

8128 HARRISBURG RD

11113109

1/8/2008

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
Barcode Font = IDAutomationHC39M

CERTIFICATE OF COMPLETION/OPERATION PERMIT

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 5445B DATE: 2/28/06

TC: 111-13-109 ☐ L ☐ CRT

SERIAL 19986

Name of Owner JEHOVAH'S WITNESSES TRUSTEES Juris.: _____

Address of Property 8128 HARRISBURG RD.

Inspection Data:

Tank Material PCC

Total Length of Drainfield 520'

Number of Lines 7 @ 45'-113'

Cover Depth 12"

Water Supply Source MUNICIPAL

Distance to Water Source >100'

Excavation Inspected 2/28/06

Tank(s) Inspected 2/28/06

Wash Line Inspected N/A

High Water Alarm Inspected _____

INSTALLED ACCORDING TO PLANS ON FILE SUBMITTED BY S&EC, 2/28/05

PLOT

Design 2006, INV., 25% REDUCTION, 1560FT², T, 2000ST, 3000PT CTR# STANLEY

The undersigned has inspected the Septic Tank System described above, and certifies it has been

☒ installed or constructed ☐ altered or repaired

☒ in accordance with the permit issued ☐ as detailed in the plot above

and meets the provisions of 15A NCAC 18A. 1900, "Laws And Rules For Sewage Treatment and Disposal Systems" in effect on the date of issuance of the permit. This issuance of this

☐ Certificate of Completion ☒ Operation Permit

does not in any way guarantee that the system will operate properly or relieve any person now or hereafter owning, controlling, or using such system from any liability resulting from the failure of the system to operate properly. This document is issued subject to those restrictions and conditions shown on the permit(s) and the provisions of 15A NCAC 18A. 1990 in addition to those listed below under "COMMENTS." This document shall be null and void if any information contained in the application is untrue or if any additions are made to the property which would increase the requirements for said system.

Notice: Disturbance of the designated repair area may result in the suspension/revocation of this permit.

COMMENTS: INSTALLED ACCORDING TO PLANS ON FILE SUBMITTED BY S&EC, 2/28/05

TYPE IIIb

David Cameron, RS 2/28/06
Environmental Health Specialist

Mecklenburg County services are available without regard to ethnic origin, sex, or disability.

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5103

FILE: 54458 DATE: 2/28/06

TC: 111-13-109 ☐ L

SERIAL Nº 20651

Permission is hereby given to _____ (Install or) Construct, _____ Alter or Repair the individual septic tank wastewater treatment system with subsurface, soil absorption, effluent discharge as specified herein at the described location. This permit is granted based upon the information supplied in the application dated 11/13/03. All work shall be completed on or before 3/3/06, after which date this permit shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of the granting of this permit. A Certificate of Completion or an Operation Permit must be obtained from the Mecklenburg County Health Department before any system can be covered up or placed into service. The issuance of this permit does not in any way guarantee that the system anticipated to be constructed will operate properly, or relieve any person now or hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

INSTALL ACCORDING TO PLANS ON FILE SUBMITTED BY S&EC, 2/28/05.

PLOT OF SYSTEM

Liquid Capacity of Septic Tank 2000 gallons

Liquid Capacity of Dosing Tank 3000 gallons

Tank Construction PCC

Trench Depth 24

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous YES

Total Line Length 520 feet

Number of Lines 7

Depth of Stone N/A inches

Distance from House 75 feet

Distance from Property Line 710 feet

Distance from Well 7100 feet

NOTICE: This system shall not be installed while soils are in a wet condition.

NAME OF OWNER JEHOVAH'S WITNESSES TRUSTEES

LOCATION OF PROPERTY 8128 HARRISBURG RD.

Comments: INSTALL ACCORDING TO PLANS ON FILE SUBMITTED BY S&EC, 2/28/05

[signature] RS 2/28/06
Environmental Health Specialist

WHITE - HEALTH DEPARTMENT's COPY • CANARY - E.H.S. COPY • PINK - OWNER OR AGENT's COPY

FEE: 300.00
DATE: 10/31/05
VISA 3CA

AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION
VOID SIXTY (60) MONTHS FROM DATE OF ISSUANCE

ACS

ND133794

PERMIT NUMBER: 5445B
PARCEL NUMBER: 11113109

JOB LOCATION ADDRESS: 8128 Harrisburg Road
PROPERTY OWNER: Trustees Jehovah's Witness
BUILDING CONTRACTOR: ____
SUBDIVISION NAME: ____
AUTHORIZATION ISSUED BY: J. Andrew Walker DATE: 10/31/05

DENR AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 5445B, AND THE ATTACHED SITE PLAN WITH SYSTEM DETAILS. CONSTRUCTION AND INSTALLATION MUST ALSO MEET ALL REQUIREMENTS SET FORTH IN THE RULES GOVERNING SANITARY SEWAGE COLLECTION, TREATMENT, AND DISPOSAL AND ANY OTHER APPLICABLE RULES AND LAWS.

2. AN INSTALLATION, CONSTRUCTION, ALTERATION AND/OR REPAIR APPROVAL MUST BE SECURED PRIOR TO INSTALLATION OF THE SEPTIC TANK SYSTEM. THE INSTALLER OF THE SYSTEM SHALL BE A REGISTERED SEPTIC TANK CONTRACTOR WITH THE MECKLENBURG COUNTY HEALTH DEPARTMENT.

3. ANY ALTERATION IN SITE OR SOIL CONDITIONS (INCLUDING LOCATION OF STRUCTURES AND APPURTENANCES) OR MODIFICATION IN USE, DESIGN WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS AS SPECIFIED IN THE ASSOCIATED IMPROVEMENT PERMIT AND APPLICATION, MAY SUBJECT THIS AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. OTHER CONDITIONS: ____
   ____
   ____
   ____
   ____

OWNER CERTIFICATION

I CERTIFY THAT THERE HAVE BEEN NO ALTERATIONS IN SITE OR SOIL CONDITIONS OR MODIFICATIONS TO FACILITY, WASTEWATER FLOW, OR WASTEWATER CHARACTERISTICS FROM THOSE SPECIFIED IN THE ORIGINAL APPLICATION OR ASSOCIATED IMPROVEMENT PERMIT UNLESS AUTHORIZED IN WRITING BY THE MECKLENBURG COUNTY HEALTH DEPARTMENT. I ALSO UNDERSTAND THAT ANY SUCH ALTERATIONS, MODIFICATIONS, OR FALSE INFORMATION ARE GROUNDS FOR REVOCATION OF PERMITSAND AUTHORIZATION TO CONSTRUCT.

SIGNATURE OF OWNER/OWNER'S REPRESENTATIVE

DATE

CONDITIONS OF IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATON

Permit Number: **5445B** Tax Number: **11113109**

- The IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change. There is to be **NO** grading, filling, or disturbance of the soil in the area of the septic tank system or repair area.
- CONSTRUCTION AUTHORIZATION must be obtained prior to receiving a Building Permit. The Construction Authorization is **NOT** transferable. Do not clear, grade, fill or disturb soil prior to obtaining a Construction Authorization.
- Domestic-type wastewater only. No industrial process wastewater may be discharged into the system.

Basement: ☐ Yes ☒ No ☐ Partial Basement

Primary Wastewater System

Type: ☐ I ☐ II ☒ III ☐ IV ☐ V ☐ VI

☐ Conventional
☐ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☐ Other
☒ Innovative or Experimental:

.25 Long-term acceptance rate (GPD/ft^2)	514 Max gallons/day wastewater flow	1560 Absorption Area (ft^2)	9 Trench spacing (min. on centers) (ft)
Serviced by private well: ☐ Yes ☒ No	2000 Gallon septic tank	520 Total trench length (ft)	24 Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
na Bedrooms in residence	3000 Gallon pump tank	na Depth of stone (in)	

Any surface water present: Type: Minimum separation distance (ft):

Additional conditions: **This is a flow-egualization system.**
Contact S&EC at 704-720-9405 for site visit before installation if there are any questions.

Repair Area System

Type: ☐ I ☐ II ☐ III ☒ IV ☐ V ☐ VI

☐ Conventional
☒ Prefabricated, permeable block panel system
☐ Shallow Placed Conventional
☐ Low Pressure Pipe
☐ Large Diameter Pipe
☐ Fill
☐ Other
☐ Innovative or Experimental:

2046 Absorption Area (ft^2)	na Depth of stone (in)	8 Trench spacing (min. on centers) (ft)	__ Maximum trench depth (in)
382 Total trench length (ft)			

The undersigned, an authorized agent of the MECKLENBURG COUNTY HEALTH DEPARTMENT, certifies that the Department has approved the Request for the Job Location contained in this document. The approval is granted in accordance with the provisions of Laws and Rules For Sewage Treatment, and Disposal Systems in effect at the time of issuance of the permit and is subject to the following provisions:

*** No work shall be conducted on the septic tank system until an Installation, Construction, Alteration and/or Repair Approval is granted by this Department.

*** This Improvement permit is transferable.

10/31/2005
DENR Authorized Agent Date

MECKLENBURG COUNTY HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 N. TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE: (704) 336-5103
FAX: (704) 336-6894

10/31/05
Owner/Agent Signature Date

NC DENR
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

FOR REGISTRATION JUDITH A. GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2006 AUG 25 03:12 PM
BK:20957 PG:592-595 FEE:$20.00

INSTRUMENT # 2006175990

2006175990

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

WASTEWATER TREATMENT AND DISPOSAL SYSTEM DESIGN AGREEMENT: 15A NCAC 18A .1948 AN ANY OF THE FOLLOWING RULES: .1956; .1957(a); .1957(b); OR .1957(c); OR .1969

FILE #: 5445B

PARCEL #: 11113109

The undersigned, Trustees Jehovah's Witnesses, owner of property located at 8128 Harrisburg Road, Charlotte, NC, (the "site") and described in an instrument recorded in Book _____ at Page _____, Mecklenburg Public Registry, hereby acknowledges that the undersigned applied to the Mecklenburg County Health Department (the "Department") for a permit to install a septic tank sewage disposal system on the site; that the Department evaluated the site for suitability for such a system in accordance with the regulations promulgated by the North Carolina Commission for Health Services as 15A NCAC 18A .1900 et seq.; that the Department originally classified the site as "unsuitable" pursuant to the standards set forth in the regulations; that the undersigned requested that the Department reclassify the site as "provisionally suitable" in light of the particular septic tank system proposed by the undersigned; that the Department considered various studies, data, and other information which indicate to the Department that the septic tank system proposed by the undersigned is allowed by the rules; and that the Department therefore reclassified the site as 'provisionally suitable" and issued an appropriate permit for such proposed septic tank system.

The undersigned further acknowledges that the proper design, construction, operation and maintenance of such septic tank system is the responsibility of the designer, owner, developer, installer, or user of the system, as applicable, and that neither the Department nor its officials, employees, or agents warrant or guarantee that the said system installed pursuant to the permit issued by the Department will function in a satisfactory manner for any given period of time or that the Department, its officials, employees or agents assume any liability for any damages of any kind which are caused, or which may be caused, by a malfunction of such system.

The undersigned further acknowledges that the following will apply to the site:

This instrument was prepared by Reginald A Canady

Mail after recording to: Reginald A Canady 6542 Monticth Dr. Charlotte, NC 28213

- Any changes on the property may make the Improvement Permit null and void and may make the Improvement Permit subject to revocation.

- Do not grade, cut, fill, pave, construct a building or deck, dig a well, install a swimming pool or otherwise cover or disturb the soil (except for planting and maintaining grass or other ground covers) in a manner which will adversely affect the repair area or area where the septic tank system is located.

- When a private certified operator is required, no improvement permit for the designated repair shall be issued unless there is a private certified operator to carry out this management program in the service area where the proposed system is to be located. (Refer to rule .1961, Maintenance of Sewage Systems," for further information.)

- Additional fees will be required according to the Mecklenburg County user fee schedule applicable at the time for the issuance of a repair permit for any subsequent repairs to the sewage treatment and disposal system or for installation of a replacement system.

- At the time repairs to the sewage treatment and disposal system are to be made or a replacement system installed, the regulation in effect at the time will govern the repairs or installation of a replacement system.

The undersigned further agrees for himself, his heirs and assigns that he shall indemnify and hold harmless the Department, its employees, and officials, as well as Mecklenburg County and its employees and officials, for any damages or other claims of any person or persons whatsoever arising out of the installation, operation, or failure of said septic tank system.

Use of the singular masculine pronoun forms herein shall be deemed to also include the plural and feminine forms as the context may require.

This document shall be placed on the public records of the Register of Deeds of Mecklenburg County and indexed therein under the Grantor Index in name or names of the undersigned, and the foregoing acknowledgements shall henceforth be binding on all persons claiming any right, title, or interest in the site.

IN WITNESS WHEREOF, the undersigned has hereunto set his hand and seal, or if corporate, has caused this instrument to be signed in its corporate name by its duly authorized officers and its seal to be hereunto affixed by authority of its Board of Directors, this _____ day of _____, 20___.

_____ Richard C Turner (SEAL)
(Corporate Name)

_____ (SEAL)

By: _____ _____ (SEAL)

_____ President _____ (SEAL)

ATTEST:

_____

_____ Secretary

(Corporate Seal)

STATE OF NORTH CAROLINA

COUNTY OF Mecklenburg

I, YOUSAF TAREEN, a Notary Public for said County and State, do hereby certify that _____ personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal this 25th day of August, 20 06.

Y Tareen

_____ Notary Public

YOUSAF I. TAREEN NOTARY PUBLIC My Comm. Expires June 27, 2010 MECKLENBURG COUNTY, NC

My Commission Expires:

June 27, 2010

STATE OF NORTH CAROLINA

COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally came before me this date and acknowledged that he is _____ Secretary of _____, a North Carolina corporation, and that by authority duly given and as the act and deed of said corporation, the foregoing instrument was signed in its name by its _____ President, sealed with its corporate seal, and attested by _____ as its _____ Secretary.

WITNESS my hand and notarial seal this _____ day of _____, 20 _____.

_____ Notary Public

My Commission Expires:

_____

REVISED 8-13-02



JUDITH A. GIBSON
REGISTER OF DEEDS, MECKLENBURG
COUNTY & COURTS OFFICE BUILDING
720 EAST FOURTH STREET
CHARLOTTE, NC 28202

PLEASE RETAIN YELLOW TRAILER PAGE

It is part of the recorded document, and must be submitted with original for re-recording and/or cancellation.

****

Filed For Registration:	**08/25/2006 03:12 PM**
Book:	**RE 20957 Page: 592-595**
Document No.:	**2006175990**
	PRMIT 4 PGS $20.00
Recorder:	**SERENA ROSS**



2006175990

S&EC

Soil & Environmental Consultants, PA

236 LePhillip Court, Suite C • Concord, North Carolina 28025 • Phone: (704) 720-9405 • Fax: (704) 720-9406
www.SandEC.com

February 28, 2005
Job #5-1379s1

Mecklenburg County Health Department
Attn: Drew Walker
700 North Tryon Street
Charlotte, NC 28202

Re: New Kingdom Hall-Harrisburg Road

Dear Mr. Walker:

Enclosed please find a copy of the latest septic system design for the proposed 400 seat Kingdom Hall on Harrisburg Road in Charlotte, NC. Soil & Environmental Consultants, PA (S&EC) is in receipt of comments from Tricia Angoli (NC DENR) regarding our earlier design submittal.

Responses to Tricia's comments:

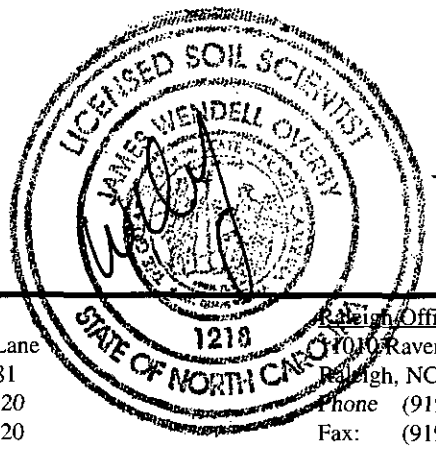
1) I have enclosed on page 21 the proposed floor plan provided to us. Unfortunately the architect was not responsive to our request for a plumbing fixture schedule. According to the proposed floor plan 2 men restrooms and 2 female restrooms are proposed. Each men's room will support 2 toilets, 2 urinals, 2 sinks and 1 laundry tub. Each ladies' room will support 3 toilets and 2 sinks. Two mother's rooms are proposed that each support 1 sink.
2) No kitchen is proposed.
3) DCS has provided specifications for an approved flow equalization control panel.
4) DCS has provided specifications for an appropriately sized effluent filter.
5) The conflicting tap sizes between page 6 and 12 have been corrected.
6) Pump tank and floats (4) diagram is on page 10.
7) Based on field data and grading/site plans from the engineer and architect we Estimated an elevation difference of 20', friction head of 9.35', pressure head of 2' for a total dynamic head of 36'. A Myers ME75 or equivalent could be used to support a system with 36' of head at 60.3gpm.

If you have questions or comments regarding the attached design please call. I've forwarded 1 copy to Ms. Angoli. If acceptable, please sign one copy as approved and mail back to S&EC.

Sincerely,

wcl

Wendell Overby
NC Licensed Soil Scientist



Cc: Tricia Angoli, Duncan McManus (DCS)

Greensboro Office:
3817-E Lawndale Drive
Greensboro, NC 27455
Phone: (336) 540-8234
Fax: (336) 540-8235

Hickory Area Office:
622 Coon Mountain Lane
Taylorsville, NC 28681
Phone: (828) 635-5820
Fax: (828) 635-5820

Raleigh Office:
7010 Raven Ridge Road
Raleigh, NC 27614
Phone (919) 846-5900
Fax: (919) 846-9467

S&EC

Soil & Environmental Consultants, PA

236 LePhillip Court, Suite C • Concord, North Carolina 28025 • Phone: (704) 720-9405 • Fax: (704) 720-9406

www.SandEC.com

Attached is a proposed design for a Pressure Manifold Septic System for a 600 gpd proposed New Kingdom Hall on Harrisburg Road in Mecklenburg County, North Carolina.

Contents: **Page**

Information for the Installer---------- 1

Design Information

- Design Specifications---------- 2-4
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- System Tapsheet---------- 6
- Repair Tapsheet---------- 7

Site Plan/System Plan---------- 8

Septic and Pump Tank Diagrams---------- 9-10

Electric Box Specifications---------- '11 11

Pressure Manifold Diagram---------- 12

Control Panel Specifications---------- 13-16

Pump Specifications---------- 17-18

Calculations---------- 19-20

Church Floor Plan---------- 21

Effluent Filter---------- 22

Feb-05
S & EC Project No. 5-1379s1
Design By: W. Overby
Reviewed By:
Development Consulting Services, Inc.
1401 Aversboro Road, Suite 206
Garner, NC 27529
Phone: (919) 625-0411
Fax: (919) 772-3437
Keith M. Roberts, P.E.

NORTH CAROLINA PROFESSIONAL SEAL 023728 ENGINEER KEITH M. ROBERTS 10/27/05

PLAN APPROVED 10/27/05 dlw

INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DEHNR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as an EEE-ZZZ-Lay installation.
- Repair is specified as panel block with LPP distribution

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner:	New Kingdom Hall Attn: Thomas Dillahunt
Address:	2243 Milton Road Charlotte, NC 28215
Phone:	(704) 877-8372
County:	Mecklenburg
Location:	Harrisburg Road
Source of Wastewater Flow:	400 seat church
Estimated Daily Wastewater Production:	514 gpd
System Flow:	60.28 gpm

Design Specifications

Drainfield Size:	520 ft.
Loading Rate:	0.29 gpd/ft.^{2}
Depth of Gravel in Trench:	NA (EZ-Lay)
Gravel Size:	NA (EZ-Lay)
Trench Depth:	24 in.
Trench Width:	36 *in.*
Septic Tank Size:	2000
Pump Tank Size:	3000
Estimated Supply Line Length:	145ft
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	25.23 gal.
Dosing Volume:	257 gal.
Supply Manifold:	4 in. SCH 80 PVC
Supply Manifold Length:	4 ft. (minimum)
Supply Manifold Volume:	N/A
Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.
Pressure Head:	2 ft.
Friction Head:	9.35
Elevation Head:	20.00
Total Dynamic Head:	36.06
Threaded Union:	In Tank
Gate Valves:	1 in Tank 1 at Pressure Manifold
Check Valves:	In Tank
Anti-Siphon Hole:	NA
Recommended Pump:	Myers ME75 or Approved Equal

Capable of Delivering 36 ft.of Head
at 61 gpm Total Flow

Additional Comments: Soil suitability was performed by S&EC and Mecklenburg County Health Department.

New Kingdom Hall-Harrisburg Road
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	514 gpd
SOIL APPLICATION RATE:	0.29 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	1560 ft^2
TOTAL LATERAL LENGTH:	520 ft.
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	500 ft
SUPPLY LINE LENGTH:	145 ft.
TOTAL DYNAMIC HEAD:	36.06 ft.
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	475.2 gal.
PUMP TANK DRAW DOWN*:	9.3 in.
SEPTIC TANK SIZE:	2000 gal.
PUMP TANK SIZE:	3000 gal.
RECOMMENDED PUMP:	Myers ME75 or Approved Equal Capable of Delivering 36 ft.of Head at 61 gpm Total Flow

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

New Kingdom Hall-Harrisburg Road

Project No. 5-1379s1

LAYOUT FOR 514gpd CHURCH

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH
TBM		6.0			100.0	
INSTR. 1			106.0			
			SYSTEM			
1	Red			3.40	102.6	43
2	Blue			3.80	102.2	54
3	Pink			4.40	101.6	65
4	Yellow			5.60	100.4	85
5	Orange			6.30	99.7	100
6	Red			6.70	99.3	113
7	Pink			7.20	98.8	60
8	Blue	EXTRA		7.80	98.2	30
					Total	**550**
			Repair			
		0.8			100.0	
			100.8			
1	Pink			2.90	97.9	47
2	Red			3.10	97.7	30
3	Blue			3.40	97.4	96
4	Yellow			3.70	97.1	40
5	Red			4.40	96.4	68
6	Pink			5.10	95.7	58
7	Yellow			6.10	94.7	43
					Total	**382**

* System	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	TRENCH BOTTOM	INNOVATIVE TYPE	DISTRIBUTN
	547	0.29	GRVLESS	24"	EZFLO	MANIFOLD
Repair	382	0.29	PPBPS	30"	N/A	LPP

Notes:

** TBM of system located top of eip; TBM of repair is stake

**TBM is assumed to be 100'

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS and FS indicate rod readings

New Kingdom Hall-Harrisburg Road

SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line LTAR
1	Red	3.40	43	SCH 80 1/2	5.48	46.73	129	0.362
2	Blue	3.80	54	SCH 80 1/2	5.48	46.73	162	0.288
3	Pink	4.40	65	SCH 40 1/2	7.11	60.63	195	0.311
4	Yellow	5.60	85	SCH 80 3/4	10.1	86.12	255	0.338
5	Orange	6.30	100	SCH 40 3/4	12.5	106.59	300	0.355
6	Red	6.70	113	SCH 40 3/4	12.5	106.59	339	0.314
7	Pink	7.20	60	SCH 40 1/2	7.11	60.63	180	0.337
	total	feet =	520	gal/min =	60.28			

Des. Flow	514
Pump Run=	8.53
soil LTAR	0.3
EZLAY ltar	0.4
EZLAY ltar +5%	0.42

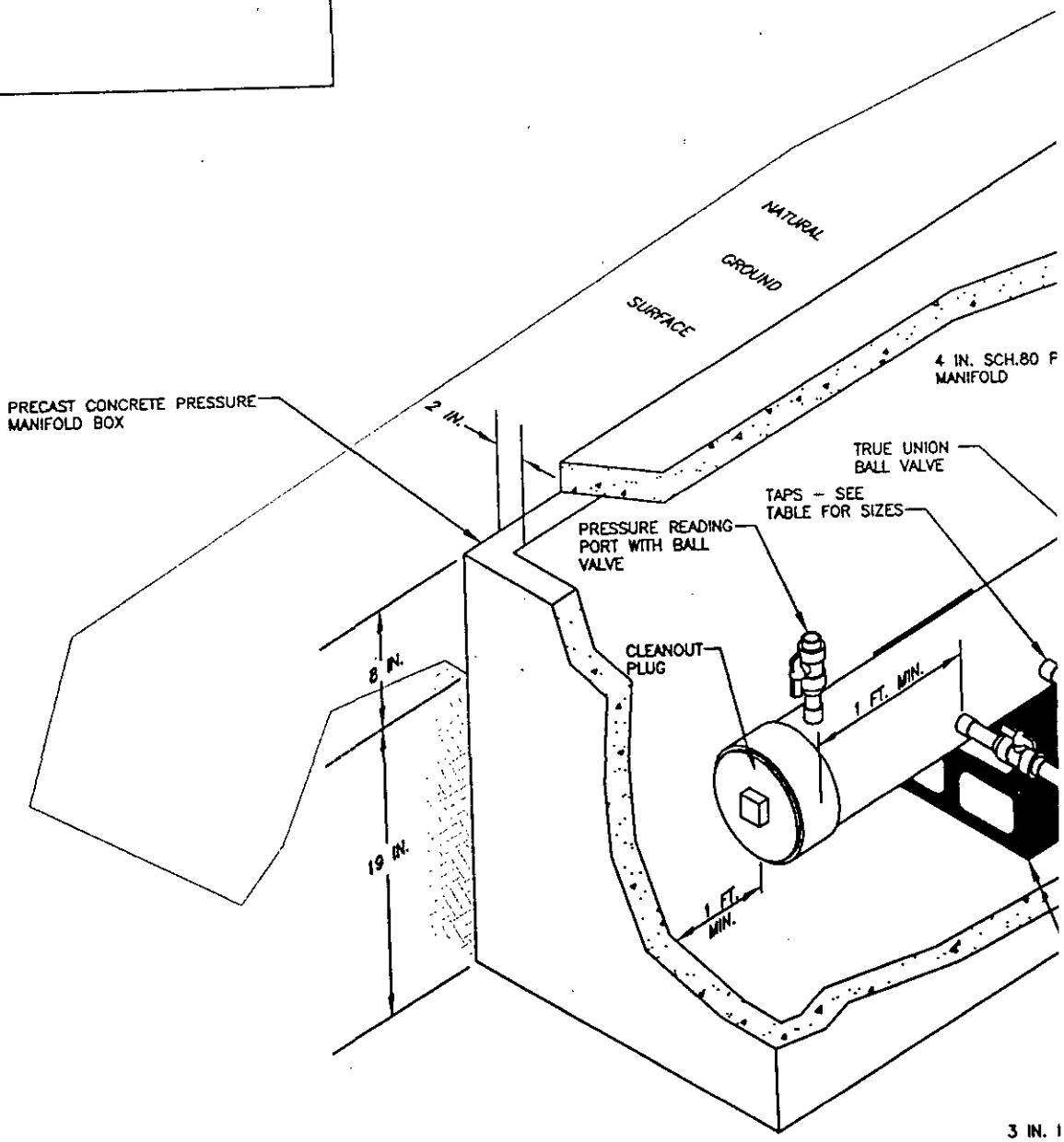
NEW KINGDOM HALL-HARRISBURG ROAD
LPP PANEL SYSTEM

Line #	Color	Elevation	Length	#Panels	Hole Size	Head	Line Flow
1	Pink	2.90	47	11	5/32"	2.00	4.51
2	Blue	3.40	38	9	5/32"	2.50	4.14
3	Yellow	3.70	40	9	5/32"	2.80	4.95
4	Red	3.10	30	7	5/32"	2.00	2.87
5	Blue	3.40	45	10	5/32"	3.00	5
6	Red	4.40	68	16	5/32"	2.00	6.56
7	Pink	5.10	58	13	5/32"	2.70	6.11
8	Yellow	6.10	43	10	5/32"	3.70	5.5
	total	feet =	369			flow	39.64
			Des. Flow	514			
			soil LTAR	0.3			

PRESSURE MA
F
NEW KINGDOM HAL

TAP SIZES

LINE No.	TAP SIZE
1	1/2" SCH. 80
2	1/2" SCH. 80
3	1/2' SCH. 40
4	3/4" SCH. 80
5	3/4" SCH. 40
6	3/4" SCH. 40
7	1/2" SCH. 40



HARRISBURG RD. (S.R. 2805) 60' R/W

POLE. ELEV.=768.74

OVERHEAD ELECTRIC/TELEPHONE LINES

UTILITY POLE

WATERLINE

EDGE OF PAVEMENT

IRON PIN FOUND

IRON PIN SET

S48°26'03"W 104.50'

N48°26'03"E 449.85'

TREELINE

1-1.25" sch 40 tsmp

Yellow 40'

Blue 30'

Pink 47'

Red 65'

Pink 58'

Yellow 42'

Blue 45'

Red 30'

cleanout

3" supp supply line

3-2" sch40 gate valves in box

check valve per supply line

REPAIR FIELD

BUILDING SETBACK

OVERHEAD TELEPHONE/ELECTRIC LINES

PROPOSED RIGHT OF WAY

15" RCP 766.52

5-Gr 100'

4-Yellow 95'

3-Pink 65'

2-Blue 54'

1-Red 43'

6-Red 112'

7-Pink 60'

8-Blue 30'

PRESSURE MANIFOLD

to repair field

3" SCH 40 PVC SUPPLY LINE

2000 GAL SEPTIC TANK AND 2000 GAL PUMP TANK

3000 GAL

FFE= 766.50

LYNDA B. NOREM
D.B. 3300, PG. 476
TAX REF.: 111-13-108
ZONED R-4

S42°26'25"E 449.75'

UNMAINTAINED 4' BARBED WIRE FENCE

CENTERLINE OF DUKE POWER COMPANY ELECTRIC TRANSMISSION LINE

N27°15'56"W 276.56'

32' BUFFER

IRON PIN SET TRANSMISSION TOWER

DUKE POWER CO.
D.B. 2852 Pg. 477
TAX REF.: 111-13-113

N57°15'56"W 163.94'

IRON PIN FOUND

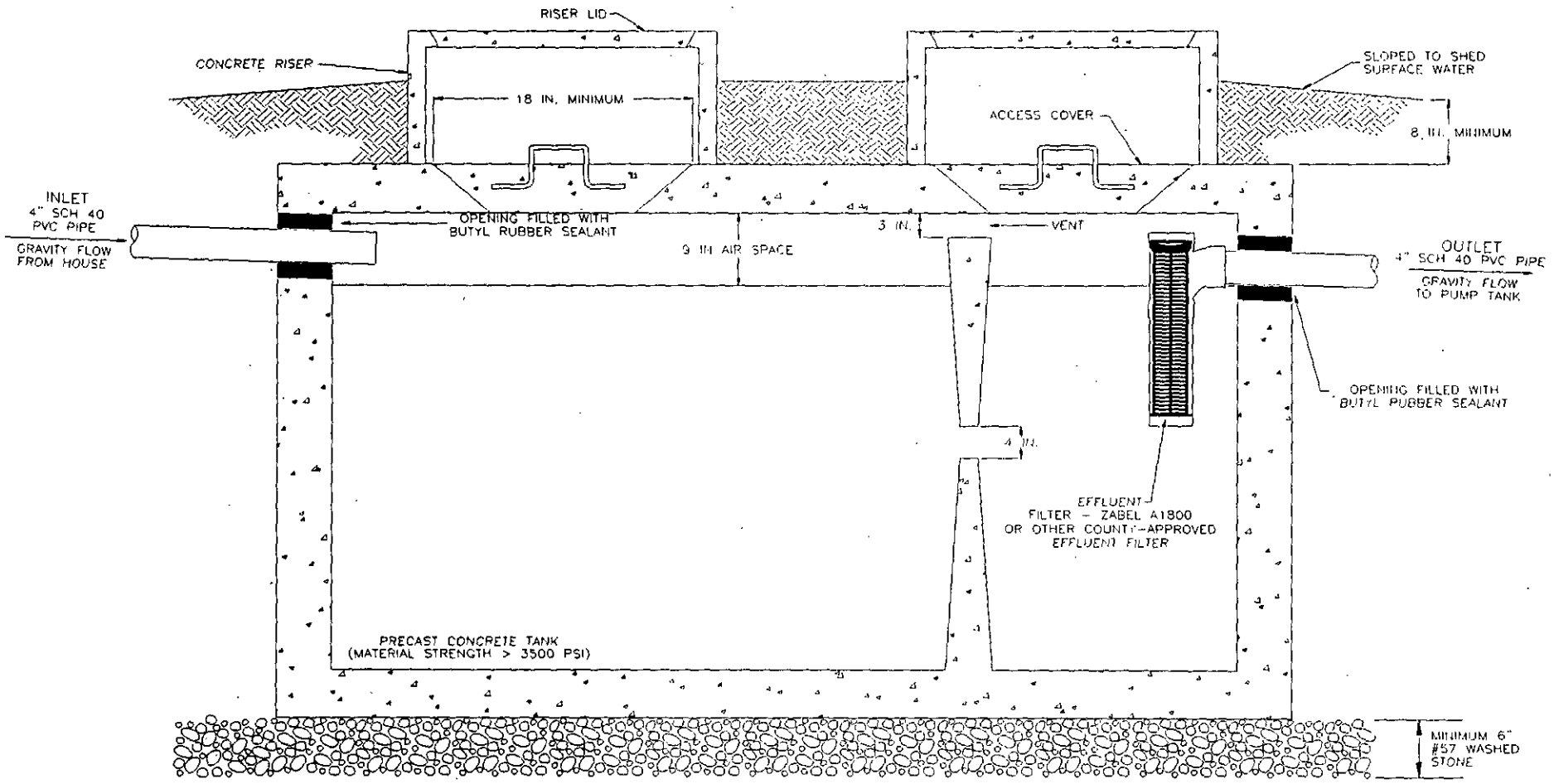
S47°07'13"W 471.14'

MAG-DATE

GRAPHIC SCALE
1" = 60'

0 60 120

10/31/05

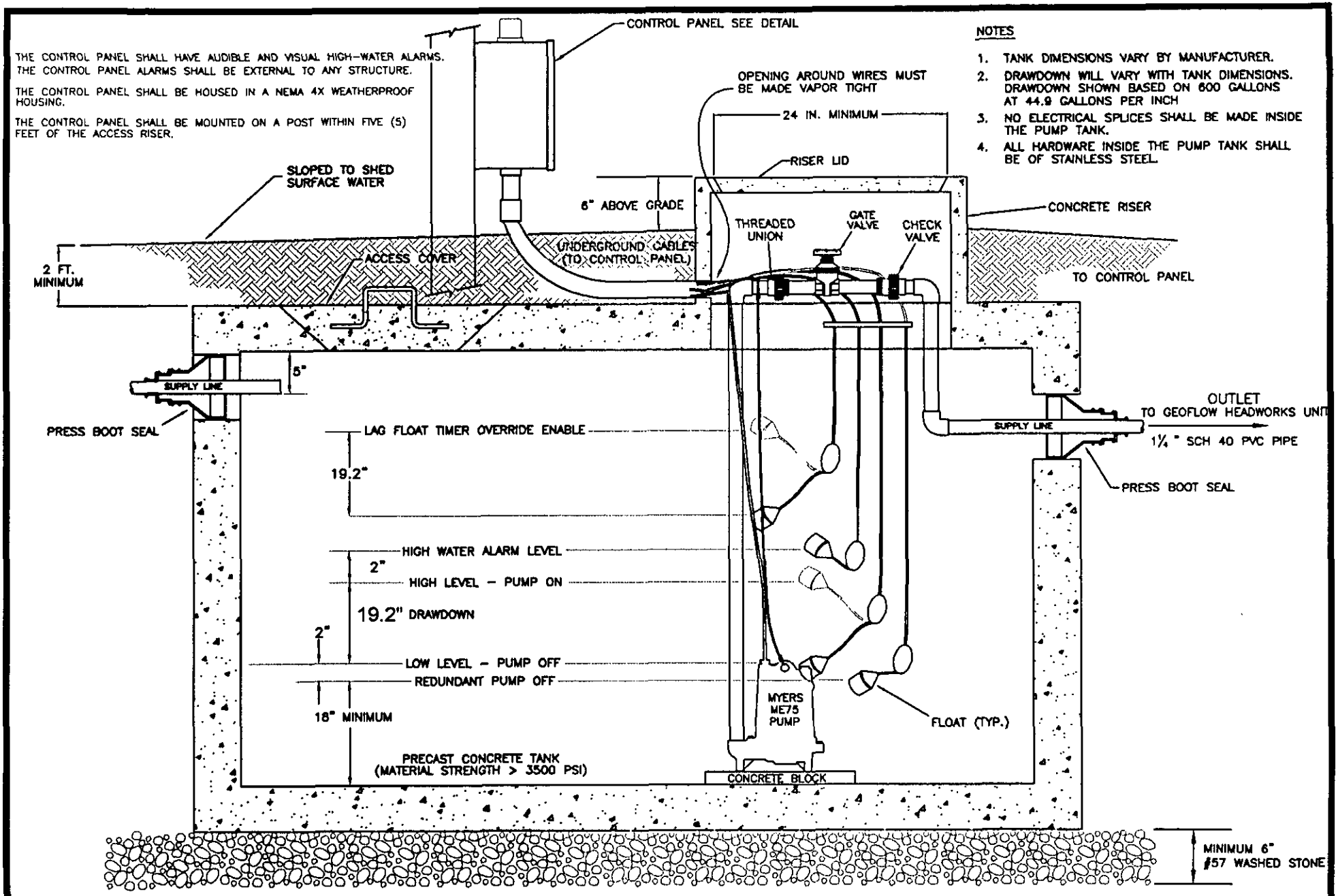


NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.

2000 GALLON SEPTIC TANK

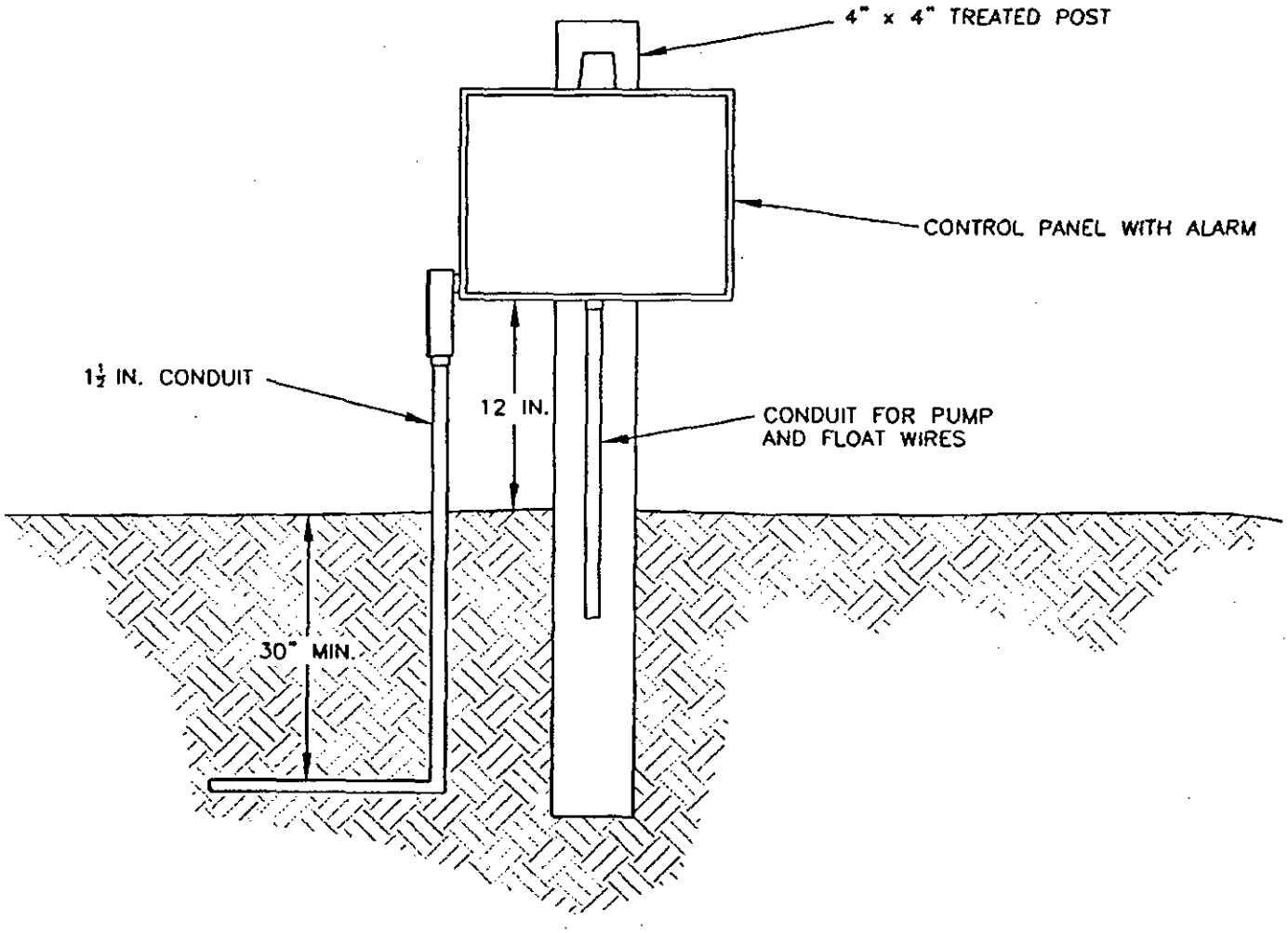
PROJECT NO: 4591	PROJECT NAME: **New Kingdom Hall-Harrisburg**	S&EC Soil & Environmental Consultants, Inc.
PROJECT MGR:	SHEET TITLE: SEPTIC TANK DIAGRAM	11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467 Web Page: www.SandEC.com
SCALE: NTS		



PROJECT NO. 5-1379	PROJECT NAME: New Kingdom Hall - Harrisburg Road
PROJECT MGR.	
SCALE NTS	SHEET TITLE: 2000 GALLON PUMP TANK DIAGRAM

S&EC
Soil & Environmental Consultants, PA
11010 Raven Ridge Road • Raleigh, North Carolina 27614 • Phone: (919) 846-5900 • Fax: (919) 846-9447
www.SandEC.com

ELECTRIC BOX

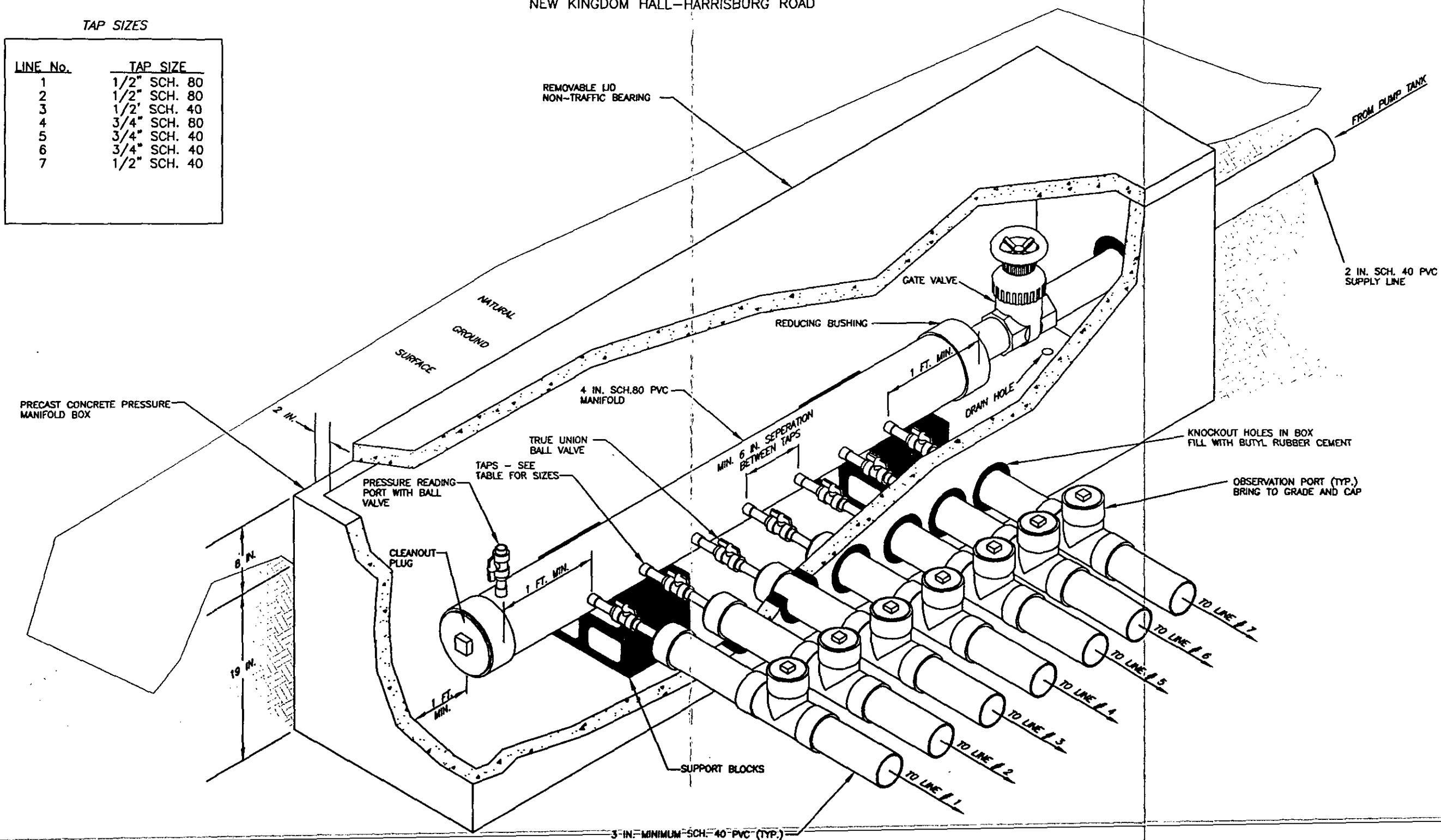


NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL CODE. ALL WIRING SHALL BE #12 MINIMUM, AND RATED FOR DIRECT BURY. PROVIDE GROUNDING AS REQUIRED, AND PROVIDE 30" MINIMUM BURY ON CABLES. PROVIDE ONE 20 AMP, DOUBLE POLE, 230 VOLT CIRCUIT BREAKER (FOR PUMP), AND ONE 20 AMP, SINGLE POLE, 115 VOLT CIRCUIT BREAKER (FOR ALARM) IN MAIN PANEL.

PRESSURE MANIFOLD DETAILS FOR NEW KINGDOM HALL–HARRISBURG ROAD

TAP SIZES

LINE No.	TAP SIZE
1	1/2" SCH. 80
2	1/2" SCH. 80
3	1/2' SCH. 40
4	3/4" SCH. 80
5	3/4" SCH. 40
6	3/4" SCH. 40
7	1/2" SCH. 40



INSTALLER FRIENDLY SERIES™ - IFS Simplex (Demand/TD)

Single phase, simplex demand dose or timed dose, float controlled system for pump control and system monitoring.

The IFS simplex control panel is designed to control one 120, 208, 240 VAC single phase pump in water and sewage installations.

The IFS control panel features a simple, easy-to-use touch pad on the inner door for programming and monitoring pump and float operation.

The panel configuration can be easily converted in the field to either a timed dose or demand dose by a simple jumper change and by adding a display board (timed dose only) for programming pump ON/OFF times.

TOUCH PAD FEATURES

A. **Control Power Indicator/Fuse.** Indicator light will illuminate if control power is present in panel.

B. **Control Fuse Replace Indicator** will illuminate if control fuse is blown. Alarm will activate if control fuse is blown.

C. **Alarm Power Indicator/Fuse.** Indicator light will illuminate if alarm power is present in panel.

D. **Alarm Fuse Replace Indicator** will illuminate if alarm fuse is blown.

E. **Float Indicators** will illuminate when floats are activated. Alarm will activate if a float operates out of sequence and the appropriate float indicator will flash.

F. **HOA (Hand-Off-Automatic) Buttons** control pump mode with indication. Hand mode defaults to Automatic when stop level is reached.

G. **Pump Run Indicator** will illuminate when pump is called to run.

H. **Seven-Segment LED Display** shows mode, pump elapsed time (hh:mm), events (cycles), alarm counter, timed dose override counter, and ON/OFF times. (Display is standard on timed dose and optional on demand dose.)

I. **Next Push Button** when pressed toggles display through: mode, elapsed time meter, cycle counter, and alarm counter. Timed dose mode also provides override counter and pump ON/OFF times.

J. **Repeat Cycle Timer Display Push Buttons** when pressed sets pump ON/OFF times (timed dose only).

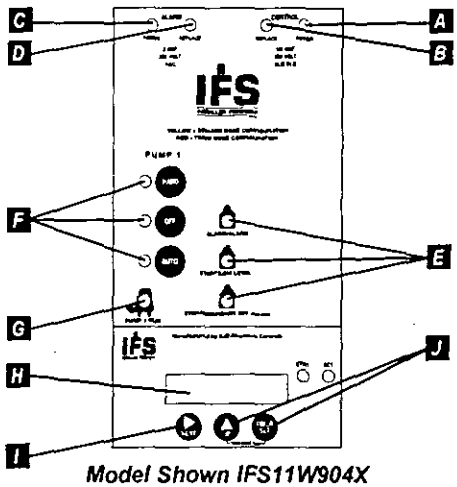
Note: LED display will turn off after one minute of not being used.

PANEL COMPONENTS

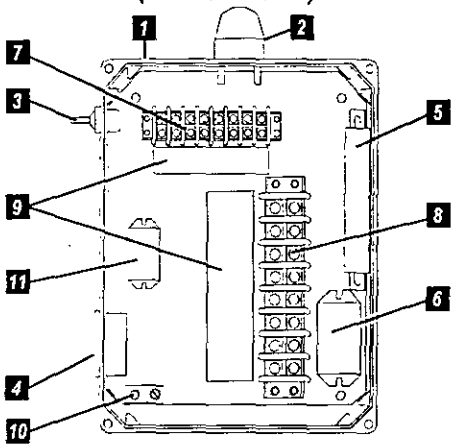
1. **Enclosure** base simplex measures 10 X 8 X 4 inches (25.4 X 20.32 X 10.16 cm). NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use). **Note:** Options, voltage, and amp range selected may change enclosure size and component layout.
2. **Red Alarm Beacon** provides 360° visual check of alarm condition.
3. **Exterior Alarm Test/Normal/Silence Switch** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
4. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
5. **Circuit Breaker** (optional) provides pump disconnect and branch circuit protection.
6. **Power Relay** controls pump by switching electrical line(s). Definite purpose contactors used when pump full load amps are above 15.
7. ***Float Connection Terminal Block***
8. **Large Incoming Power/Pump Connection Terminal Block**
9. **Terminal Block Installation Labels**
10. **Ground Lug**
11. ***Alarm Activation Relay***

NOTE: Schematic/Wiring Diagram and Pump Specification Label are located inside the panel on enclosure cover

SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.



Model Shown IFS11W904X
(Inner door view)



Model Shown IFS11W904X
(Inside view)

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes:
  Demand Dose - three 20' Sensor Float® control switches
  Timed Dose - two 20' Sensor Float® control switches
- Complete with step-by-step installation instructions
- Three-year limited warranty

SJE Rhombus CONTROLS
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

IFS	1	1	W	1	1	4	H	10E 15A

MODEL IFS

MODEL TYPE

- [ ] 1 = SPLX TIMED DOSE (includes option 8AC standard) $692.00
- [ ] 2 = SPLX DEMAND DOSE $617.00

ALARM PACKAGE

- [x] 1 = alarm package (includes test/normal/silence switch, fuse, red light & horn) ..... Base

ENCLOSURE RATING

- [x] W = NEMA 4X ..... Base

STARTING DEVICE

- [x] 1 = 120/208/240 VAC ..... Base
- [ ] 9 = 120 VAC ..... Base

PUMP FULL LOAD AMPS

- [ ] 0 = 0-7 FLA ..... Base
- [x] 1 = 7-15 FLA ..... Base
- [ ] 2 = 15-20 FLA $80.00

PUMP DISCONNECTS

- [ ] 0 = no pump disconnect ..... Base
- [ ] 4 = circuit breaker
  - 120 VAC (must select starting device option 9) $35.00
  - 120/208/240 VAC (must select starting device option 1) $70.00

SWITCH APPLICATIONS

- [x] H = floats (Timed dose = low level and alarm / Demand dose = stop, start, and alarm) ..... Base
- [ ] X = no float
  - timed dose ..... -$50.00
  - demand Dose ..... -$75.00

Note: Pump down applications only.

OPTIONS *Listed below*

Total Options _____

TOTAL LIST PRICE _____

If additional features are required, call the factory for a quote on either a SJE-Rhombus® Pro-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION	LIST PRICE
[ ]	3A	Alarm flasher	$50.00
[ ]	3B	Manual reset alarm	$25.00
[ ]	4A	Redundant off	$0.00
		(select option 4D if floats are required)	
[ ]	4D	Redundant off float - 20 ft. Sensor Float®	$25.00
[ ]	6A	Auxiliary alarm contacts, form C	$40.00
[ ]	8AC	Display board includes: ETM counter, events (cycles) counter, alarm counter, and override counter (timed dose only). Display board also required for changing a demand dose panel to timed dose panel.	
		Demand Dose	$100.00
		Timed Dose *(included as standard)*	$0.00
[x]	10E	Lockable latch - NEMA 4X	$40.00
[ ]	10F	Lightning arrestor	
		(control and alarm power combined)	$160.00
[ ]	10K	Anti-condensation heater	$100.00
[ ]	11C	NEMA 1 remote alarm panel *(must select option 6A)*	$65.00
[ ]	11D	NEMA 4X remote alarm panel *(must select option 6A)*	$170.00
[x]	15A	Control / Alarm circuit breaker	$35.00
[ ]	16A	10' cord in lieu of 20' *(per float)*	-$2.00
[ ]	16B	15' cord in lieu of 20' *(per float)*	-$1.00
[ ]	16C	30' cord in lieu of 20' *(per float)*	$5.00
[ ]	16D	40' cord in lieu of 20' *(per float)*	$15.00
[ ]	17C	Sensor Float® / internally weighted ▲ *(per float)*	$5.00
[ ]	17D	Sensor Float® / externally weighted ▲ *(per float)*	$7.00
[ ]	18A	Timer override option with float (timed dose only)	$25.00

SAMPLE

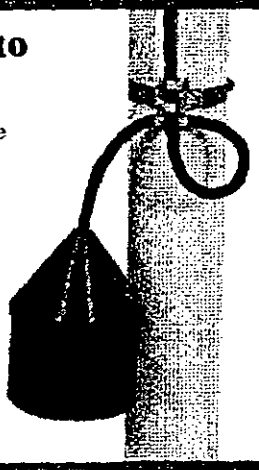
MODEL	IFS	1	1	W	9	1	4	H	8AC 10E
Model Type									
Alarm Package									
Enclosure Rating									
Starting Device									
Pump Full Load Amps									
Pump Disconnects									
Switch Application									
Options: Display, Lockable Latch									

LIST PRICE	
IFS1	$692.00
1	Base
W	Base
9	Base
1	Base
4	Base
H	Base
8AC	$0.00
10E	$40.00
TOTAL LIST PRICE	$732.00

©SJE-Rhombus Printed in USA 11/04

SENSOR FLOAT® control switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.



This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

Normally Open Model (high level)
The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)
The control switch turns on (closes) when the float drops slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.

CSA LR54245 UL LISTED 83N2

Hydraulic

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters.
- with three mounting options that allow for flexibility in installation:

  Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

  Internally Weighted: for applications where the switch can be suspended from above.

  Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

MERCURY TILT SWITCH: single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

ELECTRICAL: 5 amp, 120/230 VAC, 50/60 Hz

SJE Rhombus CONTROLS
SJ ELECTRO SYSTEMS, INC.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

Sensor Float® control switch installation instructions

⚠WARNING ELECTRICAL SHOCK HAZARD
Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠WARNING EXPLOSION OR FIRE HAZARD
Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

MOUNTING THE SWITCH

1. Place the cord into the clamp as shown in Figure B.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figure C.
5. Check installation. Allow system to cycle to insure proper operation.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus supplier for replacements.

Figure A

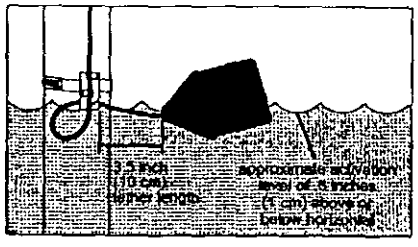
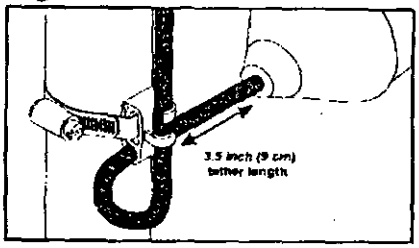


Figure B



INTERNAL WEIGHT

1. Determine desired activation level.
2. Suspend switch 7 inches (18 cm) below desired activation level as shown in Figure D. Switch remains partially submerged during the "on" tipping action. Switch can be totally submerged and still continue to operate properly.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Figure C - Wiring Diagram

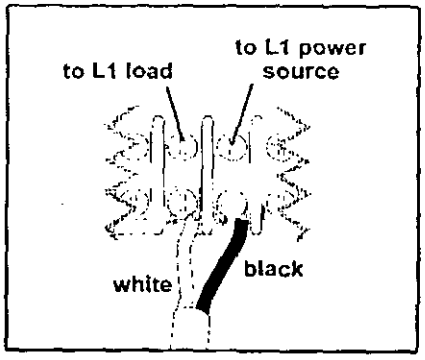
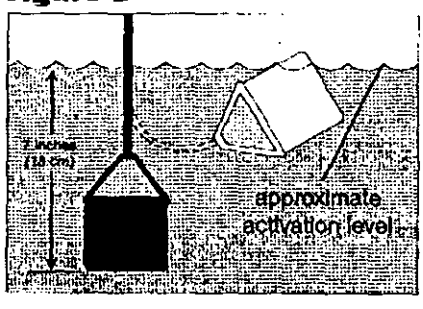


Figure D



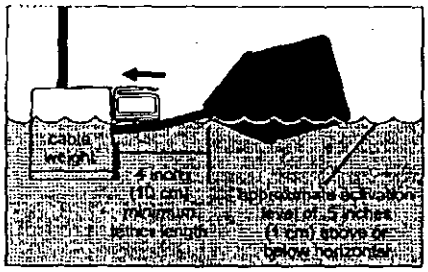
CABLE WEIGHT

1. Determine desired activation level.
2. Suspend switch and cable weight at desired activation level as shown in Figure E.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Cable weight is attached to switch cable at the factory. To adjust:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure E.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure E



CONTROLS SJE-Rhombus
SJ ELECTRO SYSTEMS, INC.
22650 County Highway 6 ■ P.O. Box 1708 ■ Detroit Lakes, Minnesota 56502 USA
1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617
e-mail: sje@sjerhombus.com

Instl. Instr. PN 1009646A
Cat. Page PN 1009509A

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Printed in USA 03/00

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps

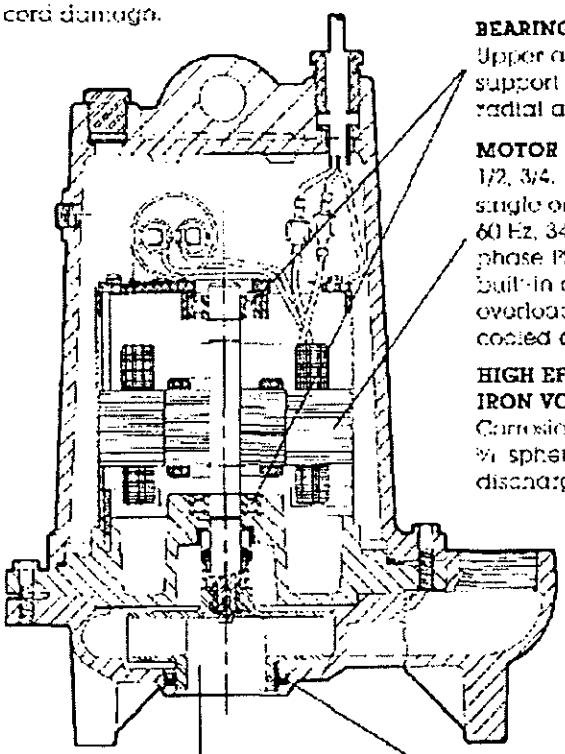
POWER CORD
Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

MOTOR HOUSING
Cast iron for efficient heat transfer and corrosion resistance.

BEARINGS
Upper and lower ball support rotor. Take radial and thrust loads.

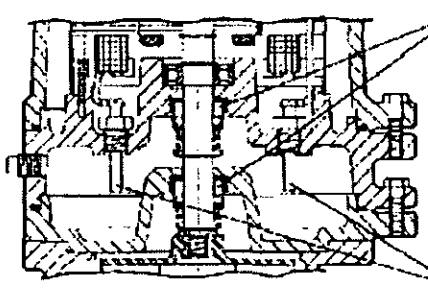
MOTOR
1/2, 3/4, 1 and 1-1/2 HP single or three phase, 60 Hz, 3450 RPM. Single phase PSC motors have built-in on winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENCY CAST IRON VOLUTE
Corrosion resistant. Passes ½ spherical solids. 2" NPT discharge.



ENCLOSED TWO VANE IMPELLER
High efficiency. Passes ½ spherical solids with stainless steel wear ring. Optional bronze construction available.

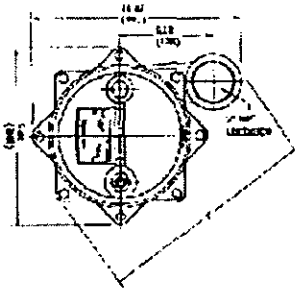
VOLUTE/IMPELLER SEAL RING
Maintains high efficiency and reduces recirculation. Replaceable.

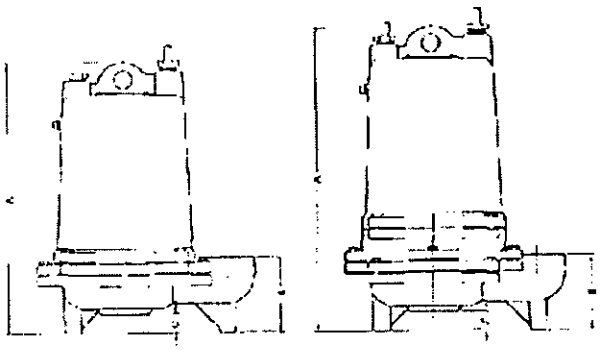


SHAFT SEAL(S)
Carbon and ceramic faces. Optional dual tandem seals. Extends motor life.

SEAL LEAK PROBES
Optional probes (dual seal only) detect water leakage in seal housing. Activates warning light.

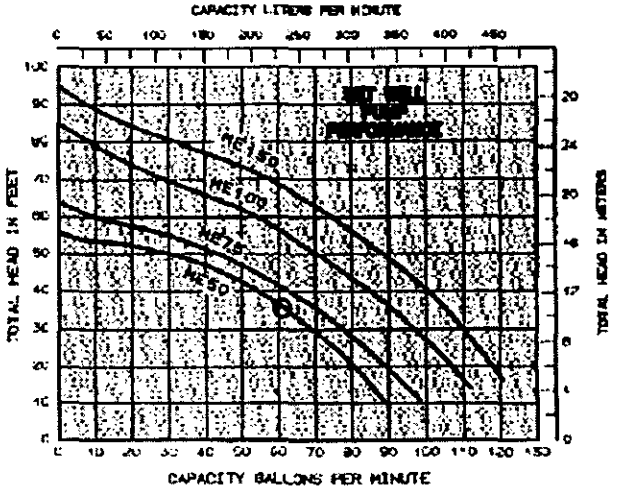
DIMENSIONS





Model Series	Inches (millimeters) A	B	C	F
ME50S	16.8 (427)	4.09 (104)	1.03 (26)	12.13 (308)
ME50D	16.6 (472)	4.09 (104)	1.03 (25)	12.13 (308)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	18.6 (472)	4.0 (102)	1.06 (27)	12.5 (318)

PERFORMANCE CURVE



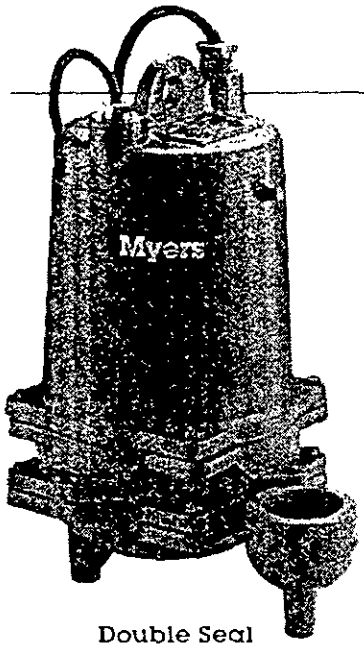
K3320 9/98
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Myers

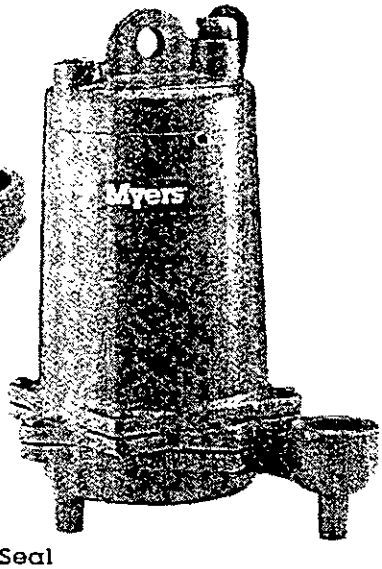
F. E. Myers, 1101 Myers Parkway, Ashland, Ohio 44805-1969
419/289-1144, FAX: 419/289-6658, www.femyers.com
Myers (Canada), 209 Trillium Drive, Kitchener, Ontario N2G 4W5

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps



Double Seal



Single Seal

THE MYERS ME SERIES EFFLUENT PUMPS ARE DESIGNED SPECIFICALLY FOR TODAY'S EFFLUENT PRESSURE DISTRIBUTION MOUNDS, TRENCHES AND HIGH FLOW DRAINAGE APPLICATIONS. The ME Series effluent pumps with their efficient two vane, enclosed impellers, provide the ideal performance for optimum dosing. ME Series pumps are constructed of only corrosion resistant materials like cast iron, stainless steel and thermoplastics to assure that they will perform for years to come in the harsh effluent environment and drainage applications. For more information, call your Myers distributor today or the Myers Ashland, Ohio sales office at 419/289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN MOUND AND TRENCH PRESSURE DISTRIBUTION SYSTEMS

- High efficiency, two vane, enclosed impeller provides ideal performance for most efficient dosing.
- Impeller passes full ¾ inch solids.
- Enclosed impeller design eliminates possibility of jamming or corrosion between impeller and volute.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC), single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)

THE ME SERIES EFFLUENT PUMPS ARE DESIGNED FOR YEARS OF MAINTENANCE FREE OPERATION

- Volute seal ring is replaceable. Restores pump to original performance if wear should occur.
- Motor is held in place by 4 screws. Easily removed if service is ever needed.

PRODUCT CAPAILITIES

Capacities To	120 GPM	454 LPM
Heads To	95 ft.	28.9 m
Max. Spherical Solids	¾ in.	19 mm
Liquids Handling	domestic effluent & drain water	
Intermittent Liquid Temp.	up to 140° F	up to 60° C
Motor Electrical Data	1/2 HP 115 volts, 1 ph 1/2 to 1-1/2 HP 230 volts, 1 ph 208, 230, 460, 575 volts, 3 ph oil-filled, permanent split capacitor type, 1 ph, 3450 rpm, 60 Hz	
Motor Insulation	Class B (130° C)	
Third Party Approvals	UL, CSA	
Acceptable pH Range	6-9	
Specific Gravity	.9-1.1	
Viscosity	28-35 SSU	
Discharge, NPT	2 in.	50.8 mm
Min. Sump Dia. Simplex	24 in.	61 cm
Duplex	36 in.	91.4 cm

Construction Materials	
Motor Housing, Volute	cast iron, Class 30, ASTM A48-76
Enclosed Two Vane Impeller Standard	engineered thermoplastic
Optional	bronze
Impeller Wear Ring	304 SST
Volute Sealing Ring	Buna-N
Shaft	416 SST
Power Cord	
1/2 HP 1 Ph	20 ft. 16/3 SJOW/SJOW-A
3/4 - 1-1/2 HP 1 Ph	20 ft. 14/3 SJOW/SJOW-A
All 3 Ph	20 ft. 14/4 SOW/SOW-A
Shaft Seals Standard	single carbon & ceramic
Optional	tandem carbon & ceramic
Opt. Lower	tungsten carbide
Fasteners	300 Series SST

WHERE INNOVATION MEETS TRADITION

ISO 9001 Certified Company

Myers
PENTAIR PUMP GROUP

Equalization Calculations
and
Pump Tank Sizing

Day	Attendance	Daily Flow
Sunday	400	1200 gal.
Tuesday	400	1200 gal.
Thursday	400	1200 gal.
Weekly Total		3600 gal.

Equalization Cycle is 1 Week (7 days)

Equalized Daily Flow: 3600 gallons/7days = 514 gallons/day
The Drainfield is sized for a daily waste flow of 603 gpd.
Trench bottom area is: (514ft^2/0.29 LTAR)(.75 EZ Flow Reduction) = 1329 ft^2

Linear Footage: 1329 ft.^{2}/3 ft. wide treches) = 443 ft.

Dose Volume: 257 gallons (76% of 4" corrugated drainline capacity)

Flow Balance

Day	In	Out	Residual
Sunday	**1200***	514	686
Monday	0	514	172
Tuesday	1200	514	858
Wednesday	0	514	344
Thursday	1200	514	**1030****
Friday	0	514	516
Saturday	0	514	2
Total	3600 gal.	3598 gal.	2 gal.

Pump Tank Sizing: Assuming a pump height of 18" and a tank with 30 gallons per inch:

Pump Submergence Volume = 540 gal.
Dose Volume = 257 gal.
Equalization Volume = 1030 gal.**
Emergency Storage Volume = 1200 gal.*
Adding the Volumes together yields a required dosing/equalization volume of 3,027 gal.

Dosing Regime: 257 gallons every 12 hours. Given a measured pump delivery rate of 60.28 gpm, the repeat cycle timer would be set at 4.5 minutes on, and 12 hours (or 11.9 hours) off. The installer shall perform a draw-down test at the completion of the installation to determine the actual pumping rate, and set the timer accordingly.

CALCULATIONS

Location New Kingdom Hall

Project Number 5-1379s1

Lot No: n/a

No. of Bedrooms		
Design Flow	514 $^{gal}/_{day}$	
LTAR	0.3 $^{gal}/_{ft^2\,day}$	
EZ-Lay? (YES OR NO)	YES	
Supply Line Length	145	ft.
Supply Line Volume	25.23	gal.
Required Feet of Line	428	ft.
Amount of Line from Layout	520	ft.
Gallons per Minute	60.28 $^{gal}/_{min}$	
Required Septic Tank Capacity	2000	gal.
Minimum Standard Tank Size	2000	
Lateral Line Volume	339.56	gal.
Dosing Volume	**254.67**	gal.
	Note: Dosing Volume based on 75% of the lateral line volume.	
Tank Draw Down	12.1	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	4.22	minutes
Elevation Head	**20**	ft.
Pressure Head	**2**	ft.
Friction Factor	**6.45**	ft./100 ft. *(From the interpolater.)*
Friction Head	**9.35**	ft.
Total Dynamic Head (+15%)	**36.06**	ft.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
36.82	2.61
40	3.03
	-2.89
45	3.77
	-3.52
50	4.58
	-4.62
60	6.42

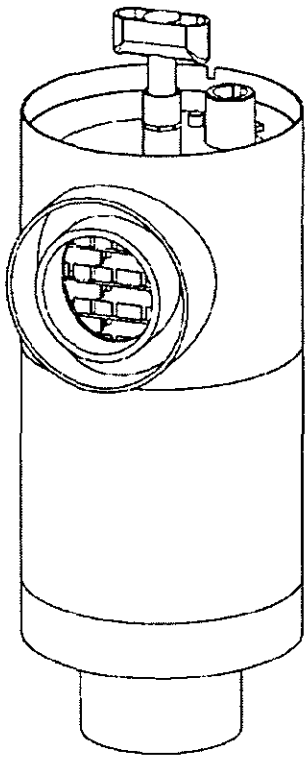
LIBRARY
MEETING ROOM
AUDITORIUM
STAGE
LOBBY
MEN'S
WOMEN'S
BABY CHANGING
ROOM MOTHERS
MOTHERS ROOM
JANITOR
OFFICE
COVERED DRIVE
CANOPY

TechData
2003 Catalog

Effluent Filters

Filter Series (A300™-8 Series)

A300-8x18-VC, A300-8x26-VC, A300-8x32-VC



Product Information 053 / Pricing 203

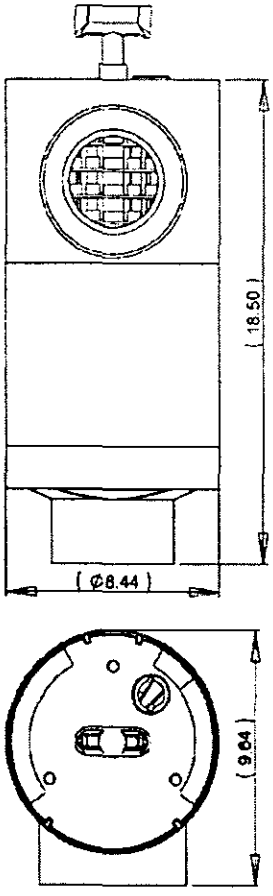
Features

- Patented effluent filter for light commercial, grease traps and in conjunction with advanced treatment systems
- Average of 50% to 90% reduction in TSS within 6 months of installation
- Average of 20% to 45% reduction in BOD_5 within 6 months of installation, reduction is dependent on the make-up of the wastewater
- Average of 60% to 90% reduction in FOG within 6 months of installation
- All Zabel® Filters accept SmartFilter® alarm switch

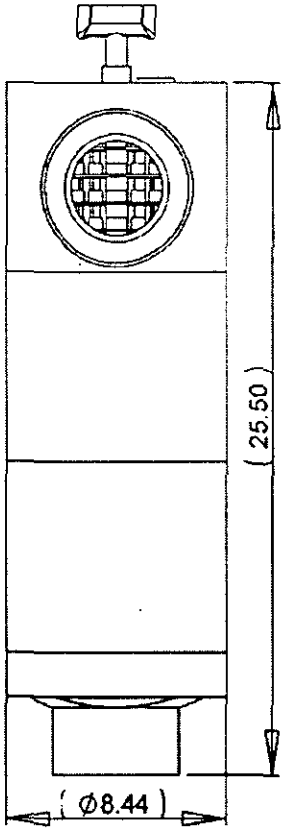
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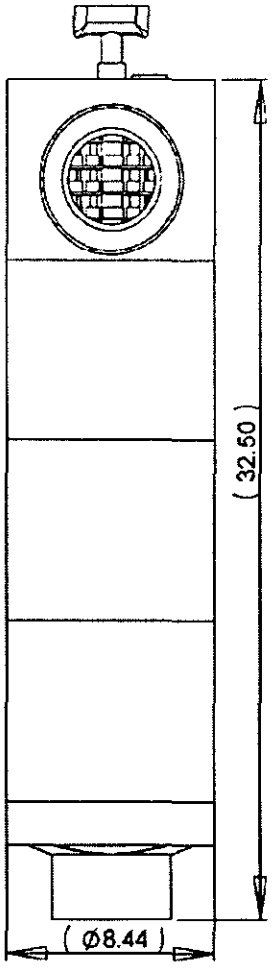
A300-8x18-VC



A300-8x26-VC



A300-8x32-VC



Zabel Environmental Technology
P.O. Box 1520, Crestwood Ky. 40014

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Department of Environment
and Natural Resources
Division of Environmental Health

Michael F. Easley, Governor
William G. Ross, Secretary
Terry L. Pierce, Director
Andy Adams, Acting Chief

NCDENR
North Carolina Department of Environment and Natural Resources

January 28, 2005

Mr. Joe Zimmerman
SJE-Rhombus
22650 County Highway 6
Detroit Lakes, MN 56501

Subject: **Approval of SJE-Rhombus Flow Equalization Panel**

Dear Mr. Zimmerman:

On December 29,2004, we received the submittal package for the IFS Control Panel to be used with Flow Equalization. On January 26, 2005, we completed inspection and testing for the control panel and found that it meets the requirements of Innovative Approval #IWWS 2004-01.

Therefore, we approve the following model of SJE-Rhombus flow equalization control panel:

IFS | 1 | 1 | W | 1 or 9 | 0, 1, or 2 | 4 | H | 10E 15 A (Simplex)

1 or 9 - Choose for starting device
(1 = 120/208/240 VAC, 9 = 120 VAC)

0, 1, or 2 - Choose for pump full load amps
(0 = 0-7 FLA, 1 = 7-15 FLA, 2 = 15-20 FLA)

Please be aware that these panels are subject to periodic inspections, and should units be found to be in noncompliance with the submission or Innovative Approval, then the approval may be suspended or revoked. Please feel free to contact me if you have any questions pertaining to this approval.

Sincerely,

Tricia Angoli
On-Site Wastewater Engineering

cc: Tommy Carr, Harry Warren, LLC

ON-SITE WASTEWATER SECTION
1642 Mail Service Center, Raleigh, North Carolina 27699-1642
Telephone: 919-715-3272 Fax: 919-715-3227 E-mail: trish.angoli@ncmail.net

S&EC

Soil & Environmental Consultants, PA

236 LePhillip Court, Suite C • Concord, North Carolina 28025 • Phone: (704) 720-9405 • Fax: (704) 720-9406
www.SandEC.com

FACSIMILE SHEET

FAX NO. (704) 720-9406

DATE: 10/27/05 Project Number: _____

TO: Name: Drew Walker CC: _____

Company: Meck Co Env Health _____

Fax Number: (704) 336 - 6894 _____

FROM: Wendell Overby SUBJECT: Control Panel

The following items are being faxed. Number of pages including transmittal sheet: 3

_____ For Your Comments/Approval
x For Your Information
_____ Per Our Conversation
_____ Per Your Request
_____ Please Advise
_____ Please Call
_____ Would Like To Discuss
_____ Please Handle

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_____ Overnight
x No Hard Copy Sent

REMARKS: Drew: I talked to Trish at the Onsite Conference. She said there are 4 approved control panels for flow equalization. The SJE Rhombus panel we spec'd is one of the (now) approved panels. I've included a page from our design and the approval letter from the state web page. Let me know if everything is now o.k.

Wendell

IF YOU HAVE ANY QUESTIONS OR PROBLEMS WITH THIS TRANSMISSION,

PLEASE CONTACT Wendell AT (704) 720-9405.

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Raleigh Office:
11010 Raven Ridge Road
Raleigh, NC 27614
Phone: (919) 846-5900
Fax: (919) 846-9467

14

CONTROL PANELS

IFS | 1 | 1 | W | 1 | 1 | 4 | H | 10E 15A

MODEL IFS

MODEL TYPE
- [✓] 1 = SPLX TIMED DOSE (includes option 8AC standard) $692.00
- [ ] 2 = SPLX DEMAND DOSE $617.00

ALARM PACKAGE
- [✓] 1 = alarm package (includes test/normal/silence switch, fuse, red light & horn) ..... Base

ENCLOSURE RATING
- [✓] W = NEMA 4X ..... Base

STARTING DEVICE
- [✓] 1 = 120/208/240 VAC ..... Base
- [ ] 9 = 120 VAC ..... Base

PUMP FULL LOAD AMPS
- [ ] 0 = 0-7 FLA ..... Base
- [✓] 1 = 7-15 FLA ..... Base
- [ ] 2 = 15-20 FLA $80.00

PUMP DISCONNECTS
- [ ] 0 = no pump disconnect ..... Base
- [ ] 4 = circuit breaker
  - 120 VAC (must select starting device option 9) $35.00
  - 120/208/240 VAC (must select starting device option 1) $70.00

SWITCH APPLICATIONS
- [✓] H = floats (Timed dose = low level and alarm / Demand dose = stop, start, and alarm) ..... Base
- [ ] X = no float
  - timed dose ..... -$50.00
  - demand Dose ..... -$75.00

Note: Pump down applications only.

OPTIONS *Listed below*

Total Options
TOTAL LIST PRICE

If additional features are required, call the factory for a quote on either a SJE-Rhombus® Pro-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION	LIST PRICE
[ ]	3A	Alarm flasher	$50.00
[ ]	3B	Manual reset alarm	$25.00
[ ]	4A	Redundant off	$0.00
		(select option 4D if floats are required)	
[ ]	4D	Redundant off float - 20 ft. Sensor Float®	$25.00
[ ]	6A	Auxiliary alarm contacts, form C	$40.00
[ ]	8AC	Display board includes: ETM counter, events (cycles) counter, alarm counter, and override counter (timed dose only). Display board also required for changing a demand dose panel to timed dose panel.	
		Demand Dose	$100.00
		Timed Dose *(included as standard)*	$0.00
[✓]	10E	Lockable latch - NEMA 4X	$40.00
[ ]	10F	Lightning arrestor *(control and alarm power combined)*	$160.00
[ ]	10K	Anti-condensation heater	$100.00
[ ]	11C	NEMA 1 remote alarm panel *(must select option 6A)*	$65.00
[ ]	11D	NEMA 4X remote alarm panel *(must select option 6A)*	$170.00
[✓]	15A	Control / Alarm circuit breaker	$35.00
[ ]	16A	10' cord in lieu of 20' *(per float)*	-$2.00
[ ]	16B	15' cord in lieu of 20' *(per float)*	-$1.00
[ ]	16C	30' cord in lieu of 20' *(per float)*	$5.00
[ ]	16D	40' cord in lieu of 20' *(per float)*	$15.00
[ ]	17C	Sensor Float® / internally weighted ▲ *(per float)*	$5.00
[ ]	17D	Sensor Float® / externally weighted ▲ *(per float)*	$7.00
[ ]	18A	Timer override option with float (timed dose only)	$25.00

SAMPLE

MODEL	IFS	1	1	W	9	1	4	H	8AC 10E
Model Type									
Alarm Package									
Enclosure Rating									
Starting Device									
Pump Full Load Amps									
Pump Disconnects									
Switch Application									
Options: Display, Lockable Latch									

LIST PRICE	
IFS1	$692.00
1	Base
W	Base
9	Base
1	Base
4	Base
H	Base
8AC	$0.00
10E	$40.00
TOTAL LIST PRICE	$732.00

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Mecklenburg County
Health Department

TELECOPIER TRANSMITTAL COVER SHEET

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TO: DUNCAN McMANUS TELECOPIER # 919-772-3437

FROM: D. Adler DATE 1-14-05

NUMBER OF PAGES TRANSMITTED: 2 (including cover sheet)

COMMENTS:

If you do not receive all pages, please call us as soon as possible at the following number: (704)336-5103

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Environmental Health Division
700 North Tryon Street • Suite 211 • Charlotte, North Carolina 28202-2236

Attached is a proposed design for a Pressure Manifold Septic System for a [redacted] gpd proposed New Kingdom Hall on Harrisburg Road in Mecklenburg County, North Carolina.

514

Contents: **Page**

Information for the Installer---------- 1

Design Information

- Design Specifications---------- 2-4
- Layout Specifications---------- 5
- System Tapsheet---------- 6
- Repair Tapsheet---------- 7

Site Plan/System Plan---------- 8

Septic Tank Diagram---------- 9

Pump Tank Diagram---------- 10

Electric Box Specs ---------- 11

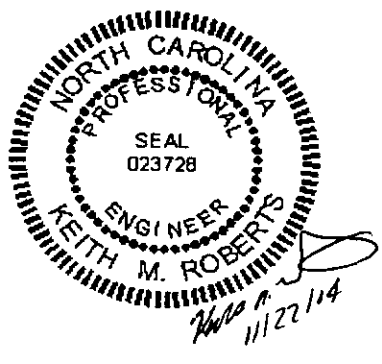
Pressure Manifold Diagram ---------- 12

Control Panel Specifications---------- 13-16

Pump Specifications---------- 17-18

Calculations---------- 19-20

September 2004
S & EC Project No. 5-1379s1
Design By: W. Overby
Reviewed By:
Development Consulting Services, Inc.
1401 Aversboro Road, Suite 206
Garner, NC 27529
Phone: (919) 625-0411
Fax: (919) 772-3437
Keith M. Roberts, P.E.



INFORMATION FOR THE INSTALLER:

- The permit should be read very carefully prior to bidding. The following are details that must be considered along with all other considerations.
- Tanks shall be approved by DEHNR, and certification supplied by the manufacturer.
- Tanks shall be water tested prior to installation.
- The installer shall be responsible to the owner for placement of the tanks and to insure that final grades are returned to the original natural grade, with exception of added structural features.
- The supply trench shall be compacted to eliminate cavities left during initial fill placement.
- Installation of the system shall be during dry conditions in order to protect the soil structure.
- All fittings shall be pressure rated fittings.
- All joints shall be cleaned with PVC pipe cleaner and a heavy bodied glue applied to weld all joints.
- Where required by the county health department, post installation inspections by the designer must be scheduled 5 week days in advance.
- Trenches shall be carefully excavated so the bottom is within 2" from the highest to . the lowest points of elevation within the trench. If the bottom elevation needs adjusting after it has been trenched, it will be done by removing high points rather than filling low points. It is extremely important to insure that trenches are not over excavated during initial trenching. All fine grading within the trench will be hand done with a shovel. No loose material will be left in the trench
- All pipe openings in the tanks shall be properly grouted. This also applies to the joints around the riser.
- All tanks shall be properly back filled and compacted to prevent slump at a later date.
- Earth dams, constructed of relatively impervious material, shall be installed at the beginning and end of each lateral.
- No heavy equipment shall be used on the field during or after installation. The use of a small loader (i.e. Bobcat) or a trencher (i.e. Ditch Witch 2300/2310) may be used for installation.
- Elevations at pinflag locations should be checked by the installer prior to beginning trenches.
- Pumptank riser should be 6" above grade, control panel should be 12" above grade.
- Septic tank riser shall be a minimum of 6" above finished grade.
- System is specified as an EEE-ZZZ-Lay installation.
- Repair is specified as panel block with LPP distribution

PRESSURE MANIFOLD SYSTEM
FOR WASTEWATER TREATMENT

Owner:	New Kingdom Hall
	Attn: Thomas Dillahunt
Address:	2243 Milton Road
	Charlotte, NC 28215
Phone:	(704) 877-8372
County:	Mecklenburg
Location:	Harrisburg Road

Source of Wastewater Flow:	400 seat church
Estimated Daily Wastewater Production:	514 gpd
System Flow:	60.28 gpm

Design Specifications

Drainfield Size:	520 ft.
Loading Rate:	0.29 gpd/ft.^{2}
Depth of Gravel in Trench:	NA (EZ-Lay)
Gravel Size:	NA (EZ-Lay)
Trench Depth:	24 in.
Trench Width:	36 in.
Septic Tank Size:	2000
Pump Tank Size:	3000

Estimated Supply Line Length:	145ft
Supply Line Diameter:	2 in. SCH 40 PVC
Supply Line Volume:	25.23 gal.
Dosing Volume:	257 gal.
Supply Manifold:	4 in. SCH 80 PVC
Supply Manifold Length:	4 ft. (minimum)
Supply Manifold Volume:	N/A

Recommended Float Controls:	SJE Sensor Float Control Switches as Required for Control Panel or County Approved Equivalents
Recommended Control Panel:	SJE-Rhombus Model 112 (NEMA 4x) Control Panel or County Approved Control Panel.

Pressure Head:	2 ft.
Friction Head:	9.35
Elevation Head:	20.00
Total Dynamic Head:	36.06

Threaded Union:	In Tank
Gate Valves:	1 in Tank
	1 at Pressure Manifold
Check Valves:	In Tank
Anti-Siphon Hole:	NA

Recommended Pump:	Myers ME75 or Approved Equal

Capable of Delivering 36 ft.of Head
at 61 gpm Total Flow

Additional Comments: Soil suitability was performed by S&EC and Mecklenburg County Health Department.

New Kingdom Hall-Harrisburg Road
PRESSURE MANIFOLD DESIGN

DESIGN FLOW:	514 gpd
SOIL APPLICATION RATE:	0.29 gpd/ft.^{2}
TOTAL AREA TRENCH BOTTOM:	1560 ft^2
TOTAL LATERAL LENGTH:	520 ft.
NUMBER OF FIELDS:	1
LATERAL LENGTH REQUIRED PER FIELD:	500 ft
SUPPLY LINE LENGTH:	145 ft.
TOTAL DYNAMIC HEAD:	36.06 ft.
MANIFOLD SIZE:	4 in.SCH 80 PVC
DOSING VOLUME:	475.2 gal.
PUMP TANK DRAW DOWN*:	9.3 in.
SEPTIC TANK SIZE:	2000 gal.
PUMP TANK SIZE:	3000 gal.
RECOMMENDED PUMP:	Myers ME75 or Approved Equal Capable of Delivering 36 ft.of Head at 61 gpm Total Flow

**Pump tank draw down based on a volume basis of 21 gallons per inch. Draw down may vary among pump tank manufacturers.*

New Kingdom Hall-Harrisburg Road

Project No. 5-1379s1

LAYOUT FOR 514gpd CHURCH

LINE #	FLAG COLOR	BS	HI	FS	ELEVATION	FLAGGED LINE LENGTH
TBM		6.0			100.0	
INSTR. 1			106.0			
			SYSTEM			
1	Red			3.40	102.6	43
2	Blue			3.80	102.2	54
3	Pink			4.40	101.6	65
4	Yellow			5.60	100.4	85
5	Orange			6.30	99.7	100
6	Red			6.70	99.3	113
7	Pink			7.20	98.8	60
8	Blue	EXTRA		7.80	98.2	30
					Total	**550**
			Repair			
		0.8			100.0	
			100.8			
1	Pink			2.90	97.9	47
2	Red			3.10	97.7	30
3	Blue			3.40	97.4	96
4	Yellow			3.70	97.1	40
5	Red			4.40	96.4	68
6	Pink			5.10	95.7	58
7	Yellow			6.10	94.7	43
					Total	**382**

* System	LINE LENGTH	LTAR GPD/FT^2	SYSTEM TYPE	TRENCH BOTTOM	INNOVATIVE TYPE	DISTRIBUTN
	547	0.29	GRVLESS	24"	EZFLO	MANIFOLD
Repair	382	0.29	PPBPS	30"	N/A	LPP

Notes:

** TBM of system located top of eip; TBM of repair is stake

**TBM is assumed to be 100'

**All measures in feet

**Nitrification lines are demonstrated on contour via colored pin flags

**BS and FS indicate rod readings

New Kingdom Hall-Harrisburg Road
SYSTEM

Line #	Color	Elevation	Length	Hole Size	Flow/Tap	gpd	Trench Area	Line LTAR
1	Red	3.40	43	SCH 80 1/2	5.48	46.73	129	0.362
2	Blue	3.80	54	SCH 80 1/2	5.48	46.73	162	0.288
3	Pink	4.40	65	SCH 40 1/2	7.11	60.63	195	0.311
4	Yellow	5.60	85	SCH 80 3/4	10.1	86.12	255	0.338
5	Orange	6.30	100	SCH 40 3/4	12.5	106.59	300	0.355
6	Red	6.70	113	SCH 40 3/4	12.5	106.59	339	0.314
7	Pink	7.20	60	SCH 40 1/2	7.11	60.63	180	0.337
	total	feet =	520	gal/min =	60.28			
			Des. Flow	514				
			Pump Run=	8.53				
			soil LTAR	0.3				
			EZLAY ltar	0.4				
			EZLAY ltar +5%	0.42				

NEW KINGDOM HALL-HARRISBURG ROAD
LPP PANEL SYSTEM

Line #	Color	Elevation	Length	#Panels	Hole Size	Head	Line Flow
1	Pink	2.90	47	11	5/32"	2.00	4.51
2	Blue	3.40	38	9	5/32"	2.50	4.14
3	Yellow	3.70	40	9	5/32"	2.80	4.95
4	Red	3.10	30	7	5/32"	2.00	2.87
5	Blue	3.40	45	10	5/32"	3.00	5
6	Red	4.40	68	16	5/32"	2.00	6.56
7	Pink	5.10	58	13	5/32"	2.70	6.11
8	Yellow	6.10	43	10	5/32"	3.70	5.5
	total	feet =	369			flow	39.64
			Des. Flow	514			
			soil LTAR	0.3			

HARRISBURG RD. (S.R. 2805) 60' R/W

POLE. ELEV.=768.74

UTILITY POLE

OVERHEAD ELECTRIC/TELEPHONE LINES

WATERLINE

EDGE OF PAVEMENT

S48°26'03"W 104.50'

N48°26'03"E 449.85'

IRON PIN FOUND

IRON PIN SET

TREELINE

1-1.25" sch 40 sprng

Yellow 49'

Blue 38'

Pink 47'

Red 68'

Blue 43'

Red 30'

Pink 58'

Yellow 43'

3-2" sch 40 gate valves in box

1 check valve per supply line

2" sched supply line

cleanout

REPAIR FIELD

CENTERLINE OF DUKE POWER COMPANY ELECTRIC TRANSMISSION LINE

N27°15'56"W 276.56'

BUILDING SETBACK

32'

IRON PIN SET

TRANSMISSION TOWER

DUKE POWER CO.
D.B. 2852 Pg. 477
TAX REF.: 111-13-113

N57°47'15"W 169.94'

IRON PIN FOUND

BUILDING SETBACK

TREELINE

FFE= 766.50

WELL

PROPOSED RIGHT-OF-WAY

PRESSURE MANIFOLD

5-Cu 100'

4-Yellow 85'

3-Pink 65'

2-Blue 54'

1-Red 43'

6-Red 112'

7-Pink 60'

8-Blue 38'

to repair field

2" SCH 40 PVC SUPPLY LINE

2000 GAL SEPTIC TANK AND 3000 GAL PUMP TANK

LYNDA B. NOREM
D.B. 3300, PG. 470
TAX REF.: 111-13-108
ZONED R-4

S42°26'25"E 449.75'

UNMAINTAINED 4' BARBED WIRE FENCE

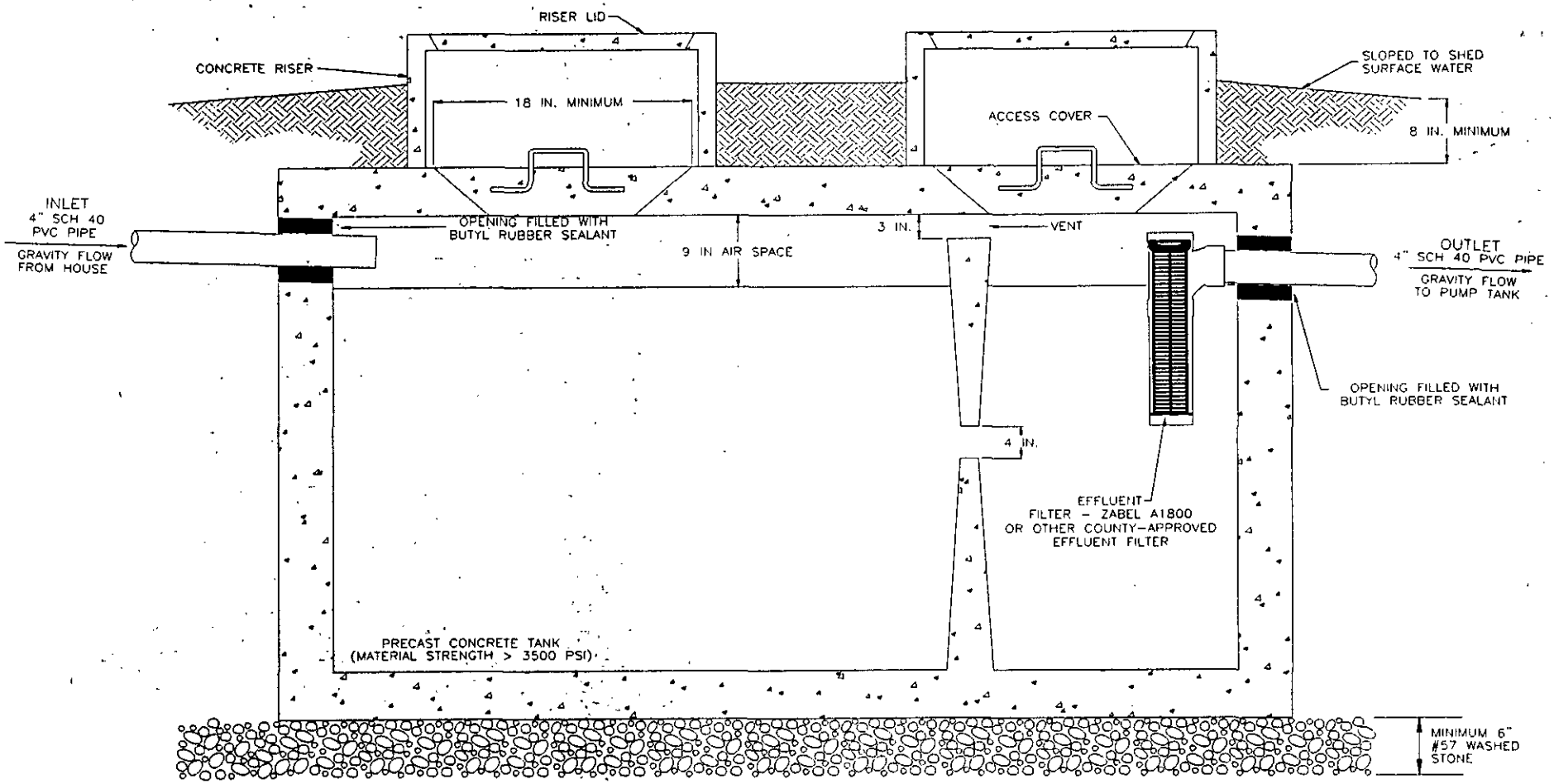
S47°07'13"W 471.14'

IRON PIN FOUND

MAG-DATE

GRAPHIC SCALE
1" = 60'

0 60 120



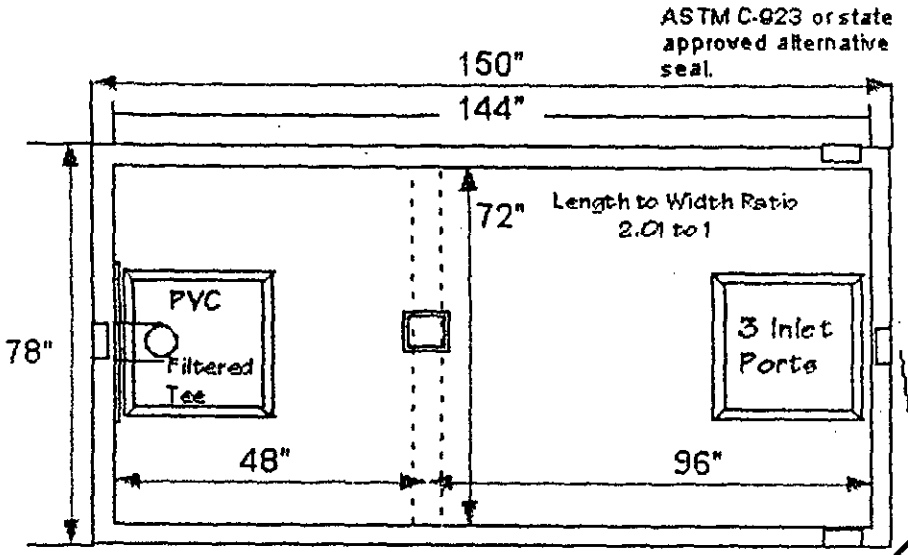
NOTES

1. TANK DIMENSIONS VARY BY MANUFACTURER.

2000 GALLON SEPTIC TANK

PROJECT NO: 4591	PROJECT NAME: **New Kingdom Hall-Harrisburg**	S&EC
PROJECT MGR.		
SCALE: NTS	SHEET TITLE: SEPTIC TANK DIAGRAM	

Soil & Environmental Consultants, Inc.
11010 Raven Ridge Road Raleigh, North Carolina 27614 Phone: (919) 846-5900 Fax: (919) 846-9467
Web Page: www.SandEC.com



STB-349
Date: 12/20/99

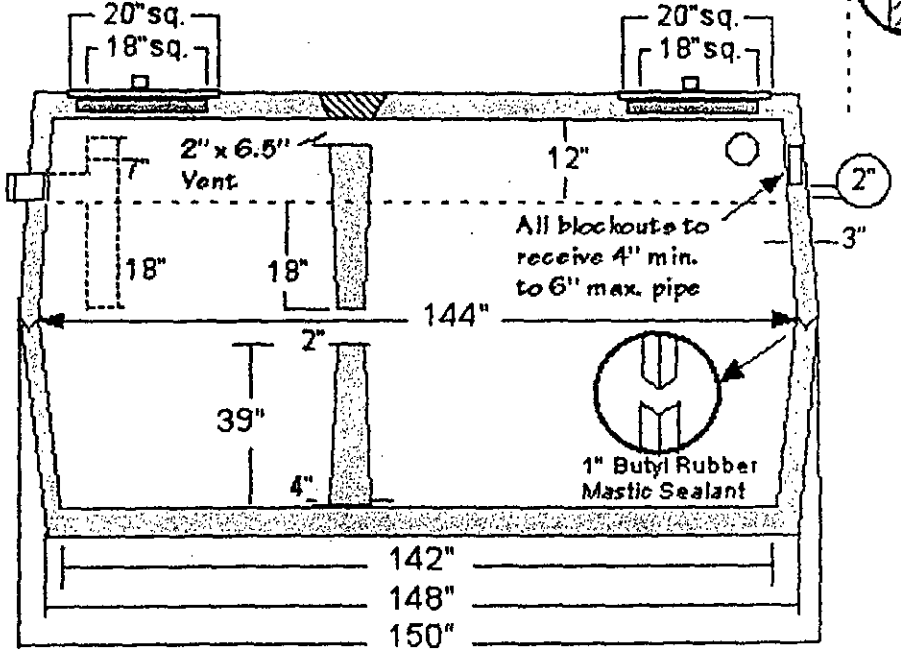
LIQUID CAPACITY: 3,141 Gallons
4.70 yds. - 18,000 lbs.

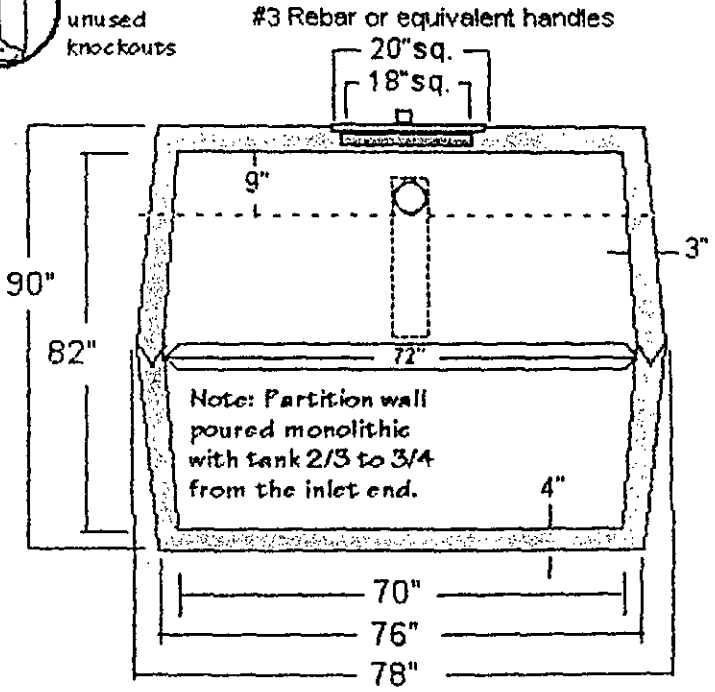
Reinforcing: 6"x6"x10 gauge wire mesh centered in top, bottom, sides and ends, baffle wall, and lids; with one inch of concrete cover, also #3 rebars at 10" on center each way (top and bottom), 11 bars the width, 5 bars the length.

State Assigned Serial Number.

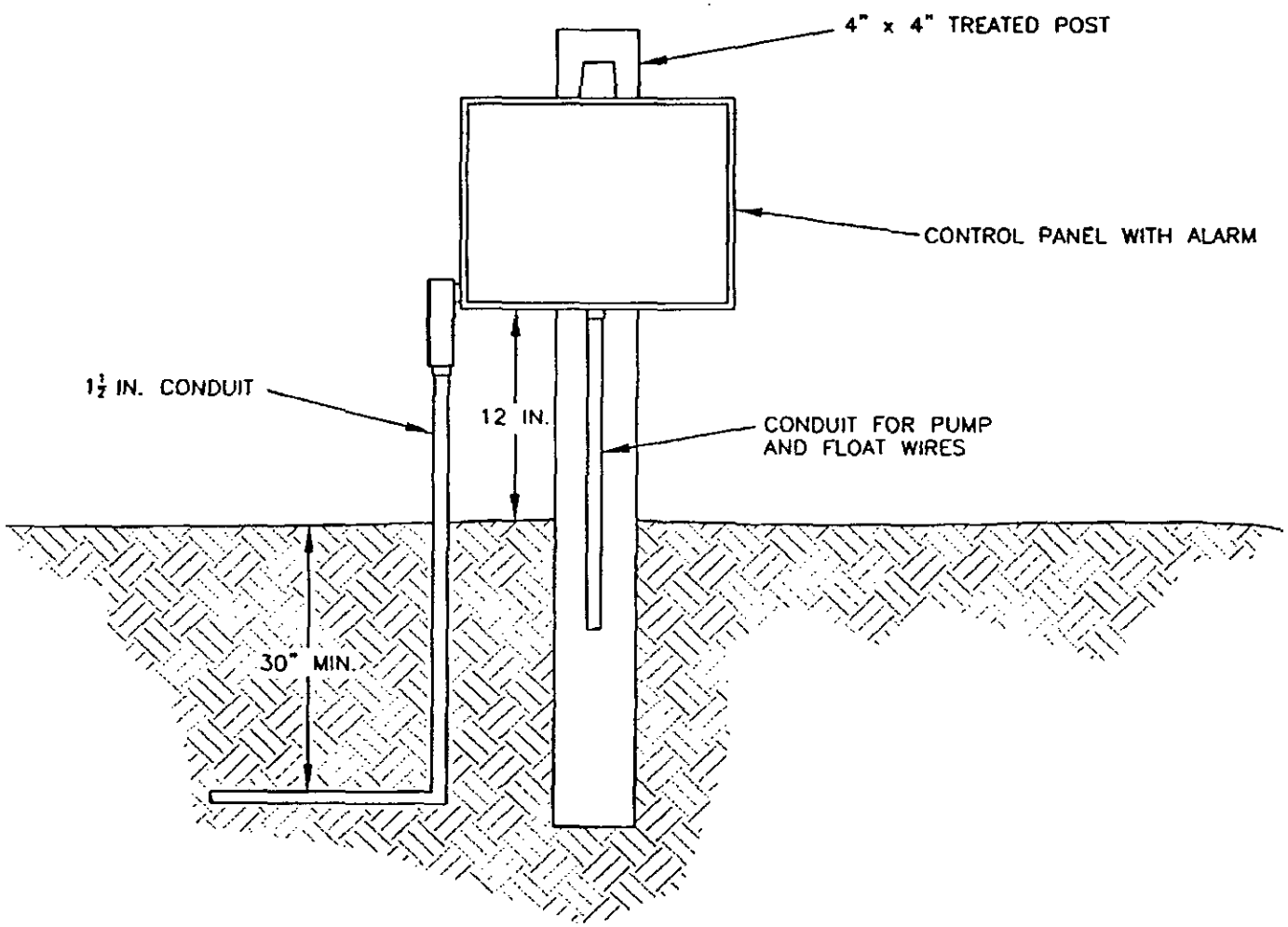
Concrete: 4,000 PSI







ELECTRIC BOX

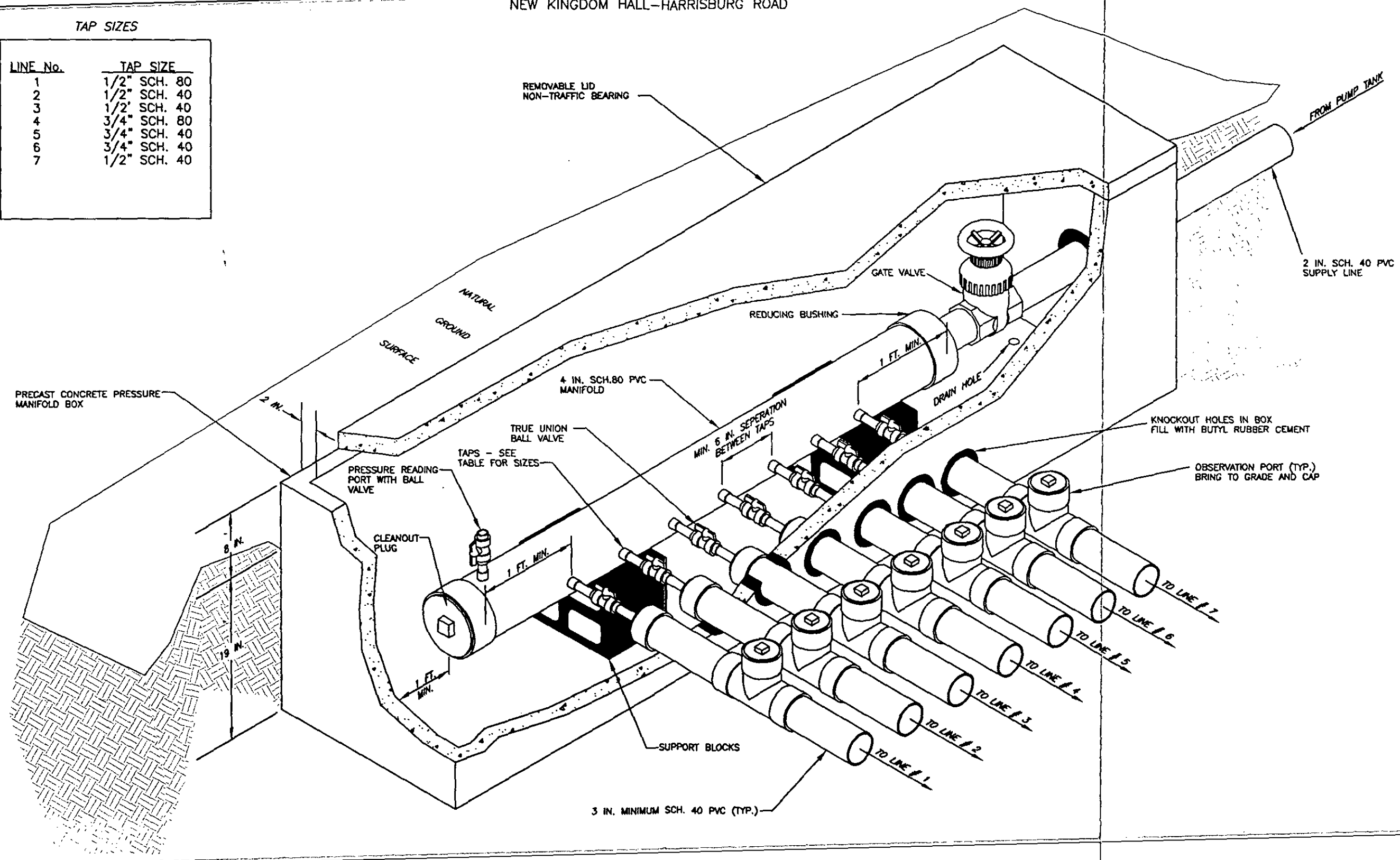


NOTES: ELECTRICAL SYSTEM COMPONENTS SHALL BE INSTALLED TO MEET OR EXCEED MINIMUM REQUIREMENTS SPECIFIED IN THE ELECTRICAL COME. ALL WIRING SHALL BE #12 MINIMUM, AND RATED FOR DIRECT BURY. PROVIDE GROUNDING AS REQUIRED, AND PROVIDE 30" MINIMUM BURY ON CABLES. PROVIDE ONE 20 AMP, DOUBLE POLE, 230 VOLT CIRCUIT BREAKER (FOR PUMP), AND ONE 20 AMP, SINGLE POLE, 115 VOLT CIRCUIT BREAKER (FOR ALARM) IN MAIN PANEL.

PRESSURE MANIFOLD DETAILS
FOR
NEW KINGDOM HALL–HARRISBURG ROAD

TAP SIZES

LINE No.	TAP SIZE
1	1/2" SCH. 80
2	1/2" SCH. 40
3	1/2' SCH. 40
4	3/4" SCH. 80
5	3/4" SCH. 40
6	3/4" SCH. 40
7	1/2" SCH. 40



MODEL DTD Control Panel

Single phase, duplex timed dosing pump control.

The Model DTD control panel provides a reliable means of controlling two single phase 120, 208, or 240 VAC pumps in onsite septic installations. A programmable timer, in conjuction with an alternating circuit board, alternately activates the magnetic contactors to turn the pumps on and off and equalize pump wear. A low level cutout float overrides the timer to prevent the pump from running dry. An alarm float activates the audio/visual alarm system indicating a high liquid level. Common applications include sand filter systems, pressure distribution systems, mound systems, or any application requiring timed dose control.

PANEL COMPONENTS

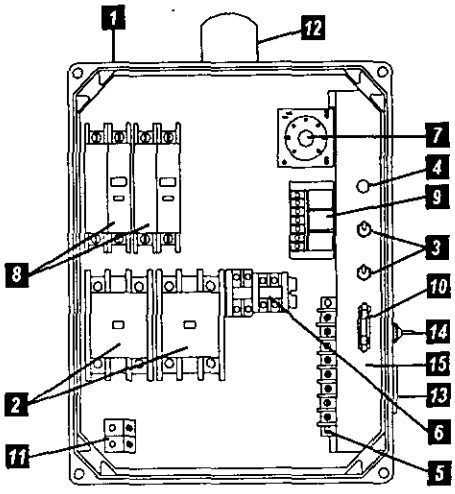
1. **Enclosure** measures 14 x 12 x 6 inches (35.56 x 30.48 x 15.24 cm); NEMA 4X (ultraviolet stabilized thermoplastic with removable flanges for outdoor or indoor use).
2. **Magnetic Motor Contactors** control pumps by switching electrical lines.
3. **HOA Switches** for manual pump control.
4. **Control/Alarm Fuse**
5. ***Float Switch Terminal Block***
6. **Incoming Power Terminal Block**
7. **Programmable Timer** with separate variable controls allows for setting the on and off times from .05 seconds to 30 hours.
8. **Pump Circuit Breakers** provides pump disconnects and branch circuit protection.
9. **Alternating Circuit Board** provide pump control and alternation (U.S. Patent 5,909,352).
10. **Spare Fuse**
11. **Ground Lugs**

NOTE: Timer Installation Label, Field Wiring Diagram and Pump/Float Switch Installation Specification Label are located inside the panel on enclosure cover.

STANDARD ALARM PACKAGE

12. **Red Alarm Beacon** provides 360° visual check of alarm condition.
13. **Alarm Horn** provides audio warning of alarm condition (83 to 85 decibel rating).
14. ***Exterior Alarm Test/Normal/Silence Switch*** allows horn and light to be tested and horn to be silenced in an alarm condition. Alarm automatically resets once alarm condition is cleared.
15. **Horn Silence Relay** (mounted under bracket).

NOTE: other options available.



Model Shown DTD1W104X

FEATURES

- Entire control system (panel and switches) is UL Listed to meet and/or exceed industry safety standards
- Dual safety certification for the United States and Canada
- Standard package includes one 20' SJE PumpMaster® pump switch and one 20' Sensor Float® control switch
- Complete with step-by-step installation instructions
- Three-year limited warranty

c UL us LISTED

PRICING/ORDERING INFORMATION

Model Number	Horsepower/ AC Voltage	Full Load Amps	List Price	Shipping Weight
DTD1W904H	1HP/120 VAC	0-7 FLA	$1180.00	20 lbs.
DTD1W124H	2HP/120/208/240 VAC	15-20 FLA	$1240.00	20 lbs.

SEE BACKSIDE FOR COMPLETE LISTING OF AVAILABLE OPTIONS.

SJE Rhombus® CONTROLS

PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE • 1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

DTD		W			4		

MODEL DTD $1,180.00

ALARM PACKAGE

- ☐ 0 = select option (If you select "0", you must select option 1F) ..... - $ 20.00
- ☐ 1 = alarm package (includes test/normal/silence switch, red beacon, horn) ..... Base

ENCLOSURE RATING

- ☑ W = Weatherproof, NEMA 4X (engineered thermoplastic) ..... Base

STARTING DEVICE

- ☐ 1 = magnetic motor contactor 120/208/240V ..... $ 60.00
- ☐ 9 = magnetic motor contactor 120V only ..... Base

PUMP FULL LOAD AMPS

- ☐ 0 = 0-7 FLA ..... Base
- ☐ 1 = 7-15 FLA ..... Base
- ☐ 2 = 15-20 FLA ..... Base
- ☐ 3 = 20-30 FLA ..... $ 50.00

PUMP DISCONNECTS

- ☑ 4 = *circuit breaker* ..... Base

FLOAT SWITCH APPLICATION

- ☐ H = 20' low level cutout (20' SJE PumpMaster®, gray), high level alarm float (20' Sensor Float®, black) ..... Base
- ☐ X = no floats ..... - $ 60.00

OPTIONS *Listed below*

Total Options _____

TOTAL LIST PRICE _____

If additional features are required, call the factory for a quote on either a SJE-Rhombus Pro-Line or Engineered Custom control panel system.

	CODE	DESCRIPTION	LIST PRICE
☐	1F	Door mounted alarm indicator with horn and test/normal/silence switch *(must select "0" for alarm package)*	$30.00
☐	4B	Redundant off, alarm activation, red indicator *(must select option 4D if floats included)*	$90.00
☐	4D	Redundant off float (20' Sensor Float®)	$25.00
☐	4E	Redundant off float, alarm activation (20' SJE PumpMaster® SPDT)	$40.00
☐	6A	Normally open dry auxiliary alarm contacts	$50.00
☐	8A	Elapsed time meters	$110.00
☐	8C	Event (cycle) counters	$90.00

	CODE	DESCRIPTION	LIST PRICE
☐	10E	Lockable latches	$30.00
☐	10K	Anti-condensation heater	$100.00
☐	16A	10' cord in lieu of 20' *(per float)*	- $2.00
☐	16B	15' cord in lieu of 20' *(per float)*	- 1.00
☐	16C	30' cord in lieu of 20' *(per float)*	$ 5.00
☐	16D	40' cord in lieu of 20' *(per float)*	$15.00
☐	18A	Timer override float (20' SJE PumpMaster®)	$40.00
☐	19X	Externally mounted pump run indicators	$40.00
☐	21E	SJE PumpMaster® in lieu of Sensor Float® *(per float)*	$5.00

SAMPLE

MODEL DTD 1 W 9 1 4 H 4E 18A

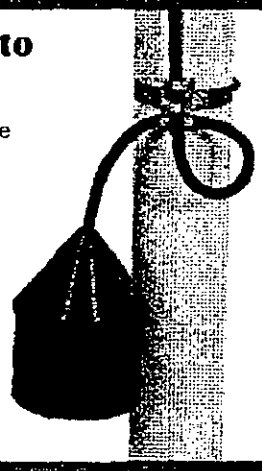
- **Alarm Package** — 1
- **Enclosure Rating** — W
- **Starting Device** — 9
- **Pump Full Load Amps** — 1
- **Pump Disconnect** — 4
- **Float Switch Application** — H
- **Option: Redundant off float, Timer override float** — 4E 18A

LIST PRICE	$1180.00
1	Base
W	Base
9	Base
1	Base
4	Base
H	Base
4E	$40.00
18A	$40.00
TOTAL LIST PRICE	$1260.00

©SJE-Rhombus Printed in USA 02/03
Effective 02/03 PN 1011951A

SENSOR FLOAT® control switch

Mercury-activated, narrow-angle float switch designed to activate pump control panels and alarms.



This narrow-angle sensing device is used to accurately monitor liquid levels in sewage and non-potable water applications. The Sensor Float® control switch is not sensitive to rotation and is suitable for use with intrinsically safe circuits. Contact SJE-Rhombus regarding specific intrinsically safe applications.

Normally Open Model (high level)
The control switch turns on (closes) when the float tips slightly **above** horizontal signaling a high level, and turns off (opens) when the float drops slightly below horizontal.

Normally Closed Model (low level)
The control switch turns on (closes) when the float drops slightly **below** horizontal signaling a low level, and turns off (opens) when the float tips slightly above horizontal.

FEATURES

- Suitable for use with intrinsically safe circuits.
- Not sensitive to rotation.
- Control differential of .5 inches (1 cm) above or below horizontal.
- UL Listed for use in non-potable water and sewage.
- CSA Certified.
- Three-year limited warranty.

LR54245 LISTED 83N2

Hydraulic

OPTIONS

This switch is available:

- for normally open (high level) applications or normally closed (low level) applications.
- in standard cable lengths of 10, 15, 20, or 30 feet and 3, 5, 6, or 10 meters.
- with three mounting options that allow for flexibility in installation:

  Mounting Clamp: for applications where the switch can be attached to a discharge pipe or similar mounting device.

  Internally Weighted: for applications where the switch can be suspended from above.

  Externally Weighted: for applications where the switch can be suspended from above.

SPECIFICATIONS

CABLE: flexible 18 gauge, 2 conductor (UL,CSA) SJOW, water-resistant (CPE) jacket

FLOAT: 3.38 inch diameter x 4.55 inch long (8.58 cm x 11.56 cm), high-impact, corrosion resistant, PVC housing for use in sewage and non-potable water up to 140°F (60°C)

MAXIMUM WATER DEPTH: 30 feet (9 meters), 13 psi

MERCURY TILT SWITCH: single pole, single throw, mercury-to-mercury contacts, hermetically sealed in a steel capsule and epoxy sealed in the float housing

ELECTRICAL: 5 amp, 120/230 VAC, 50/60 Hz

CONTROLS SJE-Rhombus SJ ELECTRO SYSTEMS, INC.
PO Box 1708, Detroit Lakes, MN 56502
1-888-DIAL-SJE (1-218-847-1317
1-218-847-4617 Fax
email: sje@sjerhombus.com
www.sjerhombus.com

Sensor Float® control switch installation instructions

⚠WARNING ELECTRICAL SHOCK HAZARD
Disconnect power before installing or servicing this product. A qualified service person must install and service this product according to applicable electrical and plumbing codes.

⚠WARNING EXPLOSION OR FIRE HAZARD
Do not use this product with flammable liquids. Do not install in hazardous locations as defined by National Electrical Code, ANSI/NFPA 70.

Failure to follow these precautions could result in serious injury or death. Replace product immediately if switch cable becomes damaged or severed. Keep these instructions with warranty after installation. This product must be installed in accordance with National Electric Code, ANSI/NFPA 70 so as to prevent moisture from entering or accumulating within boxes, conduit bodies, fittings, float housing, or cable.

MOUNTING THE SWITCH

1. Place the cord into the clamp as shown in Figure B.
2. Locate clamp at desired activation level and secure the clamp to the discharge pipe as shown in Figures A and B. **Note:** Do not install cord under hose clamp.
3. Tighten the hose clamp using a screwdriver. Over tightening may result in damage to the plastic clamp. Make sure the float cable is not allowed to touch the excess hose clamp band during operation.
4. Bring cable leads back to control device and wire according to Figure C.
5. Check installation. Allow system to cycle to insure proper operation.

Note: All hose clamp components are made of 18-8 stainless steel material. See your SJE-Rhombus supplier for replacements.

Figure A

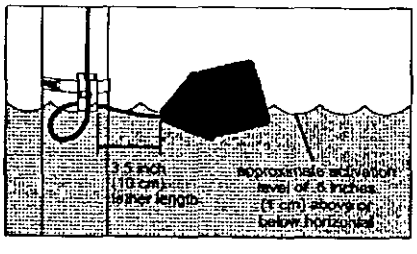
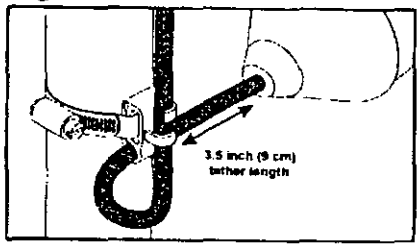


Figure B



INTERNAL WEIGHT

1. Determine desired activation level.
2. Suspend switch 7 inches (18 cm) below desired activation level as shown in Figure D. Switch remains partially submerged during the "on" tipping action. Switch can be totally submerged and still continue to operate properly.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Figure C - Wiring Diagram

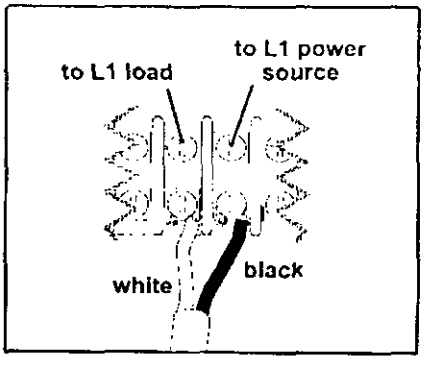
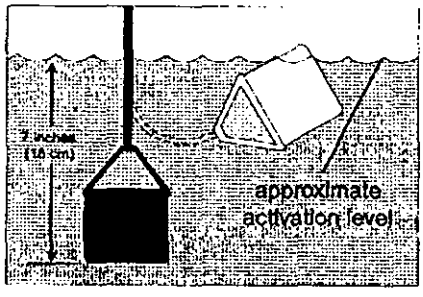


Figure D



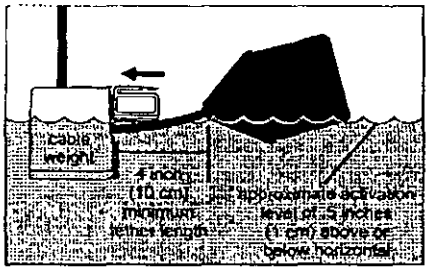
CABLE WEIGHT

1. Determine desired activation level.
2. Suspend switch and cable weight at desired activation level as shown in Figure E.
3. Wire cable leads directly into control device as shown in Figure C.
4. Check installation. Allow system to cycle to insure proper operation.

Cable weight is attached to switch cable at the factory. To adjust:

1. Release clip.
2. Adjust cable weight to desired position.
3. Lay switch cable in weight channel.
4. Align clip with weight channel and slide towards switch cable as shown in Figure E.
5. Snap clip snugly up to cable, moving clip to tightest possible position.

Figure E



CONTROLS
SJE-Rhombus
SJ ELECTRO SYSTEMS, INC.
22650 County Highway 6 ■ P.O. Box 1708 ■ Detroit Lakes, Minnesota 56502 USA
1-888-DIAL-SJE (1-888-342-5753) ■ Phone: 218-847-1317 ■ Fax: 218-847-4617
E-mail: sje@sjerhombus.com

Instl. Instr. PN 1009646A
Cat. Page PN 1009509A

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Printed in USA 03/00

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps

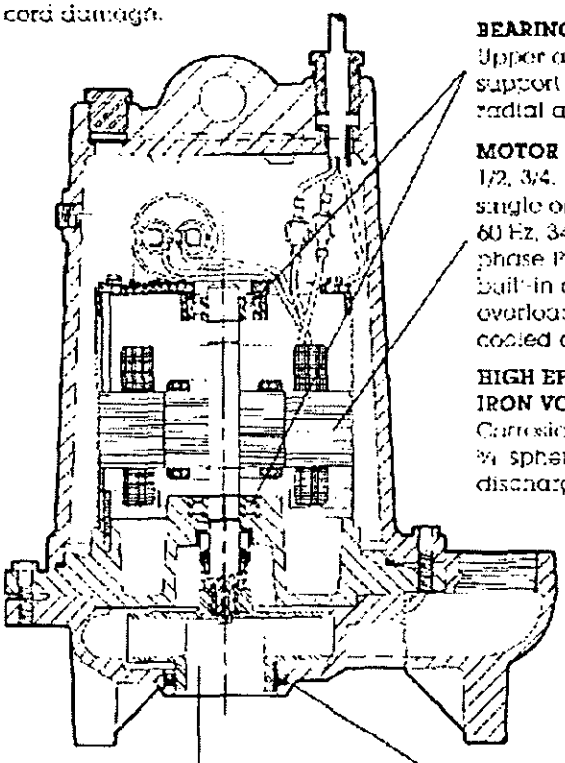
POWER CORD
Jacket sealed with compression fittings. Individual wires potted with epoxy to prevent wicking in case of cord damage.

MOTOR HOUSING
Cast iron for efficient heat transfer and corrosion resistance.

BEARINGS
Upper and lower ball support rotor. Take radial and thrust loads.

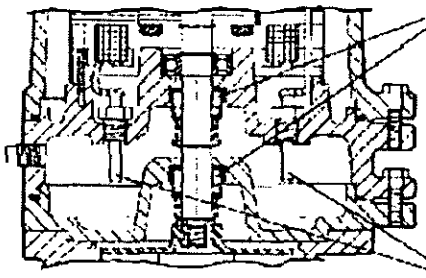
MOTOR
1/2, 3/4, 1 and 1-1/2 HP single or three phase. 60 Hz, 3450 RPM. Single phase PSC motors have built-in on winding overload protection, oil-cooled and lubricated.

HIGH EFFICIENCY CAST IRON VOLUTE
Corrosion resistant. Passes ½ spherical solids. 2" NPT discharge.



ENCLOSED TWO VANE IMPELLER
High efficiency. Passes ½" spherical solids with stainless steel wear ring. Optional bronze construction available.

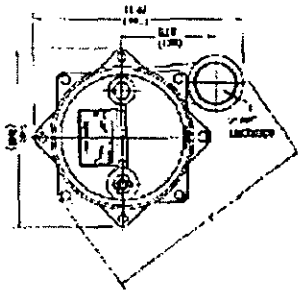
VOLUTE/IMPELLER SEAL RING
Maintains high efficiency and reduces recirculation. Replaceable.

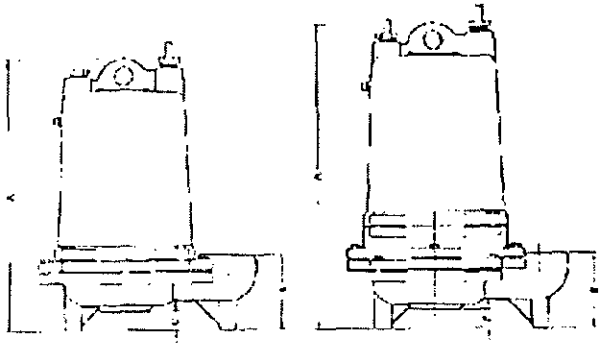


SHAFT SEAL(S)
Carbon and ceramic faces. Optional dual tandem seals. Extends motor life.

SEAL LEAK PROBES
Optional probes (dual seal only) detect water leakage in seal housing. Activates warning light.

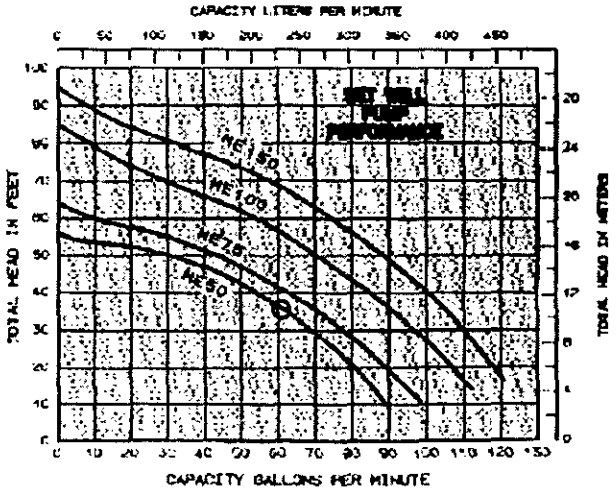
DIMENSIONS





Model Series	Inches (millimeters) A	B	C	F
ME50S	16.8 (427)	4.09 (104)	1.03 (26)	12.13 (308)
ME50D	16.6 (422)	4.09 (104)	1.03 (26)	12.13 (308)
ME75S, ME100S, ME150S	16.8 (427)	4.0 (102)	1.06 (27)	12.5 (318)
ME75D, ME100D, ME150D	16.6 (422)	4.0 (102)	1.06 (27)	12.5 (318)

PERFORMANCE CURVE



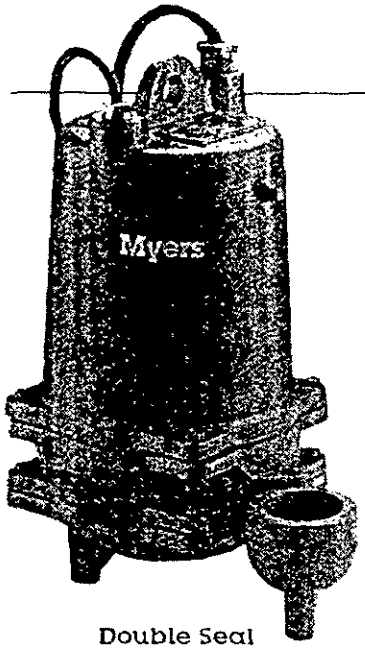
K3320 9/98
Printed in U.S.A.

Myers

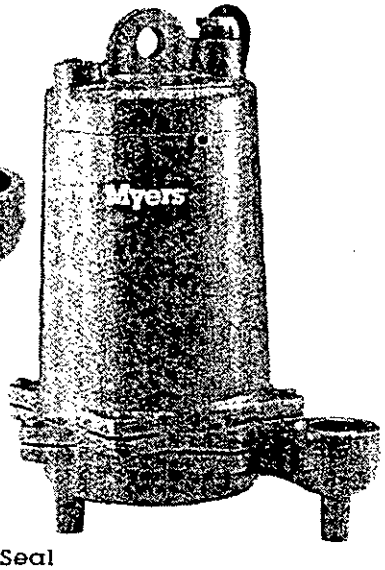
F. E. Myers, 1101 Myers Parkway, Ashland, Ohio 44805-1969
419/289-1144, FAX: 419/289-6658, www.femyers.com
Myers (Canada), 209 Trillium Drive, Kitchener, Ontario N2G 4W5

ME SERIES

1/2 through 1-1/2 HP
Effluent Pumps



Double Seal



Single Seal

THE MYERS ME SERIES EFFLUENT PUMPS ARE DESIGNED SPECIFICALLY FOR TODAY'S EFFLUENT PRESSURE DISTRIBUTION MOUNDS, TRENCHES AND HIGH FLOW DRAINAGE APPLICATIONS. The ME Series effluent pumps with their efficient two vane, enclosed impellers, provide the ideal performance for optimum dosing. ME Series pumps are constructed of only corrosion resistant materials like cast iron, stainless steel and thermoplastics to assure that they will perform for years to come in the harsh effluent environment and drainage applications. For more information, call your Myers distributor today or the Myers Ashland, Ohio sales office at 419/289-1144.

ADVANTAGES BY DESIGN

IDEAL FOR USE IN MOUND AND TRENCH PRESSURE DISTRIBUTION SYSTEMS

- High efficiency, two vane, enclosed impeller provides ideal performance for most efficient dosing.
- Impeller passes full ¾ inch solids.
- Enclosed impeller design eliminates possibility of jamming or corrosion between impeller and volute.

DURABLE MOTOR WILL DELIVER MANY YEARS OF RELIABLE SERVICE

- Oil-filled motor for maximum heat dissipation and constant bearing lubrication.
- High torque, permanent split capacitor (PSC), single phase motors. No starting switches or relays to wear out.
- Optional seal leak probe warns of seal leak condition. (Dual seal motors only.) Helps prevent costly motor damage.
- Motors have on winding current and temperature sensitive overload. (Single phase only.)

THE ME SERIES EFFLUENT PUMPS ARE DESIGNED FOR YEARS OF MAINTENANCE FREE OPERATION

- Volute seal ring is replaceable. Restores pump to original performance if wear should occur.
- Motor is held in place by 4 screws. Easily removed if service is ever needed.

PRODUCT CAPAILITIES

Capacities To	120 GPM	454 LPM
Heads To	95 ft.	28.9 m
Max. Spherical Solids	¾ in.	19 mm
Liquids Handling	domestic effluent & drain water	
Intermittent Liquid Temp.	up to 140° F	up to 60° C
Motor Electrical Data	1/2 HP 115 volts, 1 ph 1/2 to 1-1/2 HP 230 volts, 1 ph 208, 230, 460, 575 volts, 3 ph oil-filled, permanent split capacitor type, 1 ph, 3450 rpm, 60 Hz	
Motor Insulation	Class B (130° C)	
Third Party Approvals	UL, CSA	
Acceptable pH Range	6-9	
Specific Gravity	.9-1.1	
Viscosity	28-35 SSU	
Discharge, NPT	2 in.	50.8 mm
Min. Sump Dia. Simplex	24 in.	61 cm
Duplex	36 in.	91.4 cm

Construction Materials	
Motor Housing, Volute	cast iron, Class 30, ASTM A48-76
Enclosed Two Vane Impeller Standard	engineered thermoplastic
Optional	bronze
Impeller Wear Ring	304 SST
Volute Sealing Ring	Buna-N
Shaft	416 SST
Power Cord	
1/2 HP 1 Ph	20 ft. 16/3 SJOW/SJOW-A
3/4 - 1-1/2 HP 1 Ph	20 ft. 14/3 SJOW/SJOW-A
All 3 Ph	20 ft. 14/4 SOW/SOW-A
Shaft Seals Standard	single carbon & ceramic
Optional	tandem carbon & ceramic
Opt. Lower	tungsten carbide
Fasteners	300 Series SST

WHERE INNOVATION MEETS TRADITION

ISO 9001 Certified Company

Myers
PENTAIR PUMP GROUP

Equalization Calculations
and
Pump Tank Sizing

Day	Attendance	Daily Flow
Sunday	400	1200 gal.
Tuesday	400	1200 gal.
Thursday	400	1200 gal.
Weekly Total		3600 gal.

Equalization Cycle is 1 Week (7 days)

Equalized Daily Flow: 3600 gallons/7days = 514 gallons/day
The Drainfield is sized for a daily waste flow of 603 gpd.
Trench bottom area is: (514ft^2/0.29 LTAR)(.75 EZ Flow Reduction) = 1329 ft^2

Linear Footage: 1329 ft.^{2}/3 ft. wide treches) = 443 ft.

Dose Volume: 257 gallons (76% of 4" corrugated drainline capacity)

Flow Balance

Day	In	Out	Residual
Sunday	**1200***	514	686
Monday	0	514	172
Tuesday	1200	514	858
Wednesday	0	514	344
Thursday	1200	514	**1030****
Friday	0	514	516
Saturday	0	514	2
Total	3600 gal.	3598 gal.	2 gal.

Pump Tank Sizing: Assuming a pump height of 18" and a tank with 30 gallons per inch:

Pump Submergence Volume = 540 gal.
Dose Volume = 257 gal.
Equalization Volume = 1030 gal.**
Emergency Storage Volume = 1200 gal.*
Adding the Volumes together yields a required dosing/equalization volume of 3,027 gal.

Dosing Regime: 257 gallons every 12 hours. Given a measured pump delivery rate of 60.28 gpm, the repeat cycle timer would be set at 4.5 minutes on, and 12 hours (or 11.9 hours) off.
The installer shall perform a draw-down test at the completion of the installation to determine the actual pumping rate, and set the timer accordingly.

CALCULATIONS

Location New Kingdom Hall

Project Number 5-1379s1

Lot No: n/a

No. of Bedrooms

Design Flow	514	$^{gal}/_{day}$
LTAR	0.3	$^{gal}/_{ft^2\,day}$
EZ-Lay? (YES OR NO)	YES	
Supply Line Length	145	ft.
Supply Line Volume	25.23	gal.
Required Feet of Line	428	ft.
Amount of Line from Layout	520	ft.
Gallons per Minute	60.28	$^{gal}/_{min}$
Required Septic Tank Capacity	2000	gal.
Minimum Standard Tank Size	2000	
Lateral Line Volume	339.56	gal.
Dosing Volume	**254.67**	gal.

Note: Dosing Volume based on 75% of the lateral line volume.

FRICTION FACTOR INTERPOLATER
2" SCH 40 PVC

GPM	*f*
20	0.84
	-0.88
25	1.27
	-1.28
30	1.78
	-1.76
35	2.37
36.82	2.61
40	3.03
	-2.89
45	3.77
	-3.52
50	4.58
	-4.62
60	6.42

Tank Draw Down	12.1	*Generic Draw Down of 21 gal.per in.*
Pump Run Time	4.22	minutes
Elevation Head	**20**	ft.
Pressure Head	**2**	ft.
Friction Factor	**6.45**	ft./100 ft. *(From the interpolater.)*
Friction Head	**9.35**	ft.
Total Dynamic Head (+15%)	**36.06**	ft.

HARRISBURG RD. (S.R. 2805) 60' R/W

POLE. ELEV.=768.74

UTILITY POLE

OVERHEAD ELECTRIC/TELEPHONE LINES

WATERLINE

EDGE OF PAVEMENT

S48°26'03"W 104.50'

IRON PIN FOUND

IRON PIN SET

N48°26'03"E 449.85'

OVERHEAD ELECTRIC SERVICE LINE

IN 15" RCP 765.91

OUT 15" RCP 765.52

PROPOSED RIGHT OF WAY

IRON PIN FOUND

PRESSURE MANIFOLD

TREELINE

BUILDING SETBACK

1-1.25" sch 40 temp

Yellow 40'

Blue 38'

Pink 47'

Red 68'

Pink 58'

Yellow 43'

Blue 45'

Red 30'

3-2" sch40 gate valves in box

check valve per supply line

cleanout

REPAIR FIELD

5-Red 100'

4-Yellow 85'

3-Pink 65'

2-Blue 54'

1-Red 43'

6-Red 115'

7-Pink 60'

8-Blue 30' extra

to repair field

Supply Line PVC

2000 GAL SEPTIC TANK AND 3000 GAL PUMP TANK

FFE= 766.50

LYNDA B. NOREM
D.B. 3300, PG. 470
TAX REF.: 111-13-105
ZONED R-4

S42°26'25"E 449.75'

CENTERLINE OF DUKE POWER COMPANY ELECTRIC TRANSMISSION LINE

N27°15'56"W 276.56'

32' BUFFER

IRON PIN SET

TRANSMISSION TOWER

DUKE POWER CO.
D.B. 2852 Pg. 477
TAX REF.: 111-13-113

N57°14'15"W 199.94'

ORENCO

UNMAINTAINED 4' BARBED WIRE FENCE

S47°07'13"W 471.14'

IRON PIN FOUND

MAG-DATE

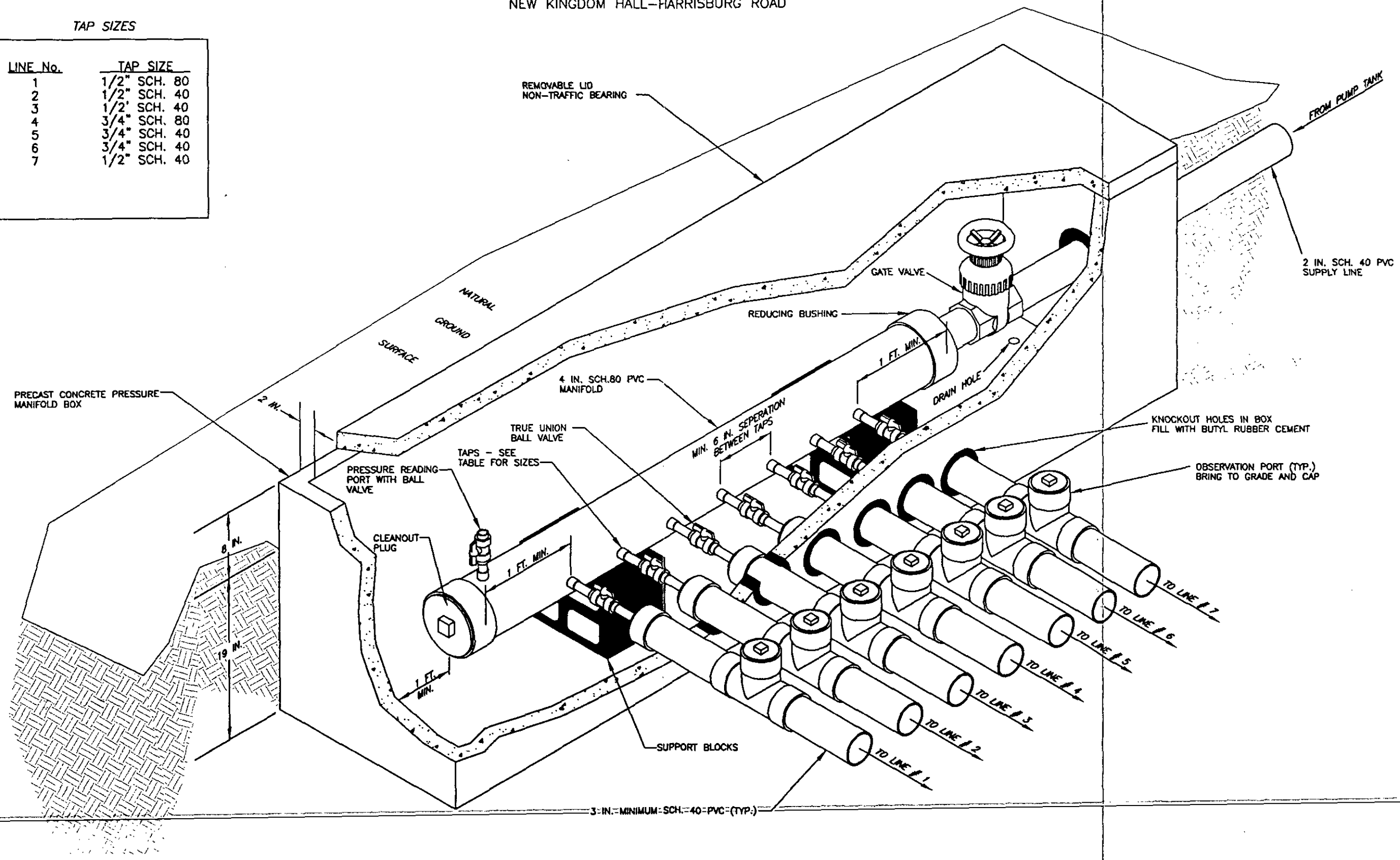
GRAPHIC SCALE
1" = 60'

0 60 120

PRESSURE MANIFOLD DETAILS
FOR
NEW KINGDOM HALL–HARRISBURG ROAD

TAP SIZES

LINE No.	TAP SIZE
1	1/2" SCH. 80
2	1/2" SCH. 40
3	1/2' SCH. 40
4	3/4" SCH. 80
5	3/4" SCH. 40
6	3/4" SCH. 40
7	1/2" SCH. 40



Mecklenburg County
Health Department

TELECOPIER TRANSMITTAL COVER SHEET

*** NOTICE ***

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TO: TRISH ANGULI TELECOPIER # 919-715-3291

FROM: DREW WALKER DATE 12/16/04

NUMBER OF PAGES TRANSMITTED: 21 (including cover sheet)

COMMENTS:
MY MAIN ~~CONCERN~~ CONCERN IS WITH THE CONTROL PANEL
THANKS FOR YOUR HELP
Drew

If you do not receive all pages, please call us as soon as possible at the following number: (704)336-5103

☐ Original will not follow ☐ Original will follow via:

☐ U.S. Mail ☐ Hand Delivery ☐ _____

Environmental Health Division
700 North Tryon Street • Suite 211 • Charlotte, North Carolina 28202-2236

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 1
Property ID: 111-131-09
Lot #:
File #: 5445B
Code: 2

AGS

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Trustees, Jehovah's Witnesses
Applicant: Alan Melhiser
Address: C/O J. Gregory, 6638 Pencade Lane, charlotte, N. C. 28215
Date Evaluated: 11/25/2003
Proposed Facility: Church
Design Flow (.1949): 1200gpd
Property Size: 5.43a
Location of Site: 8128 Harrisburg Road
Property Recorded:
Water Supply: [x] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [x] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	OTHER PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
1	LS, 8	0-4	GR/SCL	FR/SEXP/SEXP	2.5Y5/1@29"	52	N/A	NONE	US, IV
		4-22	ABK/C	FI/SEXP/S/P					
		22-52	M/CL	FR/SEXP/SS/SP					
		SOME	PLATY	STRUCTURE PRESENT					
2	"	0-4	GR/SL	FR/SEXP/NS/NP	>48" TO SOIL WETNESS	29	US	"	US, IV .12GPD/FT^2
		4-29	SBK/ABK/C	FI/SEXP/S/P					
		29-48	M/CL	FR/SEXP/SS/SP					
3	LS, 6	0-13	GR/SCL	"	2.5Y7/1@32"	48	N/A	"	"
		13-48	ABK/SC	FI/SEXP/S/P					
4	LS, 8	0-6	GR/SCL	FR/SEXP/SS/SP	>40" TO SOIL WETNESS	40	"	"	PS, IV .25GPD/FT^2
		6-40	ABK/C	FI/SEXP/S/P					
5	"	0-9	GR/SCL	FR/SEXP/SS/SP	2.5Y7/1@38"	45	"	"	PS, IV .2GPD/FT^2
		9-37	SBK/C	FI/SEXP/S/P					
		37-45	ABK/C	"					
6	"	0-10	GR/SL	FR/SEXP/NS/NP	2.5Y6/1@27"	50	"	"	US
		10-21	SBK/SCL	FR/SEXP/SS/SP					
		21-50	SBK/ABK/C	VFI/EXP/VS/VP					
7	"	0-6	GR/SL	FR/SEXP/NS/NP	>48" TO SOIL WETNESS	48	"	"	PS, IV .275GPD/FT^2
		6-14	SBK/SCL	FR/SEXP/SS/SP					
		14-48	SBK/C	FI/SEXP/S/P					

Description	Initial System	Repair System
Available Space (.1945)	US	US
System Type(s)		
Site LTAR	.25GPD/FT^2	.25GPD/FT^2

Other Factors (.1946): _____
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 11/25/2003, W. R. Marlin
Others Present:

Department of Environment, Health, and Natural Resources
Division of Environmental Health
On-site Wastewater Section

Sheet: 2
Property ID: 111-131-09
Lot #:
File #: 5445B
Code: 2

SOIL/SITE EVALUATION for ON-SITE WASTEWATER SYSTEM

Owner: Applicant:
Address: *Date Evaluated:*
Proposed Facility: Design Flow (.1949): Property Size:
Location of Site: Property Recorded:
Water Supply: [ ] Public [ ] Individual [ ] Well [ ] Spring [ ] Other
Evaluation Method: [ ] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [ ] Sewage [ ] Industrial Process [ ] Mixed

PROFILE #	.1940 Landscape Position/ Slope%	Horizon Depth (IN.)	SOIL MORPHOLOGY .1941 .1941 Structure/ Texture	.1941 Consistence Mineralogy	OTHER PROFILE FACTORS .1942 Soil Wetness/ Color	.1943 Soil Depth (IN.)	.1956 Sapro Class	.1944 Restr Horiz	Profile Class & LTAR
8	LS, 8	0-11	GR/SCL	FR/SEXP/SS/SP	>49" TO SOIL WETNESS	49	N/A	NONE	PS, IV .275GPD/FT^2
		11-49	SBK/ABK/SC	FI/SEXP/S/P					
9	"	0-8	GR/SCL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	48	"	"	PS, IV .3GPD/FT^2
		8-40	SBK/ABK/C	FI/SEXP/S/P					
		40-48	SBK/SCL	FR/SEXP/SS/SP					
10	"	0-6	GR/SL	FR/SEXP/NS/NP	2.5Y7/1@21"	40	N/A	"	US
		6-23	SBK/SCL	FR/SEXP/SS/SP					
		23-40	SBK/C	VFI/EXP/VS/VP					

Description	Initial System	Repair System
Available Space (.1945)		
System Type(s)		
Site LTAR		

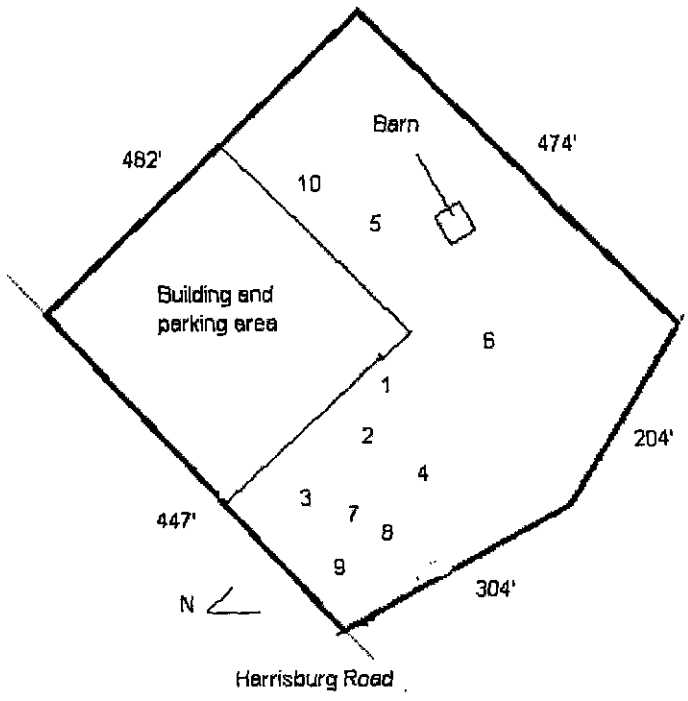
Other Factors (.1946): _____
Site Classification (.1948):
Evaluated By:
Others Present:

FILE # 5445B

COMMENTS: 100% repair

LANDSCAPE POSITIONS	GROUP	TEXTURES	1955 LTAR	CONSISTENCE MOIST	WET
R-RIDGE	I	S-SAND	1.2 - 0.8		
S-SHOULDER SLOPE		LS-LOAMY SAND		VFR-VERY FRIABLE	NS-NON-STICKY
L-LINEAR SLOPE				FR-FRIABLE	SS-SLIGHTLY STICKY
FS-FOOT SLOPE	II	SL-SANDY LOAM	0.8 – 0.6	FI-FIRM	S-STICKY
N-NOSE SLOPE		L-LOAM		VFI-VERY FIRM	VS-VERY STICKY
H-HEAD SLOPE				EFI-EXTREMELY FIRM	NP-NON-PLASTIC
CC-CONCLAVE SLOPE	III	SI-SILT-	0.6 – 0.3		SP-SLIGHTLY STICKY
CV-CONVEX SLOPE		SIL-SILT LOAM			P-PLASTIC
T-TERRACE		CL-CLAY LOAM			VP-VERY PLASTIC
FP-FLOOD PLAN		SCL-SANDY CLAY LOAM			
		SICL-SILTY CLAY LOAM			
	IV	SIC-SILTY CLAY	0.4 – 0.1		
		C-CLAY			
		SC-SANDY CLAY			

STRUCTURE	MINERALOGY
SG-SINGLE GRAIN	SLIGHTLY EXPANSIVE
M-MASSIVE	
CR-CRUMB	EXPANSIVE
GR-GRANULAR	
SBK-SUBANGULAR BLOCKY	
ABK-ANGULAR BLOCKY	
PL-PLATY	
PR-PRISMATIC	



FEE: 400.00
DATE: 11/14/03
Check 3204

INDIVIDUAL WATER AND WASTEWATER SYSTEMS PROGRAM
APPLICATION FOR IMPROVEMENT PERMIT FOR COMMERCIAL/INDUSTRIAL SITE

#1295

1 1 CRT

TYPE APPLICATION: ___ NEW SYSTEM ___ EXPANSION OF EXISTING SYSTEM ___ REPAIR OF EXISTING SYSTEM

NORTH CAROLINA
DEPARTMENT OF ENVIRONMENT,
HEALTH, AND NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL HEALTH
ON-SITE WASTEWATER SECTION

FILE #: 5445B

PROJECT TRACKING #:

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 1111 3109

STREET ADDRESS: 8128 HARRISBURG Rd

LOT NUMBER:

TOWNSHIP (CHECK ONE):

- ✓ 0 MECKLENBURG
- ___ 1 CHARLOTTE
- ___ 2 DAVIDSON
- ___ 3 CORNELIUS
- ___ 4 PINEVILLE
- ___ 5 MATTHEWS
- ___ 6 HUNTERSVILLE
- ___ 7 MINT HILL

✓ COMMERICAL ___ INDUSTRIAL

DESCRIBE TYPE OF BUSINESS:

Square Footage of Facility:

NUMBER OF EMPLOYEES: _____ PER SHIFT: _____ _____ _____

HOW WILL WATER BE USED IN THE FACILITY:

- ✓ TOILETS/URINALS
- ✓ HANDSINK
- ___ SHOWERS
- ___ FLOOR DRAINS

OTHER, PLEASE DESCRIBE:

TYPE OF WASTEWATER:

- ✓ SEWAGE
- ___ INDUSTRIAL PROCESS WASTE WATER

An IMPROVEMENT PERMIT is subject to revocation if site plans or the intended use change.

IF EXPANSION OF EXISTING SYSTEM, DESCRIBE THE PROPOSED ADDITION:

WATER SUPPLY (CHECK ONE):

- ___ COMMUNITY (C)
- ✓ MUNICIPAL (M)
- ___ PRIVATE WELL (P)
- ___ SHARED WELL (S)
- ___ OTHER 'SPRINGS' (O)

IF ANY OF THE FOLLOWING ARE LOCATED ON THE PROPERTY, PLEASE SHOW LOCATION ON PLAT:

BURIED CABLES, LANDFILLS, STUMPHOLES	___ YES	X NO	WELL SPRINGS OR WATERLINES	___ YES	X NO
EXISTING WASTE WATER SYSTEMS	___ YES	X NO	DESIGNATED WETLANDS	___ YES	X NO
EASEMENTS OR RIGHT-OF-WAYS	___ YES	X NO			

BUILDING PLANS TO INCLUDE ALL PLUMBING, FLOOR DRAINS AND ALL SOURCES OF WASTEWATER DISCHARGE AND GRADING PLANS MAY BE REQUIRED DURING THE EVALUATION STAGE.

PROPERTY OWNER: TRUSTEES: JEHOVAH'S WITNESSES

NAME: GREGORY JAMES (LAST) (FIRST) (MI)

ADDRESS: 6638 PENCADE LANE

CITY: CHARLOTTE STATE: NC ZIP 28215

DAYTIME PHONE: 704 400 7548

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

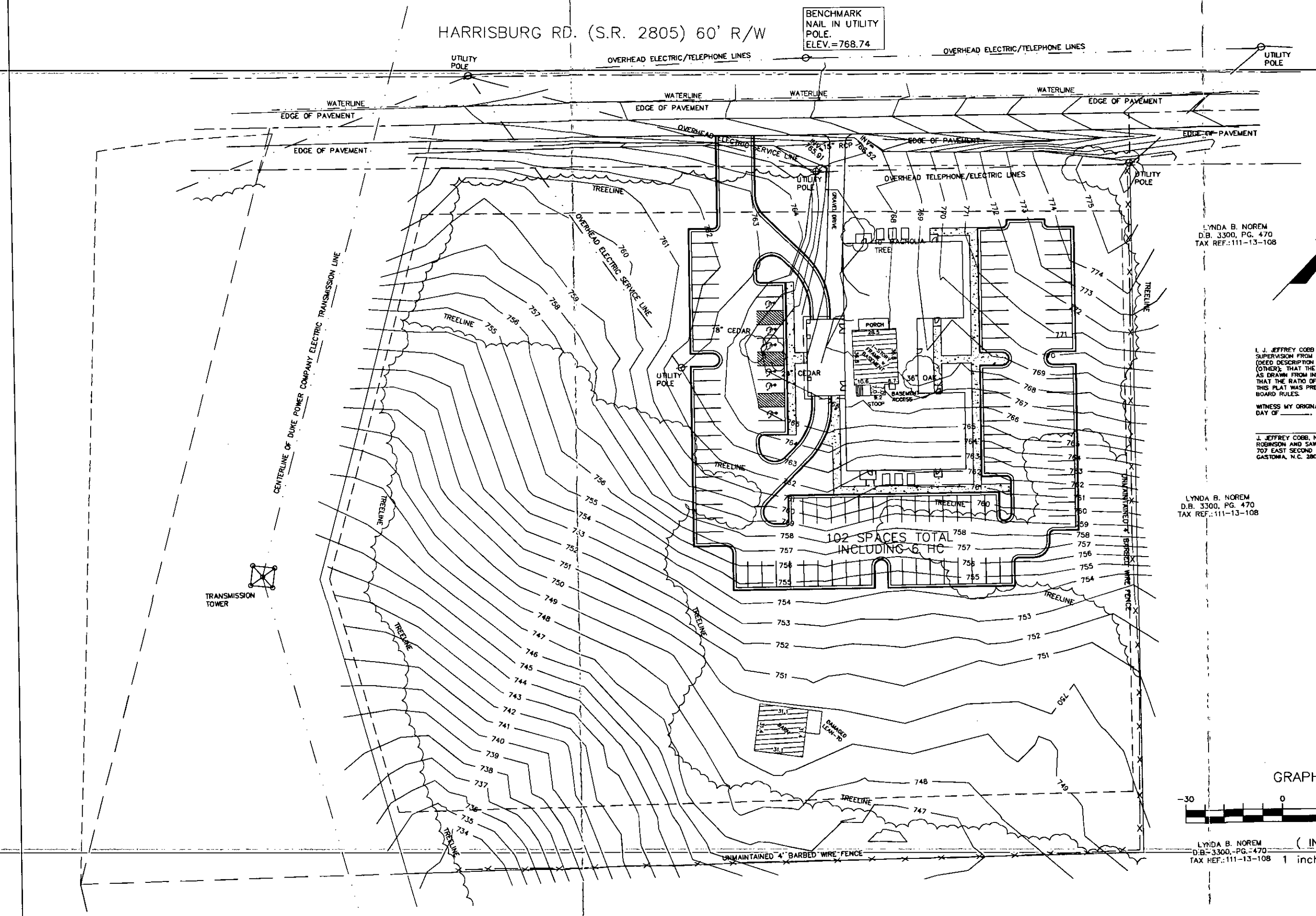
NAME: MELHISER DAVID ALAN (LAST) (FIRST) (MI)

DAYTIME PHONE: 704 309-3331

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? 4/23/03

THE UNDERSIGNED, OWNER, OR LEGAL AGENT FOR THE OWNER, OF THE PROPERTY DESCRIBED ABOVE AS THE "JOB LOCATION" HAS READ THE FOREGOING APPLICATION, ACKNOWLEDGES THAT THE CONTENTS OF SAME ARE TRUE, AND AUTHORIZES AGENTS OF THE MECKLENBURG COUNTY HEALTH DEPARTMENT TO ENTER ONTO THE PROPERTY FOR THE PURPOSE OF PROCESSING THIS REQUEST.

SIGNED: [signature] DATE: 11/13/03



I, J. JEFFREY COBB CERTIFY THAT THIS PLAT WAS DRAWN UNDER MY SUPERVISION FROM AN ACTUAL SURVEY MADE UNDER MY (DEED DESCRIPTION RECORDED IN DEED BOOK _____ PA (OTHER); THAT THE BOUNDARIES NOT SURVEYED ARE CLEA AS DRAWN FROM INFORMATION FOUND IN DEED BOOK _____ THAT THE RATIO OF PRECISION AS CALCULATED IS 1: _____ THIS PLAT WAS PREPARED IN ACCORDANCE WITH SECTION BOARD RULES.

WITNESS MY ORIGINAL SIGNATURE, LICENSE NUMBER, AND S DAY OF _____, A.D., 19.

J. JEFFREY COBB, N.C. PLS No. 2830
ROBINSON AND SAWYER, CONSULTING ENGINEERS AND LAND
707 EAST SECOND AVENUE
GASTONIA, N.C. 28054

ROBINSON & SAWYER, INC.
CONSULTING ENGINEERS & LAND SURVEYORS
EST. 1962 707 EAST SECOND AVENUE ~ GASTONIA, NC ~ 28054
PHONE: 704-864-2201
FAX: 704-864-2276
WWW.ROBSAW.COM

CITY OF CHARLOTTE, NORTH CAROLINA
ROCKY RIVER CONGREGATION OF JEHOVAH'S WITNESSES NEW KINGDOM HALL
PRELIMINARY PARKING LAYOUT(ALTERNATE)

DATE: 10/30/03

PROJECT No. 03052.01

FILE: SEE DRAWING FOLDER

SCALE: 1"=30'

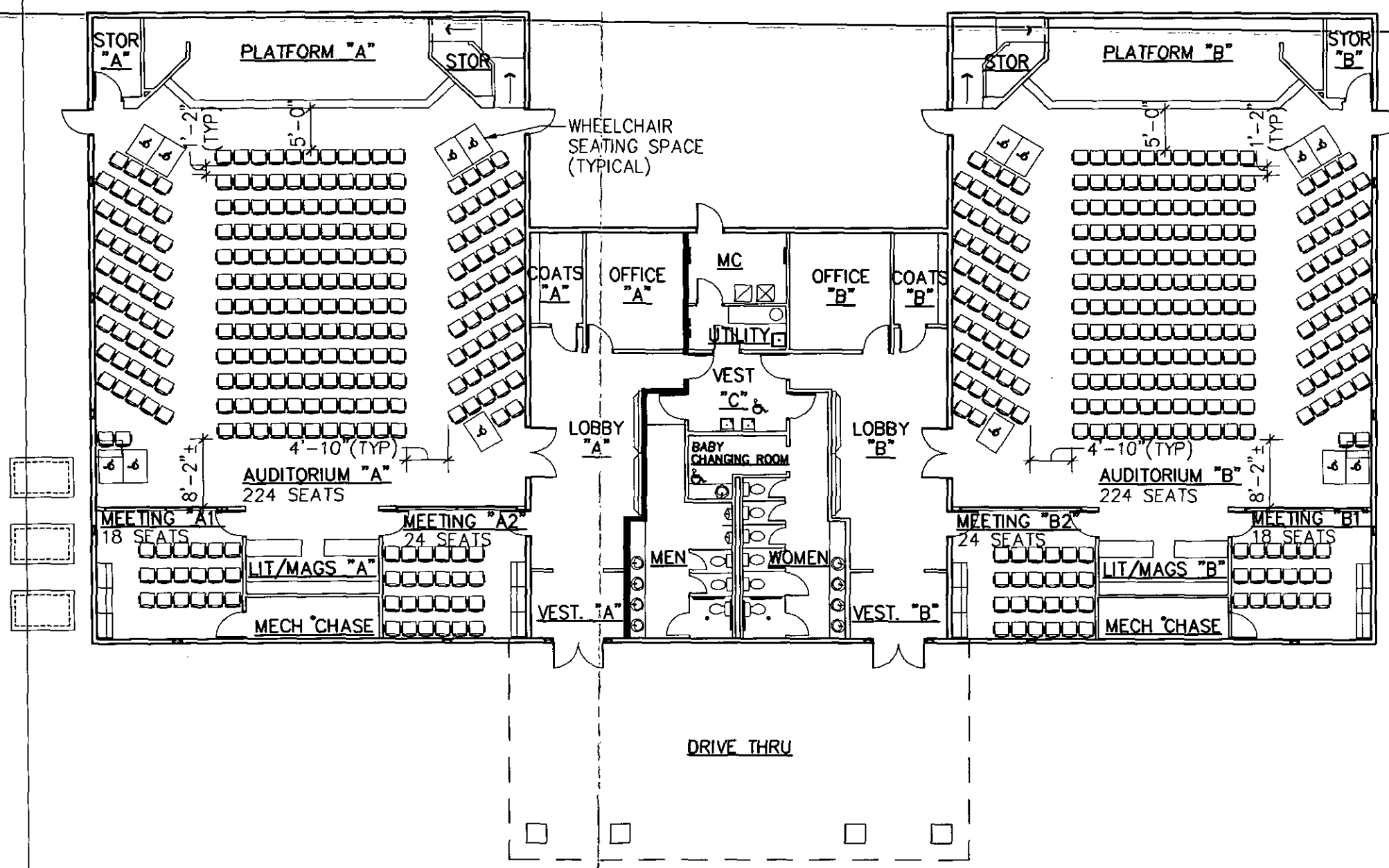
DRAWN BY: MCW

CHECKED BY: DHS

SHEET NO. # #

OF # SHEETS

File # 5445B



1 / A6.3 FLOOR PLAN – FINISHES

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

FINISH SCHEDULE

ROOM OR SPACE		WALLS	FLOOR	BASE
NAME	SQUARE FEET	SURFACE FINISH	SURFACE FINISH	SURFACE FINISH
VESTIBULE A & B	90 EACH	VINYL	TILE	TILE
VESTIBULE C	140	VINYL	TILE	WOOD
LOBBY A & B	392 EACH	VINYL	CARPET	WOOD
OFFICE A & B	134 EACH	VINYL	CARPET	WOOD OR CARPET
COATS A & B	124 EACH	VINYL	CARPET	WOOD
UTILITY ROOM	82	PAINT	TILE	TILE
BABY CARE	48	VINYL	TILE	TILE
WOMEN'S ROOM	229	TILE & VINYL	TILE	TILE
MEN'S ROOM	229	TILE & VINYL	TILE	TILE
& TOILET	49	TILE & VINYL	TILE	TILE
MEETING ROOMS A1,A2,B1 & B2	256 EACH	VINYL	CARPET	WOOD OR CARPET
LIT/MAGS A & B	108 EACH	VINYL	CARPET	–
MECH CHASE	53 EACH		SEALED	–
AUDITORIUM A & B	2440 EACH	VINYL	CARPET	WOOD OR CARPET
PLATFORM A & B	342 EACH	VINYL	CARPET	WOOD OR CARPET
RAMP/ STORAGE	96 EACH	VINYL	CARPET	WOOD OR CARPET
STORAGE A & B	60 EACH	PAINT	SEALED	–

GENERAL NOTES:

1. TOTAL BUILDING AREA – 10045 SQ FT (NOT INCLUDING DRIVE THRU)
2. TOTAL SEATING CAPACITY AUDITORIUM "A" SIDE – 272
3. TOTAL SEATING CAPACITY AUDITORIUM "B" SIDE – 272

NO	DATE	REVISION	BY
1.	3/8/01	COAT ROOM DOORS; FLOOR COVERINGS	tDG

SHEET TITLE: ROOM FINISHES

PROJECT TITLE: STANDARD KINGDOM HALL
DESIGN 10 – NORTHEAST
UNITED STATES OF AMERICA

DWN BY: DT CKD BY: FP
SCALE: 1/16"=1'-0"
DATE: 9-22-00
CAD #: 10-A6-03
SHEET No. A6.3