

CITY OF BLOOMINGTON



**AUGUST 8, 2011 @ 5:30 p.m.
COUNCIL CHAMBERS #115
CITY HALL**

**CITY OF BLOOMINGTON
PLAN COMMISSION AGENDA
August 8, 2011 @ 5:30 p.m.**

❖ City Hall Council Chambers, #115

ROLL CALL

MINUTES TO BE APPROVED: June 13, 2011 & July 11, 2011

REPORTS, RESOLUTIONS AND COMMUNICATIONS:

- **Growth Policies Plan Update Status**
- **Barbara McKinney—City Legal – Conflicts of Interest and Ethical Conduct**

APPROVAL OF CONSENT AGENDA:

PETITION CONTINUED TO: September 12, 2011

**UV-16-11 CFC Properties, Inc (Grant Street Inn)
315, 317,319 N. Grant St.**
PC Recommendation to the BZA re: Use Variance to allow a hotel/motel use within a Residential Multi-family (RM) zoning district. Also requested is a package of variances from front, side and rear parking setbacks, side & rear building setbacks and maximum impervious surface coverage. (*Case Manager: Patrick Shay*)

**PETITION:
PUD-02-11**

**Bloomington Cooperative Plots Eco-Village
415½ N. Spring St.**
Rezone to Planned Unit Development from Residential Single-Family to allow development of a cooperative housing project. (*Case Manager: Patrick Shay*)

End of Agenda

***Next Plan Commission hearing scheduled for Sept. 12, 2011*

PETITIONER: **Bloomington Cooperative Plots Eco-Village
Daniel Weddle
1710 W. 8th Street, Bloomington**

REQUEST: The petitioners are requesting Preliminary Plan and District Ordinance approval to rezone a 2.23 acre property from Residential Single Family (RS) to Planned Unit Development (PUD) to allow the construction of a cooperative housing project. Also requested is a waiver of the 5 acre minimum PUD requirement.

SITE INFORMATION:

Lot Area:	2.23 acres
Current Zoning:	Residential Single Family
Proposed Zoning:	Planned Unit Development
GPP Designation:	Urban Residential
Existing Land Use:	Vacant
Proposed Land Use:	Cooperative Housing
Surrounding Uses:	North – Salvage Yard South – Single Family East – Single Family West – Cemetery

PROJECT HISTORY: This petition was heard by the Plan Commission both in March and May of this year. The project has been continued since the May meeting to allow for additional refinement of the petitioners' proposal. The petitioners have revised the proposal and are requesting the proposal be forwarded to the Common Council.

PROPERTY DESCRIPTION: The property, zoned Residential Single Family (RS), is located west of the dead end of N. Spring Street within the Waterman's Addition. It is bordered on the north by a rail line and salvage yard (JB Salvage), on the west by Valhalla Memory Gardens cemetery and to the south and east by existing single family homes. Although the property only has a small 35-foot frontage on Spring St, it opens to a larger open field area with existing trees on the perimeter.

REPORT: The proposal includes several non-traditional development options that create several conflicts with the regulations of the UDO. The petitioners' proposed PUD Preliminary Plan and District Ordinance attempt to address these conflicts. The property is proposed to be split into five major areas; the village (sleeping cabins), the community house, the orchard, the ponds and the gardens.

The Village: The petitioners are proposing several small "cabin homes" in the northwest corner of the property. Originally, the petitioners requested a maximum

of 25 cabin homes. Based upon comments they have received throughout the PUD process, they have reduced the number of proposed cabin homes to a maximum of 10 structures. The petitioner is proposing a maximum footprint of 400 square feet and maximum height of 2-stories. They are proposing that flat roofs be permitted to allow for rooftop decks. Staff has no concerns with this request and also believes the number of homes to be appropriate.

Due to concerns raised at the initial Plan Commission hearing, individual cabin homes will be required to have kitchens and bathrooms. All homes will be connected to City water and sanitary sewer systems.

Maximum # of cabins – 10
Maximum Footprint – 400 square feet

Community House: The petitioners also reduced the number of bedrooms and occupants within the cooperative structure. Originally, the petitioners proposed a maximum of 30 bedrooms and 40 unrelated adults. The petitioners are now proposing a maximum of 15 bedrooms and have committed to a combined maximum of 30 unrelated adults in both the village and the community house. This structure would also be required to be connected to City water and sanitary sewer.

Overall Bedroom Count/Occupancy: The petitioners are proposing to limit the combined bedrooms and occupancy of the overall development (the village and the community home) to 40 bedrooms and 30 unrelated adults. Staff would still recommend that each individual home within the village be limited to no more than 3 unrelated adults.

Maximum # of bedrooms – 40
Maximum Occupancy – 30

Density Comparison: This type of development does not equate to conventional density evaluation. However, for comparison, a more conventional single family subdivision could have approximately 10 lots. If all of these homes were 3BR, there would be a total of 30 bedrooms and a maximum total occupancy of 30 unrelated adults.

The Orchard: The petitioners are proposing to plant a diverse orchard within the southern area of the property. This may require the removal of some of the smaller existing trees in this area. The orchard area has also been proposed to allow grazing of the desired animals on the property.

The Ponds: The petitioners' current stormwater plan now includes one large biofiltration pond in the central portion of the site fed by a swale that brings water from an existing outlet structure to the north. Previous plans called for this swale to be a biofiltration swale. Staff wants clarification that this swale will be constructed in a manner consistent with a biofiltration swale. There will also be a retention pond intended mostly for recreation on the western portion of the site.

The Gardens: Due to the enlarged detention pond, the garden area has been reduced as well. The petitioners will garden in open areas surrounding the community house and the swimming pond.

ADDITIONAL PRELIMINARY PLAN AND DISTRICT ORDINANCE ISSUES:

Phasing: The petitioners have proposed a specific phasing plan. The phasing is broken down as follows:

Phase 1: Utilities, ponds, central bathhouse, up to 3 member homes, garden preparation and construction, invasive vegetation removal, and native plantings

Phase 2: Community house, additional member homes, soil maintenance, and establishment of orchard/food forest

Phases 3-4: Additional member home construction

In addition, the petitioners are proposing to phase the introduction of animals onto the property over the next few years.

Parking/Emergency Drive: Due to the environmental nature of the project, the proposed community will rely heavily on bicycle and pedestrian traffic. The petitioners' parking proposal would restrict on-site ownership of cars and provide a car-sharing situation with 2 cars and one truck to be used and owned in common by the membership. To accommodate additional vehicles, the petitioners have proposed to install a total of 6 parking spaces; 5 pervious paver parking spaces and 1 ADA compliant space with a sidewalk connecting to the community building.

There has also been significant discussion with the neighborhood regarding on-street parking along Spring St. This street is approximately 20 feet in width and people currently parallel park along the street. With the potential additional residents associated with this project, this situation will only be intensified. Furthermore, any on-street parking could cause a conflict with the necessary width to accommodate a fire truck. Staff recommends that the neighborhood request the street to be designated by the City as no parking.

The drive will be a combination of a grasspave system and stone to meet Fire Department standards. It will also extend past the parking area to the northwest to provide fire access to the future cabin homes and the community building. An adequate fire truck turnaround has also been provided at the request of the Fire Department.

Utilities: The petitioners have met with the Utilities Department to determine the necessary public utility improvements to serve this property and the proposed use.

- Water – The petitioners will be upgrading existing water service within Spring St. to a 6" line, and connecting that line with a new 2" line. Although

individual structures will be connected to the City water system, they may also include cisterns to collect and utilize rainwater.

- Sanitary Sewer – The site naturally flows to the east. The sanitary sewer will follow the natural contour of the site and connect to an existing 8” line located in Spring St.
- Stormwater – As previously stated, stormwater requirements are being met by the addition of a large detention pond, a small retention pond, and a biofiltration swale that channels water runoff from the salvage yard to the north.

Several concerns have been discussed with this petition regarding stormwater and existing flooding issues. These issues are mainly caused by two “choke points”. The first is a culvert that runs under Spring St. Water from this site flows southeast and backs up on the west side of Spring St. due to the undersized culvert. This regularly creates a ponding situation in yards along the west side of Spring St. The second issue is an inadequate culvert that runs under W. 8th St. There is an existing open drainage swale that connects Spring St. to 8th St. that also ponds due to the inadequate 8th St. culvert.

The petitioners’ plan would install a new stormwater pipe under Spring St. that would slow the rate of discharge from the petitioners’ site and bypass the existing Spring St. culvert thus reducing the amount of flooding that occurs within the front yards of the homes on the west side of Spring St. The City Utilities Department has also committed to construct a new open drainage swale that would connect the new stormwater pipe to the existing open swale on the east side of Spring St.

Although funding is not currently available to improve the 8th St. culvert issue, the City Utilities Department is now aware of the problem and will place the project on their projects list to complete in the future as money and priority allows.

The Utilities Department has determined that the petitioners’ stormwater plan can meet the stormwater requirements with final details being approved at final plan stage. The petitioners’ stormwater calculations show that the combined post-development discharge rate of both the Spring Street culvert and the new pipe across Spring St. would be reduced 68%, 60% and 39% over predevelopment rates for the 2, 10, and 100-year storm events, respectively. These improvements are achieved through a combination of the new piping and the large detention pond on the site that will provide additional storage capacity for stormwater on the petitioners’ site.

Accessory Structures: The petitioners have proposed specific accessory structure standards for the PUD. They have requested that they be allowed a maximum of 7500 square feet of accessory structure footprint. The previous

submittal showed a conceptual layout of how 7500 square feet of accessory structures could fit on the property. For comparison, 10 single family homes could have a combined total of 8400 square feet of accessory structures.

Staff also recommends that the maximum accessory structure height of 20 feet remain for all structures with the exception of the barn. Staff recommends that an RE zoning district accessory structure height of 30 feet be allowed for a future barn structure.

Animals: The allowance of animals has received considerable discussion with this project. The petitioners have requested that crops and pasturage be allowed within this PUD. Their original request was to have a maximum of 50 chickens and 3 goats on the site. Fifty chickens was based upon the number of chickens that could have been allowed through the accessory chicken flock standards of Title 7 for the approximate 10 single family homes that could have been developed through a conventional subdivision.

Staff recognizes that some animal ownership is an essential and central part of the development concept being proposed by the petitioners. Therefore staff is recommending a phased approach to animal ownership within the PUD. Staff recommends that a baseline ownership of 10 chickens and 3 goats be permitted. Thereafter, staff recommends that additional chickens be permitted in increments of 5 chickens. Additional chickens would only be allowed if adjacent property owner permission is granted in accordance with the City's Animal Control Ordinance. If such approvals are granted, the cap on the number of chickens would be 50.

Staff recommends the following restrictions on animal ownership for this PUD:

- All animal containment areas must maintain a 100 foot setback from the rear property lines of the homes located along Spring St. and 25 feet from the rear property lines of the homes located along 8th St. **(The petitioners are currently requesting a 25 foot setback from any property line).**
- Chickens shall be maintained in chicken tractors
- A maximum of 50 chickens are permitted with phasing as described above.
- No roosters shall be permitted
- A maximum of three goats are permitted

The petitioners have proposed to install a vegetative buffer along the east side of the property if the bordering neighborhood requests it. The petitioners have also committed to phase the animals as follows:

- 2012: 5 chickens
- 2013: 5 additional chickens
- 2014: 3 goats
- Any additional chickens would need neighbor approval

Ownership Structure: Although the petitioners have asked for flexibility in the ownership structure, they anticipate a common ownership of land with individual village homes being owned as condominium style or zero-lot line homes. The community house would be owned in common by the membership. Staff is comfortable with all of these options and recommends that the exact ownership be developed with future final plans.

Alternative Energy Sources: The petitioners have proposed alternative energy sources such as solar panels, geothermal systems, heat pumps, and windmills. The UDO does not prohibit these types of systems and can be utilized on this site.

Education: The petitioners have included several education components in their proposal. These include a cooperative home school option for members of the community. Other individual classes for the public regarding urban agriculture, permaculture, and cooperative housing would also be permitted.

Home Occupations: The petitioners have requested that one home occupation for a massage therapist be granted with this PUD. Any future home occupations requested would have to receive a subsequent conditional use approval.

Setbacks/Development Standards: The petitioners have proposed reduced setbacks. Specific setbacks/Development standards have not been proposed. Staff recommends the following standards for this PUD:

- Primary building setbacks
 - North and West – 8 feet regardless of stories
 - East and South – 25 feet
- Accessory building setbacks
 - 35 feet from Spring St. , 5 feet for all other setbacks (no change in code)
- Parking setbacks
 - 15 feet – all sides
- Maximum impervious surface coverage - 40% (no change)
- Maximum Height, Primary Structure – 40 feet (no change)
- Maximum Height, Accessory – 20 feet (Barn may be 30 feet)
- Internal setbacks shall not be required if small lot or zero-lot line development/ownership models are used

Fence height – Maximum of 8 feet behind front facades of adjacent homes on Spring St.

Building Materials: The petitioners have proposed several alternative building techniques that may not meet the UDO's architectural guidelines. These building types include those such as cob, cordwood, Deltec Homes, earthship (recycled material), geodesic dome, post and beam, rammed earth, sandbag, straw infill, slip straw, and strawbale. The petitioners would have to meet all building codes in association with these types of construction.

Pedestrian Accommodations: The petitioners have revised the site plan to include an ADA accessible sidewalk connecting Spring St. and ADA parking to the community house. The petitioners also anticipate a more informal path system throughout the development.

Transit: After receiving Plan Commission comments regarding transit, staff explored the possibility of altering existing bus routes to include service of the Waterman addition. Currently, the closest stops are at the corner of W. 11th Street and N. Adams Street as well as the corner of W. Kirkwood Avenue and N. Adams Street. After speaking with Bloomington Transit representatives, this service is not feasible at this time. There are several physical barriers such as a low overpass on Adams St. and inadequate rail geometry with the railroad tracks that cross both Adams St. and Vernal Pike that makes service difficult.

Signs: The petitioners have proposed a single 12 square foot sign of 4 feet in height at Spring St. and the potential of an additional sign of the same size if the B-line is extended in the future adjacent to this property. The future sign would be permitted at a future connection of the site to the trail.

Tree Preservation: The petitioners are proposing to remove several areas of small trees to allow for additional sunlight and establishment of the orchard. They do intend on leaving the better stand of trees located on the southeastern portion of the property.

The petitioners will be planting several fruit and nut trees for food, noise buffers, and new canopy. The petitioners have met on-site with representatives of the Environmental Commission to discuss their preservation and planting plans. The EC has raised no concerns with their proposal.

Invasive Species Removal: The petitioners are proposing to systematically remove the invasive species on the site to be replaced with native plants.

Membership: The petitioners have outlined their membership process within the PUD Preliminary Plan and District Ordinance documents. The process has been designed to allow for ample time for prospective members to be evaluated for compatibility with the group.

Environmental Testing: The petitioners contracted several Phase II environmental tests with the purchase of their property, including PCB and heavy metal testing. All tests resulted in acceptable levels. At the previous Plan Commission meetings, there were several comments that additional testing should be considered. Due to these concerns, the petitioners have ordered a more complete Phase I environmental assessment to be performed. The petitioner will present the results of this assessment at the Plan Commission meeting.

Final Plans: It must be determined if the proposal is at a detailed enough stage to delegate final plan approvals to staff. Staff believes Phase I which includes the infrastructure, vegetation changes, and 3 cabin homes and a central bathhouse

can be done at staff level. However, staff finds that future final plan approval and construction of the community building should be reviewed by the Plan Commission.

GROWTH POLICIES PLAN ANALYSIS: As an infill development centered on diversity and sustainability, the petitioners' project takes a significant step toward achieving a majority of the Guiding Principles of the Growth Policies Plan. More specifically the proposed use of the property will help to achieve the following principles:

Compact Urban Form: The proposal is seeking an approval that would allow for an increased density of occupants on the property. As an infill development on a difficult site, this project will help to achieve more compact usage of the urbanized area without further taxing public services.

Nurture Environmental Integrity: The focus of this Eco-Village project is to create an integrated community with a focus on sustainability. It is the petitioners' stated goal to create as close to a closed loop system as possible. With this project, they propose to increase water quality, grow local foods, create an orchard, car share, meal share, seek alternative energy sources, and utilize reduced footprints all in an attempt to reduce their carbon footprint.

Leverage Public Capital: Again, as an infill project, this project serves to meet the goal of better utilizing existing public facilities without creating new undue burdens on the City's infrastructure.

Mitigate Traffic: The petitioners' desire to limit car ownership and seek to utilize bicycle and pedestrian transportation as the main mode of travel facilitates this guiding principle.

The *Conserve Community Character* principle is not as easy to evaluate for compliance. The project certainly enhances the Bloomington culture of diversity and innovation. This is an inherent part of Bloomington's identity. At the same time, careful consideration must be paid in reviewing the details of the proposal to ensure that the policy of *Protect and Enhance Neighborhoods* (Policy 1) is not compromised due to the intensity of the project. This principle can create some inconsistency with the goal of Compact Urban Form. Compact Urban Form is a desirable goal, but should not be achieved at the expense of existing neighborhoods stability.

Urban Residential: The subject property lies within the Urban Residential designation of the GPP. The GPP states that single family homes are the primary land use activity for this area and gives the following guidance for land use decisions for this area:

- Develop sites for predominantly residential uses; however, incorporate mixed residential densities, housing types, and nonresidential services where supported by adjacent land use pattern

Furthermore, the proposed project will also create a unique opportunity for other City goals such as affordable housing and fostering urban agriculture/local food production.

ENVIRONMENTAL COMMISSION MEMO: The Environmental Commission found that their initial concerns have been addressed by the petitioners and are supportive of this request.

NEIGHBORHOOD INPUT: Staff has received significant input from adjacent property owners. Staff has met several times with the petitioners and neighborhood representatives on this case. The majority of the discussion centered around drainage, animals, environmental testing, and the scale of the development. Although not all issues have been resolved, the petitioners have significantly revised their proposal to attempt to address these concerns. In addition, the petitioners have also worked closely with the neighbors to revive the Waterman Neighborhood Association.

There were also concerns raised regarding the vehicular speeds along 8th Street. To address these issues, the City looked at several potential solutions and installed center line and parallel parking pavement markings along 8th St. These will visually narrow the travel lanes and reduce the average speeds on the street.

CONCLUSION: Staff finds the overall concept to be a desirable land use that can be compatible with the goals and policies of the GPP. Furthermore, staff finds the proposed site to be a compatible site for the proposed use. It is close enough to the center of the city to allow for alternative modes of transportation while minimizing any potentially negative impacts to adjacent properties. It is bordered on two sides by a salvage yard and a cemetery as well as existing vegetation along its property lines.

Staff finds that a cooperative housing project with diverse interests and a strong focus on local food, affordable housing, and sustainability is very supportable. The main question that must be discussed and determined when evaluating compliance with the GPP is whether the intensity of the proposal as currently submitted has a potentially negative impact to the surrounding neighborhood. With the revisions to the original proposal, staff finds that the proposed use is appropriate for this property.

RECOMMENDATION: Staff recommends that the Plan Commission forward case #PUD-02-11 to the Common Council with a positive recommendation and with the following conditions:

1. The petitioner will work with staff to prepare a revised Preliminary Plan/District Ordinance for submittal to the Common Council including revised site plans and maps.
2. Individual “cabin homes” are limited to a maximum occupancy of 3 unrelated adults.
3. The “ditch” shown on the drainage plan must be designed and constructed as a biofiltration swale.

4. Accessory structures shall be a maximum height of 20 feet except that a single barn structure shall have a maximum height of 30 feet.
5. Animals (crops and pasturage) shall be permitted as recommended by staff in this report.
6. Final Plan approval of Phase I shall be delegated to staff.
7. Setback, impervious surface, and height standards for the PUD shall be as recommended in this staff report.

MEMORANDUM

Date: August 1, 2011
To: Bloomington Plan Commission
From: Bloomington Environmental Commission
Through: Linda Thompson, Senior Environmental Planner
Subject: PUD-02-11, Bloomington Cooperative Plots Eco-Village and Community House, Second Hearing

This memorandum contains the Environmental Commission's (EC) comments regarding a change of zoning from residential to Planned Unit Development (PUD). This petition contains some requests that are not yet typical for PUDs; nevertheless, after ample consideration the EC believes the sustainable nature of the plan is commendable and beneficial for future paradigm shifts in how we live and develop our cities, thus supports the request. The petitioners have been exemplary in addressing the concerns and expectations that the EC noted at the previous hearing and meetings. Below are the topics.

1.) LANDSCAPE PLAN:

The petitioners met with staff on several occasions and discussed how the landscape and buffers will be laid out. With the benefit of sharing ideas and suggestions, the illustrative plan for landscaping will almost certainly be a benefit to the neighborhood and local ecosystem services.

2.) WATER QUALITY:

The petitioners have been concentrating on the water quality and quantity issues. The EC believes the petitioners are generously offering to make improvements that equal or exceed their responsibility for the sake of neighborhood improvement. By creating a stormwater design that includes low impact development features, the water quality and quantity at the site is expected to be better than pre development, and partially at the expense of losing their best gardening location. In addition, the petitioners compromised on the use of composting toilets so the fears of some neighbors might be lessened.

3.) SITE DENSITY DESIGN:

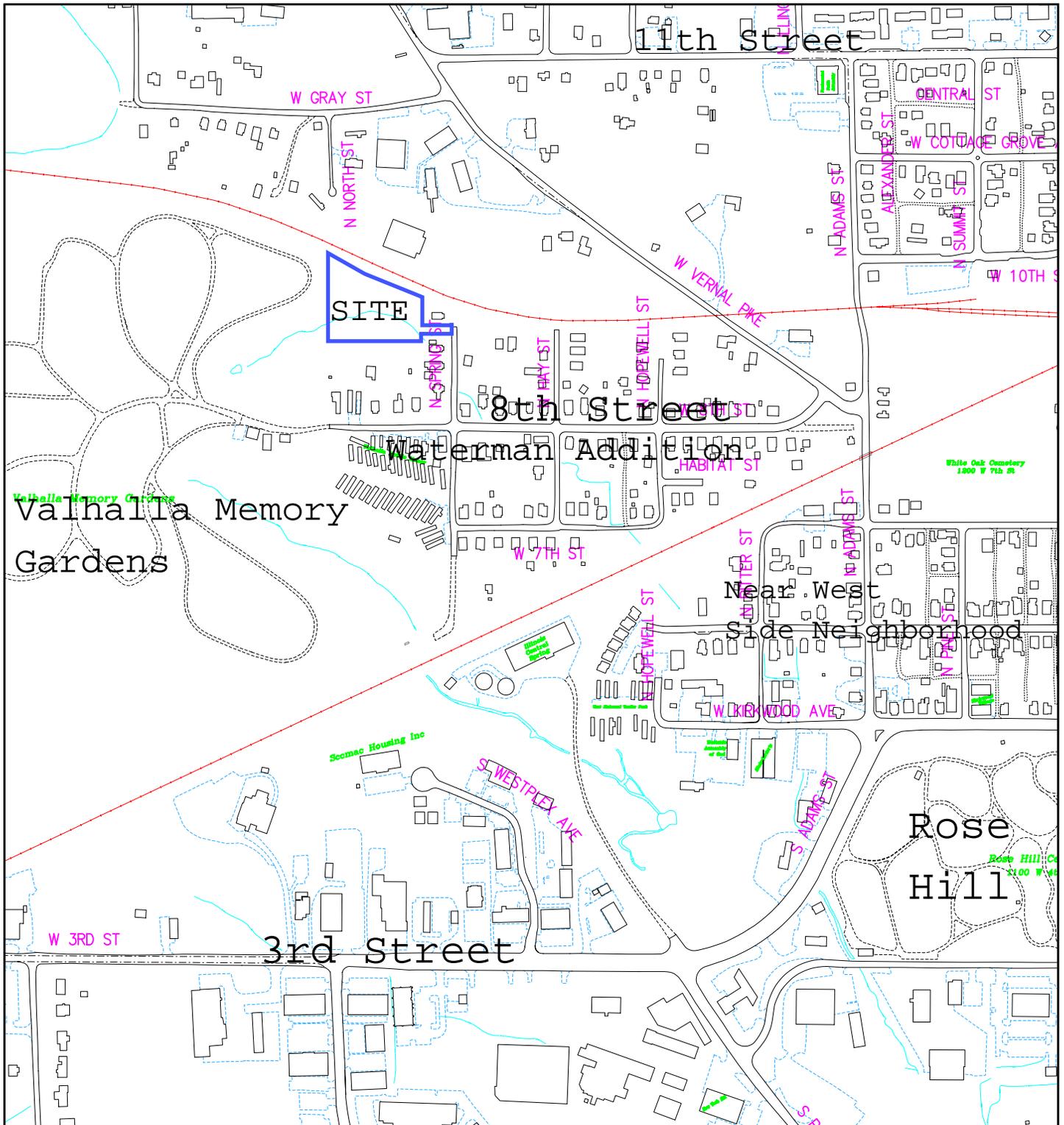
The EC believes the petitioners have resolved the density and traffic concerns by lowering the population density of the site.

4.) FARM-TYPE ANIMALS:

The petitioners have scaled down the number of animals requested and plan to phase in additional populations. The EC believes these numbers are reasonable and supports the approval for these animals. Animals are essential to the life style intended for this site and the EC foresees no problems if the animals are taken care of properly.

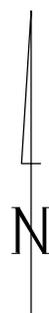
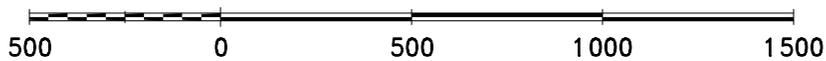
RECOMMENDATION:

The EC is supportive of, and recommends approval of this request to change zoning designation.

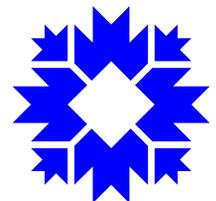


PUD-02-11 Bloomington Cooperative Plots
 415 1/2 N. Spring Street
 Location/Zoning/Land Use Map

By: shapp
 11 Jan 11

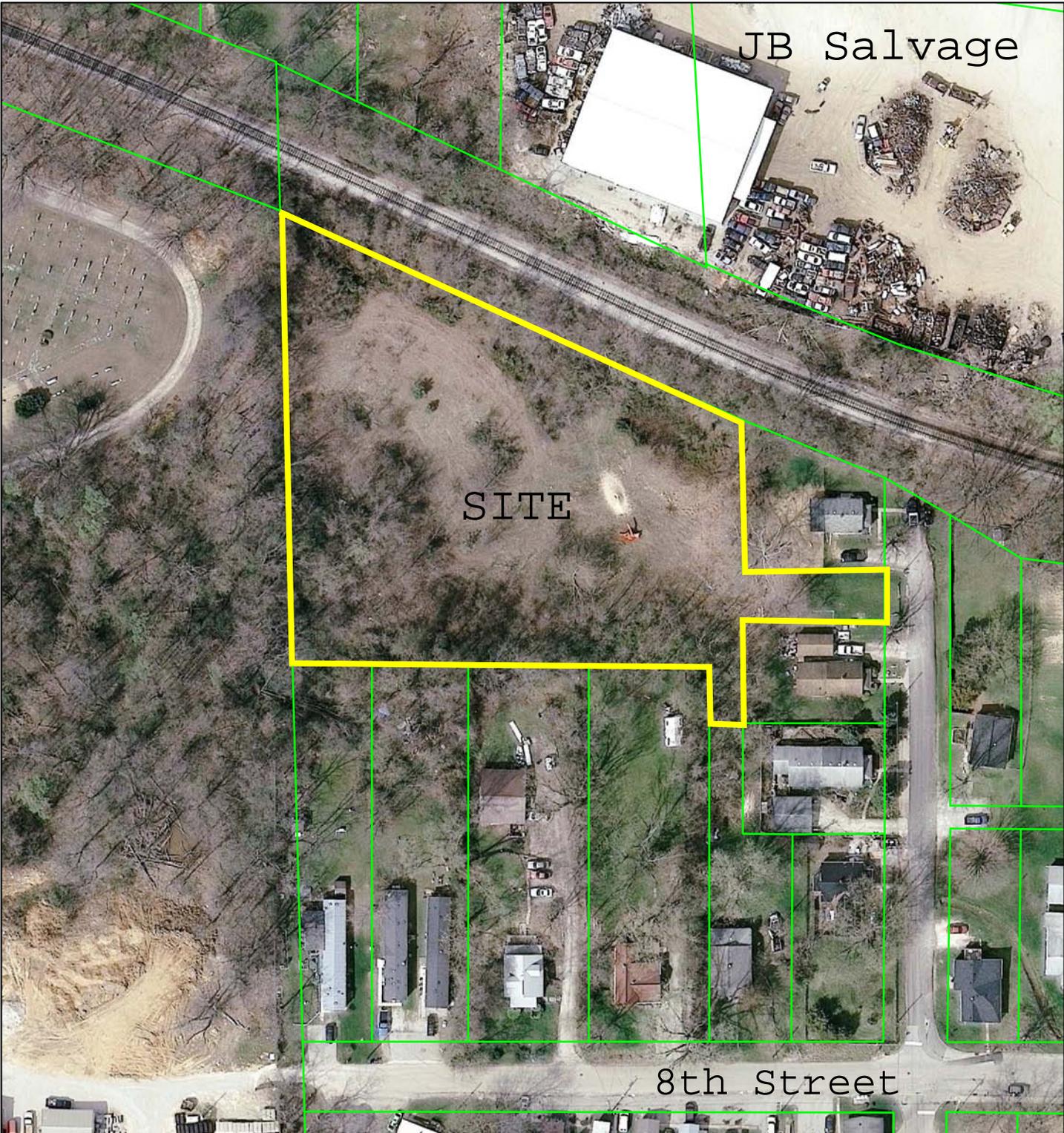


City of Bloomington
 Planning



Scale: 1" = 500'

For reference only; map information NOT warranted.



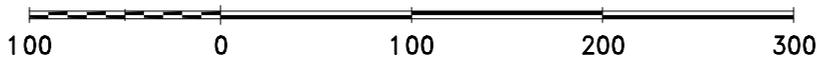
JB Salvage

SITE

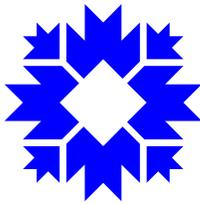
8th Street

PUD-02-11 Bloomington Cooperative Plots
Aerial Photo

By: shayp
11 Jan 11

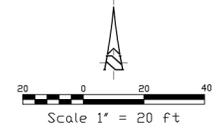
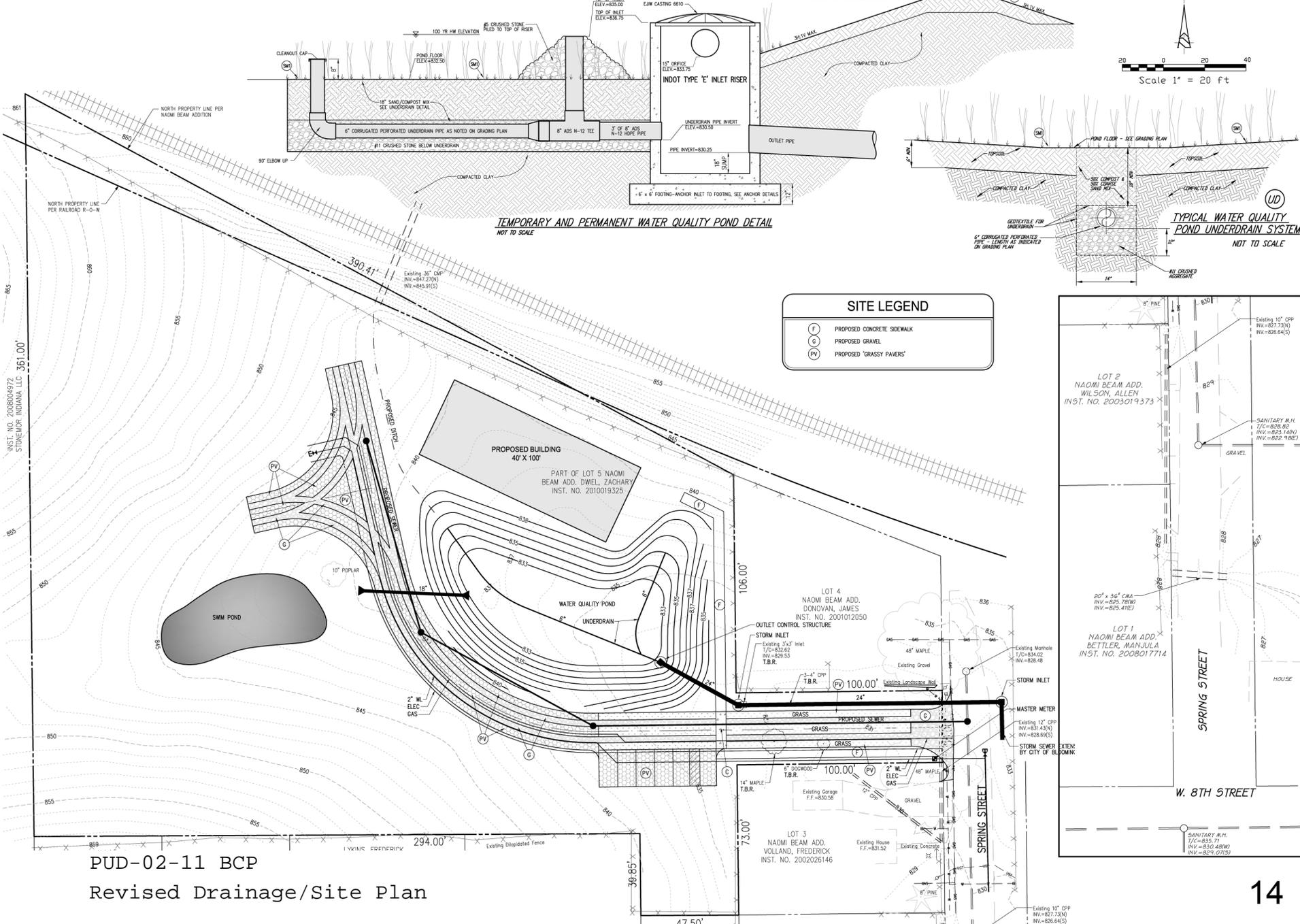


City of Bloomington
Planning



Scale: 1" = 100'

For reference only; map information NOT warranted.



Revisions:

ARCHITECTURE
ENGINEERING
PLANNING

BLOOMINGTON, INDIANA
(812) 339-2890 (Fax)

BRYNUM FANYO & ASSOCIATES, INC.
528 north walnut street
(812) 332-8030

certified by:

Proposed:
ECO VILLAGE
Bloomington, Indiana

Title: PRELIMINARY
DRAINAGE PLAN

designed by: JBT
drawn by: JR
checked by:
sheet no:
project no: 401020

INST. NO. 2008004972
STONEMOR INDIANA LLC 361.00'

PUD-02-11 BCP
Revised Drainage/Site Plan

Ecovillage PUD Addendum

Ecovillage contributions to the Neighborhood

During the May planning commission meeting, Susan Fernandes asked what we were offering the neighborhood. Though we don't have a lot of money we have been able to contribute in valuable community organizing and political ways. To be honest, many of these contributions owe a big thanks to a very vocal neighbor who kept bringing things into the light throughout the PUD process.

Reestablishing the Waterman Neighborhood Association

One of the ecovillage founders got the neighborhood association ball rolling by speaking with the HAND department. From there one of the neighbors organized the first event and then walked door to door with another ecovillager inviting people to the first meeting. A total of 8 people showed up. We now have 20 neighbors active with the Association via email. Our next neighborhood meeting is scheduled for July 31st, 2011. One of the goals of that meeting is to determine what changes to seek for the neighborhood that can be included in the PUD proposal.

Flooding

When we originally hired Bynum Fanyo to design our watershed we asked to go beyond what was necessary to help alleviate the flooding problems down stream. With our most recent iteration of the water design proposal we were able to reduce the water numbers significantly and have redirected the the water to avoid the two houses west of Spring st. that have been heavily affected in the past. Beyond that the City of Bloomington Utilities has agreed to build a suitable water channel on the East side of Spring Street. Although this does not resolve the problems entirely it is a big step in the right direction.

Videos of the Flooding:

<http://www.youtube.com/watch?v=rzZUbXq9OVc>

<http://www.youtube.com/watch?v=m5VASp1YGI4>

Street Lines

The increased bicycle traffic and neighbor concerns about the high speed of traffic on 8th street were contributing factors that recently led the city to paint double yellow lines and T marked parking spots along 8th street. The traffic calming effects have been immediately noticeable.

Bike Culture

Adding many bikes to the streets increases bike visibility in the neighborhood through increased awareness.

IDEM Investigation of JB Salvage

Due to the increased activity in the neighborhood and the ongoing voicing of concerns from one neighbor, JB Salvage has come under investigation from IDEM and has hired an environmental engineer to help them comply with state laws. JB has already cleaned up the majority of the discarded tires along the railroad tracks bordering their property. This should reduce the mosquito population breeding in the water filled tires.

On-Going Political Clout

Our current contribution to the neighborhood and what we have to offer in the future is a political voice. Those of us involved in the project look forward to offering our political voice and organizational skills to the residents of the waterman neighborhood.

Neighborhood Concerns

On-Site

Drainage Plan

Water enters the ecovillage from the surrounding 22 acres to the North and West. A plan for the water drainage has been drawn up by Bynum Fanyo. The watershed plan includes a significant holding pond to help alleviate the flooding problems of the neighborhood. In addition to slowing the water, the water will be redirected under Spring street to avoid flooding the neighbors to the West of Spring street.

Driveway Motion Lights

Motion sensitive lights will be installed at the end of the ecovillage drive. Ecovillage bikes will be required to have front and back lights.

Chickens and Goats

Chickens and goats remain one of the biggest outstanding concerns of the neighbors. We have decided to proceed with the planning staffs recommendations for 10 chickens and 3 goats without neighbor approval. A future, phased-in expansion, to a maximum of 50 Chickens would require neighbor approval. To make sure the animals are not a nuisance to the neighborhood we are going to phase in the animals over 3 years. Below you will find a list of compromises and the phasing plan. Throughout the PUD process we have sought to find suitable compromises with the neighbors.

Current Compromises

Animals will be kept 25 feet from any property boundary.

Chickens will be kept in mobile coops called chicken tractors.

We are willing to put in a vegetation noise buffer along the East side of the property if the bordering neighbors request it. We will handle these requests on a per yard basis. So if the residents of 413 North Spring want a buffer then we will put one in.

Proposed Animal Phasing

2012 : 5 chickens
2013 : 5 chickens
2014 : 3 goats
2015 : Ask for neighborhood approval to expand flock.

Greater Waterman Neighborhood

Drainage

The flooding of homes was one of the first concerns brought forward. In response, we asked our engineer to design a system that would greatly improve the situation in the neighborhood. The current proposed system greatly reduces the water flow into the neighborhood, with particularly good reductions in large storms that have typically caused the most trouble in the neighborhood.

The water will also be redirected so that it no longer fans across the houses to the West of North Spring street. The water is contained and moved into a channel, prepared by the City of Bloomington Utilities, to the East of Spring street where it is directed to the current channel that services the neighborhood. The current channel is prone to flooding and despite improvements made by our project the choke point is the culvert beneath 8th street which needs to be increased in size for the entirety of the flooding to be resolved.

Parking Along North Spring Street

It was brought to our attention by a concerned neighbor that parking along North Spring street often blocks the path for emergency vehicles. With our proposal to add many residents to the street we would like to request that North Spring be designated a no parking zone..

Transportation Bus or Shuttle System

We have had discussions with the city planning staff who said that a full size bus cannot access the neighborhood due to the low bridge on Adams street, the high railroad tracks on Adams and Vernal Pike, and the acute angle turn from Vernal Pike to 8th street. There were also concerns that servicing the neighborhood would create long waits at other stops along the current route. Given our intentions to bike and the socioeconomic state of our neighborhood we feel a shuttle service to connect us to the other bus routes would greatly improve our neighborhood, even if it were just once in the morning and once in the evening to take individuals to and from work.

Traffic

Traffic moving at high speeds down 8th street is a real concern of the current Waterman residents and neighborhood association, in addition to us as future residents. Recently the city put double yellow lines down the center of the street and added parking Ts down one side which has improved the situation.

Project Phasing

We anticipated being through the PUD process earlier in the this year, 2011. Since the process has been slower than we anticipated most of the project phasing dates in the most recent draft of the PUD will be pushed back by one year. There are a couple of exceptions. Foundational work may be done on up to 3 homes this fall and the bathhouse outlined in the original proposal may or may not be completed.

Ownership/Legal Structure

The ownership and legal structure can get quite complex and the laws are always changing; however our current plan is to create a homeowner's association and land trust to own the land. Members will pay dues for food, bills, access to land, and projects to further the missions of the ecovillage. Members will own their homes.

Watershed Proposal

We hired Bynum Fanyo to design our watershed plan. Currently the City of Bloomington Utilities is reviewing this plan and we are hopeful they will have an approval for the upcoming planning commission meeting. The current plan exceeds city requirements for water retention.

Maps

Redrawing all of the maps in the PUD is very labor intensive, thus we decided to hold off a full redrawing until the planning commission has reviewed our work. I will outline the most significant changes below.

Annual Gardens

Much of the gardening space on the Eastern side of the property, in front of the common house, may be perennial instead of annual plants. This change in plans was necessitated by the watershed designs need for a larger retention pond.

Firedrive

The direction, orientation, and surfacing of the driveway are different. We have worked with Tim Clapp throughout the process to ensure that all of the changes meet the needs of emergency access. For an accurate driveway design, with parking spaces shown, please refer to the watershed engineering drawings.

Parking Spots

The parking spots, including the ADA spots, have been consolidated to the south side of the property. An ADA walkway from the parking spots to the common house is included in the design.

Phase 1 Environmental Investigation

Prior to the purchase of the ecovillage property we hired Fields Environmental to do some PCB

and heavy metal testing on the site. Such tests are typically done after a more thorough Phase 1 investigation is completed, an investigation that identifies the most likely threat sources. After our May planning commission meeting we decided to start a Phase 1 investigation to determine if there were any significant threats not addressed by the first round of testing. The majority of the phase 1 investigation has been completed and will be available for viewing at the next planning commission meeting.

Bloomington Cooperative Plots Ecovillage

Permaculture Urban Demonstration (PUD) Proposal Draft

Bloomington Cooperative Plots Ecovillage
415 ½ Spring Street
Bloomington, IN 47404
btowncooperativeplots@gmail.com

Dear City of Bloomington:

Bloomington Cooperative Plots Ecovillage (“BCP”) is entering the PUD process to obtain permission to design and build an ecovillage/cohousing community and community housing structure. (In doing so we hope to be a precedent for the city to create a zoning district that would enable future ecovillages and community housing structures to be built in Bloomington.) We have purchased 2.23 acres in the northwest of Bloomington with the intention of creating a bicycle-focused community consisting of a community structure and various small footprint houses. BCP is an intentional community of individuals and families who dedicate their unique talents, gifts, and aspirations toward a common vision of creativity, community, sustainability, education, and economic freedom. We will promote sustainable living and community by living, eating, learning, creating, gardening, sharing, and teaching together, within our community as well as the greater Bloomington community. Community is our primary need and the heart of who we are.

To achieve our vision and goals, we will combine concepts of permaculture, organic agriculture, ecological restoration, alternative energies, alternative transportation methods, natural construction, inter-personal connection, and non-violent communication methods. This combination of ideals and practices will allow BCP to minimize the ecovillage’s carbon footprint while maximizing the productivity of the land. BCP is requesting the opportunity to make its vision of community a reality on the Spring Street property. BCP would be glad to provide any additional information needed. Thank you very much for your time and consideration.

Sincerely,
Daniel Weddle
Zach Dwiel
Carolyn Blank
Bloomington Cooperative Plots
Website: BtownCooperativePlots.dwiel.net
Email: BtownCooperativePlots@gmail.com

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Permaculture Urban Demonstration

What is permaculture? As defined by one of its founders, Bill Mollison, “permaculture is a design system for creating sustainable human environments.”

What is Permaculture Urban Demonstration? It is a play off of the acronym PUD, which stands for Planned Unit Development. Our PUD proposal approaches development from a much wider perspective than a traditional PUD proposal; thus we feel it is appropriate to call it by a more encompassing name.

There is an inherent clash between the formalized PUD process and building a village, a clash that lies in the definition of home. In a typical subdivision the developer assumes the responsibility for building the “homes” or establishes rules that limit the possibility of what future “homes” can be, while also subdividing the property. This regimented “homes” approach allows the developer to explicitly say what the future homes will look like and how they will lie on the land. BCP is approaching the problem much more organically as we cannot explicitly know how future residents will want to construct their homes. Although we are putting certain restrictions into place, we are also focused on using the PUD process in a more creative and encompassing way.

This inherent clash gives us more justification to apply Permaculture principles, which provide a scientific grounding for planning the property based on natural flows. (Flows refer to sources of energy or disturbances such as sun, wind, water, or noise pollution.) By sketching a flows map it is possible to section off the property into best uses. The intention of this proposal is to not only detail placement of individual structures, sidewalks, roads, and trees, but to also detail how the village can become a harmonious piece within its natural systems.

In short, our Permaculture Urban Demonstration is the formalization of zones that lead to the optimal possibility of a sustainable community while promoting organic development so that future villagers have the framework and legal backing to establish their homes.

Ecovillage and Coopertive Housing Zoning

Ecovillage and cooperative housing zoning is not currently part of the city zoning portfolio. A new zoning district would provide viable, sustainable, high-density housing solutions as well as coincide with recommendations from Bloomington’s Peak Oil Task Force Report. Such solutions may be critical for Bloomington’s sustainable growth and well-being in the coming years and decades. We hope our PUD proposal and the subsequent success of our project will serve as a basis for establishing an ecovillage and cooperative housing zoning ordinance.

Current Zoning for 415 ½ Spring Street

The property is zoned RS, which means the 2.23 acres could be subdivided into roughly 10 building lots which could house up to 30 unrelated adults plus children. Such capacity would likely lead to a typical subdivision or trailer park. Both development strategies would require great changes to the existing green space due to roadway infrastructure. Furthermore, being that the property is located on a dead end street and the topography is sloped, a standard auto-centric subdivision would have a major impact on the neighborhood.

Timelines

Infrastructure

Phase 1, 2011:

- Emergency Access Drive (see Emergency Access Drive in Appendix)
- Run Utilities:
 - Electricity (Possibly from Duke energy, though off grid solar is an option)
 - Sewer
 - Water
 - Gas
- Implementation of Stormwater Plan

Building

Phase 1, 2011:

- Build Central Village Bathhouse (For use during the construction of homes, it will be attached to water and sewer)
- Member Home Building (Maximum 3 Houses) It is likely the work done this season will be mostly prepping for the following building season, however, more may be accomplished depending on the length of the PUD approval process.

Phase 2, 2012:

- Member Home Building (Maximum 3 Houses)
- Community House (see Community House in Appendix)

Phase 3, 2013:

- Member Home Building (Maximum 3 Houses)

Phase 4, 2014

- Member Home Building (Maximum 3 Houses)

Animals

Phase 1, 2012

- 10 Chickens
- 3 Goats

Phase 2, 2013

- Chicken Flock Expansion Begins

Agricultural

Phase 1, 2011

- Identify trees to remain on the property
- Inoculate Soil to Build Fertility (Bacteria and Fungus Inoculate)
- Dig Ponds
- Build Raised Beds
- Sow Ladino (white) Clover as a Nitrogen Fixing Cover Crop
- Establish Ponds on the Southwest Side of the Property to Provide Irrigation
- Set Up Honey Bee Hive
- Start Composting System
- Map Out Orchard
- Plan Perennial Food Forest

Phase 2, 2012

- Inoculate Soil to Build Fertility (Bacteria and Fungus Inoculate)
- Establish Orchard
- Establish Perennial Food Forest

Ecological Restoration

Phase 1, 2011

- Clear Land of Invasive Plants: Blackberry, Multi-Floral Rose, Euonymus, Bush Honey-Suckle, etc....
- Reestablish Natives (i.e. Ginseng, Blood Root, Spice Bush, Paw Paw, etc...)
- Establish Riparian Zone on the North Side of the Property
- Establish Bio Filtration Areas

Requested Uses

Animals (see Animals in Appendix)

The current zoning allows for 10 residential lots which would equate to 50 chickens. We would like to raise a maximum of 50 chickens for use in egg production. In addition to chickens we would like to raise 3 goats for milk production and vegetation clearing. The 3 goats would consist of 2 female adults with 1 suckling child to maintain milk production.

“At this point, [the city of Bloomington planning department] staff proposes that the development be allowed a maximum of 10 chickens and 3 goats without neighbor sign-offs. We then recommend that future additional chickens be permitted in increments of 5 up to a maximum of 50 only with neighbor sign-offs. As you know, neighbor sign-offs are typically required as outlined in Title 7 of the City's Municipal Code.” The previous phasing plan was sent to us by Tom Micuda.

Accessory Buildings

Given our desire to become a demonstration site for urban agriculture, Permaculture, and cooperative living, we will require various accessory buildings totaling no more than 7,500 square feet. We created a map to illustrate the 7,500 square feet of accessory structures on property. The buildings will likely shift around, however, a map was made to provide a sense of the space and how it can be utilized. These buildings might entail a barn, gazebo, tool sheds, wood shop, chicken coop, chicken tractors, goat house, greenhouse, root cellar, bike storage shed, music studio, yoga studio, office, etc... Our continued goal will be to keep these structures as small as possible and multi-purposed while still being functional.

The accessory buildings will need to be approved by the planning and building departments.

Building Permits

We will be exploring many types of natural construction; however, we will go through the proper approval and permitting processes prior to the construction of any structures.

Commercial Spaces in Houses (see Home Based Business in Appendix)

One of the founders of the community is a massage therapist and would like to have a room in home dedicated to her practice. Her business would be by appointment only in order to meet the low traffic needs of this proposal. Any future businesses on the property would require a conditional use permit from the city planning department.

Crops and Pasture Zoning

Some of the uses of the property would otherwise fall under Monroe county's current Crops and Pastures zoning.

Emergency Access Drive (see Emergency Access Drive)

Due to our bicycle-focused lifestyle it would be possible for us to live without a road bifurcating the property; however, emergency access is important and thus we have worked out an acceptable compromise. Bloomington's fire truck 1 is the largest truck of the fleet, so our drive will be based on its turn radius of 30 feet. The drive is longer than 150 feet so we will be providing a 20 ft wide access drive with a modified hammerhead turn-around. A fire hydrant will be located at the front entrance of the property and the road will allow the truck to drive within 125 feet from the front of the furthest structure so that firefighters will be able to reach the back of all structures with their 150 foot long hose.

Because the drive will only be used in case of emergency, we will install pervious pavers above an 80 ton capacity road base that would allow us to grow herbs on top of the roadway. The herbs would be selected for species that do not grow over 12 inches so that in the case of fire they

could be run over by the truck. One such herb is creeping thyme which is shorter than most grasses.

Encroach on 25 Foot Insets

The north side of the property is the best candidate for passive solar home construction. It would greatly benefit our building plans to be able to build all the way to or very close to the property boundary lines on the northern and western property lines. The northern property lines border the CSX railroad tracks and JB Salvage beyond the tracks. The western property line borders the Valhalla Memory Gardens cemetery. This request would enable us to encroach on the 25 foot inset that is typical of home construction. We feel we can make a very strong case for the encroachment given that our impact on those two neighbors will be negligible or non-existent.

Interpretations of Use After Rezoning by the PUD Process

After approval for the rezoning by the PUD process we request that future interpretations be examined and ultimately approved or denied by the staff of the City of Bloomington Planning Department.

Population of Inhabitants, Structures, and Bedrooms

We will have a maximum population of 30 unrelated adults. This number is derived from the lot being zoned for 10 houses multiplied by 3 unrelated adults per house as currently permitted in Bloomington. This number is similar to the 13.4 residents per acre ratio of Columbia Ecovillage, a successful ecovillage in Portland, Oregon (<http://columbiaecovillage.org/>). If the project is successful we may choose to petition the city for an expanded population in the future. See also Two Acre Wood Cohousing (<http://www.martyrobertsproductions.com/coho.html>) which current consists of 14 households with 22 adults and 17 kids.

In our survey of other ecovillages and co-housing communities we have found an average ratio of 75% adults to 25% children. Given those numbers there would be an average of 8 children living in an ecovillage 30 adults in size. To ensure there is adequate space for the adults and children we wish to have 40 bedrooms, a number that gives us a couple of extra bedrooms in case we have 10 children instead of 8.

The village will have a maximum of 10 small footprint houses and a larger community house with a maximum of 15 bedrooms. The combined population of the smaller houses and community house will not exceed 30 unrelated adults. Theoretically, the property could hold many more houses; however, we are restricting our development to the areas of the property that have adequate winter sun for passive solar heating. Structures will be organized in a logical way with respect and aspect to Southern sun exposure.

Signage

We would like to place signs with our ecovillage's name on Spring Street and at our private entrance to any future extension of the B-Line. These signs will be no more than 12 square feet and no higher than 4 foot in height. The name is yet to be determined. Bloomington Cooperative Plots is merely a placeholder while we go through the PUD process.

Sub-Standard PUD

The property is only 2.23 acres and thus smaller than the typical PUD requirement of 5 acres. We request the right to enter the PUD process despite being a sub-standard size.

Our Values

Building Footprint

To maximize the number of houses we can fit on the site while minimizing our footprint, individual houses will be restricted to an internal living space footprint of 400 square feet per floor (i.e. a two story house could be 800 square feet of living space). We define it as an internal square foot limit because naturally constructed homes often have thick walls, so there can be a large difference between internal living space and exterior footprint. All structures will be built according to building code and will not encroach on the solar gain of the surrounding living structures.

Car Ownership Restrictions

The community will own 2 cars and 1 truck for the use of community members. Though we cannot legally restrict individuals from owning a car, we will prohibit members from keeping a private car on site or on neighboring public streets.

Community Garden

As part of our desire to work with the neighborhood we are open to setting up a community garden, likely on the East side of the property. Use of the community garden will be done via an application process, similar to the City of Bloomington community gardens. Such community garden infrastructure provides a strong second use of the property should the village for some reason cease to exist. The community garden will also provide space for a neighbor to maintain the garden he has kept on the lot while it was vacant.

Consideration of Neighbors

The two neighbors bordering the community to the east have a vista view of the property. We have been planning our community and agricultural practices to preserve their view.

Noise is a significant concern for neighbors of any development. Although the place is inherently noisy given its proximity to the railroad tracks and JB Salvage, we are taking precautions to mitigate our contribution to such noise. The three most notable actions are caring

for the transitional forest on the south side of the property, planning social gathering spaces on slopes that lead away from the neighbors, and living structure placement. The transitional forest will provide a vegetation sound buffer for a majority of the neighbors. The social gathering space will be on the south side of the property on a north slope that leads away from the neighbors and toward the train tracks. All of the houses are very far from the neighbors, with the exception of the community house.

In addition, we recognize that Sunday is the only day of the week JB Salvage is not operating, thus making Sundays the only quiet, peaceful, day of the week in the neighborhood. In order to benefit and respect the neighborhood as well as our own community we plan on limiting our heavy building and use of loud machinery on Sundays.

Educational Offerings

There are many threads of educational opportunities offered by this project, a number of which are defined below:

Political

This project will serve as a political precedent for similar projects. The founders have spent nearly 2 years and thousands of hours preparing this proposal. Once approved the proposal will be provided as a PDF for other inspiring ecovillages.

Demonstration Site

The entire property will become an open source Permaculture demonstration site, which means not only will individuals be able to visit the site, but we will provide free PDFs of the systems that are demonstrated so that they can be replicated with the least amount of overhead.

Cross Generational

The wide range of generations represented in the planned population of the ecovillage will provide for the cross generational sharing of knowledge and wisdom.

Historical Agricultural Use Preservation

Until the early 1970s the property was an active cattle pasture. Although we will not be reintroducing cattle, we will be operating the property as an urban farm with animals, gardens, and orchards.

Local Economy Supporters and Developers

We are active local community supporters making many things for ourselves while also providing services for members of the greater Bloomington community.

Native Habitat Restoration with Forest Sanctuary

The southeast (and to a more limited extent southwest) portions of the property are young transitional forests overrun by euonymus and honeysuckle. We will be removing the invasive

plants in order to reestablish native woodland herbs. The southeast corner of the property has a small, awkward piece of land jutting off of it. It is likely we will establish this piece of land as a mini forest sanctuary.

We will hire a local Permaculture expert to recommend plants for vegetation buffers and the filtration of water.

No Profit Motive

We are not in this project to make money. Within the freedoms granted through the PUD process, we hope to create a community of people living and working together who are connected to the land as well as to the neighborhood.

On-Site Home School Cooperative

The members of the community hope to start a home school cooperative for the homeschooling of their children. Running the school as a cooperative will allow multiple individuals to be involved in building a curriculum and teaching the children. This wide range of teachers will diversify each student's educational experience beyond what any one individual could provide. The students' education will be further enriched by unique opportunities to learn about Permaculture, alternative energy, and other sustainable practices within the community.

Physical Layout of the Structures

We desire to cluster the housing as opposed to subdividing the lot. Cluster housing is a housing layout technique that places the living structures close together so that a large portion of the green space on the property is preserved.

Sustainability Defined

There are as many definitions of sustainability as there are people in Bloomington. Below are a few that resonate with us:

- Sustainability is a way of living that promotes not only the continuation but the flourishing of human, and all, life.
- Sustainability refers to an in depth understanding of where you are and what you have, being deeply committed to one's place, and committed to improving it.
- Sustainability requires simultaneously meeting environmental, economic and community needs.
- Sustainability is a base reason for our decision to live in an ecovillage constructed with natural techniques. Clustered housing and small building footprints reduce the overall footprint of the living structures, thus preserving green space for enjoyment, gardens, and life.

Walking Distance

There are no service nodes - places where community services are offered as depicted in the Peak Oil Task Force report - in the Waterman neighborhood. Our property is within walking distance of most of the neighborhood, making it an excellent location to establish service nodes.

Water Retention and Filtering

On the southwest side of the property we hope to establish a bio-filtration area with two ponds for irrigation, water pressure, and leisure. The ponds will reduce our need to draw from the city water system and the bio-filtration will filter the water used on the property.

On the north side of the property there is a watershed from the train tracks and the recycling center. The sources of the water are potential polluters and the water currently fans out across the property. In order to prevent contamination we are considering the creation of a riparian zone to slow down and filter the water.

Water Systems

Each house will have the option to install rain water collection system. House owners will have the option to store water in their own tanks, in communal tanks, or in a pond. Water tanks and ponds will feed gardens and aquaculture tanks both outside and in the greenhouses.

Water from sinks and showers is legally considered grey water. Currently Indiana state law greatly restricts what can be done with grey water but we hope that these restrictions will evolve over time. Our systems will be connected to the sewer in the conventional fashion, however, we will leave room in our systems to accommodate future legal grey water systems. We hope to work with these laws over time, but, since the ultimate decision lies with the state government we feel it is outside the purview of this proposal to include specifics about grey water use.

Ideally we would like for all grey water from village houses to be used for our agricultural purposes. Water would eventually go into public and private aquaculture and agriculture.

Members could elect to store water temporarily in tanks, ponds or swales before passing it on to the aquaculture and agriculture. Upon proper permitting, some residents could choose to reuse this water after filtration instead of tap water from the city. Grey water and rain water systems could either be combined or kept separate.

Our Reasoning

Creativity

The community's founders are thinkers and artists who wish to work together to minimize the costs of living. The inherent clash between the formalized PUD process and organic creativity is a major difficulty we face entering a process as rigid as PUD. Therefore our proposal, though specific in all areas necessary, leaves space for fostering additional creative projects.

Fluid Interconnected Systems

Most systems that meet our basic needs are often disconnected. By implementing Permaculture at every level of our village design we will be able to create fluid interconnected systems that strive toward a closed loop system.

Home

We are building our homes and thus the utmost care and attention will be paid to making every aspect of the land our home. There has been some concern voiced by the neighbors about renters not being committed to the neighborhood. We believe the neighborhood is an extension of our home and we look forward to building relationships with and respecting the neighbors. We also aspire to reestablish the Waterman Neighborhood Association, an association that ceased activity roughly three years ago.

Need for Villages and Creative Housing Alternatives

Our project in and of itself will not be sufficient for pushing Bloomington toward becoming a sustainable community. The most important aspect of our project is that it sets a precedent for future housing projects; largely this is why we have chosen the formal PUD process as it is the most difficult, precedent-setting avenue. We hope our precedent will not only serve ground-up ecovillages (as such projects will be rare given land constraints) but also clear the way for housing cooperatives and neighborhoods that wish to reestablish their preexisting infrastructure as ecovillages. We truly hope our ecovillage lays some ground work for other sustainable endeavors to follow.

Proximity for Bike-Focused Culture

To ensure that bicycling is a viable transportation option we only considered properties within a 15 minute bike ride of downtown on reasonably safe routes. The Spring Street property is 1.3 miles (9 to 15 minutes) from city hall and the farmer's market. The roads along the way (with the exception of small stints on Vernal Pike and Adams) are primarily small residential streets with low traffic. The new North West extension of the B-line ends roughly 5 blocks from our property.



Neighbor, City Officials, and Greater Bloomington Questions

ADA (American with Disabilities Act) Walkways

There will be an ADA walkway from Spring Street to the community house and one from the handicap parking to the community house.

Age of an Adult

An adult is an individual who is 18 years of age. This was included to further define the unrelated adults portion of the proposed ecovillage population.

Animals Grazing in the Orchard

Chickens and goats are the proposed animals to be grazed in the orchard. The chickens will be kept in mobile coops which reduce smell and runoff of manure by distributing the manure evenly across the land, while maintaining a healthy level of vegetation. There will be no processing of animals for meat or hides on the property as such things are prohibited within city limits.

Example of Ways Animal Noise can be Reduced:

- There will be no roosters which will significantly minimize noise.
- The coops could be positioned to face West toward the cemetery so that the sound of roosting chickens will be directed away from the neighborhood.
- Buildings and parked cars could be placed between the neighbors and chickens.
- There could be a sound barrier (ie. wall or fence).
- The coops could be lined with noise absorbing material.

Animal Phasing

You can find the phasing plan provided by the planning department in the Animals Requested Use in the Requested Use Section above.

Anything Goes

There has been concern that the vagueness of the proposal presented at the first planning commission meeting left the project open to do anything. This current proposal greatly refines what can be done and future accountability of the provisions laid out in this proposal will be maintained by the Bloomington Planning Department.

Bike Safety

It is feared that the increase of bikers to the property and speed of drivers on 8th street will result in injuries to bikers. Although cars may travel too fast on 8th street, it is very wide which makes it suitable for biking. Spring Street is a dead end and traffic slows down greatly. The most dangerous parts traveling into town are the short stints on Vernal Pike and Adams. Although these roads are not particularly good for bikers, the duration on these roads is short traveling to either the new North West B-line extension or the Near West Neighborhood. Additionally, we see the potential for the city to install a bike line or traffic calming infrastructure on 8th street intended to slow down the cars.

Building

Any new or renovated structures on the property will go through the same building department permitting process that any structure goes through in Bloomington.

Burning or Fire Pit

Any burning done on the property will be done in accordance with the laws that govern all citizens within city limits.

Businesses in Houses

The request for businesses in houses has been reduced to one business, to accommodate a current massage therapist who is a member of the group. This is not to say that there will not be more businesses in the future. In the future individuals who wish to have businesses in their own home will need to seek a conditional use permit from the city. This case by case conditional use review of new home based business was recommended by Commissioner Joe Hoffman.

Composting of Human Feces

Although it is possible to safely compost human feces and there are many working precedents, we have removed this from the PUD at this point in time.

Culvert

The watershed that crossed the property from the north comes from a 30" culvert run beneath the tracks. In the first proposal the source of the water was not made clear and we want to clarify this.

Drugs

One concern that has been voiced is the potential for more drugs entering the neighborhood and, in particular, the increase of meth labs. The current and future members of the ecovillage are active citizens of the Bloomington community who wish to build an environment in which one improves his/her quality of life and feels he/she belongs without the use of drugs. To ensure this, we have a year long membership process to get to know prospective members before they are allowed to build and own homes in our community. This process will help us to ensure individuals with current substance abuse addictions do not move into the ecovillage.

Existing Neighborhood Concerns that Need Political Voice

From our discussions with neighbors we not only received concerns about our project, but also became aware of concerns regarding the greater Waterman neighborhood. As a result of tending to these concerns, we've decided to use our current political influence to shed light on some of these neighborhood requests, some of which are expanded upon below.

City Bus Route Extension

A good point brought up by a neighbor is that there is no bus system that directly enters and services our portion of the Waterman neighborhood. Although we don't have control over such a decision, we too feel that such service would not only greatly benefit our project but the neighborhood as a whole.

JB Auto Salvage Storm Water System

A neighbor has been investigating the storm water system of JB Salvage and believes it to be in bad shape. Though we don't know the state of the water system we feel an investigation may be appropriate.

Parking Along Spring Street

One neighbor, who is concerned with us parking along Spring Street, has expressed that the current cars parked along the street would inhibit emergency services from reaching her house. We are unsure of what can be done to remedy this situation; however, an investigation into the appropriateness of on street parking on Spring Street may uncover a true threat.

Tires on the Train Tracks

There are currently many tires lying to the sides of the train tracks from our property moving eastward to Adams Street. We are not sure who should be responsible for clean up; however, the tires will undoubtedly create a breeding environment for mosquitoes. If the city were willing to provide a truck and take care of the tire disposal fees, we would be happy to provide volunteer labor to pick up the tires.

Watershed Issues in the Waterman Neighborhood

Watershed issues seem to be the largest outstanding concern of the neighbors. Historically, the properties abutting the intermittent stream of water on our property have been subject to flooding. Although we are working to greatly reduce the shedding of water which originates on our property, there remains a large flow that bifurcates our property and ultimately floods an open culvert in the neighborhood. We believe it will be necessary for the city to resolve this and other problems in the neighborhood for there to be any hope of completely resolving the watershed issues.

Fencing the Perimeter

A neighbor has requested that we fence the property. Such a large fence would likely be cost prohibitive for us as well as going against our desire to be an open and accessible part of the neighborhood. However, we plan to use vegetation buffers to create privacy and to reduce noise.

Food Production Capabilities on 2.23 Acres

A mixed omnivorous diet of an honest proportion for one individual requires 14,000 square feet or roughly a 1/3 of an acre per year using polyculture and the most space efficient growing practices, which include Permaculture design, food forest, vertical growing, raised beds, successive planting, and other intensive growing methods. Producing the wide range of foods required in a mixed diet is not practical on our property as many food staples, such as grain, are produced far more efficiently in larger scale operations and thus it is better to specialize and trade or focus on one or a few facets of nutrition. We are choosing to focus primarily on the production of vegetables.

It is possible to grow 8,000 pounds of vegetables on an acre of ground. An adult requires 500 pounds of vegetables per year. Our growing space for vegetables lies between 1 and 1.5 acres, enough to provide 100 percent of the vegetables needed for 16 to 24 adults. Given a population

of 30 adults and 10 children, which we will consider 60% of an adult, it would be possible to grow between 44 and 66 percent of the vegetable needs of each individual. Beyond vegetable production, the diet would be supplemented by on site production of eggs, goat milk, fruit, herbs and mushrooms.

Handicap Accessibility

The common areas of the community house will be handicap accessible and the structure will have an ADA compliant walkway off of Spring street and ADA compliant parking spots. Although the community house will be handicap accessible, the accessibility of individual homes will be at the discretion of the home owners. Special consideration will be given to providing building plots near the fire drive for handicapped individuals who may wish to construct a house in the community. Given the topography of the land, there will be many places that will not be readily accessible to the handicapped. However, it is foreseeable that parts of the domesticated landscape (for example, a 3 foot high raised garden bed) could be made handicap accessible.

Houses without Toilets (Bathrooms) and Kitchens

Although we prefer to give homeowners the option on such infrastructure, all houses are required to have kitchens and bathrooms by state law and thus we will include them in all our homes.

Houses without Electricity, Water, Sewer, and Gas

The community will be connected to all utilities and will go through the standard processes for the installation of each. Water and Sewer are required by law; however, gas and electric are not. Though the community is opting to have gas and electric run to the property, hooking up to these utilities is at the discretion of individual home owners. It is possible that some houses may choose to generate their own electricity as opposed to connecting to the grid.

Limiting Membership (see Membership Process in Appendix)

Anyone who lives in the ecovillage will be required to go through an extensive membership process; a process laid out in detail in the appendix. In order to have an effective community we must thoroughly screen new members. Beyond screening, the restriction of car ownership and the overall concept of the project will largely weed out individuals who are not a fit or are not committed to joining the community.

In Writing

This written proposal sets the guidelines of the final approved project. All of our aims and objectives are set in writing. In the future this proposal and a final site design, which must be presented to the planning department after the City Council votes, will be used to make sure the property is being utilized in an agreed upon way.

Interpersonal Relationships in Living Cooperatively (See Interpersonal Relationships in Appendix)

In order to maximize cohesion between the members of our community, we will be trained in Consensus Decision Making and Non-Violent Communication. In addition to interpersonal communication training, we also have a mediator trained in the Restorative Circles and Community Justice and Mediation Center mediation techniques.

Milestones with Neighborhood Review

A neighbor recommended that the ecovillage be phased in through milestones with neighborhood review. This option was discussed at the first planning commission meeting and there seemed to be favor both ways. Ultimately, Patrick Shay, Assistant Director of the City Planning Department, said that there was no formal process for doing this and that a best bet option would be to scale back the project to something that the neighbors would be comfortable with from the start. We hope that the large changes to this proposal will be sufficient to provide comfort with the project from the start.

More Formal Interpretations About the Plans and Layout

Since the first meeting we have gone through a great deal of mapping, which can be found in the map section below. In addition to mapping ourselves, we have hired an engineer to survey the property, a Permaculturist to identify property flows and design vegetation buffers, and an architect to make some conceptual drawings.

Neighborhood Feedback Opportunities

Since the first Planning Commission Meeting we held a neighborhood meeting moderated by the city, hosted an open house, and went to over 130 houses in person to hear concerns and invite neighbors to the open house and next Planning Commission Meeting.

No Cars

We recognize that cars can provide valuable services and that many individuals view living without a car as an impossibility. Therefore, in order to uphold our policy of no car ownership we are developing a car share for the ecovillage members. The car share consists of 2 shared cars and individuals can opt to buy a share and pay for each mile driven. Although we cannot legally prohibit an individual from owning a car, we can require that they do not park their car in the ecovillage or in the Waterman neighborhood. The structure and nature of our project will self select members; i.e. if someone can not imagine a life without a personal car then it will be very unlikely that they can imagine a life in a community that greatly restricts such freedom.

Ownership Structure

We are currently exploring our options for ownership structures. A direct answer to the question is considerably difficult as liability is hard to navigate in cooperative housing situations. As laws relating to ecovillages becomes better understood and case law is established, we learn more about how they can be structured. To add context, Earthaven (www.earthaven.org), a well established, 15-year-old model ecovillage, is still modifying their legal structure. For this reason, we want to be careful about what we restrict ourselves to in this section. That said, the land will most likely be owned by a homeowners association. The land under homes in the village would then either be owned by the homeowner, or leased internally to the homeowner.

The land will likely be set apart from the community land with a zero lot line. The community house will likely be owned by the homeowners association.

Parking Overflow onto North Spring Street

To avoid spilling over onto Spring Street, we are going to set up 8 parking spots. Six spots will be gravel parking spots that are 9 feet wide by 18 feet deep. 3 of the spots will be for our car share cars and community truck and 3 spots will be for guest parking. The remaining 2 spots

will be ADA compliant and located next to the community house. These numbers came directly from our discussion with Tom Micuda and Patrick Shay of the City Planning Department.

Pets

Too many pets was a concern of more than one neighbor and it is a concern shared by most ecovillages and us. Too many animals can wreak havoc on the song bird population, gardens, and general peace, to name just a few of the potential problems. Though we do not yet have a formal rule for pet ownership, such a rule will be in our internal bylaws.

Plant Buffer / Natural Fence

We have hired local Permaculturist Keith Johnson to aid us in designing a living fence that can serve as a buffer. Keith has put together a diverse species fence around his $\frac{3}{4}$ acre property. We hope to present this information at the next planning commission meeting.

Pond Damming or Digging Permission

Ultimately the ponds were not featured in the water shed design for the property; however, we are still going to assess whether their construction is feasible and will obtain the necessary clearances from the US Army Corps of Engineers and Indiana Department of Environmental Management prior to the digging. Should it be determined that the ponds will not hold water naturally we will install ponds using a liner.

Pond Fencing/Wall

The entire property, the pond, or some area around the pond will have a 5 foot fence/wall, as the pond will be more than 36 inches in depth and thus requires a fence/wall by law. We had originally intended to have the pond accessible to wildlife; however the safety of the neighborhood children supersedes the wildlife access.

Ponds and Mosquitoes

The ponds will contain fish and frogs to control mosquitoes.

Rainwater Collection for Drinking

Many individuals in the community will collect rainwater, which can be suitable for drinking once filtered, and each house will also have city water to meet state law.

Religious Affiliation

BCP does not promote a specific religious creed. It is not a "religious community." Members of the community may follow their own unique religious callings or none at all.

Secondary Heating Systems

We are structuring our community for optimal passive solar heating. We also recognize the sun is not always a viable option for heating and, therefore, will have secondary systems in place.

Thus, all structures will be outfitted with a secondary heating system that is approved by the building department. Examples include a wood burning stove, radiant floor heating (wood, gas or electric), or conventional forced air gas/electric furnaces.

Setback Encroachment

We would like to encroach on the North side of the property, along the railroad tracks, so that we can get better solar gain. We would like to encroach on the West side of the property, along the cemetery, to have more space for our houses.

Three Story Limit on Small Houses or Two

Though we favor three story structures for our small homes we have opted to remain with only two stories to address the concern from the fire department regarding tall structures with small foot prints.

Tree Portfolio Protecting the Existing Trees

Currently we do not have a fully flushed out map of the trees on the property; however, we have some ideas on what we are going to remove, leave, and plant. We will do our best to visit this topic prior to the next planning commission meeting so that we will have some information to present.

Remove

We plan on removing the clump of trees in the South west corner of the property that shade the southern slope with all of the small houses. We all plan on removing the very small trees on the southern slope where we have made plans to plant an orchard.

Leave

We plan on leaving the trees along the property line along the South of the property and the stand of trees on the small piece of property that juts out to the South, the piece on the South East side of the property.

Plant

We have plans to plant a fruit orchard on the South side of the property. Along the North we plan to plant pine nut trees and native nut trees, the former as a high, year round noise barrier, and both as food sources. Along all of the boundaries we will be reintroducing the native Paw Paw as a food source and mid canopy vegetation buffer.

Uncommitted Individuals working on the Project (see Membership Process in Appendix)

In order to prevent half completed structures by individuals who are initially excited by our ecovillage project but ultimately wander away, we have a very rigorous application, interview, and a yearlong live-in membership process.

Utilities Pressure

BCP will be upgrading the current 2" line that runs down Spring Street to a 6" line. A 2" line will then run from the 6" line onto the ecovillage. The 6" line will end in a hydrant that will be sufficient for the fire protection of the ecovillage. The hydrant and 6" line will be the property of and maintained by the city; however, the cost of upgrade will be borne by BCP. The 2" line will be the property of and maintained by BCP.

A neighbor was concerned that the ecovillage may reduce the water pressure in the neighborhood. We have contacted the water utility office to determine what impact the ecovillage will have and are awaiting a reply.

Watershed and Swimming Pond Water Quality

Fortunately watershed and swimming pond water quality can be improved with the same solution. By setting up the swimming pond as a natural swimming pond it will be possible to keep the swimming water clean without chemicals and to further clean the water before it flows off of the property. A natural swimming pond is a pond lined by plants that constantly filter water.

Examples of Water Filtering Plants:

Sedges, Rushes, Lesser Cattails, Aquatic Irises, Pickerel Weed, Arrowhead, Water Primroses, Common Waterweed Hornwort, and Common Duckweed.

There is concern that animal manure poses a threat to the pond water and property water shed.

In order to mitigate this threat we will be raising chickens in chicken tractors and rotationally grazing the goats. Both of these techniques prevent over grazing of the land and spread manure evenly across the property. Also, excess chicken and goat manure will be used in our gardens as a source of nitrogen, thus any excess manure will be collected on a routine basis. We consider animal manure a resource too valuable to let wash away.

Watershed Quantity

We have hired an engineering firm to do this work. You can find their report in the appendix.

Who is Paying for the Improvements Needed to the City Infrastructure

The ecovillage will be responsible for the upgrading of the water line down Spring Street and the installation of the water and sewer lines onto the property. The project will not be subsidized by tax payer dollars. Members of BCP are interested in working with the neighborhood to push for city improvements to the neighborhood infrastructure including storm water infrastructure and transportation services. Reviving the inactive Waterman Neighborhood Association could be a good first step towards this goal.

Youth Hostel, Summer Camps, and Tent People

All of these items have been removed from the original PUD proposal. The youth hostel, seasonal workers camping, as well as the bed and breakfast, were removed to avoid the community going over it's population allowance. Those items as well as the summer day camp proposal were also removed to reduce car traffic to the ecovillage and neighborhood.

Ownership Structure

Protecting the individual property of community members is a rather involved and evolving process, as there is not as much precedence for communal ownership of land as for private ownership of land. Without the proper protection, a lawsuit filed against one person could jeopardize the whole property if each individual is considered a joint owner. Even Earthaven, one of the most established model ecovillages of 16 years is still adapting their ownership structure to reflect newly discovered legal loop holes they may be susceptible to.

The land will be cooperatively owned and managed by the consensus of all members of the community (see membership process). Home ownership will be more typical in that individuals will be free to design and change them so long as they pass all of the local legal requirements

and internal BCP bylaws: maximum 400 square feet living space, can not block another's home access to direct light from the sun, etc.

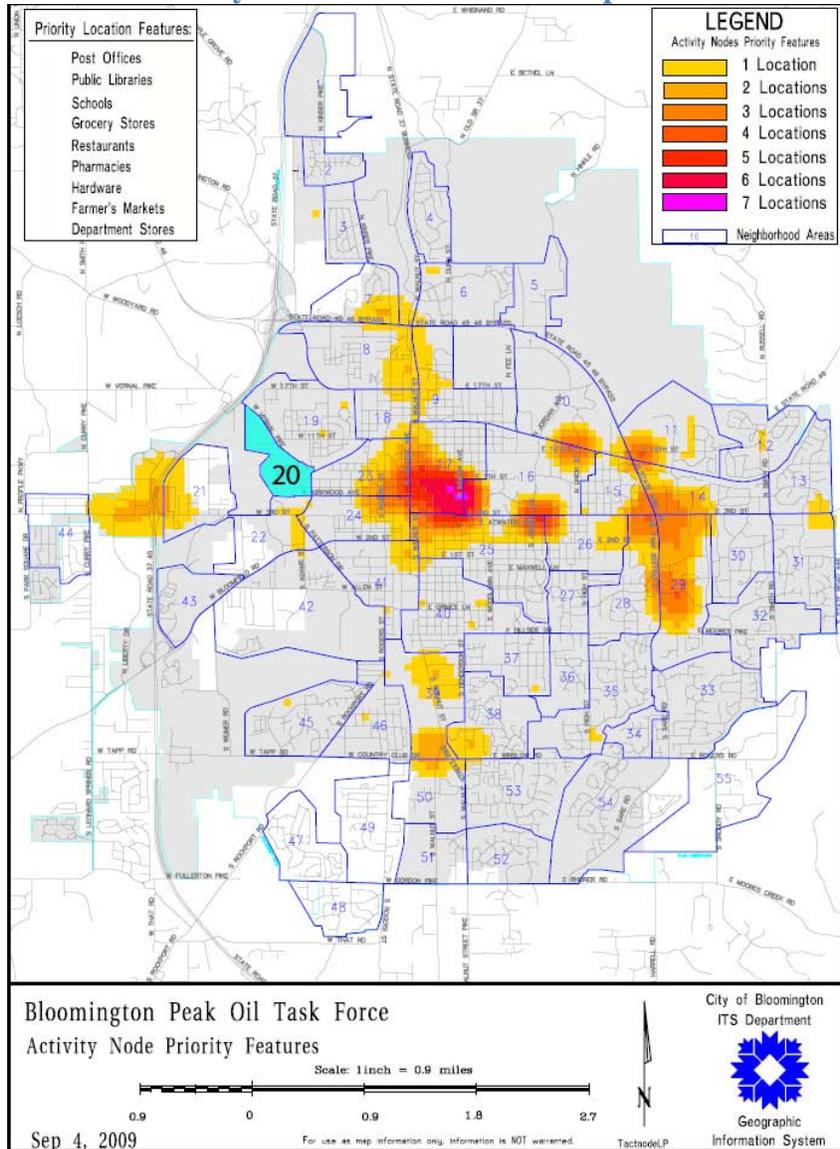
In order to more concretely commit to a cooperative organizational and ownership structure we plan to adhere to the Rochdale Cooperative Principals. One of these principals is democratic member control which according to the ICA's Statement on the Co-operative Identity means that "Co-operatives are democratic organizations controlled by their members, who actively participate in setting their policies and making decisions. Men and women serving as elected representatives are accountable to the membership." The Rochdale Cooperative Principals are a standardized set of principals used around the world by cooperatives. By adhering to these Principals we can guarantee that we will be a cooperative, without inadvertently limiting ourselves from using the most protective and applicable legal structure.

We have done a lot of research and the following is our current plan for fitting our above ideals into the existing legal framework. The land will be owned by a homeowners association which itself is owned and managed democratically by all members of the community. In the village, individuals will own their homes, however, the land under the home will be owned by the homeowners association.

Peak Oil Task Force Report & County Comprehensive Plan

Peak Oil Task Force Report

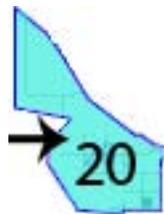
The Spring Street Property is in the Heart of Natural Neighborhood 20 Identified in the City's Peak Oil Task Force Report



MAP A: Activity Nodes

Report of the Bloomington Peak Oil Task Force

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**Spring Street Property Location
in the Neighborhood**

From the Peak Oil Task Force Report: “The goal (of neighborhood planning) should be to promote small, self-contained neighborhoods with a clearly-defined center providing essential services, ideally no further than a quarter mile from the edge.”

Neighborhood 20 is devoid of any Priority Location Features (depicted in the map on the previous page) essential to the sustenance of a neighborhood. Fortunately, the Spring Street property is near to the heart of the neighborhood and has the potential to provide many Priority Features.

County Comprehensive Plan

Our ideas align well with the ideas put forth by the Monroe County Comprehensive Plan. We feel the need for dense population close to town is absolutely essential for the development of a Bloomington that has a sustainable tax and energy usage structure. The following three ideas, from the Residential Development section (starting on page 71) of the plan, do a wonderful job of encapsulating and illustrating the importance of our proposal.

1. “Encourage development with adequate recreational space to meet the needs of the residents.”
2. “Encourage innovative concepts in housing designs and architecture that demonstrate quality and character and are aesthetically pleasing. Substandard and uninhabitable housing shall be prevented.”
3. “Strive to preserve the rural character and minimize the visual impact of large-scale development. Wherever possible, the maximum amount of natural vegetation on each site should be preserved.”

Cooperative Living Precedence in Bloomington

Bloomington Cooperative Living, Inc.

Mission: “Bloomington Cooperative Living fosters an economically, ecologically, and socially sustainable society. The organization is an opportunity for members of the Bloomington, Indiana community to share both the values of cooperation and diversity.”

<http://bloomingtoncoop.org/>

Bloomington Christian Radical / Catholic Worker

Mission: “The Bloomington Christian Radical CW is an ecumenical Christian community that tries to live, pray and work both with each other and with the poor we encounter. We try to offer housing, food, clothing and love to people facing homelessness. We perform the works of mercy and non-violently oppose the works of war. We strive to practice the Sermon on the Mount, community living, voluntary poverty, personalism, and care for the environment. We have families and children here, all trying to build community together. We love hosting visitors and prospective volunteers so give us a call.”

<http://www.catholicworker.org/communities/commlistall.cfm#IN>

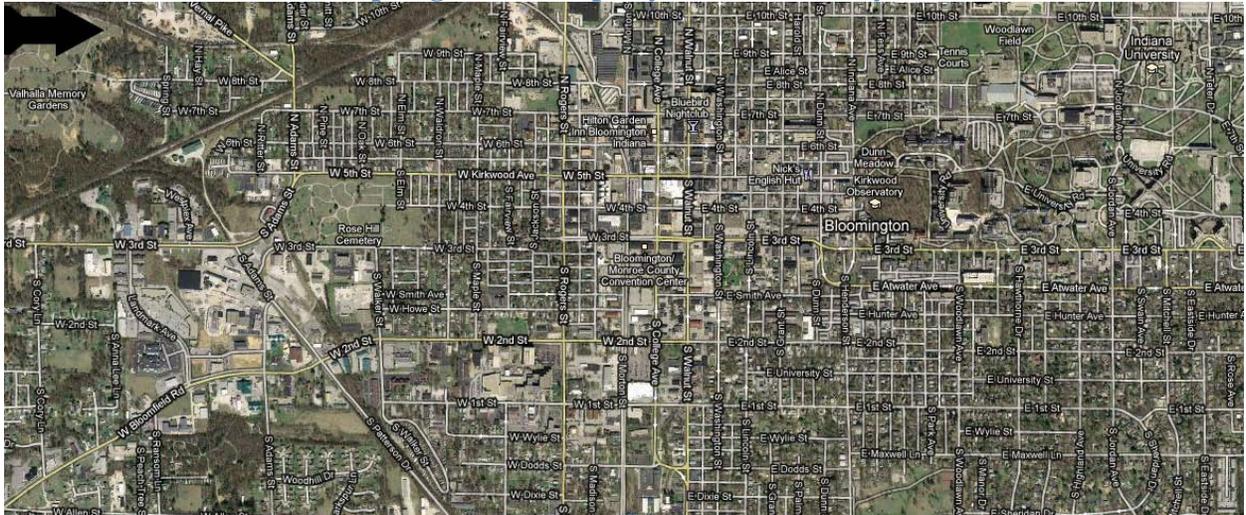
NASCO (BCP is a member of this organization)

Mission: “The North American Students of Cooperation (NASCO) Family [of associations] organizes and educates affordable group equity co-ops and their members for the purpose of promoting a community oriented cooperative movement.”

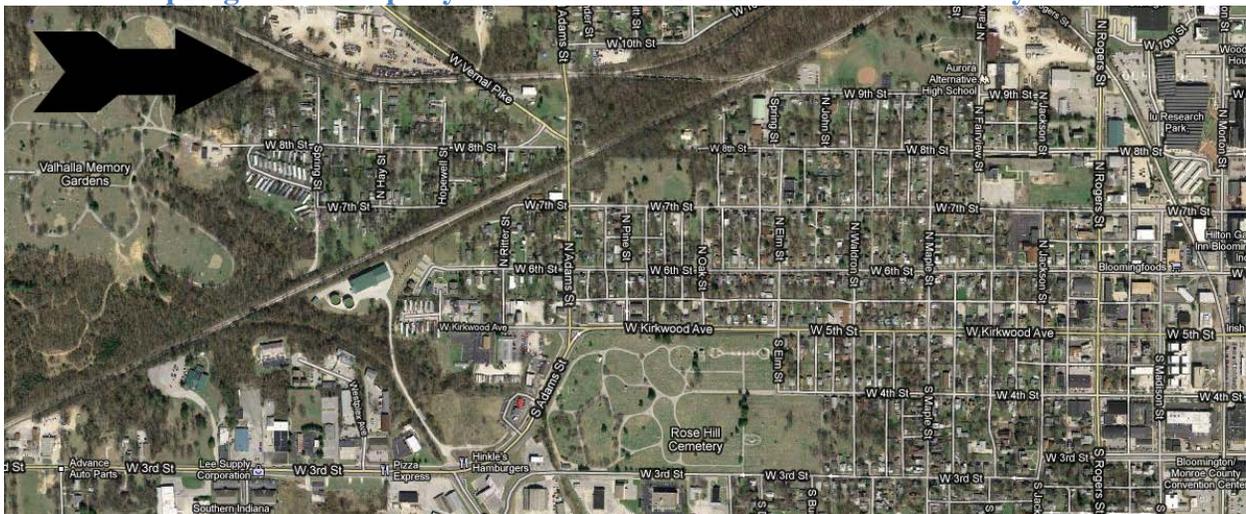
<http://www.nasco.coop/node/17>

Spring Street Physical Location

Spring Street Property Relation to City



Spring Street Property Relation to the Farmers Market and City Hall



Permaculture Urban Demonstration (PUD) Maps

Our PUD maps will include a Permaculture site analysis in addition to the city requirements. Each map that follows will have a short description below providing additional information.

Map Index

Compilation of All Maps

Physical and Political Features

- Compilation of Physical and Political Features
- Property Boundaries
- Off Set
- Contour
- Transitional Forest
- Streams

Living Structures

- Compilation Living Structures
- Village Houses
- Community House

Auxiliary Structures

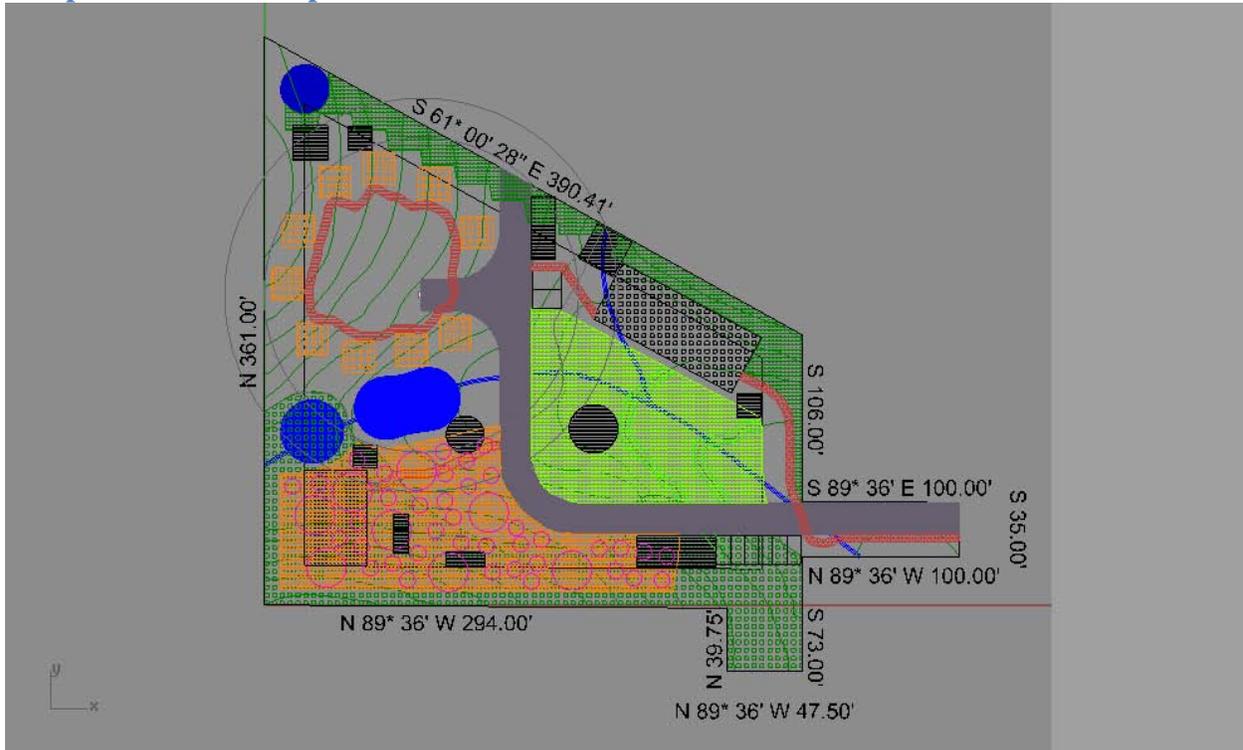
Agricultural

- Compilation Agriculture
- Annual Gardens
- Garden Beds on Contour
- Community Gardens
- Orchard
- Animal Grazing
- Food Forest
- Ponds
- Water Storage

Mobility

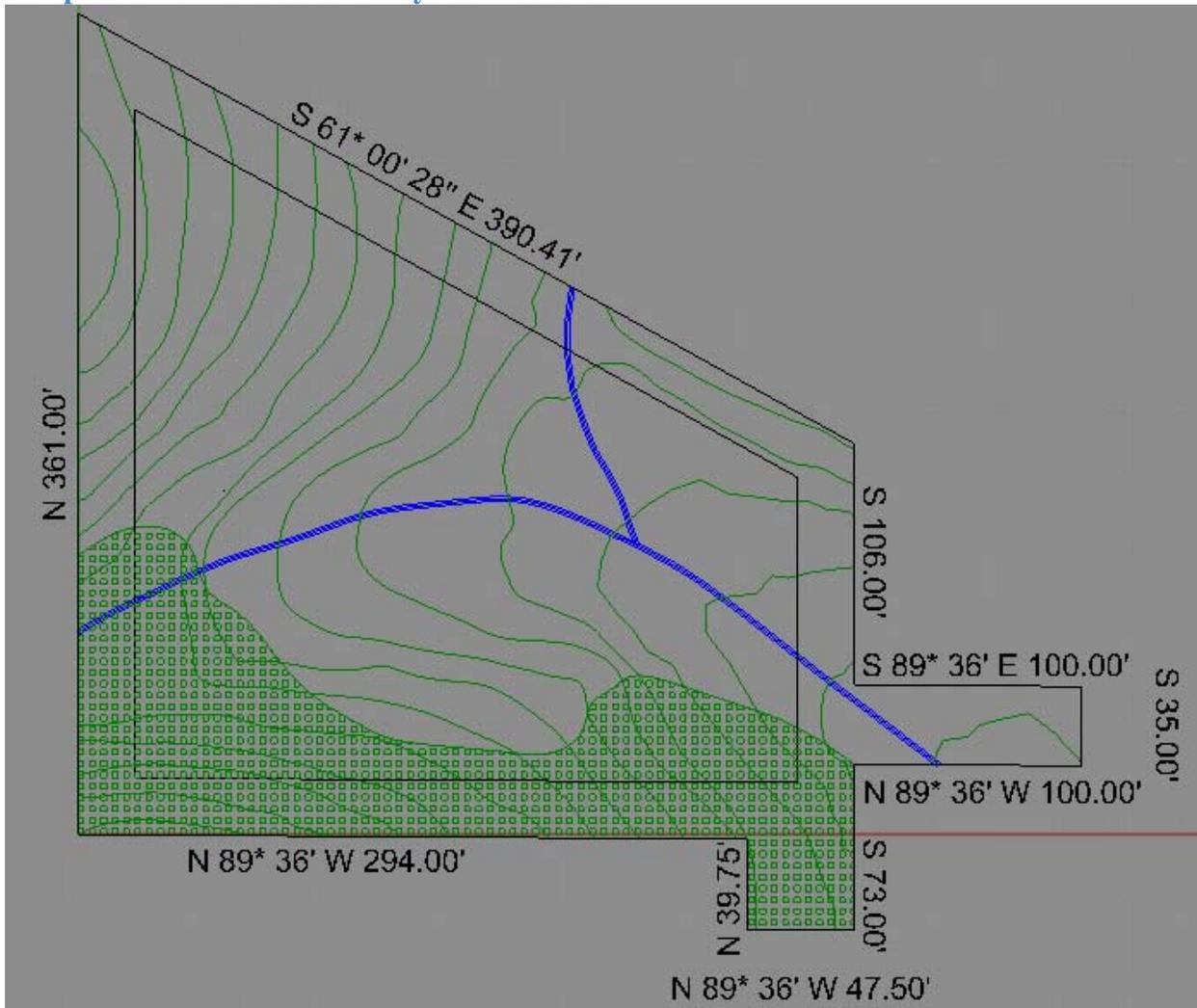
- Compilation Mobility
- Emergency Access Drive
- Walking Path

Compilation of All Maps

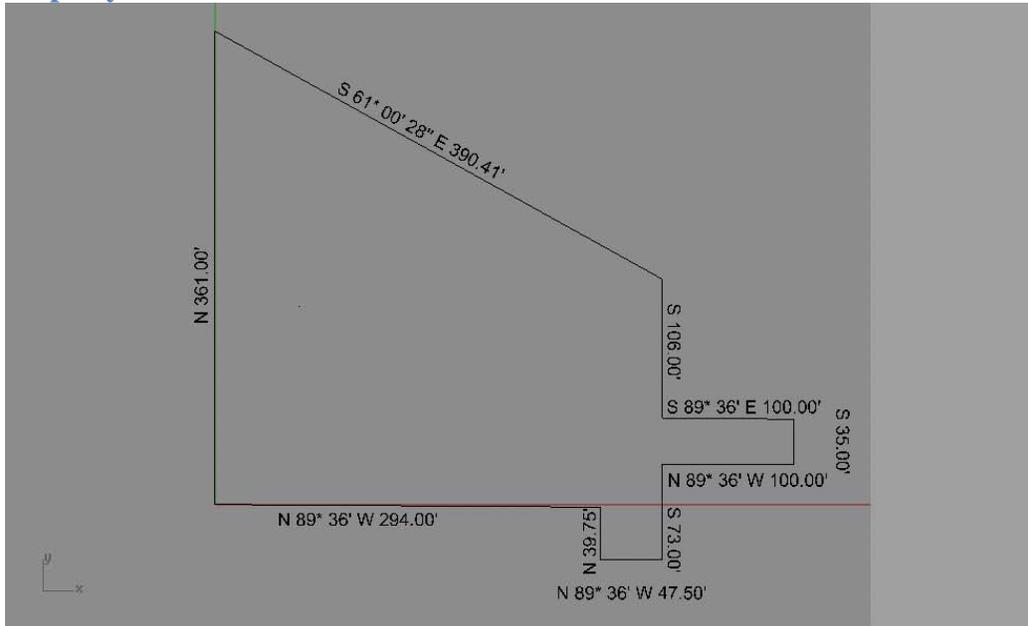


Here is our current compilation map. In the following maps we will break down this map into the groupings: Political and Physical Features, Living Structures, Auxiliary Structures, Agriculture, and Mobility. These groupings will be further broken down into individual elements with descriptions.

Compilation of Political and Physical Features

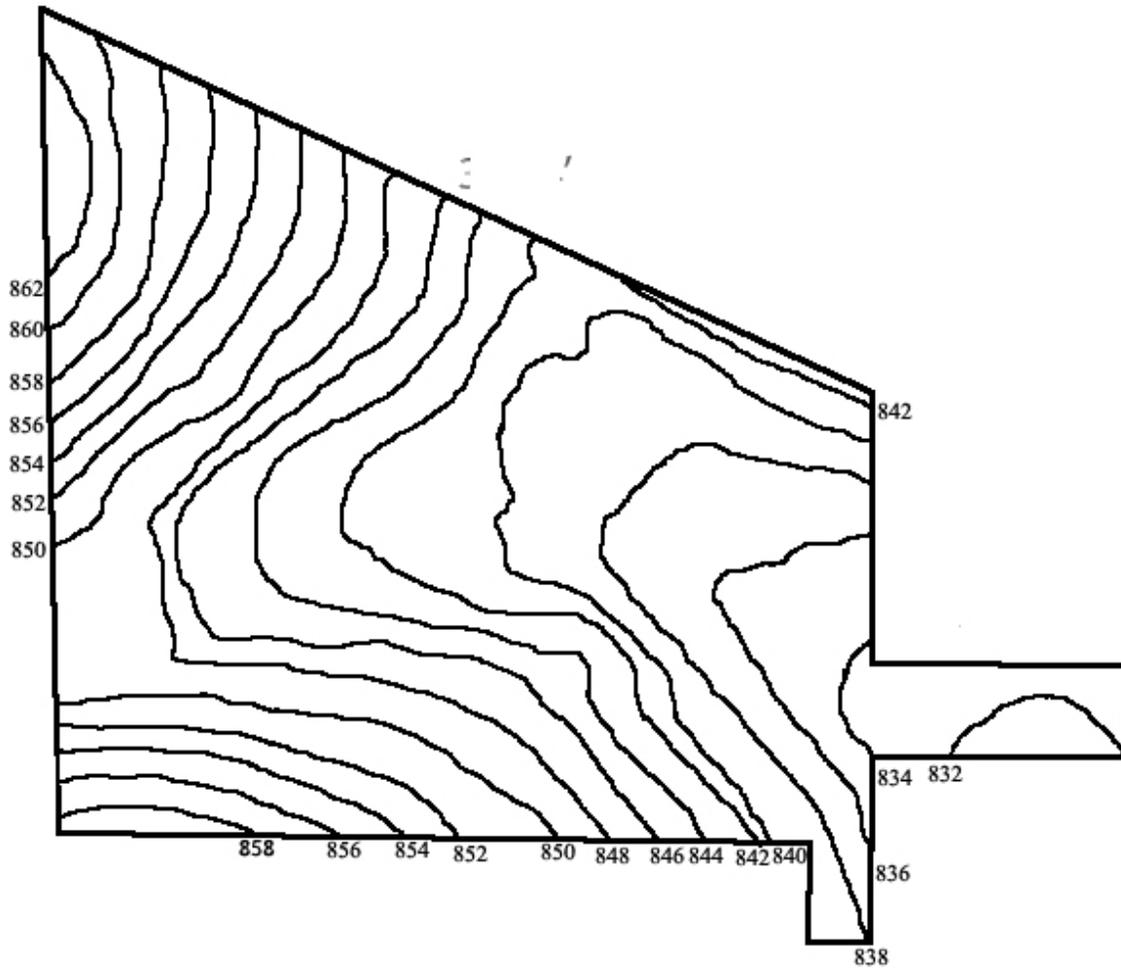
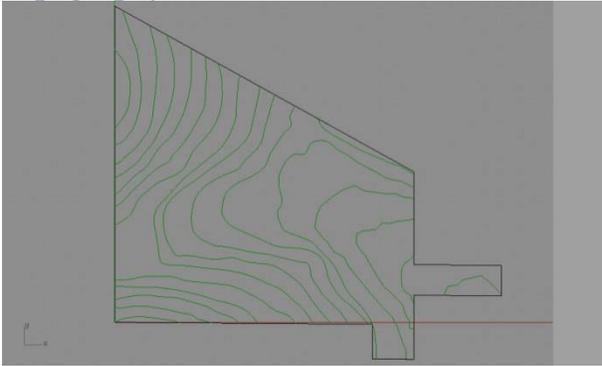


Property Boundaries



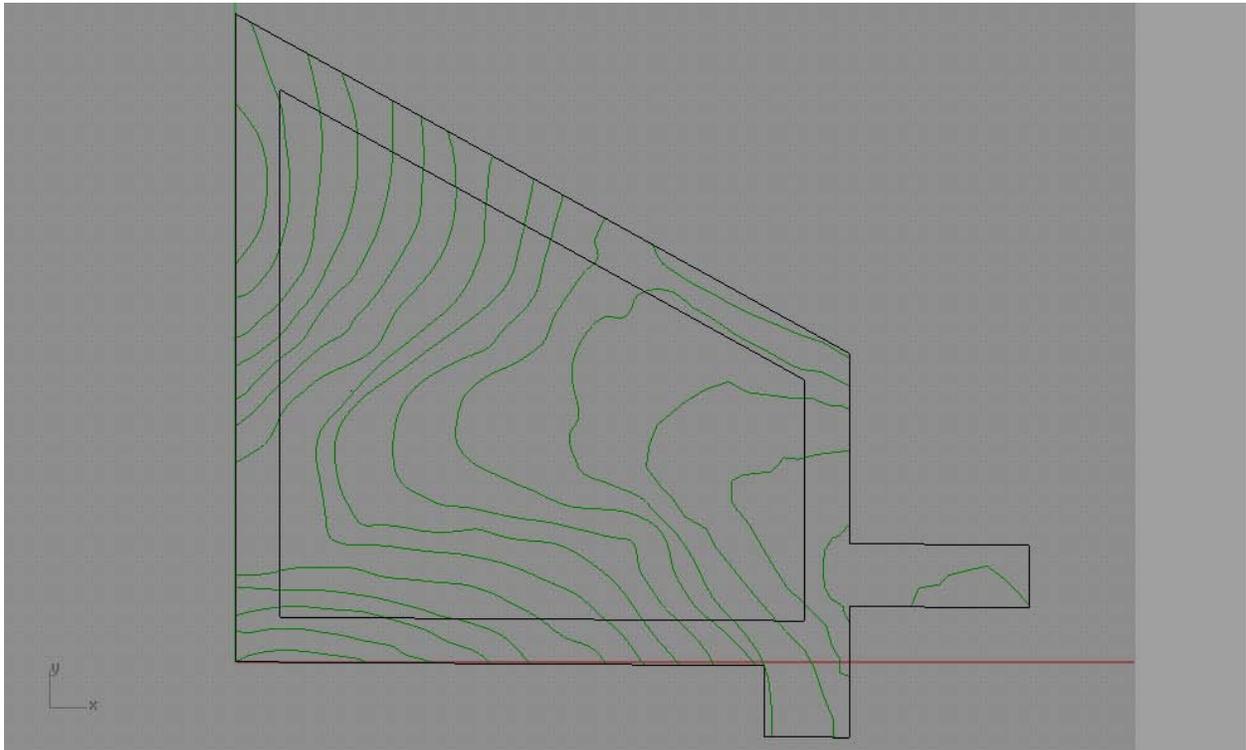
In the top map you will find the property lines defined by the legal description as provided by the deed of the land. The bottom map shows the boundaries relative to the surrounding neighbors.

Topography



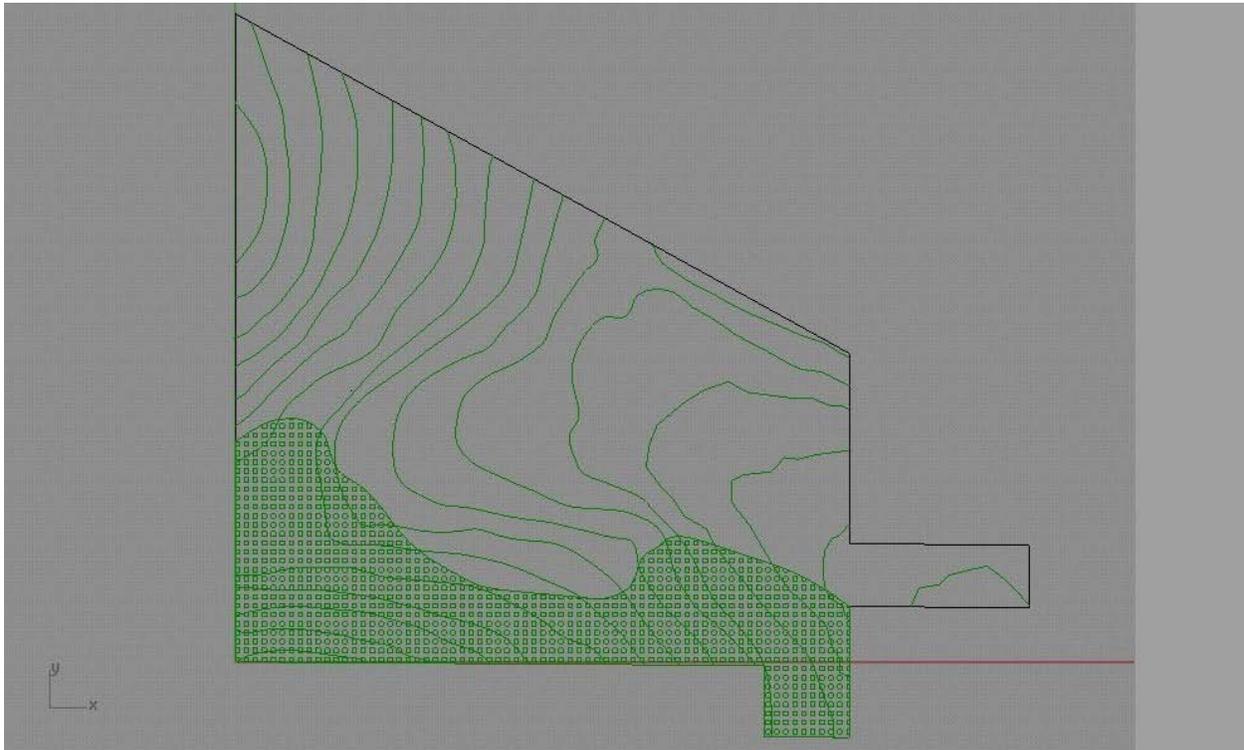
The property contains a small valley. We want to cluster the small footprint houses in the top West corner; the best location for solar gain and furthest from any potential flooding. The community house will be in East corner for solar gain as well.

Offset



The offset for construction of homes within the city limits is 25' on each border. We are asking permission to encroach on the borders on the **North** and **West** sides as these neighbors are a railroad track and graveyard respectively. Encroaching on this offset will provide us a lot more building room in the North and West sides of the property opening up the best locations for passive solar gain for the small houses and community house.

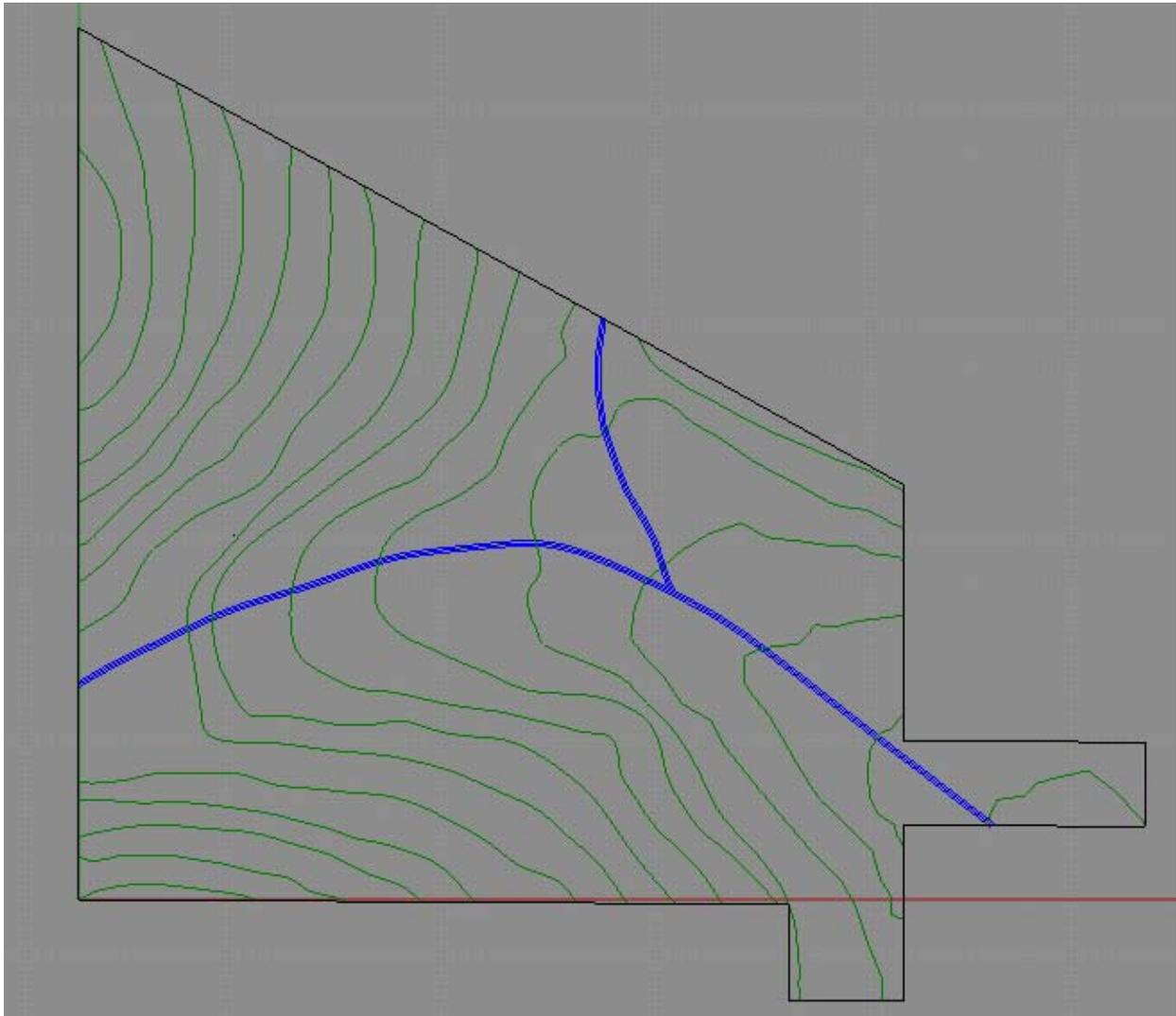
Transitional Forest



The southern part of the property currently has some high canopy trees. At this time the forest floor is covered in euonymus and honey suckle. It will take at least a couple of seasons to remove the euonymus, but once it is gone we will be reintroducing native plants. We are considering establishing a mini forest sanctuary on the South East corner of the property, where the small rectilinear piece sticks out. There will be selected cutting of a few large trees in the Southwest corner of the property, trees that currently shade the small house hillside. Additionally the small trees on the South side of the property will be replaced with a fruit orchard. The large trees along the South fence line and the stand of trees to the South East will remain although many of these larger trees are on neighboring properties and not ours to retain or remove.

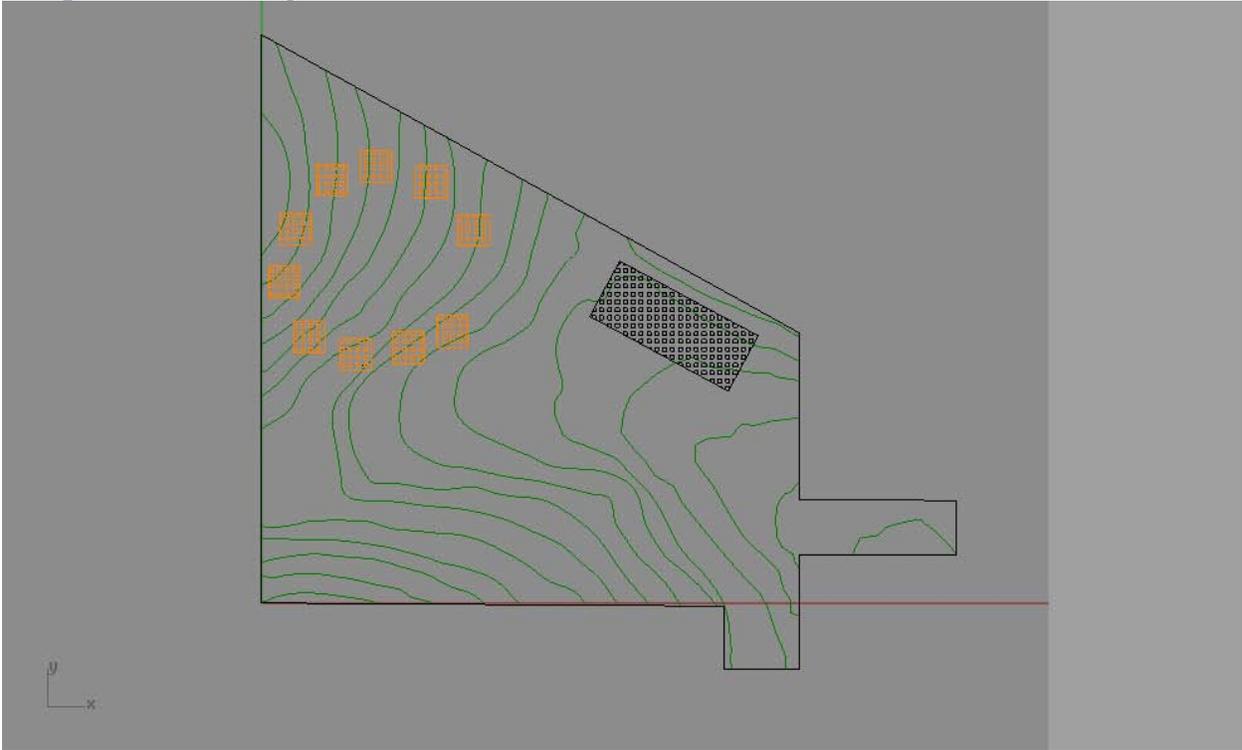
We will be planting high nut trees on the North side of the property and Paws Paws and other native trees in perimeter spaces.

Streams

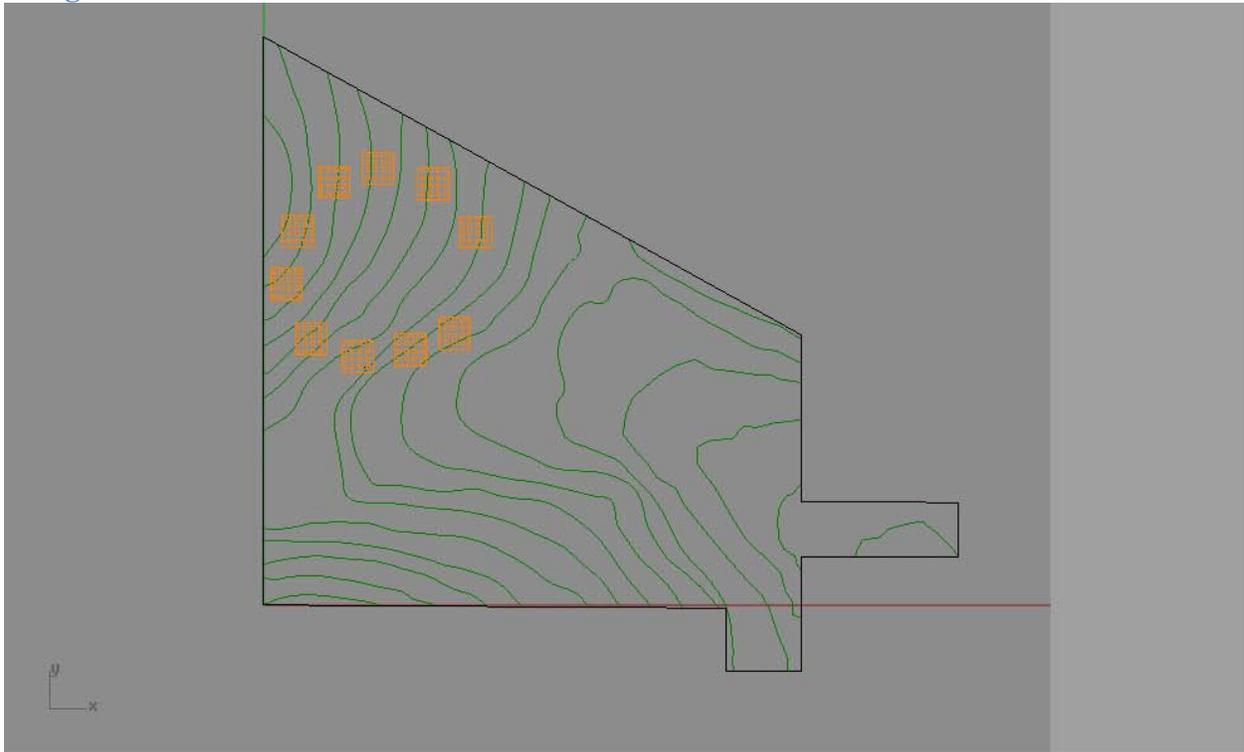


From the West running East there is a waterway that was considered a potential intermittent waterway of the State of Indiana; however, it has been determined by Linda Thompson of the city planning department that it is not and thus not subject to intermittent stream buffers. The other water way is an artificial shed from the North coming through a 30" culvert beneath the tracks and was likely created by the superimposing of the railroad tracks, a subdivision, and JB Salvage.

Compilation of Living Structures

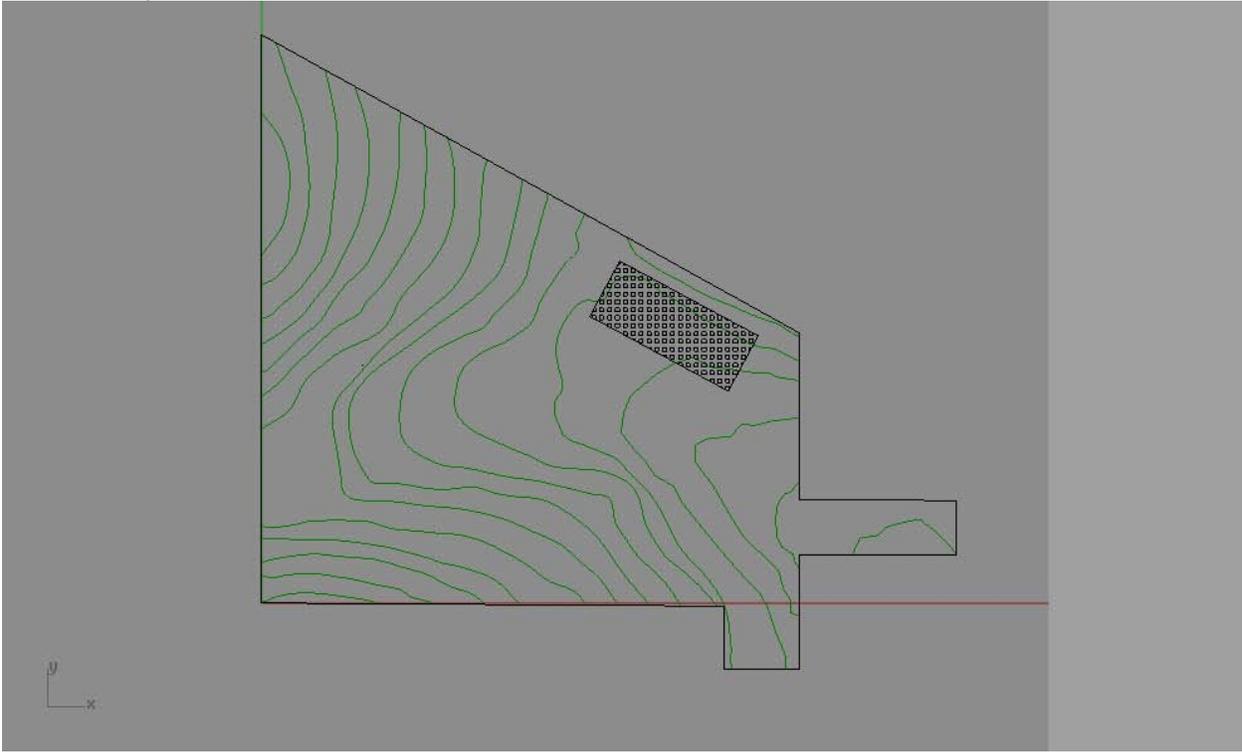


Village Houses



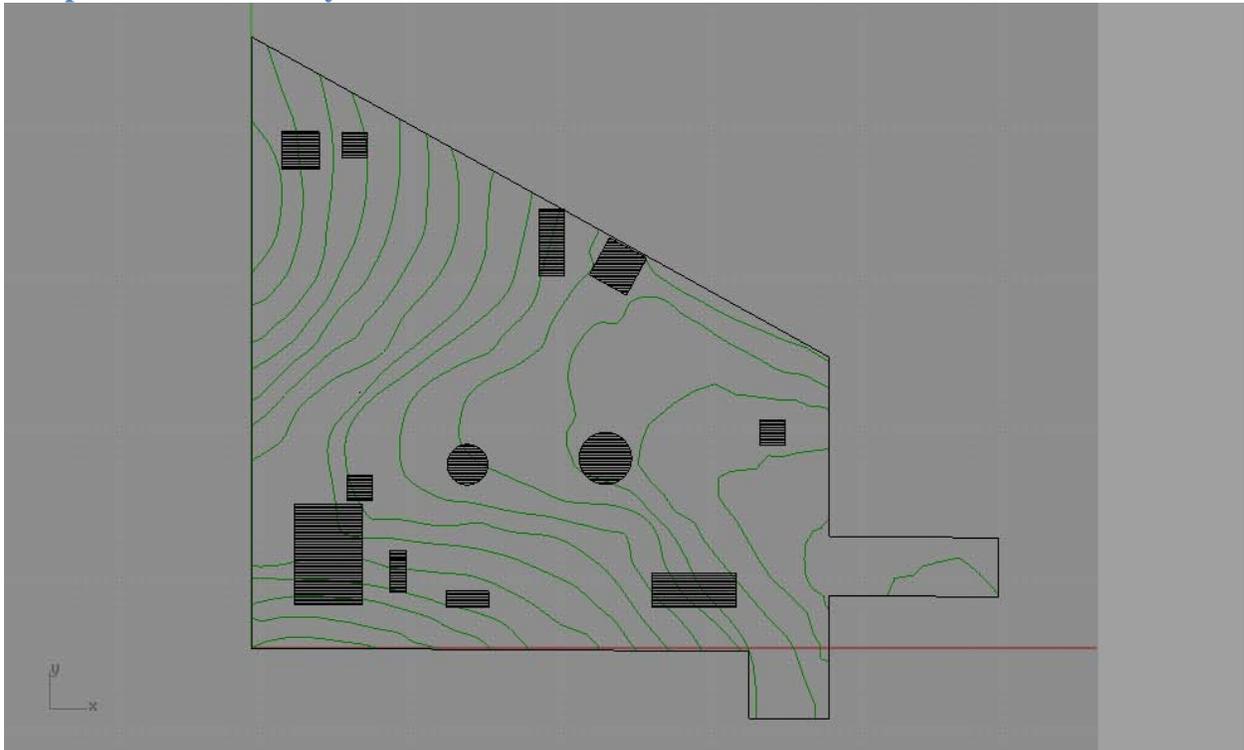
We are restricting the size of each living structure's footprint to 400 internal square feet per floor. This map shows one potential layout for the 10 village houses. Though the ultimate layout of the houses may differ this map shows how 10 houses could lay on the land. The ultimate goal of the layout is to maximize both passive solar gain and aesthetic feel.

Community House



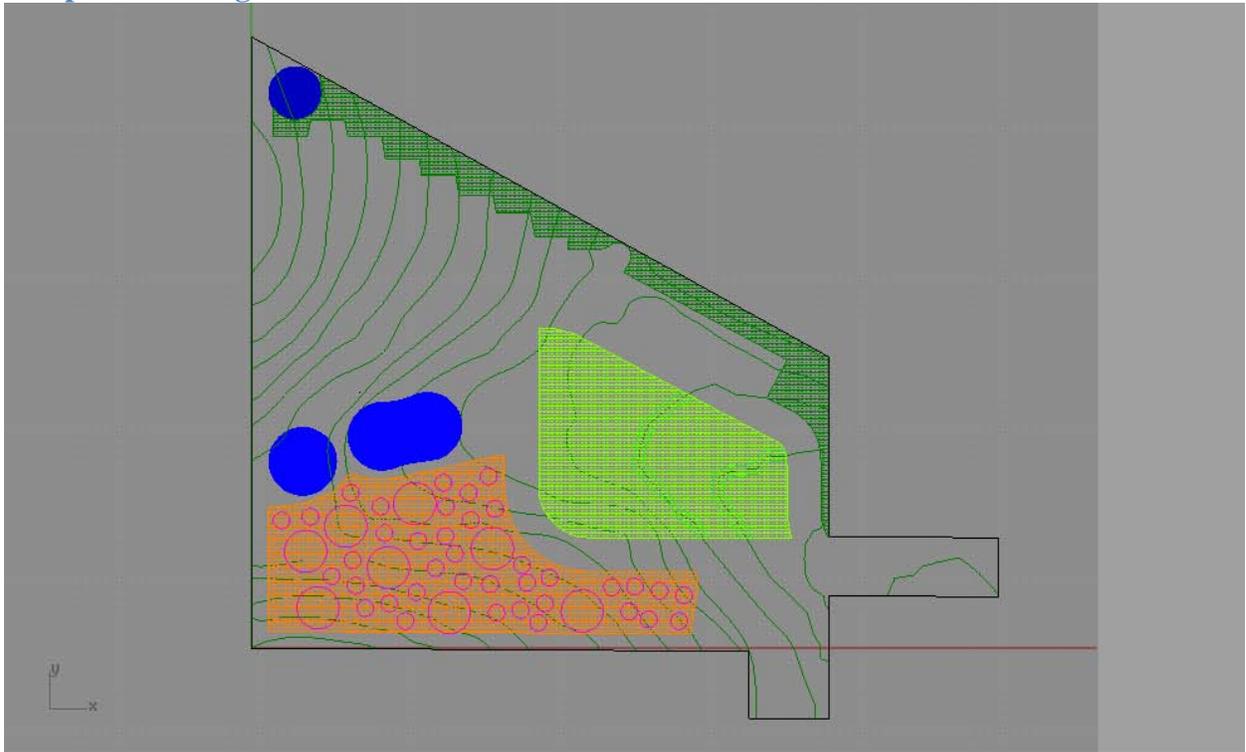
The community house will be located on the North East of the property. It will be on a small rise to protect it from flooding and South facing to maximize passive solar gain.

Compilation of Auxiliary Structures



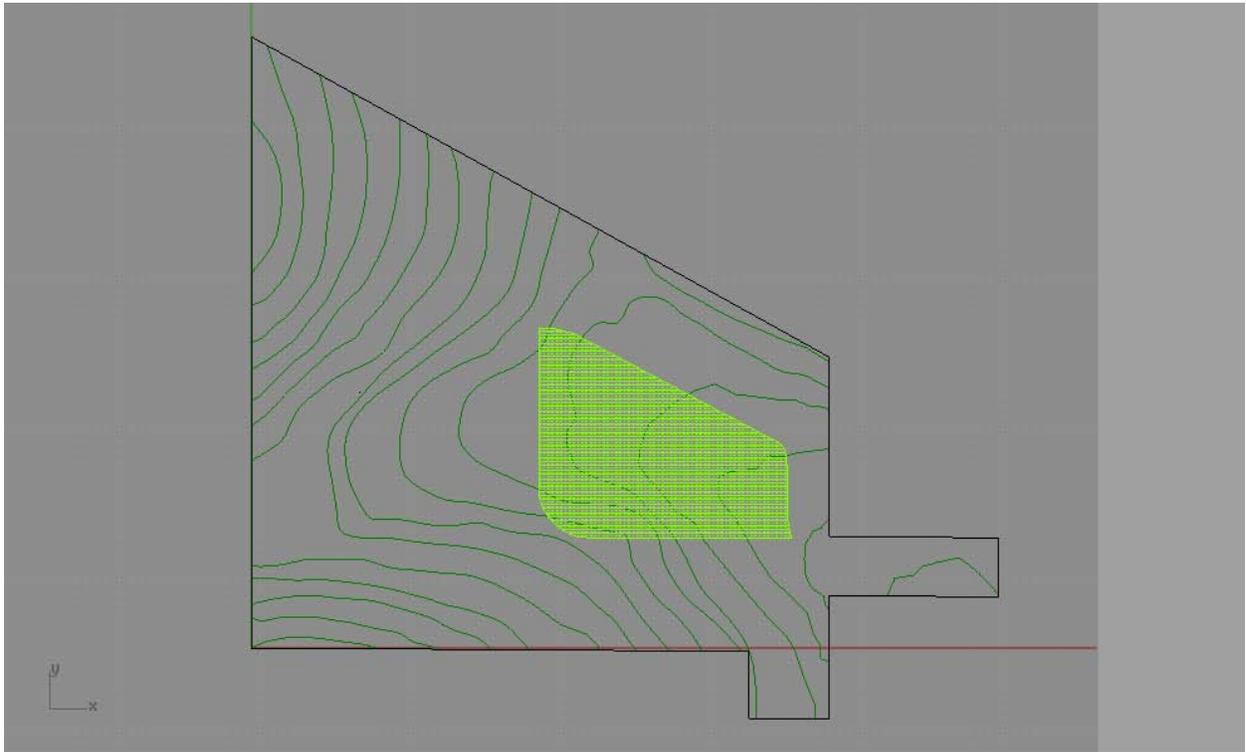
This map was made to illustrate what 7500 square feet of auxiliary structures looks like on the property. The structures included are a barn, tool sheds, gazebos, chicken tractors, a root cellar, a shop, a bath house, a bike shed, and a goat house. The structures are superimposed over parts of the orchard and annual garden; however, their final locations have yet to be fully determined.

Compilation of Agriculture



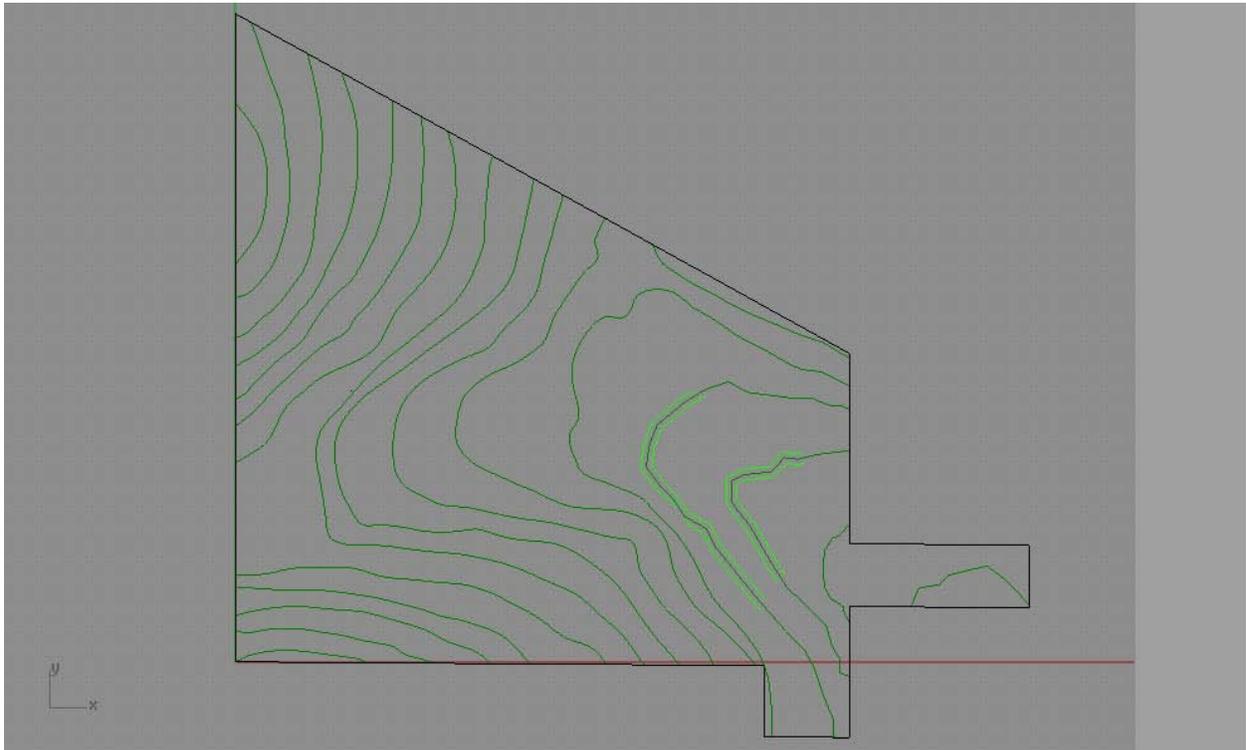
This map shows the combined food forest, gardens, orchards, ponds and animal grazing areas.

Annual Gardens



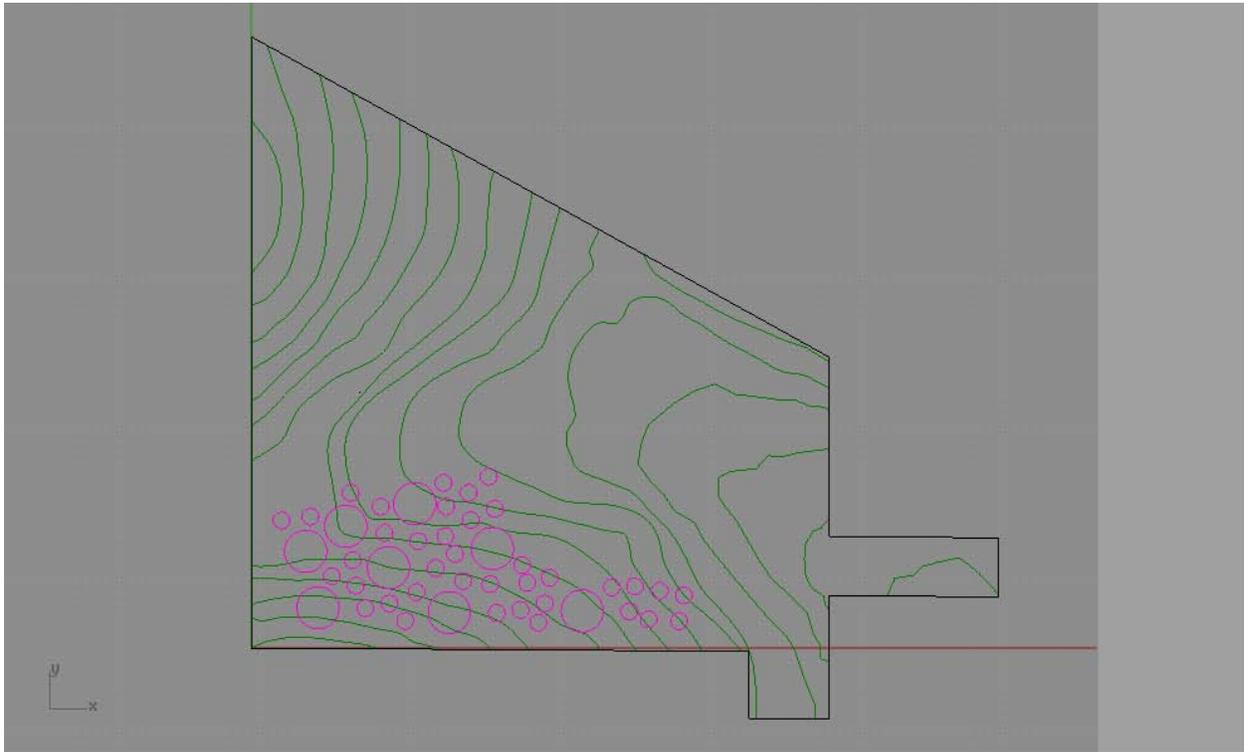
This map shows the primary annual gardens on the east side of the property; however, there will be more annual gardens amidst the houses on the North West side of the property.

Garden Beds on Contour



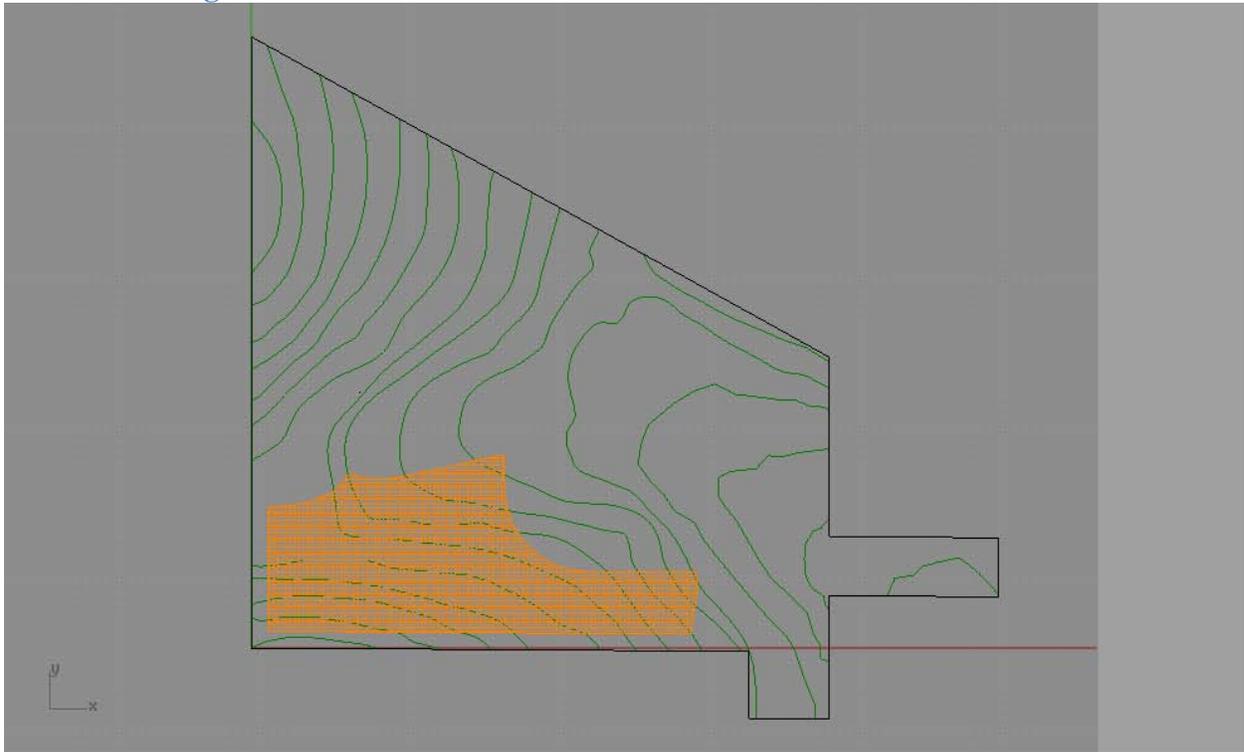
The garden beds in the gardening areas will likely be placed on contour. The two bright green garden beds above are depicted on contour. Placing garden beds on contour slows down the water that is running across the property and encourages it to soak into the soil.

Orchard



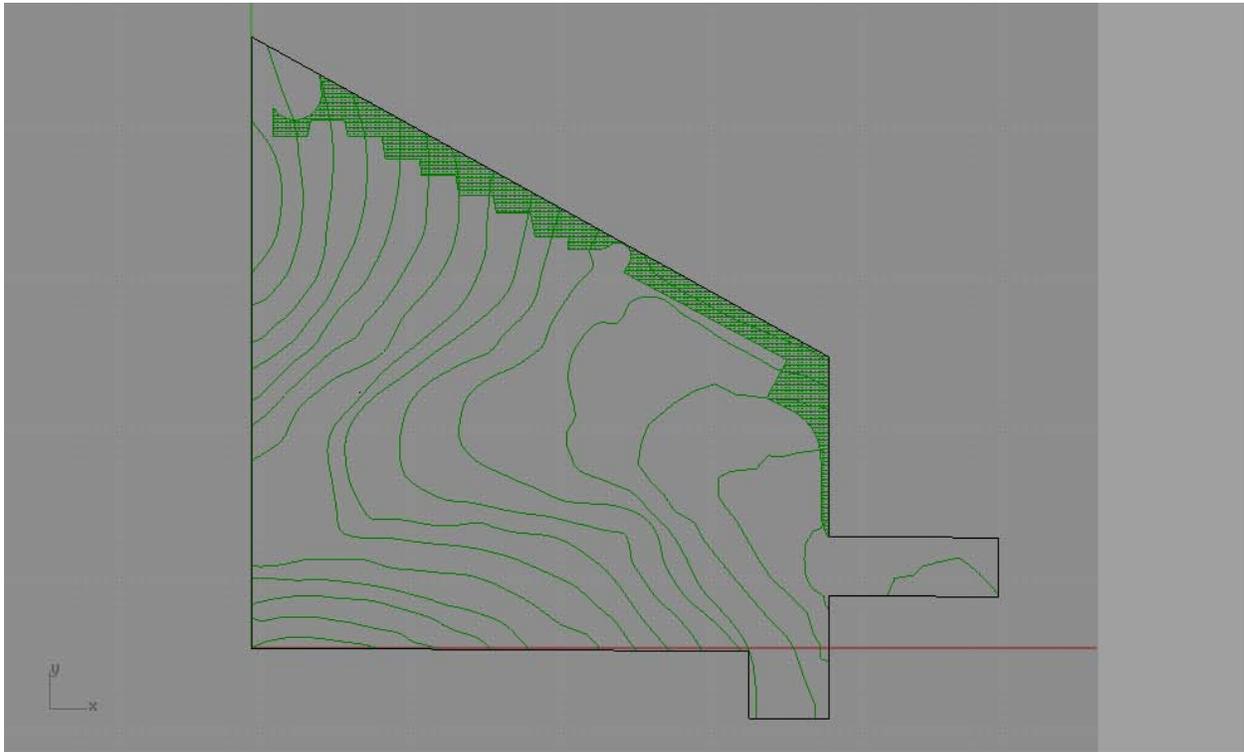
The orchard is located to the South of the property on the only significant portion of north-slope. Orchards are best located on north slopes as the longer period of cool weather in the spring keeps the buds from flowering too early. If the buds flower too early then they run a significant chance of getting damaged by frost, which lowers fruit yield.

Animal Grazing



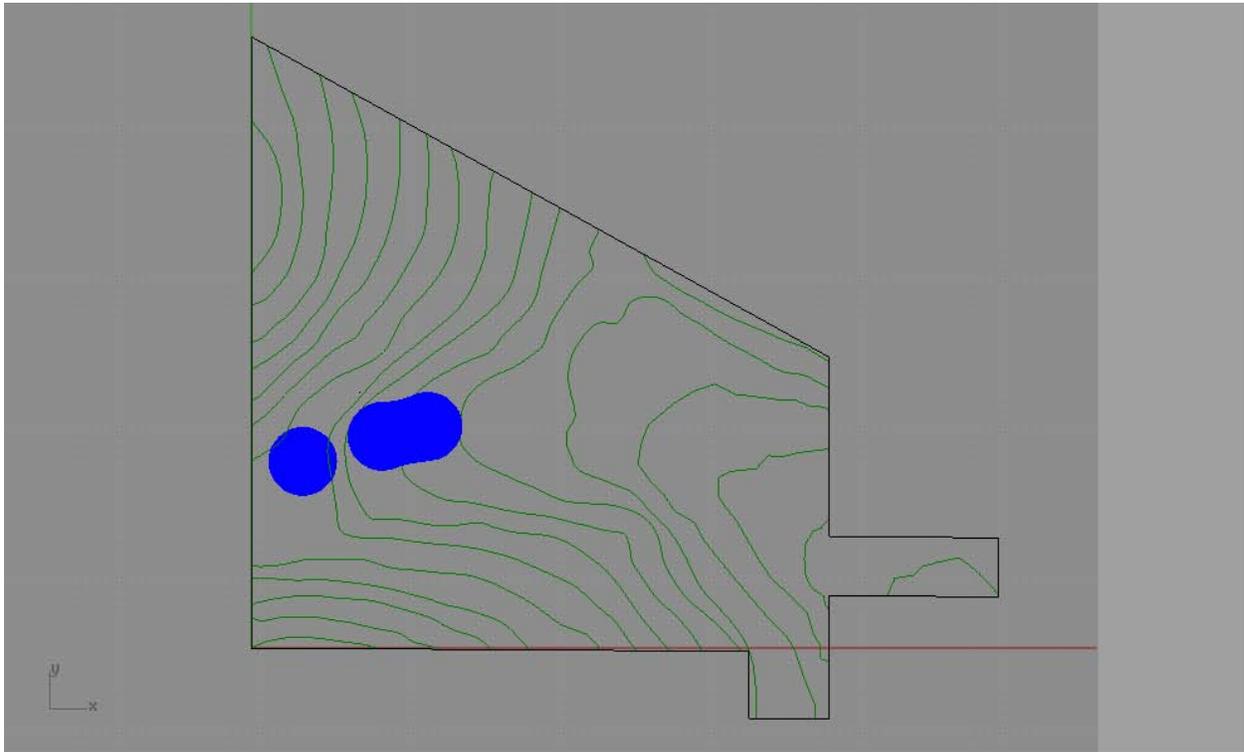
The chickens and goats will be grazed amongst the trees in the orchard. The chickens will be contained in mobile chicken tractors while the goats will be rotationally grazed. Both mobile chicken tractors and rotationally grazing protect the ground from over grazing while spreading the manure evenly.

Food Forest



Food forests are agricultural systems that use perennial plants to produce a yield year after year. The upkeep of such plants is easier than replanting annuals every year and the yields increase as the forest matures. In addition to more food and less work this form of gardening encourages the planting of diverse species which leads to more complexity within the natural system resulting in an overall increase in stability.

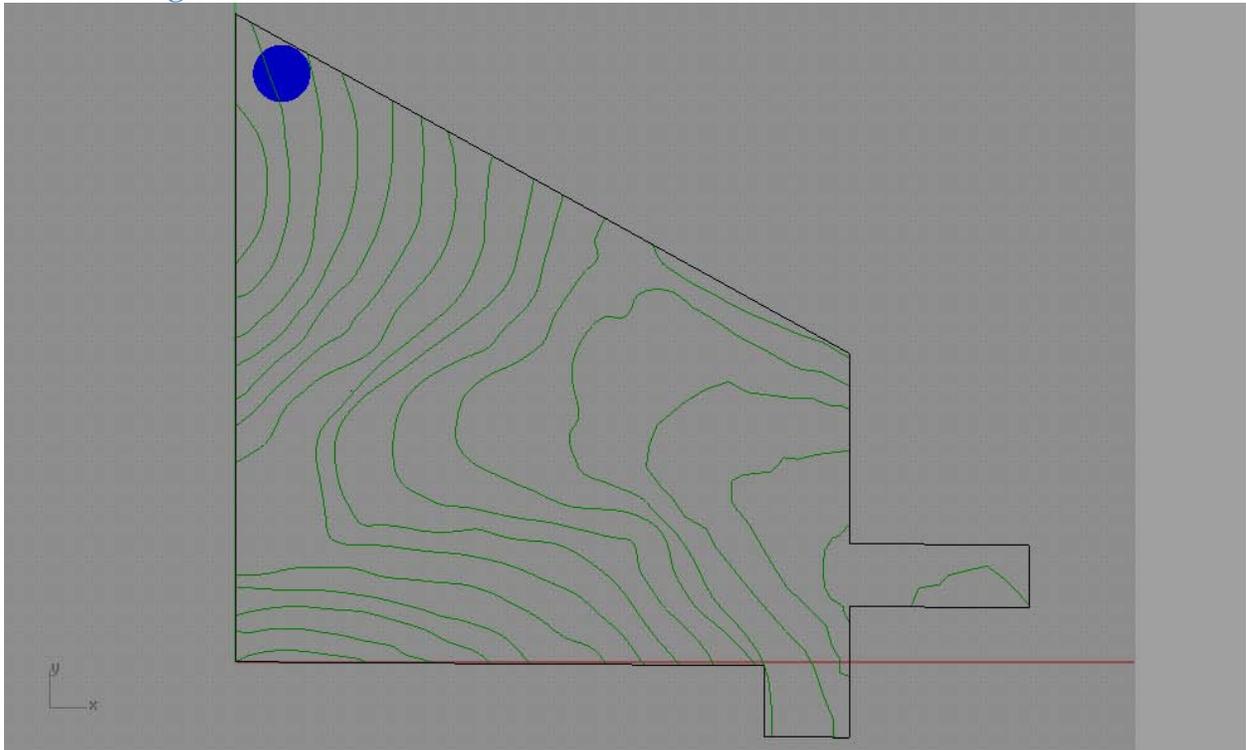
Ponds



We plan on having a large swimming pond. In addition to recreation and enjoyment the swimming pond will serve as irrigation for the property. The swimming pond is the largest pond located in the center of the map.

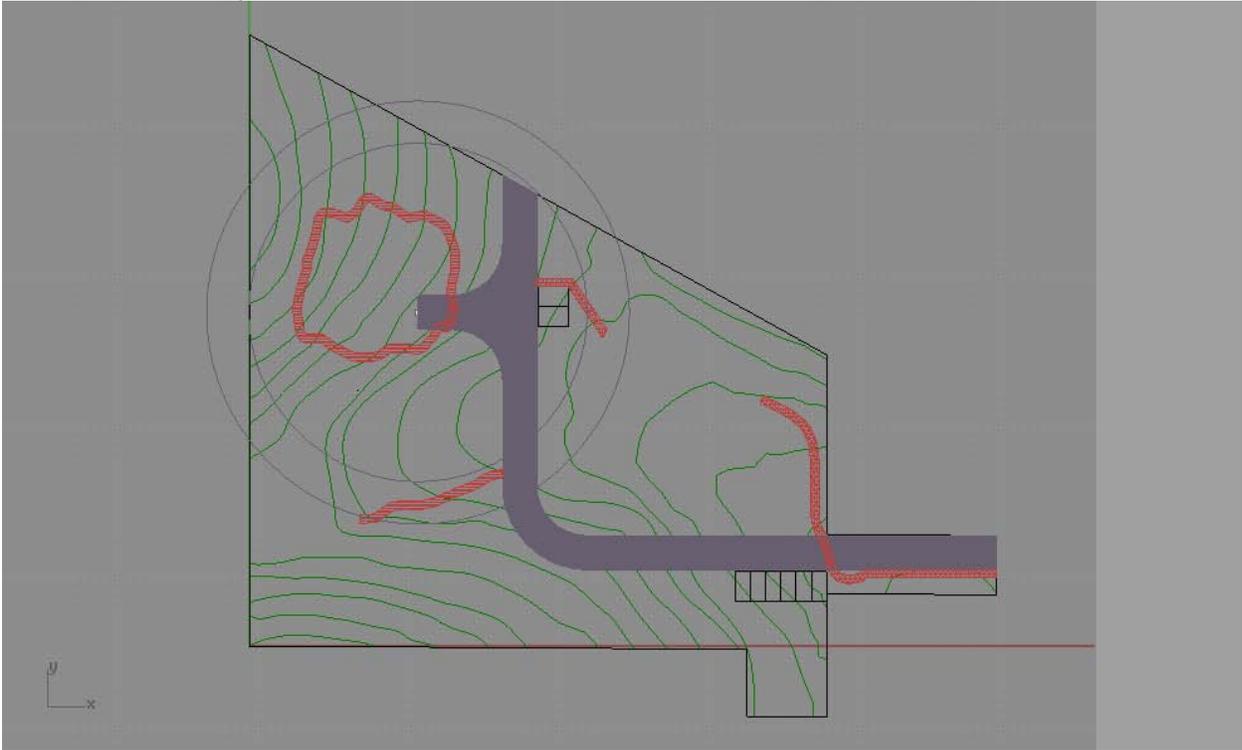
To the West is an intermittent stream that we want to slow down and turn into a forested pond or bio-retention area. This type of body of water would allow us to grow many of Indiana's native wetland plants in addition to filtering the water before entering our swimming and irrigation pond.

Water Storage

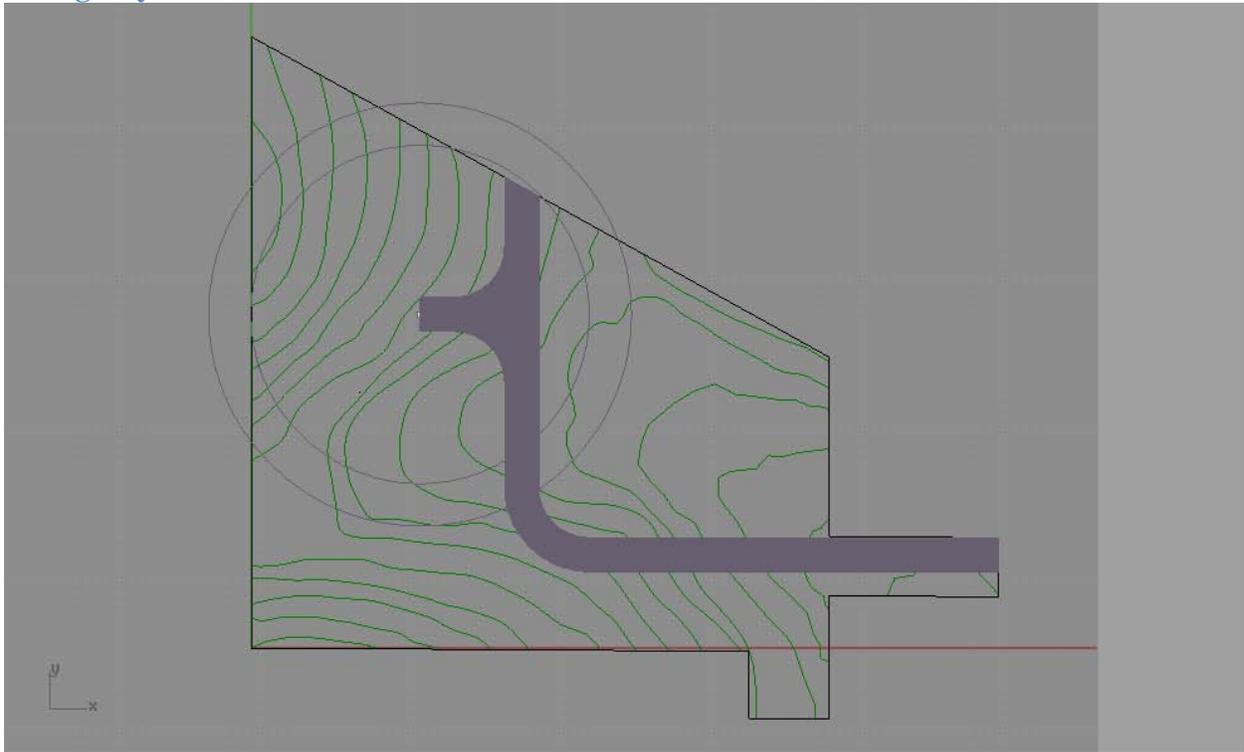


Water collected from the roofs of the structures on the highest part of the property will be channeled into ferro-cement storage tanks.

Overview Mobility



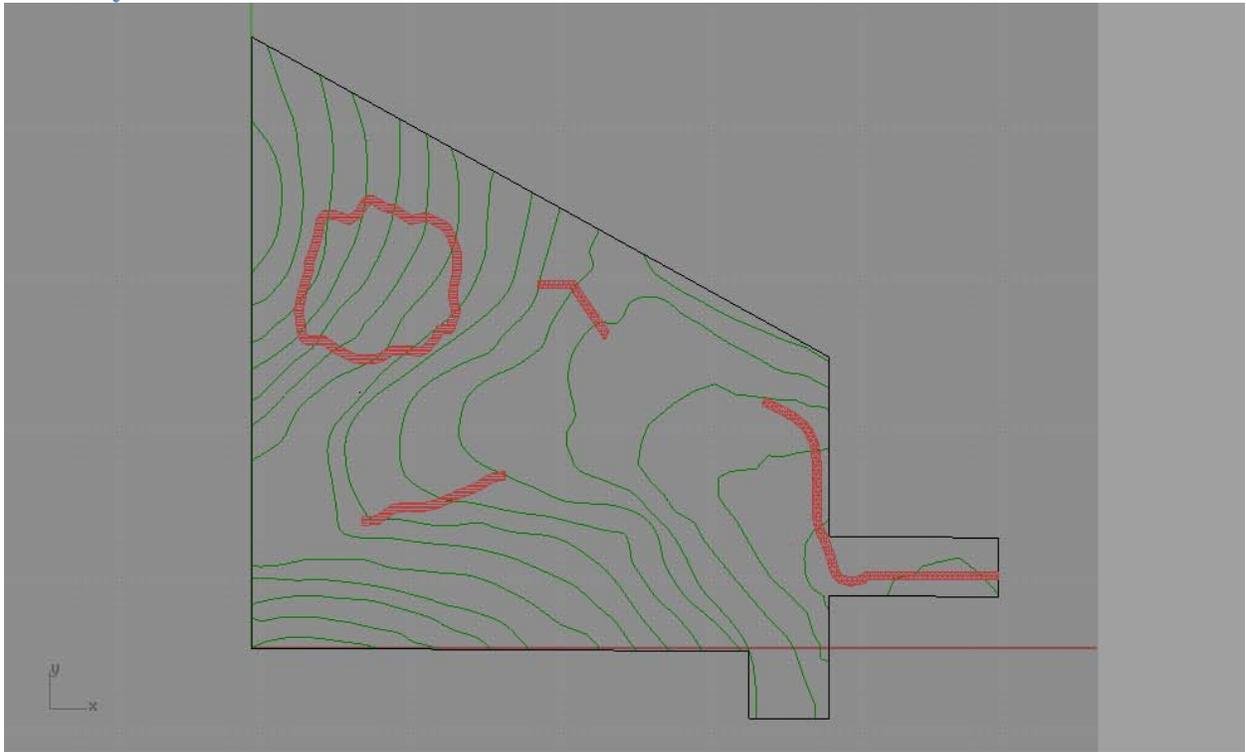
Emergency Access Drive



We worked with Tim Clapp the Monroe County fire inspector to ensure the emergency access drive would be adequate to handle an 80 ton fire truck. The turn radii of the turns in the access drive will be no less than 30'. This driveway currently depicted is different from the original we showed Tim Clapp; however, it observes the same width and turn radius requirements. We have a meeting scheduled with Tim on April 29th to discuss the new drive.

Though not depicted in the map, there will be a fire hydrant with the appropriate additional width of the driveway located just off of Spring Street.

Walkway



Paths within the community will vary in width; however the two paths that lead to the community house from Spring Street and the ADA (American's with Disabilities Act) parking spots will meet ADA standards.

Glossary

Aquaculture --- also known as aqua-farming, is the farming of aquatic organisms such as fish, crustaceans, mollusks and aquatic plants.

Car Share --- A cooperative ownership structure where members each pay a monthly fee and a fee per mile driven to use a car.

Chicken Tractor --- a mobile chicken pen that does not have a floor. Once or twice daily the chicken tractor is moved so that the chickens do not destroy the vegetation on the ground. This is a rotational grazing strategy that improves the health of the soil by increasing plant diversity and evenly spreading chicken manure.

Co-Housing --- A group of unrelated individuals living together in order to share basic costs of living, workload, and to create community connections. Co-housing does not necessarily imply the same sense of ecological responsibility that the similar term ecovillage implies

Community House --- This will be our central community structure with a large kitchen, dining hall, meeting space, and bedrooms.

Consensus ---A group decision-making process that seeks the agreement of all participants.

Cooperative Living --- This is a living style in which members of a community work together to achieve goals.

Natural Swimming Pond --- A pond that uses vegetation for filtering the water as opposed to chemicals.

Non-Violent Communication --- It is a way to communicate with greater compassion and clarity. It focuses on two things: honest self-expression — exposing what matters to oneself in a way that's likely to inspire compassion in others, and empathy — listening with deep compassion.

Passive Solar Energy --- Use of the sun to help meet a building's energy needs by means of architectural design such as arrangement of windows and materials, floors that store heat, or other thermal mass.

Perennial Food Forest --- a Permaculture cornerstone—a perennial food forest mimics the architecture and beneficial relationships of a natural forest. Food forests are not “natural” but are designed and managed ecosystems that are very rich in biodiversity and productivity.

Pervious Pavers --- The 80 ton road base will be covered with pervious pavers, a structural plastic grid that can support the weight of the fire truck while allowing low growing plants to be grown in shallow soil contained in the empty spaces within the grid. These plants will help to manage storm water run off while also providing additional room for us to raise crops.

Riparian Zone --- ecosystems located along the banks of rivers, streams, or other water bodies.

Appendix

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Alternative Energy Production

Active Solar—the use of mechanical devices (i.e. photovoltaic panels, solar cells, etc) to derive energy directly from the sun and convert it into a usable form of energy that may be used to provide space heating, hot water, and/or electricity.

Geothermal energy—the use of heat under the ground to heat water and/or convert energy into electricity

Solar Pumps—solar pumps work on the basic principle that the sun's heat is always in the air, even in cold air. A heat pump extracts this heat from the outside air and transfers it into the interior of the house by way of the house's internal duct work. This heat is circulated through the ducts by a high-powered fan after it passes over a condensing unit to either add or remove heat from the air.

Vertical Windmills—windmills that have a rotor shaft that points vertically. Axis does not have to point directly into the wind. Advantages of vertical windmills include less building materials and produces energy regardless of wind direction

Animals

Chickens

There will be multiple chicken tractors kept in the orchard. A chicken tractor is a movable chicken coop that lacks a floor but provides protection from predators. The tractor is mobile so that the chickens can migrate throughout the lawn to feast on insects as well as fertilize the soil.

Chicken Tractor



Goats

Upholding the Urban Agriculture ordinance passed unanimously by the Bloomington City Council in August 2009, raising a small number of goats (3) on the land would benefit the Bloomington community in the following ways, as stated by the ordinance: need for sustainable food production, educational opportunities, and maintenance of agriculture infrastructure. Keeping goats would accomplish all of these goals. Keeping goats at the eco-village would, in time, produce milk for its members (sometimes 1/2 gallon per day sustainably) as well as provide educational opportunities for a community so disconnected with the natural world (*see Neighborhood Asset in Appendix*). The land was historically a cattle farm, and although we do not intend to raise cattle, we hope to ensure the continuation of the land use by raising goats.

In many cities across the U.S. keeping goats as part of urban agriculture has become increasingly accepted and is proving to be extremely possible in our own backyards. Goats are currently acceptable to raise within Portland, OR, Seattle, WA, Pasadena, CA and Oakland, CA city limits.

Contingency Plan

This is the plan to be followed if Bloomington Cooperative Plots experiences one of the following situations:

- * Bloomington Cooperative Plots goes bankrupt or otherwise has no way to repay debts
- * Bloomington Cooperative Plots decides to disband

The property will be zoned for cooperative living thus the three best local candidates for taking over the property are Bloomington Cooperative Living, the Catholic Workers Union, and the Quaker Fellowship. There may be other cooperative organizations which form after this document is written which might also be good local candidates.

Plan 1: Sell the property for the equity invested in it. This would allow the members to be bought out and the buyer of the property would get an exceptional deal as it is certain the real value of the property will exceed the equity invested in it.

Plan 2: Sell the property for any outstanding debt and use the tax write off to repay members. This would allow us to pay back any lenders and though the members would still lose their equity it would be returned in future tax breaks.

Plan 3: Donate the property outright. This is the most difficult option though it does allow the members to recoup equity losses through future tax breaks. It leaves debts unsettled. The =unsettled debts will be split amongst the members.

In all three scenarios Bloomington Cooperative Living will be offered the property first, the Catholic Workers Union 2nd, and finally the Quaker Fellowship. If none of the above are

interested in buying the land it will be offered to Sycamore Land Trust or the Indiana New Farm School.

Emergency Access Drive

Road Base

In order to support the City of Bloomington's largest fire truck, fire truck 1, the road base must be capable of holding 80 tons. According to Rodger's Group Crushed Stone of Bloomington a road base capable of holding this capacity will be comprised of 6" of #2 gravel topped by 3" of #53 gravel.

Pervious Pavers

The strips of road base will be covered with pervious pavers, a structural plastic grid that can support the weight of the fire truck while allowing low growing plants to be grown in shallow soil contained in the empty spaces within the grid. See before and after pervious paver parking lot project photos below.



Low Growing Herbs

T. praecoxarcticus (English wild Thyme): best for medicinal purposes; very hardy; 3" height

S. Montana repanda (Creeping Winter Savory): culinary herb; 3" height

M. requiem (Carsican Mint): medicinal and culinary herb; 1" height

Endorsements

Bloomington Commission on Sustainability

On January 11th 2011 Bloomington Cooperative Plots was invited by the Bloomington Commission on Sustainability to attend the Planning Departments presentation of this eco-village project. After a round a questions the commission unanimously passed a motion to endorse a letter of support written by Peter Bane and to send a representative to the Planning Commission and Common Council meetings.

* You will find the BCOS Memo of Support on the next page.

Bloomington's Environmental Commission

Bloomington Cooperative Plots met with the Environmental Commission to discuss the eco-village project on February 17th 2011 and Thursday April 14th 2011.



**MARK KRUZAN
MAYOR**

CITY OF BLOOMINGTON

401 N Morton St Suite 130
PO Box 100
Bloomington IN 47402

**DEPARTMENT OF ECONOMIC
& SUSTAINABLE DEVELOPMENT**

p 812.349.3418
f 812.349.3520

**City of Bloomington Commission on Sustainability
Recommendation regarding the Bloomington Cooperative Plots proposal
Approved January 11, 2011**

The Bloomington Commission on Sustainability recommends that the Bloomington Cooperative Plots proposal be given serious consideration.

While many aspects of this proposal remain to be refined, it brings to the city's attention the reality of implementing sustainability criteria and how these challenge the structure of present zoning and other regulations.

The essential nature of this proposal is to achieve much lower per person levels of energy and materials use, both in the development and over the long term, while providing high quality housing with significant amenity near the city center. As such, the proposal deserves serious consideration by city staff and the various boards and commissions charged with carrying out city objectives.

It should be recognized at the outset that many aspects of the proposal call for unconventional solutions to the needs of urban living, but that the intent of the developer is to provide safe, affordable, energy-efficient, and attractive housing with a maximum of green space and a minimum of automobile and energy impact on the city infrastructure and neighborhood life. Therefore, where the proposal falls outside current guidelines or goes beyond them, staff and boards should make every effort to help the developer adapt its ideas in ways that meet the city's concerns for safety and sanitation, aesthetic and community impact, and environmental protection and improvement without falling into the trap of insisting on formulaic responses.

We recognize and endorse the following objectives of city policy that this proposal attempts to achieve:

Reduced automobile use and greater dependence on pedestrian, bicycle, and transit modes for transport within the city by specifically limiting space devoted solely to cars and renouncing customary auto usage by future residents.

- Conservation of residential energy use both in construction and for maintenance through passive solar design, smaller building footprints, and more economical shared use of infrastructure.
- Conservation of water resources, thereby reducing impact on city facilities and increasing resilience.
- Increased community gardening and edible landscaping, contributing to greater food security.
- Creating a central focus for one of the city's natural neighborhoods where none presently exists, thus advancing a decentralized economy and social structure for the whole community consistent with expected needs of the next phase of Bloomington's evolution.

Respectfully submitted,

Maggie Sullivan
Chair, City of Bloomington Commission on Sustainability

Environmental Investigation

415 ½ Spring Street is located in the heart of the PCB hot zone, next to a railroad, and next to a recycling operation. Due to these threats we hired Fields Environmental Incorporated to do a Phase 2 investigation of the threats of PCBs and heavy metal. The property was non-detect on PCBs. There was detection of arsenic but Rudy Fields said that this was normal background arsenic for the region. There was also detection of lead, but only enough to make wells a dangerous form of drinking water.

We donated our environmental investigation material to the city of Bloomington, as part of their efforts to map the areas affected by PCBs.

* You will find the entirety of the environmental document starting on the next page.



Fields Environmental, Inc.

1309 West Vernal Pike
 Bloomington, IN 47404
 Phone: (812) 333-5333
 www.fieldsenvironmentalinc.com

**Sample Locations, Bloomington Plots,
 North Spring Street, Bloomington, Indiana
 2005 Aerial Photo / Parcel Boundary Lines**

For: Bloomington Plots

Date: 11 - 15 - 10

Project # 10-05.01

Graphics obtained from: Monroe County GIS
 (<http://gis.co.monroe.in.us/egis/#>)

ANALYTICAL REPORT

Job Number: 510-58211-1
Job Description: Plots - Bloomington IN

For:
Fields Environmental
1309 West Vernal Pike
Bloomington, IN 47404
Attention: Rudy Fields



Approved for release.
Robin M Kintz
Project Manager I
11/8/2010 9:22 AM

Robin M Kintz
Project Manager I
robinm.kintz@testamericainc.com
11/08/2010

The test results in this report meet all NELAC requirements for parameters which accreditation is required or available. Any exceptions to NELAC requirements are noted in this report. Pursuant to NELAC, this report may not be reproduced, except in full, without the written approval of the laboratory. All questions regarding this test report should be directed to the Project Manager who signed this test report. Valparaiso IL EPA Accreditation #100432.

Job Narrative
510-58211-1

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

GC Semi VOA

Method(s) 8082: The following samples required a mercury clean-up to reduce matrix interferences caused by sulfur: (510-58211-6 MS), (510-58211-6 MSD), PL-1 (510-58211-1), PL-2 (510-58211-2), PL-3 (510-58211-3), PL-4 (510-58211-4), PL-5 (510-58211-5), PL-6 (510-58211-6).

Method(s) 8082: The following samples required a sulfuric acid clean-up to reduce matrix interferences: (510-58211-6 MS), (510-58211-6 MSD), PL-1 (510-58211-1), PL-2 (510-58211-2), PL-3 (510-58211-3), PL-4 (510-58211-4), PL-6 (510-58211-6).

Method(s) 8082: The following samples required several sulfuric acid clean-ups to reduce matrix interferences: PL-5 (510-58211-5).

No other analytical or quality issues were noted.

Metals

Method(s) 6010B: The serial dilution performed for the following sample(s) was outside control limits for barium and lead; however, the sample concentration was less than 100x's the reporting limit. Data is acceptable.
PL-5 (510-58211-5)

No other analytical or quality issues were noted.

General Chemistry

No analytical or quality issues were noted.

Organic Prep

No analytical or quality issues were noted.

METHOD SUMMARY

Client: Fields Environmental

Job Number: 510-58211-1

Description	Lab Location	Method	Preparation Method
Matrix Solid			
Polychlorinated Biphenyls (PCBs) by Gas Chromatography	TAL VAL	SW846 8082	
Automated Soxhlet Extraction	TAL VAL		SW846 3541
Metals (ICP)	TAL VAL	SW846 6010B	
Preparation, Metals	TAL VAL		SW846 3050B
Mercury (CVAA)	TAL VAL	SW846 7471A	
Preparation, Mercury	TAL VAL		SW846 7471A
Percent Moisture	TAL VAL	EPA Moisture	

Lab References:

TAL VAL = TestAmerica Valparaiso

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

METHOD / ANALYST SUMMARY

Client: Fields Environmental

Job Number: 510-58211-1

Method	Analyst	Analyst ID
SW846 8082	Ivers, Catherine L	CLI
SW846 6010B	Tharpe, Matt	MT
SW846 7471A	Thomas, Deidra	DT
EPA Moisture	Hall, Jennifer L	JLH

SAMPLE SUMMARY

Client: Fields Environmental

Job Number: 510-58211-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
510-58211-1	PL-1	Solid	10/22/2010 1500	10/23/2010 0910
510-58211-2	PL-2	Solid	10/22/2010 1505	10/23/2010 0910
510-58211-3	PL-3	Solid	10/22/2010 1515	10/23/2010 0910
510-58211-4	PL-4	Solid	10/22/2010 1525	10/23/2010 0910
510-58211-5	PL-5	Solid	10/22/2010 1540	10/23/2010 0910
510-58211-6	PL-6	Solid	10/22/2010 1555	10/23/2010 0910

Rudy Fields
 Fields Environmental
 1309 West Vernal Pike
 Bloomington, IN 47404

Job Number: 510-58211-1
 Lab Sample Id: 510-58211-1
 Client Matrix: Solid
 Date Sampled: 10/22/2010 1500
 Date Received: 10/23/2010 0910
 % Moisture: 10.7

Client Sample ID: PL-1

Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution	
GC SEMI VOA							
PCB-1016	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1221	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1232	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1242	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1248	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1254	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
PCB-1260	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1452	1.0
Surrogate				Acceptance Limits			
DCB Decachlorobiphenyl	90	%		8082	14 - 147		
Dibutylchloroendate	59	%		8082	10 - 132		
GENERAL CHEMISTRY							
Percent Moisture	11	%	0.10	Moisture	10/24/2010 1603		1.0
Percent Solids	89	%	0.10	Moisture	10/24/2010 1603		1.0

Rudy Fields
 Fields Environmental
 1309 West Vernal Pike
 Bloomington, IN 47404

Job Number: 510-58211-1
 Lab Sample Id: 510-58211-2
 Client Matrix: Solid
 Date Sampled: 10/22/2010 1505
 Date Received: 10/23/2010 0910
 % Moisture: 9.5

Client Sample ID: PL-2

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC SEMI VOA							
PCB-1016	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1221	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1232	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1242	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1248	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1254	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
PCB-1260	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1507	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	94	%		8082	14 - 147		
Dibutylchloroendate	60	%		8082	10 - 132		
GENERAL CHEMISTRY							
Percent Moisture	9.5	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	91	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields
 Fields Environmental
 1309 West Vernal Pike
 Bloomington, IN 47404

Job Number: 510-58211-1
 Lab Sample Id: 510-58211-3
 Client Matrix: Solid
 Date Sampled: 10/22/2010 1515
 Date Received: 10/23/2010 0910
 % Moisture: 10.2

Client Sample ID: PL-3

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC SEMI VOA							
PCB-1016	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
PCB-1221	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
PCB-1232	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
PCB-1242	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
PCB-1248	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
PCB-1254	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
PCB-1260	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1523	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	90	%		8082	14 - 147		
Dibutylchloroendate	61	%		8082	10 - 132		
GENERAL CHEMISTRY							
Percent Moisture	10	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	90	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields
 Fields Environmental
 1309 West Vernal Pike
 Bloomington, IN 47404

Job Number: 510-58211-1
 Lab Sample Id: 510-58211-5
 Client Matrix: Solid
 Date Sampled: 10/22/2010 1540
 Date Received: 10/23/2010 0910
 % Moisture: 6.8

Client Sample ID: PL-5

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC SEMI VOA							
PCB-1016	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1221	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1232	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1242	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1248	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1254	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1260	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	44	%		8082	14 - 147		
Dibutylchloroendate	11	%		8082	10 - 132		
METALS							
Arsenic	11	mg/Kg	3.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Barium	120	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Cadmium	<11	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Chromium	43	mg/Kg	1.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Lead	250	mg/Kg	5.3	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Selenium	4.5	mg/Kg	2.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Silver	<4.2	mg/Kg	4.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Mercury	0.91	mg/Kg	0.021	7471A	10/26/2010 0850	10/26/2010 1604	1.0
GENERAL CHEMISTRY							
Percent Moisture	6.8	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	93	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields
 Fields Environmental
 1309 West Vernal Pike
 Bloomington, IN 47404

Job Number: 510-58211-1
 Lab Sample Id: 510-58211-5
 Client Matrix: Solid
 Date Sampled: 10/22/2010 1540
 Date Received: 10/23/2010 0910
 % Moisture: 6.8

Client Sample ID: PL-5

	Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC SEMI VOA							
PCB-1016	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1221	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1232	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1242	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1248	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1254	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
PCB-1260	<0.021	mg/Kg	0.021	8082	11/01/2010 0815	11/04/2010 1553	1.0
Surrogate					Acceptance Limits		
DCB Decachlorobiphenyl	44	%		8082	14 - 147		
Dibutylchloroendate	11	%		8082	10 - 132		
METALS							
Arsenic	11	mg/Kg	3.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Barium	120	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Cadmium	<11	mg/Kg	11	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Chromium	43	mg/Kg	1.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Lead	250	mg/Kg	5.3	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Selenium	4.5	mg/Kg	2.1	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Silver	<4.2	mg/Kg	4.2	6010B	10/27/2010 0958	10/28/2010 0948	2.0
Mercury	0.91	mg/Kg	0.021	7471A	10/26/2010 0850	10/26/2010 1604	1.0
GENERAL CHEMISTRY							
Percent Moisture	6.8	%	0.10	Moisture		10/24/2010 1603	1.0
Percent Solids	93	%	0.10	Moisture		10/24/2010 1603	1.0

Rudy Fields
 Fields Environmental
 1309 West Vernal Pike
 Bloomington, IN 47404

Job Number: 510-58211-1
 Lab Sample Id: 510-58211-6
 Client Matrix: Solid
 Date Sampled: 10/22/2010 1555
 Date Received: 10/23/2010 0910
 % Moisture: 7.8

Client Sample ID: PL-6

Result/Qualifier	Unit	RL	Method	Date Prepared	Date Analyzed	Dilution
GC SEMI VOA						
PCB-1016	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1221	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1232	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1242	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1248	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1254	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
PCB-1260	<0.022	mg/Kg	0.022	8082	11/01/2010 0815	11/04/2010 1609 1.0
Surrogate				Acceptance Limits		
DCB Decachlorobiphenyl	64	%		8082	14 - 147	
Dibutylchloroendate	43	%		8082	10 - 132	
GENERAL CHEMISTRY						
Percent Moisture	7.8	%	0.10	Moisture	10/24/2010 1603	1.0
Percent Solids	92	%	0.10	Moisture	10/24/2010 1603	1.0

DATA REPORTING QUALIFIERS

Client: Fields Environmental

Job Number: 510-58211-1

Lab Section	Qualifier	Description
Metals	4	MS, MSD: The analyte present in the original sample is 4 times greater than the matrix spike concentration; therefore, control limits are not applicable.

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

Surrogate Recovery Report

8082 Polychlorinated Biphenyls (PCBs) by Gas Chromatography

Client Matrix: Solid

Lab Sample ID	Client Sample ID	DCB1 %Rec	DBC1 %Rec
510-58211-1	PL-1	90	59
510-58211-2	PL-2	94	60
510-58211-3	PL-3	90	61
510-58211-4	PL-4	84	62
510-58211-5	PL-5	44	11
510-58211-6	PL-6	64	43
MB 510-71103/1-A		97	47
LCS 510-71103/2-A		99	77
510-58211-6 MS	PL-6 MS	78	63
510-58211-6 MSD	PL-6 MSD	72	61

Surrogate	Acceptance Limits
DCB = DCB Decachlorobiphenyl	14-147
DBC = Dibutylchloroendate	10-132

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

Method Blank - Batch: 510-71103

Method: 8082
Preparation: 3541

Lab Sample ID: MB 510-71103/1-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/04/2010 1407
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330
Prep Batch: 510-71103
Units: mg/Kg

Instrument ID: SGCA
Lab File ID: B3501.D
Initial Weight/Volume: 30 g
Final Weight/Volume: 5 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Result	Qual	RL
PCB-1016	<0.010		0.010
PCB-1221	<0.010		0.010
PCB-1232	<0.010		0.010
PCB-1242	<0.010		0.010
PCB-1248	<0.010		0.010
PCB-1254	<0.010		0.010
PCB-1260	<0.010		0.010

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	97	14 - 147
Dibutylchloroendate	47	10 - 132

Lab Control Sample - Batch: 510-71103

Method: 8082
Preparation: 3541

Lab Sample ID: LCS 510-71103/2-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/04/2010 1422
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330
Prep Batch: 510-71103
Units: mg/Kg

Instrument ID: SGCA
Lab File ID: B3502.D
Initial Weight/Volume: 30 g
Final Weight/Volume: 5 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
PCB-1016	0.167	0.181	109	71 - 118	
PCB-1260	0.167	0.175	105	72 - 125	

Surrogate	% Rec	Acceptance Limits
DCB Decachlorobiphenyl	99	14 - 147
Dibutylchloroendate	77	10 - 132

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 510-71103**

**Method: 8082
Preparation: 3541**

MS Lab Sample ID: 510-58211-6
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/04/2010 1624
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330
Prep Batch: 510-71103

Instrument ID: SGCA
Lab File ID: B3510.D
Initial Weight/Volume: 15.09 g
Final Weight/Volume: 5 mL
Injection Volume: 1 uL
Column ID: PRIMARY

MSD Lab Sample ID: 510-58211-6
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 11/04/2010 1639
Date Prepared: 11/01/2010 0815

Analysis Batch: 510-71330
Prep Batch: 510-71103

Instrument ID: SGCA
Lab File ID: B3511.D
Initial Weight/Volume: 15.32 g
Final Weight/Volume: 5 mL
Injection Volume: 1 uL
Column ID: PRIMARY

Analyte	% Rec		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
PCB-1016	96	99	71 - 118	1	30		
PCB-1260	91	94	72 - 125	2	30		
Surrogate		MS % Rec	MSD % Rec			Acceptance Limits	
DCB Decachlorobiphenyl		78	72			14 - 147	
Dibutylchlorendate		63	61			10 - 132	

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

Method Blank - Batch: 510-70854

**Method: 6010B
Preparation: 3050B**

Lab Sample ID: MB 510-70854/1-A ^2
Client Matrix: Solid
Dilution: 2.0
Date Analyzed: 10/28/2010 0931
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951
Prep Batch: 510-70854
Units: mg/Kg

Instrument ID: MICPC
Lab File ID: 101561C
Initial Weight/Volume: 1.0 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Arsenic	<3.0		3.0
Barium	<10		10
Cadmium	<10		10
Chromium	<1.0		1.0
Lead	<5.0		5.0
Selenium	<2.0		2.0
Silver	<4.0		4.0

Lab Control Sample - Batch: 510-70854

**Method: 6010B
Preparation: 3050B**

Lab Sample ID: LCS 510-70854/2-A ^2
Client Matrix: Solid
Dilution: 2.0
Date Analyzed: 10/28/2010 0937
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951
Prep Batch: 510-70854
Units: mg/Kg

Instrument ID: MICPC
Lab File ID: 101561C
Initial Weight/Volume: 1.0006 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Arsenic	138	130	94	80 - 120	
Barium	269	268	100	79 - 121	
Cadmium	71.0	68.6	97	82 - 118	
Chromium	105	101	96	80 - 120	
Lead	144	140	97	80 - 120	
Selenium	200	196	98	79 - 122	
Silver	45.1	45.1	100	66 - 134	

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

**Matrix Spike/
Matrix Spike Duplicate Recovery Report - Batch: 510-70854**

**Method: 6010B
Preparation: 3050B**

MS Lab Sample ID: 510-58211-5
Client Matrix: Solid
Dilution: 2.0
Date Analyzed: 10/28/2010 0953
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951
Prep Batch: 510-70854

Instrument ID: MICPC
Lab File ID: 101561C
Initial Weight/Volume: 1.0241 g
Final Weight/Volume: 50 mL

MSD Lab Sample ID: 510-58211-5
Client Matrix: Solid
Dilution: 2.0
Date Analyzed: 10/28/2010 0959
Date Prepared: 10/27/2010 0958

Analysis Batch: 510-70951
Prep Batch: 510-70854

Instrument ID: MICPC
Lab File ID: 101561C
Initial Weight/Volume: 1.0075 g
Final Weight/Volume: 50 mL

Analyte	% Rec.		Limit	RPD	RPD Limit	MS Qual	MSD Qual
	MS	MSD					
Arsenic	99	99	75 - 125	1	20		
Barium	105	101	75 - 125	1	20		
Cadmium	97	96	75 - 125	1	20		
Chromium	83	82	75 - 125	0	20		
Lead	146	106	75 - 125	6	20	4	4
Selenium	104	102	75 - 125	0	20		
Silver	106	103	75 - 125	1	20		

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

Method Blank - Batch: 510-70777

Method: 7471A
Preparation: 7471A

Lab Sample ID: MB 510-70777/9-A
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 10/26/2010 1527
Date Prepared: 10/26/2010 0850

Analysis Batch: 510-70839
Prep Batch: 510-70777
Units: mg/Kg

Instrument ID: MHGC
Lab File ID: 102610hg.PRN
Initial Weight/Volume: 1.0 g
Final Weight/Volume: 50 mL

Analyte	Result	Qual	RL
Mercury	<0.010		0.010

Lab Control Sample - Batch: 510-70777

Method: 7471A
Preparation: 7471A

Lab Sample ID: LCS 510-70777/10-A
Client Matrix: Solid
Dilution: 10
Date Analyzed: 10/26/2010 1530
Date Prepared: 10/26/2010 0850

Analysis Batch: 510-70839
Prep Batch: 510-70777
Units: mg/Kg

Instrument ID: MHGC
Lab File ID: 102610hg.PRN
Initial Weight/Volume: 0.1001 g
Final Weight/Volume: 50 mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Mercury	25.3	31.5	125	67 - 133	

Quality Control Results

Client: Fields Environmental

Job Number: 510-58211-1

Method Blank - Batch: 510-70702

**Method: Moisture
Preparation: N/A**

Lab Sample ID: MB 510-70702/1
Client Matrix: Solid
Dilution: 1.0
Date Analyzed: 10/24/2010 1603
Date Prepared: N/A

Analysis Batch: 510-70702
Prep Batch: N/A
Units: %

Instrument ID: GBALB
Lab File ID: N/A
Initial Weight/Volume:
Final Weight/Volume:

Analyte	Result	Qual	RL
Percent Moisture	100		0.10
Percent Solids	0.026		0.10

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

Valparaiso
2400 Cumberland Drive
Valparaiso, IN 46383
Phone: 219-464-2389
Fax: 219-462-2953

Report To:

Contact: Andy Fields
Company: Fields Environmental, Inc.
Address: 1009 W Vernal Pike
Bloomington, IN 47404
Phone: 812-333-5333
Fax: 812-333-5334
E-Mail: andy@fa

Bill To:

Contact: Same
Company: _____
Address: _____
Phone: _____
Fax: _____
PO#: _____ Quote: _____

107590

Shaded Areas For Internal Use Only / of /

Package Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Sealed <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Received on Ice <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Samples Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Temperature °C of Cooler <u>0.8 °C S10-50-051</u>	
Within Hold Time <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Preserv. Indicated <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
pH Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Res Cl ₂ Check OK <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA
Sample Labels and COC Agree <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> COC not present	

Laboratory ID	MS-MSD	Client Sample ID	Sampling		Matrix	Comp/Grab	PCBS	PCBS	Pesticides	Cadmium	RLRA	8 Metals	Additional Analyses / Remarks
			Date	Time									
5811-1		PL-1	10-22-10	1500	S	G	✓						
-2		PL-2	10-22-10	1505	S	G	✓	✓					
-3		PL-3	10-22-10	1515	S	G	✓						
-4		PL-4	10-22-10	1525	S	G	✓	✓					
-5		PL-5	10-22-10	1540	S	G	✓	✓			✓		
-6		PL-6	10-22-10	1555	S	G	✓	✓					

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RELINQUISHED BY: <u>Andy Fields</u> COMPANY: <u>FET</u> DATE: <u>10-21-10</u> TIME: <u>1730</u>	RECEIVED BY: <u>[Signature]</u> COMPANY: <u>[Signature]</u> DATE: <u>10/23/10</u> TIME: <u>0910</u>
---	---

- Matrix Key**
- WW = Wastewater
 - W = Water
 - S = Soil
 - SL = Sludge
 - MS = Miscellaneous
 - OL = Oil
 - A = Air
 - SE = Sediment
 - SO = Solid
 - DS = Drum Solid
 - DL = Drum Liquid
 - L = Leachate
 - WI = Wipe
 - O =

- Container Key**
1. Plastic
 2. VOA Vial
 3. Sterile Plastic
 4. Amber Glass
 5. Widemouth Glass
 6. Other

- Preservative Key**
1. HCl, Cool to 4°
 2. H2SO4, Cool to 4°
 3. HNO3, Cool to 4°
 4. NaOH, Cool to 4°
 5. NaOH/Zn, Cool to 4°
 6. Cool to 4°
 7. None

COMMENTS: Eed Saturday
82905632 0990
(sublewrap)
custody seal 752004

Date Received: / /

Courier: Hand Delivered

Bill of Lading

Login Sample Receipt Check List

Client: Fields Environmental

Job Number: 510-58211-1

Login Number: 58211

List Source: TestAmerica Valparaiso

Creator: Looney, Christina M

List Number: 1

Question	T / F / NA	Comment
Radioactivity either was not measured or, if measured, is at or below background	True	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

Finances

At the time of submission of this proposal, we have been financed by five people: Zach Dwiell, Daniel Joseph Weddle, Ann Kreilkamp, Shodo Spring, and Travis Andrew Puntarelli. Most of the funding has gone towards the purchase of the property. Some has been invested in cleaning up the property. We are currently seeking additional funding sources for initial infrastructure projects such as the emergency access drive and utilities installation.

Interpersonal Relationships

Community Justice and Mediation Center

32-hour Basic Mediation Training

“Basic Mediation Training” is a great tool to add to the lifelong toolbox of community members interested in healing community harm, resolving neighbor-to-neighbor conflicts, alternative dispute resolution, criminal justice issues, or helping youth.

Participants who complete CJAM’s “Basic Mediation Training” are eligible to work as CJAM volunteer mediators; however, any community member interested in learning basic mediation skills is also welcome to participate.

Restorative Circles and Non-Violent Communication

Daniel Weddle one the founding members has studied Non-Violent Communication and plans on using restorative circles, a mediation technique, to resolve conflicts within the community.

What is Restorative Circles: Building a Compassionate Justice System

Born in the shanty towns of Brazil, the systemic approach of Restorative Circles guides communities to consciously choose their justice system - proactively preventing or diminishing harm while giving all those involved a real-life experience of the practical power of nonviolence. Restorative Circles can fit into existing systems and contribute to greater connection, safety and well-being in your own schools, families, legal systems, neighborhoods, local governments, workplaces, religious groups and other communities.

Restorative Circles offer ways for individuals and communities to establish connection, discover meaning and recover empowerment and humanity on profound levels. By creating a unique values based forum for reaching agreements, based in Marshall Rosenberg’s Nonviolent Communication work, these circles help sustain effective and nurturing relationships both personally and within society.

Restorative Circles have developed within the Restorative Justice movement, which in recent decades, inspired by aboriginal peacemaking circle systems, has rediscovered and adapted ways for communities to promote responsibility and healing. Rethinking justice, and engaging

with the challenge of consciously building whole system responses to community well-being, has opened up revolutionary possibilities for furthering a culture of peace.

With just 2.8 % of the world's population, Brazil has over 13.8% of all violent crimes committed worldwide, as reported by the UN. The current models for addressing such conflicts in Brazil were being overwhelmed, and the country consumed with evermore violence. In 2004, the Brazilian Ministry of Justice and Education invited Dominic Barter to develop a model of justice implementing the Restorative Justice principles. What began as a few Pilot Projects in 2004, has mushroomed into hundreds throughout Brazil. Early data show that the number of cases 'judicialized' - reaching the judge - diminish significantly where the Circles are present in the schools and community. Anecdotal feedback indicates that an unprecedented cultural shift can occur in schools as the Circles are adapted as a way to handle conflict. National awards have been presented to recognize what has been accomplished in an astonishingly short period of time. The task now is how fast can they roll out this process to all reaches of society in Brazil. This is a rare opportunity to witness and experience an emerging path 21st Century Justice.

This unique Model of Restorative Circles presents a systemic approach developed by Dominic Barter as he worked with organizations, schools, court systems, intentional communities and prisons. Applied in the Brazilian Justice and Education systems, this process makes exquisite use of Nonviolent Communication to reconnect those separated by conflict and support them in reaching not only agreed action, but opportunity for individual and community empowerment and healing as well.

Membership Process

Bloomington Cooperative Plots Eco-Village Membership Process

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Dues Contract -----	13
Buy-In and Buy-Out Processes -----	14

Types of Membership

■ Friend

- Someone who may occasionally assist with projects related to the eco-village, but who makes no formal commitment to the group.

■ Financial or Working Supporter

- Someone who offers monetary gifts or hours of service, one-time or recurring, to the eco-village and are currently not ready to make a formal commitment to the group. They are welcome to attend meetings and participate but do not have voting power.

■ Seed (Provisional Members)

- An individual interested in becoming “Rooted Members.” While renting they will be evaluated by the group at 3, 6, 9, and 12 months to determine community fit. A Seed must attend some meetings, are encourage to make community proposals, but

have voting rights that limit the blocking of proposals and do not count in consensus.

- A Seed must live with a “Rooted Member” or on the community grounds for one full calendar year.
- Provide at least 2 references, a personal 1 and a work 1
- Must attend X number of meetings per month
- Sign a Seed Dues Contract
- Sign a Seed Service Contract
- Sign Vision Contract
 - Join or create at least one committee and work x number of hours per week.

■ Seedling Members

- An individual who has been through the Seed stage and has been invited to become a lifelong member of the community, but has decided to continue as a renter.
- Seedlings will have full voting rights; however, Seedlings in the membership process will not be able to block a proposal and will not be counted in decisions requiring consensus.
- Leases are for 8 or 12 month periods and are up for renewal each year. (should they have the intent to building eventual? Within a certain amount of time?)
 - Rent will be \$200 to \$300 per month, plus food and utilities.
 - Must attend X number of meeting per month
 - Sign a Seedling Dues Contract
 - Sign a Seedling Service Contract
 - Sign Vision Contract
 - Join or create at least one committee and work 5 of hours per week.

■ Rooted (Full Member)

- An individual who has been through the Seed stage and has been invited to become a lifelong member of the community.
 - Must attend X number of meeting per month
 - Sign a Rooted Dues Contract

- Sign a Rooted Service Contract
- Sign Vision Contract
 - Join or create at least one committee and work 5 of hours per week.
- Invitational Membership
 - Rooted members reserve the right to invite members into the community to any level of the membership process on a case to case basis by the process of full consensus.
- :
- Building Members
 - Each building member will be responsible for obtaining any and all building permits or variances needed for their personal structure.

Step-by-Step Outline

The membership process takes at least 1 year to complete. You must complete all of the steps within the membership process to become a Rooted Member of the Bloomington Cooperative Plots Eco-Village. Below is an outline of the steps that an individual will go through to obtain membership.

Steps:

1. Fill out Application and Wellness Evaluation
2. Provide a Letter of Recommendation
3. Write Letter of Intent
4. Schedule an Interview
5. Sign Vision Contract, Dues Contract, and Service Contract
6. Begin living with a Rooted Member or at Bloomington Cooperative Plots
7. Fill contracts by meeting attendance, logging service hours, paying community dues, etc.
8. Attend evaluation meetings at 3, 6, 9, and 12 months during membership

Application

Name:

Age:
Sex:
E-mail:
Phone number:

Why Bloomington Cooperative Plots Eco-Village?

What do you know about BCP?
What attracts you to BCP? What are you looking for? Do you feel the community can provide what you are looking for?
How do you think you could contribute to BCP?
How did you hear about BCP?
If you personally know any of the BCP members list their names:

About You

Describe yourself in 5 words:
What goals do you wish to accomplish in the next 5 years?
Are you an artist? If so what do you consider your mediums?
Do you play a musical instrument or instruments? If so which ones?
How soon would you be interested in constructing a naturally built home? How would you approach constructing a home?
Is there anything specific you want us to know about you?
Health situation (any physical disabilities, current medication or treatments, mental health history, chronic health history, health insurance, or current health concerns):
Financial situation (debts, monthly bills, or financial needs beyond immediate self care):
Do you drink alcohol or smoke cigarettes?
What are the significant relationships in your life now? If so is your partner interested in the community?
What are your needs for being social, and for solitude?
Please describe a major obstacle in your life and how you overcame it.
What do you typically do when someone does something that upsets you?

Community Involvement and Living Arrangements

Current living situation (where, with whom, how long?):
Current working situation
What communities do you belong to?
Experiences with rural living, community living, garden and farm work, cooking, cleaning, building maintenance, carpentry, outdoor physical work, office work:
What was your best experience with Group Living?
What was your worst experience with Group Living?
What have you learned from past living arrangements?
Write about a time when you demonstrated your trustworthiness or integrity in school or at work:

Experience

Experience with meditation or other spiritual practice.

General Housekeeping

What do you do in your spare time?

What is your current diet?

Do you have a car or pet?

What are your needs for computer, television, radio, recorded music, car, or telephone?

Why do people climb mountains?

Is there intelligent life in outer space?

Personal Reference

Name:

Relationship:

Phone Number:

Email:

If you wish you may have your personal reference write a letter and submit it with the application.

Wellness Evaluation

Please answer the questions on the Wellness Evaluation (see below)

Final Interview Prep

Write at least two questions you want us to address during your interview.

Bring a Letter of Intent stating why you are interested in becoming a member of Radical Plots

Wellness Evaluation

If the answer is YES for your entire life (either since early childhood or puberty, and ever since), place a check next to symptoms that may fit you.

- Is everything at home and work (or school) in unfinished piles?
- Do you have a long-standing history of not being able to stay on task?
- Are you easily distractible?
- Do you seem to alternate between not staying focused and being so focused that a bomb could go off without you noticing it?
- Do you have a history of feeling really great and then getting yourself in trouble because of feeling so great (and being somewhat out of control and feeling invincible)?
- Are you moody?
- Are you angry all the time, with spells of rage?
- Are you empty and bored even doing something you enjoy?
- Do you get paranoid under stress?
- Do you have ups and downs that you can virtually plan on?
- Are there times every month when you just can't function (not including PMS)?
- Are you oversensitive to rejection and criticism?
- Has it always seemed that others find it easy to be happy and you don't?
- Have you spent most of your life between not quite depressed and not quite happy?
- Are you a perfectionist to the point where it keeps you from getting things done?
- Are you a pack rat?
- Do you have trouble trusting other people to do things because you're sure they'll mess it up?
- Do you obsess about something to the point where it interferes with your life?

- Do you have any ritual behaviors that you can't stop, like washing your hands too much, checking the door lock too much, counting things, etc.?
- Are you nervous more than you're not?
- Do you always feel scared?
- Does your mind never shut off, and has been that way since you were a child?

Formal Interview Process

After an individual submits an application and wellness evaluation we will arrange to have an interview. The interviewee is expected to bring a letter of Intent and questions to the interview. After the interview the individual will be asked to leave and the interviewers will discuss whether or not they feel the individual is a good fit for the community. The interviewers will then come to a decision, present their decision to the larger group at the next meeting, and then barring any objections from the larger group will contact the individual with a decision. The individual should be contacted no later than the week after the next community meeting.

Specifics of Interview

- If possible interview must be done in person
- If not possible to interview in person the interview should be conducted via phone. When possible, video chat is preferable to voice only.
- At least 3 interviewers should be present.
- Each interviewer will be required to generate 2 personal questions to ask during the interview.
- There should be a minimum of one hour scheduled for the meeting.
- We should record the interview.
- The decision must be made by 100% consensus.

Questions

- What is your life story?
- What are your beliefs about the state of the world?
- Why are you drawn to our group?
- What do you hope to find with us?
- What do you have to offer the group?
- Do you use any drugs?
- Do you have a strong understanding of our systems, financial, co-housing model, etc...
- Do you have any questions for us?

Evaluation Meeting

An evaluation meeting is a formal meeting where seed, seedling, and rooted members come together to discuss what is working and not working for both parties. It is during these meetings that fit for the community is assessed with honest and open feedback. Along the way seeds may have things pointed out that are not working so that they can adjust before a final decision is made at the end of the year.

The Evaluation meetings must consist of at least X number of members.

The meeting will consist of:

- potential member concerns/questions
- peer review by community members

At the 12 month meeting community members will vote for one of the three options:

1) Unfit Candidate

- This is a potential member that has been voted as incompatible with the community by vast majority.
- This individual will not be given the option of renting the next year.
- This individual can consult with the community about the possibility of reapplying if they wish

2) Seedling Member

- This is a potential member that has been voted by the community to extend membership process by 3, 6, 9, or 12 months by vast majority.
- This individual will be given the option of renting another year.
- This individual can request to be reevaluated for root membership at any of the evaluation meetings throughout the second year.
- Rent will be nonrefundable during the second year of renting.

3) New Root Member

- This is a potential member that has been voted into root/seedling membership by consensus.
- This member's past rent within the community will count towards the membership buy-in.

Vision Contract

I, _____, have fully read, understand, and align myself with the following documents:

- Vision Letter
- Community Vision Pillars
- Bylaws

I affirm and agree to uphold the Vision, Community Pillars, and Bylaws of the Bloomington Cooperative Plots Eco-Village.

Name Printed:

Name Signed:

Date:

Service Contract

This service contract is an agreement to dedicating x number of hours to the work of a BCP committee and to attend x number of meets and work parties every month. You will report your committee hours weekly on G-Mail.

Reasons for this Contract:

Commitment

We are looking to start a community and have a ton of work to do to ensure we can start as soon as possible. These hours of commitment will boost everyone's moral as many hands make light, bountiful, and beautiful work. If many of us are working hard to make this dream happen then others will be inspired to work alongside us, ultimately making the property cheaper and life easier.

Committees

As part of being in the BCP community each member is required to serve on at least one committee. You can serve on more than one committee if you wish and the summation of your hours will count toward the total you must work every month.

Meeting Quality

To ensure the decisions made at meetings are a fair representation of our group it is necessary for many of us to attend each meeting. Higher attendance also leads to the generation of better ideas.

Signing the Contract:

I, _____, have read, understand, and agree with the service contract and am willing to dedicate x per week to the Bloomington Cooperative Plots Eco-Village community.

Name Printed:

Name Signed:

Date:

Dues Contract

This dues contract is an agreement, between those interested in founding Bloomington Cooperative Plots Eco-Village, to pay XX dollars monthly in a jointly held account.

Reasons for this Contract:

Commitment and Steady Income

We collect dues in order to fund continual improvements to the site and cooperative infrastructure. Examples might include periodic repair of the roads, ponds, forests and communal buildings, property taxes, grants, etc.

Signing the Contract:

I(Your Name)have read, understand, and agree with the contractual savings plan and am willing to save XX dollars a month.

Name Printed:

Name Signed:

Date:

Buy In and Buy Out Processes

- We are not an income sharing community
- Buy in will be between 125 and 150% of the purchase price of land plus infrastructure, work parties will likely reduce the fee down to 100%, it can be paid up front or in \$100 monthly installments (We choose this route as many communities expect money up front and we do not believe that is reasonable.
- Buy in is transferable and upon leaving you may sell your share and home to another person who is membership or the community may buy you out at \$100 per month, This is not a great investment as the goal is not to help individuals gain money but rather to build a home that holds some equity instead of renting.
- There will be monthly dues for people living directly on the land and they will likely be \$100 per month, it is with such revenue we will build future cooperative infrastructural.

Natural Building Techniques

Below is a list of natural building techniques. This list is far from exhaustive, but it is meant to serve as introduction to the many different building techniques. It is possible that we will explore techniques not listed below.

Cob

Cob or cobb is a building material consisting of clay, sand, straw, water, and earth, similar to adobe. Cob is fireproof, resistant to seismic activity, and inexpensive. It can be used to create artistic, sculptural forms and has been revived in recent years by the natural building and sustainability movements.

Cordwood or Stackwood

Cordword or stackwood is rather similar to brick. Spilt or unsplit logs are stacked with mortar between the joints.

Deltec Homes

<http://www.deltechomes.com/floorplans.php>

Deltec homes are circular designs with the smallest being 328 square feet.

Earthship

An Earthship is a type of passive solar home made of natural and recycled materials. Recycled

tires are rammed full of soil to become the walls in this building technique.

Geodesic Dome

A geodesic dome is a spherical or partial-spherical shell structure or lattice shell based on a network of great circles (geodesics) lying on the surface of a sphere.

Post and Beam:

Post and beam (or Post and lintel) is a simple architrave where a horizontal member (the lintel or header) is supported by two vertical posts at either end. This form is commonly used to support the weight of the structure located above the openings in a bearing wall created by windows and doors.

Rammed Earth

Building a rammed earth wall involves a process of compressing a damp mixture of earth that has suitable proportions of sand, gravel and clay (sometimes with an added stabilizer) into an externally supported frame, creating a solid wall of earth.

Sandbag

Walls are gradually built up by laying bags in courses — forming a staggered pattern similar to bricklaying. The bags are sturdy sacks filled with inorganic material usually available on site (such as sand, gravel, or clay).

Straw Infill

Straw infill buildings use straw bales as insulation and not to bear the load of the roof. The structure of the wall which bears the load can be built of many materials, typically lumber or timber frame.

Slip Straw

This method is a lot like rammed earth; however, instead of an earth mixture being rammed between forms it is a mixture of straw with very wet clay mixed in.

Strawbale

A building which uses straw bales both as insulation and to bear the load of the roof.

Press

WFHB Eco-Report Radio Interview

Please disregard the inconsistency of the numbers in this interview with those found in this proposal. Though the interview is a good, honest example of what the founders have in mind and why they have applied to the PUD process, the material is out dated.

<http://www.wfhb.org/news/ecoreport-january-13-2011>

Bloomington Cooperative Plots is an EcoVillage project forming on Bloomington's west side, an intentional community of individuals and families who dedicate their unique talents, gifts, and aspirations toward a common vision of sustainability. The group purchased a two-acre plot in December and intend to construct a cooperative house for 12 to 15 people plus a campus of 9 smaller houses. EcoVillage founder Danny Weddle outlines their vision as our guest this week on EcoReport, a weekly program providing independent media coverage of environmental and ecological issues with a focus on local, state and regional people, issues, and events in order to foster open discussion of human relationships with nature and the Earth and to encourage you to take personal responsibility for the world in which we live.

<http://www.wfhb.org/news/ecoreport-march-10-2011>

We are the opening story.

Permaculture Activist Article

Please disregard the inconsistency of the numbers in this article with those found in this proposal. Though the article is a good, honest example of what the founders have in mind and why they have applied to the PUD process, the material is out dated.

* A photocopy of the article begins on the next page.

D-I-Y Meets P.U.D.

Bringing the Village into the City

Peter Bane

YOU WANT TO LIVE with your friends, plant a garden, build a natural home, and bike to work, the library, the market, and the clubs. Where can you do it?

It was a year and a half into the Great Recession and the US economy had just gone over the first of a series of cliffs on the way to a new world of lowered expectations. Not a great time to float a new venture, but when you're young and you have a pretty good idea that the world is going to change hard, fast, and not likely for the better, there's no reason to postpone making your dreams come true. A group of twenty-somethings and a few older friends in a midwestern college town begin talking about a village, and co-op housing, and renewable energy, and garden farming, and making a neighborhood, and living mortgage-free. Permaculture gets thrown into the mix, and more people join in. Soon it's December of 2009 and 14 people are meeting every other week. The real estate market is soft, a land search is on, and a likely property is on the hook for \$260,000. The talk is heating up: there's always talk in college towns.

"Talk can get money," says Danny Weddle, "but it won't make a project happen." I'm sitting in the basement of a local coffee bar on Bloomington's main street a few blocks from the front gates of Indiana University, famous music school and epicenter of the sexual revolution, thanks to the intrepid researcher, Dr. Alfred Kinsey. Weddle and business partner Zach Dwiel are explaining to me how they wound up buying 2.23 acres on the city's near-west side and are on track to realize a dream they call Bloomington Cooperative Plots.

The two of them together don't have 50 years on the planet, but they're learning fast. "We want to build our own homes. We want to live in town," explains Weddle, an artist, story-teller, and recent IU grad. I know him from a permaculture course at the university. Dwiel I've seen around town a handful of times. Both men have roots here, grew up in the city and still have family in the Hoosier Hills. This uplifted seabed region made its mark with the limestone quarried from its ground and sent round the country to be the face of famous buildings. Danny's dad still works in the industry, and the son has hauled his share of cut stone too.

In search of a vision

"We had five members who wanted a cooperative, and seven whose vision was for a village," says Zach, explaining the dynamic that had developed within their group by the end of last



Bloomington Cooperative Plots visioning. Zach Dwiel to far right.

year. "We had our sights on a property, but the deal fell apart last March, and we came up short, wondering what we were doing," interjects Danny. "We really felt some burnout after many intense months of meetings and land search, so we dropped back for a bit." He pauses. "We now realize we started out too selflessly. We weren't putting our own needs into the equation. There was a big shift after that from nurturing the group toward making a home. We put it to the rest of the members that we wanted to build our own homes, and the group pretty much fell apart after that."

That didn't stop them, however. The months of land search had honed their instincts and given them an intimate understanding of the local market. So the sign hadn't been up even a week on a lot on West 8th Street when they stumbled across it. The property hadn't been listed yet, but they now knew enough to seize a good opportunity and keep it under wraps. They entered into negotiations with the owner and settled on what seems to them a real bargain, less than a third of what the first deal would have cost. And they didn't tell anyone but a few close supporters until they had the deal inked and the deed recorded.

Between the dead and the undead

"It's an odd scrap of land right next to the railroad tracks and the salvage yard. It slopes and has a small drainage running through it, and the best land for houses is farthest from the street side," Danny tells me. "No one knew what to do with it, which is why I think we got it cheap. Plus, the market has been down

everywhere, so this was a good time to buy." The Waterman neighborhood is an out-of-the-way section squeezed between a low-level rail feeder line, the city's largest cemetery, and a main east-west arterial road. A few blocks of houses built 70-100 years ago push up against a more recent trailer park. In the language of the city's planning department, the area has no "priority infrastructure" that would support neighborhood development: no shops, no services, no public offices, no centers of employment. But it's only 1.3 miles from City Hall and the buzzing revival of downtown that's been shepherded by a series of Bloomington's recent mayors. And Waterman's almost forgotten agricultural and industrial heritage may yet be its salvation. As late as the 1970s cattle were pastured in part of the neighborhood, which was then a remnant of still operating farms just beyond the highway bypass to the west. As the junction of the city's main rail lines connecting north, west, and south, Waterman suffered the onus of low property values and industrial zoning, but with those rail corridors either partly abandoned or undergoing active rails-to-trails conversion, today the neighborhood is positioned supremely well for bike connectivity throughout the city, just what these two hope their urban ecovillage can exploit.

The months of land search had honed their instincts and given them an intimate understanding of the local market.

Building a new world

Weddle and Dwiell converged last year during the community's first phase of norming and storming. They share parallel and positive experiences of community, Weddle in Bloomington's only cooperative household, a largely student-run situation with almost two dozen members, and Dwiell in a smaller student co-op in the Bay Area called Ft. Awesome. Both men were inspired by the ecovillage movement, partly from tales of Earthaven in North Carolina, and even more so by visits each made to Dancing Rabbit in northeast Missouri. The latter's young membership, agricultural focus, and low-cost, do-it-yourself financial model appealed to them. The vision has emerged organically from pieces they seem to be collecting by the month, imaginations on fire.

The Cooperative Plots will be a hub of urban agriculture with a large, central cooperative house sheltering six or a dozen bedrooms, and servicing smaller satellite residences. Some of those might have their own kitchens. Both men liked the decen-

tralized social structure at Dancing Rabbit with its many pods, each pod with a handful of members sharing food. "You take the stress off questions of diet and lifestyle when you let people organize their own food," Danny asserts, sagely I think to myself. That was a major lesson I drew from community living, so I'm glad he's confident about it so early in the process. They want to cluster houses and limit cars, creating a small car co-op with a handful of vehicles for the 30 or more residents they envision. If they get their way, they'll persuade the city to let them limit pavement and not chop up the property with internal roads. Small building footprints with variety in heights would be arranged with meandering internal paths to make the small site seem larger than it is. A wooded buffer to the south would be thickened, ponds created in the drainages, and much of the space planted to forest gardens, heritage fruit trees, and mixed vegetables with a good-sized flock of hens. (Bloomington already permits urban chickens with some constraints.)

Social entrepreneurship

Active visioning has helped keep these two motivated, and drawn allies to them, but it took street smarts and real money to buy the property, and they only had some of it themselves. "We needed some backers, and we were fortunate to find three local angels," says Zach, whose name is on the deed. "We probably could have gotten what we needed from one of them, but we wanted to use our lenders as teachers too, and besides, each of them brings their own social network, so by broadening our base of support we have access to a much larger pool of money for future projects."

Weddle and Dwiell have been taking on teachers whenever they can, it seems. The two hooked up with Diana Christian, ecovillage author and former editor of *Communities* magazine,



Spring Street aerial view showing contours and property boundaries. Housing proposed for NW corner. Note Railroad tracks and Salvage yard to north.

when she visited Bloomington in 2009. They sought advice on legal structures, membership process, and a raft of how-to steps.

But I pinch myself. This is not happening in a county in rural Missouri with no zoning. Bloomington just adopted a Unified Development Ordinance a few years ago, and has been laboring to get a government handle on decades of scattershot land development that has left the city a sprawling patchwork of lawn order and vacuous suburban excess grafted onto its old urban core around the University. With good intentions and a little belatedly, city staff have embraced New Urbanism. What in the heck will Planning Director Tom Micuda think about cordwood sleeping cabins and strawbale co-op dorms?

City politics

Quite a lot it seems. Dwiell and Weddle have been talking with Micuda for several months and they report that he's excited and supportive. They're intending to bring a Planned Unit Development (P.U.D.) proposal to the city in a series of meetings that begin January 24th, and which they hope will lead to planning permission and the start of construction by midsummer. I'd just come the night before from a meeting of the city's Commission on Sustainability, where two of its members were giving



City survival skills. Ecovillage members dress out a road-kill deer, harvesting some of the city's unwanted abundance. (problem into solution...)

the whole panel an earful about the Cooperative Plots project. The rooms was full of smiles, friendly questions, and nodding heads. "We're talking to the City Council members," says Danny "so when this comes before them for approval, they'll have all their questions answered." The two evince some political savvy. They've started with the most supportive and influential councillors—winning them over, and they're refining their story as they work their way down the list of likely favorable votes.

Bloomington is one of five cities in the US to have acknowledged the predicament of peak oil and to have commissioned an advisory report about adapting to its consequences. Mayor Mark Krusan is supportive and has also committed the city to the US Mayors' Climate Challenge. Council members adopted the Task Force recommendations in December of 2009 by a vote of 8 to 0 with one abstention. The report was frank in its assessment: oil production has likely peaked, other fuels will peak within two decades, substitutions will be difficult to impossible, economic growth is over. Decentralization is the future of our economy, which means we must expand local agriculture, improve housing energy efficiency, shift transport to bikes and transit, make the city more walkable, bring back neighborhood commerce. So the councillors are awake, the gauntlet is down. And the question Dwiell and Weddle are asking is, "Will the city act on what it says it believes?"

The Cooperative Plots will be a hub of urban agriculture with a large, central cooperative house sheltering six or a dozen bedrooms, and servicing smaller satellite residences.

Ask for what you want

"We made an upfront request of Tom Micuda," Danny explains, "We want this... How do we do it? We are being open about the conflicts between our vision and the city's regulations. We could probably have gotten Council approval for most of this, as a special case, but we were willing to do it the hardest way." They elected to use the P.U.D. process, which they describe as too rigid, in order to set precedent for similar developments to follow. As Dwiell explained, "We want other ecovillages to happen in the city, not just this one." "Check," I think. "We want the city to adopt planning language that makes it possible. That's

why we're calling this a 'Permaculture Unit Development'," says Danny, grinning.

Planned Unit Development may strike these two as rigid, but it's the authorized way to circumvent formal planning limits. It's the model developers use when they want to bargain with the city. Concessions are expected on both sides. "We're pushing the limits," says Danny. "We want a higher density." "So does every developer, I think to myself, 'it's more profitable.' These guys probably just think it's more fun. The property is zoned for 4.5 houses per acre, about 10 units on this site. And the city has another ordinance that limits the number of unrelated persons per household to three, a consequence of lobbying by landlords wanting to regulate the student housing market and pressure from city homeowners leary of party houses developing from too many young people piled into four walls. "We're entitled to 30 bedrooms," says Dwiel, "but we don't want ten stand-alone houses to hold them. We might prefer a dozen bedrooms in the main co-op house and nine two-bedroom cabins." They are proposing to limit energy consumption (electric, gas, water) to 90% of the amount used by 30 average individuals in return for permission to house up to 40 persons or even more. Part of their vision is to have space for WWOOFers (Willing Workers on Organic Farms), conferees, or workshop participants for a week or a month. The big co-op dormitory house would have a commercial kitchen, not only for events, but for canning and preserving as well as for group meals, and even a possible neighborhood-wide meal-share program.

These ideas are subversive of the conventional paradigm, but they hit squarely in the middle of the energy descent vision: lower energy footprints, far less auto dependency and usage, urban infill, local food growing, neighborhood social development, much more sharing and building of social capital, city-center work and shopping. Will Bloomington be able to walk its talk? We'll know in a few months.

Dwiel acknowledges what they both have learned: that limited ownership is a source of problems for communities. His name on the deed is meant to be temporary, lasting only until they can transfer ownership to the right form of corporate structure. The partners have been working with architects to develop concept sketches for the P.U.D. application, and with a young woman who persisted from the earlier group, Carolyn Blank, who has been helping them develop written materials, a membership protocol, and mediation processes. They have backed away from an open recruitment to what they now call "closed membership," meaning they are looking for 20-40 members whom they already know or who are known to their friends. They think there are plenty of people in the community who will find the prospect of sweat equity and low-dollar-cost buy-in attractive, and whose "excitement for their own homes" will propel them into the project. "We're building the scaffolding," says Danny. "Other people will build the house."

The money game

Their savvy land purchase and creative financing have given them an enviable room for manoeuvre. "There's too much inertia



Danny (r) clearing bush honeysuckle on the property in December.

in the financial system," opines Weddle. We talked to banks repeatedly, and they wanted to lend us \$150,000. We only needed a third of that, but they didn't get it how we could get by on so little. We can carry the payments on our loans ourselves until the group is ready, so we aren't under pressure to recruit people for money. And all that's because of finding low-cost land and holding to a low-cost development strategy." In hard times, I think, they are in a much better bargaining position with city officials. And if not here, then where better might this get a start? Bloomington's been the sparkplug for one society-wide upheaval already; maybe it's on the edge of a development revolution too.

I ask them what the sticking points are likely to be. "Animals," they agree. "We'll start with hens. We think we should be able to get 40 hens on a lot this size. And the other issue is people density. Oh, and the fire-truck turnaround..." There are lots of hurdles to be jumped. They want renewable energy, including windmills. The power company might insist on separate meters for every building; BCP would rather have one bill and sub-meter internally. These two are taking on some very entrenched patterns in our society.

"My folks have been expressing interest in having a house with us," says Danny. "My dad's 52 and he's tired of his job. They could retire now; they've done the math. All they have to do is get rid of the SUVs. Livin' in the country, driving big vehicles..." he mutters. "But they want to ease into it, take ten more years, and we don't want vacation homes or empty houses." "Another frontier," I think. Mixed ages, family, flexible living arrangements... "I'd give it another thought," I offer, sensing the possibility in the air. Maybe lowered expectations could be good for all of us. △

Peter Bane is publisher of Permaculture Activist and a consultant to Indiana University in permaculture education. Once upon a time, when he was a young nobody, he co-founded Earthaven Ecovillage. Bloomington Cooperative Plots can be contacted via danieljosephweddle@gmail.com.