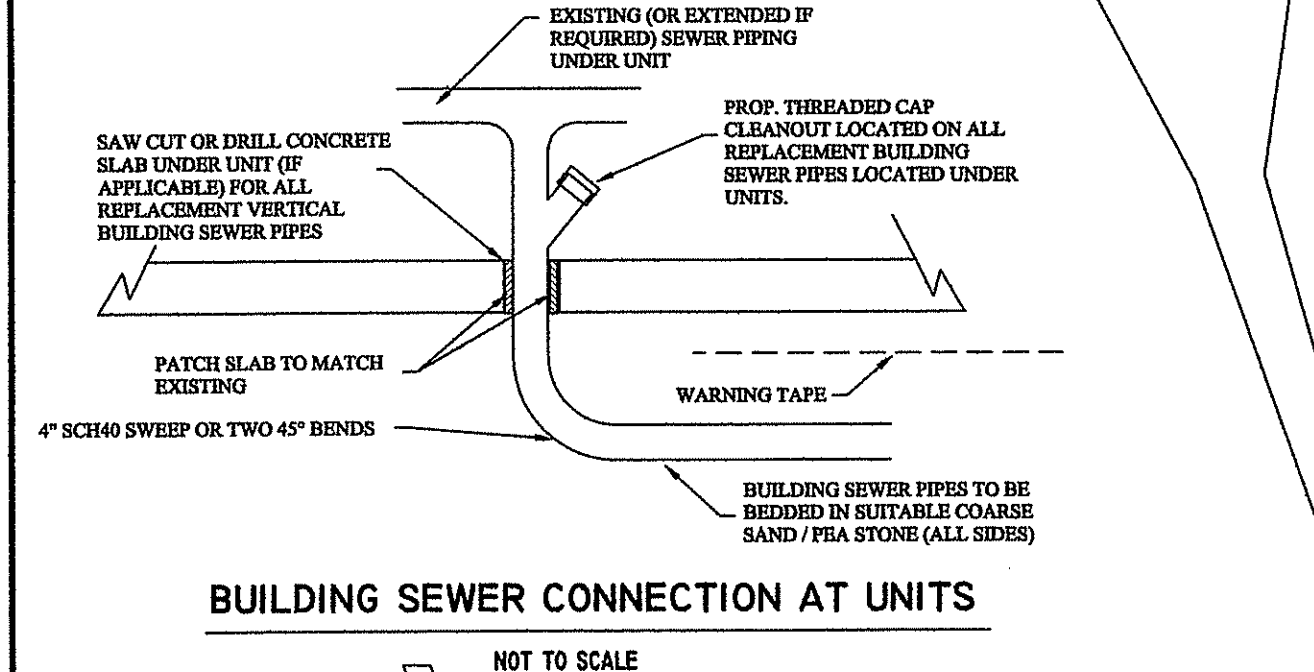
THRUST BLOCK FOR TEES

SIZE	TEE	45°
4"	8"	8"
6"	10"	10"
8"	13"	13"
10"	16"	16"
12"	20"	20"
14"	24"	24"
16"	28"	28"
18"	32"	32"
20"	36"	36"
24"	45"	45"
30"	57"	57"
36"	71"	71"

ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED SOIL.

TABLE REPRESENTS THE MINIMUM THRUST BLOCK SIZE IN GOOD SOIL. USE THE 4" SIZE CATEGORY FOR SIZING THRUST BLOCKS FOR THE 2" PRESSURE MAINS

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

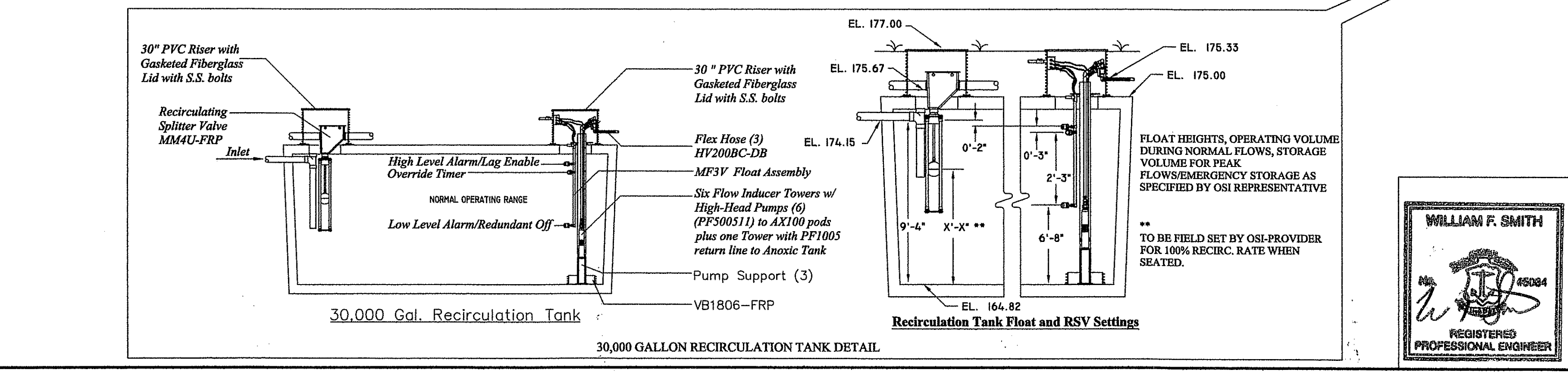


FOR INVERTS AT MOBILE HOME UNITS, RESIDENT OFFICE, INVERTS AT ANY REQUIRED BLDG. SEWER JUNCTION MANHOLES, AND PRIMARY SEPTIC TANK INLET & OUTLET INVERTS REFER TO ELEVATION SCHEDULE ATTACHED TO OWTS APPLICATION AND PUMP CURVES PACKAGE

NOTE:
2" CLASS 200 (MIN) PRESSURE SEWER MAINS TO BE BELL-AND-GASKET PIPE RATED FOR 200 PSI MIN. (WITH SUITABLE LUBRICATE USED DURING INSTALLATION). SEWER MAINS (IDENTIFIED AS TRANSPORTS "A", "B", "C", "D", "E", "F", "G", and "SEWER TREATMENT MAIN") SHALL BE TESTED FOR LEAKAGE BY CONTRACTOR (WITNESSED BY DESIGNER)

"SWEEPS" SHALL BE USED AT ALL ANGLE POINTS GREATER THAN 22.5 DEGREES.

THRUST BLOCKS AT ALL CHANGES IN DIRECTION ARE REQUIRED ON THE PRESSURE MAINS.



DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 22 2015 FILE # 15-0136
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

Signature: [Signature]

PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND

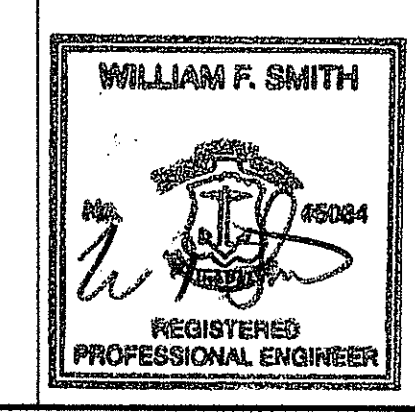
SCALE: NONE DATE: DECEMBER 29, 2014

Civil Engineering Concepts, Inc.
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NEW BEDFORD, MA 02742
(508) 990-4900

REVISIONS:
4/29/15 REVISE TANKS / PIPING / AX100 ELEVATIONS

SHEET 9 of 13 JOB#: 06-049



GENERAL CONSTRUCTION NOTES

- All construction shall conform to the State of Rhode Island and Providence Plantations Department of Environmental Management - Rules and Regulations Establishing Minimum Standards relating to location, design, construction, and maintenance of On-Site Wastewater Treatment Systems (as most recently amended), and in accordance with the Bottomless Sand Filter Guidelines Document (as most recently amended).
- All work shall be done in a workmanlike manner with lines laid as straight as possible and joints made watertight. All work shall be performed by an Installer licensed in the State of Rhode Island and certified for the installation of B.S.F. - type systems by RI DEM and the Vendor. Verification of Installer's certification will be required by the Designer prior to "start of construction" request by the Installer. Contractor is responsible for obtaining, understanding, and following the manufacturer's installation procedures.
- Designer is to be notified 72 hours prior to the start of OWTS construction. Contractor is to ensure that Designer is notified 2 working days in advance of any required inspections so proper notification to RI DEM can be made. Work shall not continue until the previous stage is inspected and approved.
- Contractor shall provide the designer with a copy of the recorded Maintenance Agreement prior to the Designer's issuance of Certificate of Construction.
- Dig-Safe notification is required prior to any excavation. Any underground utilities shown are approximate only and are based on limited availability of plans, visual observation, and local knowledge. There are underground electric, tel, and cable on the property. Actual locations are to be verified by the Contractor prior to excavation through Dig-Safe procedures, any local utility departments (as necessary), and private utility locating company (if required due to the existence of underground utilities that may not be marked through "Dig-Safe").
- Area to be utilized for the B.S.F.'s shall remain clear of all vehicles, equipment, and stockpiled materials. Contractor shall delineate the B.S.F. area with caution tape to restrict access. Compaction or smearing of native soil will compromise the operation of the B.S.F. and is not permitted.
- Proper size hole saws, in good conditions, are to be used for the installation of conduit / piping grommets. Refer to, and follow, required hole sizes specified in manufacturer's installation documentation. The use of incorrectly sized hole saw will result in improperly seated grommets and is not permitted. Any conduit / piping installed into polyethylene riser or tank that is not watertight will not be approved by the Designer.
- Contractor shall confirm with Dadson's Association Representative (prior to any site activity) the extent of bushes, landscaping, fences, ornamental decorations, etc that are to be removed by Contractor vs removal by the unit owners as well as those items that are to be reinstalled by the contractor.

EXISTING SEPTIC SYSTEMS:

- Existing tanks shall be pumped empty and filled with clean soil with roofs collapsed or the tanks shall be removed and disposed of in accordance with RI DOH and RI DEM requirements.
- Existing leaching areas shall be abandoned in place. Any distribution box covers to grade shall have the D-box pumped, the box collapsed, and backfilled with clean soil (4" loam min.).
- Existing building sewer pipes (that are to be abandoned) located under the units and extending vertically through the slabs (or soil) shall be capped off as soon as the plumbing is connected to the new building sewer pipes.
- Contractor shall coordinate with Dadson's Association Representative the removal of any sections of trim / facade between the bottom of the units and ground that may be required to access the plumbing.

INDIVIDUAL PRIMARY TREATMENT SEPTIC / BIOTUBE PUMP VAULT TANKS: Gallonage as specified on Details

- Tanks shall be concrete H-10 rated with all joints 100% watertight, sealed with suitable gasket material. RI DEM approved poly / fiberglass tanks may be used only with Designer's approval after reviewing tank documentation to be provided by Contractor.
- Tanks shall be manufactured with OSI compatible mounting flanges molded in (to receive watertight OSI PVC riser assemblies).
- Tanks shall have flexible seals at the inlets capable of receiving the specified bldg. sewer pipe diameters. Contractor is responsible for ordering tanks with suitable inlet and outlet flexible pipe connectors with stainless steel retractable clamps.

MANHOLES FOR BLDG. SEWER PIPING, CLEANOUTS, OR FLOW METER:

- Any specified manholes shall utilize OSI manhole / bolt down cover assemblies. The use of mismatched bolt down covers requiring an assortment of removal tools is not permitted.
- Any alternate manhole structures shall be 100% waterproof and be fitted with a suitable, full diameter bolt down cover.

SEWER PIPING:

- All gravity piping from the mobile home units to sewer junction manholes and primary septic tanks shall be 4" SCH40 PVC. Gravity piping interconnecting the advanced treatment components shall be SCH40 pipe of the diameters specified, with the exception of the gravity return lines from the B.S.F.'s which may be SDR35.
- All pressure piping from primary septic tank Biotube pump vault outlets to pressure mains shall be 1.5" dia. Class 200 pressure rated PVC with pressure rated fittings. All pressure sewer mains (identified as transport "A", "B", "C", "D", "E", "F", "G", and "SEWER TREATMENT MAIN" shall be 2" dia. Class 200 pressure rated PVC pipe with pressure rated fittings. Contractor shall test all mains for leakage (to be witnessed by designer). All the pressure mains shall be Class 200 rated minimum.

SLEEVING:

- All indicated sleeving shall consist of seamless PVC pipe that extends 10' in each direction beyond the sewer or water pipe being crossed, or shall extend 25' in each direction beyond a storm drain being crossed. The sleeve shall be attached at each end by a rubber seal secured with stainless steel clamps. Sleeve shall be sufficiently sized to fit over any couplings on the encased pipe.

XERXES FIBERGLASS GREASE TRAP, PROCESSING TANK, AND RECIRCULATION TANK: Gallonage as specified on Details

- Tanks shall be factory equipped with suitable pipe penetration fittings for all designated inlet locations and pipe sizes. Static water test required on the tank following installation if tank manufacturer certified water tightness report is not provided.
- Manufacturer - provided, or matching Orenco, risers shall be used. Riser manufacturer watertight bonding epoxy (or other proper adhesive) required between tank adapters and risers. Final loam placement (elevation) shall be at least 1" below the access covers and graded away from the tanks to prevent surface water from ponding on and entering the covers.
- Manufacturer's mounting hardware shall be utilized. All materials and construction shall meet the manufacturer requirements and applicable building, plumbing, electrical, and safety codes. Third party or alternate generic parts requiring substantial field modifications to fit shall not be permitted.
- Contractor shall verify with Xerxes provider the exact exterior dimensions of the tanks prior to excavating and preparing gravel bedding.
- Anti-buoyancy devices shall be provided or approved by the Xerxes provider. Cabling tie-downs shall be in compliance with Xerxes installation procedures.

ADVANTEK AX100 RECIRCULATING TEXTILE FILTER PODS: (3 required)

- The AX pods shall be laid level on a 5" (min) thick bed of compacted sand/gravel.
- Proper compaction of well-drained granular material under, and along the side, is necessary to ensure the pods will not float.
- Hand compaction of backfilled material around the AX pods and related piping is required to prevent damage to the pods and small diameter piping.
- All pressure piping connected to the AX unit shall be Class 200 PVC pressure rated piping with pressure rated fitting (no DWV-type fitting permitted).
- The Passive Air Vent shall be located within 4' of the AX pods.

B.S.F. (FINAL DISCHARGE) PUMP CHAMBER:

- Suitable OSI screened pump vault may be used inside tank in place of the indicated pump towers.
- Three sets of discharge pumps, towers assemblies, wiring/piping required. Each B.S.F. has a dedicated pump tower/pumping system. The triplex pump system shall alternate from the control panel.
- A high pressure, flow control, OSI Gate Valve shall be installed on each Distribution Valve inlet pressure line (in the D-Valve manholes) to adjust B.S.F.#1 and B.S.F.#2 flows to match the flow (and distal head) in B.S.F.#3 in order to provide uniform distribution to the B.S.F.'s (see detail on sheet #11).
- Pressure line from final discharge pump chamber shall be insulated where earth cover is less than 4' above the pipe. See detail this sheet.
- Two 1.5" dia SDR35 drain line connections into the outlet end of the pump chamber are required. The 1.5" drain return lines shall be equipped with a 90-degree bend directing the return flow downward to prevent impacting the floats. See Final Discharge Pump Chamber details on this sheet.
- All pressure piping shall be Class 200 PVC pressure piping (with pressure rated fittings). Transport pipe between pump chamber and Distribution Valve shall be installed a minimum of 4' below grade (see pump chamber detail for pressure line outlet requirements). 4 cu. ft. (min) thrust blocks required at all angle points.
- B.S.F. pump(s) shall be as specified. Any pump substitution shall require the Designer's review of the substitute pump specifications and pump curve.
- B.S.F. pump calculations input data/pump curve is provided on attachment with application.

B.S.F. PUMP SYSTEM: (continued)

- For additional pump information, see details contained within this plan, accompanying documentation and manufacturers published information provided at the time of pump purchase. The information contained within this plan is intended to provide schematic requirements only. Actual manufacturer's shop drawings are to be coordinated with the component supplier, including all accessories such as alarms, floats, etc. that are compatible with the pumps. Odd components requiring extensive modification to the system are not permitted.
- Three 6-zone OSI Distribution Valves (with air release) are utilized. Plumbing is configured to allow for effluent in the piping downstream of the D-Valve to drain back (via D-valve drain-down connectors on each outlet line) to the pump chamber via 2" SDR35 (or SCH40) PVC. The transport pipes preceding the D-Valves remains charged due to the length. Insulation, sand bedding, and suitable burial depth is required to ensure the Transport lines will not freeze.

ELECTRICAL, CONTROLS, ALARM PANELS: w/ telephone line remote telemetry connection

- A sign shall be posted in the vicinity of pump manholes warning of the potential of hazardous sewer gases and the need for proper confined space entry, venting, and air monitoring prior to working on the pump assembly.
- A Telemetry system is required for monitoring the secondary treatment various pumps and controls (telemetry is not required for the individual primary tanks located at the mobile home units).
- Control Panels shall be pump-matched NEMA-4 rated units conforming to RI DEM requirements relative to pump power and alarm circuits and conform to applicable local/state electrical regulations.
- Primary Tank Biotube pumps / alarms shall be individually controlled by a matching control / alarm panel. Electrical power shall be provided by separate electric service meter / panel typically used for mobile home units (electrical shall not be connected to the individual residential electric services). Exterior meter / panel shall conform to all applicable electrical / building code requirements.
- Meter / panel sizing, wiring gauges, and conduit sizes shall be determined by a licensed Electrician. Biotube vaults shall not be electrically connected to the mobile home units (with the exception of the "Office"). Electrical installation shall conform to all applicable local / state regulations.
- A separate meter shall be located at the end of Cedarfield Road (start of 45' access road path) for servicing the various pumps and controls located in the fenced in area encompassing the B.S.F.'s. Contractor shall coordinate with National Grid.
- Electrical wiring is to be encased in suitable conduit with proper fittings at each end to maintain a waterproof connection and prevent transport of vapors/gas from the components to the control / alarm panels and / or buildings.
- Pump systems / alarms associated with the Anoxic Tank, recirc. Tank, and Discharge Pump Chamber Tank shall be serviced by a dedicated meter / panel located within the B.S.F. fence enclosure. Meter / panel shall be equipped with a weather protected 120v service outlet. Contractor shall coordinate with National Grid.

BOTTOMLESS SAND FILTER (B.S.F.): three B.S.F.'s are utilized

- A start up test of the AX pumping system, the B.S.F. pumping system, and the pressure (head) testing of the B.S.F. laterals is required to be performed by the Installer / Maintenance provider and witnessed by the Designer. Any subsequent electrical work shall include the Electrician's verification to the Maintenance provider that the electricity is properly restored to the Control Panel.
- B.S.F. shall be constructed as shown with materials as specified in the details. Installation of a 4" dia. perforated (filter fabric wrapped) inspection well is required.
- Sand media material shall conform to ASTM C33 sand (sieve) requirements with less than 1% fines passing number 200 sieve. Bank run sand or conventional OWTS sand/gravel is not permitted. Designer will require sieve analysis from sand supplier within 3 days prior to sand delivery.
- Manifold: dia. as specified on detail and shall be Class 200 PVC. All fittings shall be pressure rated (DWV fittings not recommended).
- Distribution lateral: dia. specified on detail and shall be Class 200 PVC with 1/8" orifice holes (drilled with a new bit) and fitted slotted cold weather orifice shields spaced at intervals specified. Laterals shall be laid level. Distal ends of laterals shall be equipped with a 45-degree elbow and 1" threaded female end cap. Sweep elbows extending to the surface are not to be installed on ends. All fittings shall be pressure rated (DWV fittings not acceptable).
- Leaching area excavation shall be level and scarified as shown on B.S.F. cross-section detail. Care shall be taken to avoid compaction of remaining soil. Excavation of native material below the Prepared native soil surface (bottom inspection) shall be inspected by the Designer prior to placement of the 6" thick layer of sand / soil mix.
- Above ground B.S.F. support framing shall consist of 6" x 6" pressure treated timbers drilled and pinned to the soil with #3 or #4 rebar and screwed/nailed together at the corners and joints. Below ground construction shall utilize 1/2" min. thickness P.T. plywood in place of timbers. 30 ml. liner shall be placed inside timbers and plywood. Vertical 4" x 4" timbers (to support 6" x 6" frame) required with three at each corner and one every 10' on center (max).
- Where more than two courses of 6" x 6" timbers are exposed, 1/2" dia. threaded galvanized rod(s) with 2" dia. galvanized washers and nuts shall be installed in the second timber down from the top (to support timbers from bowing out), evenly placed along the length of B.S.F. (approximately 12' o.c.).
- Trees or shrubs shall not be planted within 10' of the B.S.F.
- Heavy equipment shall not be operated over the components or the prepared leaching area during installation. Rubber tired machinery is not to be driven over the prepared natural soil base or sand / stone bed during system installation.
- B.S.F. is not to be covered with topsoil or any other type of cover material that will restrict air flow. Any accumulated weeds, grass, or foreign material on the filter shall be removed by hand labor. Pea gravel surface must remain fully exposed to atmosphere.
- All existing or proposed (if any) wells within 200' of proposed OWTS are shown. The Mobile Home Park is serviced by Town water.
- All existing or proposed (if any) public wells within 500' of proposed OWTS are shown.
- No ungraduated drains allowed within 25' of proposed OWTS. No downgradient drains allowed within 50' of leaching area or within 25' of other OWTS component. Refer to RI Department of Environmental Management - Rules Establishing Minimum Standards Relating to Location, Design, Construction, and Maintenance of On-site Wastewater Treatment Systems, Table 22.1 Minimum Setback Distances.
- Property lines as depicted on this plan are approximate only based on Assessor Tax Maps and are not the result of a boundary survey.
- For proper operation, all Primary Septic Tanks shall be inspected annually for the first three years to determine a suitable pump out frequency.
- The Anoxic tank and Recirc. Tank are inspected as part of the OSI O & M procedure. The O & M provider shall notify the owner when those tanks requires pumping.
- A manufacturer-approved maintenance contract for the advanced treatment system is required to be filed in the Tiverton Town Hall Land Evidence records office. Contract must be kept current as a condition of approval.

REPLACEMENT OF WATER LINES:

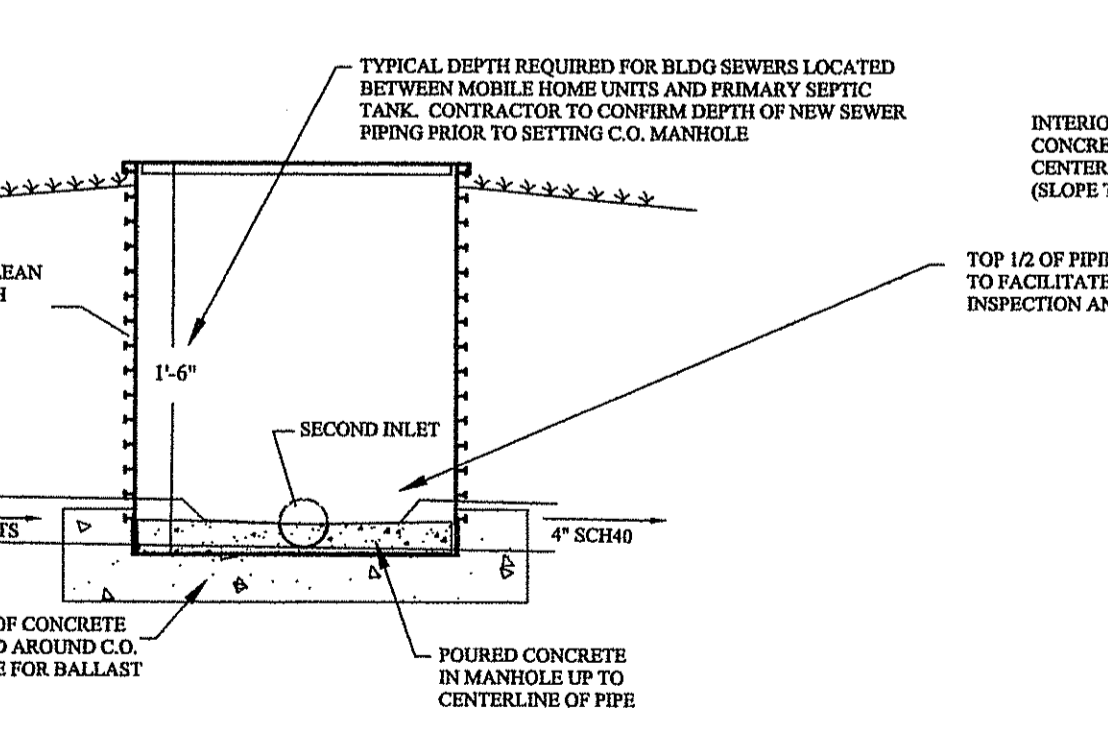
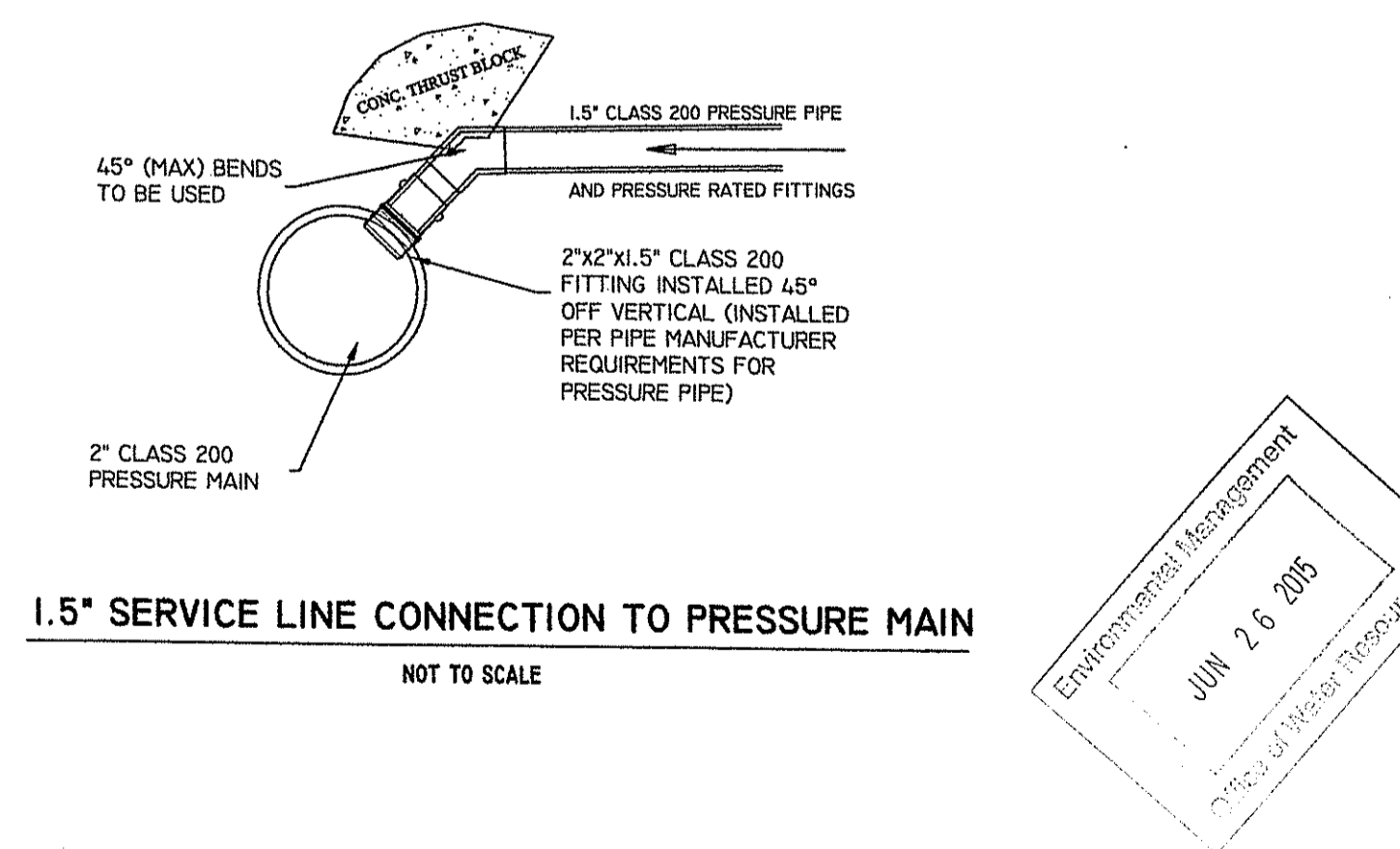
- A new water main is required to be installed and connected to the Bulgarmarsh Road (State Route 177) water main.
- The Contractor shall obtain all necessary permits for the pavement out, water main installation, and backfilling / compaction / asphaltting.
- Any required police detail or flaggers are the responsibility of the Contractor.
- The Contractor shall coordinate all necessary inspections, chlorinating, and testing of the new water piping system and hydrants.
- The Contractor shall provide 48 hour notification to the Designer for scheduling an as-built survey of the various stages of the water system installation.
- Temporary potable water lines along Cedarfield Road will be required to ensure continuous water service to units during installation of replacement water mains and water service lines.

EROSION CONTROL NOTES:

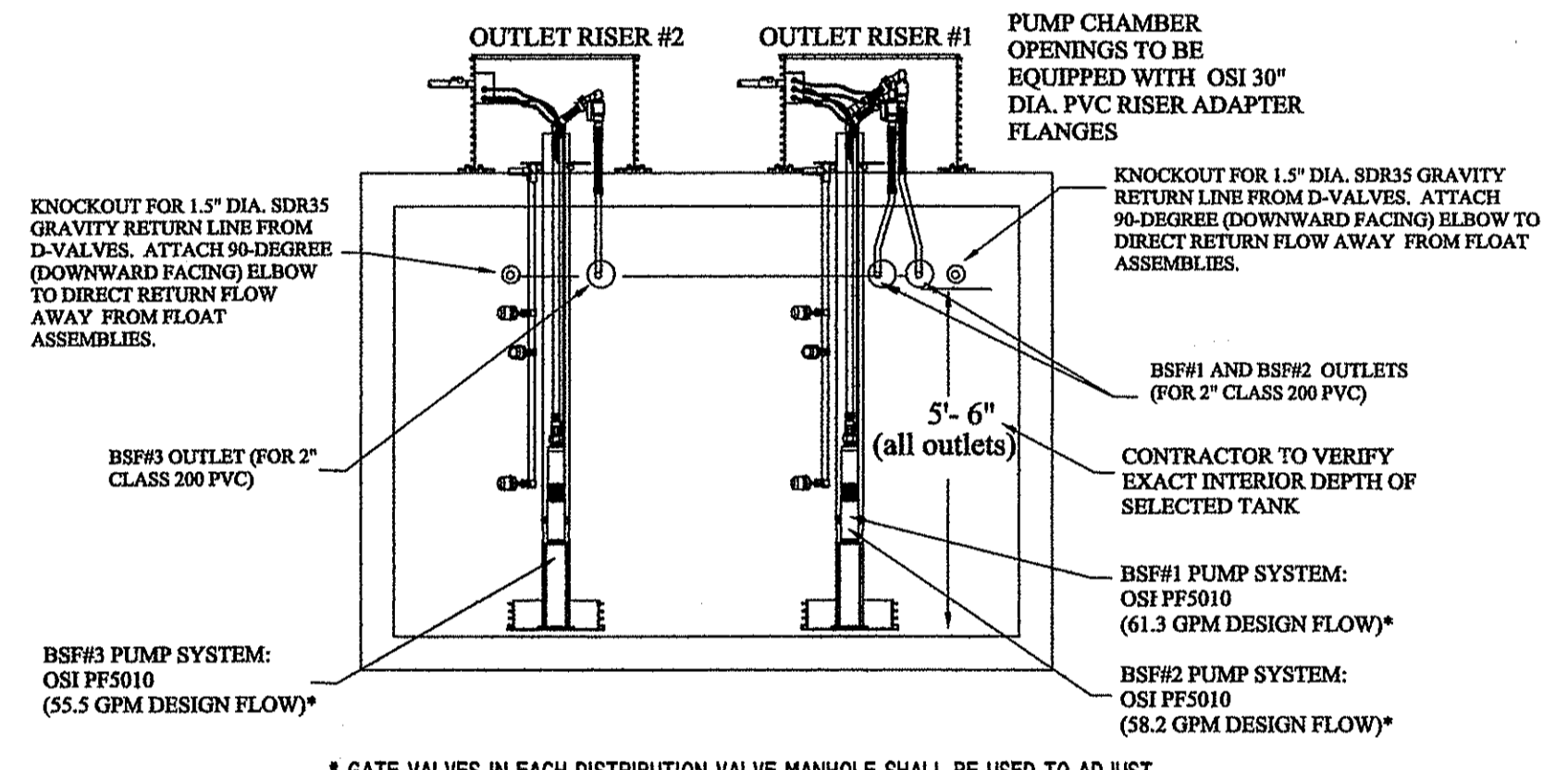
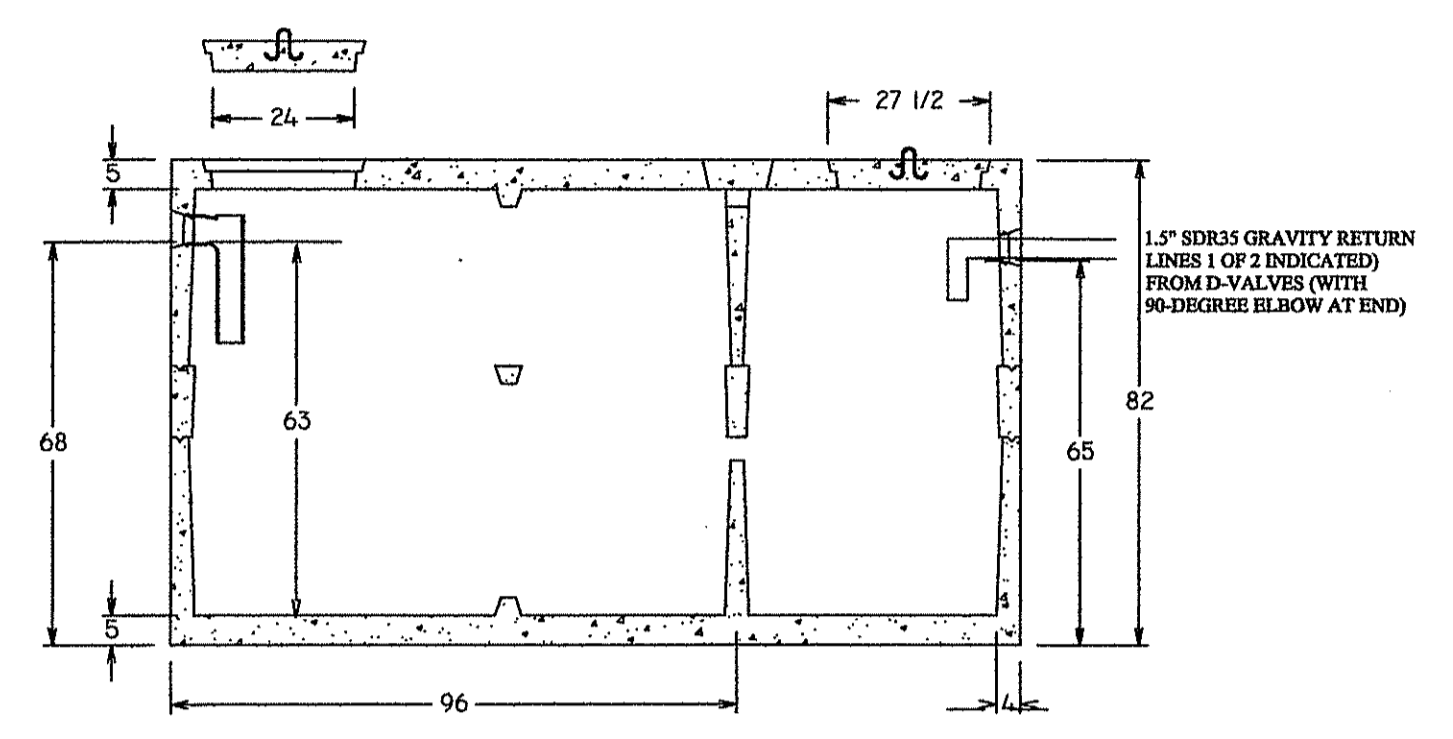
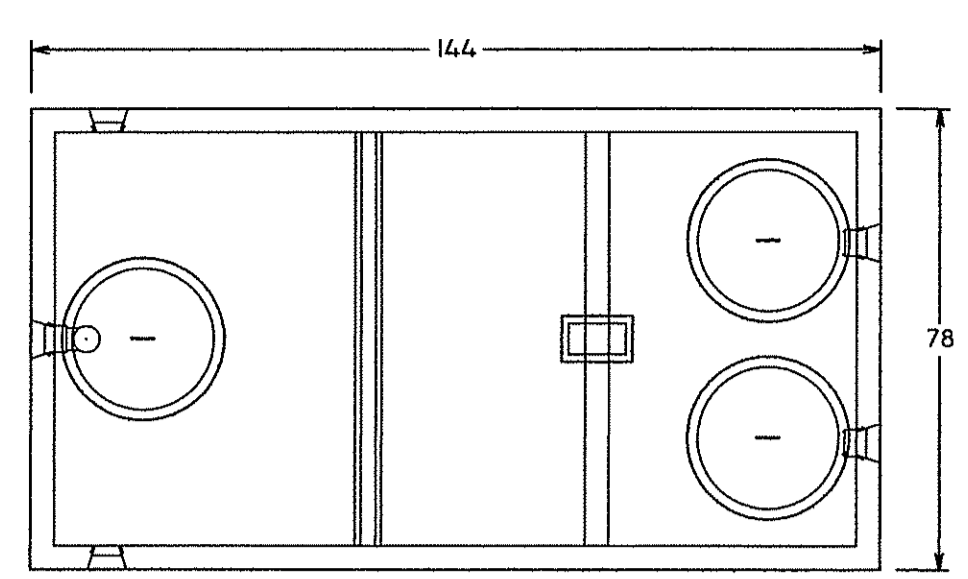
- Any silt fencing or haybale lines are to be installed, as shown on the site plan, prior to any activity. They are to remain in place and be maintained until all activities are completed and area has been loamed, seeded and vegetation is established.
- Any substantial silt accumulation against the haybales / silt fence is to be removed by hand labor.
- All construction litter and debris is to be removed from the vicinity of the silt fence or haybale line daily.
- No fueling of construction vehicles / equipment permitted within 100' of Wetlands.

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

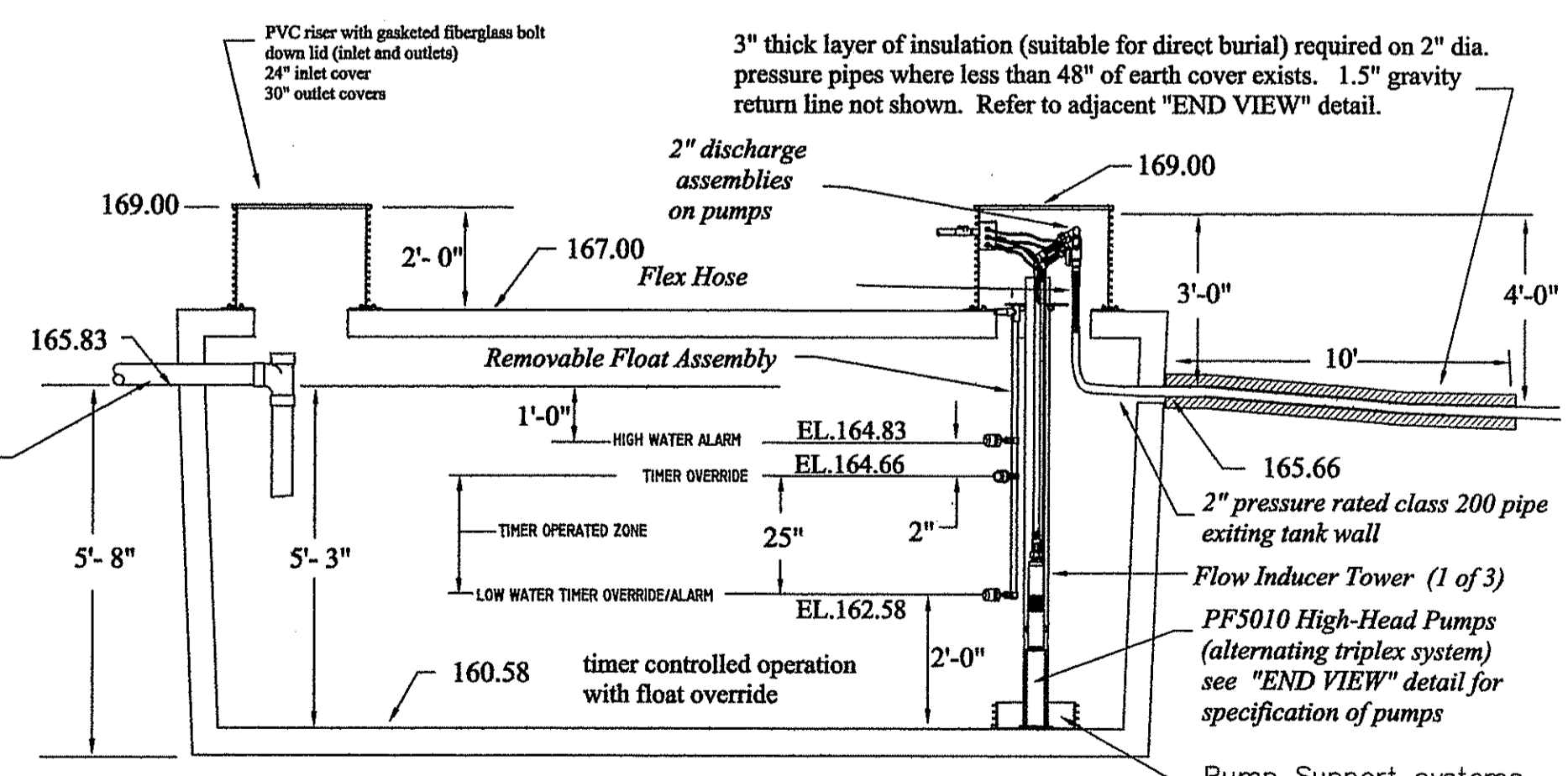
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 23 2015 FILE # 15-0136
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE



JUNCTION / ACCESS MANHOLE DETAIL FOR MULTIPLE BLDG. SEWER CONNECTIONS (BETWEEN MOBILE HOME AND PRIMARY TANK)
NOT TO SCALE



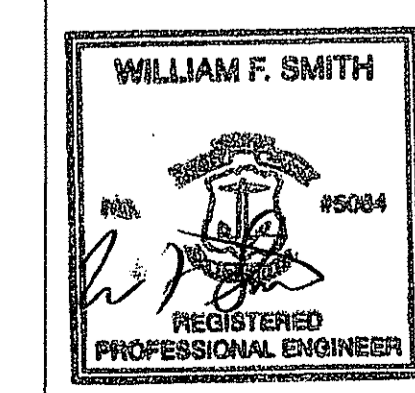
* GATE VALVES IN EACH DISTRIBUTION VALVE MANHOLE SHALL BE USED TO ADJUST BSF#1 AND BSF#2 FLOWS TO MATCH BSF#3 IN ORDER TO PROVIDE EQUAL DISTRIBUTION
END VIEW



2,500 GAL. CONCRETE FINAL DISCHARGE (BSF) PUMP CHAMBER TANK
Scale: NTS

NOTE: DISCHARGE PUMP CHAMBER FLOAT SETTINGS AND VOLUMES BASED ON DIMENSIONS OF JOLLY PRECAST 2500 GALLON TANK. CONTRACTOR SHALL CONSULT WITH DESIGNER ON FLOAT SETTINGS FOR ANY ALTERNATIVE 2500 GALLON TANK

BSF (FINAL DISCHARGE) PUMP CHAMBER DETAIL
NOT TO SCALE



4/29/15	REVISE PUMP CHAMBER ELEVATIONS,
	DISCHARGE PIPING
REVISIONS:	

PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND
SCALE: NONE DATE: DECEMBER 29, 2014

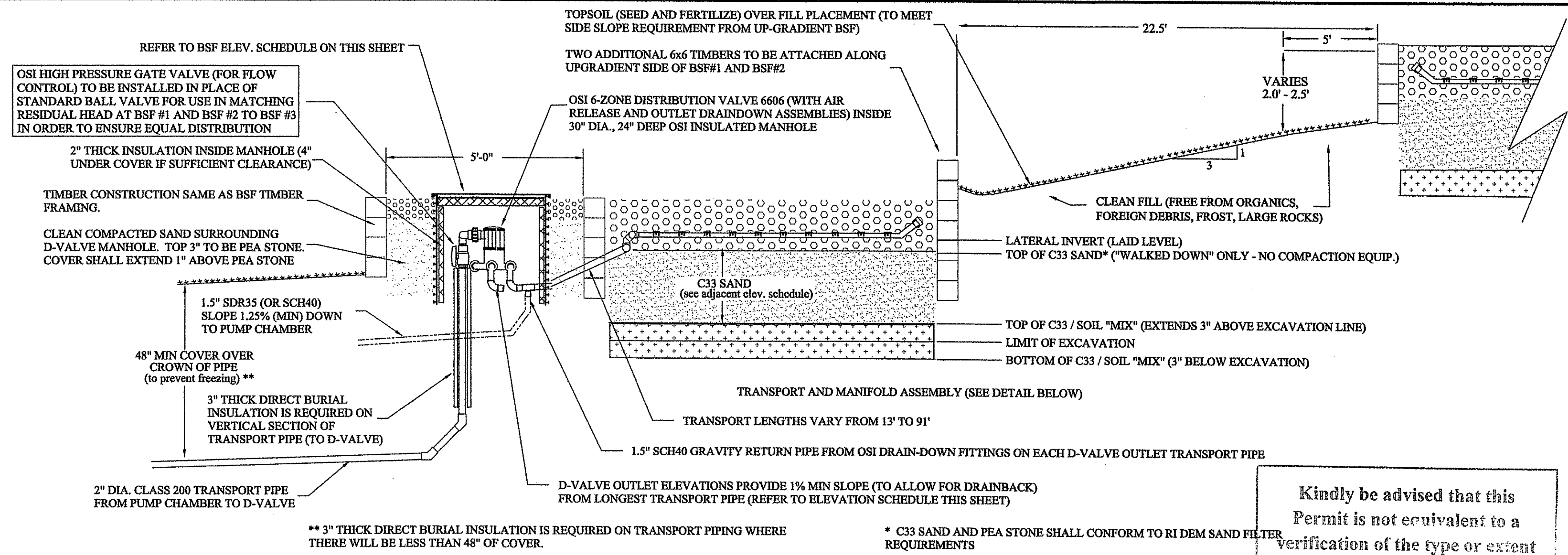
Civil Engineering Concepts, Inc.
34A MAIN STREET P.O. BOX 5325
LITTLE COMPTON, RI 02837 NEW BEDFORD, MA 02742
PH: (401) 592-0177 NEW BEDFORD, MA 02742
FAX: (401) 592-0178 (508) 990-4900
EMAIL: wsmithce@aol.com

SHEET 10 OF 13 JOB#: 06-049

BSF #1	BSF #2	BSF #3
166.0 = EXIST. GRADE	174.0 = EXIST. GRADE	181.0 = EXIST. GRADE
162.00 = WATER TABLE	171.00 = WATER TABLE	178.00 = WATER TABLE
162.00 = LEDGE	171.00 = LEDGE	178.00 = LEDGE
170.00 = TOP OF TIMBERS (HIGH SIDE)	178.50 = TOP OF TIMBERS (HIGH SIDE)	185.00 = TOP OF TIMBERS (ALL FOUR SIDES)
169.50 = FIN. GRADE ON UP-GRAIDENT SIDE (MAX.)	177.50 = FIN. GRADE ON UP-GRAIDENT SIDE	183.00 = FIN. GRADE AT DOWN-GRADIENT TIMBERS
169.50 = TOP OF TIMBERS (LOW SIDE)	178.00 = TOP OF TIMBERS (LOW SIDE)	182.50 = FIN. GRADE 5' HORIZONTALLY FROM TIMBERS (DOWN-GRADIENT SIDE)
167.50 = FIN. GRADE AT DOWN-GRADIENT TIMBERS	176.00 = FIN. GRADE AT DOWN-GRADIENT TIMBERS	184.50 = INV. LATERALS
166.75 = FIN. GRADE 5' HORIZONTALLY FROM DOWN-GRADIENT TIMBERS	175.50 = FIN. GRADE 5' HORIZONTALLY FROM DOWN-GRADIENT TIMBERS	184.25 = TOP OF C33 SAND *** (3' H2O SEPARATION + 3.25' H2O MOUNDING)
169.50 = TOP OF PEA STONE	178.00 = TOP OF PEA STONE	180.50 = BOTTOM OF C33 SAND
169.00 = INV. LATERALS	177.50 = INV. LATERALS	180.25 = BOTTOM OF EXCAVATION
168.75 = TOP OF C33 SAND * (3' H2O SEPARATION + 3.25' H2O MOUNDING)	177.25 = TOP OF C33 SAND ** (3' H2O SEPARATION + 3.25' H2O MOUNDING)	180.00 = BOTTOM OF C33 / NATIVE SOIL MIX
165.75 = BOTTOM OF C33 SAND	173.50 = BOTTOM OF C33 SAND	184.00 = TOP OF D-VALVE MANHOLE / TOP OF SURROUNDING PEA STONE
165.50 = BOTTOM OF EXCAVATION	173.25 = BOTTOM OF EXCAVATION	184.00 = TOP OF TIMBERS SURROUNDING D-VALVE
165.25 = BOTTOM OF C33 / NATIVE SOIL MIX	173.00 = BOTTOM OF C33 / NATIVE SOIL MIX	178.50 = D-VALVE INLET INVERT - HORIZONTAL SECTION (4' BURIAL DEPTH)
169.75 = TOP OF D-VALVE MANHOLE / TOP OF SURROUNDING PEA STONE	177.25 = TOP OF D-VALVE MANHOLE / TOP OF SURROUNDING PEA STONE	182.00 = D-VALVE OUTLET INVERTS
170.25 = TOP OF TIMBERS SURROUNDING D-VALVE	177.25 = TOP OF TIMBERS SURROUNDING D-VALVE	
165.25 = D-VALVE INLET INVERT - HORIZONTAL SECTION (4' BURIAL DEPTH REQ'D)	171.50 = D-VALVE INLET INVERT - HORIZONTAL SECTION (4' BURIAL DEPTH REQ'D)	
167.75 = D-VALVE OUTLET INVERTS	175.25 = D-VALVE OUTLET INVERTS	

* NOTE: BSF #1 REQUIRES 36" OF C33 SAND
 ** NOTE: BSF #2 REQUIRES 45" OF C33 SAND
 *** NOTE: BSF #3 REQUIRES 45" OF C33 SAND

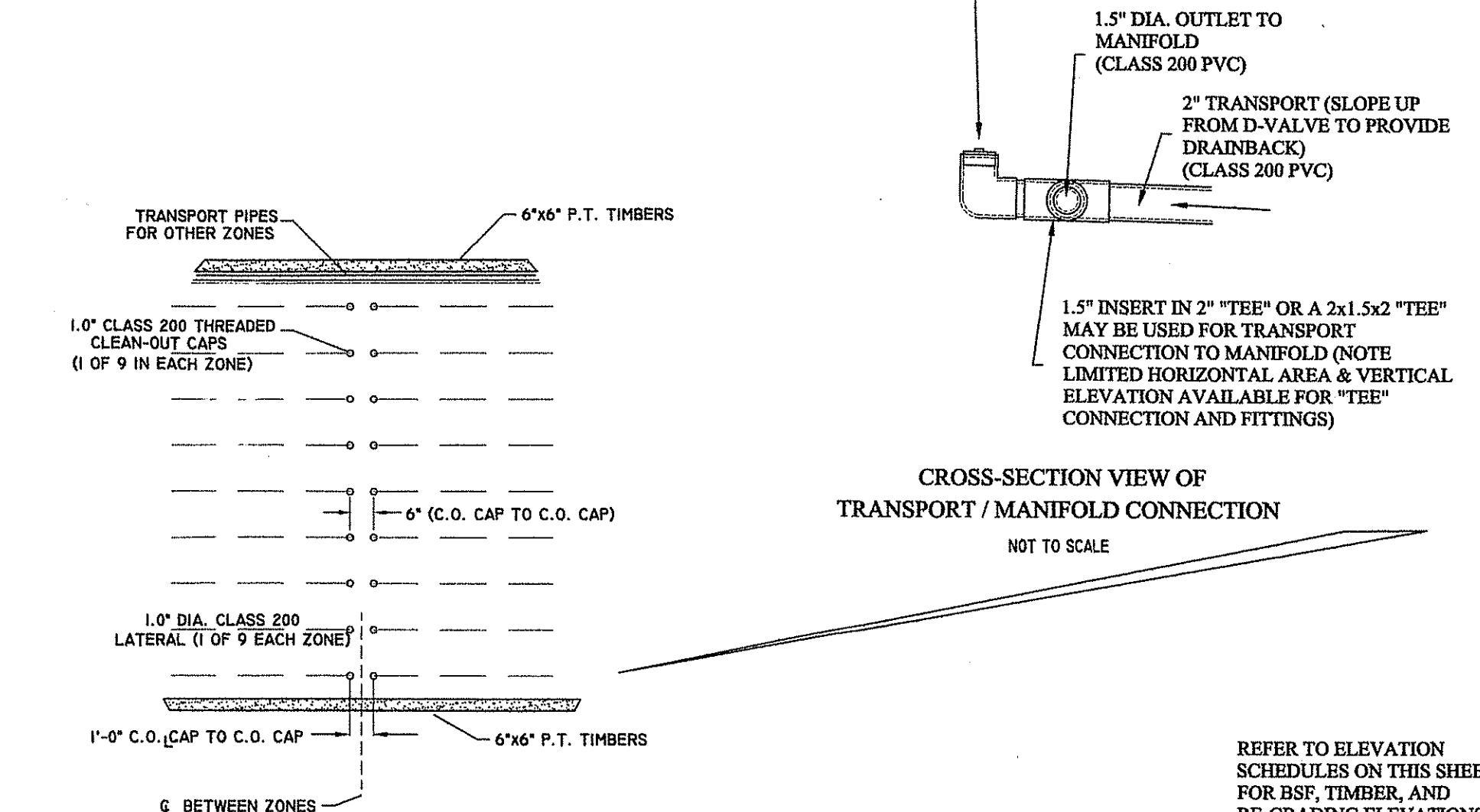
ELEVATION SCHEDULE OF BOTTOMLESS SAND FILTERS (REFER TO TREATMENT TANKS PROFILE AND BSF PUMP CHAMBER DETAIL PROFILE FOR TANKAGE ELEVATIONS)



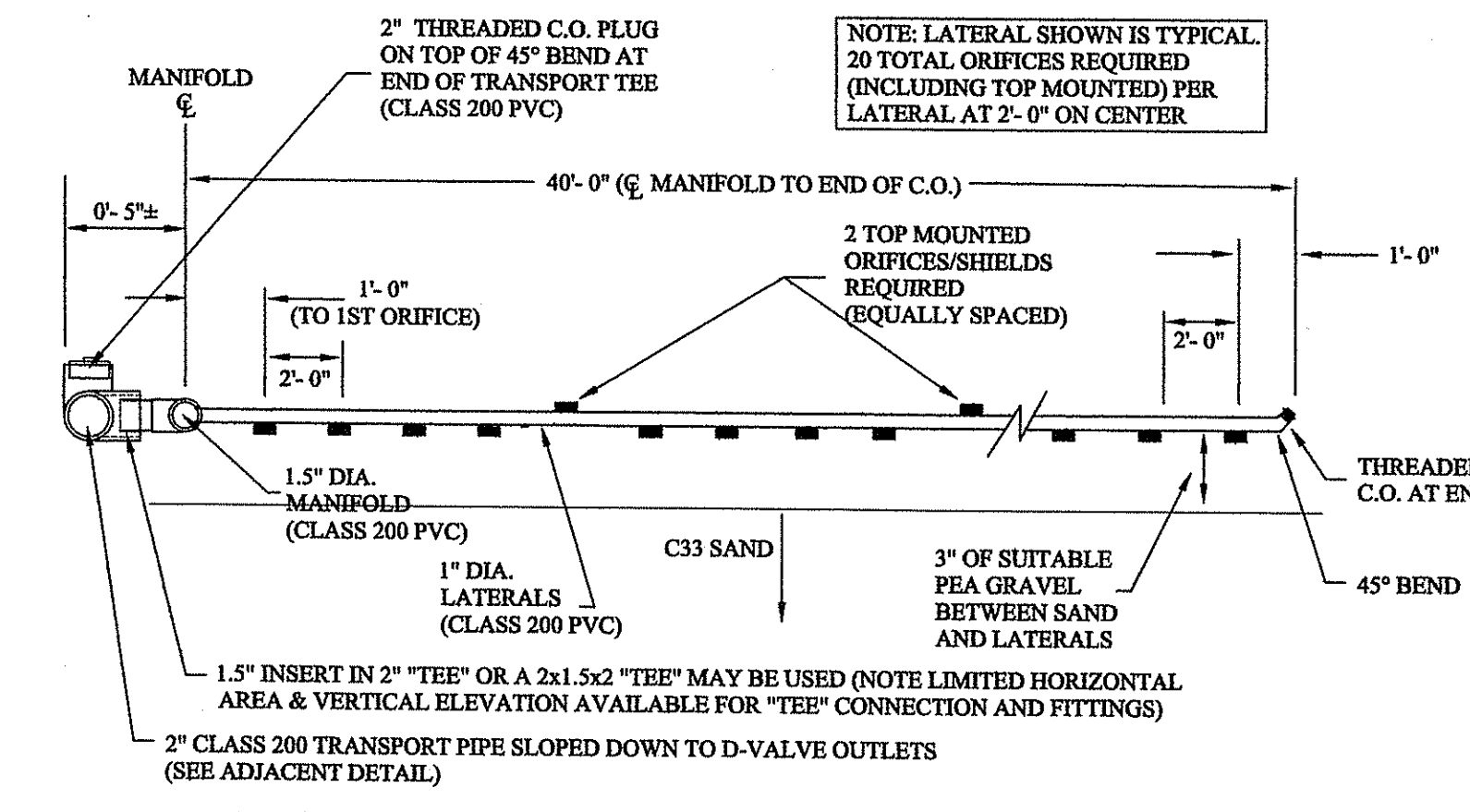
BSF / OSI DISTRIBUTION VALVE ASSEMBLY PROFILE (REFER TO BSF ELEVATION SCHEDULE ON THIS SHEET FOR APPLICABLE ELEVATIONS)

Kindly be advised that this permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.

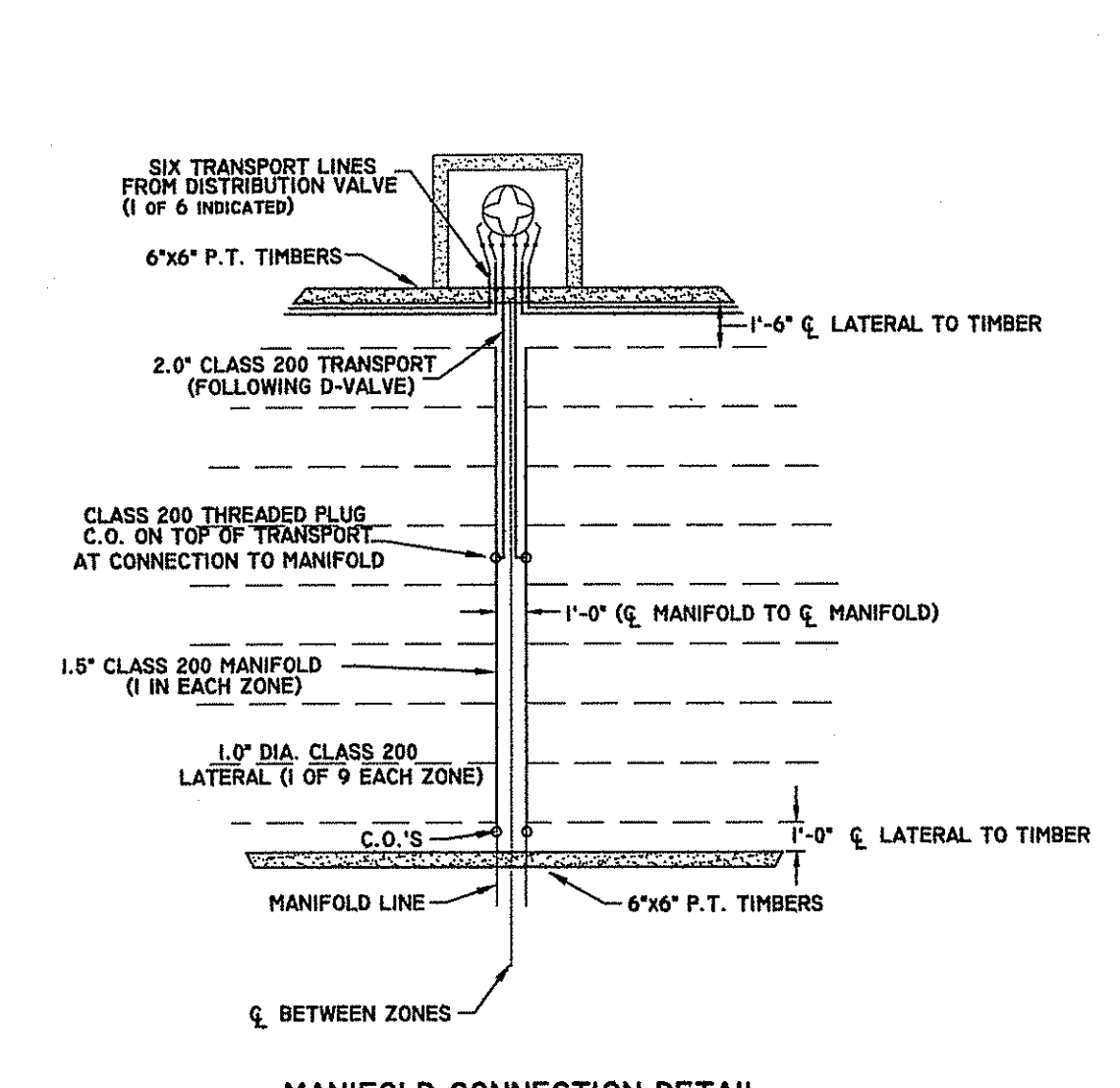
NOTE: ALL PRESSURE PIPING (AND RELATED FITTINGS) TO BE CLASS 200 RATED



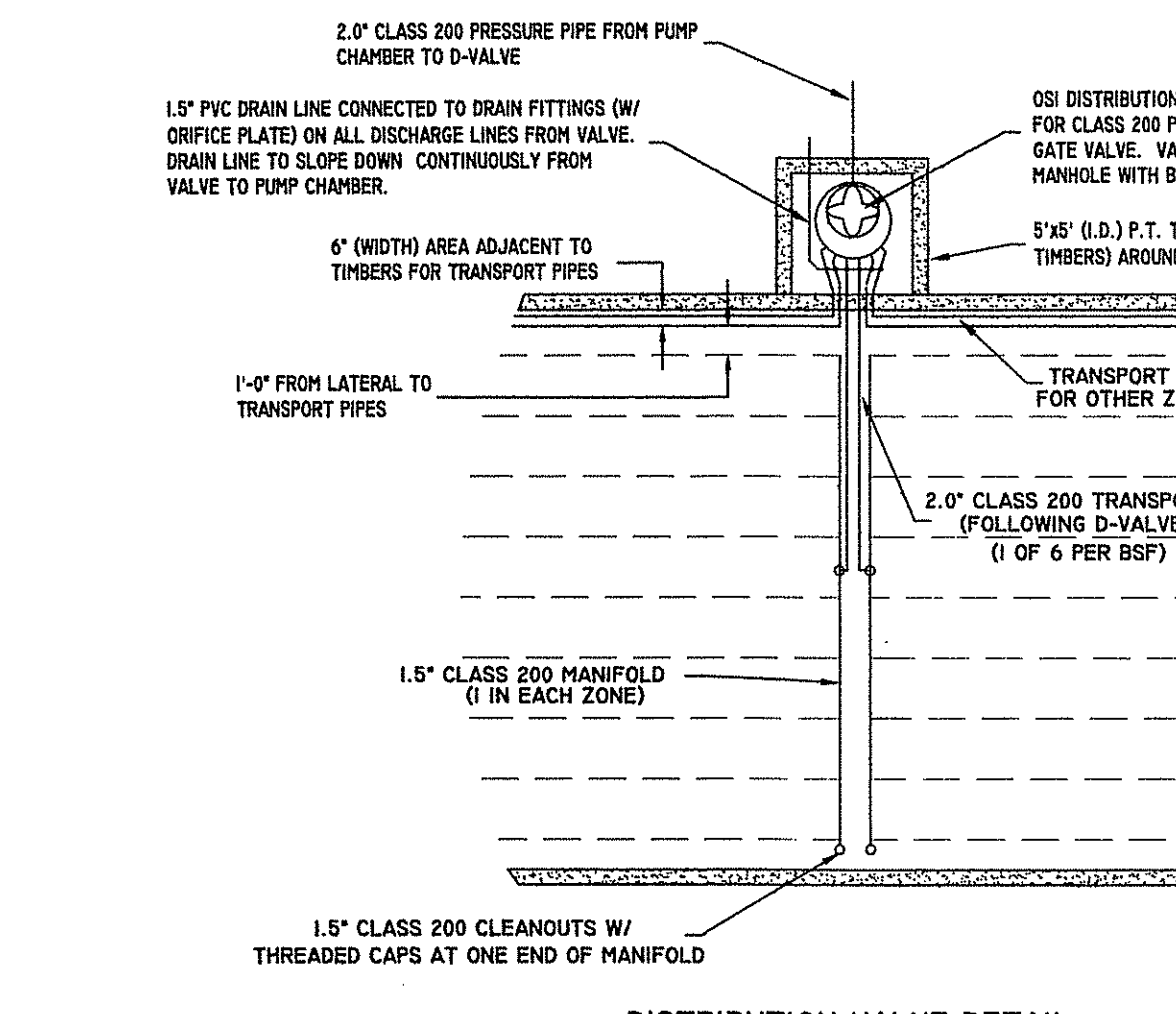
CROSS-SECTION VIEW OF TRANSPORT / MANIFOLD CONNECTION (NOT TO SCALE)



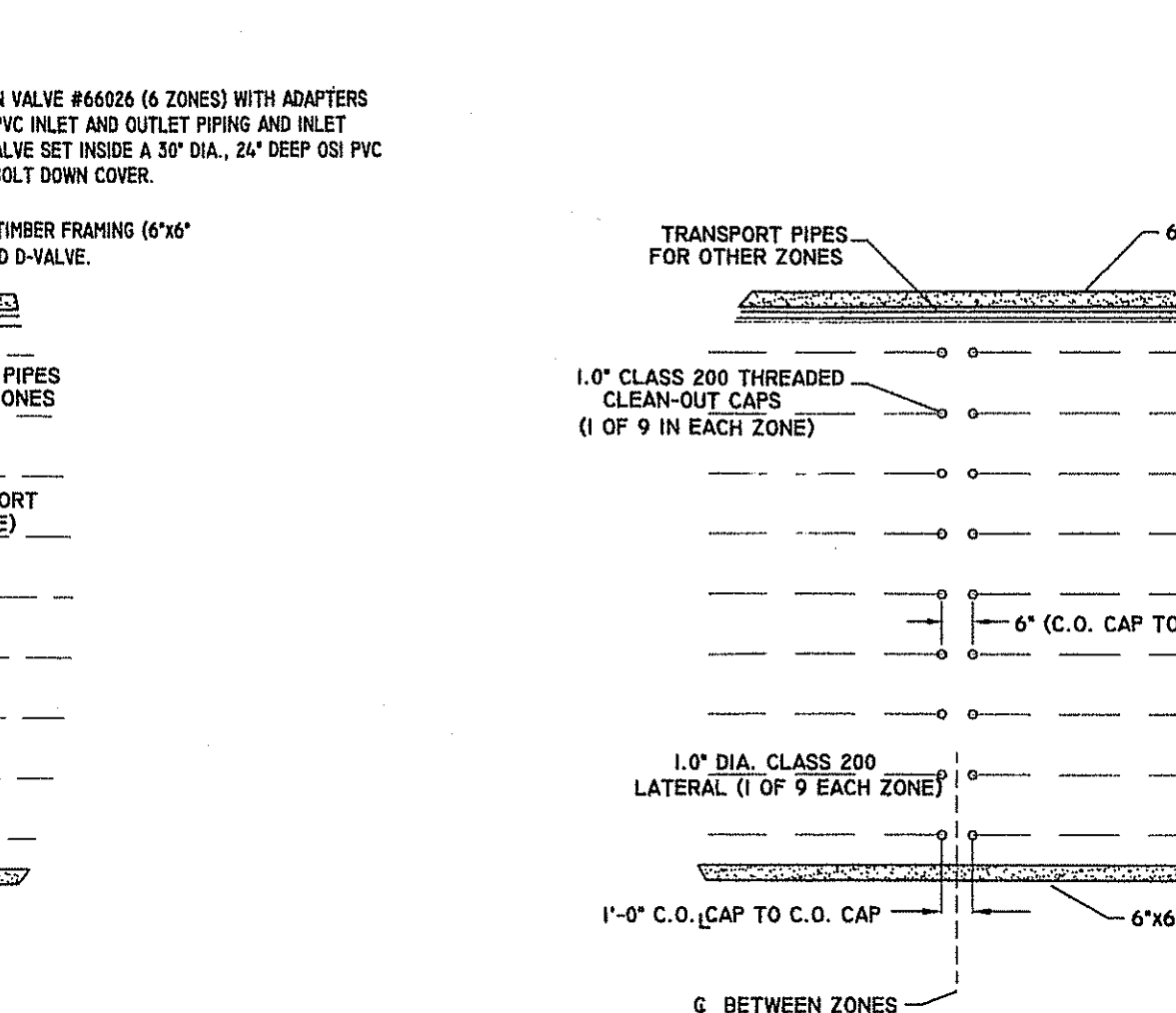
BSF LATERAL ORIFICE SPACING and TRANSPORT CONNECTION (NOT TO SCALE)



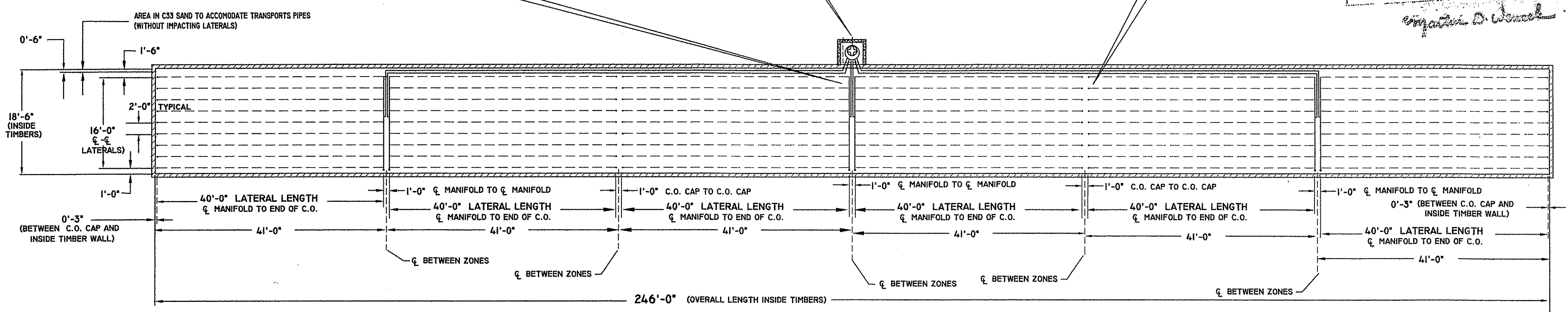
MANIFOLD CONNECTION DETAIL



DISTRIBUTION VALVE DETAIL



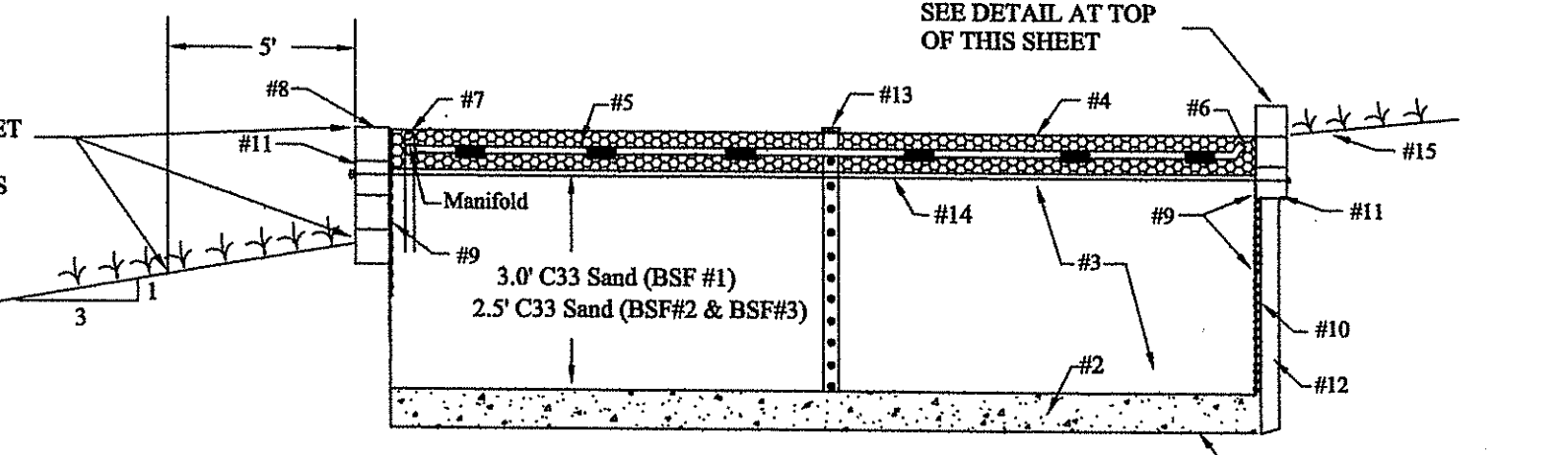
LATERAL CLEAN-OUT DETAIL



NOT TO SCALE
 BOTTOMLESS SAND FILTER DETAIL (1 OF 3 BSF'S)

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
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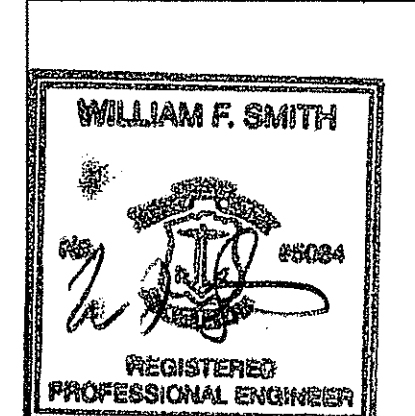
REFER TO ELEVATION SCHEDULES ON THIS SHEET FOR BSF, TIMBER, AND RE-GRADING ELEVATIONS



REFER TO ELEVATION SCHEDULE (THIS SHEET) FOR ELEVATIONS
 ANY ADDITIONAL MATERIAL THAT MAY BE NECESSARY DUE TO THE DEPTH NATIVE "B" HORIZON SHALL BE C33 SAND ONLY

- Scarified and non-compacted native soil. Existing BSF ground surface preparation shall only consist of stripping native "A" and root structure (and any native "B" horizon if necessary to achieve specified depth/elevation).
- 6" thick layer of evenly mixed Native Mineral Soil (from B Horizon) and ASTM C-33 Sand. Mix layer may be required to extend deeper if uniform suitable "B" material is not encountered.
- 24" thick layer of non-compacted ASTM C-33 Sand.
- 9" min. thickness layer of 3/8ths inch Washed Pea Gravel.
- Class 200 (SCH-40) PVC pipe with pressure rated fittings and orifices (with shields) spaced as specified in detail below.
- 45-degree elbow with threaded female cap (matching lateral diameter)
- Cleanout fitting at ends of all transport pipes.
- Class 200 Transport pipe from Distribution Valve.
- 30 mil. PVC liner.
- 1/2" non-PT plywood support frame below grade.
- 6" x 6" PT timber support frame above ground.
- 4" x 4" vertical non-PT vertical support timbers to brace 6" x 6" timber frame construction and plywood frame. Recommend 3 vertical timbers at each corner and every 10' o.c.
- 4" dia. filter fabric wrapped SDR-35 inspection well with removable cap required per RI DEM BSF Guidance Document.
- 1/2 inch (min) dia. threaded tie rods required every 10' across width of timber enclosure.
- Clean fill placed to meet side slope requirement of up-gradient BSF.

BSF - TYPICAL PROFILE DESCRIPTION (NOT TO SCALE)



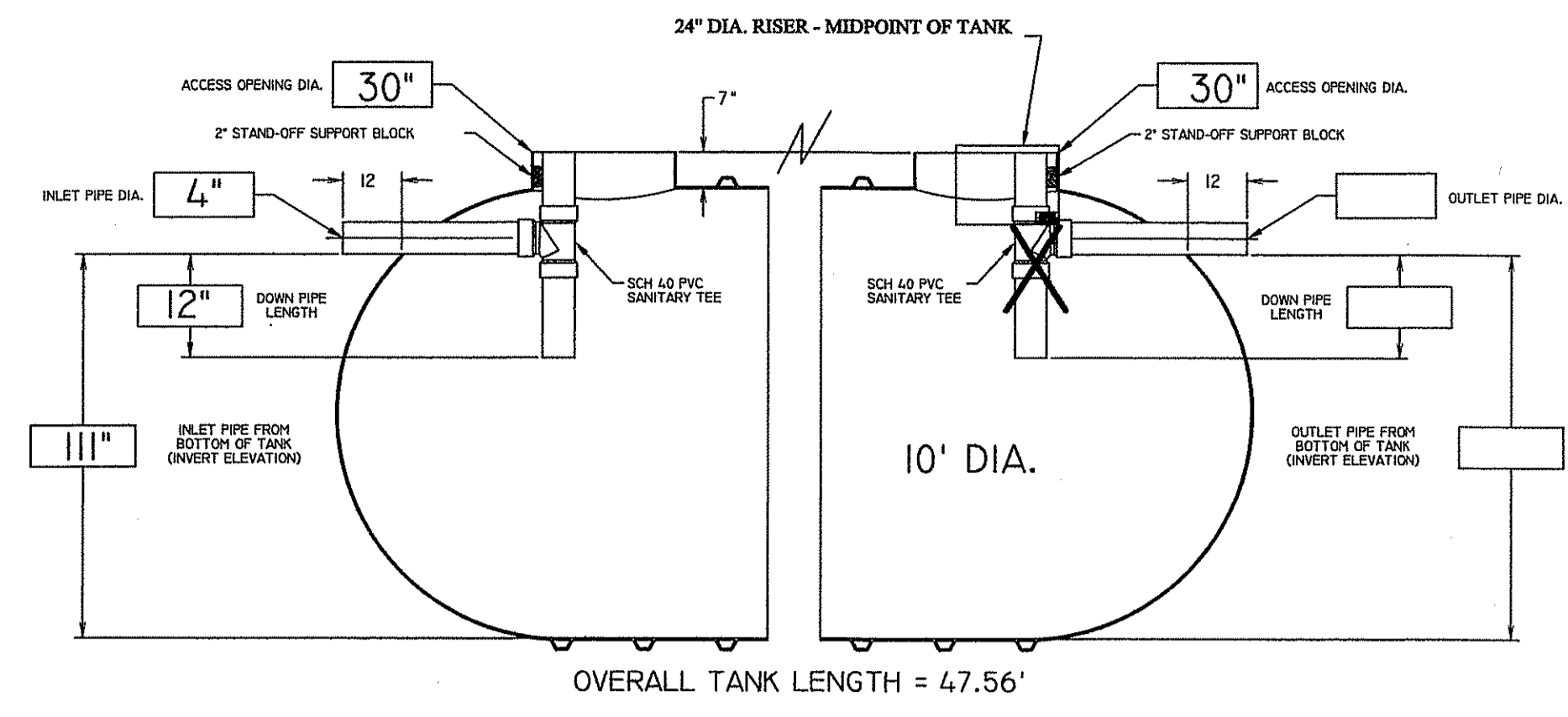
4/29/15 REVISE BSF ELEVATIONS
 REVISIONS:

PROPOSED OWTS REPAIR PLAN
 PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
 PLAT 410 LOT 125 AND 126
 301 BULGARMARSH ROAD
 TIVERTON, RHODE ISLAND

SCALE: NONE DATE: DECEMBER 29, 2014

Civil Engineering Concepts, Inc.
 34A MAIN STREET P.O. BOX 5323
 LITTLE COMPTON, RI 02857 NEW BEDFORD, MA. 02742
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 EMAIL: wsmithce@aol.com

SHEET 11 OF 13 JOB#: 06-049

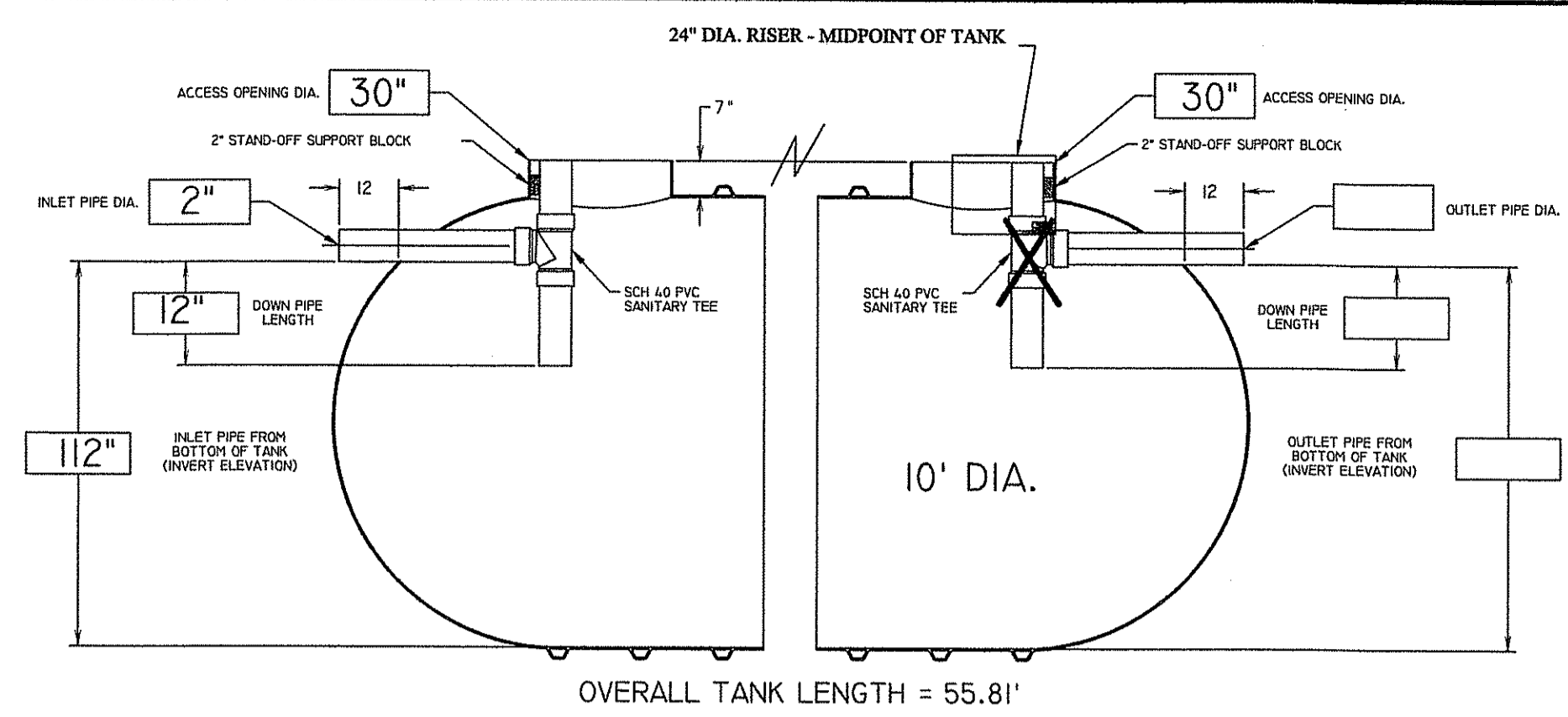


MAXIMUM HEIGHT OF INVERT ELEVATION

PIPE SIZES	TANK SIZES				
	4' DIA.	6' DIA.	8' DIA.	10' DIA.	12' DIA.
2" DIA.	42"	66"	86"	112"	132"
3" DIA.	41"	64"	84"	111"	130"
4" DIA.	40"	63"	83"	110"	129"
6" DIA.	34"	59"	79"	107"	125"
8" DIA.	33"	56"	76"	104"	123"
10" DIA.	N/A	N/A	71"	98"	118"
12" DIA.	N/A	N/A	69"	97"	116"

SIDE INLET OPENING FOR 4" SCH40 PVC (NOTE: NO OUTLET REQUIRED. DISCHARGE PRESSURE PIPE EXITS THROUGH RISER)

XERXES 25,000 GALLON ANOXIC TANK
NOT TO SCALE



MAXIMUM HEIGHT OF INVERT ELEVATION

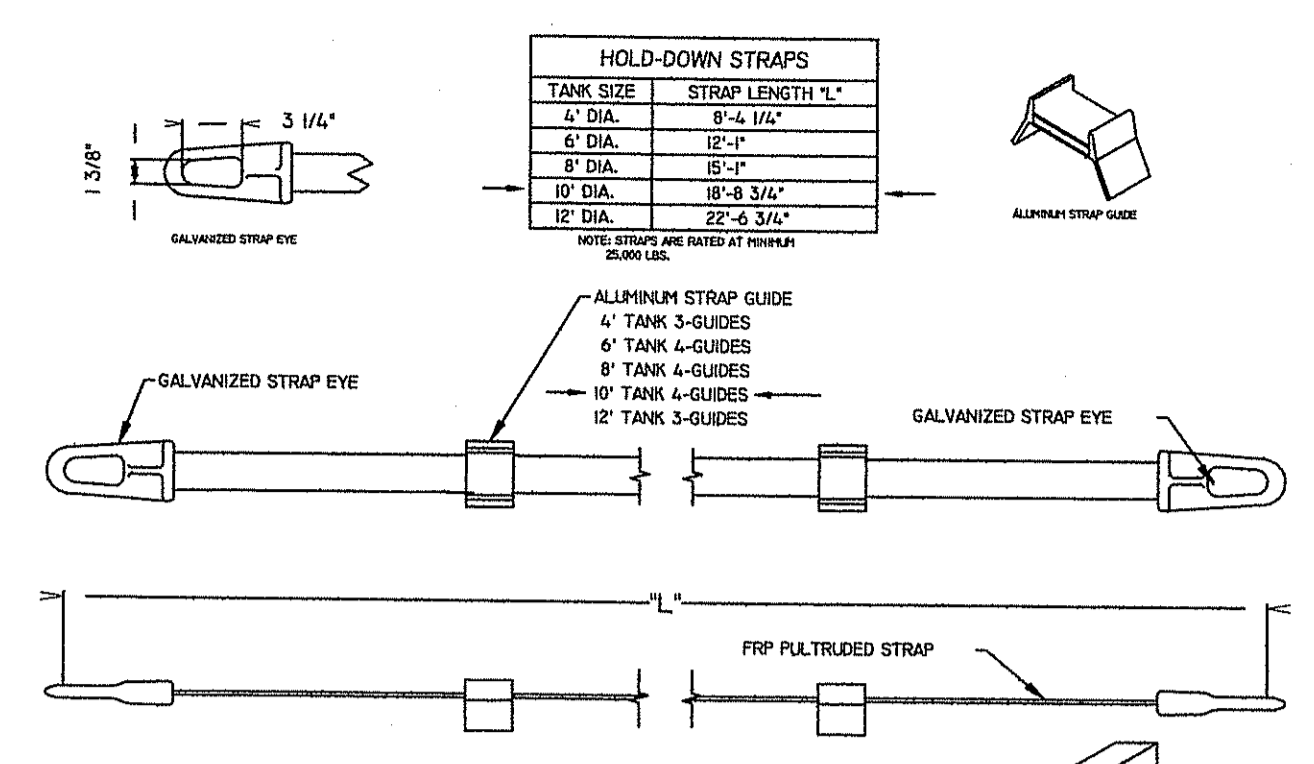
PIPE SIZES	TANK SIZES				
	4' DIA.	6' DIA.	8' DIA.	10' DIA.	12' DIA.
2" DIA.	42"	66"	86"	112"	132"
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4" DIA.	40"	63"	83"	110"	129"
6" DIA.	34"	59"	79"	107"	125"
8" DIA.	33"	56"	76"	104"	123"
10" DIA.	N/A	N/A	71"	98"	118"
12" DIA.	N/A	N/A	69"	97"	116"

SIDE INLET OPENING FOR 2" CLASS 200 PVC (NOTE: NO OUTLET REQUIRED. DISCHARGE TO AX100S AND ANOXIC RETURN LINE THROUGH RISER)

XERXES 30,000 GALLON RECIRCULATION TANK
NOT TO SCALE

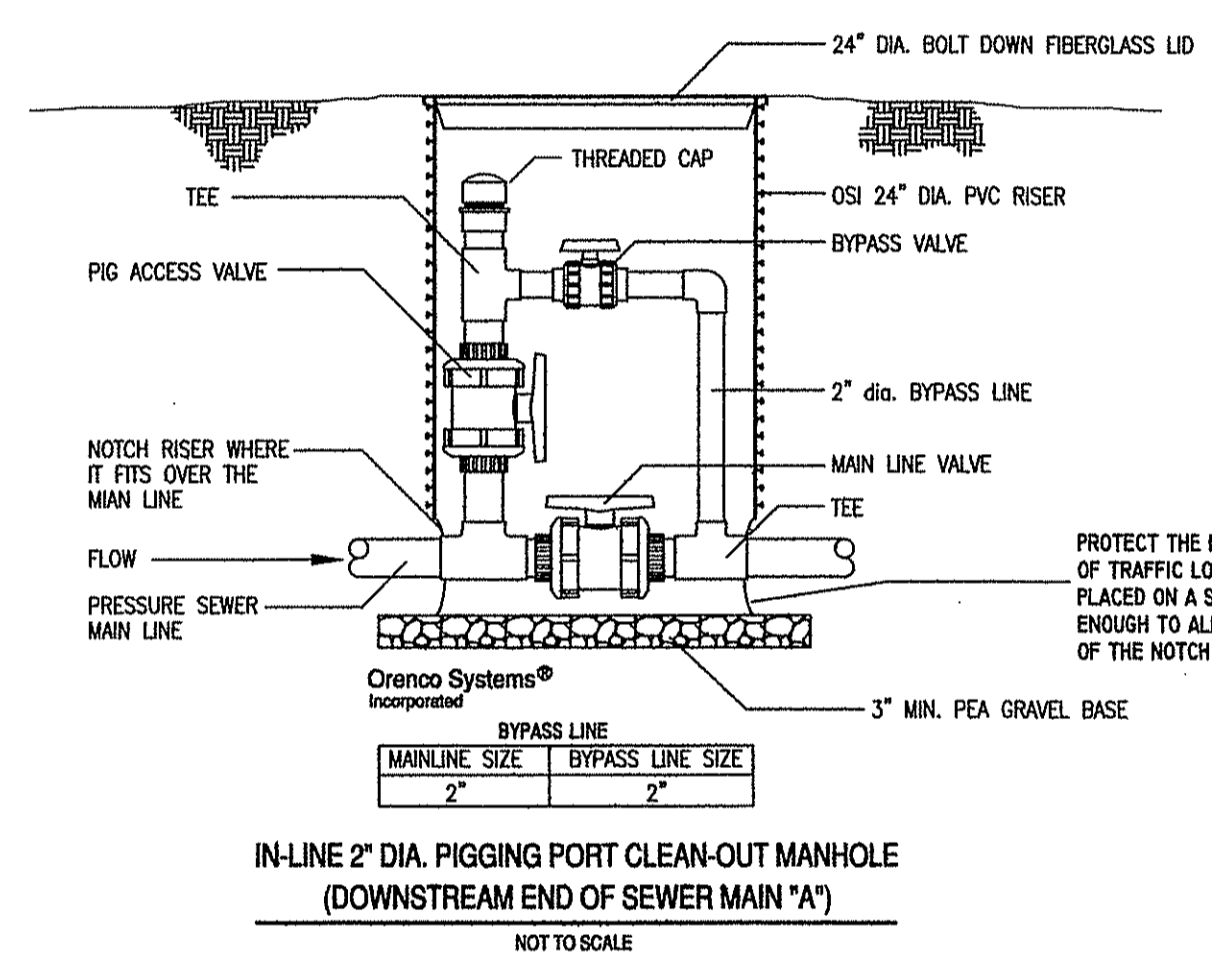
XERXES DEADMAN

TANK SIZE	QTY	Wt.	APPROX. WEIGHT EACH
4'-600	2	12"	1,800 LBS
4'-1,000	2	12"	1,800 LBS
6'-2,000	2	12"	1,800 LBS
6'-3,000	2	12"	2,400 LBS
6'-4,000	2	12"	2,400 LBS
6'-5,000	2	12"	1,800 LBS
6'-6,000	2	12"	2,400 LBS
6'-7,000	2	12"	2,400 LBS
6'-8,000	2	12"	2,400 LBS
6'-9,000	2	12"	2,400 LBS
6'-10,000	2	12"	2,400 LBS
6'-11,000	2	12"	2,400 LBS
6'-12,000	2	12"	2,400 LBS
6'-13,000	2	12"	2,400 LBS
6'-14,000	2	12"	2,400 LBS
6'-15,000	2	12"	2,400 LBS
6'-16,000	2	12"	2,400 LBS
6'-17,000	2	12"	2,400 LBS
6'-18,000	2	12"	2,400 LBS
6'-19,000	2	12"	2,400 LBS
6'-20,000	2	12"	2,400 LBS
6'-21,000	2	12"	2,400 LBS
6'-22,000	2	12"	2,400 LBS
6'-23,000	2	12"	2,400 LBS
6'-24,000	2	12"	2,400 LBS
6'-25,000	2	12"	2,400 LBS
6'-26,000	2	12"	2,400 LBS
6'-27,000	2	12"	2,400 LBS
6'-28,000	2	12"	2,400 LBS
6'-29,000	2	12"	2,400 LBS
6'-30,000	2	12"	2,400 LBS
6'-31,000	2	12"	2,400 LBS
6'-32,000	2	12"	2,400 LBS
6'-33,000	2	12"	2,400 LBS
6'-34,000	2	12"	2,400 LBS
6'-35,000	2	12"	2,400 LBS
6'-36,000	2	12"	2,400 LBS
6'-37,000	2	12"	2,400 LBS
6'-38,000	2	12"	2,400 LBS
6'-39,000	2	12"	2,400 LBS
6'-40,000	2	12"	2,400 LBS

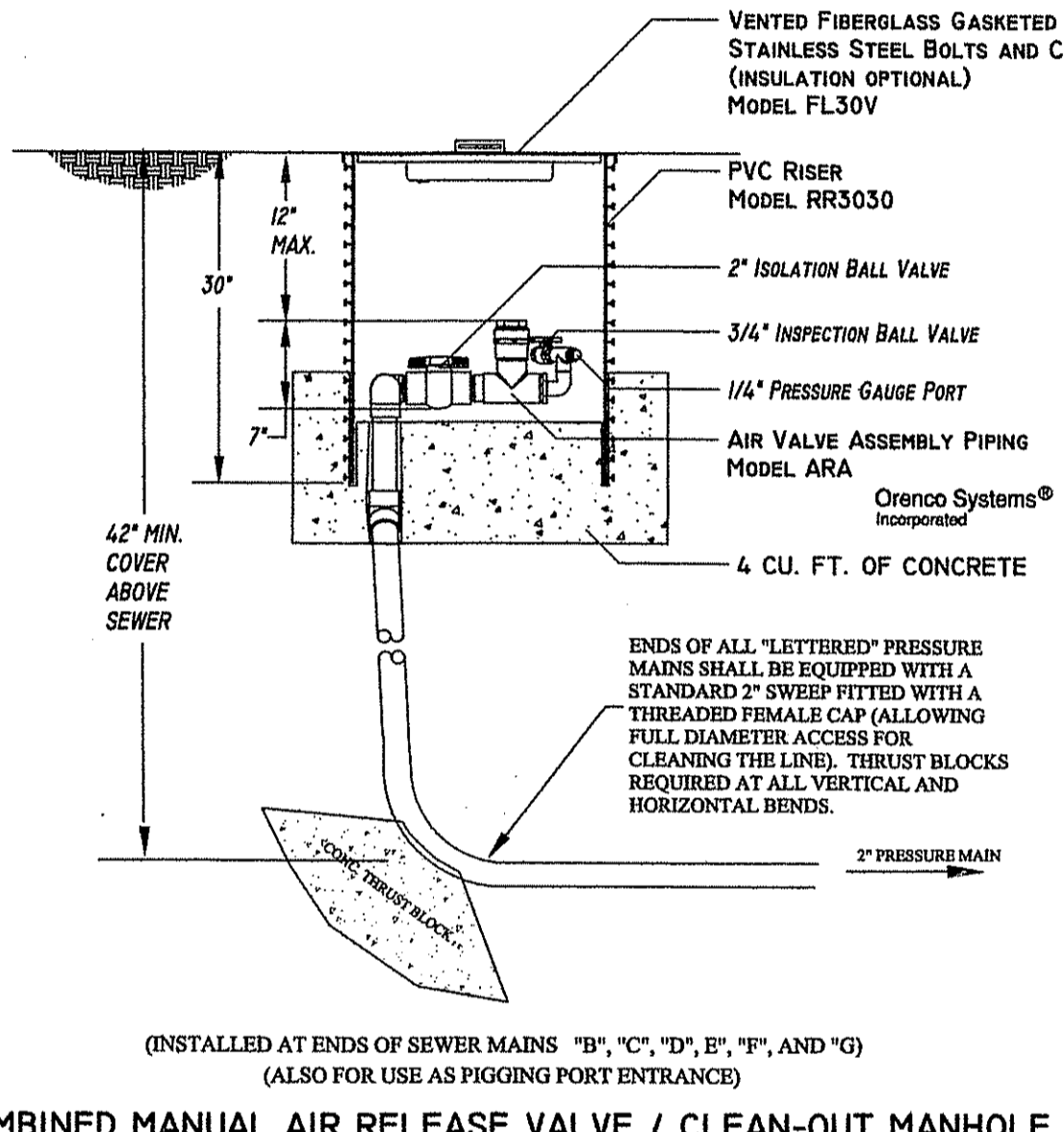


FOLLOW MANUFACTURERS INSTALLATION INSTRUCTION

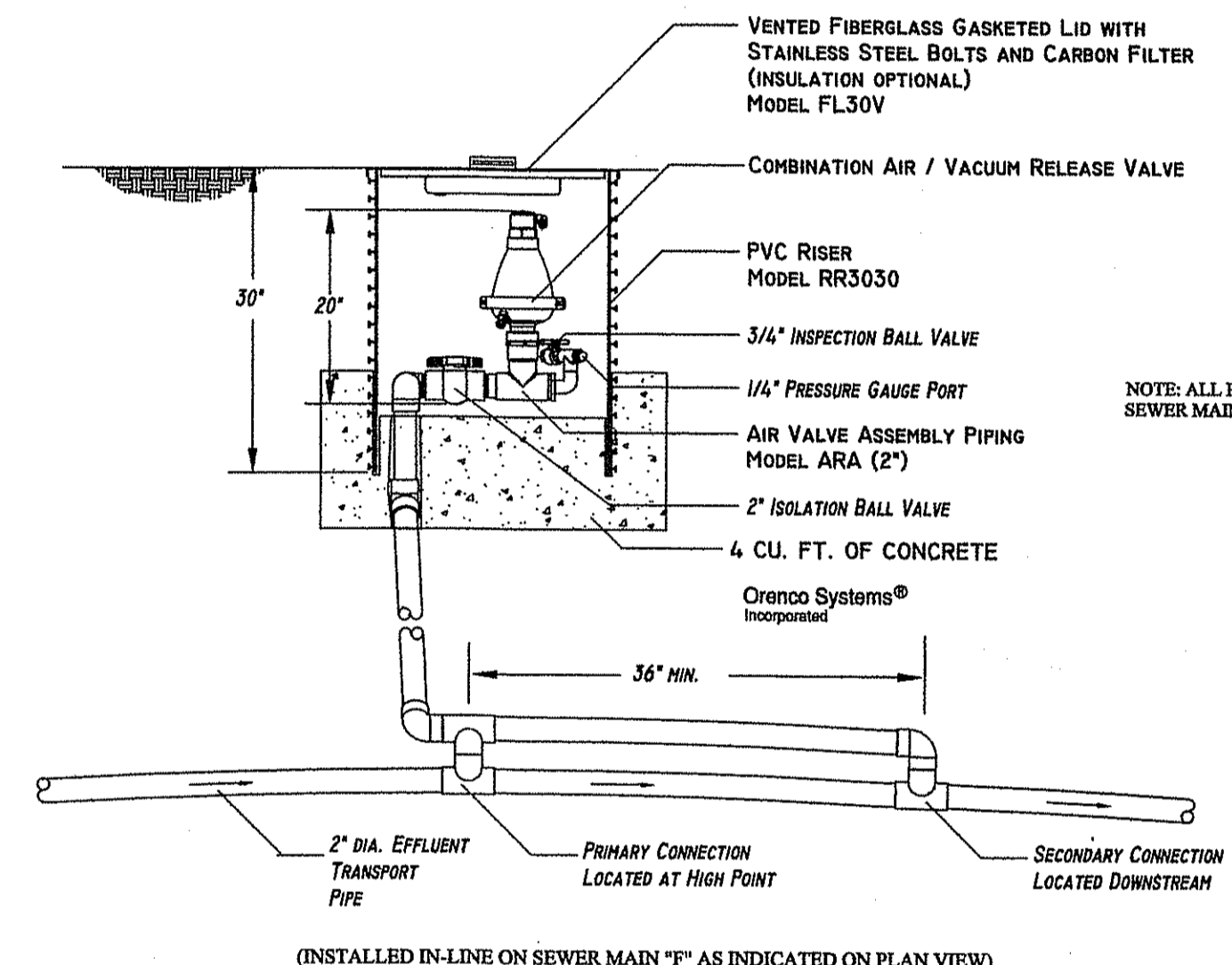
NOTE: XERXES DEADMANS ARE ENGINEERED AND DESIGNED TO BE USED WITH XERXES TANKS. IN MULTI-TANK INSTALLATIONS, EACH TANK REQUIRES ITS OWN SET OF DEADMANS. FOR CAST IN PLACE OR READMAN CONSTRUCTED OFF SITE, REFER TO XERXES INSTALLATION MANUAL AND OPERATING GUIDELINES FOR PROPER SIZING AND ANCHOR POINT SPECIFICATIONS.



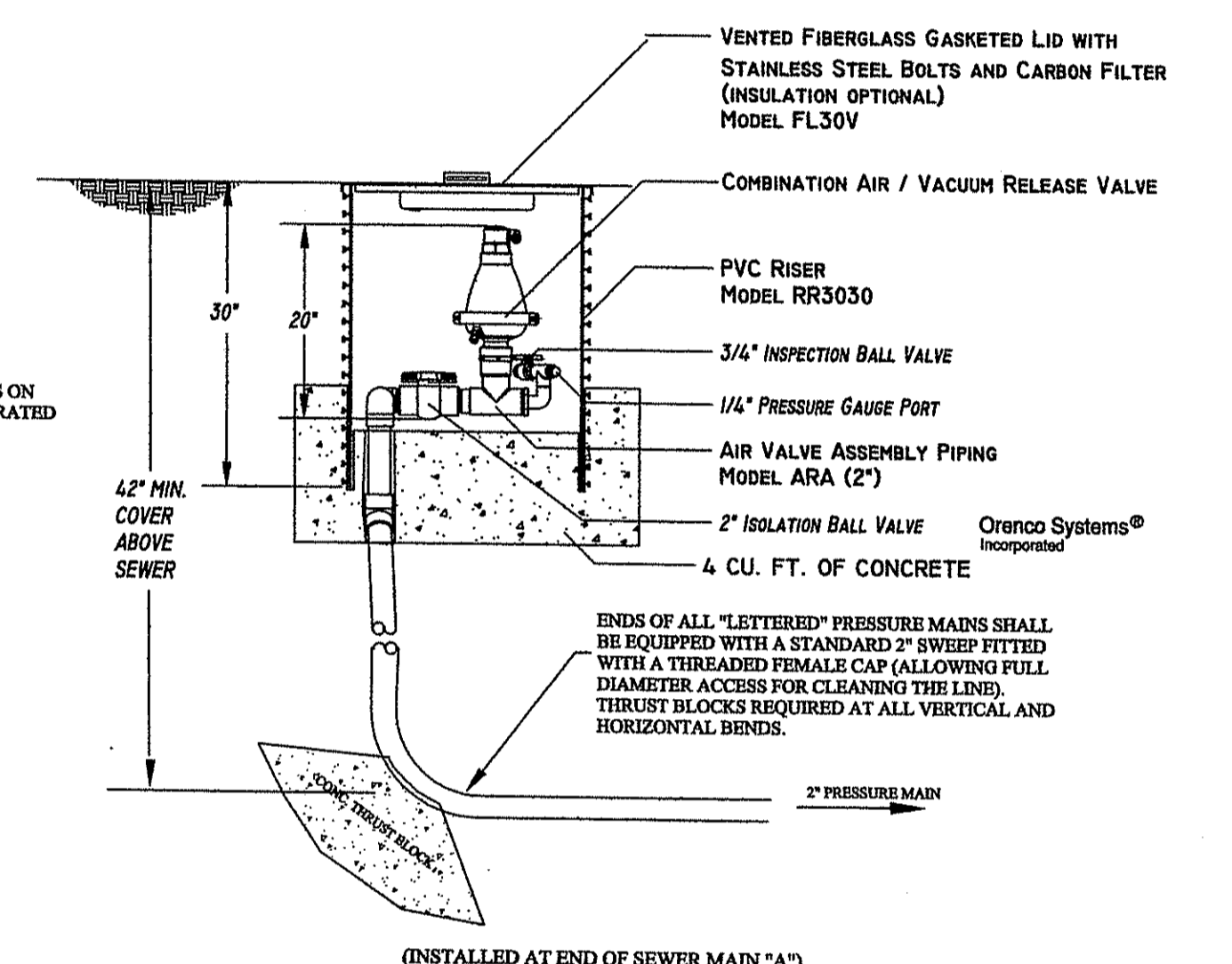
IN-LINE 2" DIA. PIGGING PORT CLEAN-OUT MANHOLE (DOWNSTREAM END OF SEWER MAIN "A")
NOT TO SCALE



COMBINED MANUAL AIR RELEASE VALVE / CLEAN-OUT MANHOLE
NOT TO SCALE

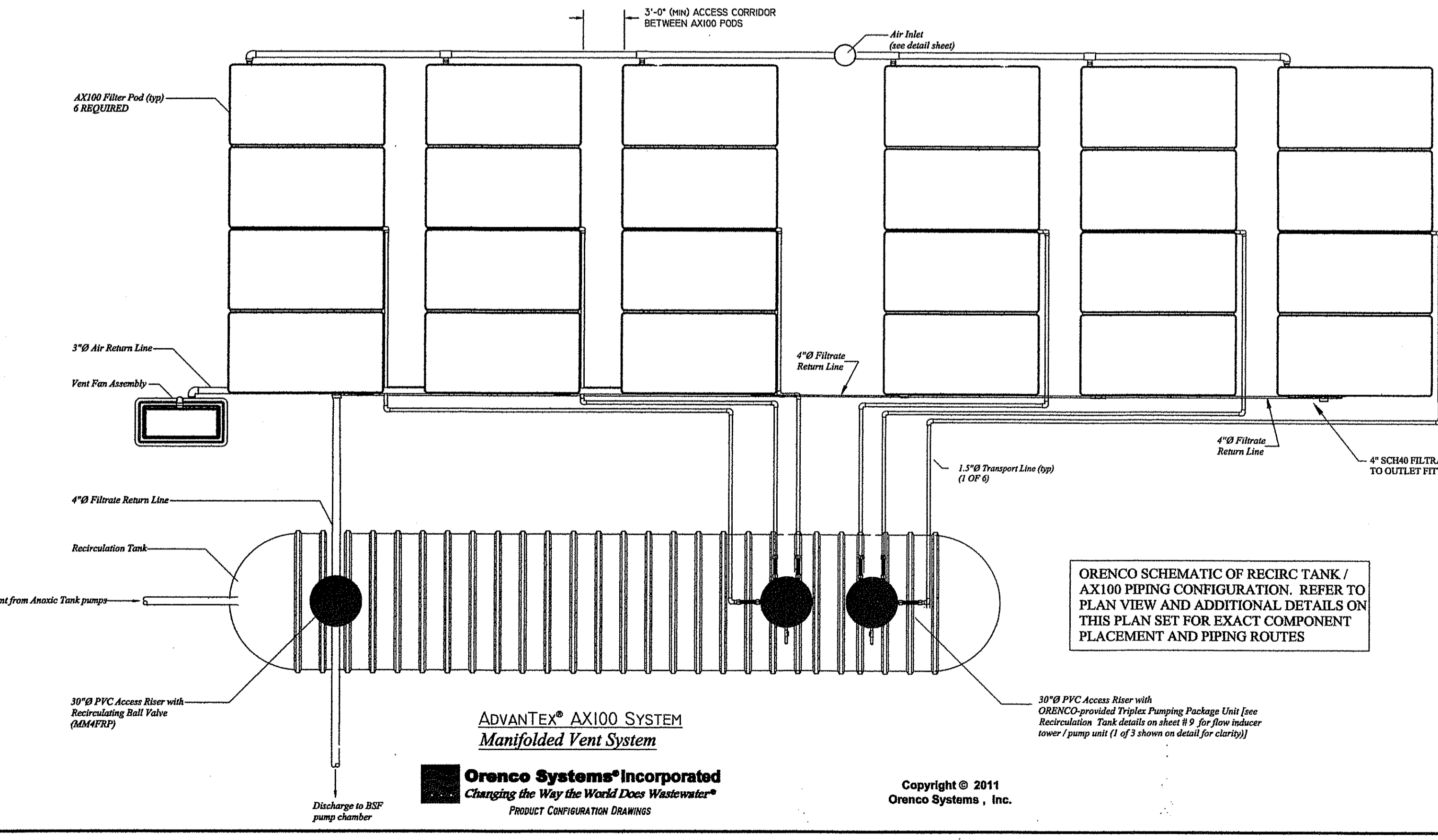


IN-LINE AUTOMATIC AIR RELEASE ACCESS MANHOLE
NOT TO SCALE



AUTOMATIC AIR RELEASE / CLEAN-OUT MANHOLE
NOT TO SCALE

Kindly be advised that this Permit is not equivalent to a verification of the type or extent of freshwater wetlands on site.



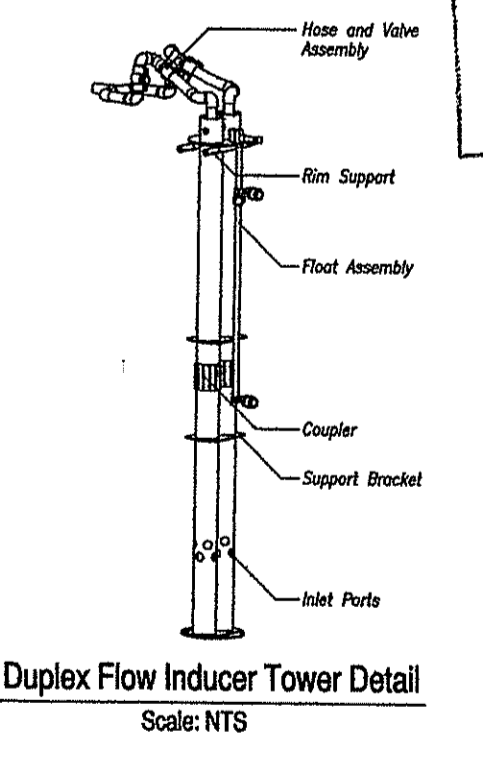
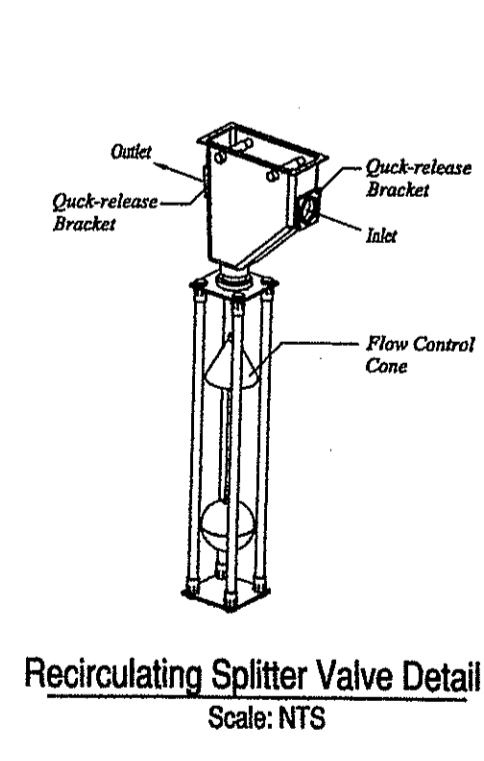
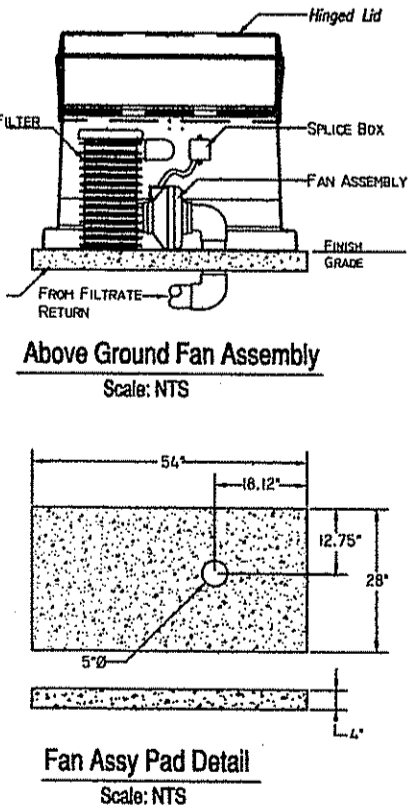
ORENCO SCHEMATIC OF RECIRC TANK / AX100 PIPING CONFIGURATION. REFER TO PLAN VIEW AND ADDITIONAL DETAILS ON THIS PLAN SET FOR EXACT COMPONENT PLACEMENT AND PIPING ROUTES

ADVANTEX® AX100 SYSTEM
Manifolded Vent System
Orenco Systems® Incorporated
Changing the Way the World Does Wastewater®
PRODUCT CONFIGURATION DRAWINGS

Copyright © 2011
Orenco Systems, Inc.

DESIGN NOTES:
EXPECTED FLOWS
Q PEAK ≤ 23,490 GPD
Q AVERAGE ≤ 13,732 GPD (BASED ON WATER METER READINGS)
EXPECTED INFLUENT QUALITY
GREASE & OIL: 20 MG/L
BOD: 150 MG/L
TSS: 40 MG/L
TYPICAL EFFLUENT QUALITY
BOD: <20 MG/L
TSS: <20 MG/L
RECIRCULATION TANK IS SIZED TO ACCOMMODATE 100% OF PEAK FLOW
REFER TO BASIS OF DESIGN FOR ADDITIONAL DETAILS

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 23 2015 FILE # 15-0136
NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
APPROVED PLANS MUST BE AT CONSTRUCTION SITE

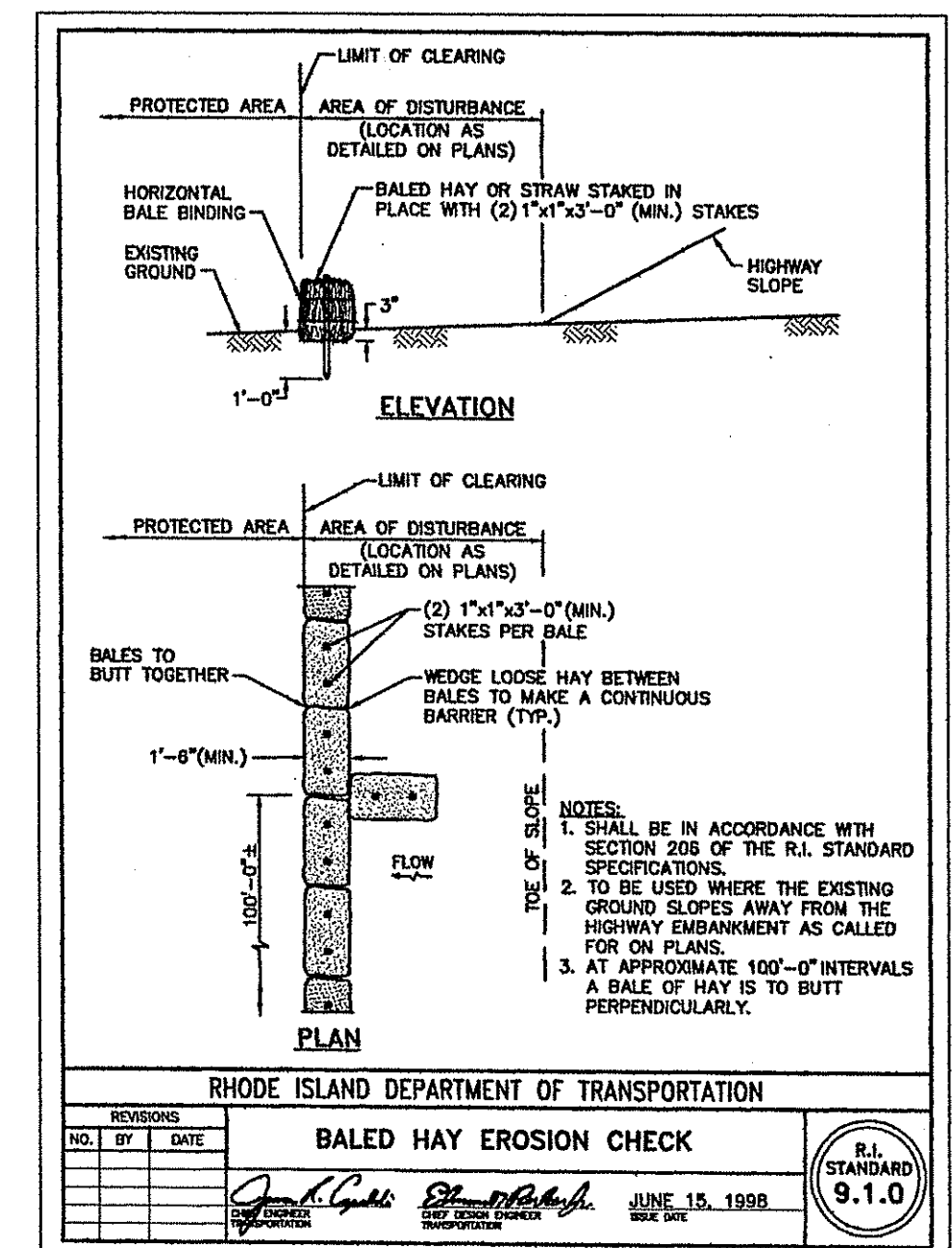
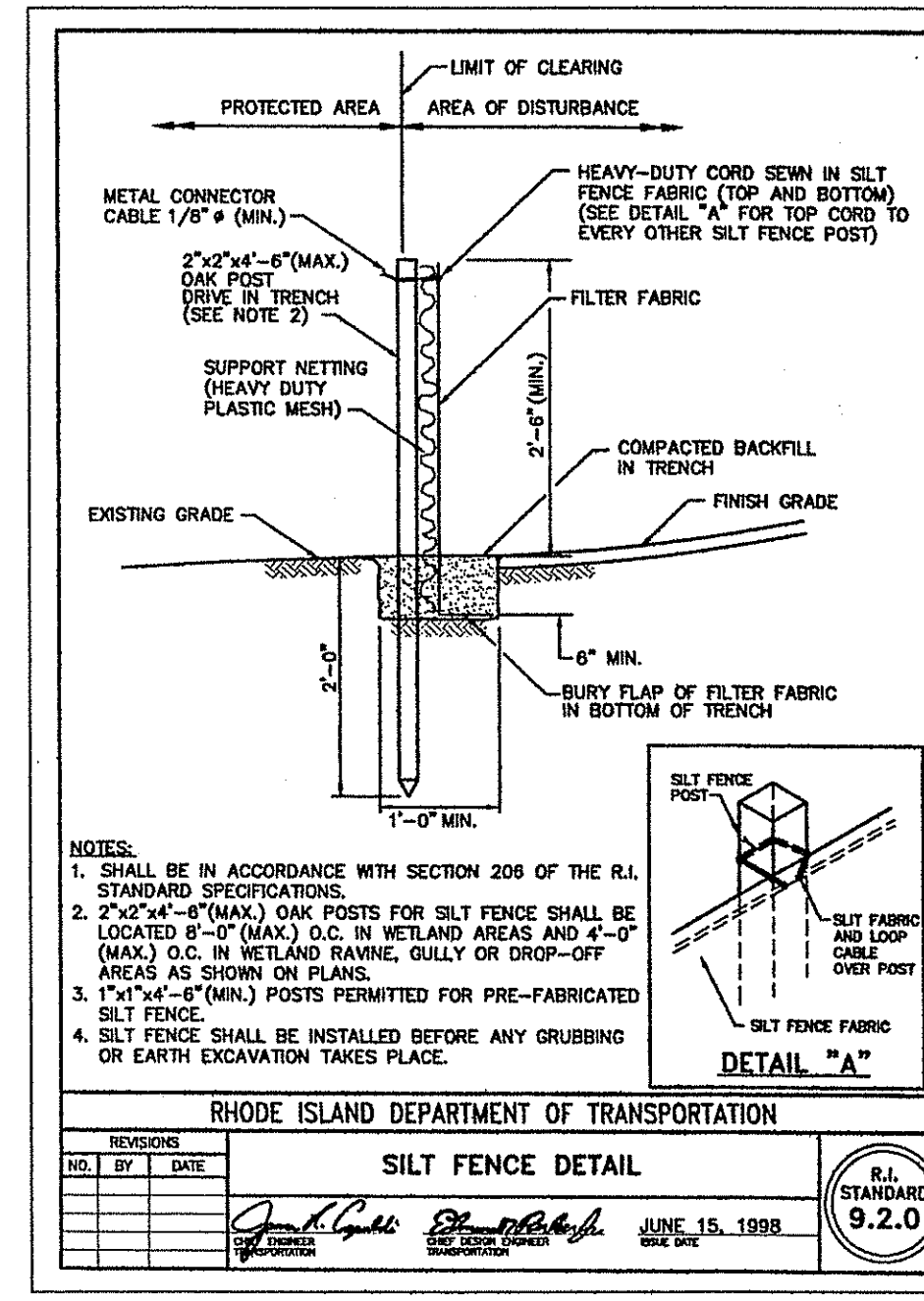
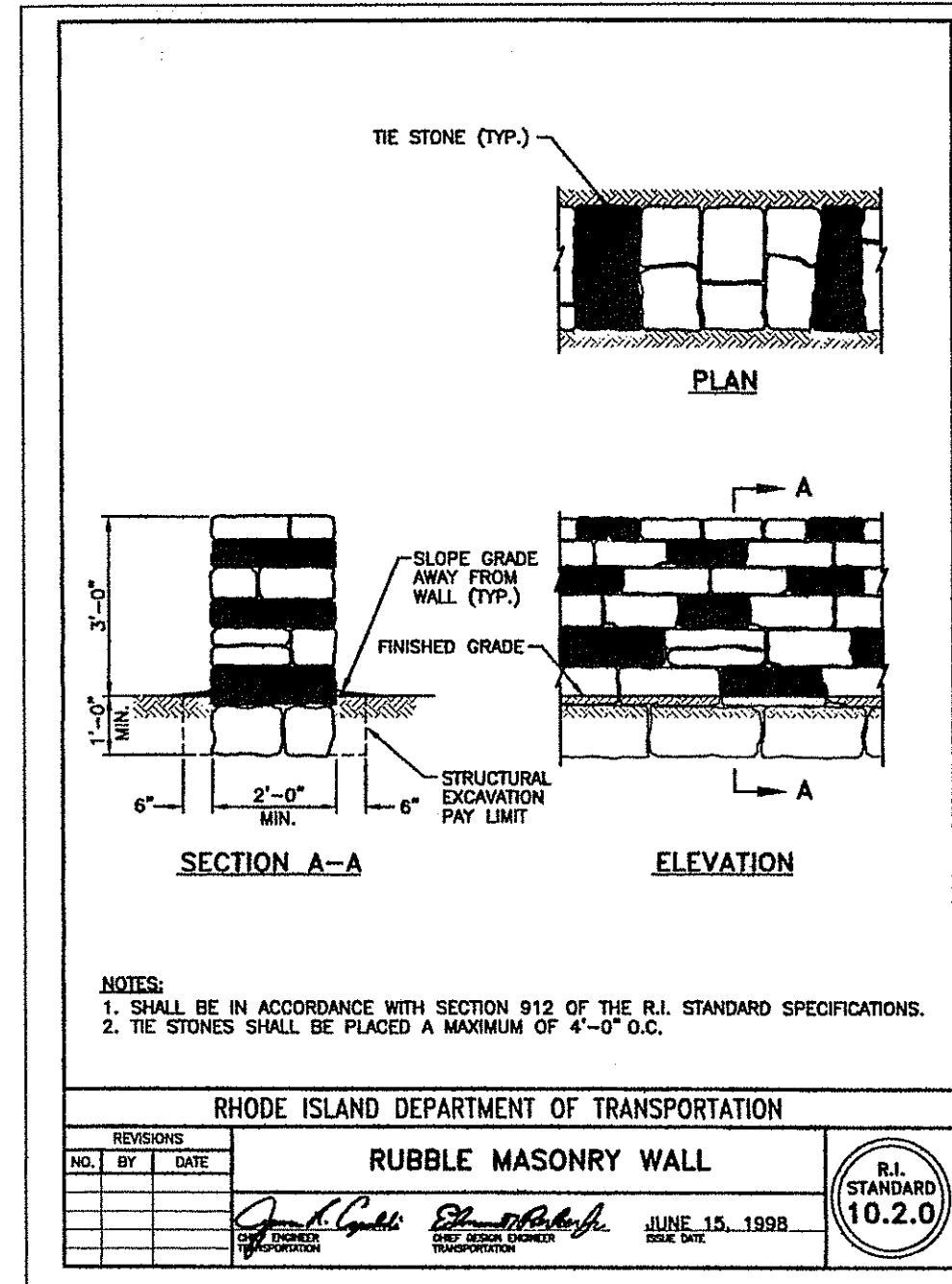
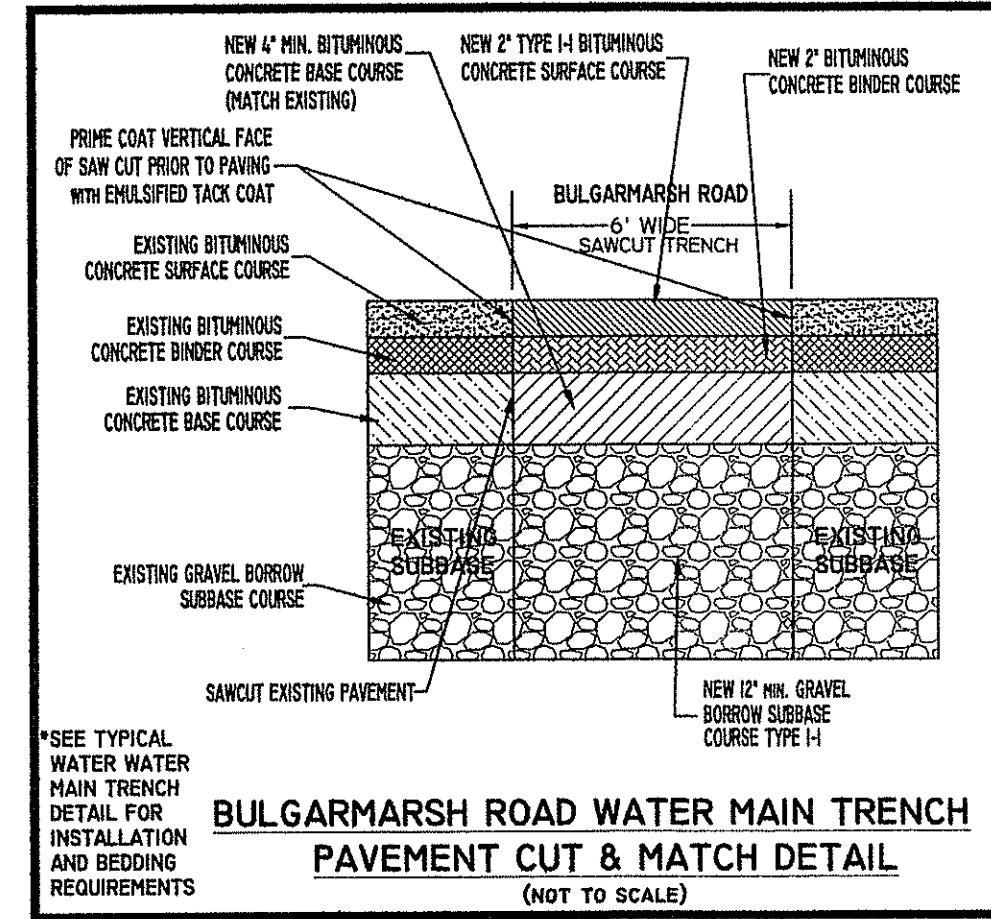
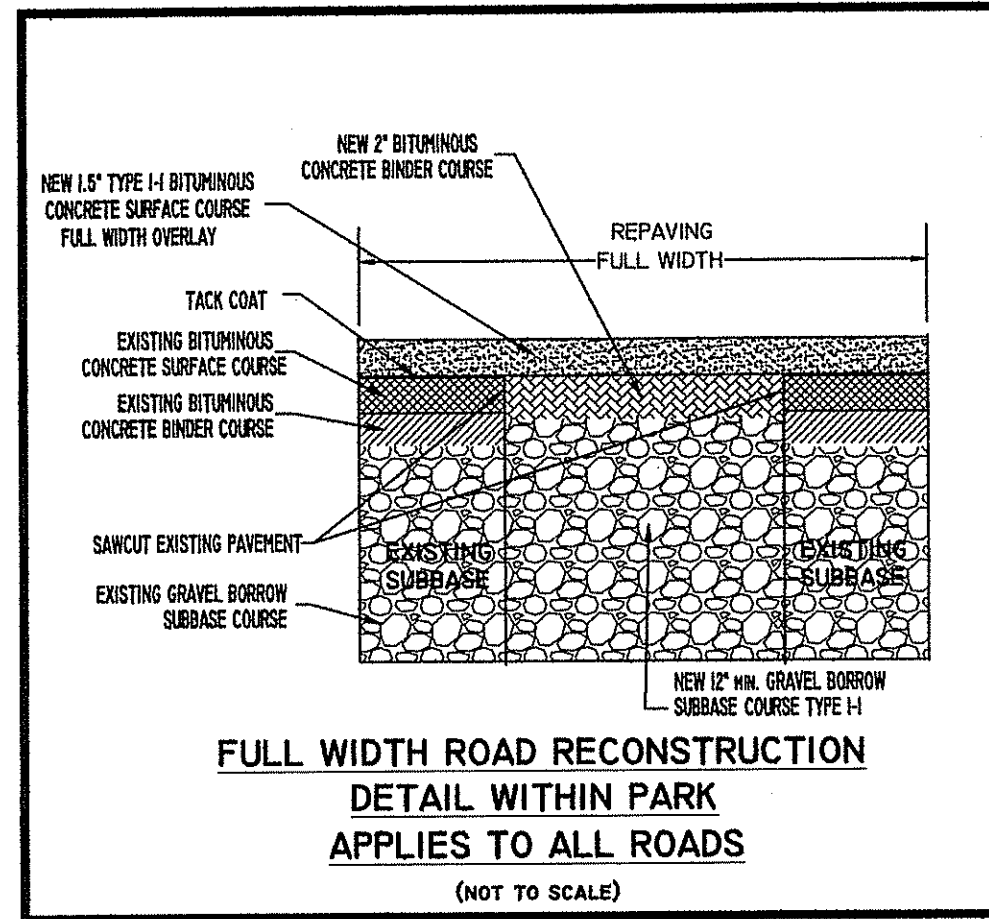


OSI AX100 / RECIRC. TANK DETAILS
NOT TO SCALE

WILLIAM F. SMITH
REGISTERED PROFESSIONAL ENGINEER
4/29/15 NO CHANGES THIS SHEET

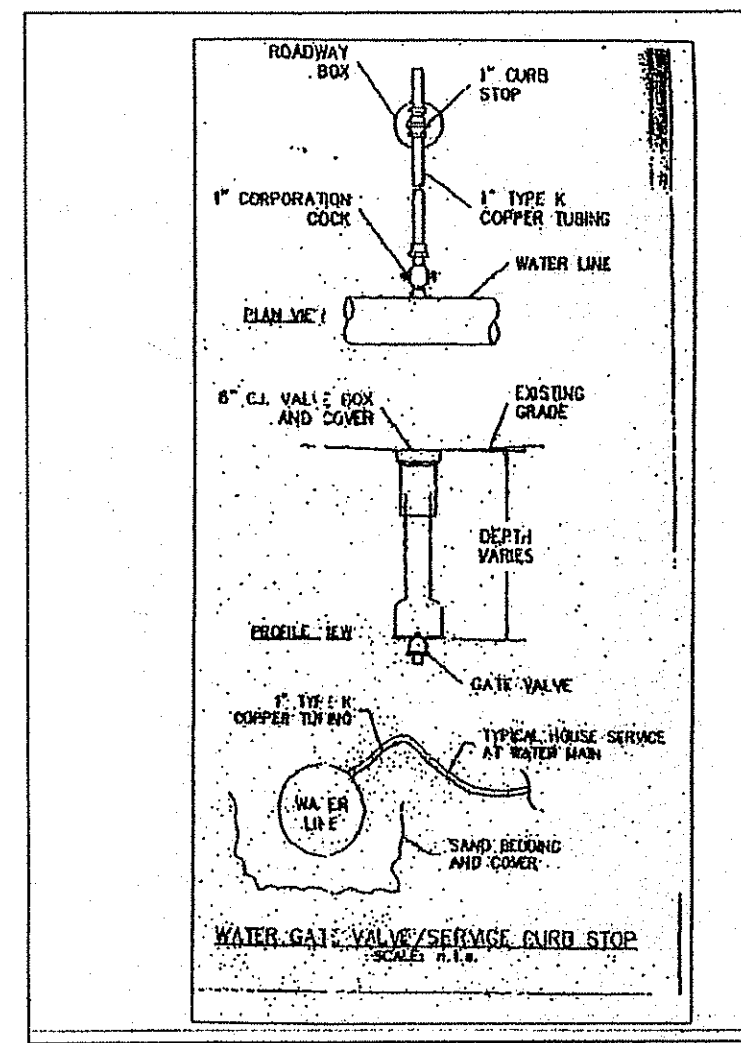
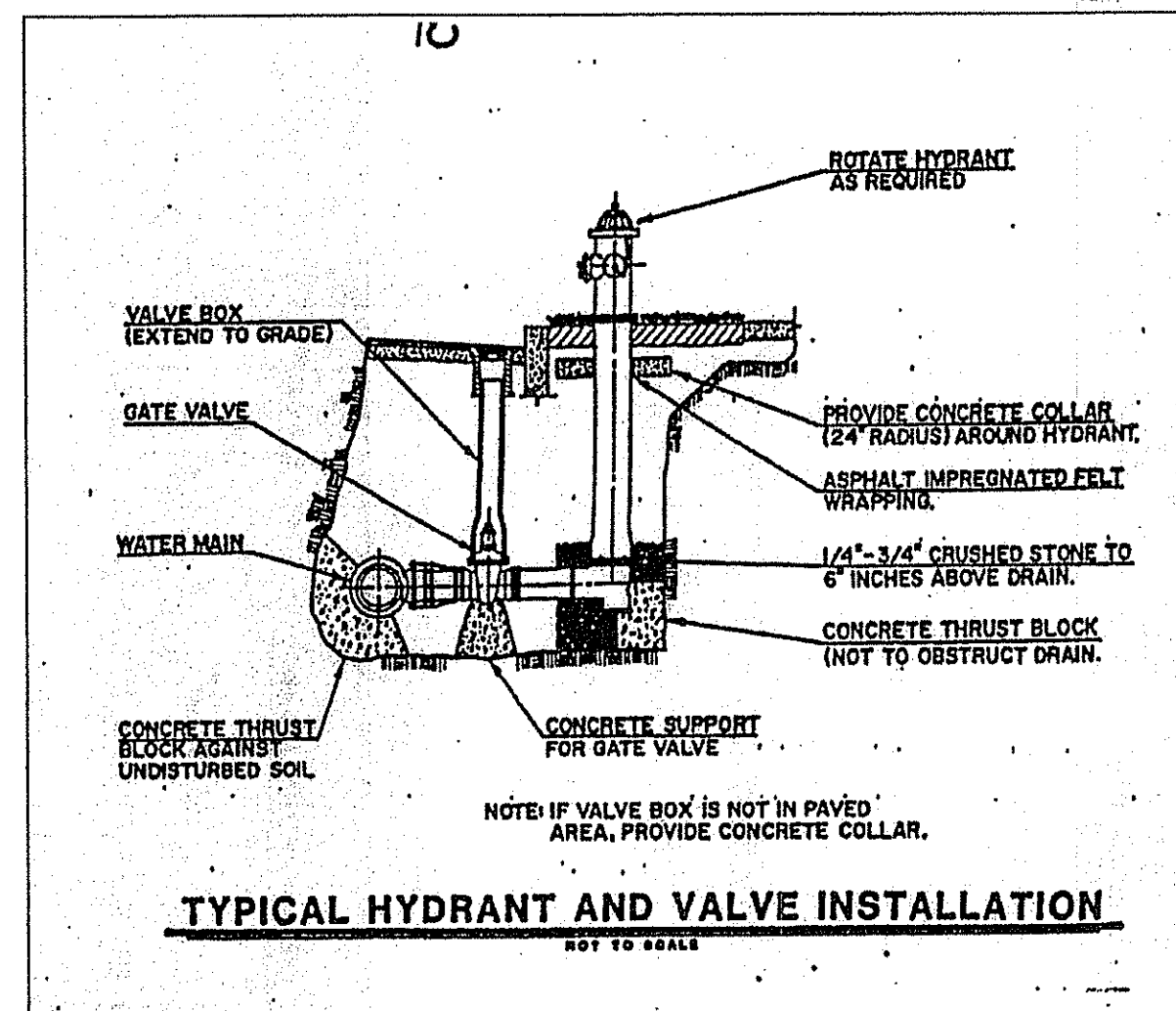
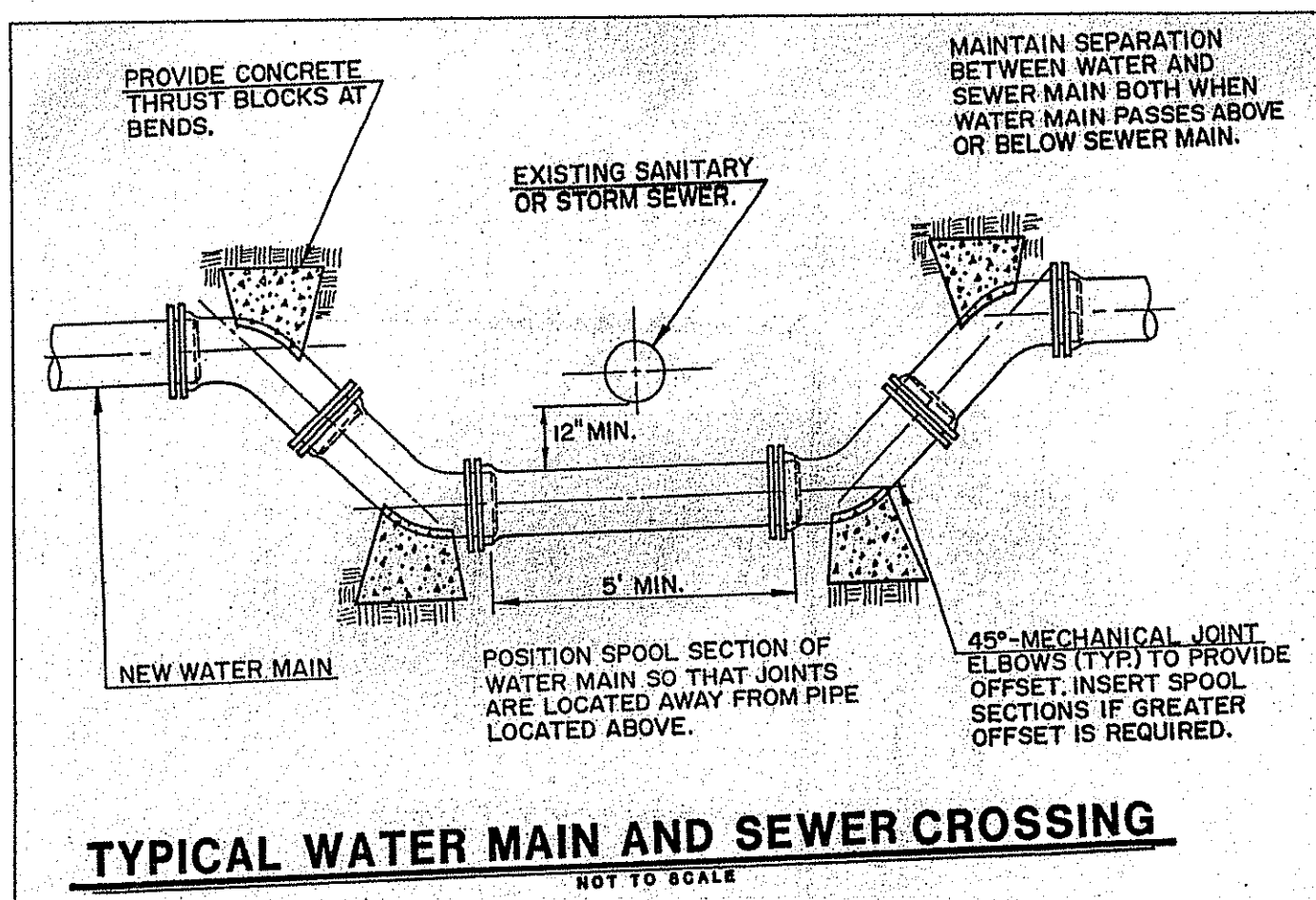
PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND
SCALE: NONE DATE: DECEMBER 29, 2014
Civil Engineering Concepts, Inc.
36A MAIN STREET
LITTLE COMPTON, RI 02837
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SHEET 12 OF 13

Environmental Management
JUN 26 2015
Office of Water Resources



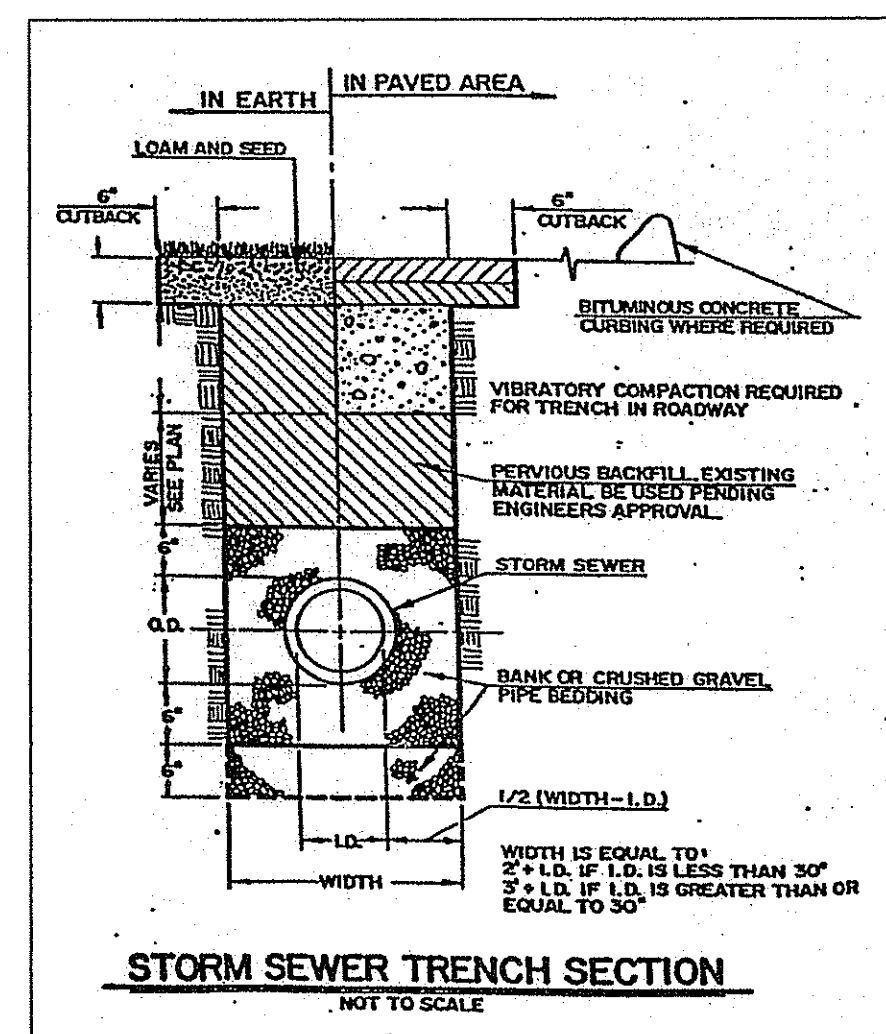
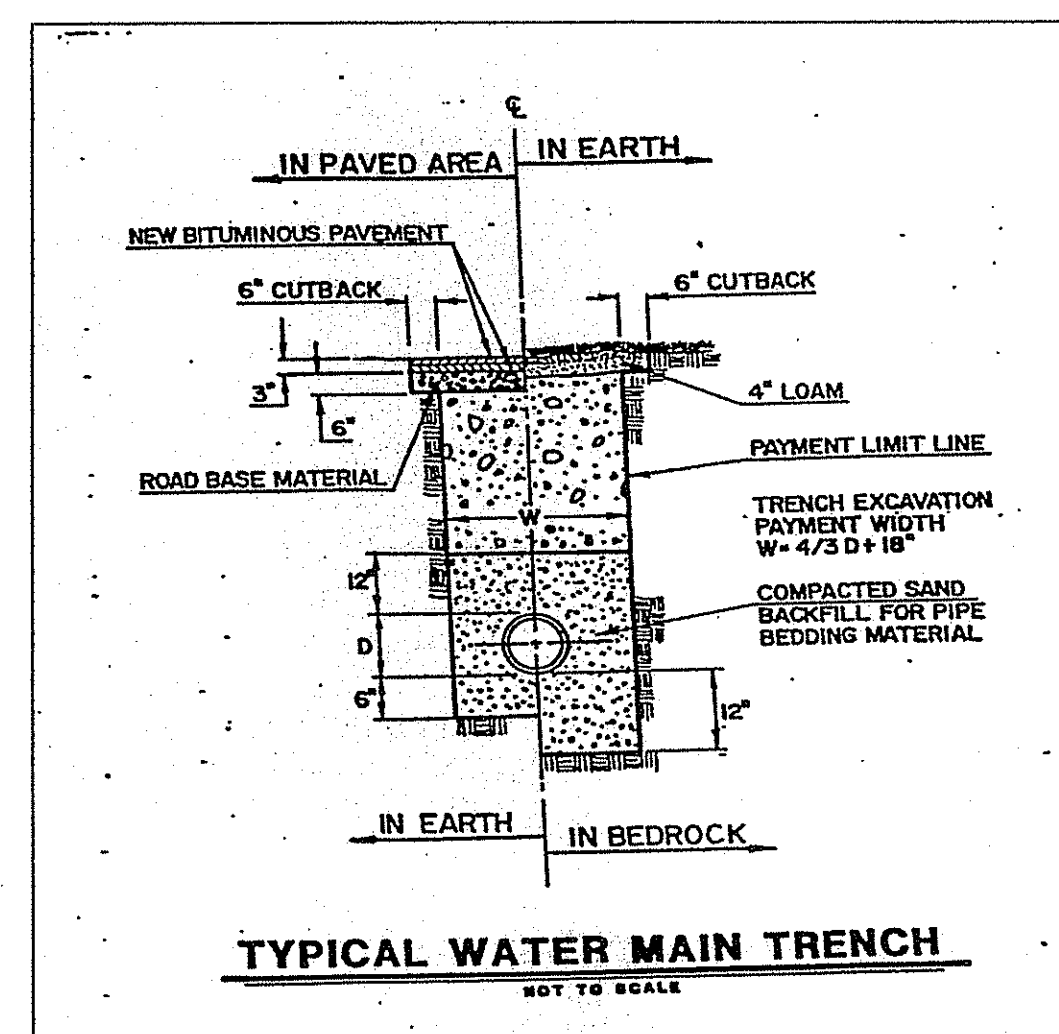
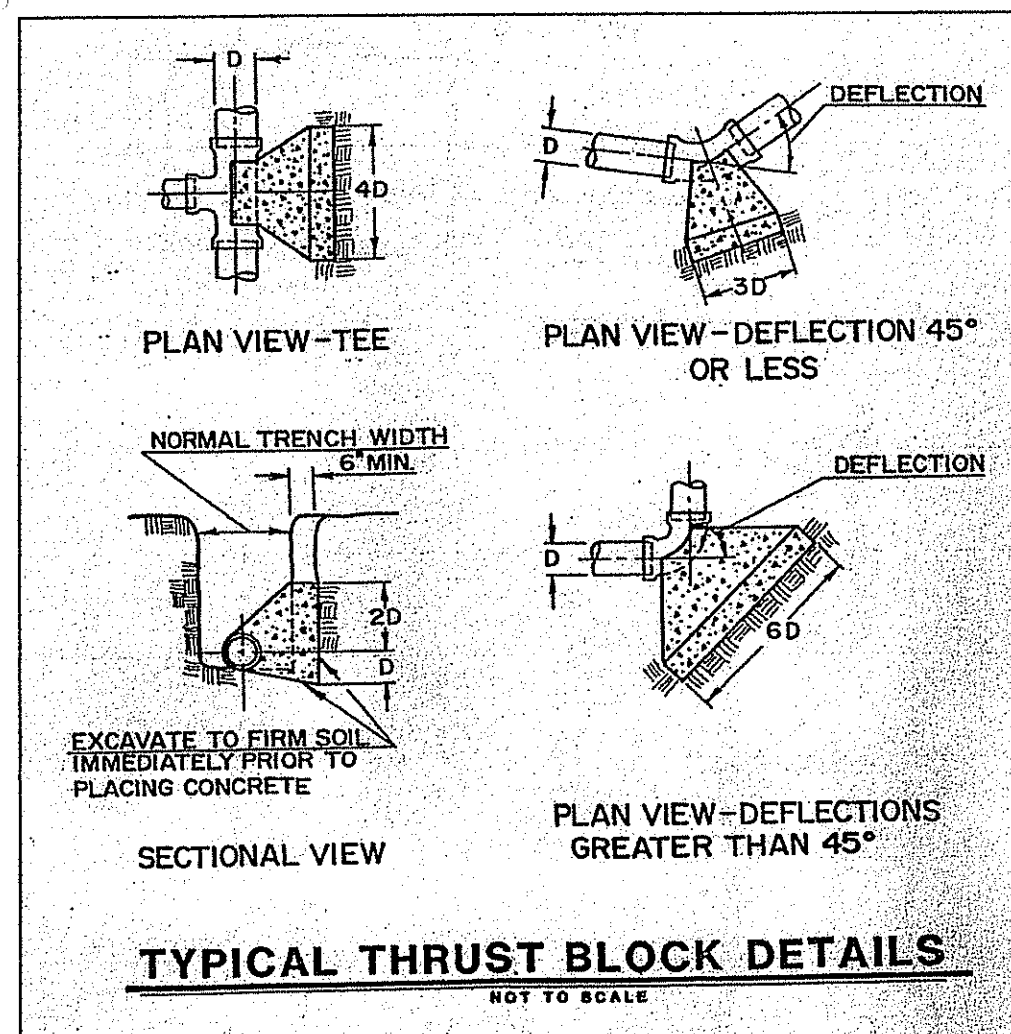
CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY STREET OPENING PERMITS ASSOCIATED WITH THE NEW WATER MAIN TO BE INSTALLED UNDER BULGARMARSH ROAD (STATE HIGHWAY) AS WELL AS COORDINATING ALL NECESSARY INSPECTIONS OF THE ROADWAY REPAIR WORK. ANY REQUIRED TRAFFIC DETAIL IS THE RESPONSIBILITY OF THE CONTRACTOR.

REFER TO NOTES #67 - #72 ON SHEET #10.



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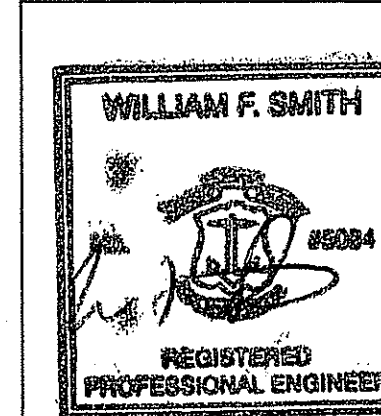
ALL WATER LINE MATERIALS, INSTALLATION PROCEDURES, AND INSPECTION SHALL COMPLY WITH THE MATERIAL SPECIFICATIONS FOR, AND THE GENERAL REQUIREMENTS OF, THE NORTH TIVERTON FIRE DISTRICT. ALL PROPOSED WATER MAINS TO BE 8\"/>



WATER LINE DETAILS
NOT TO SCALE

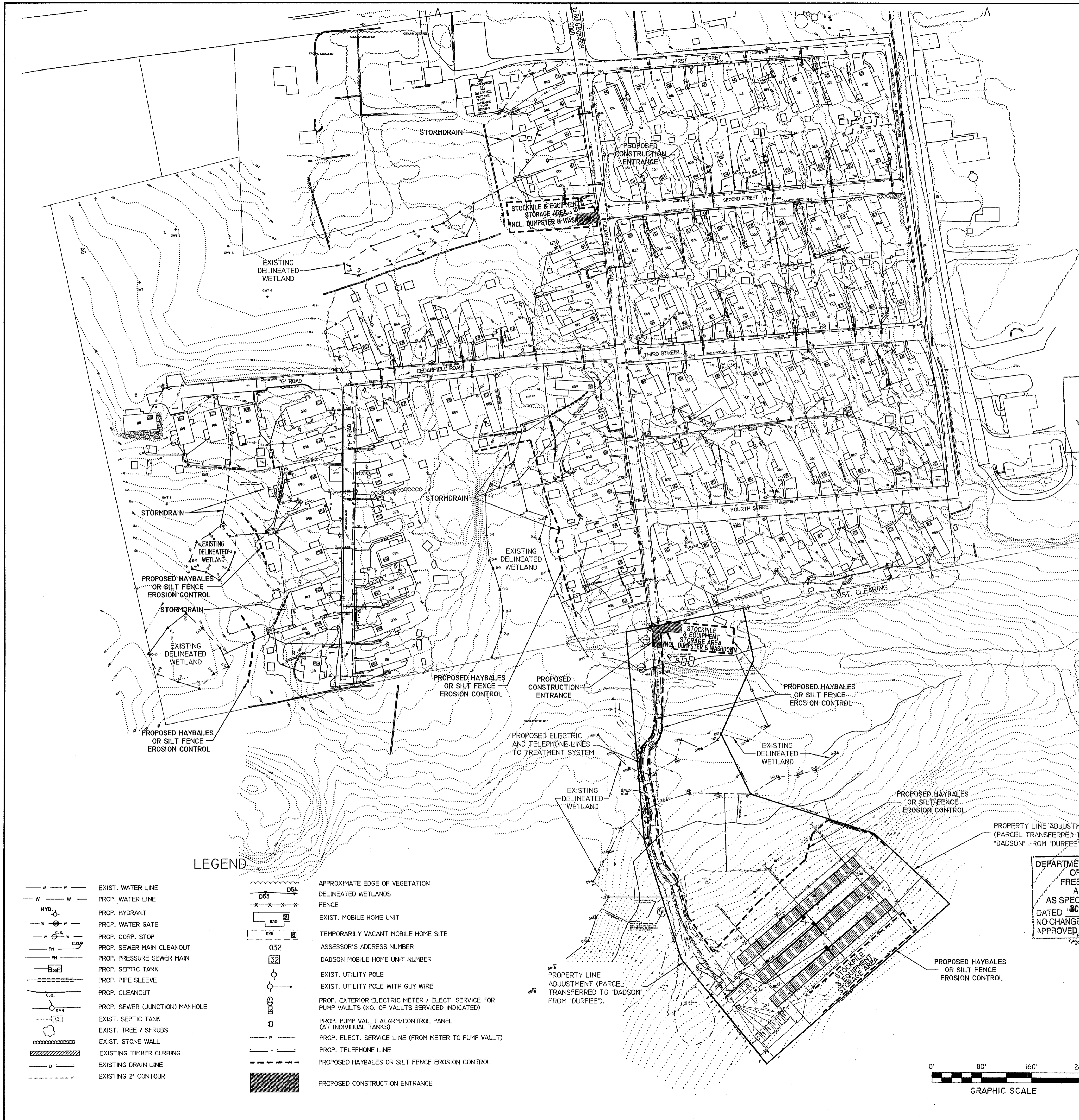
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF WATER RESOURCES
FRESHWATER WETLANDS PROGRAM
APPROVED WITH CONDITIONS
AS SPECIFIED IN THE LETTER OF APPROVAL
DATED OCT 23 2015 FILE # 15-0136
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Environmental Management
JUN 26 2015
Office of Water Resources



4/29/15 No CHANGES THIS SHEET
REVISIONS:

PROPOSED OWTS REPAIR PLAN
PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
PLAT 410 LOT 125 AND 126
301 BULGARMARSH ROAD
TIVERTON, RHODE ISLAND
SCALE: NONE DATE: DECEMBER 29, 2014
Civil Engineering Concepts, Inc.
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SHEET 13 OF 13 JOB#: 06-049

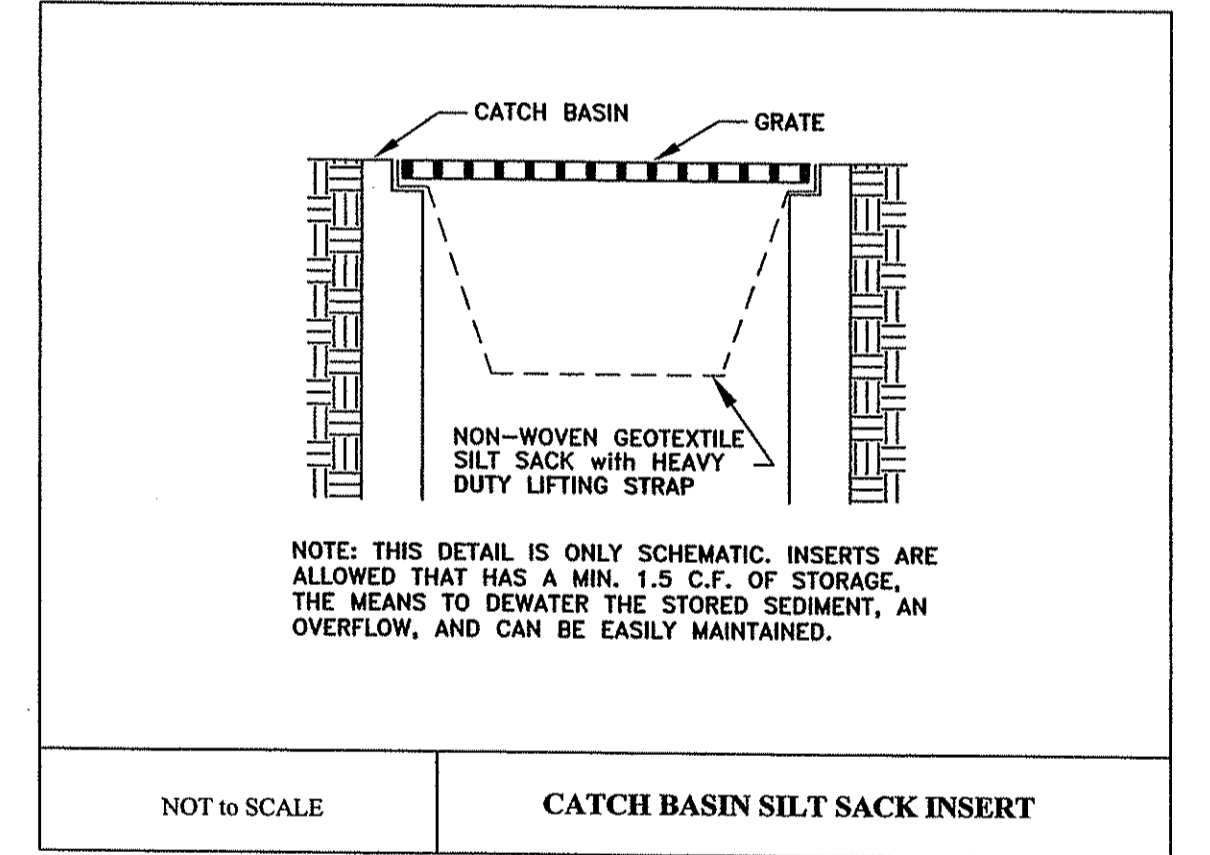
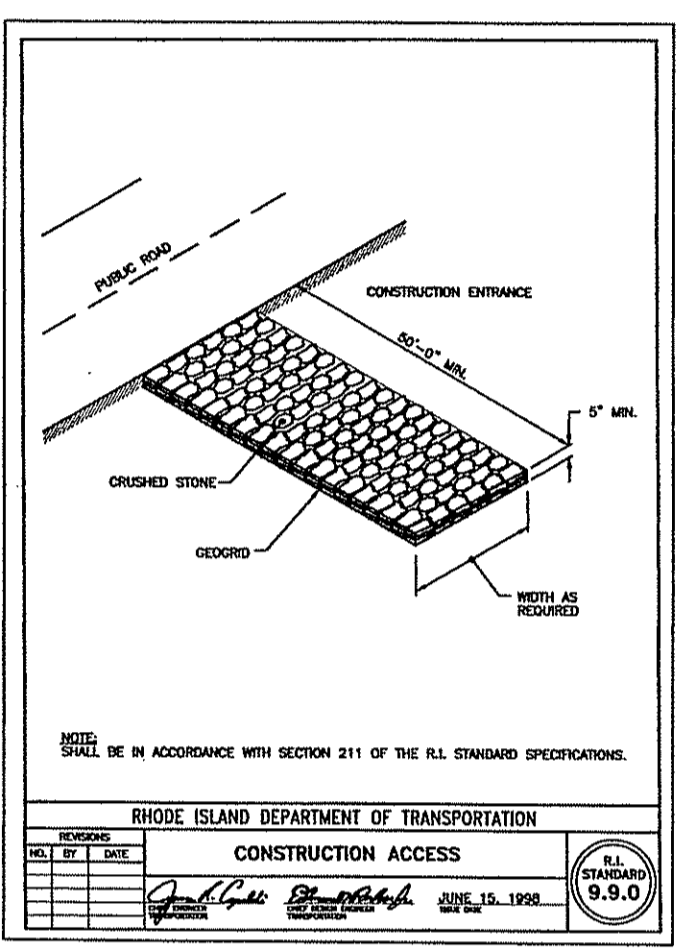
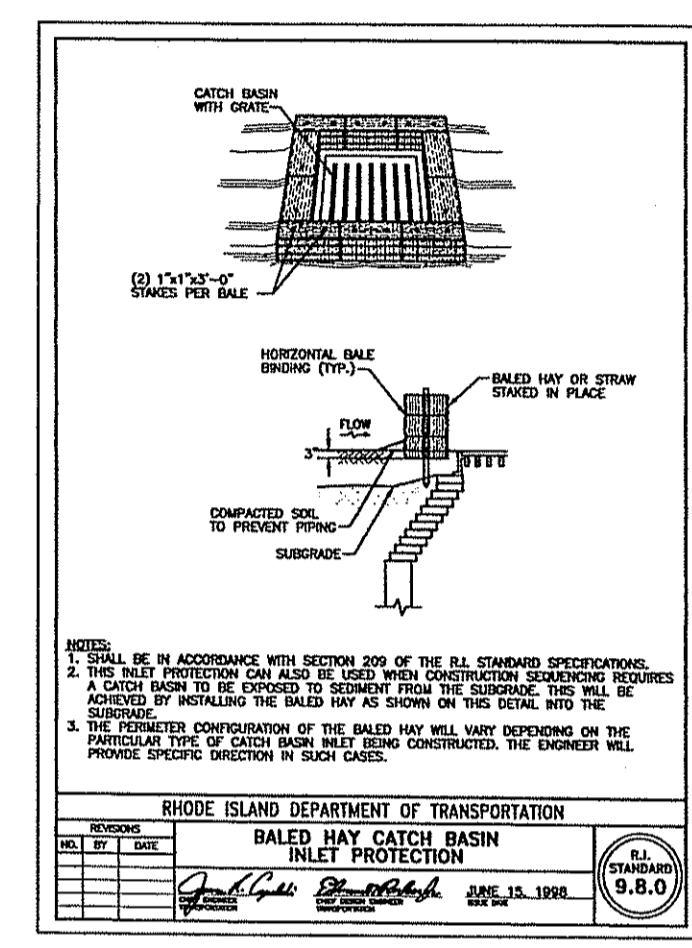
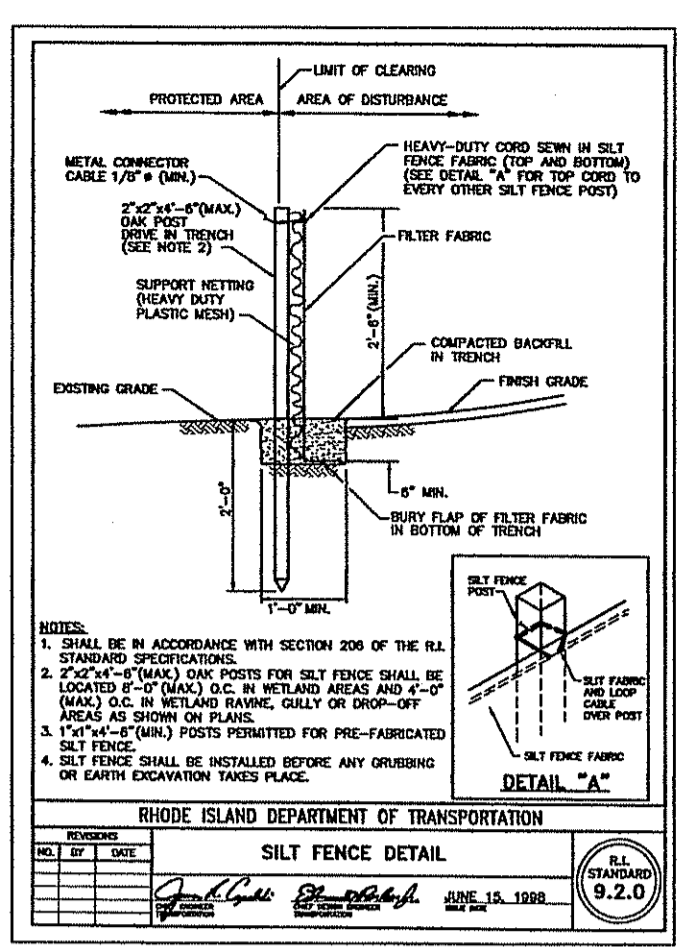
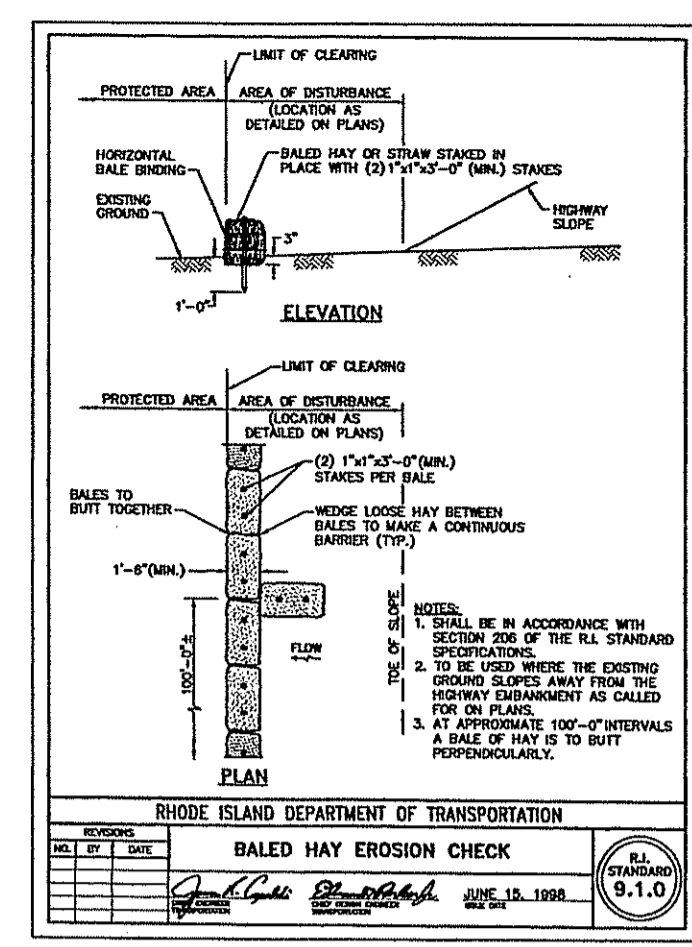
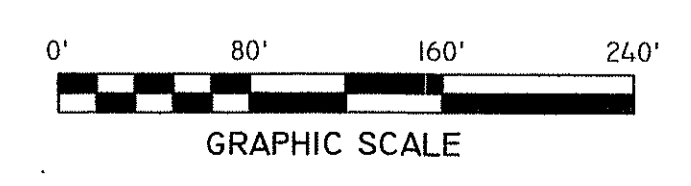
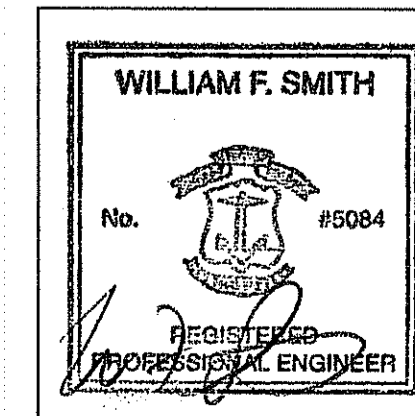


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LEGEND

- | | | | |
|---------------|--------------------------------|-----|--|
| — W — W — | EXIST. WATER LINE | DSL | APPROXIMATE EDGE OF VEGETATION DELINEATED WETLANDS |
| - - - W - - - | PROP. WATER LINE | DSS | FENCE |
| HYD | PROP. HYDRANT | MSU | EXIST. MOBILE HOME UNIT |
| - W - W - | PROP. WATER GATE | MSU | TEMPORARILY VACANT MOBILE HOME SITE |
| - W - W - | PROP. CORP. STOP | 032 | ASSESSOR'S ADDRESS NUMBER |
| FM | PROP. SEWER MAIN CLEANOUT | 32 | DADSON MOBILE HOME UNIT NUMBER |
| FM | PROP. PRESSURE SEWER MAIN | U | EXIST. UTILITY POLE |
| SM | PROP. SEPTIC TANK | U | EXIST. UTILITY POLE WITH GUY WIRE |
| PS | PROP. PIPE SLEEVE | PE | PROP. PUMP VAULT ALARM/CONTROL PANEL (AT INDIVIDUAL TANKS) |
| C.O. | PROP. CLEANOUT | PE | PROP. ELECT. SERVICE LINE (FROM METER TO PUMP VAULT) |
| SM | PROP. SEWER (JUNCTION) MANHOLE | T | PROP. TELEPHONE LINE |
| ST | EXIST. SEPTIC TANK | --- | PROPOSED HAYBALES OR SILT FENCE EROSION CONTROL |
| SH | EXIST. TREE / SHRUBS | --- | PROPOSED CONSTRUCTION ENTRANCE |
| SW | EXIST. STONE WALL | | |
| TC | EXISTING TIMBER CURBING | | |
| D | EXISTING DRAIN LINE | | |
| --- | EXISTING 2' CONTOUR | | |

DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
 OFFICE OF WATER RESOURCES
 FRESHWATER WETLANDS PROGRAM
 APPROVED WITH CONDITIONS
 AS SPECIFIED IN THE LETTER OF APPROVAL
 DATED OCT 23 2015 FILE # 15-0136
 NO CHANGES ALLOWED WITHOUT PRIOR APPROVAL
 APPROVED PLANS MUST BE AT CONSTRUCTION SITE



- SOIL SEDIMENT & EROSION CONTROL NOTES:**
- 1) ALL WORK SHALL COMPLY WITH THE RIDEN WETLANDS PERMIT, INCLUDING THE APPROVED CONSTRUCTION SITE STORMWATER, SOIL & SEDIMENT CONTROL PLAN. A COPY OF THE WETLAND PERMIT AND APPROVED PLANS SHALL BE KEPT ON-SITE FOR THE DURATION OF THE PROJECT.
 - 2) NO FUELING OF VEHICLES IS PERMITTED WITHIN 100 FEET OF ANY WETLAND AREA.
 - 3) HAYBALES OR SILT FENCE EROSION CONTROL SHALL BE INSTALLED PRIOR TO THE START OF CONSTRUCTION ACTIVITIES AND REMAIN IN PLACE UNTIL COMPLETION OF THE PROJECT AND GRASS IS RE-ESTABLISHED IN DISTURBED AREAS. HAYBALES OR SILT FENCE SHALL BE INSPECTED DAILY AND REPLACED OR MAINTAINED AS NECESSARY.
 - 4) THE SITE SHALL BE POLICED DAILY FOR TRASH AND CONSTRUCTION DEBRIS AND DISPOSED OF PROPERLY.
 - 5) IT IS THE CONTRACTORS RESPONSIBILITY TO NOTIFY DIG SAFE AS REQUIRED BY LAW PRIOR TO THE START OF CONSTRUCTION ACTIVITIES. UTILITIES DEPICTED ON THIS PLAN ARE APPROXIMATE ONLY. OTHER UTILITIES MAY EXIST ON SITE THAT ARE NOT SHOWN ON THIS PLAN.
 - 6) REFER TO CONSTRUCTION DRAWINGS FOR ADDITIONAL DETAILS.

CONSTRUCTION SITE STORMWATER, SOIL & SEDIMENT EROSION CONTROL PLAN
 PREPARED FOR
DADSON ESTATES MOBILE HOME PARK
 PLAT 410 LOT 125 AND 126
 301 BULGARMARSH ROAD
 TIVERTON, RHODE ISLAND

SCALE: 1" = 80' DATE: OCTOBER 1, 2015

Civil Engineering Concepts, Inc.
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REVISIONS: SHEET 1 OF 1 JOB#: 06-019