

**TOWN OF FRONT ROYAL
PLANNING COMMISSION WORK SESSION**



May 16, 2018, 6:00 PM

Town Hall – 102 East Main – 2nd Floor Chambers

AGENDA

- I. Meeting Opening.**
- II. Commissioner Reports (if any)**
- III. GUEST SPEAKER: Nick Starling, Skyscraper Farm LLC**
[Attachment: Handout related to Skyscraper Farms and Mr. Starling]
- IV. FRSUB-000830-2018, Preliminary Plan, Happy Creek Knolls, Section 4**
A proposed new subdivision and extension of Happy Ridge Drive.
[Attachment: Small copy of Preliminary Plan and Review Letter.]
- V. Other – Discussion – Updates.**
- VI. Adjournment.**



***Skyscraper Farm™**, is a unique high-rise ecological building. Our structure incorporates a vertical farm along with luxurious office, retail, and living spaces all in one property; yet can scale to fit on your local grocery store.*

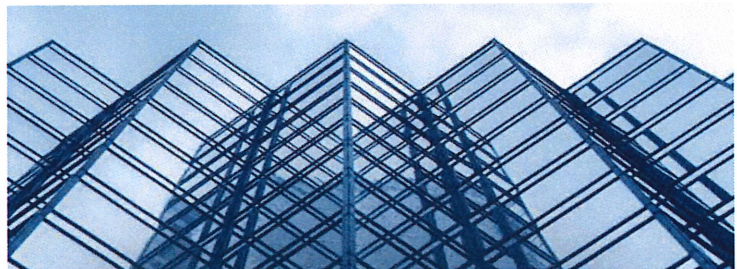
Farm Facts

- ✓ Gross margin of **75.3%**
- ✓ **602,343** acres of field farm equivalent on **7/10 acres**
- ✓ Uses **98%** Less Water Than Field Agriculture
- ✓ Reuses **95%** of the Water Used
- ✓ Adds energy back to the grid beyond **200** sunlight days a year
- ✓ Crop yield of **92+%** v. the Global average yield of 50%



Why Vertical Farming?

You may be familiar with urban farms, rooftop greenhouses, or commercial greenhouses.



Skyscraper Farm is DIFFERENT

We are bringing "vertical farming" to the market on a scale that impacts crop yield, decreases land acreage and water needed WHILE recycling the water that is used... True Sustainability

We have customizable towers capable of fitting on top of your local grocery store, providing 'Just-in-time agriculture™'.

Food insecurity is a concern for the world. Poor quality, limited options, and a fragile supply line, are some of the challenges.

Did you Know?

- Fertilizers produce chemical runoff that is polluting the water supply, creating "dead zones."
- Large amounts of water and land are needed to keep pace with the growing population.

Skyscraper Farm™ Can Help!

- ✓ Reduced water needs and recycled waste.
- ✓ Crops protected from disease and the elements
- ✓ Partnered with a major U.S. research university and agencies



COLLEGE OF
AGRICULTURE AND
LIFE SCIENCES
VIRGINIA TECH™

Skyscraper Farm: Innovation at the Nexus of Food, Energy, and Water Systems: mobilizing Virginia Tech to feed the world

Presented by:

Nick Starling

Chairman of Skyscraper Farm LLC

www.skyscraper.farm



Nick Starling has been researching vertical farming since 2011. During this time, he has discovered a variety of improvements needed within the entire industry if it is to reach its potential of feeding the world while dramatically reducing water usage from 70% of the world's water to less than 10%, and eliminating agricultural runoff.

The vertical farming industry requires the following in order to achieve its potential: (1) specialization of labor: either grow aeroponically, or manufacture aeroponic equipment, not both; (2) banks to back aeroponic manufacturers in leasing equipment to growers. This will enable old-gen aeroponic equipment to be sold to those with less money, and allow manufacturers to focus on making more efficient models; (3) publicize an efficiency model. Big dollar investment has favored less efficient models because the founder has pedigree; (4) vertical farming must be done to scale. Too many promising vertical farmers have closed because they limited their capacity from the start; and (5) get as much economic research to USDA regarding vertical farming as soon as possible. Economics inform the Farm bill.

Nick Starling was the lead team leader into Baghdad during the 2003 invasion of Iraq. Since leaving the US Army Rangers, Nick has focused on how to engage veterans in post-traumatic growth, entrepreneurship, and the peace process. Nick personally endeavors to complete his PhD dissertation on the economics of vertical farming.

When: Monday, February 5, 2018

Time: 2:00pm - 3:00pm

Where: 108 HABB1

Please contact Lesley Mitchell (lesleyg@vt.edu) if you would like to meet with Mr. Starling following his seminar. He is interested in collaborating with Virginia Tech.



DEPARTMENT OF PLANNING & ZONING

T: (540) 635-4236
F: (540) 631-2727

Town Administration Building 102 E. Main St.
P.O. Box 1560, Front Royal, VA 22630-1560

May 9, 2018

Ramsey Inc.
Attn: Chris Ramsey
508 Commerce Avenue
Front Royal, VA 22630

**Re: FRSUB-000830-2018, Major Subdivision Plan
Happy Creek Knolls Section 4
T.M. 20A21-3-G (12.43 acres, 33 proposed lot, 2 streets, SWM lot)**

Dear Mr. Ramsey,

On April 24, 2018, Town Staff received the above-referenced resubmission of a major subdivision application. Please see the department review comments below.

A. TOWN DEPARTMENT OF PLANNING & ZONING:

1. Loudoun County Specifications. Please remove specifications from Loudoun County on Sheet 1.1.
2. Sidewalk. Please include on the plans and typical sections sidewalks that are six (6) feet in width. The Town Code requires them to be six (6) feet in width when abutting a curb, and five (5) feet if offset from the curb.
3. Stormwater Management Pond. Who is proposed to own and maintain the Stormwater Management Pond after constructed with this development?
4. Steep Slope. Please identify and label all areas of steep slopes pursuant to Town Code 148-860.A., including the two categories described under 148-860.A.3.a. Any lot located within a steep slope overlay area must contain a note stating that the property hereon is subject to the provisions of the Town Code related to Steep Slopes. Furthermore, please demonstrate how the grading plan complies with the Building Site Requirements listed under 148-860.A.6. Please note the 2:1 slopes are apparent at the proposed pond and other areas on the property. The Town Code restricts development on steep slopes greater than 15% unless deemed feasible by a geotechnical report.

5. Haymaker Lane. Please extend Haymaker Lane to the adjacent property line.
6. Light Poles - location. Please place light poles within the public right-of-way.
7. Water meters. Please place the water meters within the public right-of-way.
8. Sewer Pump Station. Please describe the intent of the pump station. Including the following:
 - a. What others will design and build the pump station?
 - b. Is the pump station being designed so it can be eliminated once it can be tied into HEPTAD?
 - c. Who will maintain the pump station and lot that it is located on?
9. Stormwater Maintenance Agreement. A stormwater management maintenance agreement will be required upon final plat and subdivision plan submission.
10. Bonding. Bonding will be required prior to final plat and subdivision plan approval.
11. Light Poles - type. The final subdivision plan is required to include details on the light poles that match Town specifications.
12. Light Poles – density. Please check your spacing distribution of light poles. It is significantly denser than required by Town Code. Similarly, street and traffic signs shall be required by Town Code on the final subdivision plan.
13. Drainage Easements. All drainage swales transferring storm water across lots should be placed within easements.
14. Fire Hydrant Easements. An easement is required for hydrants not within the public right-of-way. Furthermore, please show the distance to the closest fire hydrants that are off-site and ensure that there is a spacing of no more than 550 feet between hydrants. A no parking/no driveway entrance fire lane should be added in front of each fire hydrant.
15. Environmental Impact Statement. Please include an environmental impact statement.
16. Planning Commission Review. This application is tentatively scheduled for review by the Planning Commission at the June 20, 2018 Planning Commission Meeting (WCGC, 7PM). A preliminary review will take place at the May 16, 2018 Planning Commission Work Session (Town Hall, 6PM).
17. Landscaping. The final subdivision plan is required to include landscaping to meet Town Code Chapter 156 requirements for street trees and development lot coverage. To assist with that, what areas on the site can be preserved from development that may be wooded?

18. Sanitary sewer line F1 – F2. This is shown as future sewer outfall. Please construct this for construction of this development.

B. TOWN DEPARTMENT OF ENERGY SERVICES:

Pg 1 - Address correction: 1101 Manassas Ave Front Royal Va 22630

Pg 2 TFR General notes (article 21) to read; Electric service to be in compliance with Energy Services conduit policy, TFR Code 12-1 and TFR Code 70-50.1

C. TOWN ENGINEER:

1. Under General Specifications on Sheet 1: #1 - Change references from Loudoun County to appropriate local authorities. #8 - Change reference from Front Royal to Warren County Building and Inspections Department.

2. Sheet 2: Specify materials to be used in street section.

3. Sheets 14-15: Check outlet control data for pond outlet pipe. Outflows seem unreasonably low.

D. TOWN DEPARTMENT OF PUBLIC WORKS:

Public Works reviewed the site plans and offer the following comments:

- Need three valves at each tee
- Any dead end waterline needs a blowoff on it
- Who is going to maintain and be in charge of the pump station
- Need Town standards details on water and sewer, sidewalk, curb and aprons

If you have any questions regarding these comments, please call me at 635-7819.

Thank you.

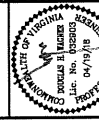
Please resubmit the preliminary plan once the above-issues are adequately addressed. Feel free to contact me if you have any questions. We will need a digital copy and at least 4 sets of the plan for resubmission.

Sincerely,

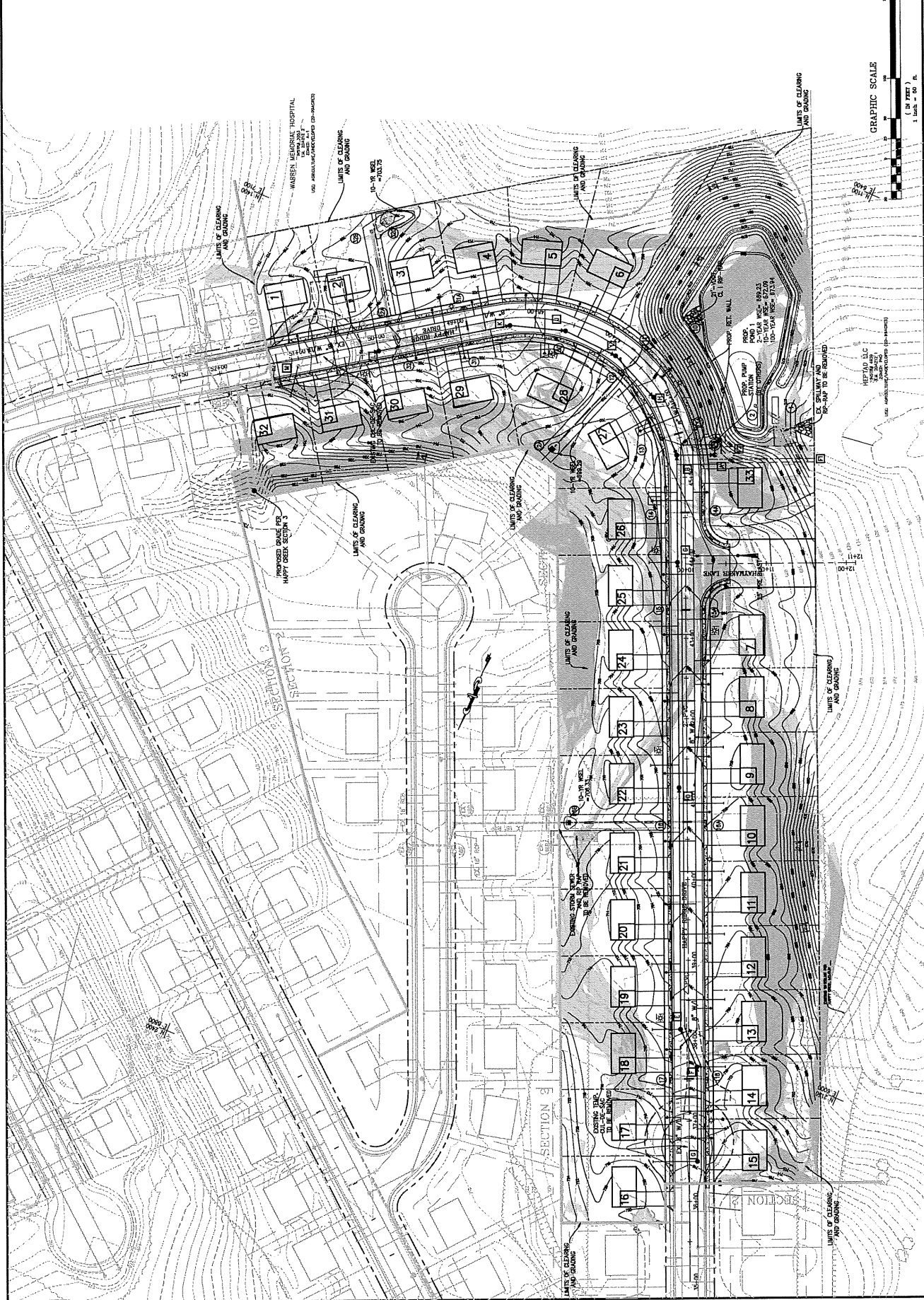
Jeremy F. Camp, Director
Department of Planning & Zoning

Cc: Bowman Consulting (Douglas Wagner, 101 South Street, S.E. Leesburg, VA 20175)

GRADING PLAN
SECTION 4
PRELIMINARY PLAN
HAPPY CREEK KNOLLS
TOWN OF FRONT ROYAL



DATE	DESCRIPTION
JTE	DESIGN
DATE	DESIGN
SCALE	AS SHOWN
DATE	10/02/04-04-001
DATE	MARCH, 2010
FILE NO.	1002-04-004
SHEET	4 of 15



GRAPHIC SCALE
1 inch = 60 feet
(1/2" = 30 feet)