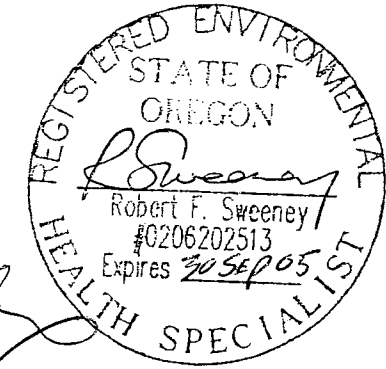


HD AVIATION & SOUTHEND AIRPARK

T.4S, R.1W, SEC. 2D & 11A, T.L. 200, 203, 400, 401, 1600

14401 KEIL ROAD N.E.
AURORA, OREGON 97002



PLAN APPROVED

Date 6/22/05 Signed [Signature]
* With changes noted here in

INSTALLER: TBA

LICENSE #: TBA

Table of Contents

Page 1	Cover Sheet	Page 17	Tank Details - C2 & R1
Page 2	Construction Specifications	Page 18	Tank Details - R3 & D7
Page 3	Design Data Table	Page 19	Tank Details - S12, S13, S14
Page 4	Soil Evaluations	Page 20	Tank Anti-Buoyancy Details
Page 5	System Schematic	Page 21	Recirculating Textile Filter
Page 6	Site Plan - Overall	Page 22	Recirculating Textile Filter Details
Page 7	Site Plan- Collect & Treatment Sys	Page 23	Drainfield Details - 1
Page 8	Site Plan - Treatment System Area	Page 24	Drainfield Details - 2
Page 9	Tank Details - S4, S9, S11	Page 25	Pump Curves - S1, S2, S3
Page 10	Tank Details - S5 & D2	Page 26	Pump Curves - S4, S7, S9, S11
Page 11	Tank Details - S6 & D3	Page 27	Pump Curves - D1, D2, D3, D4
Page 12	Tank Details - S10 & D4	Page 28	Pump Curve - D5, D6, D7
Page 13	Tank Details - S12 & D5	Page 29	Preliminary Parts List
Page 14	Tank Details - S13 & D6	Page 30	Maintenance Matrix - 1
Page 15	Tank Details - S1, S2, S3	Page 31	Maintenance Matrix - 2
Page 16	Tank Details - C1 & D1		

Project Description

Proposed expansion of existing wastewater treatment facility for a regional airport.
System design = 10,000 GPD.

Residential strength waste flows to eight new Septic Tanks and three new 2-compartment Septic/Dosing Tanks. Effluent flows by gravity from the Septic Tanks to five new Dosing Tanks. Three existing Dosing Septic Tanks will be converted to Sewage Lift Stations, pumping to a new 3000-gallon Co-mingle Tank with effluent filter and then to a 3000-gallon Dosing Tank. Accumulated sludges to be removed by a licensed Sewage Disposal Service.

Effluent is pumped from the Dosing Tanks and Septic/Dosing Tanks to a new 3000-gallon Co-mingle Tank and new 3000-gallon Recirculation Tank that is to be intertied to existing 2x3000-gallon Recirculation Tanks. The Recirculation Tanks will dose two AX-100 Recirculating Textile Filters.

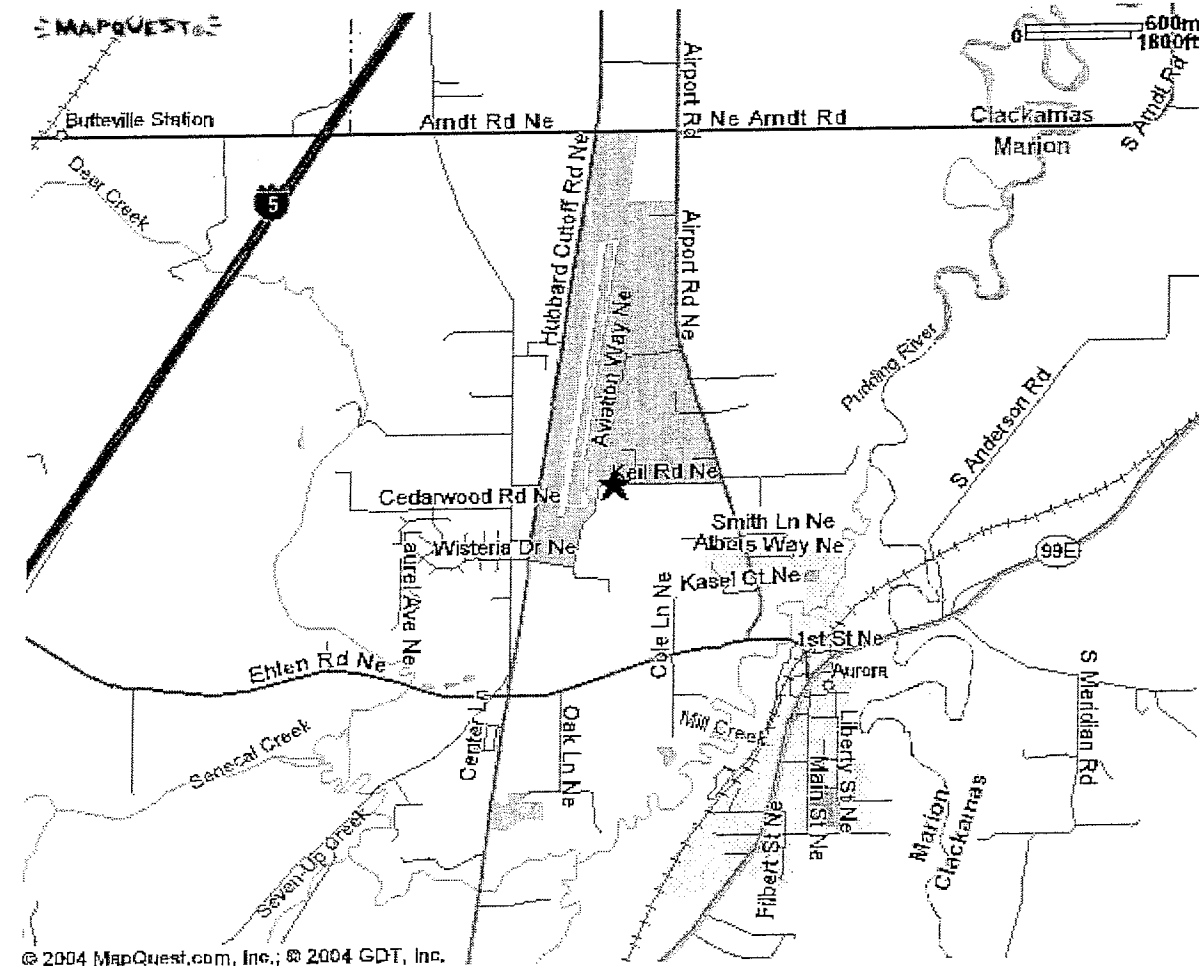
Final disposal via an existing Dosing Tank will be retrofitted with new pumping systems. The existing drainfield size to be doubled to 3000 lft by using the previously identified reserve area. Existing drainfield laterals to be removed and replaced. New Distribution System is detailed in this design. New reserve area will be located west of present drainfield.

Existing Recirculating Gravel Filter to be disassembled and removed. Used gravel media will be deposited in empty NW corner of Tax Lot 400.
Site is served by a private water well.

Site and Soils (Profile Details, Pg. 4)

Amity Silt Loam
Slope 0 - 2%
Reference: Existing File / Permit No.: DEQ110707

VICINITY MAP



© 2004 MapQuest.com, Inc.; © 2004 GDT, Inc.

PAGE 1

H.D. AVIATION & SOUTHEND AIRPARK

CHECKED BY: hl

Environmental Management Systems Inc.
4080 SE International Way, Ste. B112
Milwaukie, OREGON 97222
OR (503)353-9691 WA (360)735-1109
FAX (503)353-9695

11 JAN 2005

T.4S, R.1W, SEC. 2D & 11A, T.L. 200, 203, 400, 401, 1600

DRAWN BY: gr

SCALE: NONE

COVER SHEET

CHECK OFF	
	GENERAL STANDARDS
	All work and material shall conform with OAR 340 Div. 71 & 73 approved design permit, and appropriate laws. Permits relating (but not limited) to plumbing, electrical, and grading must be coordinated with the on-site system installer and designer.
	Minor modifications to accommodate stumps, boulders or other unforeseen obstacles may be needed. Major modification cannot be performed without re-design and regulatory approval.
	If the installation contractor (installer) notes any conflicts with applicable State and/or local laws, rules or requirements, he shall request a clarification before ordering or installing affected materials or work. This may include and is not limited to such factors as: land-use regulations, grading ordinances, erosion control districts, hauling limits, typographical errors, etc.
	Installer is to obtain copies of all necessary permits, authorizations, licenses etc. prior to initiating construction, including that specialty work designated to a subcontractor which is directly or indirectly related to the system construction.
	Installer shall request and obtain utility locates by a qualified service for all potential underground utilities before excavation work commences.
	Installer shall maintain any and all survey monuments, which are affected by work and activities, related to the projects. Monuments, if damaged by the installer, shall be reset by a licensed surveyor at the installer's expense.
	All materials and equipment shall be of the type, model and brand listed for the manufacturers specified, unless otherwise authorized by the system designer. Substitution of materials and equipment shall receive pre-authorization and the contractor/installer will be responsible for providing performance and operating data.
	Installer shall prepare, maintain and provide, at completion of the project, drawings detailing the construction "as-built" and shall provide the owner & designer with the manufacturer's current specification and operating data on all equipment installed prior to final payment to the installer.
	TANK (S)
	Grout: Grout watertight using hydraulic-adhesive type cement or grout material. Grout interior and exterior.
	Seal all joints and seams with manufacturer-approved sealants.
	Odor proof: Seal riser lid to contact with closed cell plastic foam sheet, or single-side adhesive neoprene foam tape.
	All tanks must be Traffic Rated.
	Tanks must be fitted with manhole covers in steel rings set in pavement minimum 2" above the tank risers.
	Riser: Tank must be equipped with a watertight riser, with minimum 18" inside diameter, with tank access brought to or above finish grade. Riser seams must be grouted interior and exterior.
	Knockouts: Perforations and unused knockouts must be grouted.
	Watertight: Tank must be subject to overnight test for watertightness prior to calling for inspection. Fill to a maximum 2" into riser. Mark water level, initials, time and date.
	PUMP (S)
	Air-lock hole: Install a 5/32" diameter hole in discharge pipe below off level and below check level.
	Disconnect: Provide a quick disconnect of non-corrosive material within 12" of riser top. Position to allow for removal of pump and pump screen for annual maintenance.
	Isolate valve: Provide a gate or ball valve within 12" of riser top, on discharge side of disconnect. Position to allow for removal of pump and pump screen for annual maintenance.

	Flush transport pipe and check for equal distribution from splitters, valves, and/or distribution box.
	Float control assembly: Float controls must be connected to a separate stand pipe, not discharge line, which is serviceable and accessible.
	Pump screen: Provide a corrosion-resistant screen with minimum twelve sq. ft. surface area, with maximum 1/8" openings, surrounding pump extending above maximum effluent level.
	Trace wire: Provide an electrically continuous 18 gauge, green-jacketed copper wire in trench for the full length of all transport lines, accessible at the source end.
	ELECTRICAL COMPONENTS
	Wiring of pumps and controls shall be performed by a licensed electrician under the auspices of a permit secured from the local jurisdiction. For details of electrical system, pump controls, floats, and the level of the float settings see the manufacturer's instructions and approved design.
	Splicing of wires at the splice box inside the tank risers shall be done using the heat shrink connectors provided by the manufacturer or with an approved watertight electrical connector nut.
	Wiring from the splice box to the source or the control panel shall be protected in UL approved PVC conduit, constructed watertight. Pump line voltage shall have water proof insulation such as THW, THWN, or HHW. Wire for all connections shall be 14 gauge wire or larger.
	"Seal offs" shall be installed between the splice box and the power source or control panel, either in the horizontal just outside the riser or in the vertical just below the control panel or per connection. "Seal offs" shall be installed to manufacturer's specifications and shall be equal to or better than the following: Appleton EYF seal off box, PVC terminal adapters (threaded), Killark sealing compound, Killark packing fiber.
	Wiring shall be color coded or numbered and the schedule written inside the control panel or on the wiring diagram.
	Upon completion, the apparatus shall be tested for operation and correctness. Available voltage, pump run voltage and pump run amperage shall be measured and recorded inside the control panel.
	The wiring diagram shall be retained on site (preferably in control panel enclosure) and any as-built notes or comments entered, initialed, and dated.
	CONTROL PANEL (S)
	The electrician shall label the control panel or electrical panel with his business name and the permit number and date of installation.
	Control panel shall be installed per manufacturer's instructions; alarm shall be audible from the living/working space. Pump and alarm must be on separate circuits. Location of panels to be based on electrical access.
	The control panel for all pumps must have the capability to record the number of alarms, pump events and override events, if applicable.
	Use a padlock or other locking device to prevent unauthorized access to the control panel. Panel to be installed on 4" X 4" post, NOT on wall.
	Panel shall be in accordance with NEMA 4X rating. Panel enclosure shall meet NEMA 4X requirements.
	OTHER
	Setbacks: Maintain required setbacks.
	COLLECTION SYSTEM
	Plumbing permit required
	DISTRIBUTION AND TRANSPORT LINES
	Pressure piping: Must meet or exceed Class 200 PVC, (ASTM 2241), or class 160 for pipes greater than an inch in diameter.
	Road crossing: Sleeve transport pipe in Sch. 40 PVC, installed a minimum of 18" below grade, and bedded in 3/4" minus to the surface.
	All work and materials shall conform with Chapter 246-272 WAC, approved design permit, and appropriate laws. Permits relating (but not limited) to plumbing, electrical, and grading must be coordinated with the on-site system installer and designer.



Environmental Management Systems Inc. 4080 SE International Way, Ste. B112 Milwaukie, OREGON 97222 OR (503) 353-9691 WA (360) 735-1109 FAX (503) 353-9695	CHECKED BY: <i>hl</i> DRAWN BY: <i>gr</i>	H.D. AVIATION & SOUTHERN AIRPARK T.4S, R.1W, SEC. 2D & 11A, T.L. 200, 203, 400, 401, 1600 CONSTRUCTION SPECIFICATIONS	PAGE 2 11 JAN 2005 SCALE: NONE
	Environmental Management Systems Inc.		

Source	Gallons Per Day
Existing Building 1	825
Existing Building 2	945
Existing Building 3	375
Future Building 4	90
Future Building 5	75
Future Building 6	105
Future Building 7	165
Future Building 8	150
Future Building 9	90
Future Building A	480
Future Building A	525
Existing Building B	45
Existing Building C	225
Existing Building D	135
Future Building E	45
Existing Building F	45
Future Building G	180
Future Building H	180
Existing Building I	315
Existing Building J	195
Future Building K	495
Future Building L	510
Future Building L	525
Future Building M	105
Future Building N	225
Projected Peak Flow	7500
Design Flow Max	10000

Effluent Quality	Gallons Per Day	Loading Rate
Advantex Effluent	5000	45 lf / 150 gpd

Effluent Quality	Gallons Per Day	Loading Rate
Advantex Effluent	5000	45 lf / 150 gpd

Parameter	Not to Exceed
BOD	20 mg/L
TSS	20 mg/L
TN	30 mg/L

System Components-HD Aviation								
	Tank #	Volume (gal)	Dose Schedule	Pump Type	# of Pumps	Pump Model	Pump Size	Gal/min
Pump Stations	S1	3000	Timed	Solids Handling	2	PSE4011	4/10 hp	10
	S2	3000	Timed	Solids Handling	2	PSE4011	4/10 hp	10
	S3	1500	Demand	Solids Handling	2	PSE4011	4/10 hp	10
Septic Tanks	S5	1000	na	na	na	na	na	na
	S6	3000	na	na	na	na	na	na
	S10	3000	na	na	na	na	na	na
	S12	1500	na	na	na	na	na	na
	S13	1500	na	na	na	na	na	na
	S14	1000	na	na	na	na	na	na
	S15	1000	na	na	na	na	na	na
	S16	1000	na	na	na	na	na	na
Septic/Dosing Tanks	S4	1500	Demand	Turbine	2	P100511	1/2 hp	10
	S7	1500	Demand	Turbine	2	P100511	1/2 hp	10
	S8	1500	Demand	Submersible	1	Myers	1/2 hp	10
	S9	1500	Demand	Turbine	2	P100511	1/2 hp	10
	S11	1500	Demand	Turbine	2	P100511	1/2 hp	10
Dosing Tanks	D1	2000	Timed	Turbine	2	P100511	1/2 hp	10
	D2	1000	Timed	Turbine	2	P100511	1/2 hp	10
	D3	1500	Timed	Turbine	2	P100511	1/2 hp	10
	D4	1000	Timed	Turbine	2	P100511	1/2 hp	10
	D5	1000	Timed	Turbine	2	P100511	1/2 hp	10
	D6	1000	Timed	Turbine	2	P100511	1/2 hp	10
	D7	3000	Timed	Turbine	2	P501512	1-1/2 hp	50
Recirculation Tanks	R3	3000	Timed	Turbine	2	P500712	3/4 hp **	50

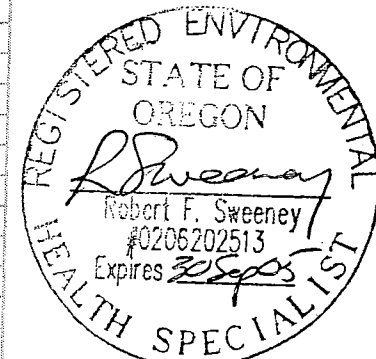
Primary Septic Tankage Volume = 25,500 gallons
Total Tankage Volume = 47,500 gallons

Recirculating Textile Filter
Max. Design Capacity = 10,000gpd
Projected Peak Flow = 7500 gpd
Projected Average Daily Flow = 3750 gpd
Pod Surface Area = 100 sqft.
Number of pods = 2
Recirculation Rate = 4 to 1
Actual Flow (w/ Recirc.) = 15000 gpd
Design Hydraulic Loading = 50 gal/sqft/day
Design Recirculation Loading = 250 gal/sqft/day

** Pumps to be upgraded to size and model determined and verified by RTF Manufacturer (Orengo).

Distribution Components	Quantity	Component
	1	OSI-Hydrotek V6602 Automatic Distribution Valve (RTF Pod Distribution)
	1	OSI-Hydrotek V6606 Automatic Distribution Valve (Drainfield Distribution)

Pressure Distribution Drainfield
Max. Design Capacity = 10,000gpd
Projected Peak Flow = 7500 gpd
Projected Average flow = 3750 gpd
Design Hydraulic Loading Rate = 45 Lf./ 150gpd



H.D. AVIATION & SOUTHBEND AIRPARK

T.4S, R.1W, SEC. 2D & 11A, T.L. 200, 203, 400, 401, 1600

DESIGN DATA TABLE

PAGE 3
11 JAN 2005
SCALE: NONE

Environmental Management Systems Inc.
4080 SE International Way, Ste. B112
Milwaukie, OREGON 97222
OR (503)353-9691 WA (360)735-1109
FAX (503)353-9695

CHECKED BY: *bl* DRAWN BY: *AK*

ENVIRONMENTAL MANAGEMENT SYSTEMS Inc. - ON-SITE SEWAGE TREATMENT SITE EVALUATION DATA
 4080 SE International Way, Suite #B-112, Milwaukie, OR 97222-8867 (503) 353-9691 fax: (503) 353-9695 (Vancouver, WA 360-735-1109)

APPLICANT: HD AVIATION PREVIOUS EVALUATIONS: Y / N / ID#:

ADDRESS OF SITE: 1400 KEIL RD, AURORA, OR 97002 Sub Division: _____

LEGAL DESCRIPTION: TOWNSHIP: 2S RANGE: 1W SECTION: 2, 11 PARCEL/TAX LOT: 800 other: _____

SOIL PROFILES: DRAINFIELD AREA - EAST SET OF HOLES

TEST HOLE	DEPTH (IN)	TEXTURE	Redoximorphic Features			Coarse Fragments	ROOTS	STRUCTURE & Other Comments:	APPL. RATE w / Pretreatment
			MATRIX COLOR	Oxidized COLOR	Reduced Color				
#1 NE	0" - 8"	gSiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
	8" - 16"	SiCL	7.5YR 3/2	--	--	--	cf	Faint Mottles / sbk	45 LfV/150g
	16" - 36"	SiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles / abk	50 LfV/150g
Slope= 2% E	36" - 64"	SiCL	7.5YR 2.5/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
	0" - 13"	gSiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
#2 NW	13" - 18"	SiCL	7.5YR 3/2	--	--	--	cf	Faint Mottles / sbk	45 LfV/150g
	18" - 40"	gSiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles / abk	50 LfV/150g
	40" - 76"	SiCL	7.5YR 2.5/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
#3 SE	0" - 10"	gSiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
	10" - 30"	gSiCL	7.5YR 3/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles / abk	50 LfV/150g
	30" - 62"	SiCL	7.5YR 2.5/1	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
Slope= 2% E	62" - 66"	SiCL	7.5YR 3/2	--	--	--	--	Massive	75 LfV/150g
	0" - 14"	gSiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
#4 SW	14" - 30"	gSiCL	7.5YR 3/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles / abk	50 LfV/150g
	30" - 48"	SiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
	Slope= 2% E	48" - 66"	SiCL	7.5YR 3/2	--	--	--	Massive	75 LfV/150g

WEATHER CONDITIONS: (X) CLEAR () CLOUDY () PRECIPITATION () EXTREME DRYNESS () OTHER: _____

LANDFORMS: () FLOODPLAIN (X) TERRACE (X) UPLAND () SIDESLOPE () OPEN () OTHER: _____

VEGETATION: (X) PASTURED () FORESTED (X) CLEARED () WETLAND () OTHER: _____

MAJOR LIMITING FACTOR(S): (X) WATER TABLE / (X) SOIL SUITABILITY / () SET BACKS / () LOT SIZE

SOIL TYPE: SiL / SiCL PROPOSED SYSTEM: RGF to Pressure Drainfield

ADDITIONAL COMMENTS: Soil Pits Observed with Randy Trox, RS of DEQ-Western Region.

EVALUATOR'S NAME: ROBERT F. SWEENEY, RS EVALUATOR'S SIGNATURE: *R. Sweeney* DATE: 14 July 1999

ENVIRONMENTAL MANAGEMENT SYSTEMS Inc. - ON-SITE SEWAGE TREATMENT SITE EVALUATION DATA
 4080 SE International Way, Suite #B-112, Milwaukie, OR 97222-8867 (503) 353-9691 fax: (503) 353-9695 (Vancouver, WA 360-735-1109)

APPLICANT: HD AVIATION PREVIOUS EVALUATIONS: Y / N / ID#:

ADDRESS OF SITE: 1400 KEIL RD, AURORA, OR 97002 Sub Division: _____

LEGAL DESCRIPTION: TOWNSHIP: 2S RANGE: 1W SECTION: 2, 11 PARCEL/TAX LOT: 800 other: _____

SOIL PROFILES: DRAINFIELD AREA - WEST SET OF HOLES

TEST HOLE	DEPTH (IN)	TEXTURE	Redoximorphic Features			Coarse Fragments	ROOTS	STRUCTURE & Other Comments:	APPL. RATE w / Pretreatment
			MATRIX COLOR	Oxidized COLOR	Reduced Color				
#1 SW	0" - 10"	SiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
	10" - 21"	SiL	7.5YR 3/2	--	--	--	cf	abk	45 LfV/150g
	21" - 25"	gSiL	7.5YR 3/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles	50 LfV/150g
Slope= 1% W	25" - 60"	SiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
	0" - 15"	SiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
#2 SE	15" - 19"	gSiL	7.5YR 3/2	--	--	--	cf	sbk	45 LfV/150g
	19" - 28"	SiCL	7.5YR 3/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles	50 LfV/150g
	Slope= 1% W	28" - 60"	SiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive
#3 NE	0" - 15"	SiL	7.5YR 3/3	--	--	--	mf	sbk	45 LfV/150g
	15" - 20"	gSiL	7.5YR 3/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles / abk	50 LfV/150g
	20" - 60"	SiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
Slope= 1% W	0" - 16"	SiL	7.5YR 3/3	--	--	--	mf	abk	45 LfV/150g
#4 NW	16" - 22"	gSiL	7.5YR 3/2	7.5YR 4/6	7.5YR 3/2	--	ff	Distinct Mottles / abk	50 LfV/150g
	22" - 60"	SiCL	7.5YR 4/2	7.5YR 4/6	7.5YR 3/2	--	vff	Somewhat Massive	50 LfV/150g
	Slope= 1% W	0" - 16"	SiL	7.5YR 3/3	--	--	--	mf	abk

WEATHER CONDITIONS: (X) CLEAR () CLOUDY () PRECIPITATION () EXTREME DRYNESS () OTHER: _____

LANDFORMS: () FLOODPLAIN (X) TERRACE (X) UPLAND () SIDESLOPE () OPEN () OTHER: _____

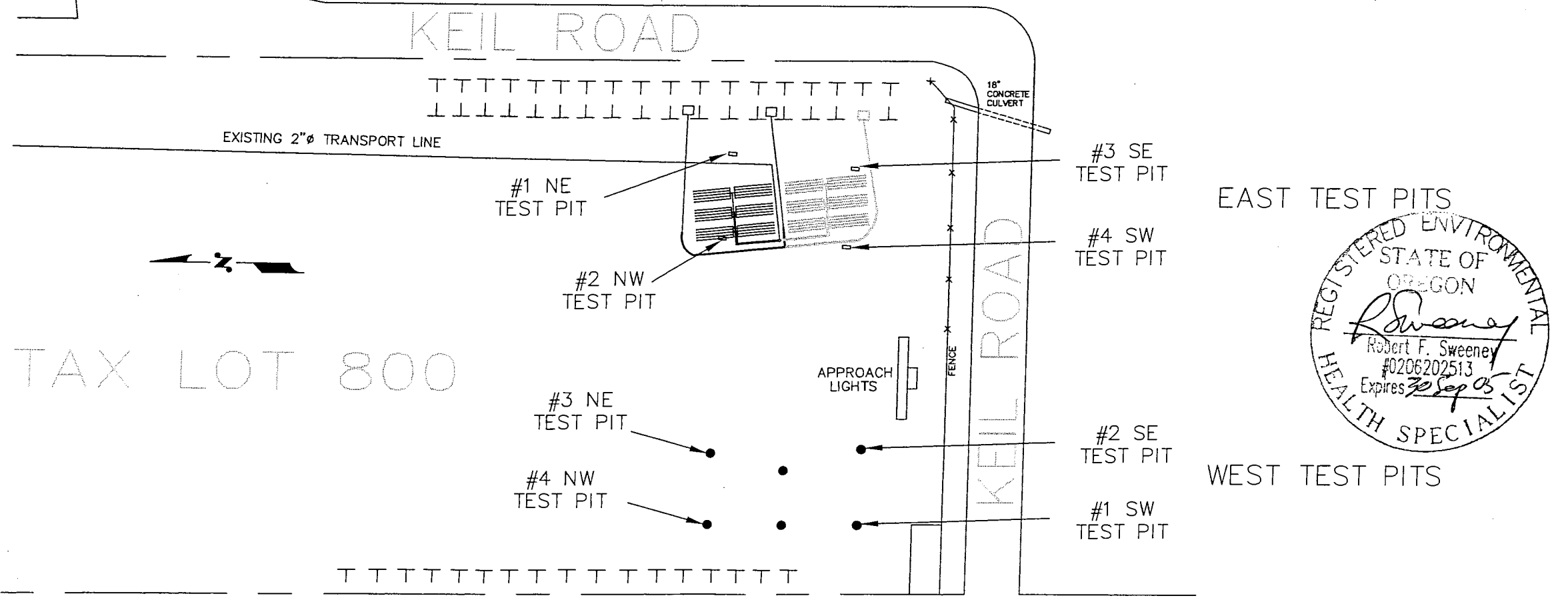
VEGETATION: (X) PASTURED () FORESTED (X) CLEARED () WETLAND () OTHER: _____

MAJOR LIMITING FACTOR(S): (X) WATER TABLE / (X) SOIL SUITABILITY / () SET BACKS / () LOT SIZE

SOIL TYPE: SiL / SiCL PROPOSED SYSTEM: RGF to Pressure Drainfield

ADDITIONAL COMMENTS: Soil Pits Observed with Randy Trox, RS of DEQ-Western Region.

EVALUATOR'S NAME: ROBERT F. SWEENEY, RS EVALUATOR'S SIGNATURE: *R. Sweeney* DATE: 14 July 1999



ENVIRONMENTAL MANAGEMENT SYSTEMS Inc.
 4080 SE International Way, Ste. B112
 Milwaukie, OREGON 97222
 OR (503) 353-9691 WA (360) 735-1109
 FAX (503) 353-9695

REGISTERED ENVIRONMENTAL HEALTH SPECIALIST
 STATE OF OREGON
 Robert F. Sweeney
 #0206202513
 Expires 30 Sep 05

SOIL EVALUATIONS

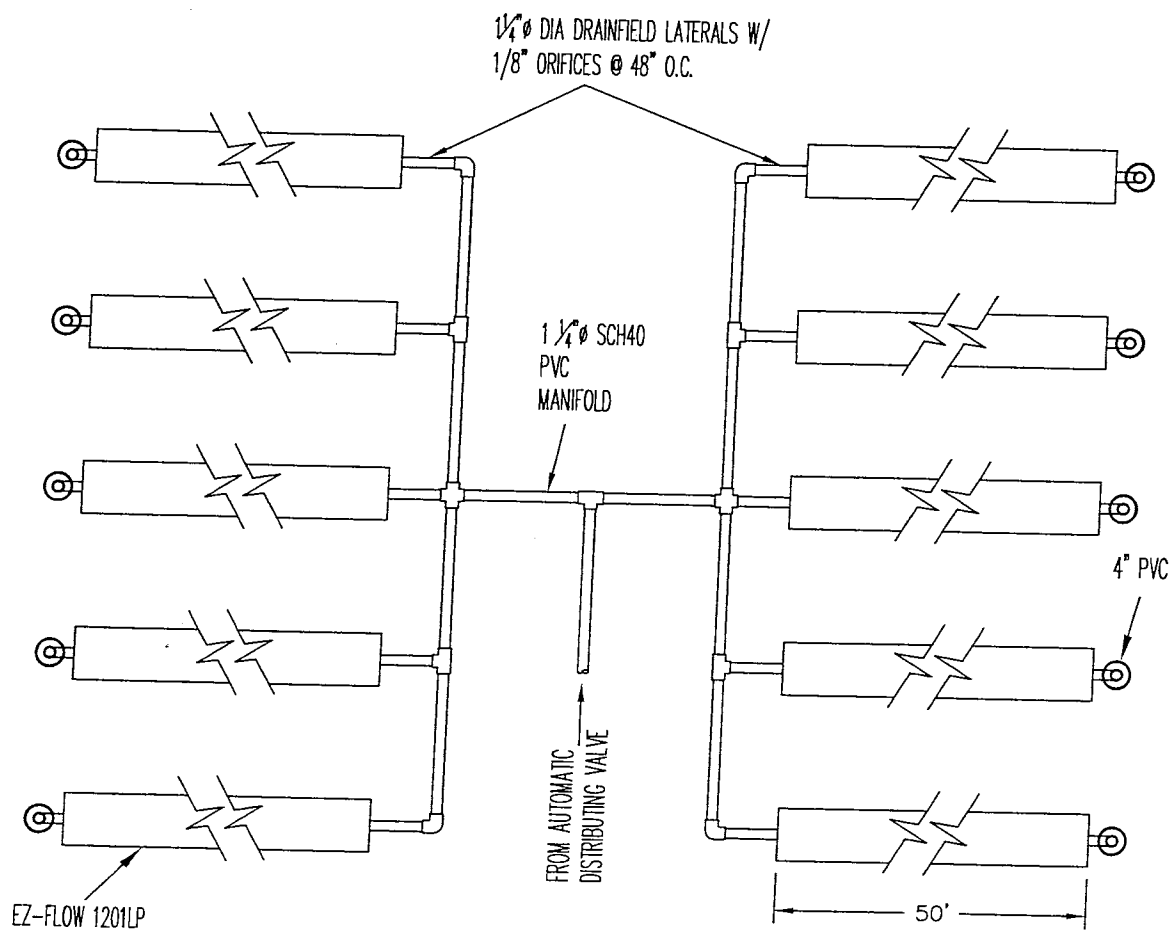
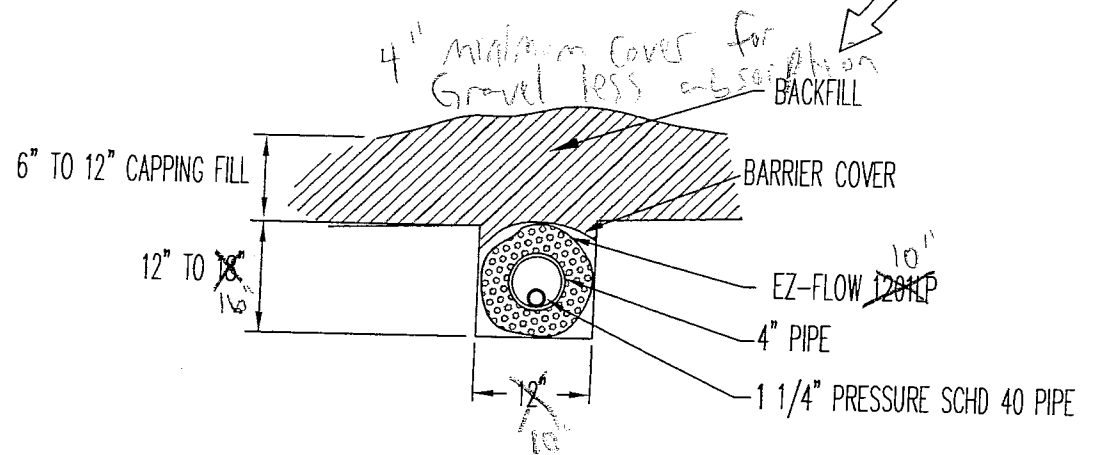
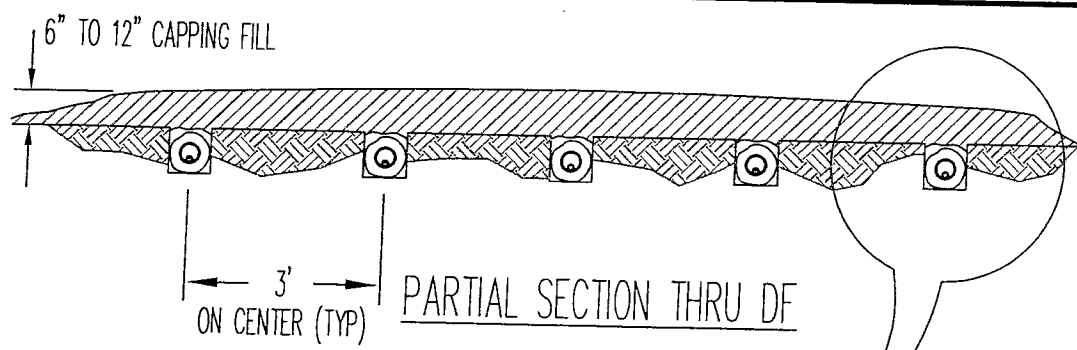
PAGE 4

11 JAN 2005

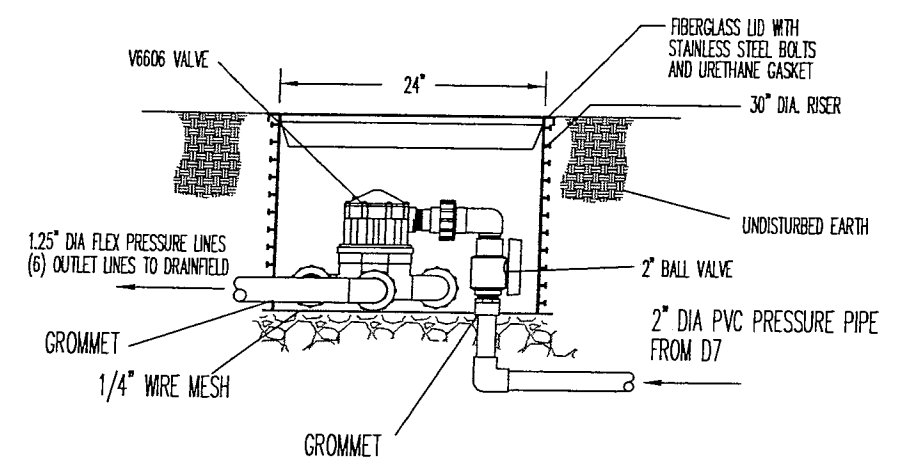
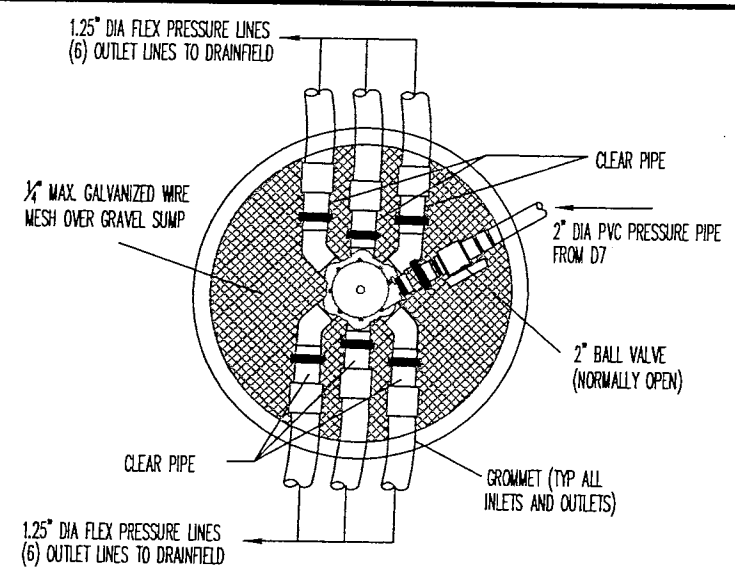
SCALE: NONE

H.D. AVIATION & SOUTHBEND AIRPARK

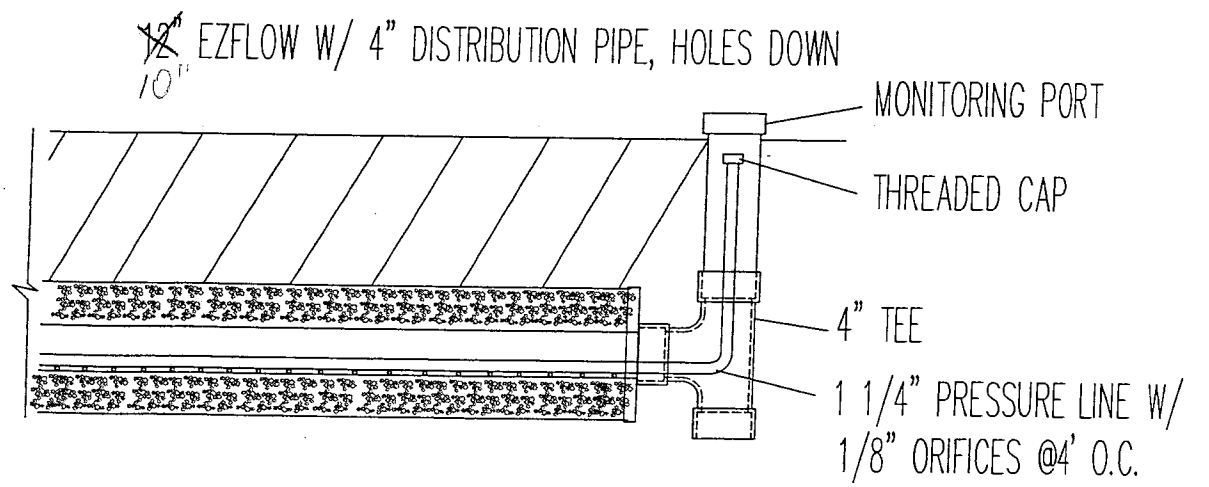
T.4S, R.1W, SEC. 2D & 11A, T.L. 200, 203, 400, 401, 1600



DRAINFIELD CELL



V6606 DISTRIBUTING VALVE



MONITORING PORT @ END OF EACH LINE



Environmental Management Systems Inc. 4080 SE International Way, Ste. B112 Milwaukie, OREGON 97222 OR (503)353-9691 WA (360)735-1109 FAX (503)353-9695	CHECKED BY: <i>[Signature]</i> DRAWN BY: <i>[Signature]</i>	H.D. AVIATION & SOUTHBEND AIRPARK T.4S, R.1W, SEC. 2D & 11A, T.L. 200, 203, 400, 401, 1600 DRAINFIELD DETAILS-1	PAGE 23 11 JAN 2005 SCALE: NONE
	REGISTERED ENVIRONMENTAL HEALTH SPECIALIST STATE OF OREGON <i>[Signature]</i> Robert F. Sweeney #0266202513 Expires 20 Sep 05		

KEIL ROAD

EXISTING RIP RAP

EXISTING GWI
OUTFALL TO BE
DISCONNECTED

18"
CONCRETE
CULVERT

NEW
RIP RAP

#3 SE
TEST PIT

#4 SW
TEST PIT

#1 NE
TEST PIT

EXISTING
1'x3' GWI

#2 NW
TEST PIT

NEW
V6606

CONNECT NEW 1'x3' GWI
TO EXISTING GWI.
DISCONNECT CURRENT
SOUTH OUTFALL AND
REROUTE SOUTH OF
NEW DRAINFIELD CELLS

APPROACH
LIGHTS

FENCE

KEIL ROAD

EXISTING 2"ØPVC
TRANSPORT LINE

RESERVE DRAINFIELD AREA

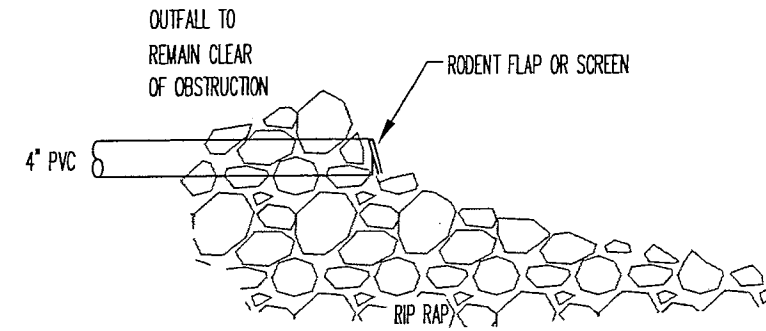
#3 NE
TEST PIT

#4 NW
TEST PIT

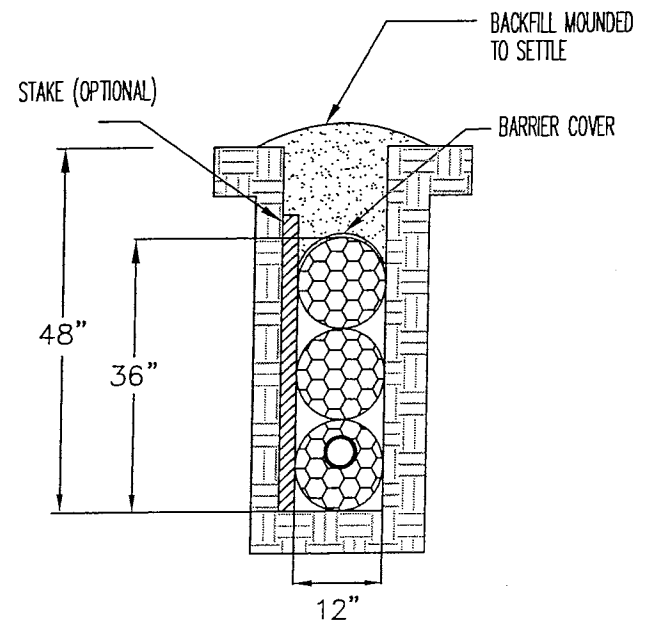
#2 SE
TEST PIT

#1 SW
TEST PIT

STATE HIGHWAY 164



RIP RAP DETAIL



EZ1203V
GWI DETAIL

CHECKED BY: *bl* DRAWN BY: *gk*

Environmental Management Systems Inc.
4080 SE International Way, Ste. B112
Milwaukie, OREGON 97222
OR (503)353-9691 WA (360)735-1109
FAX (503)353-9696