

10522 PARKTON RD

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: 5679B DATE: 4/27/05

TC: 111-164-21 ☒ L ☐ CRT

SERIAL 19816

Name of Owner STEVE BERRIER Juris.: _____

Address of Property 10522 PARKTON ROAD

Inspection Data:

Tank Material 1500 PCC

Total Length of Drainfield 250'

Number of Lines 1 @ 250'

Cover Depth 12"

Water Supply Source MUNICIPAL

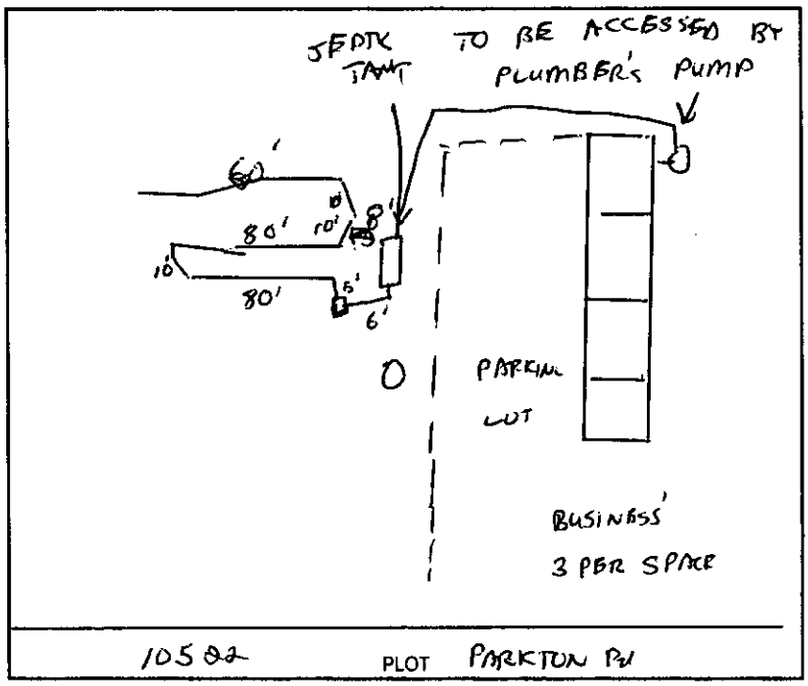
Distance to Water Source >50

Excavation Inspected 4/27/05

Tank(s) Inspected 4/27/05

Wash Line Inspected —

High Water Alarm Inspected —



Design 1500 ST 750 SFT INNOVATIVE, E2 FLOW CTR# LARRY WILLIAMS

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: TYPE III - G 250' TOTAL E2 FLOW, 1 LINE, all at SAME LEVEL, *OWNER DECIDED TO HAVE PLUMBER INSTALL PLUMBERS PUMP, LIFT STATION TO REACH SEPTIC TANK - AFTER I STRONGLY ADVISED AGAINST SUCH. *

Environmental Health Specialist

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

INSTALLATION, CONSTRUCTION, ALTERATION, AND/OR REPAIR APPROVAL

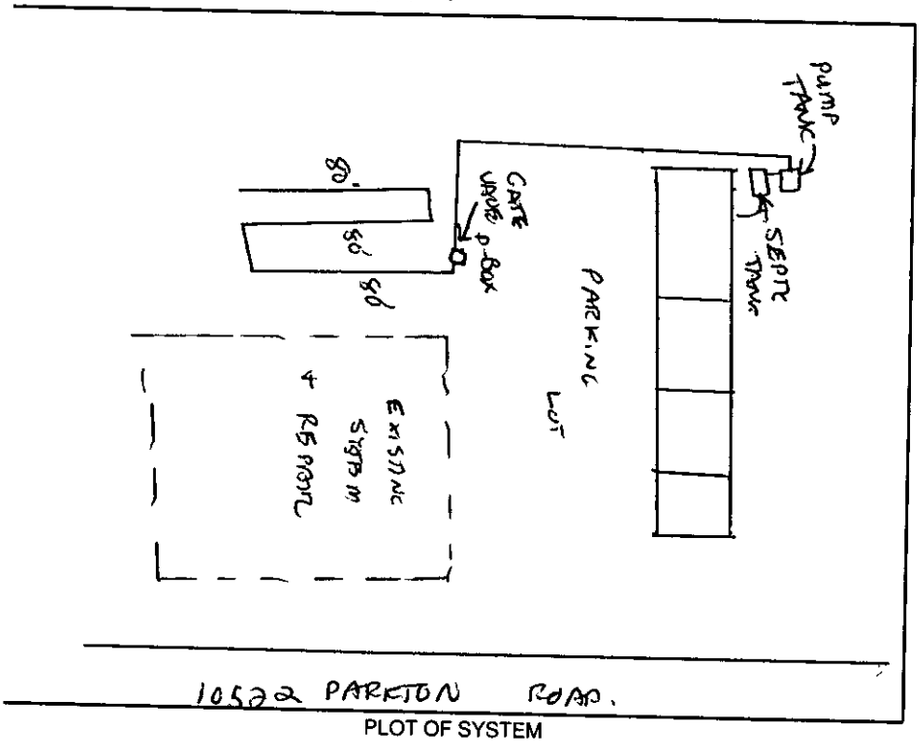
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON ST., SUITE 211
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 56798 DATE: 4-6-05

TC: 111-164-21 ☑L

SERIAL 19972

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 7-6-04. All work shall be completed on or before _____, after which date this permit shall be null and void. The system shall meet all of the construction requirements of I5A 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.



PLOT OF SYSTEM

Liquid Capacity of Septic Tank 1500 gallons

Liquid Capacity of Dosing Tank 1000 gallons

Tank Construction PCC

Trench Depth 30"

Absorption and/or Nitrification Lines:

Trench Width 3 feet

Trench Walls Scored and Porous yes

Total Line Length 250' feet

Number of Lines 1

Depth of Stone NA inches

Distance from House 5' feet

Distance from Property Line 10' feet

Distance from Well 100' feet

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

NAME OF OWNER STEVE BERRIER

LOCATION OF PROPERTY 10522 PARKTON ROAD.

Comments: (1) CONTRACTOR PRODUCE PLANS INDICATING ONLY 12 EMPLOYEES FOR ENTIRE STRUCTURE, THEREFORE, GPD IS 300, 250 TOTAL LINEAR FT. (2) CONTRACTOR TO USE 10-BOX, SERIAL DISTRIBUTION,

Environmental Health Specialist

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

FEE: 300.00 ck # 2526 LD 93480
DATE: 8/11/04 GC ACS

AUTHORIZATION FOR WASTEWATER SYSTEM CONSTRUCTION

PERMIT NUMBER: 5679B
PARCEL NUMBER: 111-164-21 PO

JOB LOCATION ADDRESS: 10522 Parkton Road
PROPERTY OWNER: Frank Withers / Legacy Development
BUILDING CONTRACTOR: Frank Withers
SUBDIVISION NAME: NA
AUTHORIZATION ISSUED BY: Trevor Thomason, R.S.I. DATE: 08/10/04

DENR/DEH AUTHORIZED AGENT

AUTHORIZATION CONDITIONS

1. WASTEWATER SYSTEM CONSTRUCTION AND INSTALLATION MUST MEET ALL CONDITIONS AND SPECIFICATIONS AS SET FORTH IN IMPROVEMENT PERMIT NUMBER 5679B, 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 CONSTRUCTION AUTHORIZATION AND ASSOCIATED PERMIT(S) TO REVOCATION.

4. THIS CONSTRUCTION AUTHORIZATION AS PROVIDED IN G.S. 130A-335(f) AND G.S. 130A-336(b) SHALL BE VALID FOR A PERIOD EQUAL TO THE VALIDITY OF THE IMPROVEMENT PERMIT, NOT TO EXCEED 60 MONTHS.

5. OTHER CONDITIONS:
Part of the Repair Area allocated for Permit #1724A will be used as Repair Area for this permit.

6. No floor drains in shop

7 Agreement forms on file prior to installation approval

Suzie Preidt

CONDITIONS OF IMPROVEMENT PERMIT / CONSTRUCTION AUTHORIZATON

Permit Number: **5679B**

Tax Number: **111-164-21 PO**

- 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:

0.30 Long-term acceptance rate (GPD/ft^2)	**600** Max gallons/day wastewater flow	**1500** Absorption Area (ft^2)	**9** Trench spacing (min. on centers) (ft)
Serviced by private well: ☐ Yes ☒ No	**1500** Gallon septic tank	**500** Total trench length (ft)	**30** Maximum trench depth (in) (At least 12" of provisionally suitable soil must remain between trench bottom and unsuitable soil conditions.)
NA Bedrooms in residence	**1000** Gallon pump tank	**NA** Depth of stone (in)	

Any surface water present: **NO** Type: Minimum separation distance (ft):

Additional conditions: **Facility to be an "Auto Service Building". Septic system designed for 24 employees at 25 gpd. Type IIIb,g septic system for initial and repair installation. Install drain lines on 9' centers, level, and on contour. Use pressure manifold for equal distribution.** NO FLOOR DRAINS INSIDE

AGREEMENT FORMS ON FILE PRIOR TO INSTALLATION APPROVAL

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:

1500 Absorption Area (ft^2) **500** Total trench length (ft)	**NA** Depth of stone (in)	**9** Trench spacing (min. on centers) (ft)	**30** Maximum trench depth (in)

The undersigned, an authorized agent of the MECKLENBURG COUNTY HELTH 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 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.

RS 8/10/04
DENR/DEH Authorized Agent Date

MECKLENBURG COUNTY
HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
c/o HAL MARSHALL CTR.
SUITE 211
700 N. TRYON ST.
CHARLOTTE, NC 28202
(704) 336-5103

Suzy Pruitt 8/11/04
Owner/Agent Signature Date

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

IWWS-100195

PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: 5679B

TC: 111-164-21 PO

Draw in and name all roads adjoining the property. Draw in and accurately dimension the lot concerned. Accurately indicate property boundaries proposed and/or existing structures and driveways, underground utilities, and wells and springs within 100 feet of the proposed building or drainfield.

10522 PARKTON ROAD

COMMENTS:

- SEE ATTACHED PLOT PLAN FOR SEPTIC SYSTEM LAYOUT.
- TYPE III b, g SEPTIC SYSTEM
- DESIGN FLOW = 600 GPD (25 GPD x 24 EMPLOYEES)
- SITE LTAR = 0.3 GPD/FT²
- INSTALL 5 DRAIN LINES AT 100' x 3'
- INSTALL DRAINLINES ON 9' CENTERS, LEVEL, AND ON CONTOUR.
- 1500 GAL SEPTIC TANK
- 1000 GAL PUMP TANK
- PRESSURE MANIFOLD
- TYPE III b, g SEPTIC SYSTEM FOR REPAIR (100%)

- EXISTING SEPTIC SYSTEM ON-SITE. (FILE # 1724 A)
- INSTALL FENCE/BARRIER AROUND SEPTIC SYSTEM DRAIN FIELDS.

SETBACKS:

- 5' FROM BUILDING FOUNDATION
- 10' FROM ALL PROPERTY LINES

* NO FLOOR DRAINS IN SHOP *

AGREEMENT FORMS ON FILE PRIOR TO INSTALLATION APPROVAL

Susie Preidt
OWNER/AGENT SIGNATURE

DATE

APPROVAL DATE Tom Thomas, RSI 8/10/04

White - Health Department's Copy

Canary - E.H.S. Copy

Pink - Owner's Copy

FOR REGISTRATION JUDITH A. GIBSON
REGISTER OF DEEDS
MECKLENBURG COUNTY, NC
2004 SEP 10 01:56 PM
BK:17738 PG:676-679 FEE:$20.00

INSTRUMENT # 2004197307

2004197307

STATE OF NORTH CAROLINA

COUNTY OF MECKLENBURG

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

FILE # 5679B
PARCEL # 11116421

The undersigned, Steve Berrier, owner of property located at 10522 Parkton Rd. Charlotte, NC 28215, (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 conditions will apply to the site:

This instrument was prepared by: Patsy T. Withers
Mail after recording to: 10532 Parkton Rd., Charlotte, NC 28215
Steve Berrier

-- 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 regulations in effect at that 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 theDepartment, 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 the 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 9th day of September, 2004.

_____ _____(SEAL)
(Corporate Name)

_____(SEAL)

By: _____ _____(SEAL)

_____ President _____(SEAL)

ATTEST:

_____

_____ Secretary

(Corporate Seal)

STATE OF NORTH CAROLINA
COUNTY OF Montgomery

I, Patsy J. Withers, a Notary Public for said County and State, do hereby certify that Steve Berrier personally appeared before me this date and acknowledged the due execution of the foregoing instrument.

WITNESS my hand and notarial seal, this 9th day of September, 2004.

Patsy J. Withers
Notary Public

My Commission Expires:

July 24, 2006

STATE OF NORTH CAROLINA
COUNTY OF _____

I, _____, a Notary Public for said County and State, do hereby certify that _____ personally came before me this day 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

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

Sheet: 1 of 2
Property ID: 111-164-21
Lot #:
File #: ~~1724A~~ 56798
Code: 1

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

Owner: Legacy Development/ Frank Withers
Address: 6717 Oak Hill Road, Charlotte, N. C. 28227
Proposed Facility: Auto service bldg. Design Flow (.1949): 600gpd
Location of Site: 10522 Parkton Road
Water Supply: [ ] Public [x] Individual [x] Well [ ] Spring [ ] Other
Evaluation Method: [x] Auger Boring [ ] Pit [ ] Cut
Type of Wastewater: [x] Sewage [ ] Industrial Process [ ] Mixed

Applicant: Suzie Preidt
Date Evaluated: 7/19/2004.
Property Size: .2a inv.
Property Recorded:

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, 6	0-3	GR/CL	FR/SEXP/SS/SP	>50 " TO SOIL WETNESS	50	N/A	NONE	PS, IV .3GPD/FT^2
		3-37	SBK/C	FI/SEXP/S/P					
		37-50	SBK/CL	FR/SEXP/SS/SP					
2	"	0-5	GR/CL	"	>48" TO SOIL WETNESS	48	"	"	"
		5-41	SBK/C	FI/SEXP/S/P					
		41-48	SBK/CL	FR/SEXP/SS/SP					
3	"	0-18+	MIXED FILL						US
4	"	0-3	GR/CL	FR/SEXP/SS/SP	>48" TO SOIL WETNESS	"	"	"	PS, IV .3GPD/FT2
		3-25	SBK/C	FI/SEXP/S/P					
		25-48	SBK/CL	FR/SEXP/SS/SP					
5	"	0-4	GR/CL	"	"	"	"	"	"
		4-36	SBK/C	FI/SEXP/S/P					
		36-48	SBK/CL	FR/SEXP/SS/SP					

Description	Initial System	Repair System
Available Space (.1945)	PS	US
System Type(s)		
Site LTAR	.3GPD/FT^2	.3GPD/FT^2

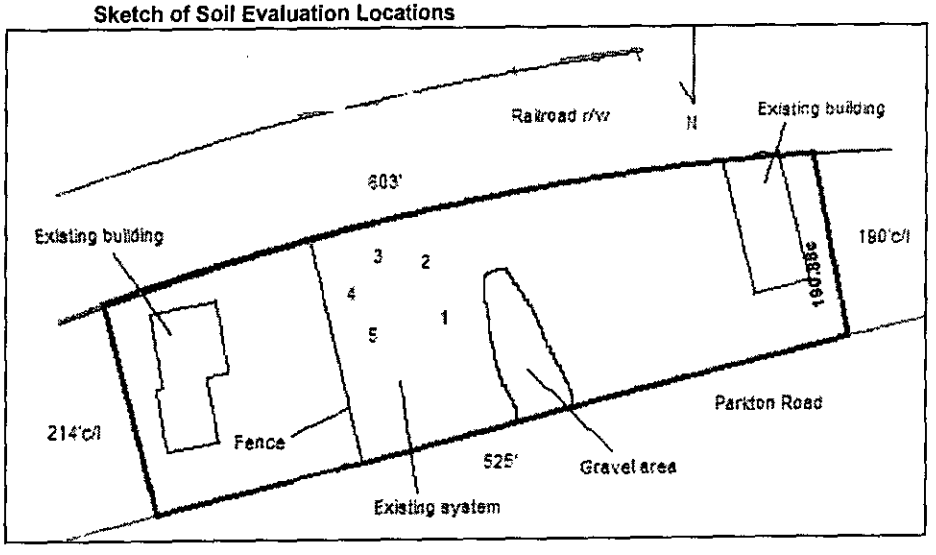
Other Factors (.1946):
Site Classification (.1948): UNSUITABLE
Evaluated By: W. R. Marlin, LSS, 7/20/2004, W. R. Marlin
Others Present:

COMMENTS:
Not sure if 100% repair is required

Landscape Position	Group	Texture	.1955 LTAR	Structure
R-Ridge	I	S-Sand	1.2 - 0.8	SG-Single-Grain
SS-Shoulder Slope		LS-Loamy Sand		M-Massive
LS-Linear Slope				CR-Crumb
FS-Food Slope	II	SL-Sandy Loam	0.8 - 0.6	GR-Granular
NS-Nose Slope		L-Loam		SBK-Subangular Blocky
HS-Head Slope				ABK-Angular Blocky
CC-Concave Slope	III	SI-Silt	0.6 - 0.3	PL-Platy
CV-Convex Slope		SICL-Silty Clay Loam		PR-Prismatic
T-Terrace		CL-Clay Loam		
FP-Flood Plain		SCL-Sandy Clay Loam		
	IV	SC-Sandy Clay	0.4 - 0.1	
		SIC-Silty Clay		
		C-Clay		

Consistence Moist	Consistence Wet	Mineralogy
VFR-Very Friable	NS-Non-Sticky	SEXP-Slightly Expansive
FR-Friable	SS-Slightly Sticky	EXP-Expansive
FI-Firm	S-Sticky	
VFI-Very Firm	VS-Very Sticky	
EFI-Extremely Firm	NP-Non-Plastic	
	SP-Slightly Plastic	
	P-Plastic	
	VP-Very Plastic	

Sketch of Soil Evaluation Locations



FEE: 400.00

DATE: 7/6/04

Check 2475 JKA

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

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 #: 17247 56796

PROJECT TRACKING #:

PROPERTY INFORMATION (FROM ENGINEERING FORM) FOR JOB LOCATION:

TAX/PARCEL NUMBER: 111-164-21P0

STREET ADDRESS: 10522 Parkton Road

LOT NUMBER:

___ COMMERICAL ✓ INDUSTRIAL Zoned

DESCRIBE TYPE OF BUSINESS: Auto Service Bldg.

Square Footage of Facility: 6200

NUMBER OF EMPLOYEES: 4 per Unit = 24 PER SHIFT: 1 SP

TOWNSHIP (CHECK ONE):

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

HOW WILL WATER BE USED IN THE FACILITY:

✓ TOLIETS/URINALS
✓ HANDSINK
___ SHOWERS
✓ FLOOR DRAINS

OTHER, PLEASE DESCRIBE: Lift Station

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 ___ NO
EXISTING WASTE WATER SYSTEMS ___ YES ___ NO
EASEMENTS OR RIGHT-OF-WAYS ✓ YES ___ NO Bell South
WELL SPRINGS OR WATERLINES ___ YES ___ NO
DESIGNATED WETLANDS ___ YES ___ 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:

NAME: (LAST) Withers (FIRST) Frank (MI) / Legacy Development

ADDRESS: 6717 Oak Hill Road

CITY: Charlotte STATE: NC ZIP: 28227

DAYTIME PHONE: 704 239 5297

LEGAL AGENT FOR PROPERTY OWNER, IF APPLICABLE:

NAME: (LAST) Preidt (FIRST) Suzie (MI)

DAYTIME PHONE: 704 829-7771

704-913-6143

WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? _____

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: Suzie Preidt DATE: 7/6/04

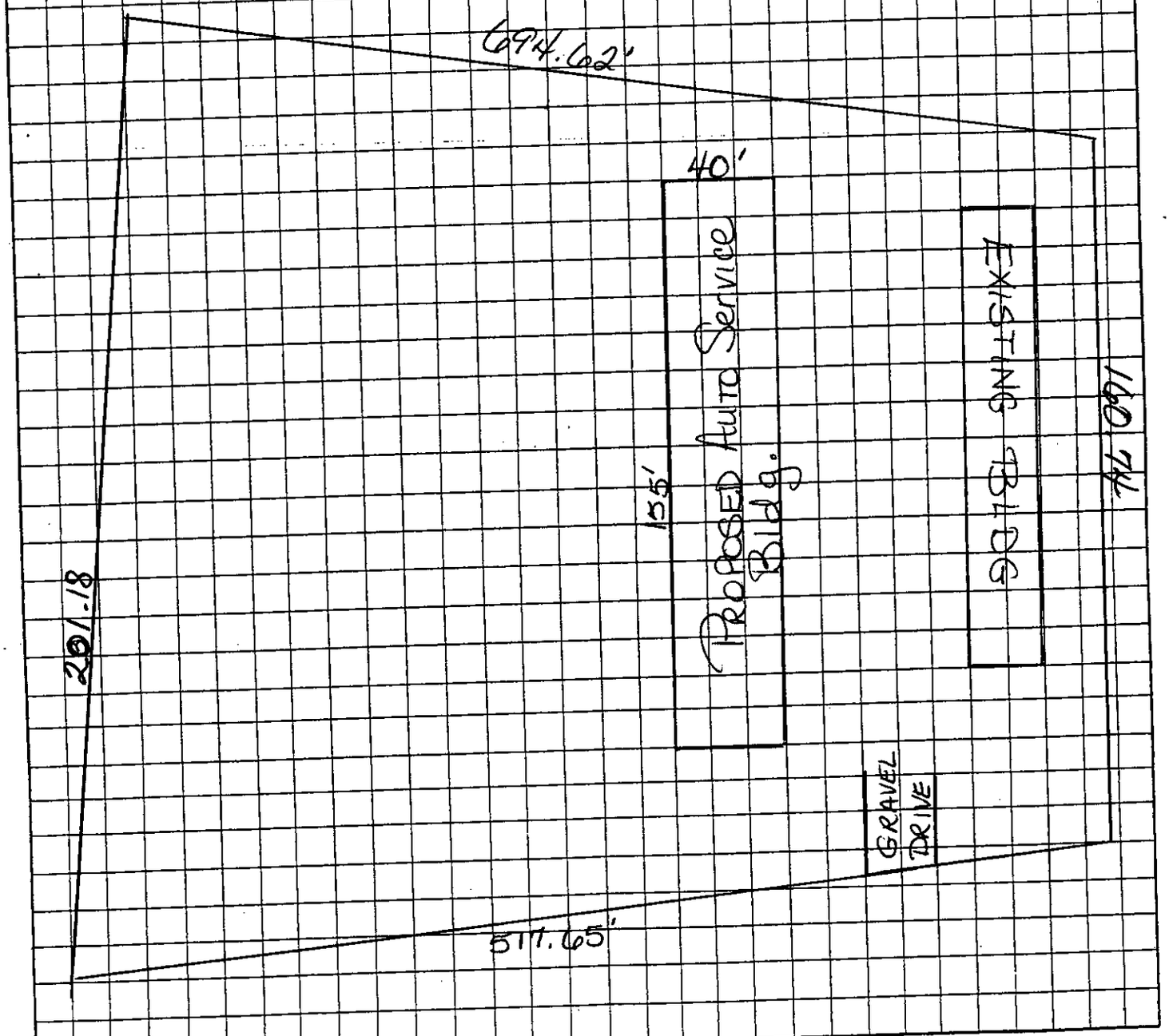
PROPOSED PLOT PLAN

HEALTH DEPARTMENT
ENVIRONMENTAL HEALTH DIVISION
700 NORTH TRYON STREET
CHARLOTTE, NC 28202
PHONE (704) 336-5102

FILE: ~~5-2447~~ 5678B

TC: 111-164-2120

Draw in and name all roads adjoining the property. Draw in and accurately dimension the lot concerned. Accurately indicate property boundaries proposed and/or existing structures and driveways, underground utilities, and wells and springs within 100 feet of the proposed building or drainfield.



Suzie Preidt
OWNER/AGENT SIGNATURE

DATE 7/6/04

APPROVAL DATE _____

White - Health Department's Copy

Canary - E.H.S. Copy

Pink - Owner's Copy

CH = S77°03'18"W 694.62' (TOTAL)
R=2242.01 L=697.43' (TOTAL)

FOUND

10522 PARKTON ROAD

PERMIT #
5679B

Timber Wheel Stops

R=2242.01 L=469.00'
CH = S79°58'26"W 468.14

2" SCH 40 PVC SUPPLY LINE

1000 GAL PUMP TANK

1500 GAL SEPTIC TANK

Roll Out Garbage

Hdcp Parking Sign

8 spaces

6" Concrete Slab w/ 6x6 1.4-1.4 WM

10522

New Gravel

40'

Proposed AUTO SERVICE BUILDING

New Gravel

Existing Gravel

Existing CHAIN LINK FENCE

SCALE: 1" = 20'

N

(EXISTING FILL) * TYPE III 6g SEPTIC SYSTEM
* TYPE III 6g SEPTIC SYSTEM FOR REPAIR AREA.

100'
100'
100'
100'
100'

PRESSURE MANIFOLD

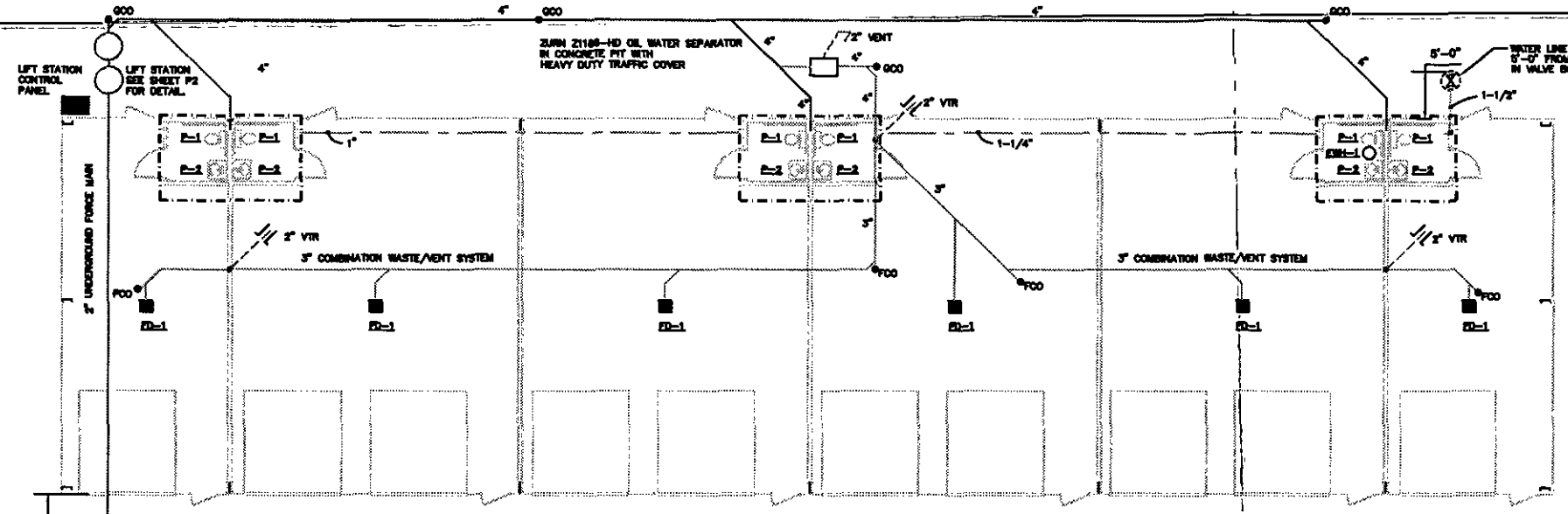
REPAIR AREA

ADDITIONAL REPAIR AREA 100%

Approximate Existing Septic Field And Repair Area (Verify In Field)

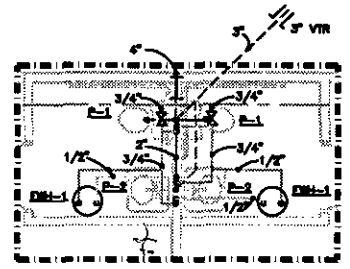
SEPTIC SYSTEM PERMIT # 1724 A

NJD



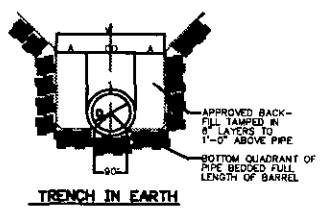
1 / P1 PLUMBING FLOOR PLAN

SCALE : 1/8" = 1'-0"



2 / P1 ENLARGED WATER CLOSET

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



TRENCH IN EARTH

PIPE TRENCH BEDDING

SCALE: NONE

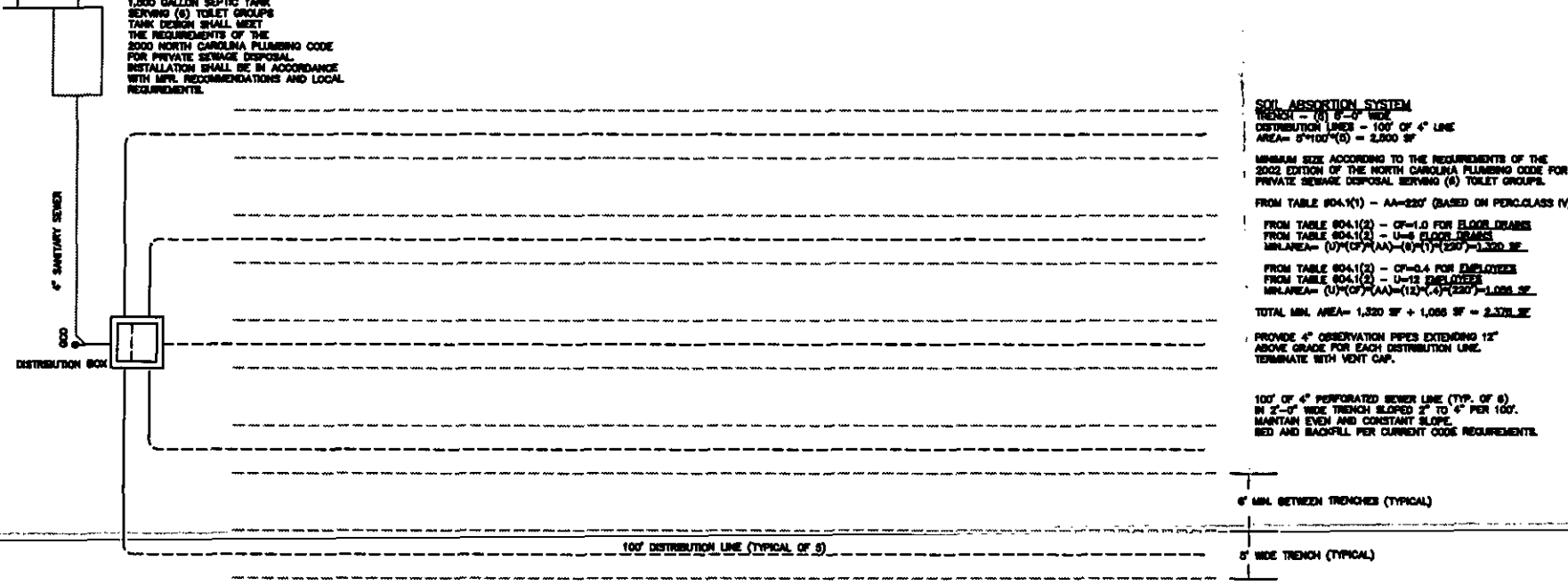
UNDERGROUND PIPING BETWEEN BUILDING AND DISTRIBUTION BOX

EXCAVATION:

a) All underground piping to be installed in accordance with State and Local standards.
b) Shape subbase and bottoms of excavations with recesses to receive pipe bells, flanges, connections, valves and similar enlargements of piping systems.
c) Depth of exterior piping: except as otherwise indicated, excavate for exterior water-bearing piping (drainage) so that the top of piping will not be less than 3' vertical distance below finished grade.
d) Store excavated material (temporarily) near the excavation, in a manner which will not interfere with or damage the excavation or saver materials. Do not store under trees (within the drip line).
e) Reject excavated material which is either in excess of quantity needed for backfilling or does not comply with requirements for backfill material.
f) Remove unused material from project site, and dispose of in a lawful manner.
g) Maintain dry excavations for utility work, by removing water. Protect excavations from inflow of surface water. Pump minor inflow of ground water from excavations; protect excavations from major inflow of ground water by installing temporary sheeting and waterproofing. Provide adequate barriers which will protect other below-grade property from being damaged by water, sediment or erosion from or through plumbing work excavations.

BACKFILLING:

a) Do not backfill until installed utility work has been tested and accepted, wherever testing is indicated.
b) Condition backfill material by either drying or adding water uniformly, to whatever extent may be necessary to facilitate compaction to the required densities. Do not backfill with frozen soil materials.
c) Backfill simultaneously on opposite sides of utility work, and compact simultaneously; do not dislocate the work from installed positions.
d) Backfill excavations in 8" high courses of backfill material, uniformly compacted.
e) Backfill to elevations matching adjacent grades, at the time of backfilling excavations for utility work.
f) Compaction tests: where compaction tests indicate lower densities of backfill than specified, continue compaction (and recavation and backfilling where necessary) and provide additional testing as directed by the local authority. The allowable density tolerance is not more than one-test-out-of-5 falling more than 2 percentage points below the standard density.



SOIL ABSORPTION SYSTEM
TRENCH = (6) 5'-0" WIDE
DISTRIBUTION LINES = 100' OF 4" LINE
AREA= 5*100*(6) = 2,500 SF

MINIMUM SIZE ACCORDING TO THE REQUIREMENTS OF THE 2002 EDITION OF THE NORTH CAROLINA PLUMBING CODE FOR PRIVATE SEWAGE DISPOSAL SERVING (6) TOILET GROUPS.

FROM TABLE 604.1(1) – AA=220' (BASED ON PERC.CLASS IV)

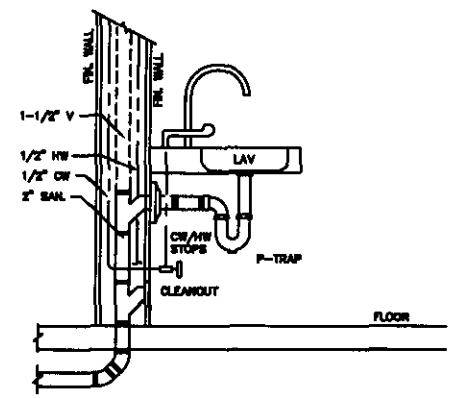
FROM TABLE 604.1(2) – CF=1.0 FOR FLOOR DRAINS
FROM TABLE 604.1(2) – U=6 FLOOR DRAINS
MIN.AREA= (U)*(CF)*(AA)=(6)*(1)*(220')=1,320 SF

FROM TABLE 604.1(2) – CF=0.4 FOR EMPLOYEES
FROM TABLE 604.1(2) – U=12 EMPLOYEES
MIN.AREA= (U)*(CF)*(AA)=(12)*(.4)*(220')=1,056 SF

TOTAL MIN. AREA= 1,320 SF + 1,056 SF = 2,376 SF

PROVIDE 4" OBSERVATION PIPES EXTENDING 12" ABOVE GRADE FOR EACH DISTRIBUTION LINE. TERMINATE WITH VENT CAP.

100' OF 4" PERFORATED SEWER LINE (TYP. OF 5) IN 2'-0" WIDE TRENCH SLOPED 2" TO 4" PER 100'. MAINTAIN EVEN AND CONSTANT SLOPE. BED AND BACKFILL PER CURRENT CODE REQUIREMENTS.



3 / P1 WATER CLOSET RISER

SCALE : NONE

4 / P1 LAVATORY DETAIL

SCALE : NONE

Electrical Design and Drafting Service

SEAL

PROJECT NAME
Barrier Properties
10510 Parkton Road
Charlotte, North Carolina

PROJECT NO.	DRAWN BY:
4-004	B. Price
CAD NO.	CHECKED BY:
SCALE: as noted	DATE: June 1, 2004

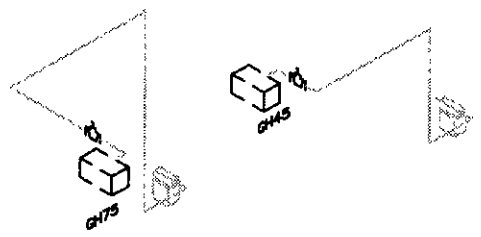
REVISIONS:
△

SHEET TITLE:

SHEET NUMBER:

OF 1

GAS SCHEDULE			
ITEM	DESCRIPTION	BTU INPUT	SPECIFICATION
GH45	HEATER	45,000	SEE 2/P3 FOR SPECIFICATIONS
GH75	HEATER	75,000	SEE 2/P3 FOR SPECIFICATIONS



1 / P3 **GAS ISOMETRIC - ROOF**
SCALE : NONE

of the following standards:

1. Standard for Welded and Seamless Wrought-Steel Pipe, ANSI/ASME B36.10;
2. Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless, ASTM A 53 or
3. Standard Specification for Seamless Carbon Steel Pipe for High-Temperature Service, ASTM A 106.

Ductile iron pipe shall comply with one of the following standards:

Note: Ductile iron Pipe shall be not less than 3-in. size, shall not be welded, and shall be used only underground outside building foundation boundaries, or aboveground, provided that joints are properly restrained against movement and separation.

1. Standard for Ductile-Iron Pipe, Centrifugally Cast, in Metal Molds or Sand-Lined Molds, for Gas, ANSI A21.52; or
2. Specification for Ductile Iron Pressure Pipe, ASTM A 377.

Cast-iron, copper and brass pipe shall not be used.

METALLIC TUBING

Seamless copper, aluminum alloy, or steel tubing may be used with gases not corrosive to such material.

1. Steel tubing shall comply with Standard Specification for Electric Resistance-Welded Coiled Steel Tubing for Gas and Fuel Oil Lines, ASTM A 539, or Standard Specification for Copper Brazed Steel Tubing, ASTM A 254.
2. Copper tubing shall comply with standard Type K or L of Specification for Seamless Copper Water Tube, ASTM B 88; or Specification for Seamless Copper Tube for Air Conditioning and Refrigeration Field Service, ASTM B 280.
3. Aluminum alloy tubing shall comply with Specification for Aluminum-Alloy Drawn Seamless Tubes, ASTM B 210, or Specification for Aluminum-Alloy Seamless Pipe and Seamless Extruded Tube, ASTM B 241. Aluminum-alloy tubing shall be coated to protect against external corrosion where it is in contact with masonry, plaster, or insulation, or is subject to repeated wettings by such liquids as water, detergent, or sewage. Aluminum-alloy tubing shall not be used in exterior locations or underground.
4. Corrugated stainless steel tubing shall be tested and listed in compliance with the construction, installation, and performance requirements of Standard for Fuel Piping Systems Using Corrugated Stainless Steel Tubing, ANSI/AGA LC 1.

PIPE INSTALLATION

1. Pipe hangers and supports shall conform to the requirements of ANSI/MSS SP-58.
2. Spacing of supports in gas piping installations shall not be greater than is indicated in NFPA 54.

PIPE PROTECTION

1. Piping systems shall have sufficient flexibility to prevent thermal expansion or contraction from causing excessive stresses in the piping material or undesirable forces at points of connections to equipment and at anchorage or guide points. Flexibility shall be provided by the use of bends, loops, offsets, or couplings of the slip type. Where reasonable doubt exists as to the adequate flexibility of the system, formal calculations should be provided to the engineer for review.
2. Underground piping systems shall be installed with at least 18 in. of cover. Piping shall be buried or covered in a manner so as to protect the piping from physical damage. Piping shall be protected against corrosion in an approved manner. When dissimilar metals are joined underground, an insulating coupling or fitting shall be used.

PIPE OUTLETS

1. The outlet fittings or piping shall be securely fastened in place and shall be located far enough from doors, walls, patios, slabs, and ceilings to permit the use of wrenches without straining, bending, or damaging the piping. Outlets shall not be located behind doors.
2. The unthreaded portion of gas piping outlets shall extend not less than 1 in. through finished ceilings or indoor or outdoor walls and the unthreaded portion of gas piping outlets shall extend not less than 2 in. above the surface of floors or outdoor patios or slabs. Exception: Devices shall be installed in accordance with the manufacturers' installation instructions.
3. Each outlet shall be closed gastight with a threaded cap immediately after installation and shall be left closed until the gas equipment connection replaces the cap.

2. A drip shall be provided at any point in the line of pipe where condensate could collect. Drips shall be installed in areas that will be readily accessible for emptying and cleaning. Drips shall be adequately protected from freezing conditions.
3. Line pressure regulators shall be marked by a metal tag or other permanent means, designating the building or the part of the building being supplied. An independent vent to the outside of the building, in accordance with the regulator manufacturer's instructions, shall be provided where the location of a regulator is such that a ruptured diaphragm will cause a hazard.
4. An accessible gas shutoff valve shall be provided upstream of each gas pressure regulator. Shutoff valves shall be listed and approved for the pressure, service and reliability of operation..
5. Each aboveground portion of a gas piping system upstream from the equipment shutoff valve shall have a continuous electrical bond to a grounding electrode, as defined ANSI/NFPA 70. Electrical circuits shall not utilize gas piping or components as conductors.
6. Gas equipment shall be installed so that burners and burner ignition devices are located not less than 18 in. above the floor.
7. All gas equipment shall be located so as to permit access to the equipment with sufficient clearance to permit cleaning, maintenance and replacement of heating surfaces, burners, pilots, controls, and vents.
8. Gas equipment and their vent connectors shall be installed with clearances from combustible material so that their operation will not create a hazard to persons or property.

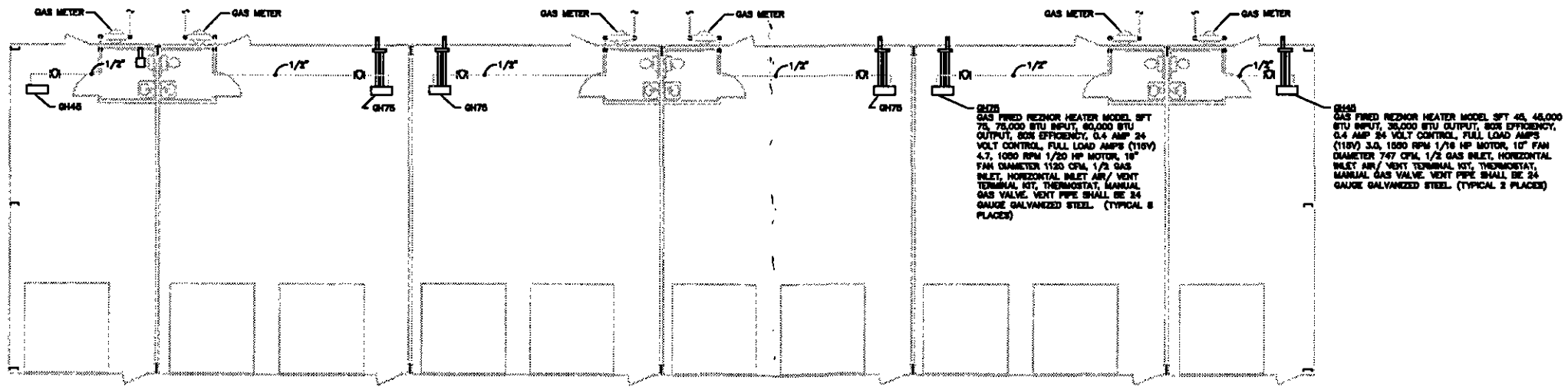
QUALITY ASSURANCE

1. Gas pipe or tubing and fittings shall be clear and free from cutting burrs and defects in structure or threading, and shall be thoroughly brushed, and chip and scale blown. Defects in pipe or tubing or fittings shall not be repaired. When defective pipe, tubing, or fittings are located in a system, the defective material shall be replaced.
2. All gas piping is to be pressure tested. The test pressure to be used shall be no less than 1-1/2 times the proposed maximum working pressure, but not less than 3 psig. Test duration shall be not less than 1/2 hr for each 500 cu ft of pipe volume.

GAS PIPING SPECIAL CONDITIONS

ABOVEGROUND PIPING OUTSIDE.

1. Gas piping installed aboveground shall be securely supported and located where it will be protected from physical damage. Where passing through an outside wall, the piping shall also be protected against corrosion by coating or wrapping with an inert material approved for such applications. Where piping is encased in a protective pipe sleeve, the annular space between the gas piping and the sleeve shall be sealed at the wall to prevent the entry of water, insects, or rodents.



2 / P3 **PLUMBING FLOOR PLAN**
SCALE : 1/8" = 1'-0"

Electrical Design and Drafting Service
P.O. Box 161
Hickory, North Carolina 28603
Tel. (704) 322-2004

SEAL:

PROJECT NAME:
Barrier Properties
10510 Parkton Road
Charlotte, North Carolina

PROJECT NO.	DRAWN BY:
4-004	E. Price
CAD NO.	CHECKED BY:
SCALE: as noted	DATE: June 1, 2004

REVISIONS:
△

SHEET TITLE:

SHEET NUMBER:

OF 1

PLUMBING GENERAL NOTES

1. Supply piping shall be tested [illegible] soil, and vent piping shall be located in walls or partitions, unless noted otherwise.
2. All piping and equipment shall be cleaned of foreign matter then cleaned-out under pressure before the system is put into operation.
3. The system shall be tested with potable water and shall be proved tight under a water pressure of 125 pounds per square inch for a period of 2 hours..
4. After the system has been tested and approved, the entire new system, including valves and accessories, shall be chlorinated. Disinfecting shall be in accordance with AWWA C651.
5. The Contractor shall keep the premises and points at the building free of rubbish and waste material associated with the installation of the work. Remove from the jobsite any materials not economically recoverable. Any materials removed from the jobsite and sold for salvage shall be credited to the Owner's account.
6. All materials used shall be new unless otherwise indicated and shall be furnished in accordance with the standard specification of the American Society for Testing Materials and other industry standard guide specifications.
7. All plumbing vents in exterior walls shall be offset a minimum of 3'-0" at roof before roof penetration.
8. All plumbing vents within a 10'-0" radius of exhaust vents shall be extended to a height of 2'-0" above the exhaust vent crown.
9. All plumbing vents within a 10'-0" radius of any roof top unit shall be extended to a height of 3'-0" above the fresh air intake.
10. All openings in ceilings and plenum walls for plumbing pipes shall be sealed airtight.
11. Install water hammer arrestors complete with accessible isolation valve on hot and cold water supply piping for all quick closing valves. Install air chambers on hot and cold water supply piping to each fixture or group of fixtures for each washroom. Fabricate chambers to be same size as supply pipe or to be 3/4-inch minimum, and to be minimum 18-inches long.
12. All hose bibbs shall be mounted 18" above finished floor unless otherwise specified. All wall hydrants shall be mounted 24" above finished grade unless otherwise specified.
13. Provide floor drains with trap primers serviced by nearest fixture, where hose bibbs are not available for maintenance.
14. Cleanouts shall have tops designed for specific floor finishes such as carpet, tile, etc., unless noted otherwise. Cleanouts shall be located not more than 50 feet apart for 3" pipe and not more than 80 feet apart for 4" pipe.
15. The Contractor shall be responsible for providing sway bracing and restraints to resist the earthquake effects on the system in accordance with state and local codes and ordinances. Refer to the latest edition of the "Seismic Restraint Manual Guidelines for Mechanical Systems" published by SMACNA for guidelines to determine the correct restraints for piping.
16. See site plan for extent of all piping leaving and entering the building. Verify exact pressure, depth, flow direction, material, connection points, etc., of all existing utilities on job site. See site/civil plans for location and details of backflow prevention. Contractor shall furnish and install all backflow protection required by the local utility department.
17. Coordinate locations of all equipment, fixtures and piping where necessary to interface components of plumbing with fire sprinkler piping, ductwork, lighting, electrical raceways structural and all other trades. Piping run above ceilings shall be run high as possible.
18. The contractor shall do all cutting of walls, floors, and ceilings as required for installation of plumbing work. All cutting shall be held to a minimum. Patch and finish surfaces to match adjoining surfaces. The cutting of openings or holes in walls and cutting of holes in floors and ceilings shall be done in a manner, as not to endanger the stability of the structure and any such work shall be coordinated with other contractors.
19. All penetrations through fire rated assemblies shall be sealed with a UL listed material that will maintain the integrity of the assembly fire rating.
20. The project design is based on the first manufacturer indicated on the drawings or the project manual. The Contractor shall bear any costs altering any other contract or subcontract resulting from a substitute of equipment from that specified or on which drawings and specifications are based. When no manufacturer is named, the Contractor may submit any reputable and equal quality manufacturer that meets all codes, criteria and performance requirements of the design documents.
21. Variation from specified fixture appearance will need to be approved through the architect. The plumbing contractor will be required to coordinate acceptance for variation of fixture locations and fixture configurations with the local building authority, the owner, the architect and the general contractor.
22. Coordinate with the most up-to-date architectural workings drawings before roughing-in plumbing fixtures.
23. If equipment is submitted and accepted with utility connections other than as shown on the drawings and specifications, it shall be the responsibility of the contractor to provide proper utility connections to this equipment at no additional cost. The equipment rough-ins as shown are accurate to the best of our knowledge, however, in some instances the owner or supplier may make substitutions or the equipment item may vary from what is shown, therefore the contractor shall verify all critical dimensions prior to construction. Refer to large-scale plans, riser diagrams, and equipment details for vent piping and valving not indicated on the plans. Do not scale drawings. Reference Architectural drawings for final locations of doors, windows, walls, etc. Contractor shall consult Architectural and Structural drawings for all dimensions, ceiling heights, beam depths, location of partitions, and kind and number of fixtures or pieces of equipment, structural member locations, etc. Failure of the contractor to verify these dimensions shall place the responsibility for any subsequent relocation directly upon the contractor.
24. The plumbing contractor is to provide instruction to the Owner in the proper operation and maintenance of all equipment and appurtenances provided.
25. These engineering drawings are diagrammatic. It is the intention of these drawings to cover all work and material for a complete first class installation. Make proper hot and cold water, waste, vent, etc. piping connections to all fixtures and equipment, although all fittings and connections are not shown. The plumbing contractor is responsible for providing pipe escutcheons, dielectric unions, drip pans, pipe labels, valve tags, anchors, supports, seals, sleeves, sleeve seals, etc. in quantities adequate to satisfy the intent of the engineer's documents. Any equipment, plumbing fixture, trim hardware and/or devices usually utilized in this class of work, though not specifically mentioned or shown on these drawings, but which may be necessary for the satisfactory completion of the work (as determined by the architect) shall be furnished and installed by the contractor as part of his total work.
26. Plumbing work and plumbing materials shall meet the requirements of the applicable edition of the state and local plumbing codes, regulations and ordinances. The latest edition of the local Plumbing Building Code is hereby incorporated into and made a part of these documents and the Contractor shall carry out their provisions. Anything contained in these documents that conflicts with the code shall be installed in accordance with the code and such conflicts shall be brought to the attention of the Engineer for clarification. The installation must also meet the local Building Inspection Department approval.

QUALITY ASSURANCE

1. All materials and equipment shall be installed and completed in a first class workmanlike manner. The Owner reserves the right to reject any damaged equipment and to direct the removal and replacement of any items, which in their opinion does not represent acceptable workmanship. Such removal and replacement shall be done when directed by the Owner and without additional cost to the Owner.
2. Plumbing equipment and accessories shall be inspected upon receipt and any damage reported immediately to the carrier and/or manufacturer for warranty services. The Plumbing Contractor shall be responsible to have touch-up or repainted all materials and equipment in his contract with a factory finish if it is observed marred, scratched or defaced at final acceptance of the building by the Owner.
3. The Contractor shall guarantee all materials, equipment and workmanship for a period of 12 months after date of final acceptance of building by the Owner's representative, or for 12 months after occupancy of Owner or their tenants should occupancy precede acceptance. All guarantee failures shall be corrected or replaced by the Contractor as soon as possible after notification of such failure.
4. Furnish the Owner with a complete booklet containing equipment engineering data, operating and maintenance instructions, and control wiring diagrams (indicating control equipment and function). In addition, the Contractor shall instruct Owner and/or their representatives on the proper operation and servicing of the equipment.

WATER HEATERS

outlet pipe size to a point not more than 2" above the flood level of the pan.

2. Provide a 3" high (24 ga. min.) galvanized pan for each water heater. Pipe the drain pan to the floor drain (or to another receptacle approved by the local authority).
3. The plumbing contractor is responsible for coordinating electrical connection points and changes in the electrical requirements with the electrical contractor.

PLUMBING FIXTURES

1. Water flow limiting devices will be provided on all plumbing fixtures to meet the maximum allowable water usage for plumbing fixtures as indicated below.

   Public lavatories 0.5 gal/min.
   Tank type water closet 1.6 gal/flush

2. Provide accessible trap primers with integral air gaps for each floor drain. Install trap primers in accordance with manufacture application data.

ROOF DRAINS AND SCUPPERS

1. See sheet architectural plans for roof drains and scupper overflow sizing and locations.

PIPE MATERIALS AND INSTALLATION

WATER PIPING (INTERIOR)
Above Ground:
Type L hard-drawn copper tubing with wrought copper fittings.
ASTM B88-78.
Alternate CPVC after water heater where acceptable by code
Below Graund:
Type k hard-drawn copper tubing with brazed joints.
ASTM B88-78.

WATER PIPING (EXTERIOR)
2" and Smaller:
Type K soft tempered copper tubing with brazed joints.
ASTM B88-78.
3" and Larger:
Class 250 Cast iron cement lined pipe and fittings
Mechanical gasket joints with bituminous seal coat.
ASTM A377-77.

SOIL WASTE, VENT AND STORM
Sanitary and Vent:
Hubless Cast iron and fittings with approved clamps.
ASTM c564-70 and CISPI 301-78.
Above Ground Storm (sanitary alternate):
Ductile Iron with Mechanical Joints (AWWA c151, class 51).
Joints (ANSI/AWWA c111/a21.11).

PIPE SIZES

1. See fixture schedule, floor plans, symbol legend, and domestic water riser diagrams for pipe sizing information.
2. See floor plans for building drain and main water service sizes; see riser diagrams for main branch line sizes and fixture schedule for fixture water line, drain and trap sizes.
3. All piping is sized according to the characteristics of the preferred piping materials. If alternate piping is used then the contractor is responsible for verifying that the velocities are maintained to the original design intent. Provide for allowance for expansion for hot water cpvc.

PIPE HANGERS AND SUPPORTS

1. Place hangers within 12 inches of each horizontal elbow.
2. Use hangers with 1-1/2 inch minimum vertical adjustment. Design hangers for pipe movement without disengagement of supported pipe.
3. Support vertical piping at every floor. Support riser piping independently of connected horizontal piping.
4. Provide hangers adjacent to equipment so the equipment does not support any piping.
5. Support cast iron drainage piping at every joint.

PIPE HANGER SPACING

Copper or Steel Piping Pipe size (inches)	Max. Spacing (feet)	Rod dia. (inches)
1/2 to 1	5	3/8
1-1/4	6	3/8
1-1/2 to 2	8	3/8
2-1/2 to 3	10	1/2
4 to 6	12	5/8

Horizontal and vertical spacing shall not exceed N.C. State Plumbing Code Table 308.5.

Plastic Piping		
½ to 1-1/2	3	3/8
2 to 3	4	3/8
4 to 6	4	1/2

PIPE INSULATION

1. All hot and cold water piping indicated to be run above finished ceilings or in exterior walls shall be installed on the conditioned space side of the building insulation. Insulate all domestic water system pipes above ceilings and on outside walls with R-7 insulation or better.
2. Insulate all domestic hot water system pipes with 1" of 0.24-0.28 conductivity insulation.
3. Provide insulation on all exposed piping under fixtures in accordance with ADA guidelines.

MAINTAIN PROPER SLOPE FOR INTERIOR AND EXTERIOR PIPE

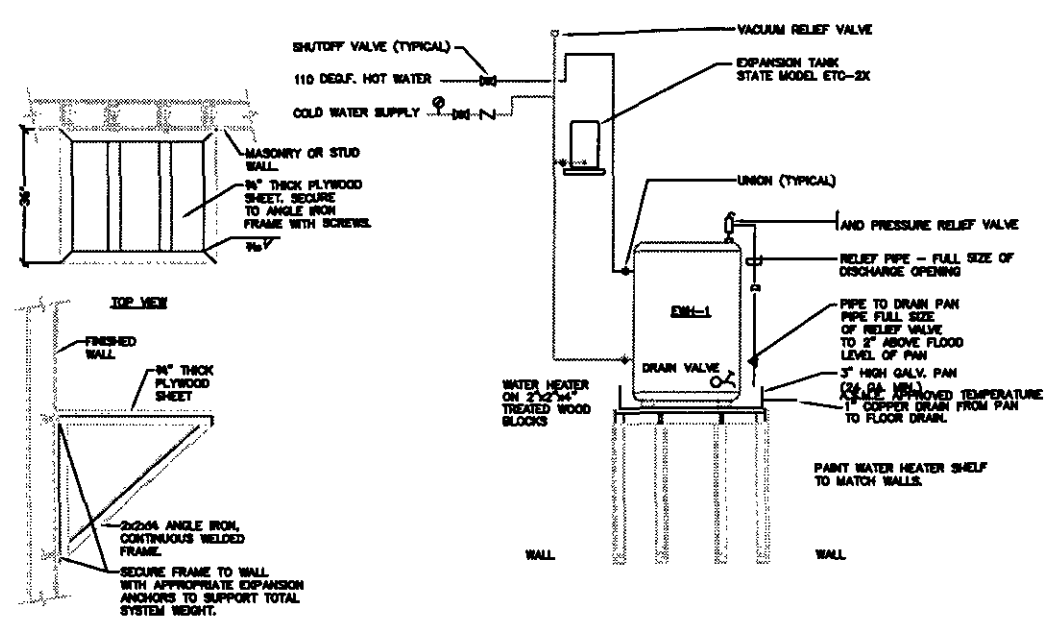
1. Slopes and invert elevations of exterior sewers, manholes, etc. shall be established and verified, by the plumbing contractor, before any piping is installed so that proper slopes will be maintained and necessary invert elevations obtained.
2. Slopes and invert elevations of all interior pipes shall be established before any piping is installed.
3. All sanitary sewer and storm drainage piping 4-inch and larger shall be installed with a slope of 1/8-inch per foot unless noted otherwise.
4. Sanitary sewer and storm drainage piping less than 4-inch shall be installed with a minimum slope of 1/4-inch per foot.
5. Domestic Hot and Cold water piping shall be sloped for drainage with drain valves installed at low points. Access panels shall be provided at concealed valves, water hammer arrestors and other devices.

PLUMBING FIXTURE CONNECTION/SPECIFICATION SCHEDULE

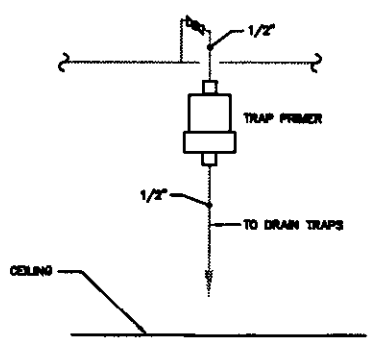
ITEM	DESCRIPTION	WASTE	VENT	CW	HW	SPECIFICATION
P-1	WATER CLOSET ADA COMPLIANT	3"	2"	1/2"	-	FLOOR MOUNTED VITREOUS CHINA ROUND TANK TYPE, BOWL SHALL BE EQUAL TO KOHLER K-3427 WITH KOHLER K-4962 WHITE CLOSED FRONT HEAVY-DUTY SEAT WITH COVER.
P-2	LAVATORY ADA COMPLIANT	2"	1-1/2"	1/2"	1/2"	WALL HUNG VITREOUS CHINA WITH WIDE SPREAD TRIM AND GRID WASTE. BOWL SHALL BE EQUAL TO KOHLER K-2032 WITH KOHLER K-7601-P SUPPLIES WITH STOPS, K-7715 GRID WASTE, K8998 P-TRAP AND A KOHLER K-7401-5A FAUCET.
GCO	GRADE CLEANOUT	3"	-	-	-	J.R. SMITH MODEL 4180C03-PB
FCO	FLOOR CLEANOUT					
WCO	WALL CLEANOUT	3"	-	-	-	J.R. SMITH MODEL 4430C-NB
FD-1	FLOOR DRAIN	3"	1-1/2"	-	-	OWNER PROVIDED

ELECTRIC WATER HEATER SCHEDULE

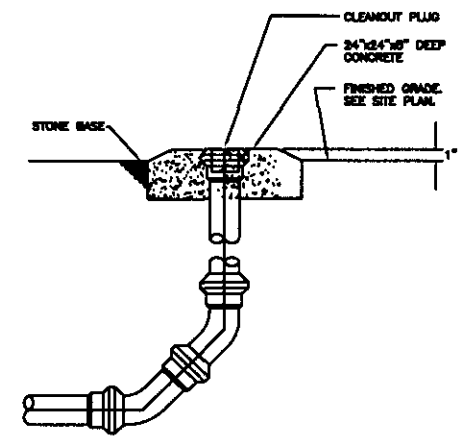
MARK	ITEM	STORAGE (GALLONS)	RECOVERY (GPH) @ 90°ΔT	KW	VOLTS	PHASE	DESCRIPTION
EWH-1	WATER HEATER	6	16	1.5	120	1	ELECTRIC, STORAGE TYPE EQUAL TO STATE MODEL CPE 6 10MBA



1 / P4.0 **WATER HEATER DETAIL**
SCALE : NONE



2 / P4.0 **TRAP PRIMER**
SCALE : NONE



3 / P4.0 **GRADE CLEANOUT**
NO SCALE

Electrical Design and Drafting Service

SEAL:

PROJECT NAME:

Berrier Properties
10510 Parkton Road
Charlotte, North Carolina

PROJECT NO:	DRAWN BY:
4-004	B. Price
CAD NO:	CHECKED BY:
SCALE: as noted	DATE: June 1, 2004

REVISIONS:

SHEET TITLE:

SHEET NUMBER:

LIFT STATION GENERAL:
Furnish and install the duplex metro-rail system as manufactured by Metropolitan Pump Company (or equal). System shall include [illegible] pumps with discharge elbow and rail supports, access frame with covers and guide rail supports, pump lifting chains with hooks, wiring channel, NEMA 3 weatherproof control box and sealed mercury tube level switches. The Lift Station Contractor is to provide concrete basin, guide rails, discharge piping and valves. Structure and dimensions to be as shown. Install pumps according to manufacturers application data.

SUBMERSIBLE PUMP-MOTOR CONSTRUCTION:
Each pump shall be of the sealed submersible type. Pump shall be capable of handling raw, unscreened sewage with two port no clog type impellers. Pump casing shall be fitted with bronze wear ring. Pump shall have two mechanical seals with oil chamber between the seals. Rotating seal faces shall be carbon and stationary seal faces to be ceramic. All metal parts of seal including spring shall be 303 stainless steel. All pump fasteners shall be 303 stainless steel. Pump motor shall be of the sealed submersible type with standard insulation for operation in high-dielectric oil to give better heat dissipation and longer bearing life. Motor stator shall be held in place with removable and ring so that it can be removed for repair without heating outer shell or using a press. Motor housing shall be fitted with high-dielectric oil and no pressure balancing devices shall be used. Pump motor-shaft shall be of 303 stainless steel. Pump shall be standard production pump with attached rail guides and discharge sealing flange. Rail guides shall be fastened to pump so that all lifting loads will come on the guide supports and not on the pump or motor housing. A lifting chain and hook shall be supplied for each pump.

HYDRAULIC SEALING FLANGE:
The discharge of each pump shall be fitted with diaphragm-type hydraulically operated sealing flange. When pump is in operation, pressure shall force diaphragm against discharge elbow flange providing a leak-proof seal. When pump is idle, pressure shall be removed from diaphragm so that pump can be removed from sump with no mechanical contact of sealing flanges. Complete weight of pump to rest on bottom support plate, no weight to be supported on guide rails or discharge elbow. Sealing diaphragm shall be removable and shall be mounted on pump discharge flange. Diaphragm material shall be Buna N Rubber.

PUMP MOUNTING BASES:
A separate mounting plate shall be furnished for each pump. These plates shall include adjustable guide rail supports and discharge elbow with flange to align with pump hydraulic sealing flange. Discharge elbow shall be 125 lb. standard flange 6" pipe size. Plates and fittings shall be coated with tar base epoxy paint.

ACCESS FRAME AND COVER:
A double door access frame assembly shall be supplied. Access frame and covers shall be fabricated of aluminum and bolted to basin. Frame shall support guide rails and electrical wiring bracket. A separate hinged cover shall be provided for each pump. Cover shall be provided with lifting handle and safety latch to hold cover in the open position. Locking hasps shall be furnished for each cover.

ELECTRICAL CONTROL PANEL:
Control panel shall have a NEMA 3R weatherproof enclosure and shall be dead front with separate removable inside panel to protect electrical equipment. A lock hasp shall be provided on outside door. A circuit breaker shall be provided for each pump and a magnetic starter with 3 leg overload protection shall be supplied for each pump. An alternating relay shall be provided to alternate pumps on each successive cycle of operation. Starters shall have auxiliary contacts to operate both pumps on override condition. An interlock relay shall be provided to automatically reconnect the control circuit in case of circuit breaker trip on one pump. H-O-A switches and Run Lights shall be supplied for each pump. A terminal strip shall be provided for connecting pump and control wires. Pump control box time meters shall be furnished for each pump and installed in the panel.

SUMP LEVEL CONTROLS:
Sealed float type mercury switches shall be supplied to control sump level and alarm signal. The mercury tube switches shall be sealed in a polyurethane float for corrosion and shock resistance. The support wire shall have a heavy neoprene jacket and a weight shall be attached to a cord above the float to hold switch in place in sump. Weight shall be above the float to prevent sharp bends in the cord when the float operates under water. The float switches shall hang in the sump supported only by the cord that is held to the wiring channel. Three float switches shall be used to control level. One for pump TURN-ON, one for pump TURN-OFF, and one for both pumps TURN-ON. A fourth switch shall be provided for HIGH LEVEL ALARM.

ALARM:
A high water alarm light shall be supplied. Alarm flashing light is to be supplied for mounting at the control box. Alarm light shall glow dim at all times except under alarm conditions, then light shall glow bright and flash.

OPERATION OF SYSTEM:
On sump level rise lower mercury switch shall first be energized, then upper level switch shall next energize and start lead pump. With Lead Pump operating sump level shall lower to low switch TURN-OFF setting and pump shall stop. Alternating relay shall index on stopping of pumps so that the Lag Pump will start on next operation. If sump level continues to rise when Lead Pump is operating, override switch shall energize and start Lag Pump. Both Lead and Lag Pump shall operate together until low level switch TURNS-OFF both pumps. If level continues to rise when both pumps are operating, high level switch shall energize HIGH LEVEL ALARM. If one pump should fail for any reason, the second pump shall operate on the override control. All level switches shall be adjustable, for level setting, from the surface.

PUMP SCHEDULE

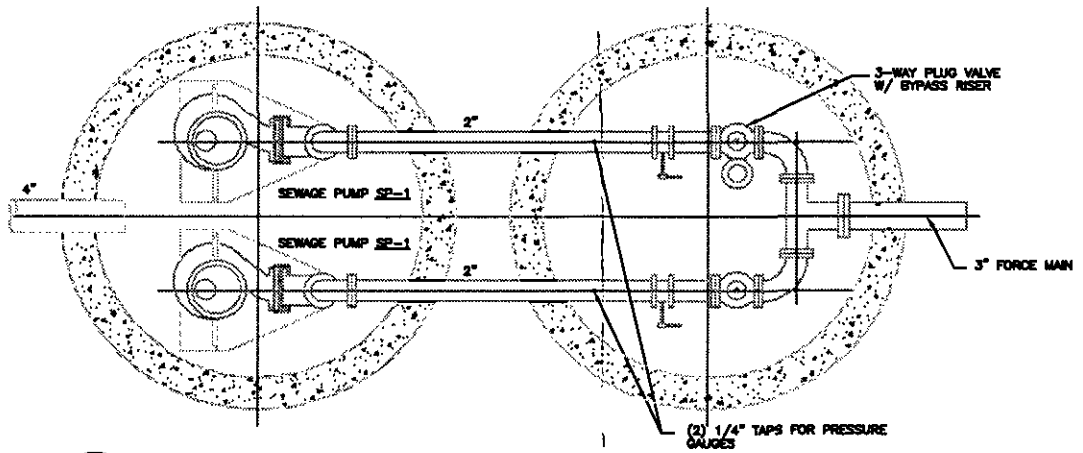
MARK	MANUFACTURER	TYPE	SERVICE	GPM	HEAD	MAX. EFF.	VOLTS	PHASE	RPM	NOTES
SP-1	METROPOLITAN SM400	SUBMERSIBLE	SEWAGE	42	40'	57%	208	3	1750	7" DIA. IMPELLER

ALTERNATE PREFABRICATED LIFT STATION

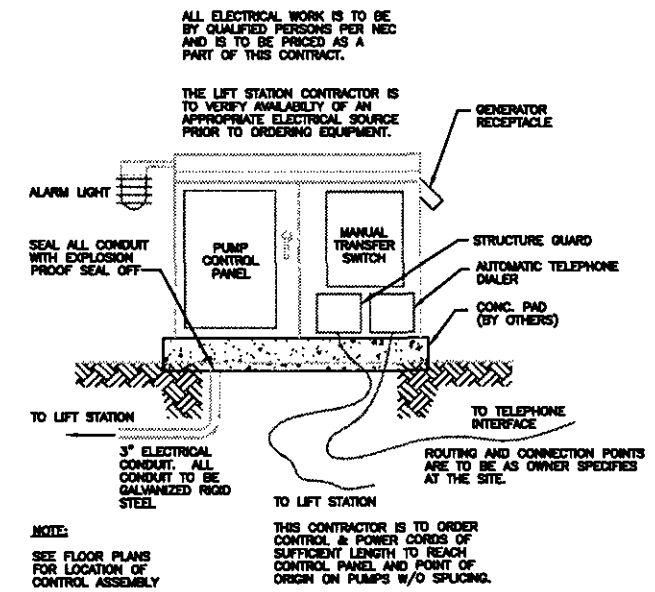
LIFT STATION WITH EQUIVALENT SPECIFICATIONS TO THE SYSTEM INDICATED BELOW. PREFABRICATED SYSTEM SHALL BE AS MANUFACTURED BY THE METROPOLITAN PUMP COMPANY OR EQUAL. PROVIDE COMPLETE AND OPERABLE SYSTEM PER MFR. REQUIREMENTS.

PUMP NOTES:

1. SELECT PUMPS FOR INDIVIDUAL AND PARALLEL OPERATION AS SHOWN ON THE PLANS. PUMP ELECTRICAL PROVISIONS ARE BASED ON TWO 1-HP MOTORS. PROVIDE MOTOR HORSEPOWER SUFFICIENT TO DRIVE THE PUMP WITHOUT OVERLOADING UNDER ALL OPERATING CONDITIONS, INCLUDING SINGLE PUMP OPERATION IN MULTIPUMP INSTALLATION. COORDINATE ALTERNATE PUMP SELECTIONS WITH THE ELECTRICAL CONTRACTOR.
2. PERFORMANCE CURVES SHALL BE SUBMITTED FOR APPROVAL OF THE ENGINEER, WITH SYSTEM CURVES ADDED THERETO INDICATING ALL OPERATING POINTS OF THE PUMP SYSTEM.

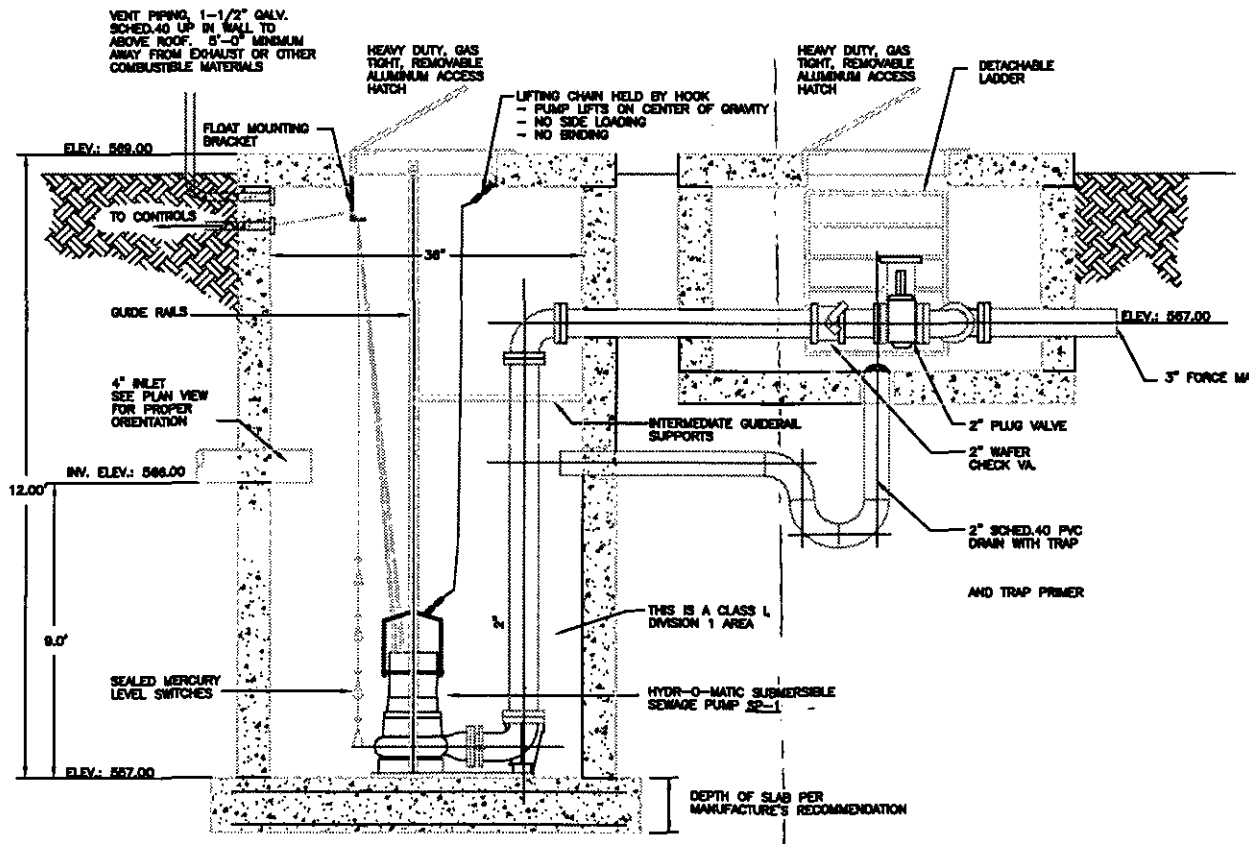


1 P2.0 **LIFT STATION PLAN VIEW**
SCALE : NONE

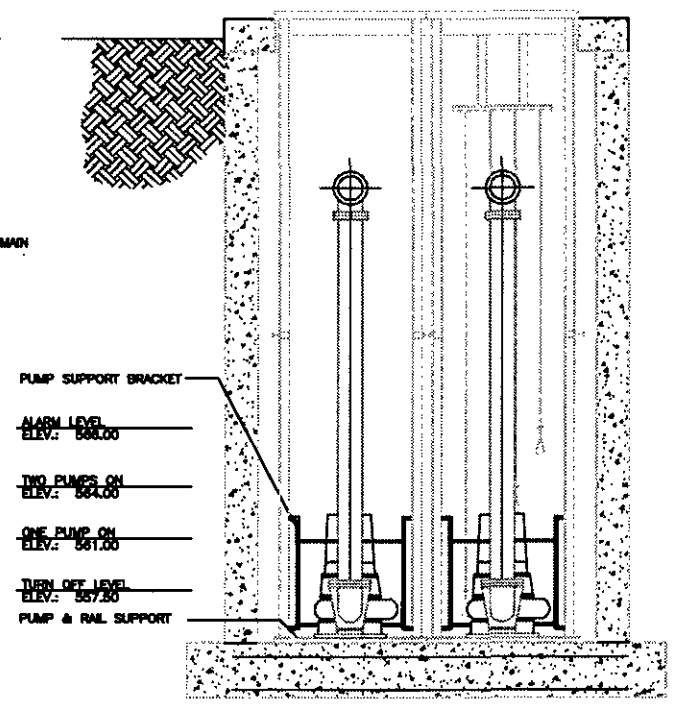


2 P2.0 **LIFT STATION CONTROL PANEL**
SCALE : NONE

NOTE:
1. LIFT STATION IS TO BE INSTALLED BY AN EXPERIENCED & QUALIFIED CONTRACTOR.
2. ALL PIPING & VALVES ARE TO BE PROVIDED BY THE LIFT STATION CONTRACTOR UNLESS OTHERWISE NOTED.
3. ALL CONCRETE WORK ASSOCIATED WITH THIS DRAWING IS THE RESPONSIBILITY OF THE LIFT STATION CONTRACTOR.



3 P2.0 **LIFT STATION SIDE VIEW**
SCALE : NONE



4 P2.0 **LIFT STATION END VIEW**
SCALE : NONE

Electrical Design and Drafting Service
[illegible]

SEAL

Bernier Properties
10510 Parkton Road
Charlotte, North Carolina

PROJECT NAME:

PROJECT NO.	DRAWN BY:
4-004	B. Price
CAD NO.	CHECKED BY:
SCALE: as noted	DATE: June 1, 2004

REVISIONS:
△

SHEET TITLE:

SHEET NUMBER:

OF 1

Permits Unlimited, Inc.

Permitting Specialist

7/28/04

To: Bill Marlin

From: Suzie Preidt

Re: File # ~~5640B~~ 5673B

Please find attached revised drawing for Legacy Development/Berrier Properties @ 10522 Parkton ~~Dr~~ Road.

Could you please call me with an update. We need to confirm this project has been approved so we will not run into any problems when we have our plan review with Commercial Plan review.

Sincerely,
Suzie Preidt

P.O. Box 749 Belmont, NC 28012
Phone: 704-829-7771 Fax: 704-825-1057
E-mail: PermitsUnlimited@aol.com