2010
JTJ
OK
12/1/09

Groundwater & Wastewater Services
Septic Project File & Data Review Worksheet

GWS File #: 9012B WASPS App #: 4749 4457

Primary ES assigned to project: OT

Secondary ES assigned to project:

Project Type: New System ☐ Alteration ☐ Repair ☑ Modified Plot Plan ☐ JTJ

I. File Review: 2010 REPAIR

Rule or Law	Permit Application			
.1937(d)	Is the Application complete	Yes ☑	No ☐	N/A ☐
.1937(d)	Is there a Site plan/Plat with application	Yes ☑	No ☐	N/A ☐
.1937(d)	Is the Facility shown?	Yes ☑	No ☐	N/A ☐
.1937(d)	Are appurtenances shown	Yes ☑	No ☐	N/A ☐
	Site Evaluation Information			
.1939 (a)(1)	Topography and Landscape Position Recorded?	Yes ☑	No ☐	N/A ☐
.1940 (a-g)	Slope % Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Texture Class Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Structure type Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Consistence Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(2)	Mineralogy Recorded?	Yes ☑	No ☐	N/A ☐
.1939 (a)(3)	Soil Wetness Condition Recorded?	Yes ☐	No ☐	N/A ☑
.1939 (a)(4)	Soil Depth to Rock or Parent Material Recorded When Encountered	Yes ☐	No ☐	N/A ☑
.1939 (a)(5)	Depth to Restrictive Horizons Recorded When Encountered?	Yes ☑	No ☐	N/A ☑
.1939 (a)(6)	Sufficient Available Space Recorded?	Yes ☐	No ☐	N/A ☐
.1937(m)	Are the Profile Locations Shown?			
.1939(a)	Are the S/PS Profiles in system & in repair area?	Yes ☑	No ☐	N/A ☐
& .1945(b)	Number of auger borings made: 3			
	Were sufficient auger borings made?	Yes ☑	No ☐	N/A ☐
.1939(d), .1955, .1956, .1957	LTAR	Yes ☑	No ☐	N/A ☐
	Improvement Permit/Construction Authorization			
.1937(g)	Proposed System Type stated-Initial	Yes ☐	No ☐	N/A ☑
130A-336(a)				
.1945(b)	Proposed System Type stated-Repair	Yes ☑	No ☐	N/A ☐
130A-336 (a)(3)	System location identifiable by setbacks - Initial	Yes ☐	No ☐	N/A ☑
.1937(g)	System components shown – Initial	Yes ☑	No ☑	N/A ☐
.1945(b)				
.1945(b)	Repair area shown	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Does System design match facility, flow & WWcharacteristics?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is System design consistent with soil/site conditions?	Yes ☑	No ☐	N/A ☐
.1937 (f)(g)	Is the System located in the approved area?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Is the Design flow (gpd) indicated?	Yes ☑	No ☐	N/A ☐

130A-336(a)	Number of Bedrooms, employees, seats, etc. indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench depth indicated?	Yes ☐	No ☐	N/A ☐
.1937(g)	Trench width indicated?	Yes ☑	No ☐	N/A ☐
.1937(g)	Trench length indicated?	Yes ☐	No ☐	N/A ☐
130A-336(a)(1)	Proposed/existing well shown?	Yes ☑	No ☐	N/A ☐
130A-336(a)(1)	Property line lengths shown?	Yes ☑	No ☐	N/A ☐
130A-336(a)	Facility/appurtenance setbacks shown from fixed points?	Yes ☑	No ☐	N/A ☐
	Operation Permit			
.1937(i)	System type as described in table V(a) of rule .1961	Yes ☑	No ☐	N/A ☐
.1937(i)	Conditions for system performance, operation, maintenance, monitoring and reporting.	Yes ☐	No ☐	N/A ☐

II. WASPS Review:

Construction authorization issued	Yes ☐	No ☐	N/A ☐
Installation approval issued	Yes ☐	No ☐	N/A ☐
Operation permit issued	Yes ☐	No ☐	N/A ☐
Other related documentation	Yes ☐	No ☐	N/A ☐

Items requiring correction/modification: _____

Comments:

_____

_____

_____

_____

_____

IA issued date: 8-27-10

OP issued date: 9 9-10

Review performed by: RC

Date performed: 12/04

9-16-10

8012B

MECKLENBURG COUNTY
GROUNDWATER & WASTEWATER SERVICES

4749

APPLICATION FOR A RESIDENTIAL SITE IMPROVEMENT PERMIT/ CONSTRUCTION AUTHORIZATION FOR AN ON-SITE WASTEWATER SYSTEM, NEW WELL INSTALLATION, OR REPAIR OF EXISTING WELL

1. SEPTIC / TYPE APPLICATION: ☐ N/A ☐ NEW SYSTEM ☐ ALTERATION ☒ REPAIR ☐ MODIFIED PLOT PLAN

2. WELL / TYPE APPLICATION: ☒ N/A ☐ NEW WELL ☐ MAJOR REPAIR ☐ ABANDONMENT

3. JOB LOCATION INFORMATION:

TAX PARCEL NUMBER: 001-711-15
STREET ADDRESS: 21437 BETHEL CHURCH RD
CITY: CORNELIUS
STATE: NC ZIP: 28031
SUBDIVISION NAME:
LOT #: LOT SIZE (acres):
TOWNSHIP:
☐ 0-MECKLENBURG ☒ 3-CORNELIUS ☐ 6-HUNTERSVILLE
☐ 1-CHARLOTTE ☐ 4-PINEVILLE ☐ 7-MINT HILL
☐ 2-DAVIDSON ☐ 5-MATTHEWS

4. BUILDING INFORMATION:

BUILDING TYPE:
☐ SINGLE MOBILE HOME ☐ MODULAR HOME
☐ DOUBLE WIDE ☐ MULTIPLE FAMILY
☒ HOUSE ☐ OTHER _____
HEATED SQUARE FOOTAGE:
NUMBER OF BEDROOMS: 3
NUMBER OF OCCUPANTS: 2
FOUNDATION TYPE:
☐ CONCRETE SLAB ☐ BASEMENT WITH PLUMBING
☐ CRAWL SPACE ☐ BASMENT WITH NO PLUMBING

5. IF PLANNING TO EXPAND OR ALTER THE EXISTING SEPTIC SYSTEM PLEASE COMPLETE THE FOLLOWING SECTION: ☐ N/A

NUMBER OF BEDROOMS TO BE ADDED: Ø NUMBER OF ADDITIONAL OCCUPANTS IN THE RESIDENCE: Ø

6. WATER SUPPLY: ☐ MUNICIPAL ☒ PRIVATE WELL ☐ PUBLIC WELL ☐ SHARED WELL ☐ OTHER _____

7. PROPOSED USE OF WELL: ☐ N/A ☐ IRRIGATION ☒ POTABLE (DRINKING WATER) ☐ OTHER _____

8. PLEASE INDICATE AND RANK DESIRED SEPTIC SYSTEM TYPE(S) IN ORDER OF PREFERENCE *(1-MOST DESIRED 5-LEAST DESIRED)*:

☐ N/A ☐ ANY TYPE ☐ CONVENTIONAL ☐ ACCEPTED ☐ INNOVATIVE ☐ ALTERNATIVE ☐ OTHER _____

8A. RANK: ____ ____ ____ ____ ____

9. DO ANY OF THE FOLLOWING APPLY TO THE PROPERTY IN QUESTION? IF "YES" PLEASE ATTACH SUPPORTING DOCUMENTATION.

BURIED CABLES, LANDFILLS, STUMPHOLES	☐ YES	☐ NO	GRADING/SOIL REMOVAL PERFORMED	☐ YES	☒ NO
EXISTING WASTEWATER (SEPTIC) SYSTEMS	☒ YES	☐ NO	JURISDICTIONAL WETLANDS	☐ YES	☒ NO
WELLS, SPRINGS, OR WATER LINES	☒ YES	☐ NO	APPROVAL REQUIRED BY ANY OTHER PUBLIC AGENCY	☐ YES	☒ NO
EASEMENTS OR RIGHT-OF-WAYS	☐ YES	☐ NO	WASTEWATER OTHER THAN DOMESTIC SEWAGE	☐ YES	☒ NO
CHEMICAL/PETROLEUM STORAGE TANKS	☐ YES	☐ NO	KNOWN UNDERGROUND CONTAMINATION	☐ YES	☒ NO
WASTE STORAGE	☐ YES	☒ NO	GROUNDWATER USE RESTRICTIONS/VARIANCES	☐ YES	☒ NO

10. WHAT DATE WAS THE PROPERTY ORIGINALLY DEEDED AND RECORDED? _____ ☐ UNKNOWN

11. WHAT IS THE ANTICIPATED CLOSING DATE FOR THIS PROPERTY? _____ ☒ N/A

12. PROPERTY OWNER:

NAME: CHUNGWEI/HOLLY H SUN
ADDRESS: 21437 BETHEL CHURCH RD
CITY: CORNELIUS
STATE: NC ZIP: 28031
HOME PHONE: 704-892-1037
WORK PHONE: 704-370-2021
MOBILE PHONE:
FAX:

13. OWNER'S LEGAL REPRESENTATIVE, IF APPLICABLE:

NAME:
ADDRESS:
CITY:
STATE: ZIP:
HOME PHONE:
WORK PHONE:
MOBILE PHONE:
FAX:

14. SEPTIC SYSTEM PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Improvement Permit and Authorization to Construct shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for either sixty (60) months or is non-expiring depending upon the documentation submitted: complete site plan = 60 months, complete plat = non-expiring.

CWS (Initial here for septic system applications)

15. WELL PERMIT APPLICATION:

If the information in this application is falsified, changed, or the site is altered, then the Well Permit shall become invalid. I have read this application and certify that the information provided herein is true, complete and correct. Authorized county and state officials are granted right of entry to conduct necessary inspections to determine compliance with applicable laws and rules. I understand that I am solely responsible for the proper identification and labeling of all property lines and corners and making the site accessible so that a complete site evaluation can be performed. The permit is valid for a period of twelve (12) months from the date of issuance.

_____ (Initial here for well applications)

16. APPLICATION SIGNATURE SECTION:

ONLY COMPLETE APPLICATIONS WILL BE PROCESSED. A proper signature is required in order to process your application. Please review the application carefully and sign in the space provided below.

Property Owner's or Owner's Legal Representative Signature

8/30/10
Date

OFFICE USE ONLY

☐ SURVEY PLAT TO SCALE SUBMITTED ☐ SCALED SITE PLAN SUBMITTED ☐ UN-SCALED SITE PLAN SUBMITTED

SEPTIC APPLICATION FEES RECEIVED: $ NA DATE FEE RECEIVED: _____

WELL APPLICATION FEES RECEIVED: $ _____ DATE FEE RECEIVED: _____

APPLICATION PROCESSED BY: SC

GWS FILE NUMBER ASSIGNED: 8012B

APPLICATION ID NUMBER ASSIGNED: 4749

COMMENTS:

MECKLENBURG COUNTY – GROUNDWATER & WASTEWATER SERVICES
700 N. TRYON ST. SUITE 211 CHARLOTTE, NC 28202, OFFICE: 704-336-5103, FAX: 704-336-6894

DENR/DEH

ON-SITE WASTEWATER SECTION

Sheet ___ *of* ___
PROPERTY ID #: ___
COUNTY: ___

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Chungwei Sun
ADDRESS: 21437 Bethel Church Road, Cornelius, NC 28031
PROPOSED FACILITY: Residence
PROPOSED DESIGN FLOW (.1949): 360
LOCATION OF SITE: 21437 Bethel Church Road, Cornelius, NC 28031
WATER SUPPLY: • Private • Public • Well • Spring • Other ___
EVALUATION METHOD: • Auger Boring • Pit • Cut

APPLICATION DATE 8/30/10
DATE EVALUATED: 8/30/10
PROPERTY SIZE: .75
PROPERTY RECORDED: 1962
TYPE OF WASTEWATER: • Sewage • Industrial Process • Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	OTHER PROFILE FACTORS .1943 SOIL DEPTH	OTHER PROFILE FACTORS .1956 SAPRO CLASS	OTHER PROFILE FACTORS .1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LS 4%	0-4	GR/CL	FR/SS/SP/SE×P	>48" TO SOIL WETNESS	48"	NA	NA	IV, P.S. 0.3 G/D/FT²
		4-48	SBK/C	FI/S/P/SE×P					
2									
3									
4									

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	P.S.	P.S.
System Type(s)	IIa	IIa
Site LTAR	0.3 G/D/FT²	0.3 G/D/FT²

OTHER FACTORS (.1946): ___
SITE CLASSIFICATION (.1948): P.S.
EVALUATED BY: Jeremy Mickelson, P.S.
OTHER(S) PRESENT: ___

COMMENTS: ___

LEGEND

use the following standard abbreviations

LANDSCAPE POSITION	GROUP	SOIL TEXTURE	CONVENTIONAL .1955 LTAR*	LPP .1957 LTAR*	MINERALOGY/ CONSISTENCE	STRUCTURE
CC (Concave Slope)	I	S (Sand)	1.2 - 0.8	0 6 - 0.4	NEXP (Non-expansive)	G (Single Grain)
CV (Convex Slope)		LS (Loamy Sand)			SEXP (Slightly Expansive)	M (Massive)
D (Drainage Way)					EXP (Expansive)	CR (Crumb)
DS (Debris Slump)	II	SL (Sandy Loam)	0.8 - 0.6	0.4 - 0.3		GR (Granular)
FP (Flood Plain)		L (Loam)				SBK (Subangular Blocky)
FS (Foot Slope)						ABK (Angular Blocky)
H (Head Slope)	III	Si (Silt)	0.6 - 0.3	0.3 - 0.15		PL (Platy)
L (Linear Slope)		SiCL (Silty Clay Loam)				PR (Prismatic)
N (Nose Slope)		CL (Clay Loam)				
R (Ridge)		SCL (Sandy Clay Loam)			**MOIST**	**WET**
S (Shoulder Slope)		SiL (Silt Loam)				
T (Terrace)					VFR (Very Friable)	NS (Non-sticky)
	IV	SC (Sandy Clay)	0.4 - 0.1	0.2 - 0 05	FR (Friable)	SS (Slightly Sticky)
		SiC (Silty Clay)			FI (Firm)	S (Sticky)
		C (Clay)			VFI (Very Firm v Very Sticky)	VS (Very Sticky)
		O (Organic)	None	None	EFI (Extremely Firm)	NP (Non-plastic)
						SP (Slightly Plastic)
						P (Plastic)
						VP (Very Plastic)

*Adjust LTAR due to depth, consistence, structure, soil wetness, landscape, position, wastewater flow and quality.

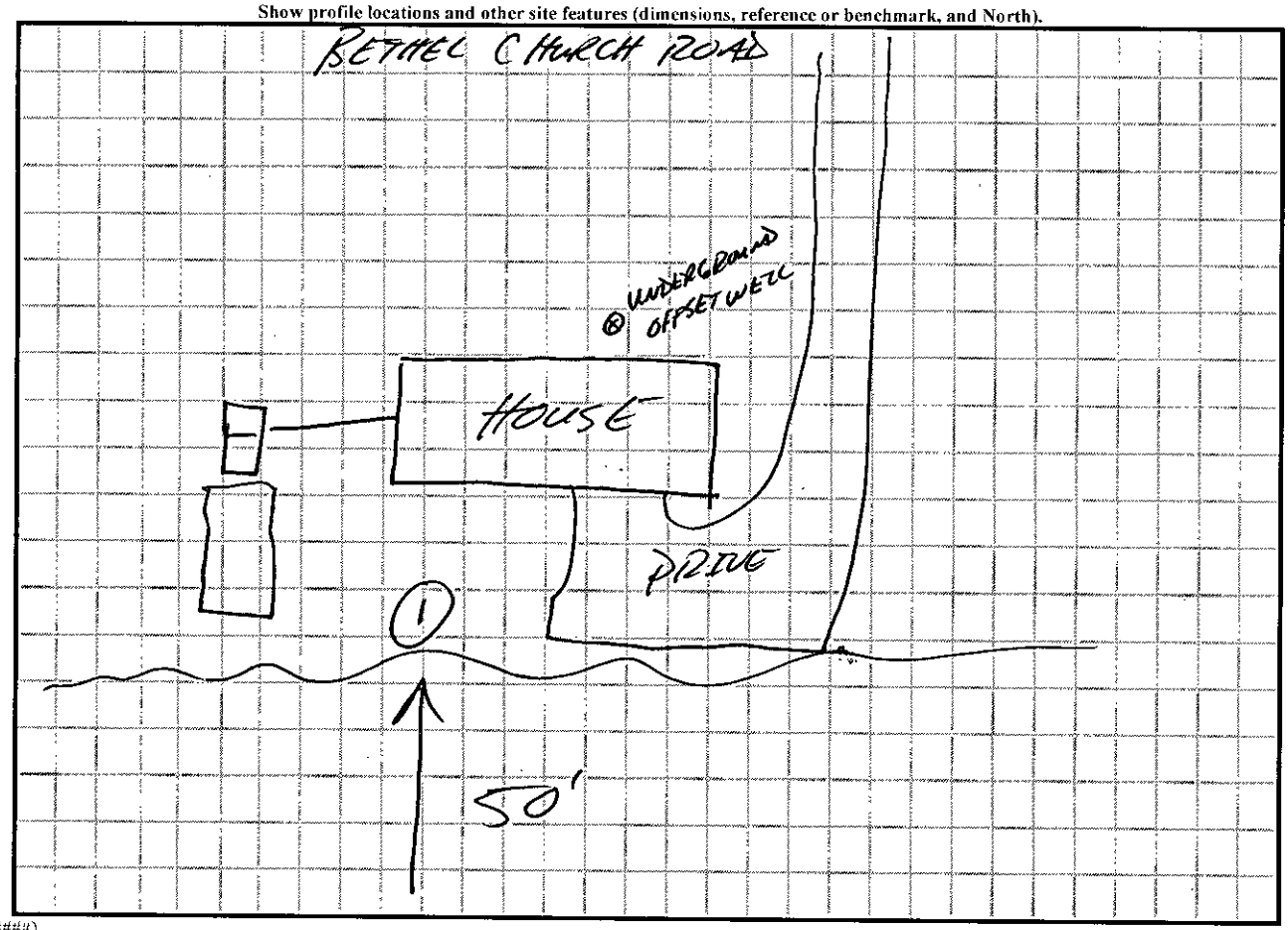
NOTES

HORIZON DEPTH	In inches below natural soil surface
DEPTH OF FILL	In inches from land surface
RESTRICTIVE HORIZON	Thickness and depth from land surface
SAPROLITE	S(suitable) or U(unsuitable)
SOIL WETNESS	Inches from land surface to free water or inches from land surface to soil colors with chroma 2 or less - record Munsell color chip designation
CLASSIFICATION	S (Suitable), PS (Provisionally Suitable), or U (Unsuitable)

Evaluation of saprolite shall be by pits.

Long-term Acceptance Rate (LTAR): gal/day/ft^2

Show profile locations and other site features (dimensions, reference or benchmark, and North).



DENR (######)
Review (#####)

LAKE NORMAN

Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: 704-336-5103 Fax: 704-336-6894
http://groundwater.charmeck.org

Homeowner/Tenant Interview Form

Please fill out completely to aid in the evaluation of your failing septic system.

Name: HOLLY/CHUNGWEI SUN Date: 8/30/10

Address: 21437 BETHEL CHURCH RD Phone: 704-892-1037 (Home/Cell)

CORNELIUS, NC 28031 704-370-2021 (Work)

Email: CWSun81@gmail.com

When was the septic system installed? 1962 Permit/File #:

Who installed the septic system?

When was the septic tank last pumped? MAY 2010

Who pumped the septic tank? Stanley Environmental

How often have you had the tank pumped? Once

Where are the septic tank and drain field located on the property?

Approximately 20-30 feet west of the house

Briefly describe the problem you are experiencing with the septic system:

Drain fields are damp and there is a small pool of water on top of Septic Tank

When did you first notice the problem? about a month ago

Does the problem seem to be linked to certain events (heavy rains, doing laundry, guests staying over, etc.)?

Yes ☐ No ☑

Explain:

How many people are living in the house? 2 Adults Teens 1 Children

How much water do you use each day (provide estimate in gallons)? 200

Is the property served by public water? Yes ☐ No ☒

If yes, on average how much is your monthly water bill? $_____

Do you have a dishwasher? Yes ☑ No ☐ How many times per week is it used? 2-3

Do you have a garbage disposal? Yes ☑ No ☐ How many times per week is it used? 1

Do you have a washing machine? Yes ☑ No ☐ How many times per week is it used? 4-5

Do you use "in tank" or "in bowl" toilet sanitizer products? Yes ☐ No ☐

Do you have a water softener unit or water treatment system installed? Yes ☐ No ☑

If yes, where does the system drain? _____

Are any household cleaning chemicals put down the drain? Yes ☐ No ☑

If yes, please indicate what types of chemicals: _____

Are any other types of chemicals (paints, solvents, oils, etc.) put down the drain? Yes ☐ No ☑

If yes, please indicate what types of chemicals: _____

Have any new water using fixtures been added in the house since the septic system was installed? Yes ☑ No ☐

If yes, please indicate what type of fixtures have been added: new shower, sinks, toilets

Excluding sinks, showers, bathtubs, and toilets please list any other plumbing fixtures (spa, whirlpool, etc.) that are in the house:

_____

Do you have an in-ground irrigation system? Yes ☐ No ☑

If yes, how often is the system used during a one week period? _____

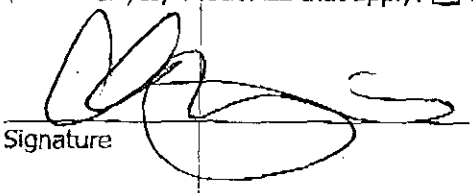
Has any site work been done at the property or to the house since you moved in? Examples include: gutter drains, swimming pool installation, basement remodel/finish, landscaping, paving of driveway, etc.

Please describe:

House was recently completely renovated, including installing new showers, toilets, sinks, paving of driveway

Are there underground utilities located on the property? Yes ☑ No ☐

If yes, check ALL that apply: ☑ Power ☑ Phone ☑ Water ☑ Gas ☑ Cable TV



Signature

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

INSTALLATION APPROVAL for an ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 8012B Permit #: 4749 Tax Parcel #: 001-711-15

Property Owner: HOLLY HARRISON SUN

Job Location Address: 21437 BETHEL CHURCH ROAD

City: CORNELIUS State: NC Zip Code: 28031

Installation Approval Issuance Date: 8/27/10

Permission is hereby given to ☐ install ☐ alter ☒ repair an on-site wastewater treatment & and disposal system, with subsurface soil absorption and effluent discharge, as specified herein at the described location. This approval is granted based upon the application information submitted to our office. All work shall be completed on or before 9/27/10, after which date this approval shall be null and void. The system shall meet all of the construction requirements of 15A NCAC 18A. 1900 which are in effect on the date of granting this approval. 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 of hereafter owning, controlling or using such system from any liability resulting from the failure of the system to operate properly.

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

Permitted Design Flow: 360 GPD

Liquid Capacity of Septic Tank: 1500 - EXISTING gallons

Site LTAR: 0.3 GPD/ft² (For new installations only.)

Liquid Capacity of Dosing Tank: ——— gallons

Drainfield Design ☒ N/A

Trench Depth: _____ inches

Trench Width: _____ feet

Line Spacing: _____ feet (O.C.)

Total line length: _____ feet

# of Lines: _____ @ _____ feet

Depth of Media: _____ inches (Type) _____

Distribution Device: _____

Bed Design *(For Repair Installations ONLY.)* ☐ N/A

Bed Depth: 36-40 inches

Bed Width: 9 feet

Total line length: 200 feet

# of Lines: 3 @ 67 feet

Depth of Media: 24 inches (Type) STONE/TIRE CHIPS

Distribution Device: D-BOX

Water Supply Source

☒ Municipal ☐ Private Well ☐ Community Well

☐ Other _____

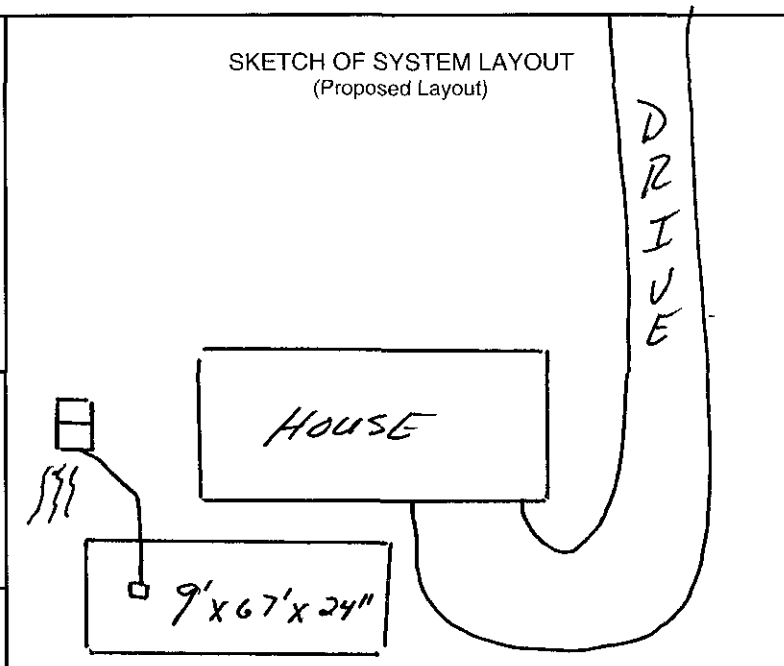
Minimum System Setbacks

Distance from Building Foundation: >5' feet

Distance from Property Line: >10' feet

Distance from Water Supply Source: >50' feet

SKETCH OF SYSTEM LAYOUT
(Proposed Layout)



Comments: System Classification & Type: 2010 Repair

INSTALL 9'X67'X24" STONE BED

DENR Authorized Agent: Jeremy Nicholson, R.S. Signature: Jeremy Nicholson, R.S.

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 80128 Permit #: 4749 Tax Parcel #: 001-711-15

Property Owner: Holly Harrison Sun

Job Location Address: 21437 Bethel Church Road

City: Cornelius State: NC Zip Code: 28031

Operation Permit Issuance Date: 9/9/10 Contractor Name: Autrey

Permitted Design Flow: 360 GPD

Liquid Capacity of Septic Tank: Existing gallons

Liquid Capacity of Dosing Tank: — gallons

Effluent Pump Model: —

Drainfield Installation ☒ N/A

Trench Depth: ~~____~~ inches

Trench Width: ____ feet

Line Spacing: ____ feet (O.C.)

Total line length: ____ feet

# of Lines: ____ @ ____ feet

Depth of Media: ____ inches (Type) ____

Depth of Cover: ____ inches

Distribution Device: ____

Inspection Dates

Tank(s) Inspected: —

Excavation Inspected: 9/9/10

Pump & Controls Inspected: —

Bed Installation *(For Repair Installations ONLY.)* ☐ N/A

Bed Depth: 40 inches

Bed Width: 9 feet

Total line length: 200 feet

# of Lines: 3 @ 67 feet

Depth of Media: 24-30 inches (Type) Tire Chips

Depth of Cover: 24 inches

Distribution Device: D-Box

Water Supply Source

☒ Municipal ☒ Private Well ☐ Community Well

☐ Other ____

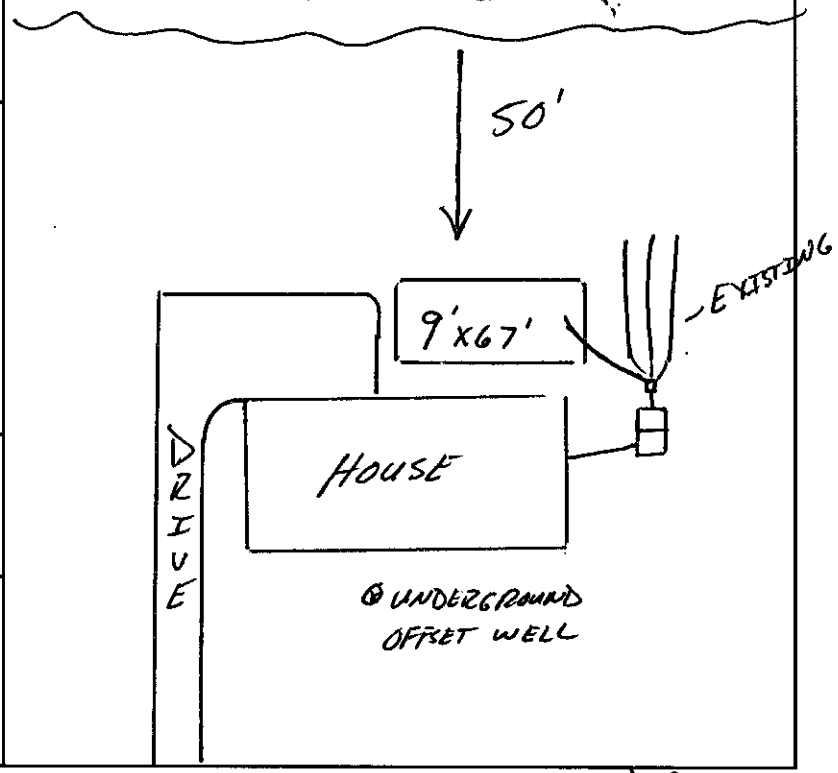
System Installation Setbacks

Distance from Building Foundation: 75' feet

Distance from Property Line: 710' feet

Distance from Water Supply Source: 750' feet

SKETCH OF SYSTEM INSTALLATION
(As-Built Drawing)



The undersigned has inspected the Septic Tank System described above, and certifies it has been ☐ installed ☐ altered ☒ repaired ☐ as detailed in the plot above ☐ in accordance with the permit issued 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. The issuance of this 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. 1900 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 or Revocation of this permit.

Comments: System Classification & Type: IIa, Conventional, GBD, Gravity, NA, NA

DENR Authorized Agent: Jeremy Michelone, R.S. Signature: Jeremy Michelone, R.S.

Mecklenburg County Groundwater & Wastewater Services
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

NC DENR
Division of Environmental Health
On-Site Wastewater Section

OPERATION PERMIT for an
ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

File #: 2012B Permit #: 4749 Tax Parcel #: 001-711-15

Property Owner: Holly Harrison Sain

Job Location Address: 21437 Bethel Church Road

City: Cornelius State: NC Zip Code: 28031

OPERATION PERMIT CONDITIONS:

I. Performance: System shall perform in accordance with 15A NCAC 18A .1961.

II. Monitoring: System shall be monitored as required by 15A NCAC 18A .1961.

III. Maintenance: Ground absorption sewage treatment and disposal systems shall be checked, and the contents of the septic tank removed, periodically from all compartments, to ensure proper operation of the system. The contents shall be pumped whenever the solids level is found to be more than 1/3 of the liquid depth in any compartment.

IV. Operation: System shall be operated in accordance with 15A NCAC 18A .1961.

System Classification: IIa

*Operation Permits for Type V and VI systems expire five (5) years from the date of issuance (in accordance with Table V(a)). The system owner must contact GWS six (6) months prior to expiration for permit renewal.

Subsurface system operator required: Yes ☐ No ☒

☐ This type of system requires the system owner to maintain a contract with a certified operator to perform system inspection, maintenance, and reporting as required in 15A NCAC 18A .1961. and Table V(a). The system owner is responsible for all fees associated with these services.

☒ System does not require inspection by GWS on a routine frequency.

☐ System requires inspection by GWS once every five (5) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every three (3) years. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every twelve (12) months. The system owner is responsible for all fees associated with the inspection.

☐ System requires inspection by GWS once every six (6) months. The system owner is responsible for all fees associated with the inspection.

V. Other: 2010 Repair

DENR Authorized Agent: Jeremy Mickelson, R.S. Date: 9/9/10

Signature: Jeremy Mickelson, R.S.

FEE: 100
DATE: 11/24/09
CRT [ ]

or rec'd 6/08 $300

APPLICATION FOR APPROVAL TO USE AN EXISTING ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM

MECKLENBURG COUNTY - GROUNDWATER &.WASTEWATER SERVICES
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

GWS – UES.APP 06/07

FILE #: 8012B

TYPE APPLCATION: JPM 4452

- ☐ ADDITION - INCREASE ROOMS/OCCUPANCY/MOBILE HOME SIZE (A / M)
- ☐ ADDITION - RENOVATION OR GARAGE WITH NO MAJOR CHANGES (X)
- ☐ EXCHANGE MOBILE HOME - SAME # BEDROOMS (Y)
- ☐ COMMERCIAL OR INDUSTRIAL (N)

PERSON FILING APPLICATION:
NAME: EFC Assoc. Inc/d/b/a EFC Builders
ADDRESS: 4205. Main St
CITY: Troutman
STATE: NC ZIP: 28166
PHONE: 704.528.5221
ALTERNATE PHONE: 704.239.2022

PROPERTY OWNER:
NAME: Chiengiee + Holly Sin
ADDRESS: 21437 Bethel Church Rd
CITY: Cornelius
STATE: NC ZIP: 28031
PHONE: 704.759.7713
ALTERNATE PHONE:

JOB LOCATION INFORMATION
TAX/PARCEL #: 00171115
STREET ADDRESS: 21437 Bethel Church Rd
CITY: Cornelius.
STATE: NC ZIP: 28031
SUBDIVISION OR MOBILE HOME PARK NAME: Serene waters
LOT #: 2

TOWNSHIP:
- ☐ 0-MECKLENBURG
- ☐ 1-CHARLOTTE
- ☐ 2-DAVIDSON
- ☐ 3-CORNELIUS
- ☐ 4-PINEVILLE
- ☐ 5-MATTHEWS
- ☐ 6-HUNTERSVILLE
- ☐ 7-MINT HILL

WATER SUPPLY:
☐ MUNICIPAL (M) ☐ COMMUNITY (C) ☑ PRIVATE WELL (P) ☐ SHARED WELL (S) ☐ OTHER 'SPRINGS' (O)

RESIDENTIAL PROPERTY TYPE:
☑ HOUSE (H) ☐ MODULAR HOME (M) ☐ MULTIPLE FAMILY (U)
☐ SINGLE MOBILE HOME (S) ☐ DOUBLE WIDE (D)
☐ OTHER (O)

OCCUPANCY (both fields are required):
NUMBER OF BEDROOMS: 3
NUMBER OF OCCUPANTS: 2

COMMERCIAL / INDUSTRIAL PROPERTY TYPE:
TYPE OF BUSINESS:
EMPLOYEES PER SHIFT:
OF SHIFTS:
INDUSTRIAL WASTES? ☐ YES ☐ NO
UNDERGROUND STORAGE TANKS? ☐ YES ☐ NO

ADDITION TYPE ATTACHED TO EXISTING STRUCTURE: Removing bedroom inside house and convert to Den/play room
☑ BEDROOM ☐ BATHROOM ☐ KITCHEN ☐ DINING ROOM ☐ LIVING ROOM ☐ DEN
☑ GARAGE ☐ SUNROOM ☐ PORCH ☐ DECK ☐ OTHER

ADDITION TYPE DETACHED FROM EXISTING STRUCTURE:
☐ DETACHED GARAGE ☐ DETACHED GARAGE WITH PLUMBING ☐ POOL HOUSE ☐ SHOP ☐ BARN
☐ STORAGE SHED ☐ DETACHED PORCH / DECK ☐ OTHER

*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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Owner's/Agent's Signature — Date: 11/24/09

*The undersigned, an authorized agent of the Mecklenburg County Health Department, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules for Sanitary Sewage Collection, 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 y this Department.
- This permit is not transferable.

☐ ADDITION / RENOVATION APPROVAL - VALID 1 YEAR FROM ISSUANCE
☐ MOBILE HOME EXCHANGE APPROVAL - VALID 6 MONTHS FROM ISSUANCE

O.K. to UES to add a Garage, Bedroom & bathroom. House will remain a 3 Bedroom House.

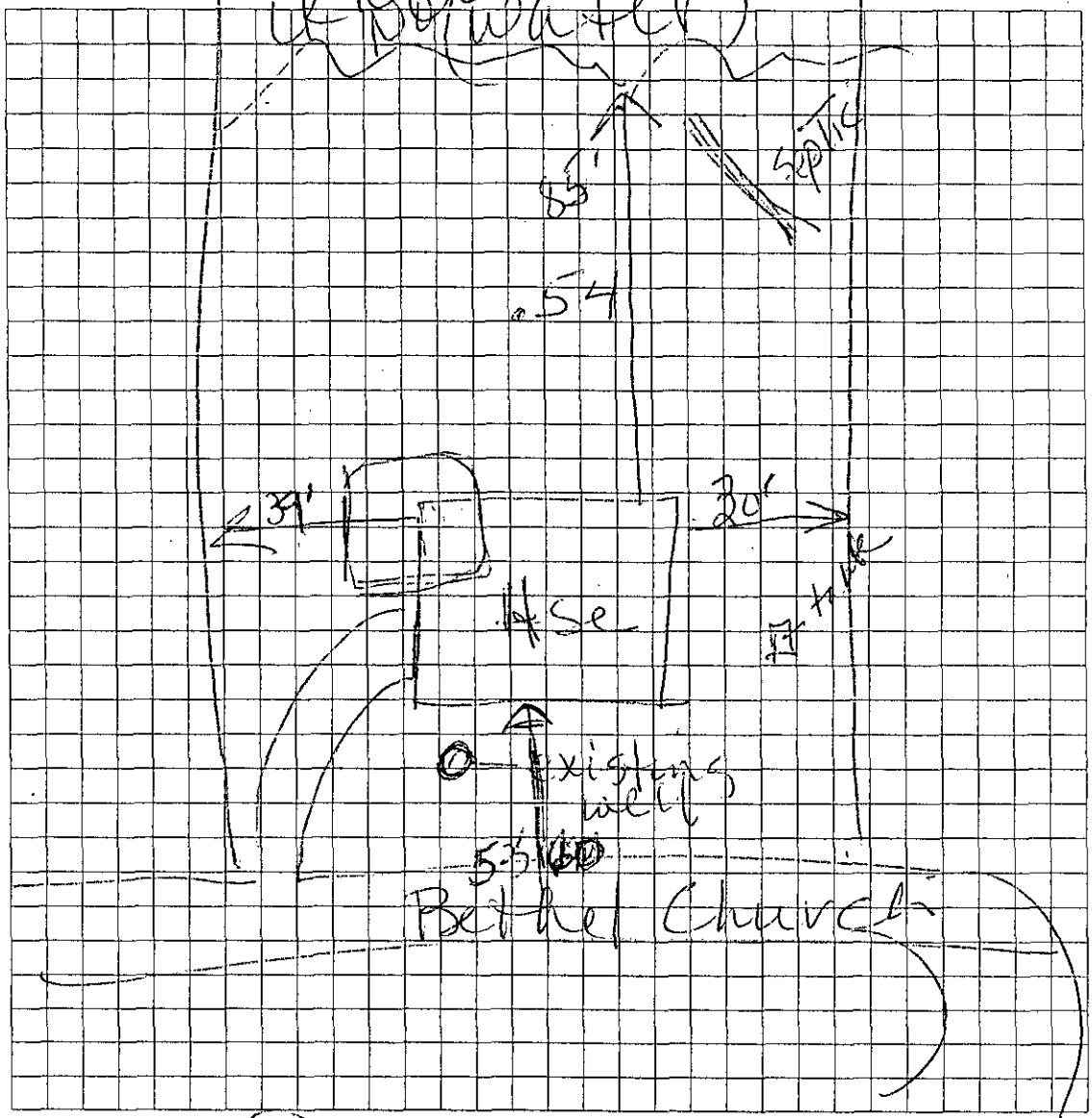
EHS Signature — Date: 12/1/09

Mecklenburg County
Land Use & Environmental Service Agency
Groundwater & Wastewater Services
700 N. Tryon St., Suite 211
Charlotte, NC 28202
Phone: (704) 336-5103
Fax: (704) 336-6894

File # 8012B
Date

PROPOSED PLOT PLAN

A map showing existing and proposed property lines and easements with dimensions, the location of the single family residence, non-single family residence, or other facility, and appurtenances, the site for the proposed well, and the location of existing or proposed sewer lines and/or sewage disposal systems, surface water bodies, aboveground or underground storage tanks. Name all roads adjoining the property. If this a repair indicate the type of repair.

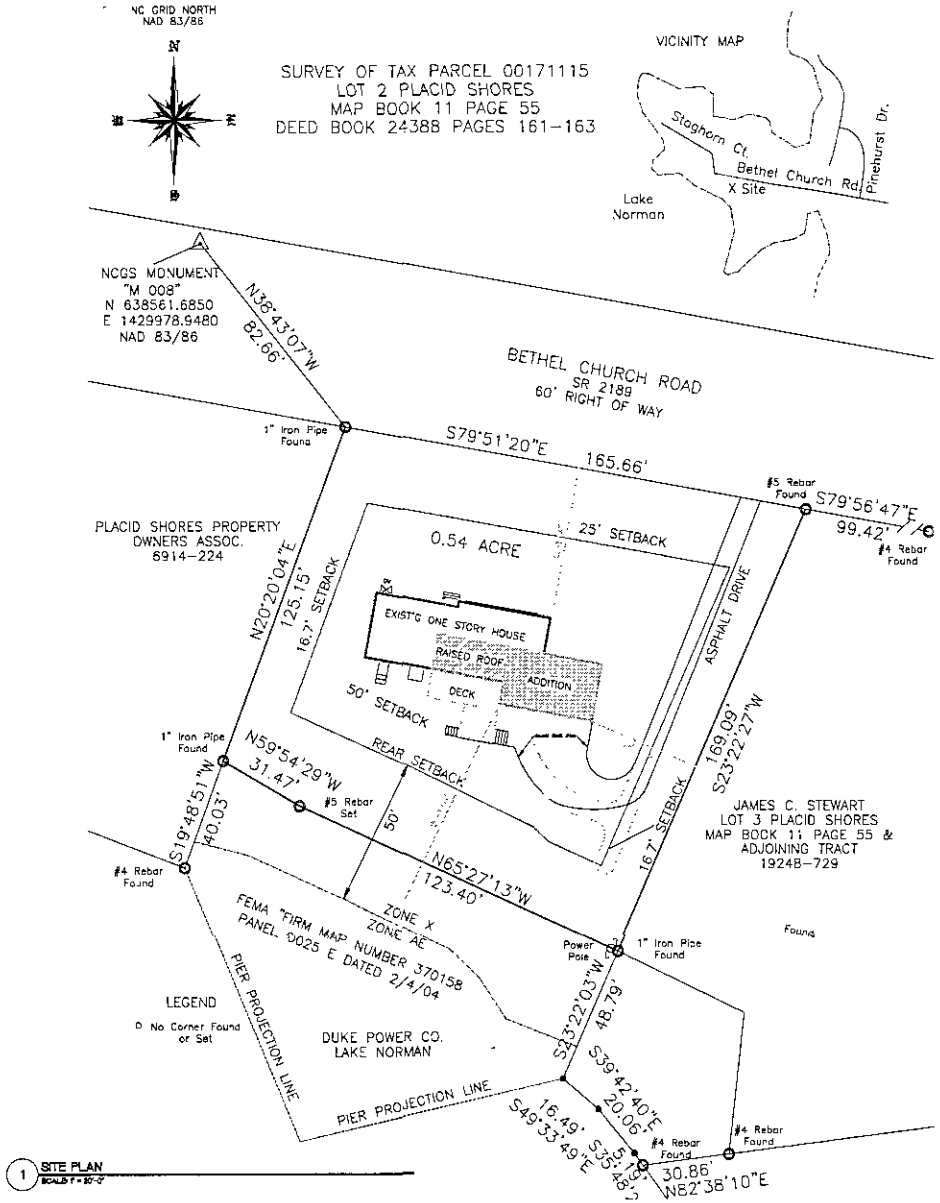


Owner/Agent Signature	
Date 11/24/09	

LBC 12/15/04

SUN HOUSE RENOVATION

21437 Bethel Church Rd., Cornelius NC, 28031



1 SITE PLAN
SCALE: 1" = 30'-0"

DRAWING INDEX

SP	SITE PLAN + TITLE SHEET
A1	FOUNDATION PLAN
A2	FIRST FLOOR PLAN
A3	SECOND FLOOR PLAN
A4	ROOF PLAN
A5	SOUTH AND NORTH EXTERIOR ELEVATIONS
A6	EAST AND WEST EXTERIOR ELEVATIONS
A7	BUILDING SECTION #1
A8	BUILDING SECTION #2

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www.pbcARCHITECT.com

Seals/Signatures

Consultants

Project/Project Location

SUN HOUSE
21437
Bethel Church Rd.
Cornelius, NC 28031

Owner

Holly+Chungwei Sun
21437 Bethel Church Rd.
Cornelius, NC 28031
H 704-892-1037

Notes

1. This drawing and the design shown on the property of Paul B. Clark, Architect, PLLC, the reproduction or use of this drawing is subject to their written consent.
2. Do not scale drawing. All work shall be as noted, detailed and dimensioned. Any discrepancies shall be brought to the attention of Paul B. Clark, Architect, PLLC prior to the start of construction. Architect is not responsible for construction performed in accordance with incorrect dimensions or field conditions.

Issued for/Issued on

9.9.2009

Revisions

Sheet Title

SITE PLAN

Sheet Number

SP

STRUCTURAL GENERAL NOTES

1. GENERAL
   A. ALL CONSTRUCTION SHALL CONFORM TO THE 2003 INTERNATIONAL BUILDING CODE OR 2003 INTERNATIONAL RESIDENTIAL CODE, OR THE CURRENT EDITION OF THE NORTH CAROLINA STATE BUILDING CODE, WHICHEVER IS APPLICABLE.
   B. THESE NOTES SHALL APPLY EXCEPT WHERE INDICATED OTHERWISE BY DRAWINGS OR SPECIFICATIONS. A DETAIL SHOWN FOR ONE CONDITION SHALL APPLY TO ALL LIKE AND SIMILAR CONDITIONS
   C. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE DESIGN AND ADEQUACY OF THE ERECTION BRACING, SHORING, TEMPORARY SUPPORTS AND ALL OTHER MEANS, METHODS TECHNIQUES, SEQUENCES, AND PROCEDURES OF CONSTRUCTION.

2. REINFORCED CONCRETE
   A. ALL CONCRETE PLACEMENT SHALL CONFORM TO ACI 301-96, SPECIFICATION FOR STRUCTURAL CONCRETE OF BUILDINGS
   B. ALL CONCRETE SHALL BE NORMAL WEIGHT 3000 PSI COMPRESSIVE STRENGTH AFTER 28 DAYS UNLESS NOTED OTHERWISE. CONCRETE SHALL BE PLACED AT A SLUMP NOT LESS THAN 3" AND NOT MORE THAN 6 INCHES. CONCRETE EXPOSED TO THE WEATHER SHALL CONTAIN BETWEEN 4 AND 6 PERCENT ENTRAINED AIR BY VOLUME.
   C. CONSTRUCTION OR CONTROL JOINTS SHALL BE PROVIDED IN SLABS ON GRADE SO THAT THE MAXIMUM AREA BETWEEN JOINTS SHALL BE 400 FEET AND THE LENGTH NOT MORE THAN 1-1/2 TIMES THE WIDTH.
   D. PLACE VERTICAL CONTROL JOINTS IN BASEMENT AND RETAINING WALLS AT 20'-0 ON CENTER (MAX.) USING 90° DEEP V-CHAMFERED JOINTS ON BOTH FACES. CONSTRUCTION JOINTS SHALL FALL ON CONTROL JOINTS AND SHALL BE KEYED. HALF OF ALL SPECIFIED HORIZONTAL REINFORCING SHALL BE INTERRUPTED AT CONTROL JOINTS.
   E. REINFORCING BARS SHALL CONFORM TO ASTM A615 GRADE 60 AND SHALL BE DETAILED IN CONFORMANCE WITH ACI SP-66 .
   F. PROVIDE CORNER BARS AT ALL CORNERS AND INTERSECTIONS OF FOOTINGS, BEAMS AND WALLS
   G. REINFORCING BARS INDICATED AS CONTINUOUS SHALL HAVE CLASS "B" TENSION LAPS (26 INCHES FOR #5 BARS.)
   H. REINFORCING STEEL SHALL HAVE THE FOLLOWING CONCRETE COVER UNLESS NOTED OTHERWISE:
   i. CONCRETE AGAINST EARTH (NOT FORMED) = 3 INCHES
   ii. FORMED CONCRETE EXPOSED TO EARTH OR WEATHER = 1-1/2 INCHES
   iii. CONCRETE SLABS AND WALLS NOT EXPOSED TO WEATHER = ¾ INCH
   iv. CONCRETE BEAMS (STIRRUPS) AND COLUMNS (TIES) = 1-1/2 INCHES.

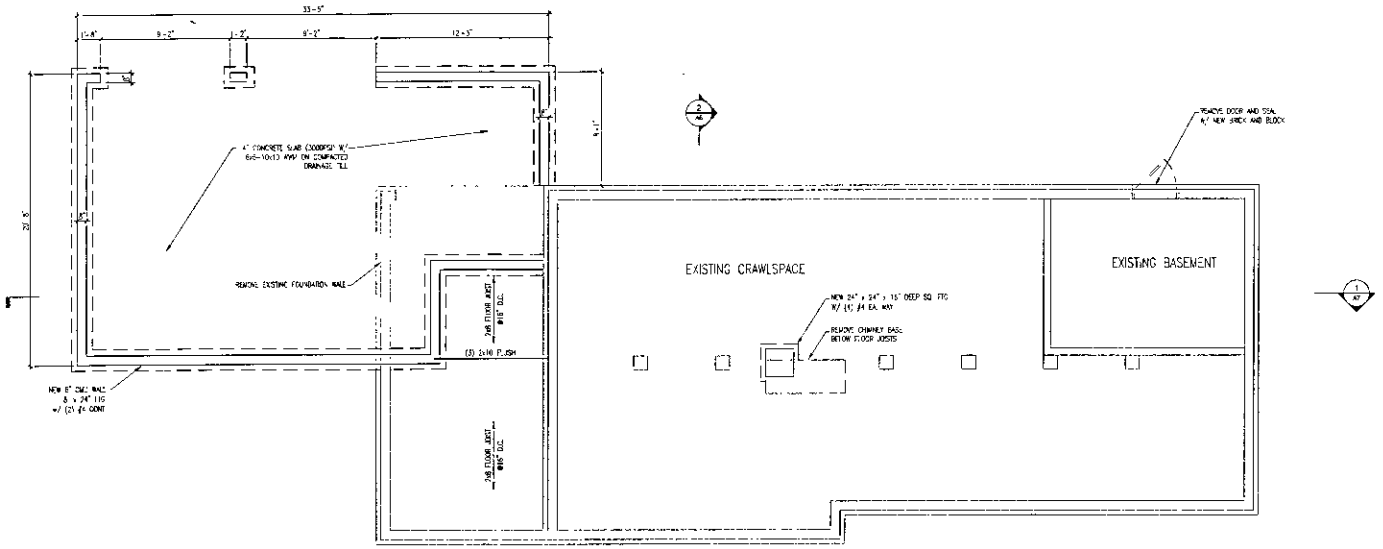
3. MASONRY
   A. CONCRETE MASONRY DESIGN AND CONSTRUCTION SHALL CONFORM TO REQUIREMENTS FOR CONCRETE MASONRY STRUCTURES ACI 530-99/ASCE-99
   B. CONCRETE MASONRY UNITS (CMU) SHALL BE LIGHTWEIGHT HOLLOW LOAD-BEARING UNITS ASTM C90 GRADE N WITH A NET STRENGTH OF 2000 PSI ON NET CROSS-SECTIONAL AREA OF CMU DETERMINED IN ACCORDANCE WITH ASTM C140
   C. MORTAR SHALL COMPLY WITH ASTM C270, TYPE M OR S. STANDARD MORTAR BED JOINT THICKNESS SHALL BE 3/8" AND IN NO CASES SHALL EXCEED 5/8" IN THICKNESS
   CMU SHALL BE LAID IN RUNNING BOND UNLESS NOTED OTHERWISE
   D. PROVIDE LADDER-TYPE HORIZONTAL JOINT REINFORCING COMPLYING WITH ASTM A82, ZINC-COATED #9 GAGE PLACED 16" ON CENTER UNLESS NOTED OTHERWISE. HORIZONTAL JOINTS SHALL BE LAPPED 12" MINIMUM
   E. WHERE WALLS ARE TO BE GROUTED SOLID, THE MAXIMUM LIFT HEIGHT SHALL BE 5'-0 FOR CMU LESS THAN 8" AND 12'-0 FOR CMU 8" OR GREATER. GROUT SHALL BE PLACED IN ACCORDANCE WITH ACI 530.1 SECTION 3.5.E. GROUTED WALLS GREATER THAN 5'-0 IN HEIGHT SHALL HAVE INSPECTION HOLES AT THE BASE OF THE WALL.
   F. LAP VERTICAL REINFORCING BARS 50 TIMES THE BAR DIAMETER (24" FOR #4 BARS.)
   G. VERTICAL CONTROL JOINTS SHALL BE PLACED IN ALL CMU WALLS NOT RETAINING EARTH AND SHALL BE LOCATED A DIMENSION THREE TIMES THE WALL HEIGHT ON CENTER BUT NOT MORE THAN 50'-0 ON CENTER NOR LESS THAN 25'-0 ON CENTER.
   H. PROVIDE MINIMUM 1 #5 VERTICAL GROUTED FULL-HEIGHT AT EACH SIDE OF OPENINGS AND AT ALL ENDS AND CORNERS OF WALLS.

4. STRUCTURAL WOOD
   A. LUMBER SPECIFIED FOR JOISTS, HEADERS AND BEAMS SHALL BE #2 SOUTHERN YELLOW PINE (SYP), (2) 2X8 DEFAULT, UNLESS NOTED OTHERWISE.
   B. STRUCTURAL SHEATHING SHALL BE APA RATED SHEATHING, 7/16" MINIMUM THICKNESS.
   C. ALL STUDS SHALL BE #2 SPRUCE-PINE-FIR (SPF) UNLESS NOTED OTHERWISE.
   D. ALL DOOR HEADERS SHALL BE 5PT UNLESS NOTED OTHERWISE
   E. ALL HEADERS AND BEAMS SHALL BE SUPPORTED ON EACH END BY 2-2X4 STUDS MINIMUM UNLESS NOTED OTHERWISE
   F. ALL GLULAM BEAMS SHALL BE DESIGNATED 24F-V4 UNLESS NOTED OTHERWISE.
   G. ALL LAMINATED VENEER LUMBER (LVL) SHALL BE MINIMUM 2.0 E, FB=2800 PSI & SHALL BE INSTALLED PER MANUFACTURER'S SPECS.
   H. ALL WOOD FASTENINGS SHALL CONFORM TO THE 2005 EDITION OF THE NATIONAL DESIGN SPECIFICATION ANSI/AF&PA NDS-2005.
   I. ALL SPECIFIED NAILS ARE COMMON NAILS UNLESS NOTED OTHERWISE. NAILS SUBSTITUTED FOR SPECIFIED COMMON NAILS SHALL BE OF THE SAME SHANK LENGTH AND SHANK DIAMETER OF THOSE SPECIFIED IN THE CONSTRUCTION DOCUMENTS

5. STRUCTURAL STEEL
   A. STRUCTURAL STEEL DETAILING, FABRICATION, AND ERECTION SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE AISC STEEL CONSTRUCTION MANUAL.
   B. STRUCTURAL STEEL SHALL CONFORM TO ASTM A-36. COLD FORMED, WELDED AND SEAMLESS CARBON STEEL STRUCTURAL TUBING, ROUNDS AND IN SHAPES SHALL CONFORM TO ASTM A-500, GRADE B.
   C. ALL BOLTS SHALL BE ASTM A-325 WITH THE THREADS EXCLUDED FROM THE SHEAR PLANE. BOLTED CONNECTIONS SHALL BE ASSEMBLED IN ACCORDANCE WITH AISC SPECIFICATIONS, STRUCTURAL JOINTS USING ASTM A325 OR ASTM A490 BOLTS
   D. STEEL PIPE SHALL CONFORM TO ASTM A53, TYPE E OR S, GRADE B.
   E. ANCHOR BOLTS SHALL CONFORM TO ASTM A36.

6. SOIL AND FOUNDATION
   F. THE ALLOWABLE SOIL BEARING PRESSURE IS ASSUMED TO BE A MINIMUM OF 2500 POUNDS PER SQUARE FOOT. IF AFTER EXCAVATION, THE CONDITIONS INDICATE A SOIL BEARING CAPACITY OF LESS THAN 2500 PSF, THE ENGINEER SHALL BE NOTIFIED TO REDESIGN THE FOOTING.
   G. ALL FOOTINGS SHALL BEAR ON ORIGINAL UNDISTURBED SOIL WHERE POSSIBLE. IF STRUCTURAL FILL IS REQUIRED, IT SHALL BE MECHANICALLY COMPACTED IN MAXIMUM 8" UNCOMPACTED LIFTS TO 95% OF STANDARD PROCTOR
   H. ALL SOILS CONTAINING ORGANIC MATERIAL SHALL BE REMOVED AND REPLACED WITH STRUCTURAL FILL AS INDICATED IN NOTE "E" ABOVE.
   I. BACKFILL AGAINST WALLS SHALL BE PLACED EVENLY AGAINST BOTH SIDES OF THE WALL UNTIL THE LOWER FINISHED GRADE IS REACHED. WALLS SHALL BE TEMPORARILY BRACED LATERALLY DURING BACKFILL OPERATIONS. FOR BASEMENT WALLS BACKFILL SHALL NOT BE PLACED UNTIL THE FLOOR FRAMING ABOVE HAS BEEN INSTALLED CONNECTED TO THE TOP OF THE WALL.
   J. UNLESS NOTED OTHERWISE, REINFORCE ALL FOOTINGS W/#4 BARS AT 12" O.C. EA. WAY, LOCATE 3" FROM BOTTOM
   K. CONTINUOUS WALL FOOTINGS SHALL BE MINIMUM SIZE AS REQUIRED BY CODE AND CONTAIN 2#5 REBAR CONTINUOUS LOCATED 3" FROM THE BOTTOM OF THE FOOTING. #5 DOWELS SPACED 48" O.C. SHALL EXTEND FROM THE FOOTING AND INTO THE FOUNDATION WALL
   L. SLABS ON-GRADE SHALL BE A MINIMUM OF 4" THICK AND SHALL BE REINFORCED WITH 6X6 - W1.4 X W1.4 WELDED WIRE FABRIC PLACED 1" BELOW THE TOP OF THE SLAB.

7. DESIGN LOADS
   A. GRAVITY LOADS:
      i. ROOF:
         1. LIVE LOAD (CONSTRUCTION) = 20 PSF
         2. DEAD LOAD = 20 PSF
      ii. FLOOR:
         1. ASSEMBLY ROOMS, BALCONIES, DECKS, AND PUBLIC ROOM LIVE LOAD = 100 PSF
         2. UNINHABITABLE ATTICS WITHOUT STORAGE = 10 PSF
         3. UNINHABITABLE ATTICS WITH LIMITED STORAGE = 20 PSF
         4. HABITABLE ATTICS AND SLEEPING AREAS = 30 PSF
         5. ALL OTHER AREAS = 40 PSF
   B. WINDS LOADS SHALL BE PER ASCE 7-98, MINIMUM DESIGN LOADS FOR BUILDINGS AND OTHER STRUCTURES. WIND LOAD MUST MEET 90 MPH MINIMUM



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

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Seals/Signatures

Paul B. Clark, Architect, PLLC, 22185, Davidson, N.C.

PAUL B. CLARK, 10754, NORTH CAROLINA, REGISTERED, ARCHITECT, 11.20.2009

Consultants

NORTH CAROLINA, PROFESSIONAL ENGINEER, SEAL, 036611, JOHN T. READING, 11/20/09

11/20/09

Project/Project Location

SUN HOUSE
21437
Bethel Church Rd.
Cornelius, NC 28031

Owner

Holly+Chungwei Sun
21437 Bethel Church Rd.
Cornelius, NC 28031
H 704-892-1037

Notes

1. This drawing and specification, as an instrument of service is the property of Paul B. Clark, Architect, PLLC and is not to be used in whole or part for any other project without written authorization of Paul B. Clark, Architect, PLLC and is not to be loaned, copied or reproduced without the written permission of Paul B. Clark, Architect, PLLC and/or its consultants.
2. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractor shall verify and be responsible for all dimensions. Do not scale drawings. Any discrepancies shall be reported to the architect before proceeding with the work.

Issued for/Issued on

11.20.2009

Revisions

Sheet Title

FOUNDATION FLOOR PLAN

Sheet Number

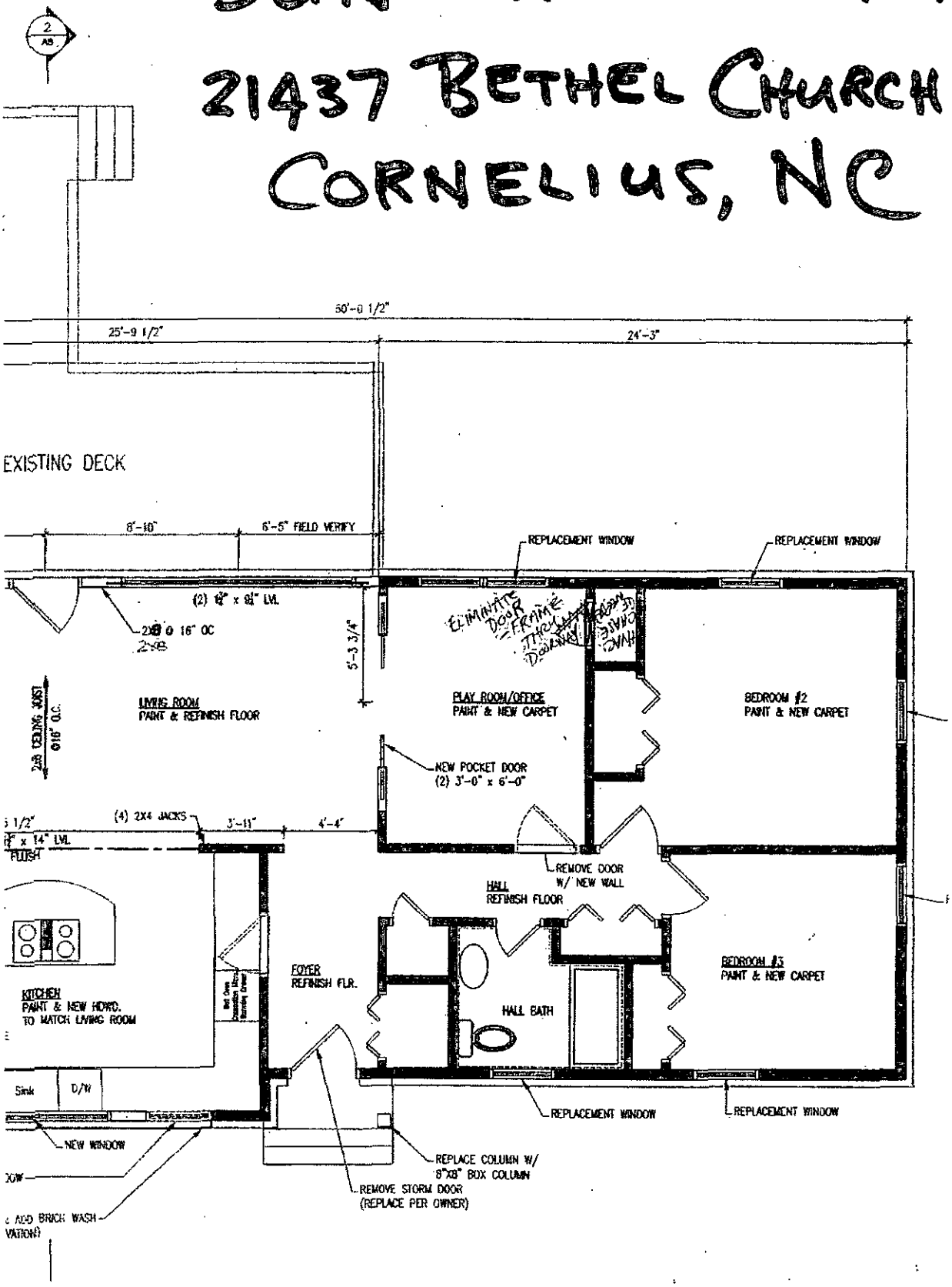
A1

11/30/2009 DWG CHANGE

"SUN" RENOVATION

21437 BETHEL CHURCH RD

CORNELIUS, NC



GENERAL CONSTRUCTION NOTES

(1) THESE PLANS SHOULD BE STUDIED AND USED IN THEIR ENTIRETY AS INFORMATION VITAL TO EACH STAGE OF CONSTRUCTION WILL APPEAR ON MORE THAN ONE SHEET.

(2) IF CONTRACTOR DISCOVERS A CONSTRUCTION DEVIATION FROM THE PLANS, IT IS CONTRACTOR'S RESPONSIBILITY TO BRING INTO COMPLIANCE WITH THE PLANS OR CONTACT THE ARCHITECT BEFORE PROCEEDING. GENERAL CONTRACTOR ASSUMES LIABILITY FOR ANY DEVIATION FROM THE PLAN NOT APPROVED BY THE DESIGNER.

(3) AT THE TIME CREATION, PLANS CONFORM TO "CABO ONE AND TWO FAMILY DWELLING CODE" OF THE "INTERNATIONAL RESIDENTIAL CODE" HOWEVER MODIFICATIONS MAY BE NECESSARY TO COMPLY WITH LOCAL AND STATE CODES (2006 OR 2009 NCRC).

(4) CONTRACTOR SHALL VERIFY DIMENSIONS.

(5) CONTRACTOR SHALL COMPLY WITH THE CONTENTS OF THE SPECIFICATIONS FOR THIS HOUSE.

(6) VERIFY ALL LOCAL CODES, AND SITE CONDITIONS (INCLUDING LOCATION OF ON SITE UTILITIES AND EASEMENTS) PRIOR TO CONSTRUCTION.

(7) SEE STRUCTURAL DRAWINGS FOR ADDITIONAL INFORMATION

(8) GENERAL CONTRACTOR SHALL BE HELD SOLELY RESPONSIBLE FOR COMPLETION OF ALL WORK SHOWN OR REASONABLY IMPLIED BY THESE DRAWINGS AND/OR SPECIFICATIONS. HE SHALL CONFIRM ALL DIMENSIONS AND CONDITIONS AT THE SITE AND SHALL IMMEDIATELY NOTIFY THE DESIGNER IN WRITING OF ANY DISCREPANCIES.

(9) DIMENSIONS ON THE FLOOR PLAN ARE FROM FACE OF STUD OR TO THE CENTER OF BEAM, DOOR, WINDOW AS INDICATED ON PLAN.

(10) DIMENSIONS ON FOUNDATION PLANS ARE FROM FACE OF MASONRY OR CONCRETE WALL, AS INDICATED.

(11) DRAWINGS SHALL NOT BE SCALED, USE LABELED DIMENSIONS ONLY

(12) DETAILS TAKE PRECEDENCE OVER PLANS & ELEVATIONS. LARGER SCALED DRAWING TAKE PRECEDENCE OVER SMALLER SCALED DRAWINGS.

(13) THE DESIGNER MAKES EVERY EFFORT TO USE ONLY PRODUCTS AND TECHNIQUES RECOGNIZED AT THE TIME AS APPROPRIATE FOR THE APPLICATIONS SHOWN. HOWEVER, MANY ITEM SHOWN ON THESE PLANS ARE IN GENERIC TERMS AND ARE LEFT TO THE OWNER'S AND/OR CONTRACTORS DISCRETION OR ARE SHOWN SPECIFICALLY AS REQUESTED BY THE OWNER AND/OR CONTRACTOR. THE DESIGNER ASSUMES NO RESPONSIBILITY FOR THE PERFORMANCE OF ANY MATERIAL OR PRODUCTS SHOWN OR ANY TECHNIQUES NOT SPECIFICALLY SHOWN ON THE PLANS.

(14) ALL WOOD USED IN CONSTRUCTION OF DECKS AND STEPS SHALL BE TREATED. FASTENERS FOR TREATED WOOD (NAILS, BOLTS, ETC.) SHALL BE GALVANIZED

(15) CONTRACTOR SHALL INSTALL GROUND FAULT INTERRUPT OUTLETS AS PER CODE

(16) HEARTH DIMENSIONS DETERMINED BY CODE.

(17) PROVIDE SMOKE DETECTORS AS REQUIRED BY CODE.

(18) PROVIDE DOORBELLS, TRANSFORMER, AND CHIME. VERIFY LOCATION WITH ARCHITECT OR OWNER

(19) WATER AND MOISTURE PROTECTION

(A) PROVIDE FOUNDATION WATERPROOFING WHERE EXTERIOR GRADE IS ABOVE CRAWL SPACE OR BASEMENT SLAB AND INSTALL 4" PERFORATED PLASTIC FOUNDATION DRAINS AND SLOPE TO ON-SITE NATURAL DRAINAGE COURSES.

(B) ALL BUILDING EXTERIOR SURFACE PENETRATIONS WITH POTENTIAL EXPOSURE TO WEATHER SHALL BE FLASHED AND/OR CAULKED AS PER CODE AND/OR BIOLISTRY-RECOGNIZED PROPER CONSTRUCTION TECHNIQUES. ALL ROOF SHINGLE FLASHING AGAINST A VERTICAL SIDEWALL SHALL BE STEP FLASHING.

(C) ALL FLASHING SHALL BE TURNED OUT AT LOWER EDGE TO DIRECT WATER OUT OF STRUCTURE.

(D) ALL FLASHING SHALL BE COPPER, ALUMINUM OR PVC, UNLESS NOTED OTHERWISE.

(E) IF ANY TYPE OF LAP SIDING OTHER THAN VINYL IS USED, PROVIDE A SEALED WATERPROOF BARRIER BEHIND ANY VERTICAL OR SILL TRIM WITH BARRIER TURNED OUT AT FIRST SIDING COURSE BELOW TRIM

(F) IF ANY TYPE OF LAP SIDING OTHER THAN VINYL IS USED, WRAP ALL CORNERS W/ 6 MIL. POLY EXTENDING 12" HORIZONTALLY BEYOND VERTICAL JOINTS AND TURNED OUT OVER CLADDING OR FLASHING AT BOTTOM OF JOINT.

(G) INSTALL ROOFING MATERIALS ACCORDING TO MANUFACTURER'S RECOMMENDATION FOR THE AREA AND CLIMATE, INCLUDING BUT NOT LIMITED TO SHINGLES, TILES, FELTS, FLASHING AND FLASHING DEVICES

(H) INSTALL ALL EXTERIOR FINISH MATERIALS PER MANUFACTURER'S RECOMMENDATIONS (I.E. CONTROL JOINTS, ATTACHMENT/ANCHORING DEVICES, FLASHING, SEALANTS, ETC.)

(I) FOR ROOF PITCHES OVER 4/12 (33% SLOPE) USE 30# FELT UNDERLAYMENT. FOR ROOF PITCHES FROM 2/12 TO 4/12 (17% TO 33% SLOPE) USE SELF-ADHERING POLYMER MODIFIED BITUMEN SHEET IN LIEU OF 30# UNDERLAYMENT

(K) ROOF SHEATHING: FOR RAFTERS @ 16" O.C. USE ½" PLYWOOD W/ ½" PLYND CLIPS (UNLESS NOTED OTHERWISE). FOR RAFTERS @ 24" O.C. USE ⅝" PLYWOOD W/ ⅝" PLYWD. CLIPS (UNLESS NOTED OTHERWISE)

(20) GARAGE SEPARATION

(A) GARAGE CEILING & WALL BETWEEN HOUSE AND GARAGE SHALL ½" SHEET ROCK.

(B) DOORS FROM HOUSE TO GARAGE SHALL BE 1⅜" THICK SOLID WOOD OR 20-MIN. RATED.

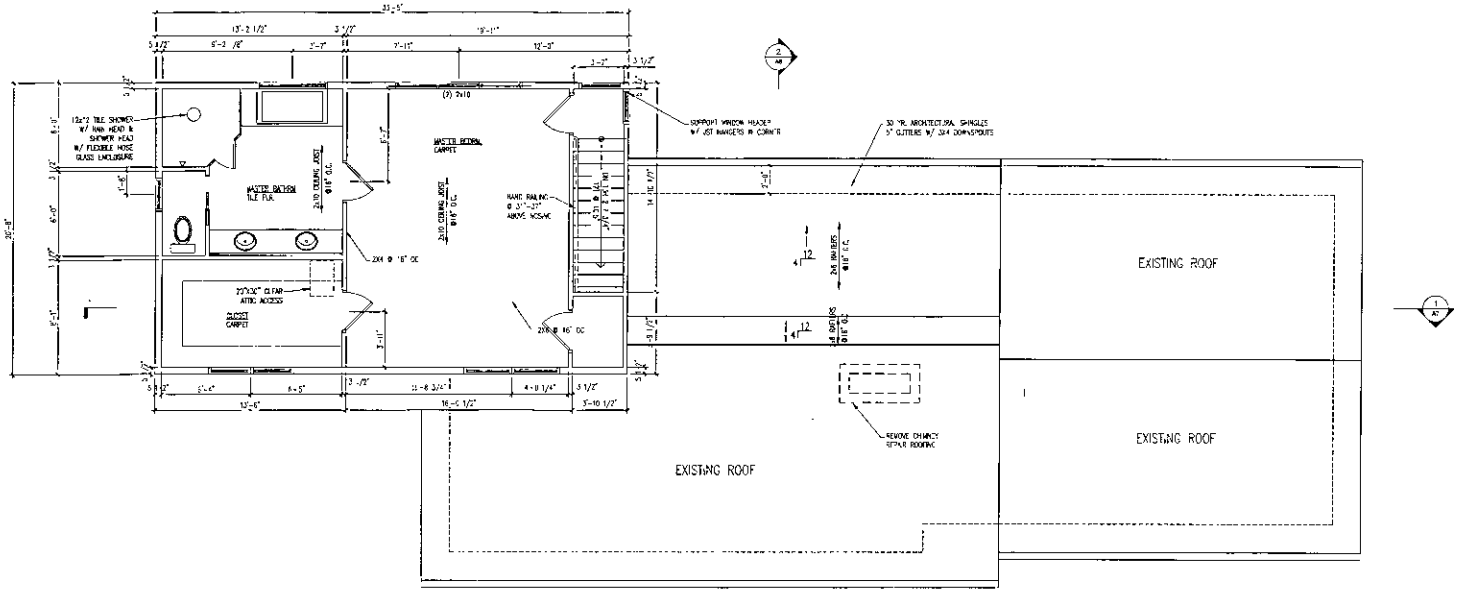
(21) GUARDRAIL OPENING LIMITATIONS

REQUIRED GUARDRAILS ON OPEN SIDES OF STAIRWAYS, RAISED FLOOR AREAS, BALCONIES, AND PORCHES SHALL HAVE INTERMEDIATE RAILS OR ORNAMENTAL CLOSURE WHICH DO NOT ALLOW PASSAGE OF AN OBJECT 6 INCHES (152 mm) OR MORE IN DIAMETER. HORIZONTAL SPACING BETWEEN THE VERTICAL MEMBERS IN REQUIRED GUARDRAILS SHALL BE A MAXIMUM OF 4 INCHES (102 mm). AT THE NEAREST POINT BETWEEN THE MEMBERS.

EXCEPTION: THE TRANGULAR OPENINGS FORMED BY THE RISER, TREAD, AND BOTTOM RAIL OF A GUARD AT THE OPEN SIDE OF A STAIRWAY MAY BE OF SUCH SIZE THAT A SPHERE 6 INCHES (153 mm) CAN NOT PASS THROUGH

(22) TERMITE PROTECTION

ALL HOUSE FOUNDATIONS & SLABS SHALL BE PRETREATED FOR TERMITES BY A LICENSED EXTERMINATOR.



2 SECOND FLOOR PLAN
SCALE: 1/4" = 1'-0"

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Seals/Signatures

Paul B. Clark, Architect PLLC — 32185 — Davidson, N.C.

10754 — Engineer — Davidson, N.C. — 11.18.2008

Consultants

NORTH CAROLINA PROFESSIONAL SEAL 28692 ENGINEER BRYAN T. READING — 11/20/09

Project/Property Location

SUN HOUSE
21437
Bethel Church Rd.
Cornelius, NC 28031

Owner

Holly+Chungwei Sun
21437 Bethel Church Rd.
Cornelius, NC 28031
H 704-892-1337

Notes

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2. Written dimensions on these drawings shall have precedence over scaled dimensions. Contractors shall verify and be responsible for all dimensions. Paul B. Clark, Architect, PLLC shall be notified of any variation from dimensions and conditions shown on these drawings.

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11.18.2009

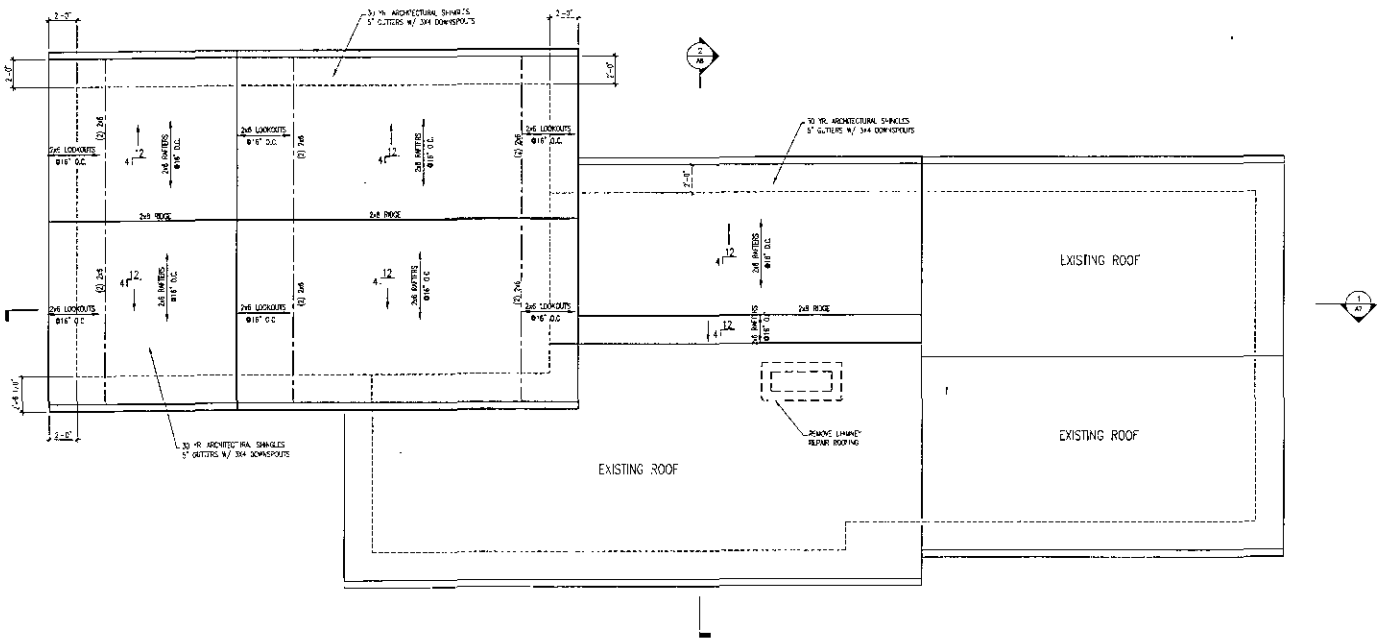
Revisions

Sheet Title

2ND FLOOR + ROOF PLAN

Sheet Number

A3



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

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Seals/Signatures

Paul B. Clark Architect PLLC Davidson, N.C. 52185

PAUL B. CLARK 10754 REGISTERED PROFESSIONAL ENGINEER DAVIDSON, N.C. 11.18.2009

Consultants

NORTH CAROLINA REGISTERED PROFESSIONAL SEAL 28032 ENGINEER BRYAN E. REMSBURG 11.25.09

Project/Project Location

SUN HOUSE

21437
Bethel Church Rd.
Cornelius, NC 28031

Owner

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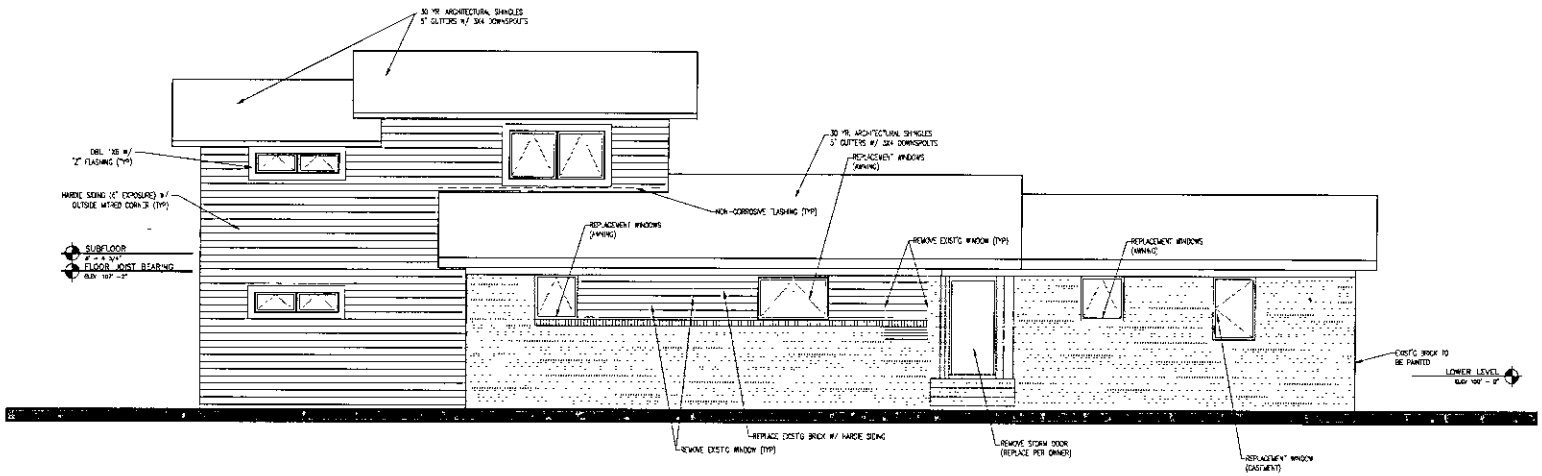
Revisions

Sheet Title

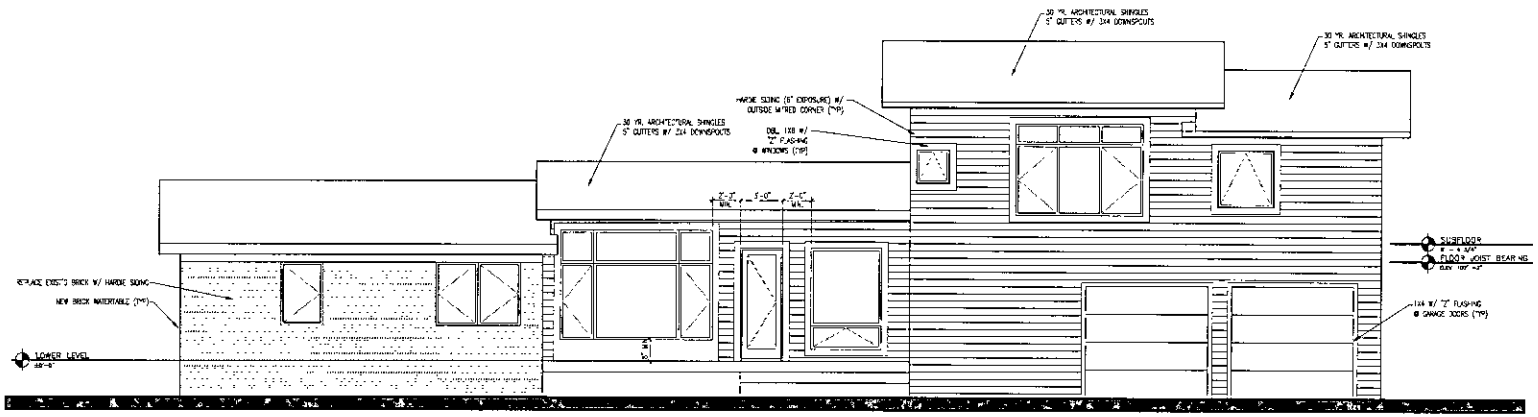
ROOF PLAN

Sheet Number

A4



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



2 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

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Notes

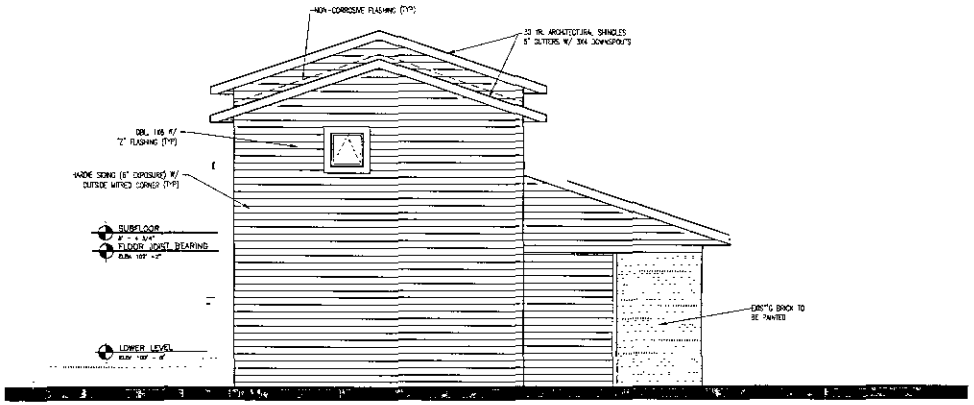
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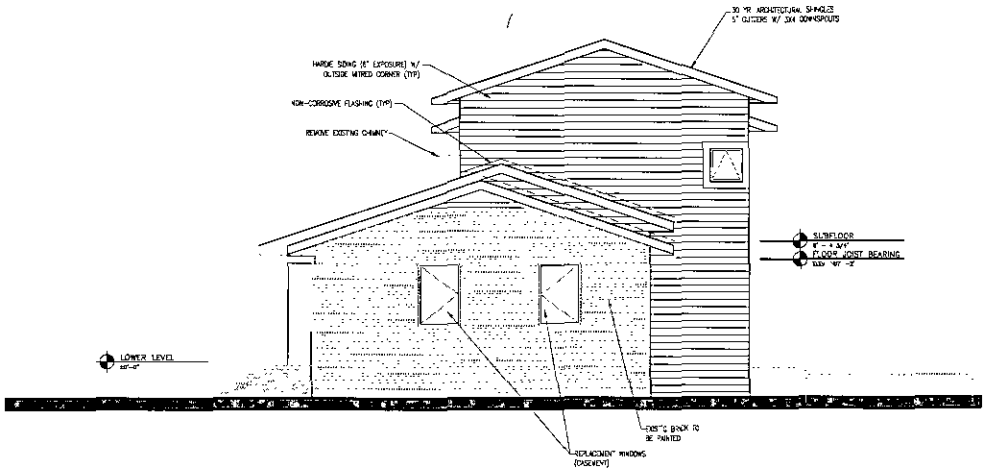
Revisions

Sheet Title
NORTH/SOUTH ELEVATIONS

Sheet Number
A5



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



2 NORTH ELEVATION
SCALE: 1/4" = 1'-0"

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9.18.2009

Consultants

Project/Project Location

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Owner

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Notes

1. [illegible]
2. [illegible]

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9.18.2009

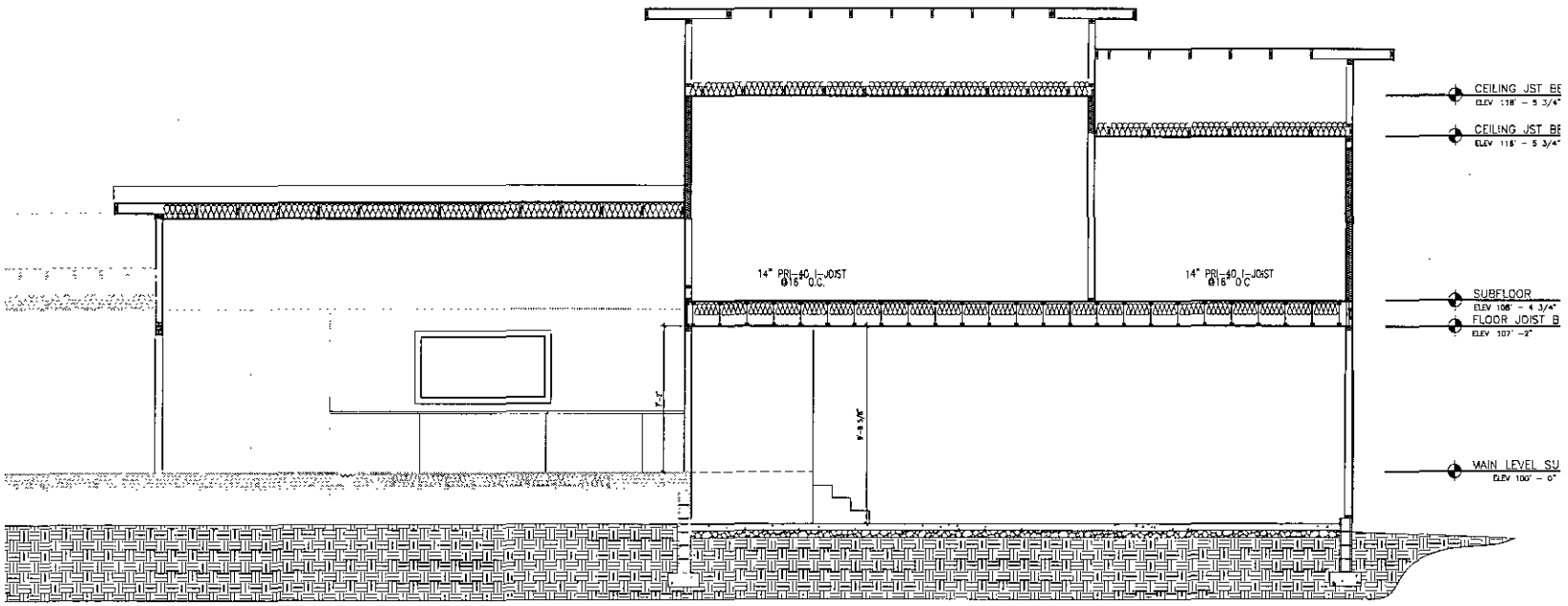
Revisions

Sheet Title

EAST/WEST
ELEVATIONS

Sheet Number

A6



1 BUILDING SECTION 1

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Notes

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2. Check all building lines and utility locations before beginning construction. Notify Paul B. Clark, Architect, PLLC immediately of any variations, discrepancies, or other discrepancies.

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8.18.2009

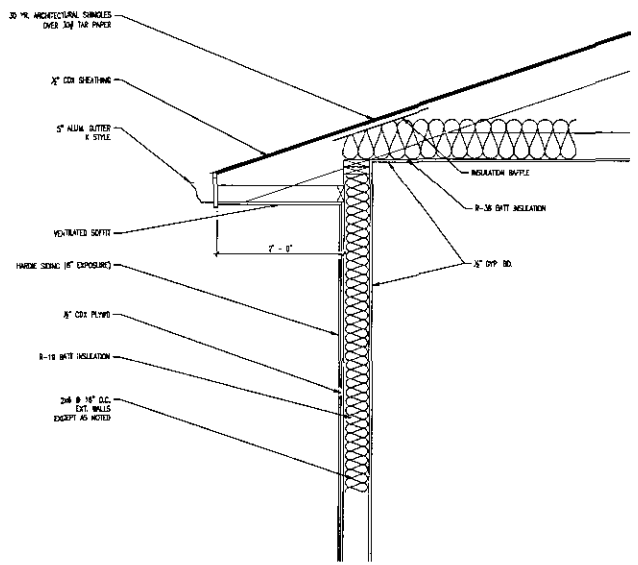
Revisions

Sheet Title

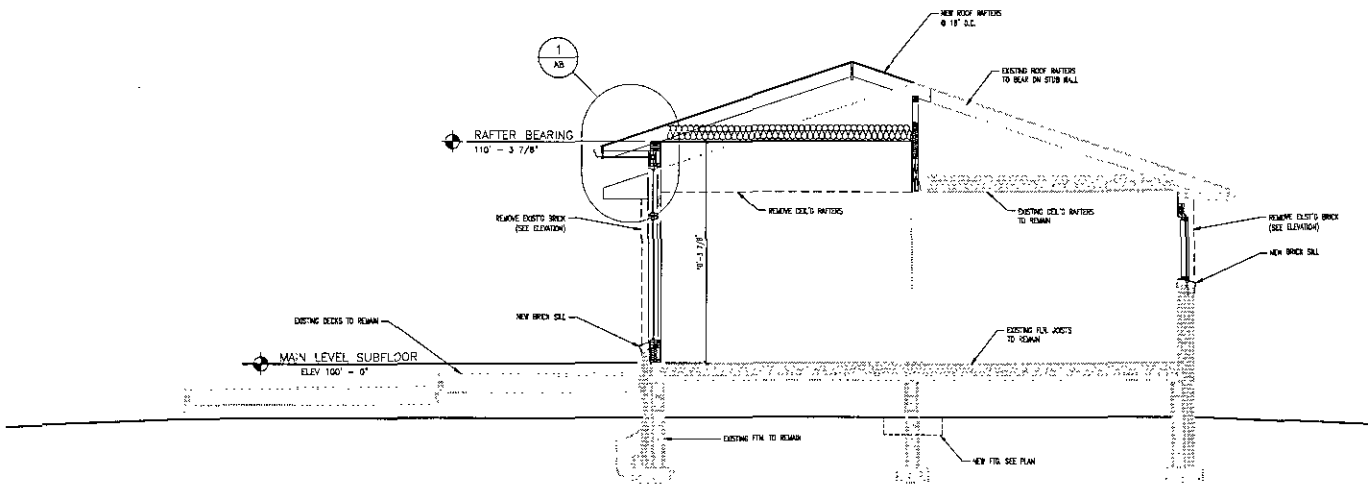
BUILDING SECTIONS

Sheet Number

A7



1 WALL SECTION - TYPICAL
SCALE: 1" = 1'-0"



2 BUILDING SECTION 2
SCALE: 1/4" = 1'-0"

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Consultants

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Owner

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Cornelius, NC 28031
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Notes

1. [illegible]
2. [illegible]

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9.18.2009

Revisions

Sheet Title

BUILDING SECTIONS

Sheet Number

A8

APP # 4162

FEE: $100.00
DATE: 4/20/09
CRT [ ] CK #1125 VM

APPLICATION FOR APPROVAL TO USE AN EXISTING ON-SITE WASTEWATER TREATMENT & DISPOSAL SYSTEM
MECKLENBURG COUNTY - GROUNDWATER & WASTEWATER SERVICES
700 N. Tryon St., Suite 211 Charlotte, NC 28202
Phone: (704) 336-5103 Fax: (704) 336-6894

GWS – UES.APP 06/07

FILE #: 80128

TYPE APPLCATION:

- [x] ADDITION - INCREASE ROOMS/OCCUPANCY/MOBILE HOME SIZE (A / M)
- [ ] ADDITION - RENOVATION OR GARAGE WITH NO MAJOR CHANGES (X)
- [ ] EXCHANGE MOBILE HOME - SAME # BEDROOMS (Y)
- [ ] COMMERCIAL OR INDUSTRIAL (N)

PERSON FILING APPLICATION:

NAME: HOLLY SUN
ADDRESS: 21437 BETHEL CHURCH RD
CITY: CORNELIUS
STATE: NC ZIP: 28031
PHONE: 704-892-1037 Best Number
ALTERNATE PHONE: 704-779-9493 - 704-840-2005

PROPERTY OWNER:

NAME:
ADDRESS:
CITY:
STATE: ZIP:
PHONE:
ALTERNATE PHONE:

JOB LOCATION INFORMATION

TAX/PARCEL #: 00171115
STREET ADDRESS: 21437 BETHEL CHURCH RD
CITY: CORNELIUS
STATE: NC ZIP: 28031
SUBDIVISION OR MOBILE HOME PARK NAME:
LOT #:

TOWNSHIP:

- [ ] 0-MECKLENBURG
- [ ] 1-CHARLOTTE
- [ ] 2-DAVIDSON
- [x] 3-CORNELIUS
- [ ] 4-PINEVILLE
- [ ] 5-MATTHEWS
- [ ] 6-HUNTERSVILLE
- [ ] 7-MINT HILL

WATER SUPPLY:

- [ ] MUNICIPAL (M)
- [ ] COMMUNITY (C)
- [x] PRIVATE WELL (P)
- [ ] SHARED WELL (S)
- [ ] OTHER 'SPRINGS' (O)

RESIDENTIAL PROPERTY TYPE:

- [x] HOUSE (H)
- [ ] MODULAR HOME (M)
- [ ] MULTIPLE FAMILY (U)
- [ ] SINGLE MOBILE HOME (S)
- [ ] DOUBLE WIDE (D)
- [ ] OTHER (O)

OCCUPANCY (both fields are required):

NUMBER OF BEDROOMS: 3
NUMBER OF OCCUPANTS: 2

COMMERCIAL / INDUSTRIAL PROPERTY TYPE:

TYPE OF BUSINESS:
EMPLOYEES PER SHIFT:
OF SHIFTS:

INDUSTRIAL WASTES? [ ] YES [ ] NO
UNDERGROUND STORAGE TANKS? [ ] YES [ ] NO

ADDITION TYPE ATTACHED TO EXISTING STRUCTURE:

- [x] BEDROOM
- [x] BATHROOM
- [x] KITCHEN
- [ ] DINING ROOM
- [ ] LIVING ROOM
- [ ] DEN
- [ ] GARAGE
- [ ] SUNROOM
- [ ] PORCH
- [ ] DECK
- [ ] OTHER

ADDITION TYPE DETACHED FROM EXISTING STRUCTURE:

- [ ] DETACHED GARAGE
- [ ] DETACHED GARAGE WITH PLUMBING
- [ ] POOL HOUSE
- [ ] SHOP
- [ ] BARN
- [ ] STORAGE SHED
- [ ] DETACHED PORCH / DECK
- [ ] OTHER

*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 the Mecklenburg County Health Department to enter onto the property for the purpose of processing this request.

Holly Sun — Owner's/Agent's Signature
4/10/09 — Date

*The undersigned, an authorized agent of the Mecklenburg County Health Department, certifies that the Department has approved the Request for the Job Location contained in this document. This approval is granted in accordance with the provisions of Laws and Rules for Sanitary Sewage Collection, 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 y this Department.
- This permit is not transferable.

- [ ] ADDITION / RENOVATION APPROVAL - VALID 1 YEAR FROM ISSUANCE
- [ ] MOBILE HOME EXCHANGE APPROVAL - VALID 6 MONTHS FROM ISSUANCE

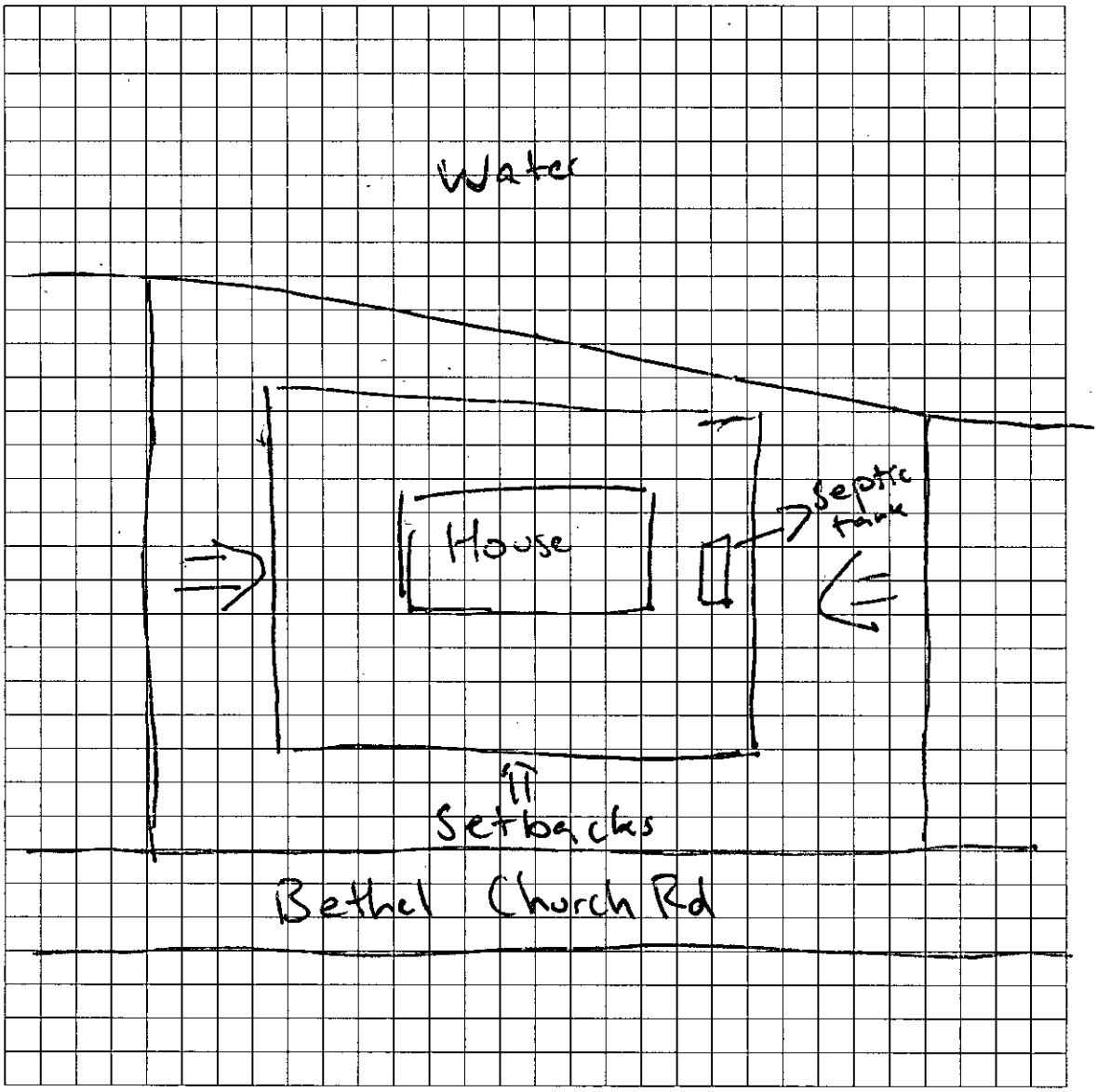
EHS Signature — Date

Mecklenburg County
Land Use & Environmental Service Agency
Groundwater & Wastewater Services
700 N. Tryon St., Suite 211
Charlotte, NC 28202
Phone: (704) 336-5103
Fax: (704) 336-6894

File #_____
Date_____

PROPOSED PLOT PLAN

A map showing existing and proposed property lines and easements with dimensions, the location of the single family residence, non-single family residence, or other facility, and appurtenances, the site for the proposed well, and the location of existing or proposed sewer lines and/or sewage disposal systems, surface water bodies, aboveground or underground storage tanks. Name all roads adjoining the property. If this a repair indicate the type of repair.



Owner/Agent Signature	
Date 4/10/09	

LBC 12/15/04