ICHD–ENVIRONMENTAL HEALTH DIVISION

Statesville Office (704) 878-5305 Mooresville Office (704) 660-3625 PERMIT # AP ~~300~~ 801

SEPTIC IMPROVEMENT PERMIT / AUTHORIZATION TO CONSTRUCT / OPERATION PERMIT / EXISTING SYSTEM

PIN # 4646-17-3868 ✓

APPLICANT/OWNER: Rich Rafferty APPLICANT ADDRESS: 3 Oreste St. Smithtown, NY

SITE ADDRESS: 455 Sundown Rd. Mooresville, NC ✓ PHONE: — ALT. PHONE Jonathan 704-650-2260

SITE DIRECTIONS: BSR → Williamson Rd South → R on Sundown → Lot @ end on left SAP CONTROLLED: ☐ YES ☒ NO

SUBDIVISION: — SECTION: — LOT # — LOT AREA: 0.503 DESIGN FLOW: 360 GPD L.T.A.R.: 0.30

Septic Tank	1000	(gal)	STB	5124	Date	3-18-20	☒ New System ☐ Repair ☐ Expansion System Type: I II III (IV) V VI		☒ Residence	No. Bedrooms	3	Water Supply
Pump Tank	1000	(gal)	PT	2823	Date	3-22-20	System Description: LP-PPBPS (50% Reduction)		☐ Business	No. Persons	6	☒ Private
Pump Make	GOULDS		Model	WE0512HH2	Serial #		Repair System Description: TS II + PPBPS (50% Reduction)		☐ Other	No. Employees	—	☐ Public
# Nitrification Fields	1		# Lines	3	Linear Ft	300	Maintenance Agreement Required: ☒ YES ☐ NO		☐ Slab ☐ Crawl Space			☐ Community
Trench Width	24"		Trench Bottom Depth(Low side)			30"	Gravel Depth — ☐ GRAVITY ☒ PRESSURE		☒ Basement w/plumbing		☐ Basement w/o plumbing	

Comments / Conditions:

INITIAL SITE SKETCH

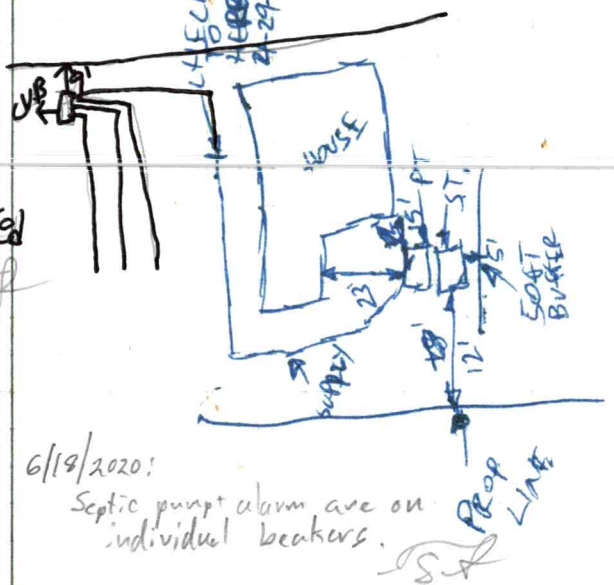
See attached plans from Michael Athanas + Associates Michael Athanas LSS# 1252

Dated 9/23/19
Revised 9/27/19 (site plan)

on 4/29/2020 BW checked Tanks and part of supply Line. 4/30/2020 TS checked drain lines. 5/1/2020 The rest of supply Line was connected to cuband all drain lines were connected. pressure set using a generator, Alarm tested. Run time set for 5 min. over run was set for 7 min. pump is Aqua works no floats used Pressure transducer.

AS BUILT SKETCH

~~TANKS SET~~ TANKS CHECKED 4-29-20 BCW



6/19/2020: Septic pump + alarm are on individual breakers. ST

Permit can be suspended or revoked if any false information is supplied toward securing the permit / any unauthorized changes are made to the site / any unauthorized changes are made in the installation of the system. **CONTACT A LOCATOR SERVICE PRIOR TO ANY EXCAVATION**

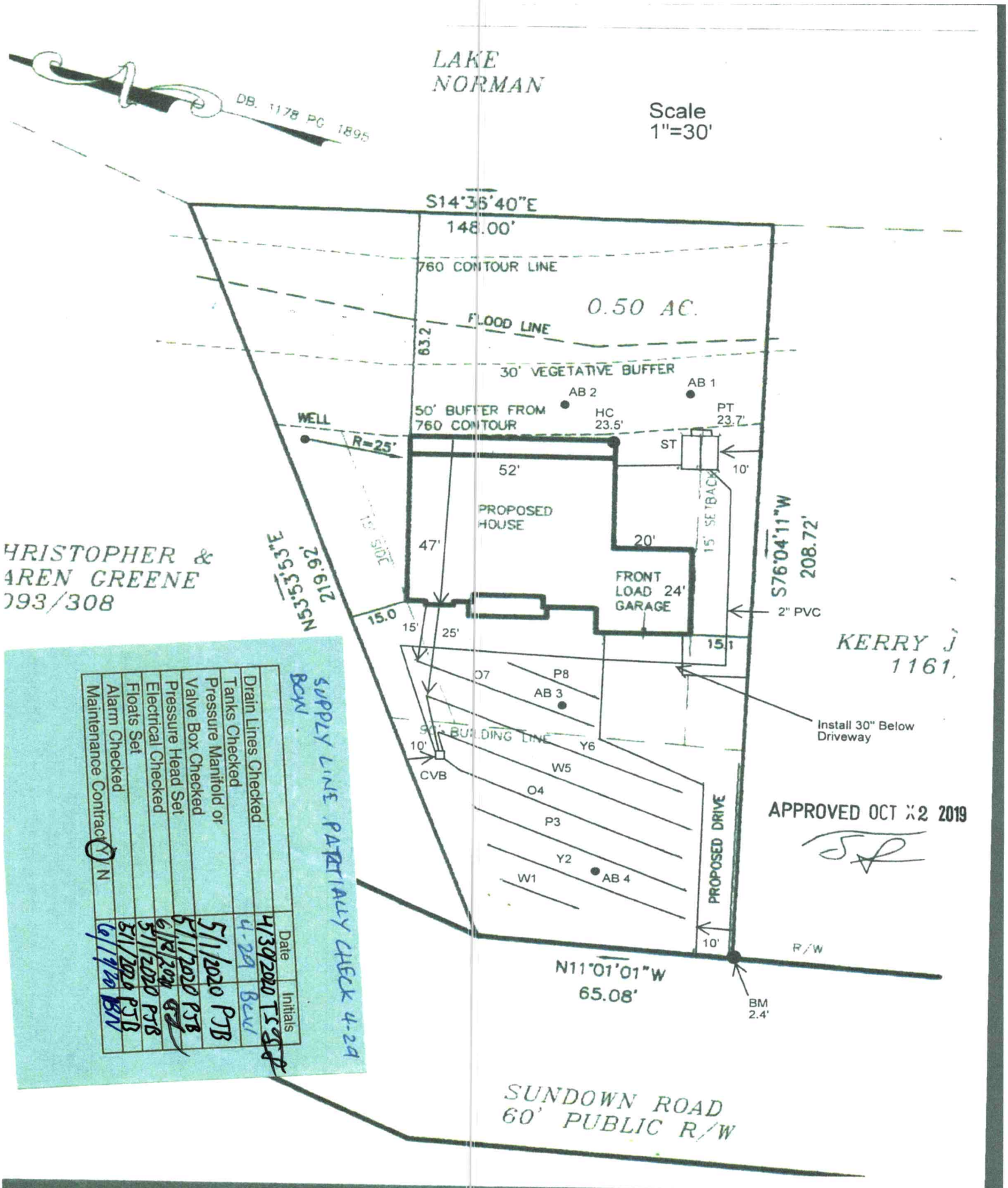
☐ IMPROVEMENT PERMIT *with plat valid without expiration.* ☒ IMPROVEMENT PERMIT *with site plan valid for 60 mos.* ☒ AUTHORIZATION TO CONSTRUCT *valid for period equal to IMPROVEMENT PERMIT--not to exceed 60 mo.*

Owner / Applicant Signature: Brenda Rafferty Date: 10/15/19 Installed by: STANLEY ENVIRONMENTAL

IMPROVEMENT PERMIT by: Tom Shuck Date: 10/2/19 OPERATION PERMIT by: Patrick J Bryett Date: 6/19/2020

AUTHORIZATION TO CONSTRUCT by: Tom Shuck Date: 10/2/19 Existing System Inspected by: Date:

FOR SEPTIC FINAL INSPECTION: CALL 704-664-3703 between 8am-9am the day the inspection is needed. Be sure to speak with an inpsector to confirm your inspection time.



SUPPLY LINE PARTIALLY CHECK 4-29 BCW

	Date	Initials
Drain Lines Checked	4/30/2020	TSG
Tanks Checked	4-29	BCW
Pressure Manifold or Valve Box Checked	5/1/2020	PJB
Pressure Head Set	5/1/2020	PJB
Electrical Checked	6/12/2020	GL
Floats Set	5/1/2020	PJB
Alarm Checked	5/1/2020	PJB
Maintenance Contract (Y) N	6/1/20	BCW



MICHAEL ATHANAS & ASSOCIATES
LICENSED SOIL SCIENTIST
561 Ennis Rd.
Weddington, NC 28173
(704) 576-3887
9/17/2019

Reference: Data Sheet for 455 Sundown Rd
House Footprint: See attached plan
Building Setbacks: 35' front/rear, 15' side, 50' lake
Water Source: Private well
Number of Bedrooms/Daily Flow: 3/360 GPD
Predetermined LTAR: 0.3 GPD/FT^2 (ICHD)
Proposed System Type: PPBPS
Proposed Repair System Type: TSII PPBPS
Distribution: Low Pressure-CVB
Flow per Orifice: 0.59 GPM
Orifice Size: 3/16"
System Flow: 26.6 GPM
Dosing Volume: 162 gallons
Pump Run Time: 6.1 minutes
Elevation Head: 23'
Friction Head: 3.1'
Pressure Head: 2'
Total Dynamic Head: 28.1'
Supply Line Length: 170' of 2" PVC
Septic/Pump Tank Size: 1000/1000 gallons
Proposed Trench Bottom: 30" (ICHD)
Proposed Trench Width: 24" (8' on center)



APPROVED OCT 22 2019

Line	Design Length	# of Panels	Actual Length	Elevation
White 1			19'	2.1'
Yellow 2			55'	3.2'
Pink 3			59'	4.3'
Orange 4	**60'**	**13**	**64'**	**5.7'**
White 5	**70'**	**16**	**70'**	**7.1'**
Yellow 6	**70'**	**16**	**74'**	**8.6'**
Orange 7			47'	10.0'
Pink 8			25'	11.4'

Initial System: 200' **Repair System:** 205'
Pump Tank: 23.7' **House Corner:** 23.5' **Benchmark:** 2.4'

Comments:
MA&A have changed the septic design to fit a larger house box. Install supply line 30" below the driveway. Do not cut for the driveway or garage. Do not cut for positive drainage.

PROPERTY ID #: 4646173868
COUNTY: Iredell

SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM

OWNER: Jane Korn APPLICATION DATE
ADDRESS: 20335 Rainbow Cir, Cornelius, NC 28031 DATE EVALUATED: 8/2019
PROPOSED FACILITY: PROPOSED DESIGN FLOW (.1949): PROPERTY SIZE:
LOCATION OF SITE: 455 Sundown Rd PROPERTY RECORDED:
WATER SUPPLY: Ξ Private ☐ Public Ξ Well ☐ Spring ☐ Other
EVALUATION METHOD: Ξ Auger Boring ☐ Pit ☐ Cut TYPE OF WASTEWATER: Ξ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941)		OTHER PROFILE FACTORS				PROFILE CLASS & LTAR
			.1941 STRUCTURE/ TEXTURE	.1941 CONSISTENCE/ MINERALOGY	.1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	
1	LS 3%	0-12	RBr CL WSBK	FR SS SP SXP	Mn	42"	N/A	N/A	PS 0.275
		12-42	R C SBK	FR SS SP SXP					
2	LS 3%	0-18	R Br CL WSBK	FR SS SP SXP	Mn	42"	N/A	N/A	PS 0.275
		18-42	R C SBK	FR SS SP SXP					
3	LS 12%	0-5	Br SCL WSBK	FR SS SP SXP	N/A	48"	F-C SAP	N/A	PS 0.3-0.35
		5-48	R CL SBK	FR SS SP SXP					
4	LS 12%	0-12	R Br SCL WSBK	FR SS SP SXP	N/A	48"	F-C SAP	N/A	PS 0.3-0.35
		12-48	R CL SBK	FR SS SP SXP					

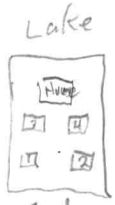
DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	400 FT^2	410 FT^2
System Type(s)	PPBPS	TSII PPBPS
Site LTAR	0.3 (ICHD)	0.3 (ICHD)

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: MA&A
OTHER(S) PRESENT:
APPROVED OCT 22 2019

COMMENTS:

DEPARTMENT OF HEALTH AND HUMAN SERVICES
DIVISION OF PUBLIC HEALTH, ENVIRONMENTAL HEALTH SECTION
ON-SITE WATER PROTECTION BRANCH

Sheet 1 of 1
PROPERTY ID #: 4696-17-3868
COUNTY: Iredell



SOIL/SITE EVALUATION
for ON-SITE WASTEWATER SYSTEM
(Complete all fields in full)

OWNER: Jane Korn
ADDRESS: 20235 Rainbow Cr. Cornelius NC
PROPOSED FACILITY: 3 BR SFR
LOCATION OF SITE: 455 Sundown Rd. Mooresville, NC
APPLICATION DATE 5/4/19
DATE EVALUATED: 5/22/19
PROPERTY SIZE: 0.503 acres
PROPERTY RECORDED: Yes
PROPOSED DESIGN FLOW (.1949): 360 GPD
WATER SUPPLY: ☒ Private ☐ Public ☐ Well ☐ Spring ☐ Other
EVALUATION METHOD: ☐ Auger Boring ☒ Pit ☐ Cut
TYPE OF WASTEWATER: ☒ Sewage ☐ Industrial Process ☐ Mixed

PROFILE #	.1940 LANDSCAPE POSITION/ SLOPE %	HORIZON DEPTH (IN.)	SOIL MORPHOLOGY (.1941) .1941 STRUCTURE/ TEXTURE	SOIL MORPHOLOGY (.1941) .1941 CONSISTENCE/ MINERALOGY	OTHER PROFILE FACTORS .1942 SOIL WETNESS/ COLOR	.1943 SOIL DEPTH	.1956 SAPRO CLASS	.1944 RESTR HORIZ	PROFILE CLASS & LTAR
1	LSS 18% Prim	0-3	SCL V.W.SBK	Sl. Friable, SS, SP, Soap		61	-	-	0.325
		3-14	Clay W.SBK/ABK	Sl. Firm, Sticky, SP, Soap					
		14-61	Clay Loam W.SBK some saprolite	Friable, SS, SP, Soap					
2	LSS 17% Prim	0-7	SCL V.W.SBK	Sl. Friable, SS, SP, Soap		48	-	-	0.325
		7-20	Clay M.SBK/ABK	Sl. Firm, Sticky, SP, Soap					
		20-48	Clay Loam W.SBK some mica some saprolite	Sl. Friable, SS, SP, Soap					
		48-58	Loamy Saprolite MA	Very Friable + Well Drained					
3	LSS 16%	0-7	SCL V.W.SBK	Sl. Friable, SS, SP, Soap		52	-	-	0.30 PS
		7-18	Clay some mica M.SBK/ABK	Sl. Firm, Sticky, SP, Soap					
		18-52	Clay Loam mica W.SBK some saprolite + manganese	Sl. Friable, SS, SP, Soap					
		52-63	Loamy Saprolite MA	Friable + moderately Drained					
4	LSS 16%	0-5"	SCL V.W.SBK	Sl. Friable		52	-	-	0.30 PS
		5-24"	Clay some mica M. SBK W.ABK	Sl. Firm, Sticky, SP, Soap					
		24-52"	Clay Loam W.SBK some mica SAP	Sl. Friable, SS, SP, Soap					
		52-58"	Loamy Saprolite MA	Friable + moderately Drained					

DESCRIPTION	INITIAL SYSTEM	REPAIR SYSTEM
Available Space (.1945)	232	228
System Type(s)	50% Red	TSII + 50% Red
Site LTAR	0.30	0.30

OTHER FACTORS (.1946):
SITE CLASSIFICATION (.1948): PS
EVALUATED BY: Tom Shuck
OTHER(S) PRESENT: Paul Pennegger + David Bean

ER Intl layout AP 300801

IREDELL COUNTY DEPARTMENT of ENVIRONMENTAL HEALTH

APPLICATION FORM

$225

Application For: ( ) New Well Permit ( ) Well Repair Permit ( ) Well Abandonment
(✓) Septic Improvement Permit ( ) Authorization to Construct ( ) Existing System Inspection ( ) Septic System Repair

THE ABOVE PERMIT DOCUMENTS WILL BECOME INVALID IF INFORMATION PROVIDED ON THIS APPLICATION IS FALSIFIED OR CHANGED, OR IF THE SITE IS ALTERED. THE IMPROVEMENT PERMIT IS VALID FOR EITHER 60 MONTHS OR WITHOUT EXPIRATION DEPENDING UPON DOCUMENTATION SUBMITTED. APPLICATION WITH SITE PLAN 60 MONTHS, APPLICATION WITH COMPLETE, SCALED PLAT WITHOUT EXPIRATION. SEE 15A NCAC 18A .1937(f) FOR DETAILS.

Page 2: *Site Plan Worksheet* form MUST accompany this application

The following optional attachments may also be submitted: (✓) Survey Plat, scaled no more than 1 inch = 60 feet
Place an (X) beside whichever is submitted if applicable ( ) Custom Site Plan, scaled no more than 1 inch = 60 feet

Applicant Information: (PRINT CLEARLY)

Applicant Name: Rich Rafferty **Address:** 3 Oreste St, Smithtown, NY **Zip:** 11787

Applicant Email: _____ **Phone:** Jonathan-704-650-2260 **Alt. Phone:** _____

Owner Name: Same **Address:** _____ **Zip:** _____

Owner Email: _____ **Phone:** _____ **Alt. Phone:** _____

Property Information:

Street Address: 455 Sundown Rd

Subdivision Name: _____ **Section/Phase:** _____ **Lot Number:** _____

Driving Directions: _____

Site Development Information: *(check or complete ALL that apply*

CHECK FOUNDATION TYPE

(✓) New Single Family Residence
( ) New Multi-Family Residence
( ) Accessory Building
( ) Bedroom(s) Addition
( ) Repair to failing septic system ___ Tank ___ Drain lines Describe Problem: _____

Maximum Number of Bedrooms: 3
Maximum Number of Occupants: _____
( ) Swimming Pool
( ) Other Addition/Structure: _____

( ) Crawl Space Foundation
( ) Concrete Slab Foundation
(✓) Basement with Plumbing
( ) Basement without Plumbing

Non-Residential Site Development: Type of Business: _____
Square Footage of Building: _____ Max. Number of Employees: _____ Max. Number of Seats/Beds/Other: _____

Water Supply: ( ) Replacement Well – Reason: _____
( ) Multi-connection Well Number of Houses: _____ Number of Persons: _____

(✓) New Well ( ) Existing Well ( ) Community Well ( ) City Water ( ) Other Public Water

Desired Septic System Type: *(you may rank in order of preference)* Year existing system installed: _____
( ) No Preference ( ) Alternative ( ) Conventional ( ) Innovative (✓) Modified Conventional ( ) Other: _____

Please answer the following to the best of your ability:

( ) Yes (✓) No Does the site contain any jurisdictional wetlands?
( ) Yes (✓) No Is any non-domestic sewage (i.e. industrial) to be generated?
( ) Yes (✓) No Is the site subject to approval by any other public agency?

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.

Signature: _____ 9/23/2019
Property owner or owner's legal representative signature (SIGNATURE REQUIRED) DATE

IREDELL COUNTY DEPARTMENT OF ENVIRONMENTAL HEALTH

DOCUMENTATION TO AUTHORIZE AN OWNER'S LEGAL REPRESENTATIVE

Applications for permits require the "signature of the owner or owner's legal representative" (15A NCAC 18A .1937). If the owner does not sign the application himself or herself, they can submit any one of the following documents to designate their legal representative:

Power of Attorney; Real Estate Contract; Estate executor; Bankruptcy trustee; Court ordered guardianship

In the absence of the above documentation, the property owner may provide the local health department with documentation that designates a legal representative. A property owner may:

Complete this form to document his or her legal representative, or provide his or her own form that contains the information in this form.

If there are multiple property owners, then all property owners must sign the form that designates a legal representative.

By signing a form that designates a legal representative for purposes of 15A NCAC 18A .1937, the property owner authorizes that representative to act on their behalf in matters pertaining to the application and permitting process, including signing or receiving any application, document or permit. The owner retains full responsibility to meet all permit conditions specified by the local health department.

I, Mary Lee + Rich Rafferty, am the legal owner(s) of the property located at 455 Sentown Road, Mooresville, NC 28117, identified as PIN (Parcel Identification Number) 4646173868.000, located in Iredell County, North Carolina.

I do hereby authorize (**print legal representative/company name**) Jonathan Smith, Foundation Homes Residential, to act as an agent on my behalf in applying for/signing/obtaining any of the documents described below.

- Application for Improvement Permit (IP) / Authorization to Construct (AC)
- Improvement Permit (IP) / Authorization to Construct (AC)
- Application for soil-site evaluation (new/repair)
- Application/permit for private drinking water well/well abandonment
- Application for Compliance Inspection

I agree to abide by all decisions and/or conditions between the legal representative acting on my behalf and the Iredell County Department of Public Health, Environmental Health Division.

x _____ 9/19/19
Signature of Owner(s) Date

x _____ 9/19/19
Signature of Witness Date

Please return this signed form to the appropriate office:

Mooresville - Environmental Health
ronda.hart@co.iredell.nc.us
Fax: 704-662-3239
610 E. Center Avenue, Mooresville, NC 28115

Statesville - Environmental Health
adrienne.shea@co.iredell.nc.us
Fax: 704-871-3483
349 N. Center Street, Statesville, NC 28677

IREDELL COUNTY

PO Box 788
349 North Center St.
Statesville, NC 28677

APPLICATION NUMBER
203371
Issue Date: 02/08/2019

ZONING PERMIT

Open Space

Parcel Number	Street Address	Jurisdiction
4646173868.000	455 SUNDOWN ROAD, MOORESVILLE, NC	IREDELL COUNTY

Owner Information	Applicant Information
Owner: KORN, JANE S.	Applicant: FINNEY BUILDERS
Address: 203 S RAINBOW RD	Address: 1198 GATEWAY DR
CORNELIUS, NC 28031	MOORESVILLE, NC 28115
Phone:	Phone: 704-787-0123

Use Requested	Zone Code
SFD	R20 House Pushed back until lot 90' wide Ex RA = 100'

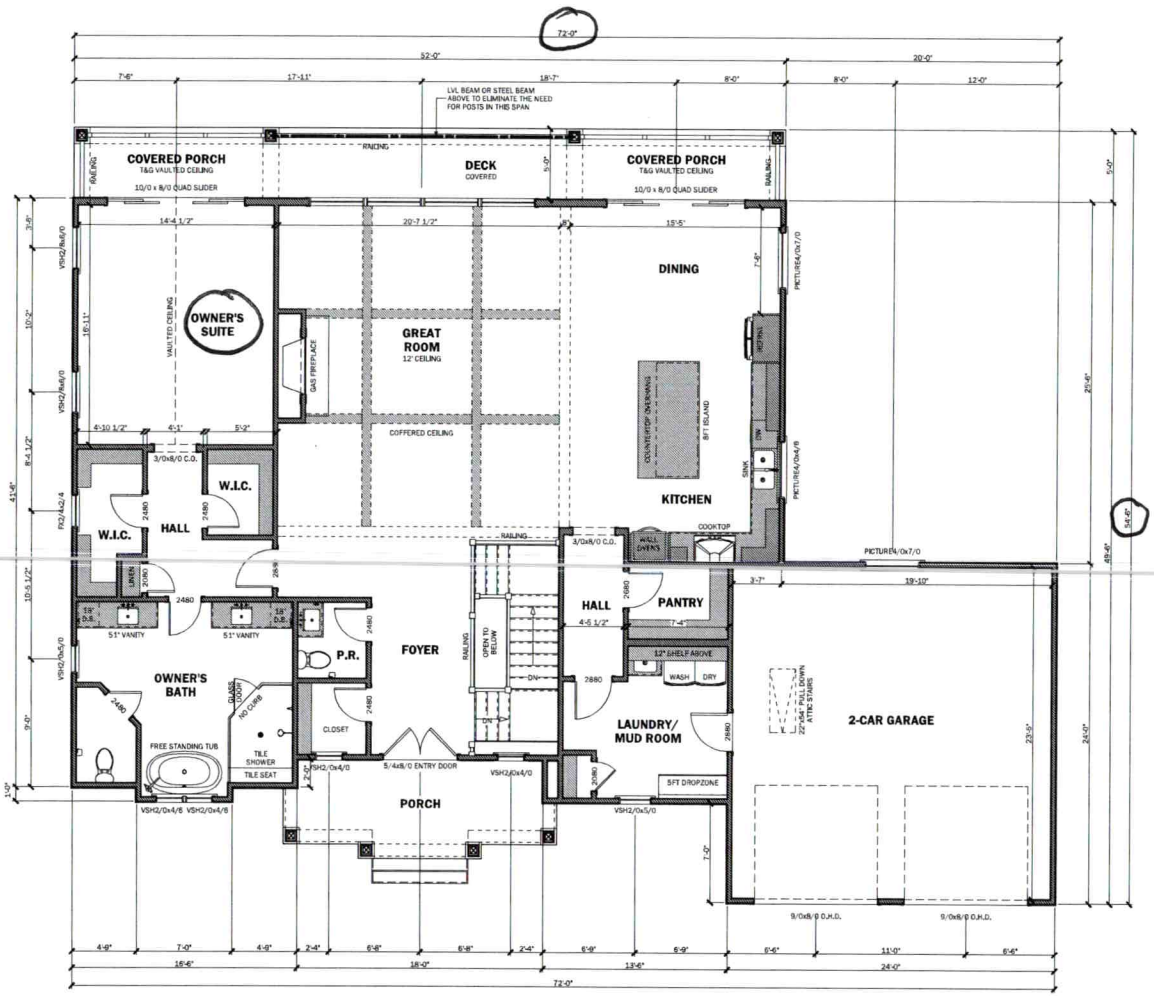
Lot Acreage	F Setback	B Setback	L Setback	R Setback	Watershed	Flood Zone
.490	35.00	50.00	15.00	15.00	CACL	AE

Remarks:

The applicant certifies that there are no deed restrictions, contractual agreements or governmental regulations of any kind that interfere with or prohibit the use of the property or the use for which this permit is requested. The applicant further acknowledges that enforcement of deed restrictions, plat conditions and other contractual agreements will not be undertaken by Iredell County and is the sole responsibility of the affected parties.

Applicant: _____ Date: _____

Permit Number	167074	TOTAL FEES:	$ 79.50



FIRST FLOOR PLAN

SCALE: 1/4" = 1'-0"
WALL HEIGHT: 9'-1 1/8"
WINDOW HEADERS @ 8'-0" A.F.F.

Acknowledgement of
Plans Submittal ONLY
Brenda Smith Date 10/15/19
Tom Shad Date 10/2/19

438 WILLIAMSON ROAD
SUITE C
MOORESVILLE, NC 28117
704-360-2251
FOUNDATIONHOMESUSA.COM

Town/Twp/County
TOWNSHIP
COUNTY

Engineer
INTELLIGENT DESIGN ENGINEERING
1945 J N PEASE PLACE
#204
CHARLOTTE, NC 28262
CHAD RITTER, P.E.
CORPORATE LIC. #C-3118
704-335-7200

Stamp/Seal

Project Name/Owner
CUSTOM HOME
RAFFERTY
TO BE BUILT AT
455 SUNDOWN RD.
MOORESVILLE, NC 28117

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Date
9/23/2019

Drawn By
RES

Reviewed By
—

Plan Set Scale
24x36 sheet
1/4" = 1'-0"
11x17 sheet
1/8" = 1'-0"

Project Plan Code
—

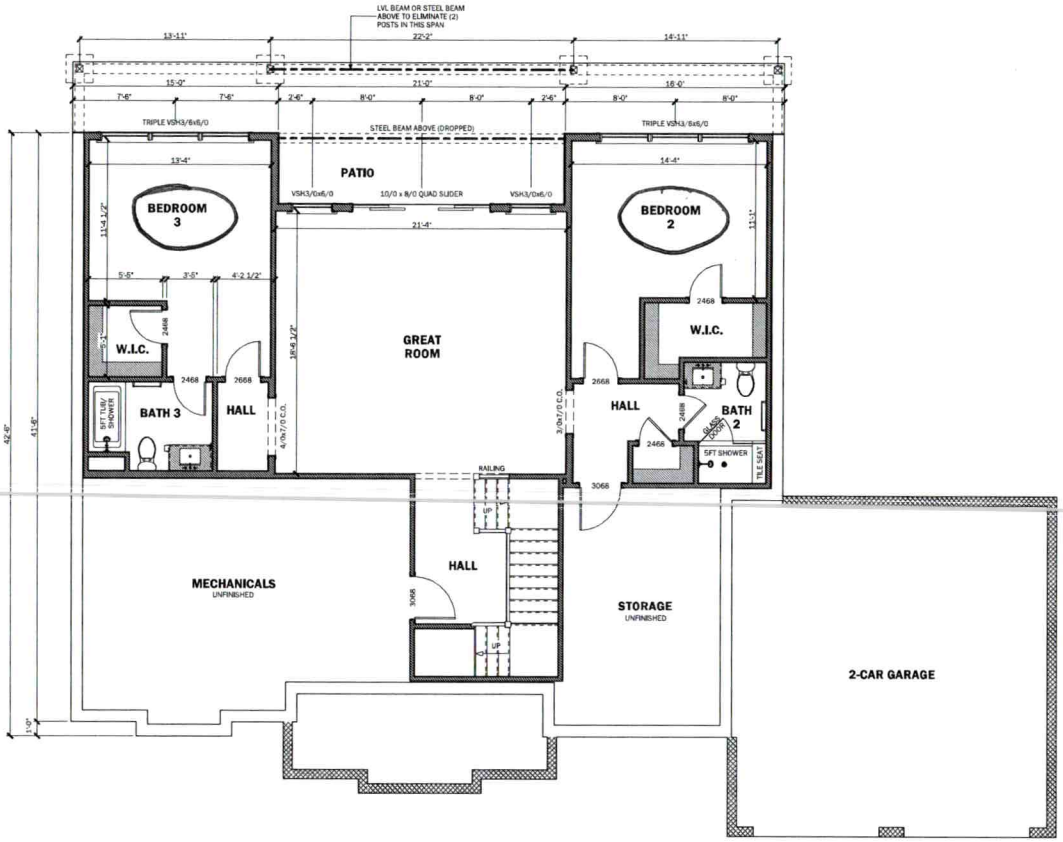
Drawing Set
NOT FOR CONSTRUCTION
PRELIMINARY SET

Sheet Title Description
MAIN LEVEL PLAN

Sheet Number
A4.0

Master Plan Version
v1.3

PENDING ENGINEERING



LOWER LEVEL PLAN

SCALE: 1/4" = 1'-0"
WALL HEIGHT: 9'-1 1/8"
WINDOW HEADERS @ 8'-0" A.F.F.

Acknowledgement of Plans Submittal ONLY!

Brenda Smith Date 10/15/19

Tom Shuck Date 10/2/19

438 WILLIAMSON ROAD
SUITE C
MOORESVILLE, NC 28117
704-360-2251
FOUNDATIONHOMESLKN.COM

Township/County
TOWNSHIP
COUNTY

Engineer
INTELLIGENT DESIGN ENGINEERING
1945 J N PEASE PLACE
#204
CHARLOTTE, NC 28262
CHAD RITTER, P.E.
CORPORATE LIC. #C-3118
704-335-7200

Stamp/Seal

Project Name/Owner
CUSTOM HOME
RICH & MARY ROSE
TO BE BUILT AT
455 SUNDOWN RD.
MOORESVILLE, NC 28117

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Date
9/23/2019

Drawn By
RES

Reviewed By
—

Plan Set Scale
24x36 sheet
1/4" = 1'-0"
11x17 sheet
1/8" = 1'-0"

Project Plan Code
—

Drawing Set
NOT FOR CONSTRUCTION
PRELIMINARY SET

Sheet Title Description
LOWER LEVEL PLAN

Sheet Number
A3.0

Master Plan Version
v1.0

PENDING ENGINEERING