

13145 MCCORD RD

01124104

12/17/07

duponbj

Groundwater and Wastewater Services File Imaging Project
May 2007
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Wastewater Design Flow Rationale

Design Flows

Cottages	5	Single Room Units
D.D.F. per Unit	120	G/D
Total	600	G/D
Country Inn Suites	14	Suites (Incl. 2 Cottages)
D.D.F. per Suite	175	G/D
Total	2,450	G/D
Owner's Suite	1	Suite
D.D.F. per Suite	240	G/D
Total	240	G/D
Food Service Flow/Cottage	55	G/D
Number of Units	5	Single Room Units
Total	275	G/D
Total Suite Flow for Country Inn	2,965	G/D

** Dining flow of 5 G/D per seat was discussed with Trish Angoli of OSWW and agreed to due to the 120 G/D already allocated to each of the 20 total bedrooms.

Flow Determination

Daily Dosing Volume:	2,965.00	G/D
LTAR:	0.25	G/D/SF (LTAR)
Area:	11,860.00	Sq. Ft. Trench Bottom
Lateral Lengths:	3,953.33	LF (Conventional)
No. of Laterals:	20.00	Conventional Laterals
Average Lateral Length:	198.00	LF Ea. Conventional Laterals

*Repair field shall consist of (36) - 140 LF laterals as shown on plan

Grease Trap Sizing

Grease Trap Design Flow:	5	Gallon/Day/Meal Served
Dining Room Seats:	120	Seats
Min. Grease Trap Size:	600	Gallons
Use	(2) 1,000	Gallon Grease Traps in Series

Septic Tank Sizing

Daily Design Flow:	2,965	G/D
Min. Septic Tank Size:	3,349	Gallons
Min. Pump Tank Size:	3,349	Gallons

Use 4,000 Gallon Septic Tank & Pump Tank

Conventional System Sizing

Number of Laterals:	20.00	Laterals
Length of Laterals:	198	LF Ea.
Pressure Manifold Design:		
No. of Manifolds:	1.00	Manifold(s)
No. of Taps:	20.00	Taps
Flow per Tap:	5.48	G/M (1/2" Dia. SCH 80 PVC)
Flow per Dose:	109.60	G/M
Operation Head:	2.00	Ft.
Static Head:	33.00	Ft.
Friction Head:	17.32	Ft.
Pump Rqmts:	109.60	G/M @ 52.32 Ft. TDH

Use Goulds 3888 WS5012D3 Effluent Pump
5 HP/230 v/1PH or approved equal

Dose Volume:

Total Lateral Volume:	2,581.53	Gallons
Lateral Volume per Field:	1,290.76	Gallons
75% of Lateral Volume:	968.07	Gallons
66% of Lateral Volume:	851.90	Gallons
Therefore, Dose:	897.00	Gallons
	69%	of Lateral Volume per Dose
Pump Run Time:	8.18	Minutes per Dose
Drawdown:	19.99	Inches/Dose

Conventional Septic System Sizing:

Daily Design Flow:	600	G/D
Min. Septic Tank Size:	1,202.00	Gallons
Min. Pump Tank Size:	1,202.00	Gallons

Use 2,000 Gallon Septic Tank & Pump Tank

Proposed LTAR:	0.225	G/D/SF
Lateral Area:	2,667	Sq. Ft.
Total Lateral Lengths:	889	LF
25% Reduction System	667	LF (Chambers)

Cottage System Sizing

Number of Laterals:	8	Laterals
Length of Laterals:	83	LF Ea.
Pressure Manifold Design:		
No. of Taps:	8.00	Taps
Flow per Tap:	5.48	G/M (1/2" Dia. SCH 80 PVC)
Flow per Dose:	43.84	G/M
Operation Head:	2.00	Ft.
Static Head:	33.00	Ft.
Friction Head:	21.22	Ft.
Pump Rqmts:	43.84	G/M @ 56.22 Ft. TDH



PIEDMONT DESIGN
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Associates, P.A.
Suite 101 Westfield Center, 125 East Plaza Drive
Mooresville, North Carolina 28115
Phone: (704) 664-2888 Fax: (704) 664-1778 www.pdapa.com

PREPARED FOR:
CHOATE CUSTOM HOMES
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 287617
800-728-7866

PRELIMINARY SEPTIC SYSTEM LAYOUT
YELLOW HILL COUNTRY INN
MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

PRELIMINARY

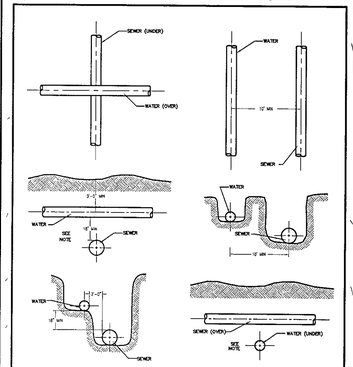
REVISIONS	BY

Date: 8/19/2009
Scale: 1"=50 FT
2' CONTOURS
Drawn: DMD
Checked: DLM
Job: 08-07-07
Sheet U-1
of 1 Sheets

Location: PR- PUBLICATION OR REUSE OF THESE DRAWINGS OR ANY DETAILS WITHIN MUST BE WITH THE WRITTEN CONSENT OF PIEDMONT DESIGN ASSOCIATES, P.A.

Owner: _____ Approved: _____ Date of Issue: AUG 19 2009

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NOTE:
1. ALL REFERENCES TO SEWER IN THIS FIGURE AREA SANITARY SEWER. REFER TO EARTHWORK SPECIFICATIONS FOR SEPARATION OF STORM SEWERS AND SANITARY SEWERS.
2. WHEN WATER MAIN IS ABOVE SEWER, BUT LESS THAN 18" CLEARANCE, OR WHEN THE SEWER IS ABOVE THE WATER MAIN AND THE SEWER LINE SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MINIMUM LATERAL DISTANCE MEASURED AT RIGHT ANGLES TO THE SEWER OF 10 FEET ON EACH SIDE OF THE CROSSING.

RELATION OF WATER MAINS TO SANITARY SEWER MAINS

NOTES:
- BOUNDARY, TOPOGRAPHICAL & SITE INFORMATION PROVIDED BY PIEDMONT DESIGN ASSOCIATES, PA. MECKELNBURG COUNTY PARCEL ID#: 011-24-104
- DRAINFIELD PIT LOCATIONS & OFFISTE WELL LOCATIONS HAVE BEEN FIELD LOCATED WITH SUBMETER GPS BY PIEDMONT DESIGN ASSOCIATES.
- DRAINFIELD LOCATION HAS BEEN APRROVED BY CONSULTING SOIL SCIENTIST AND REGIONAL SOILS SPECIALIST.
- THERE ARE SEVERAL WELLS LOCATED WITHIN 500 FEET OF PROPOSED SEPTIC SYSTEM
- CONTRACTOR SHALL ESTABLISH A BENCHMARK ON SITE.
- ONLY SANITARY SEWER DISCHARGE SHALL BE ALLOWED TO ENTER SYSTEM. NO DISCHARGE FROM STORM WATER, COOLING SYSTEM OR CONDENSATE DRAINS SHALL BE ALLOWED TO ENTER SYSTEM.
- CLEAR DRAIN FIELD OF ALL DEBRIS, LIMBS, ETC. CUT SMALL SAPLINGS OFF AT GROUND. LIGHTLY HAND SMOOTH ANY IRREGULAR SURFACES. REMOVE LIMBS FROM REMAINING TREES TO A MIN OF 8' ABOVE GRADE. GRASS ALL DISPOSAL AND DISTURBED AREAS.
- MAINTAIN 8' MINIMUM SEPARATION ON ALL PPBPS LATERALS
- SEED ALL DISTURBED AREAS.
- OBSERVE ALL SETBACKS.

– REFER TO SHEETS U–2 TO U–5 AND SPECIFICATION PACKAGE FOR SYSTEM DETAILS & ELEVATIONS

Parcel #011-24-104
Total Gross Area = 15.018 Acres (654,191 Sq. Ft.)
Area Located Within R/W of McCord Road 0.061 Acres (2,655 Sq. Ft.)
Total Net Area = 14.957 Aces (651,536 Sq. Ft.)

Parcel #011-24-105
Total Gross Area = 15.342 Acres (668,293 Sq. Ft.)
Area Located Within R/W of McCord Road 0.187 Acres (8,127 Sq. Ft.)
Total Net Area = 15.155 Aces (660,166 Sq. Ft.)

Parcel #011-24-106
Total Gross Area = 3.674 Acres (160,054 Sq. Ft.)
Area Located Within R/W of McCord Road 0.346 Acres (15,114 Sq. Ft.)
Total Net Area = 3.328 Aces (144,940 Sq. Ft.)

CONTACT LIST

PROPERTY OWNER
SALISBURY LAND HOLDING, LLC
1600 SOUTH HICKORY RIDGE TRAIL
MILFORD, MI 48380

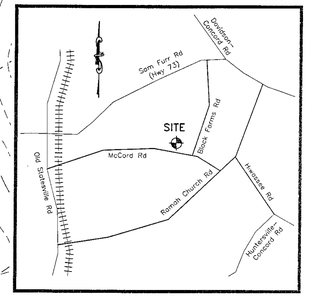
OWNERS AGENT
CHOATE CUSTOM HOMES, INC.
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
JOHN CHOATE, GC
800–728–7866 (O)
919–791–1922 (F)

WASTEWATER SYSTEM DESIGN ENGINEER
PIEDMONT DESIGN ASSOCIATES, PA
125 EAST PLAZA DRIVE, SUITE 101
MOORESVILLE, NC 28117
DONALD L. MUNDAY, PE
704–664–7888 (O)
704–664–1778 (F)

SITE/CIVIL ENGINEER:
PIEDMONT DESIGN ASSOCIATES, PA
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MOORESVILLE, NC 28117
DONALD L. MUNDAY, PE
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704–664–1778 (F)

SOILS CONSULTANT
ROLLANS SOIL & ENVIRONMENTAL CONSULTANTS
470 N. BROAD STREET, SUITE D
MOORESVILLE, NC 28115
ASHLEY ROLLANS, LSS
(704) 658–1723 (O)
(704) 658–1724 (F)

SURVEYOR
PIEDMONT DESIGN ASSOCIATES, PA
125 EAST PLAZA DRIVE, SUITE 101
MOORESVILLE, NC 28117
MARK S. PENCE, PLS
704–664–7888 (O)
704–664–1779 (F)



VICINITY MAP
NO SCALE

DESIGN SUMMARY:
- (7) ONE BEDROOM COTTAGES, (14) COUNTRY INN SUITES, (1) OWNERS SUITE IN COUNTRY INN
- DESIGN FLOW – 175 G/D/COTTAGE/SUITE = 3,675 G/D
- DESIGN FLOW – 240 G/D/OWNER SUITE = 240 G/D
- TOTAL DAILY DESIGN FLOW = 3,915 G/D
- LTAR = 0.25 G/D/SF (PER ASHLEY ROLLANS, LSS FOR PROPOSED LOW PRESSURE PPBPS LATERALS
- (2) 1,000 GALLON GREASE TANKS IN SERIES AT COUNTRY INN KITCHEN
- COLLECTION SYSTEM
- 1,500 GALLON SEPTIC TANK & 1,500 GALLON PUMP TANK FOR STEP SYSTEM
- 5,000 GALLON SEPTIC TANK
- 1,500 GALLON FLOW E.Q./BIOCLERE DOSING TANK
- (2) BIOCLERE MODEL 24/20–950 MODIFIED TRICKLING FILTERS IN SERIES
- 1,500 GALLON SETTLING TANK (BAFFLED) WITH EFFLUENT FILTER
- 5,000 GALLON PUMP TANK WITH H–VALVES, TRI–PLEX PANEL AND PUMPS
- (3) LOW PRESSURE PPBPS ZONES FOR SUBSURFACE SEWAGE DISPOSAL

BEFORE YOU DIG !
CALL 1–800–632–4949
N.C. ONE–CALL CENTER
IT'S THE LAW !

IMPORTANT:
THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY FOR THE EXACT FIELD LOCATIONS OF ALL THE WATER, SEWER, ELECTRIC, TELEPHONE, TELEVISION AND ANY OTHER UNDERGROUND OR OVERHEAD UTILITY BEFORE STARTING CONSTRUCTION. THE OMISSION FROM OR INCLUSION OF UTILITY LOCATIONS ON THE CONSTRUCTION DRAWINGS IS NOT TO BE CONSIDERED AS THE NON–EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK PRIOR TO CONSTRUCTION.

McCord Road

GRAPHIC SCALE
50 0 25 50 100 200
(IN FEET)
1 inch = 50 ft.

PUBLICATION OR REUSE OF THESE DRAWINGS OR ANY DETAILS WITHIN MUST BE WITH THE WRITTEN CONSENT OF PIEDMONT DESIGN ASSOCIATES, P.A.

Owner: _____ Approved: _____ Date of Issue: _____

Location: PR–31

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PIEDMONT DESIGN
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Mooresville, North Carolina 28115
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PREPARED FOR:
CHOATE CUSTOM HOMES, INC
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
800–728–7866

SEPTIC SYSTEM OVERALL SITE PLAN
YELLOW HILL COUNTRY INN
13229 MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

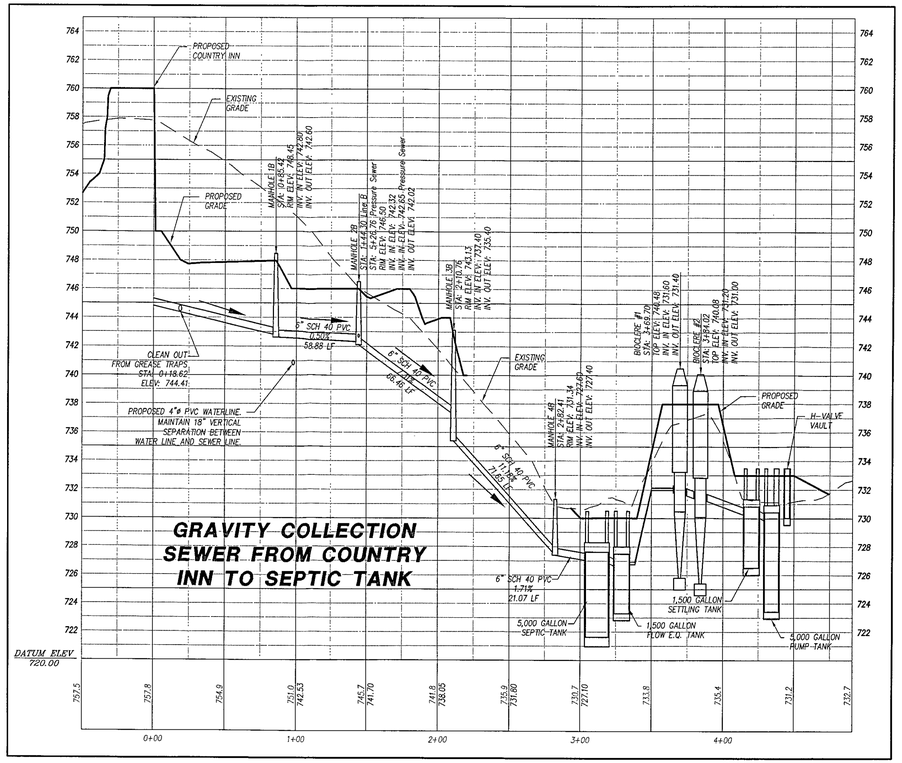
Approved By
ON-SITE WASTEWATER SECTION
Division of Environmental Health, DENR
File No.: 2009-65
Date: March 18 2010
By:

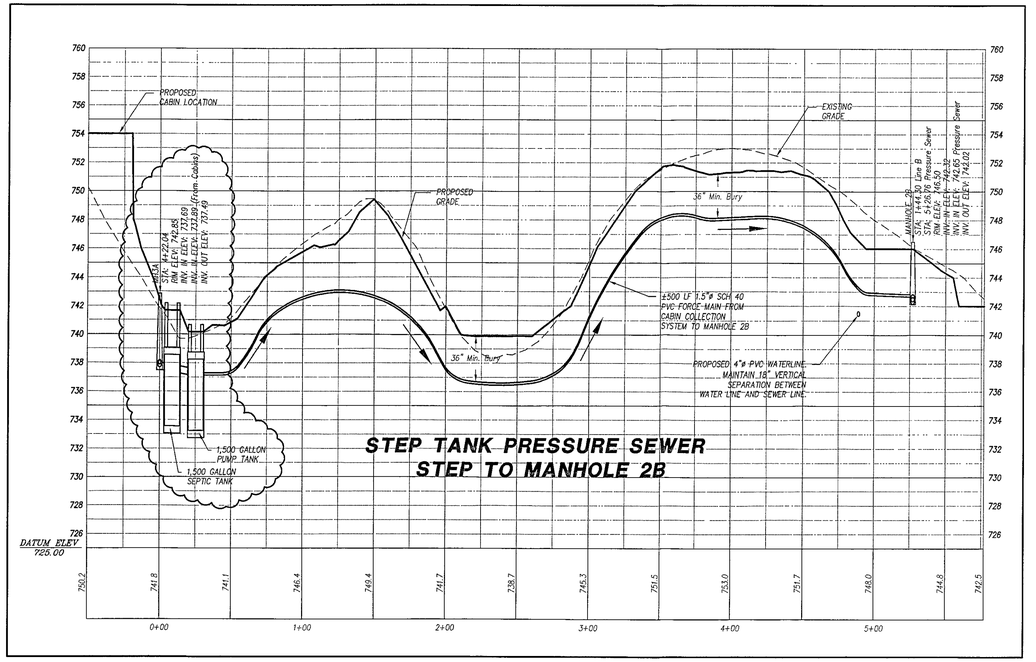
On-Site Water Protection Section
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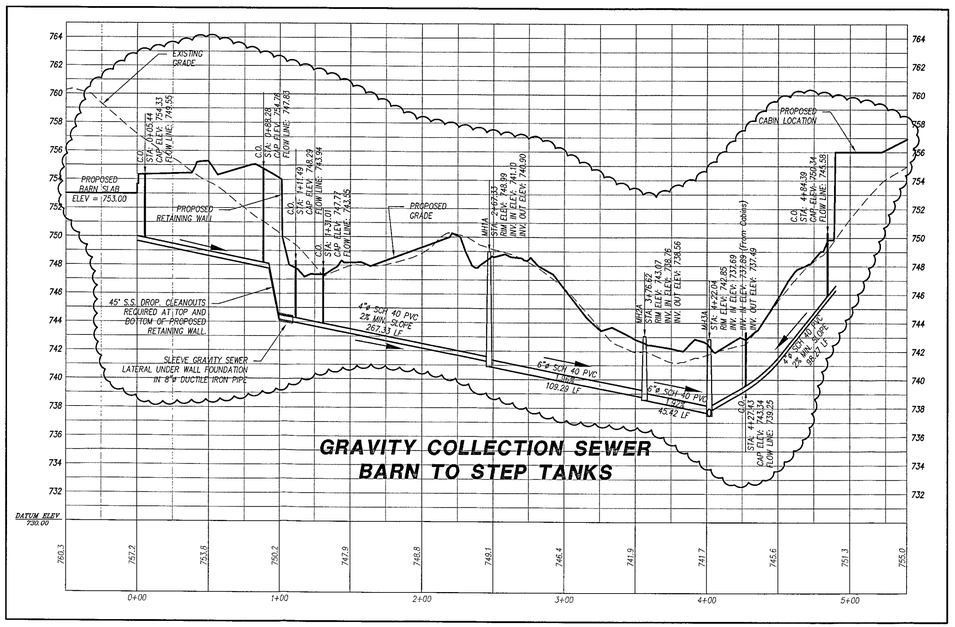
NORTH CAROLINA PROFESSIONAL SEAL 17227 ENGINEER DONALD L MUNDAY

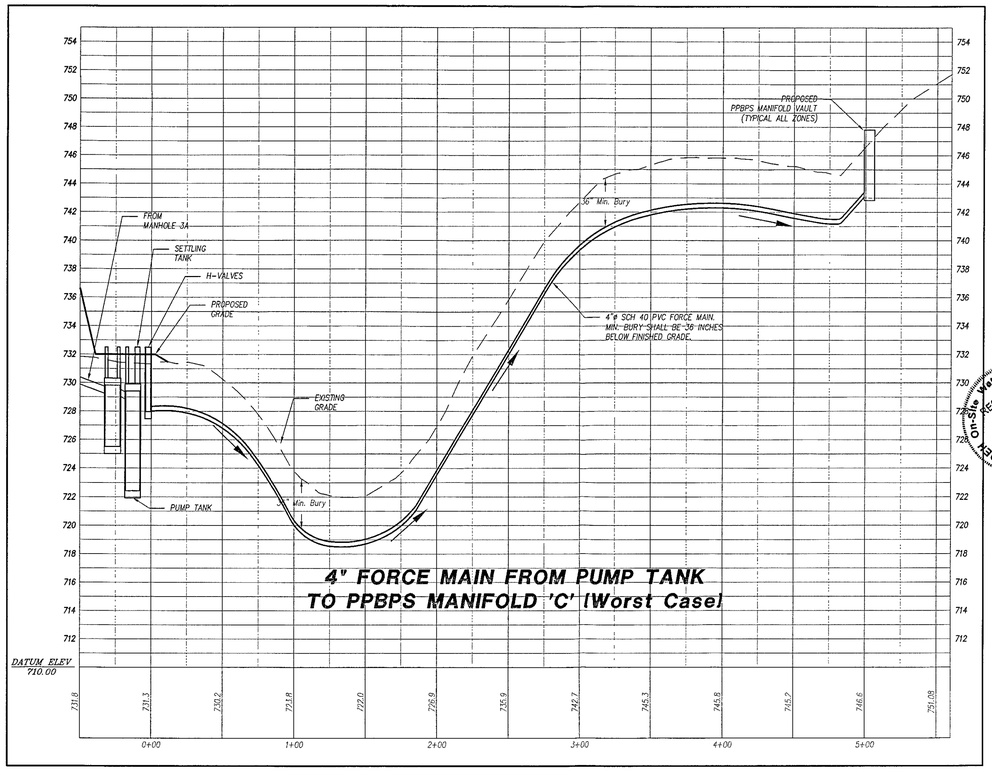
REVISIONS	BY
REV. PER COMMENTS BY NCDENR–DOWPS (1/6/10)	DMD

Date: 10/27/09
Scale: 1"=50 FT 2' CONTOURS
Drawn: DMD
Checked DLM
Job: 08–07–07
Sheet: U–1
1/6/10
5 Sheets









PIEDMONT DESIGN ASSOCIATES, P.A.
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Suite 101 Westfield Center, 125 East Plaza Drive
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PREPARED FOR:
CHOATE CUSTOM HOMES, INC
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
800-728-7866

COLLECTION & DISTRIBUTION SYSTEM PROFILES
YELLOW HILL COUNTRY INN
13229 MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

Water Protection Section
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On-Site

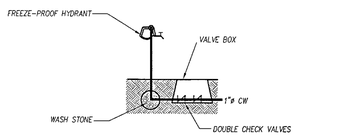
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 17327 DONALD L. MCKEE

REVISIONS	BY
A REV. PER COMMENTS BY NCDENR-DSWPS (1/6/10)	DMD

Date: 10/27/09
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Drawn: DMD
Checked: DLM
Job: 08-07-07
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of 5 Sheets

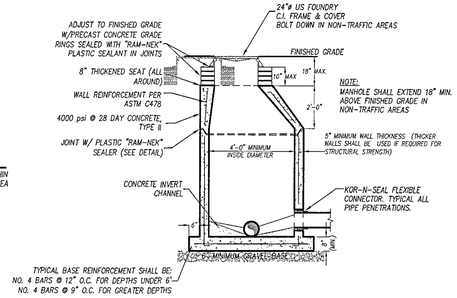
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Owner: _____ Approved: _____ Date of Issue: _____

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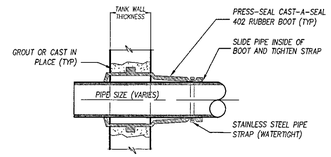
YARD HYDRANT DETAIL

N.T.S. LOCATE HYDRANT 10'± FROM TANKS WITHIN ENCLOSED AREA



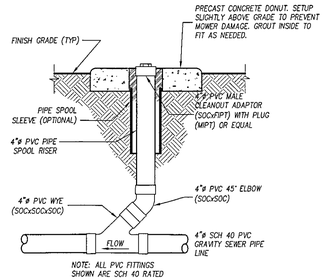
SECTION VIEW – STANDARD MANHOLE

N.T.S.



SECTION VIEW – TANK PENETRATION DETAIL

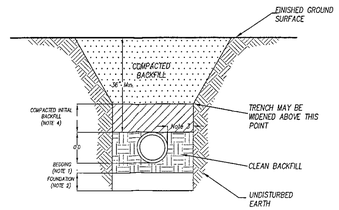
N.T.S.



GRAVITY SEWER LATERAL CLEANOUT DETAIL

N.T.S.

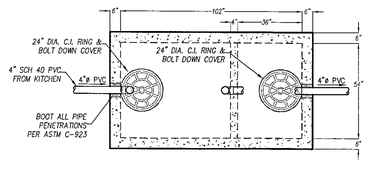
TRENCH NOTES:
1. 4" TYPICAL, 6" DEPTH IF IN ROCK
2. FOUNDATION STONE REQUIRED WHEN SOIL CONDITIONS ARE UNSTABLE
3. CLEAR DISTANCE NOT LESS THAN 6" OR MORE THAN 12" ON EITHER SIDE
4. INITIAL BACKFILL SHALL BE PLACED IN 6" LIFTS AND COMPACTED. INITIAL BACKFILL SHALL CONTAIN NO BACKFILL OVER 1.5" , FROZEN LUMPS OR DEBRIS.
5. BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY
6. PVC PIPE SHALL BE SCH 40 PVC
7. DETAIL SHALL BE USED FOR ALL COLLECTION SEWERS, SERVICE LATERALS & TRANSPORT PIPING TO DISPOSAL AREA



PVC SEWER PIPE BEDDING DETAIL

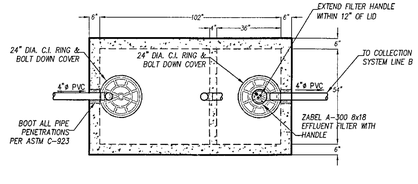
N.T.S.

REFER TO SPECIFICATION PACKAGE FOR MATERIALS SELECTION AND INSTALLATION REQUIREMENTS



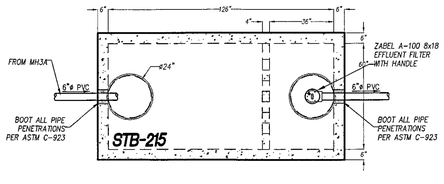
PLAN VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



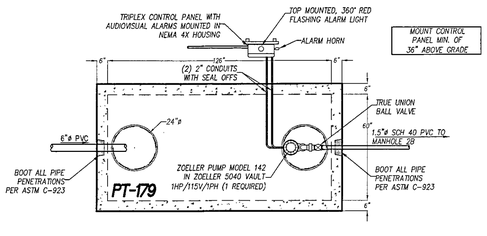
PLAN VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



PLAN VIEW–DEH APPROVED 1,500 GAL SEPTIC TANK

NTS STEP TANK



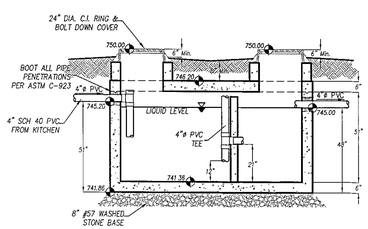
PLAN VIEW–DEH APPROVED 1,500 GAL PUMP TANK

NTS STEP TANK

ALL PIPE PENETRATIONS MUST HAVE BOOTED PENETRATION SEALS BOTH INLET AND OUTLET

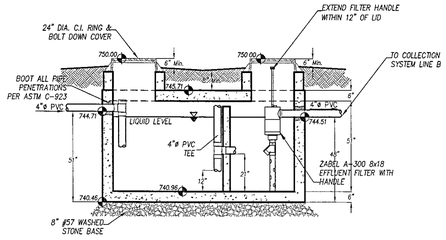
NOTE:
ALL GRAVITY PIPE BETWEEN TANKS SHALL BE SCH 40 PVC. MINIMUM SLOPE SHALL BE 2%

RISER & LID NOTES:
RISERS TO BE CAST IN PLACE AT TIME OF TANK CONSTRUCTION AND MEET THE REQUIRED APPROVAL FOR THE SPECIFIED RISER. ALL TANK ACCESS LIDS MUST HAVE BOLT DOWN OR LOCKING CAPABILITY.



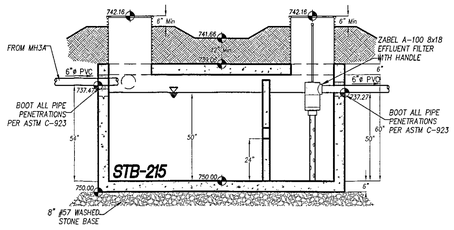
SECTION VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



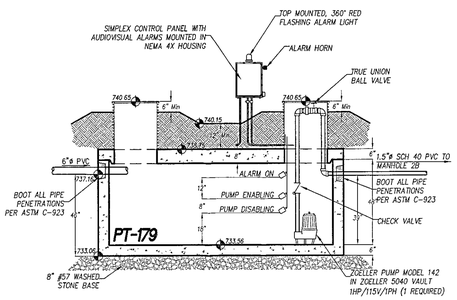
SECTION VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



SECTION VIEW–DEH APPROVED 1,500 GAL SEPTIC TANK

NTS STEP TANK



SECTION VIEW–DEH APPROVED 1,500 GAL PUMP TANK

NTS STEP TANK

TANK ELEVATIONS

NOTE: TANK DIMENSIONS & ELEVATIONS BASED ON STAY RIGHT PRECAST CONCRETE COMPANY, INC. (919-876-8600). OTHER STATE APPROVED TANKS MAY BE SUBSTITUTED BUT NOT WITHOUT PRIOR APPROVAL FROM THE ENGINEER. CONTRACTOR SHALL VERIFY DIMENSIONS AND ADJUST GRADES AND FLOAT SETTINGS AS REQUIRED TO CAUSE FLOW AND DOSING AS CALLED FOR.

On-Site Water Protection Section RECEIVED JAN 19 2010 DENR/DEH

PIEDMONT DESIGN ENGINEERING/SURVEYING/PLANNING
Associates, P.A.
Suite 101 Westfield Center, 125 East Plaza Drive
Mooresville, North Carolina 28115
Phone:(704) 664-7888 Fax:(704) 664-1778 www.pdapa.com

PREPARED FOR:
CHOATE CUSTOM HOMES, INC.
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
800-728-7866

STEP SYSTEM, GREASE TANK & COLLECTION SYSTEM DETAILS
YELLOW HILL COUNTRY INN
13229 MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

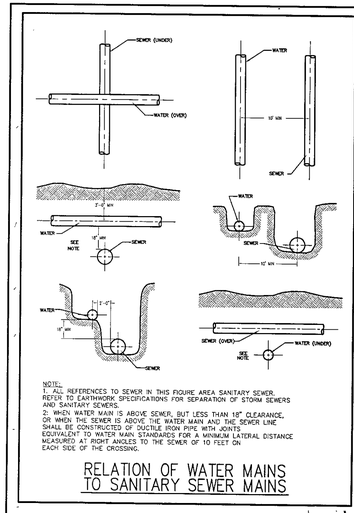
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 17387 DONALD L. MCCARTHY

REVISIONS	BY
A REVISED ELEVATIONS ON STEP TANKS (1/6/10)	DMD

Date: 10/27/2009
Scale: 1" = 40 Ft
AS SHOWN
Drawn: DMD
Checked: DLM
Job: 08-07-07
Sheet U-3
A 1/6/10
of 5 Sheets

Location: PR-31
PUBLICATION OR REUSE OF THESE DRAWINGS OR ANY DETAILS WITHIN MUST BE WITH THE WRITTEN CONSENT OF PIEDMONT DESIGN ASSOCIATES, P.A.
Owner: _____ Approved: _____ Date of Issue: _____

\2008\080707-ChoateMcCordRd\dwg\U-3 & U-4.dwg, 1/6/2010 8:31:10 AM, David DeCaron



NOTE:
1. ALL REFERENCES TO SEWER IN THIS FIGURE AREA SANITARY SEWER. REFER TO EARTHWORK SPECIFICATIONS FOR SEPARATION OF STORM SEWERS AND SANITARY SEWERS.
2. WHEN WATER MAIN IS ABOVE SEWER, BUT LESS THAN 18" CLEARANCE, OR WHEN THE SEWER IS ABOVE THE WATER MAIN AND THE SEWER LINE SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE WITH JOINTS EQUIVALENT TO WATER MAIN STANDARDS FOR A MINIMUM LATERAL DISTANCE MEASURED AT RIGHT ANGLES TO THE SEWER OF 10 FEET ON EACH SIDE OF THE CROSSING.

RELATION OF WATER MAINS TO SANITARY SEWER MAINS

NOTES:
- BOUNDARY, TOPOGRAPHICAL & SITE INFORMATION PROVIDED BY PIEDMONT DESIGN ASSOCIATES, PA. MECKELNBURG COUNTY PARCEL ID#: 011-24-104
- DRAINFIELD PIT LOCATIONS & OFFSITE WELL LOCATIONS HAVE BEEN FIELD LOCATED WITH SUBMETER GPS BY PIEDMONT DESIGN ASSOCIATES.
- DRAINFIELD LOCATION HAS BEEN APPROVED BY CONSULTING SOIL SCIENTIST AND REGIONAL SOILS SPECIALIST.
- THERE ARE SEVERAL WELLS LOCATED WITHIN 500 FEET OF PROPOSED SEPTIC SYSTEM
- CONTRACTOR SHALL ESTABLISH A BENCHMARK ON SITE.
- ONLY SANITARY SEWER DISCHARGE SHALL BE ALLOWED TO ENTER SYSTEM. NO DISCHARGE FROM STORM WATER, COOLING SYSTEM OR CONDENSATE DRAINS SHALL BE ALLOWED TO ENTER SYSTEM.
- CLEAR DRAIN FIELD OF ALL DEBRIS, LIMBS, ETC. CUT SMALL SAPLINGS OFF AT GROUND. LIGHTLY HAND SMOOTH ANY IRREGULAR SURFACES. REMOVE LIMBS FROM REMAINING TREES TO A MIN OF 8' ABOVE GRADE. GRASS ALL DISPOSAL AND DISTURBED AREAS.
- MAINTAIN 8' MINIMUM SEPARATION ON ALL PPBPS LATERALS
- SEED ALL DISTURBED AREAS.
- OBSERVE ALL SETBACKS.

– REFER TO SHEETS U-2 TO U-5 AND SPECIFICATION PACKAGE FOR SYSTEM DETAILS & ELEVATIONS

Parcel #011-24-104
Total Gross Area = 15.018 Acres (654,191 Sq. Ft.)
Area Located Within R/W of McCord Road 0.061 Acres (2,655 Sq. Ft.)
Total Net Area = 14.957 Aces (651,536 Sq. Ft.)

Parcel #011-24-105
Total Gross Area = 15.342 Acres (668,293 Sq. Ft.)
Area Located Within R/W of McCord Road 0.187 Acres (8,127 Sq. Ft.)
Total Net Area = 15.155 Aces (660,166 Sq. Ft.)

Parcel #011-24-106
Total Gross Area = 3.674 Acres (160,054 Sq. Ft.)
Area Located Within R/W of McCord Road 0.346 Acres (15,114 Sq. Ft.)
Total Net Area = 3.328 Aces (144,940 Sq. Ft.)

CONTACT LIST

PROPERTY OWNER
SALISBURY LAND HOLDING, LLC
1600 SOUTH HICKORY RIDGE TRAIL
MILFORD, MI 48380

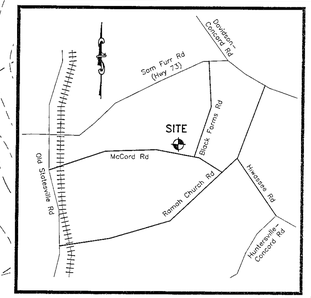
OWNERS AGENT
CHOATE CUSTOM HOMES, INC.
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
JOHN CHOATE, GC
800-728-7866 (O)
919-791-1922 (F)

WASTEWATER SYSTEM DESIGN ENGINEER
PIEDMONT DESIGN ASSOCIATES, PA
125 EAST PLAZA DRIVE, SUITE 101
MOORESVILLE, NC 28117
DONALD L MUNDAY, PE
704-664-7888 (O)
704-664-1778 (F)

SITE/CIVIL ENGINEER:
PIEDMONT DESIGN ASSOCIATES, PA
125 EAST PLAZA DRIVE, SUITE 101
MOORESVILLE, NC 28117
DONALD L MUNDAY, PE
704-664-7888 (O)
704-664-1778 (F)

SOILS CONSULTANT
ROLLANS SOIL & ENVIRONMENTAL CONSULTANTS
470 N. BROAD STREET, SUITE D
MOORESVILLE, NC 28115
ASHLEY ROLLANS, LSS
(704) 658-1723 (O)
(704) 658-1724 (F)

SURVEYOR
PIEDMONT DESIGN ASSOCIATES, PA
125 EAST PLAZA DRIVE, SUITE 101
MOORESVILLE, NC 28117
MARK S. PENCE, PLS
704-664-7889 (O)
704-664-1778 (F)



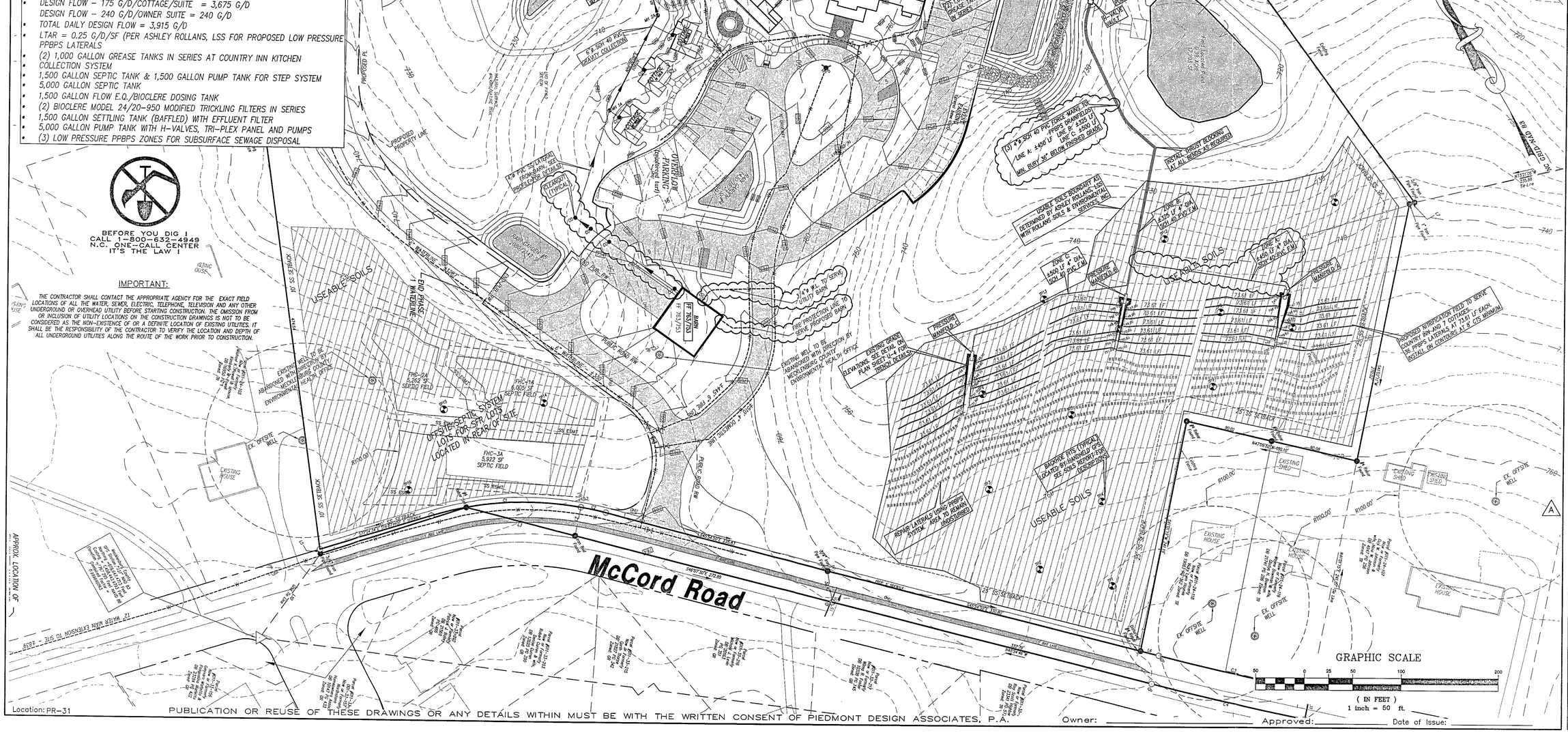
VICINITY MAP
NO SCALE

DESIGN SUMMARY:
- (7) ONE BEDROOM COTTAGES, (14) COUNTRY INN SUITES, (1) OWNERS SUITE IN COUNTRY INN
- DESIGN FLOW – 175 G/D/COTTAGE/SUITE = 3,675 G/D
- DESIGN FLOW – 240 G/D/OWNER SUITE = 240 G/D
- TOTAL DAILY DESIGN FLOW = 3,915 G/D
- LTAR = 0.25 G/D/SF (PER ASHLEY ROLLANS, LSS FOR PROPOSED LOW PRESSURE PPBPS LATERALS
- (2) 1,000 GALLON GREASE TANKS IN SERIES AT COUNTRY INN KITCHEN
- COLLECTION SYSTEM
- 1,500 GALLON SEPTIC TANK & 1,500 GALLON PUMP TANK FOR STEP SYSTEM
- 5,000 GALLON SEPTIC TANK
- 1,500 GALLON FLOW E.Q./BIOCLERE DOSING TANK
- (2) BIOCLERE MODEL 24/20-950 MODIFIED TRICKLING FILTERS IN SERIES
- 1,500 GALLON SETTLING TANK (BAFFLED) WITH EFFLUENT FILTER
- 5,000 GALLON PUMP TANK WITH H-VALVES, TRI-PLEX PANEL AND PUMPS
- (3) LOW PRESSURE PPBPS ZONES FOR SUBSURFACE SEWAGE DISPOSAL

BEFORE YOU DIG !
CALL 1-800-632-4949
N.C. ONE-CALL CENTER
IT'S THE LAW !

IMPORTANT:

THE CONTRACTOR SHALL CONTACT THE APPROPRIATE AGENCY FOR THE EXACT FIELD LOCATIONS OF ALL THE WATER, SEWER, ELECTRIC, TELEPHONE, TELEVISION AND ANY OTHER UNDERGROUND OR OVERHEAD UTILITY BEFORE STARTING CONSTRUCTION. THE OMISSION FROM OR INCLUSION OF UTILITY LOCATIONS ON THE CONSTRUCTION DRAWINGS IS NOT TO BE CONSIDERED AS THE NON-EXISTENCE OF OR A DEFINITE LOCATION OF EXISTING UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION AND DEPTH OF ALL UNDERGROUND UTILITIES ALONG THE ROUTE OF THE WORK PRIOR TO CONSTRUCTION.



Location: PR-31
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Owner: _____ Approved: _____ Date of Issue: _____

PIEDMONT DESIGN ASSOCIATES
ENGINEERING/SURVEYING/PLANNING
Suite 101 Westfield Center, 125 East Plaza Drive
Mooresville, North Carolina 28115
Phone:(704) 664-7888 Fax:(704) 664-1778 www.pdapa.com

PREPARED FOR:
CHOATE CUSTOM HOMES, INC
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
800-728-7866

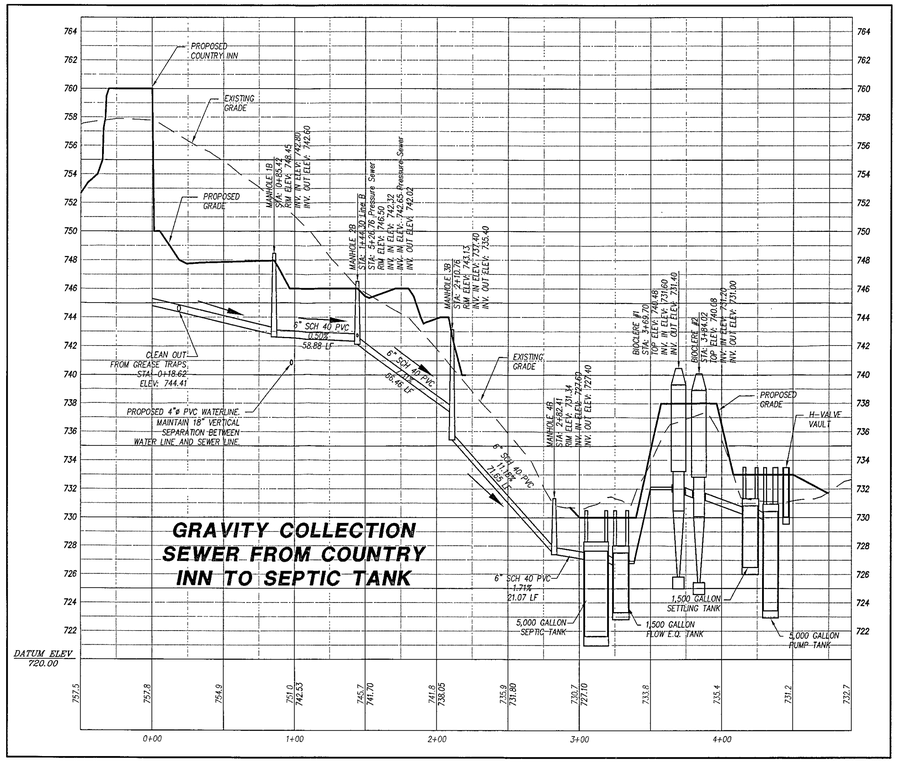
SEPTIC SYSTEM OVERALL SITE PLAN
YELLOW HILL COUNTRY INN
13229 MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

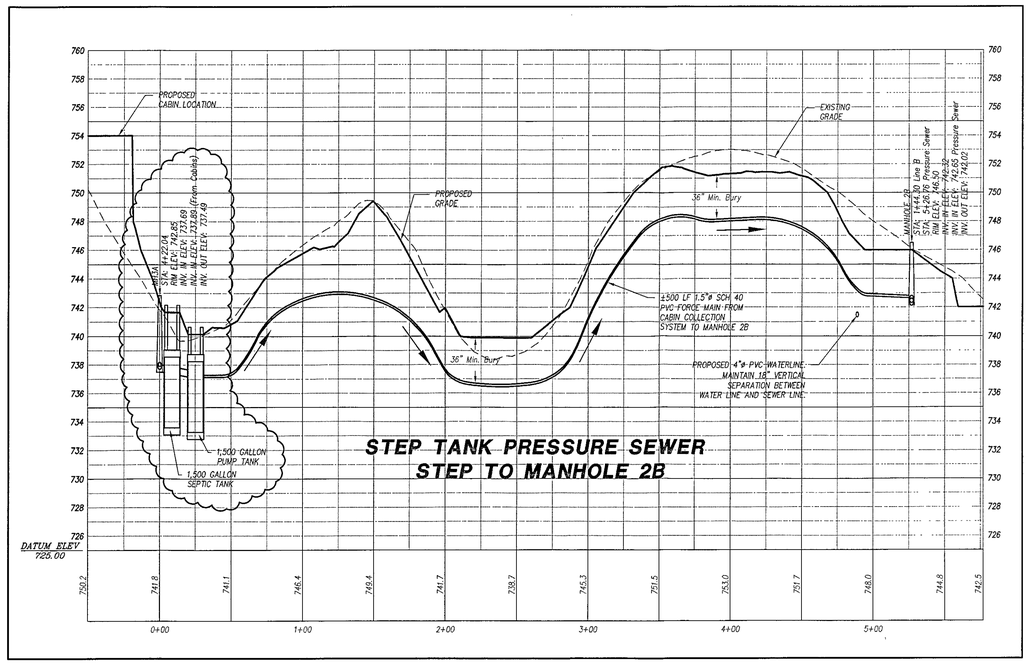
NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 032187 DONALD L. MUNDAY

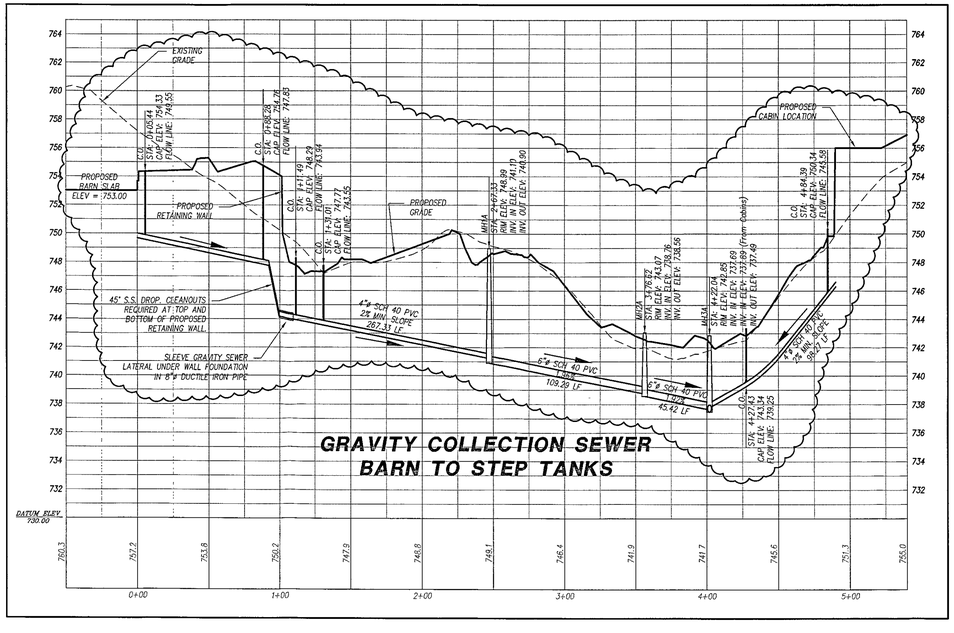
REVISIONS	BY
REV. PER COMMENTS BY NCDENR-DSWPS (1/6/10)	DMD

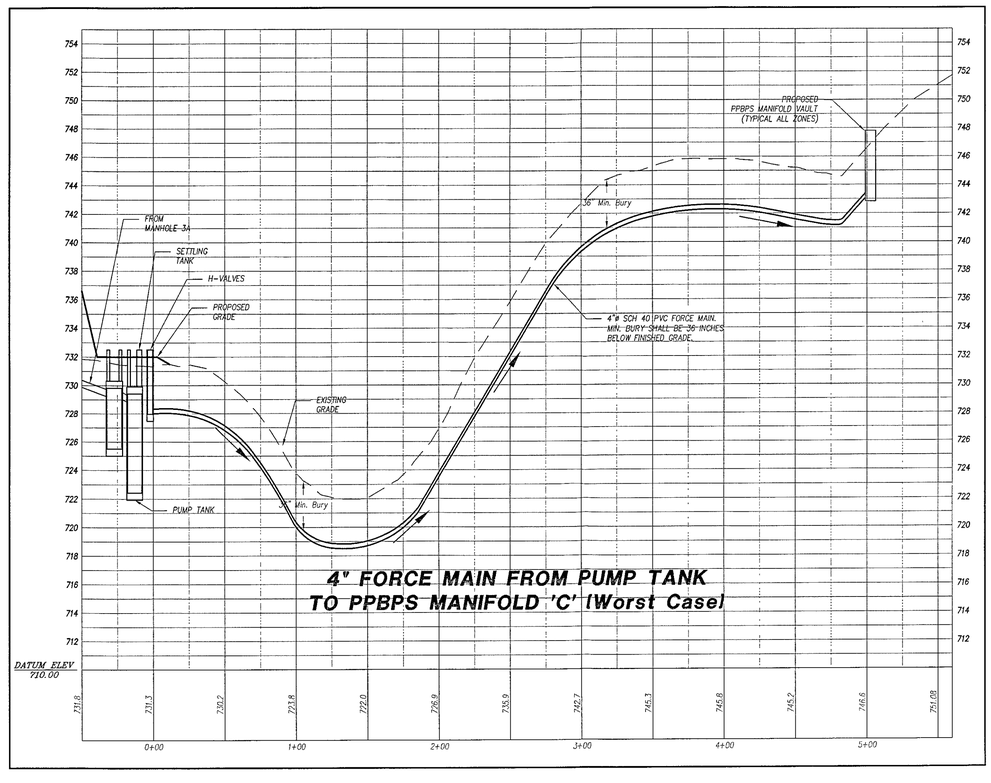
Date: 10/27/09
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Checked: DLM
Job: 08-07-07
Sheet: U-1
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of 5 Sheets

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PIEDMONT DESIGN ENGINEERING/SURVEYING/PLANNING
Associates, P.A.
Suite 101 Westfield Center, 125 East Plaza Drive
Mooresville, North Carolina 28115
Phone:(704) 664-7888 Fax:(704) 664-1778 www.pdapa.com

PREPARED FOR:
CHOATE CUSTOM HOMES, INC
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
800-728-7866

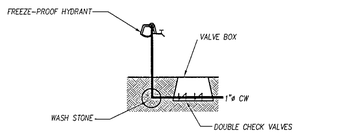
COLLECTION & DISTRIBUTION SYSTEM PROFILES
YELLOW HILL COUNTRY INN
13229 MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL ENGINEER SEAL 47527 DONALD L. MARTIN

REVISIONS	BY
A REV. PER COMMENTS BY NCDENR-DSWPS (1/6/10)	DMD

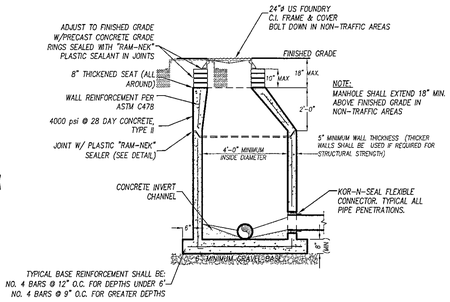
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Scale: 1"=50 FT, 1"=5 FT
Drawn: DMD
Checked: DLM
Job: 08-07-07
Sheet U-2
A 1/6/10
of 5 Sheets

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Owner: _____ Approved: _____ Date of Issue: _____
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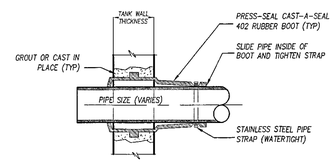
YARD HYDRANT DETAIL

N.T.S. LOCATE HYDRANT 10'± FROM TANKS WITHIN ENCLOSED AREA



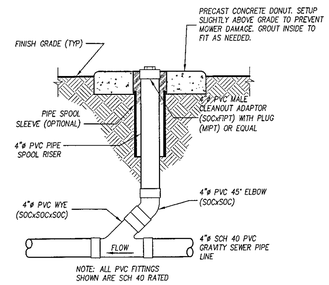
SECTION VIEW – STANDARD MANHOLE

N.T.S.



SECTION VIEW – TANK PENETRATION DETAIL

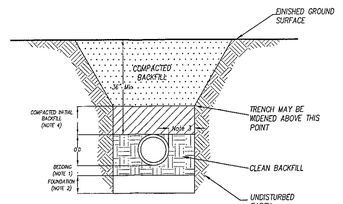
N.T.S.



GRAVITY SEWER LATERAL CLEANOUT DETAIL

N.T.S.

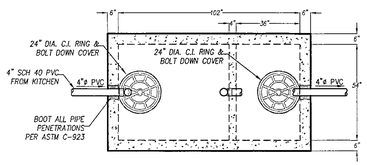
TRENCH NOTES:
1. 4" TYPICAL, 6" DEPTH IF IN ROCK
2. FOUNDATION STONE REQUIRED WHEN SOIL CONDITIONS ARE UNSTABLE
3. CLEAR DISTANCE NOT LESS THAN 4" OR MORE THAN 12" ON EITHER SIDE
4. INITIAL BACKFILL SHALL BE PLACED IN 6" LIFTS AND COMPACTED. INITAL BACKFILL SHALL CONTAIN NO BACKFILL OVER 1.5" , FROZEN LUMPS OR DEBRIS.
5. BACKFILL SHALL BE COMPACTED TO 95% STANDARD PROCTOR DENSITY
6. PVC PIPE SHALL BE SCH 40 PVC
7. DETAIL SHALL BE USED FOR ALL COLLECTON SEWERS, SERVICE LATERALS & TRANSPORT PIPING TO DISPOSAL AREA



PVC SEWER PIPE BEDDING DETAIL

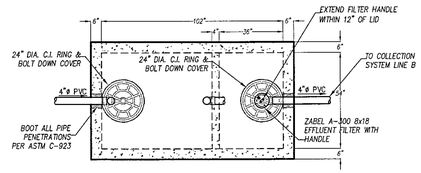
N.T.S.

REFER TO SPECIFICATION PACKAGE FOR MATERIALS SELECTION AND INSTALLATION REQUIREMENTS



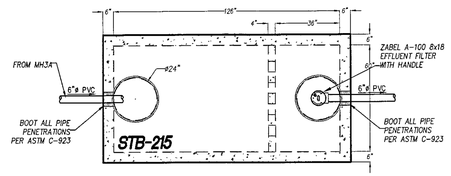
PLAN VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



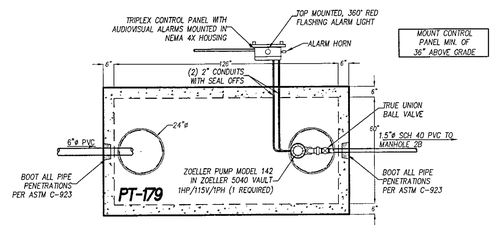
PLAN VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



PLAN VIEW–DEH APPROVED 1,500 GAL SEPTIC TANK

NTS STEP TANK



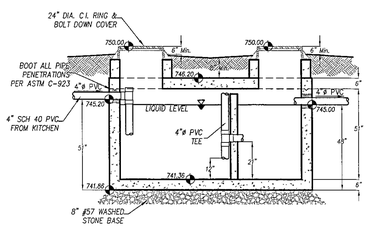
PLAN VIEW–DEH APPROVED 1,500 GAL PUMP TANK

NTS STEP TANK

ALL PIPE PENETRATIONS MUST HAVE BOOTED PENETRATION SEALS BOTH INLET AND OUTLET

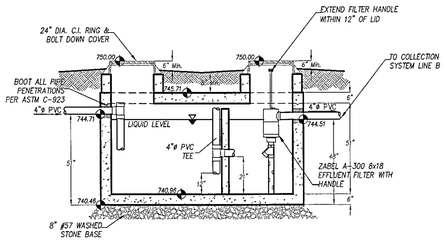
NOTE:
ALL GRAVITY PIPE BETWEEN TANKS SHALL BE SCH 40 PVC. MINIMUM SLOPE SHALL BE 2%

RISER & LID NOTES:
RISERS TO BE CAST IN PLACE AT TIME OF TANK CONSTRUCTION AND MEET THE REQUIRED APPROVAL FOR THE SPECIFIED RISER. ALL TANK ACCESS LIDS MUST HAVE BOLT DOWN OR LOCKING CAPABILITY.



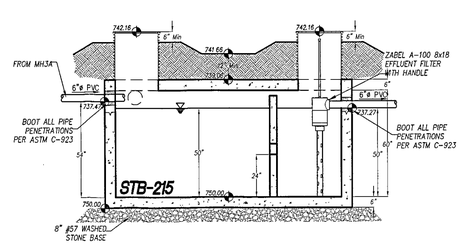
SECTION VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



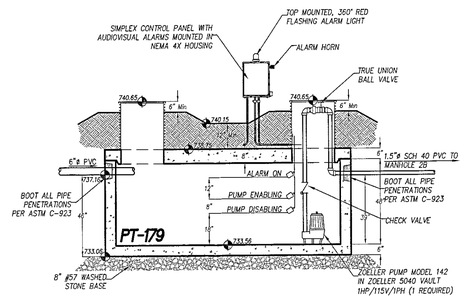
SECTION VIEW–DEH APPROVED 1,000 GAL GREASE TRAP

NTS



SECTION VIEW–DEH APPROVED 1,500 GAL SEPTIC TANK

NTS STEP TANK



SECTION VIEW–DEH APPROVED 1,500 GAL PUMP TANK

NTS STEP TANK

TANK ELEVATIONS

NOTE: TANK DIMENSIONS & ELEVATIONS BASED ON STAY RIGHT PRECAST CONCRETE COMPANY, INC. (919-876-8600). OTHER STATE APPROVED TANKS MAY BE SUBSTITUTED BUT NOT WITHOUT PRIOR APPROVAL FROM THE ENGINEER. CONTRACTOR SHALL VERIFY DIMENSIONS AND ADJUST GRADES AND FLOAT SETTINGS AS REQUIRED TO CAUSE FLOW AND DOSING AS CALLED FOR.

PIEDMONT DESIGN ENGINEERING/SURVEYING/PLANNING
Associates, P.A.
Suite 101 Westfield Center, 125 East Plaza Drive
Mooresville, North Carolina 28115
Phone:(704) 664-7888 Fax:(704) 664-1778 www.pdapa.com

PREPARED FOR:
CHOATE CUSTOM HOMES, INC.
6320 ANGUS DRIVE, SUITE D
RALEIGH, NC 27617
800-728-7866

STEP SYSTEM, GREASE TANK & COLLECTION SYSTEM DETAILS
YELLOW HILL COUNTRY INN
13229 MCCORD ROAD
HUNTERSVILLE, MECKLENBURG COUNTY, NORTH CAROLINA

NORTH CAROLINA PROFESSIONAL SEAL 17327 ENGINEER DONALD L. MCCORD

REVISIONS	BY
A REVISED ELEVATIONS ON STEP TANKS (1/6/10)	DMD

Date: 10/27/2009
Scale: 1" = 40 Ft AS SHOWN
Drawn: DMD
Checked: DLM
Job: 08-07-07
Sheet U-3
A 1/6/10
07 5 Sheets

Location: PR-31
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Owner: _____ Approved: _____ Date of Issue: _____

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