



City of Lawrence
KANSAS

achieve the vision
revitalizing the former Farmland property

BARTLETT & WEST

CDM
Smith



Consultant Team Tasks

General List of Consultant Team Scope of Services

- **Business Park Master Planning**
 - Site Investigation, Analysis & Infrastructure Review
 - Conceptual Layout Ideas
 - Final Master Planning Layout & Design
- **Engineering Design for K-10/O’Connell Road Intersection**
 - Site Topographic Surveying & Intersection Design
- **Preliminary Platting**
 - Boundary Field Surveying, Drainage Study & Traffic Impact Study
- **Sustainability Values**
 - Green Alternatives, Initiatives and Sustainability Options
- **Other Tasks**
 - Rail Alternatives & Coordination
 - Geotechnical Soil Borings

Projected Timeline

Key Benchmark Time Frames

Feb. 7 th -	Contract Approved by City Commission
Feb-Mar -	Site Investigation/Field Surveying/Geotechnical Soil Borings
Mar. 15 th -	Key Stakeholders Meeting
Apr 25 th -	NREL On-site Meeting
Apr-May -	Design Development for Master Planning
May 8-16 th -	Multiple Owner's Informational Meetings
May 31 st -	Preliminary Design (Field Check) for K-10/O'Connell Intersection
Today -	Presentation to City Commission for project briefing
Late July -	Submit Rezoning & Preliminary Plat
Aug 31 st -	Final Design for K-10/O'Connell Intersection
Sept -	Rezoning & Preliminary Plat to Planning Commission
Sept 30 th -	K-10/O'Connell Intersection bids received
Oct -	Rezoning & Preliminary Plat to City Commission
Nov -	Begin Construction on K-10/O'Connell Intersection

Meetings & Public Involvement



Key Project Meetings

- Feb 16th – Project Kick-off discussions with city staff
- Feb 28th – Westar Energy & Southern Star Gas Discussion
- Mar 15th – Key Stakeholders Meeting
- Apr 2nd – Meeting with University of Kansas professors and staff
- Apr 19th – Meeting with Utilities Department
- Apr 25th – NREL On-site Meeting with EPA/DOE
- May 4th – Meeting with Craig Weinaug at Douglas County
- May 8th – Meeting with adjacent business owners along 23rd Street
- May 9th – Meeting with Tow/Salvage Yard owners along 19th Street
- May 9th – Meeting with East Hills Business Park owners
- May 16th – Open House/Public Information Meeting
- May 30th – Discussion with Chuck Soules regarding Westar Easements/Exhibits
- Ongoing – Project Team Meetings occur about every 2 weeks

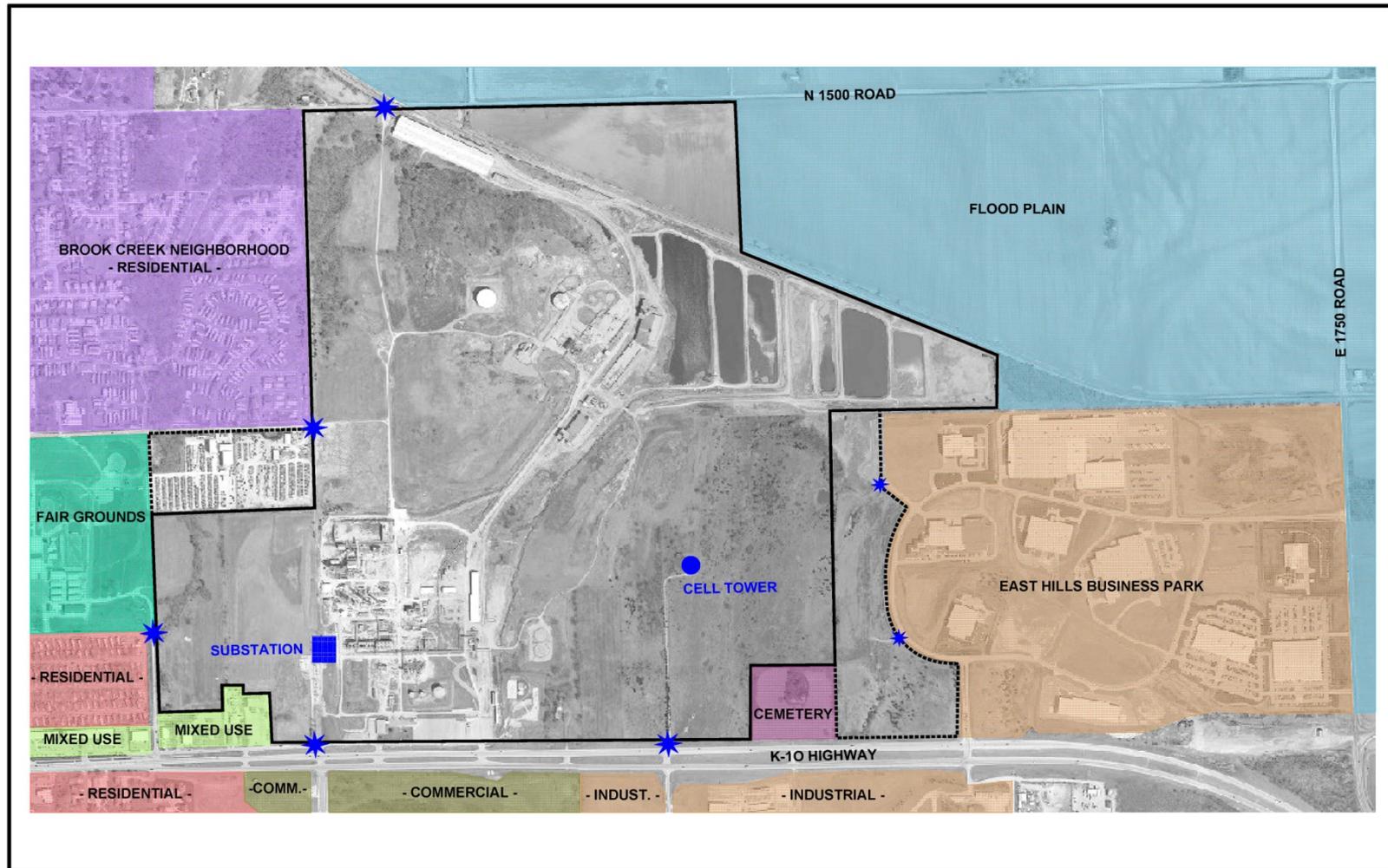
Site Location Aerial

The screenshot displays a web-based GIS application interface. On the left, there is a search panel for 'Swift Site' with filters for Building Type (Commercial, Industrial, Office), Square Feet Available (Any), and Ceiling Height (Any). Below the search panel is a list of buildings with their respective details:

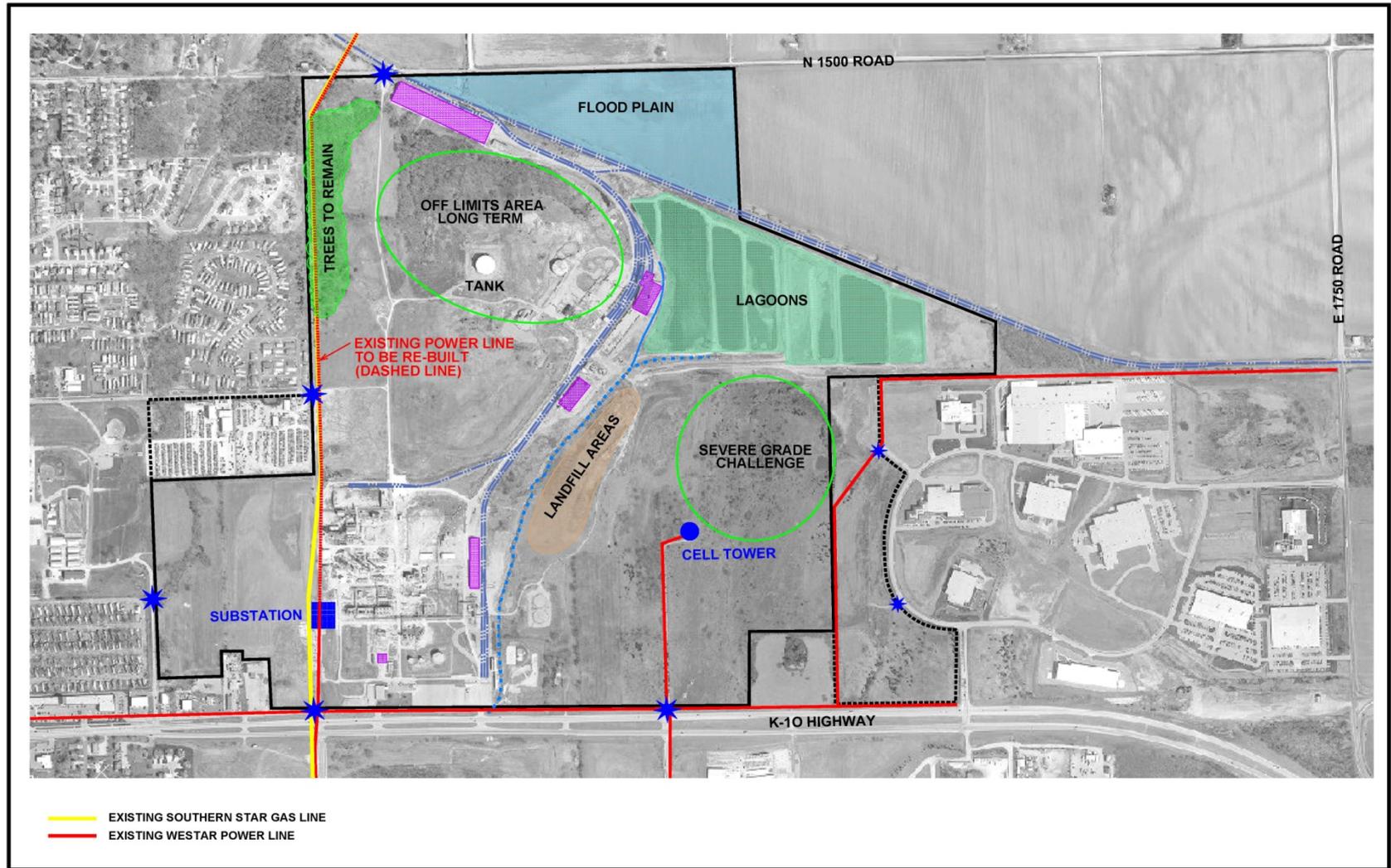
Building Name	Sq Ft.	Lease Rate
Sauer-Danfoss	157,500	na
3801 Greenway Circle	81,381	4.75
4920 Corporate Centre Dr. 75,000	75,000	\$17.50
4910 Corporate Cent: up to 55,000	55,000	17.50
4940 Corporate Centre Dr. 54,200	54,230	\$17.50
One Riverfront Plaza; Office	52,000	10.00 per square foot
1202 Cardinal Drive / Sac's Dist	46,875	4.25-4.75
3780 Greenway Circle; 44,465 S	44,465	

The main area of the screenshot is an aerial satellite view of a site, outlined in red. The site is located in a rural area with large fields and some industrial buildings. A legend in the top right corner indicates that the map is in 'Satellite' mode and shows 'GIS Layers' including Streets, Satellite, and Blend. The Lawrence KS Chamber of Commerce logo is visible in the top right corner of the map area.

Adjacent Property Inventory



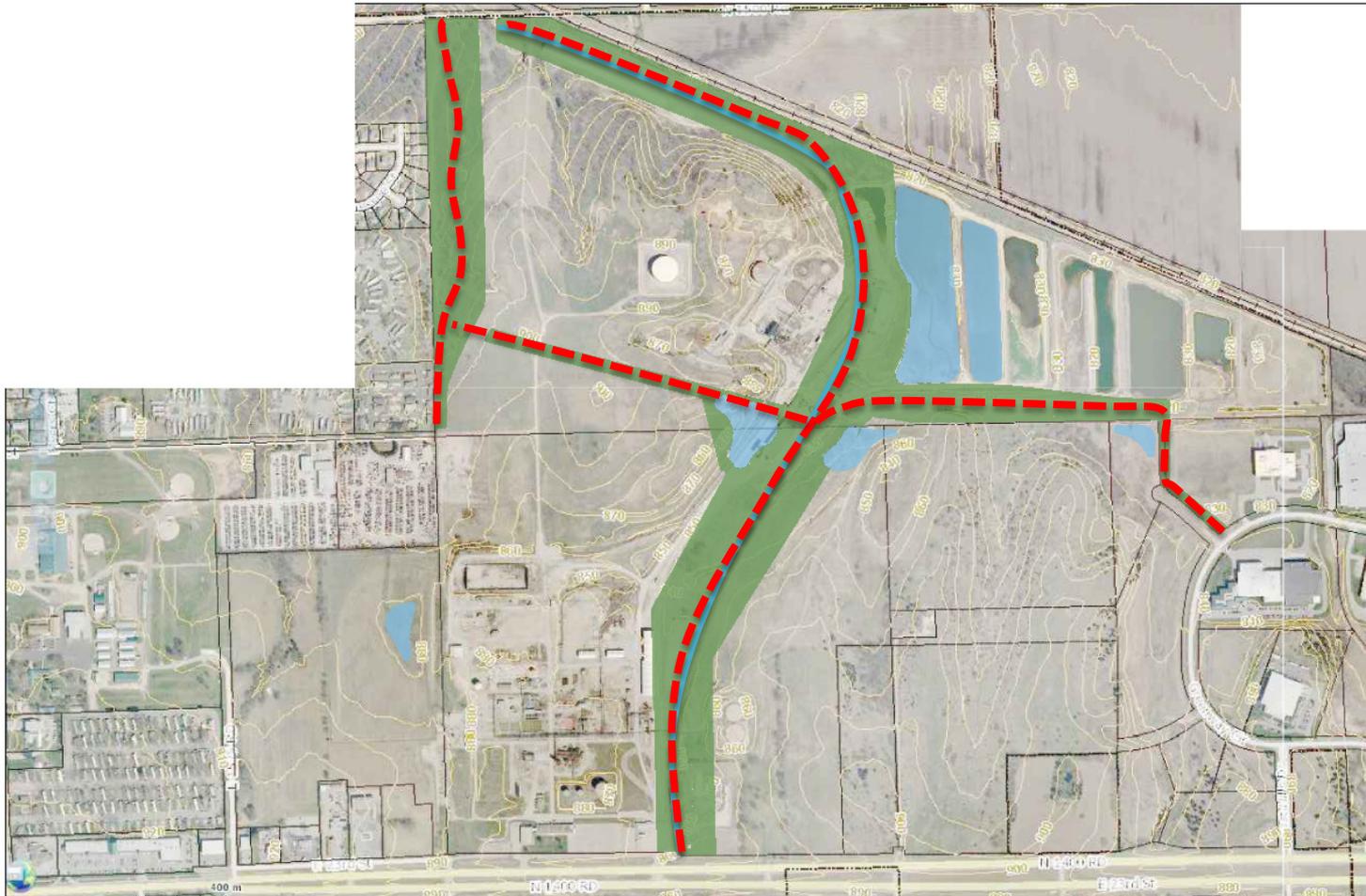
Interior Site Inventory



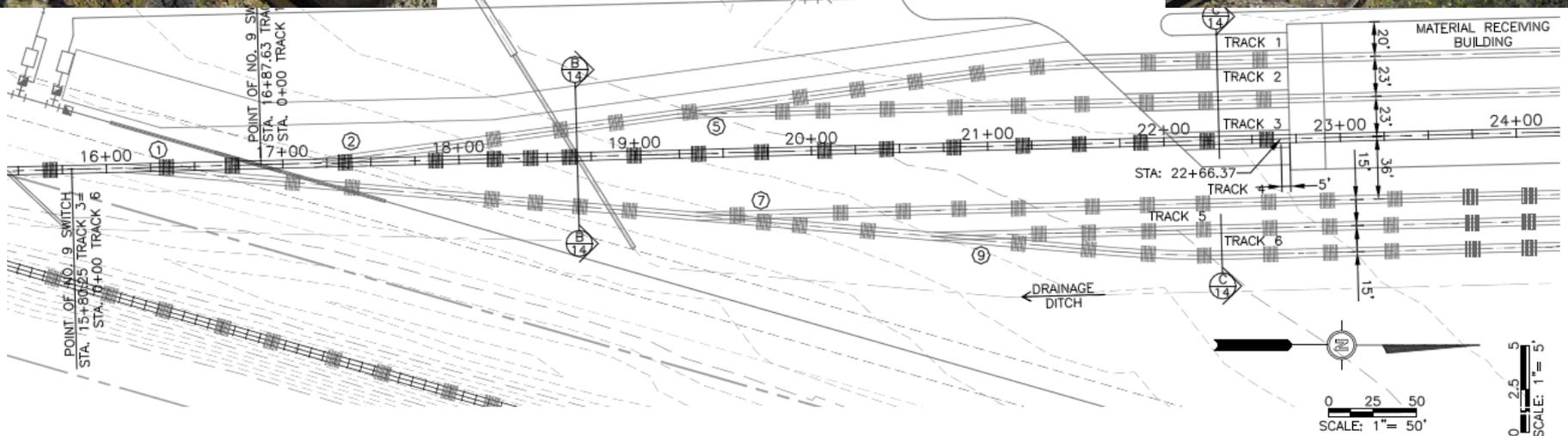
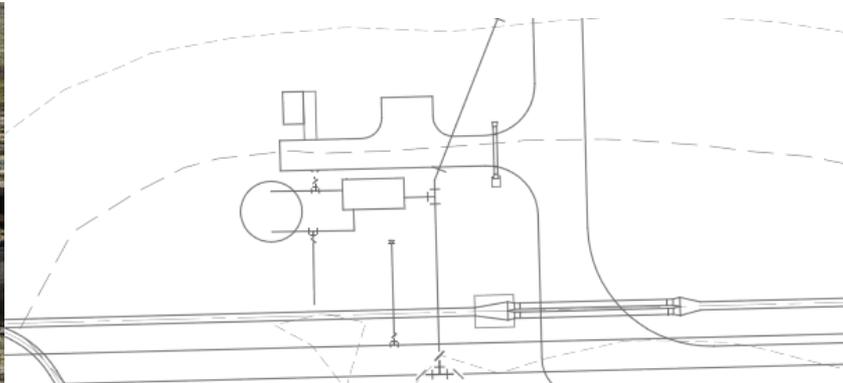
AT&T Cell Tower



Drainage-way to Green-way

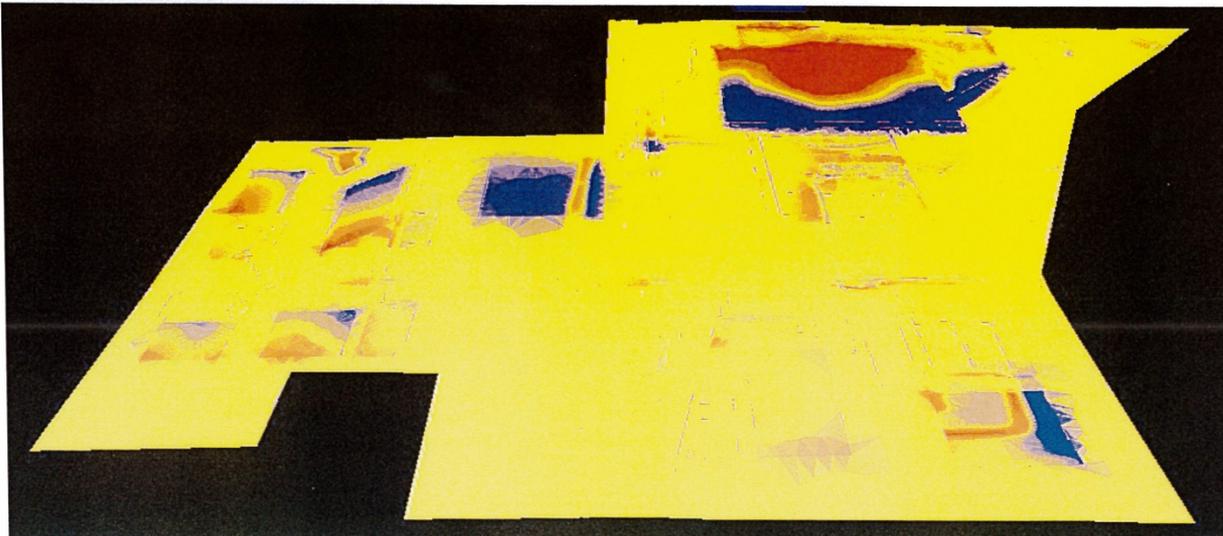
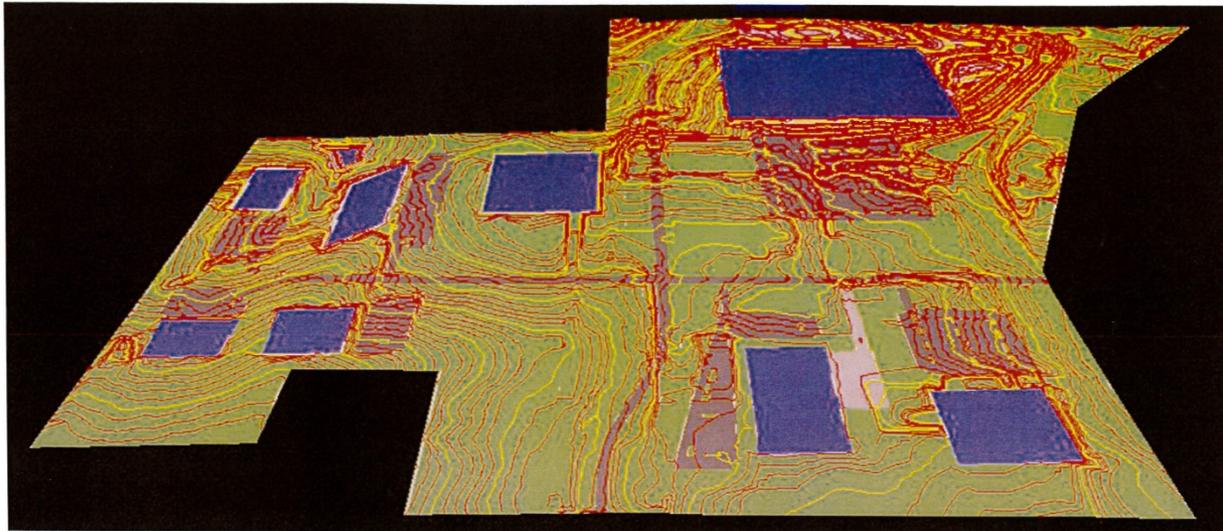


Rail Connection Opportunities

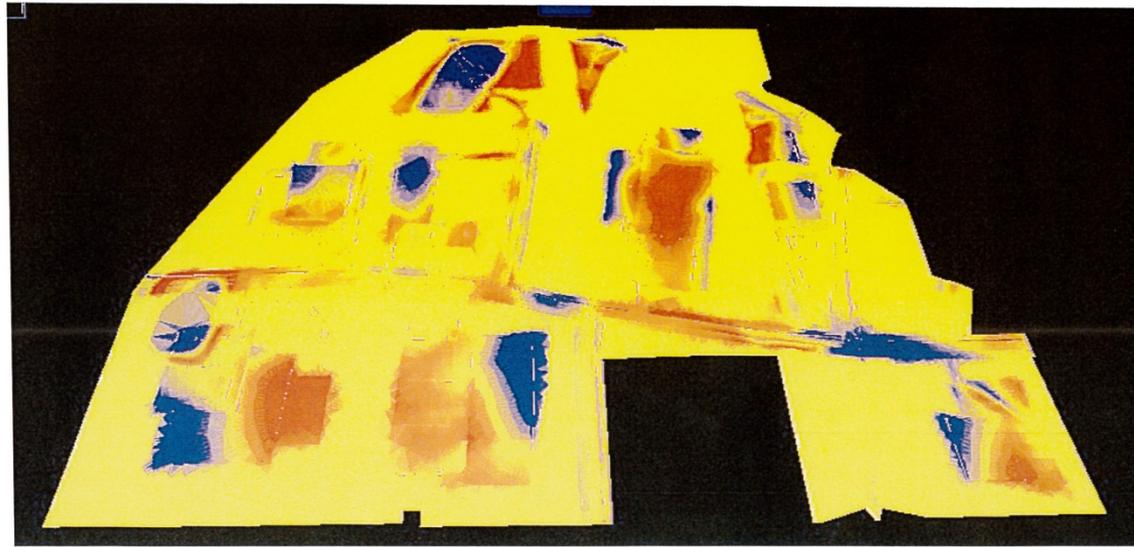
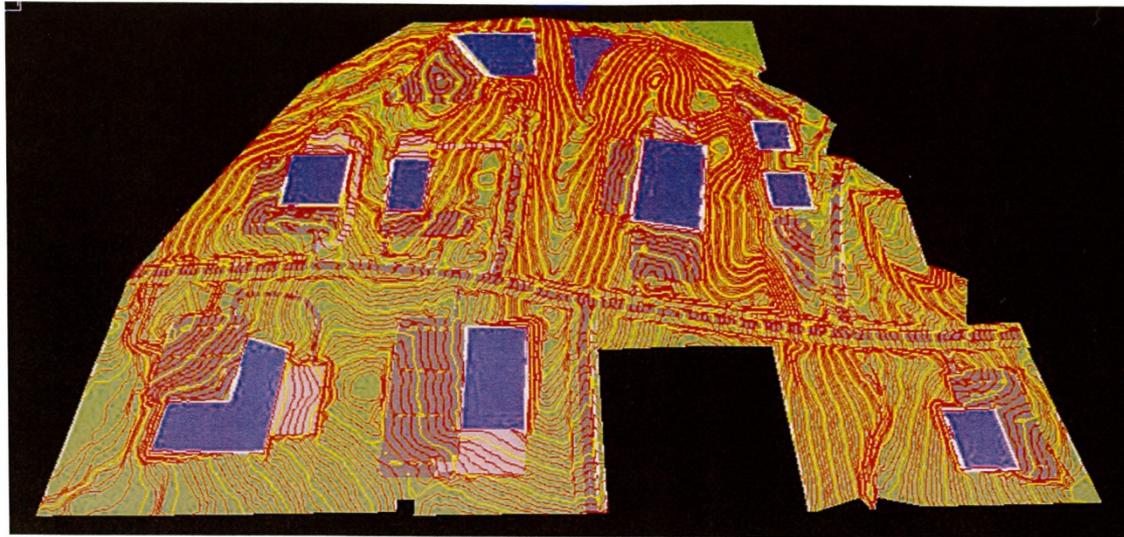


107.38 LF	107.38 LF	471.36 LF	115# RAIL	7" x 9" x 10" - 0"	115# CWR BY BLDG CONTRACTOR	1060
NO. 9 TURNOUT RH TURNOUT NO. 1	NO. 9 TURNOUT LH TURNOUT NO. 2	7" x 9" x 8" - 6" NO. 5 TIES		TIES		
1+86.25	1+95.01					

Evaluating Grading Challenges



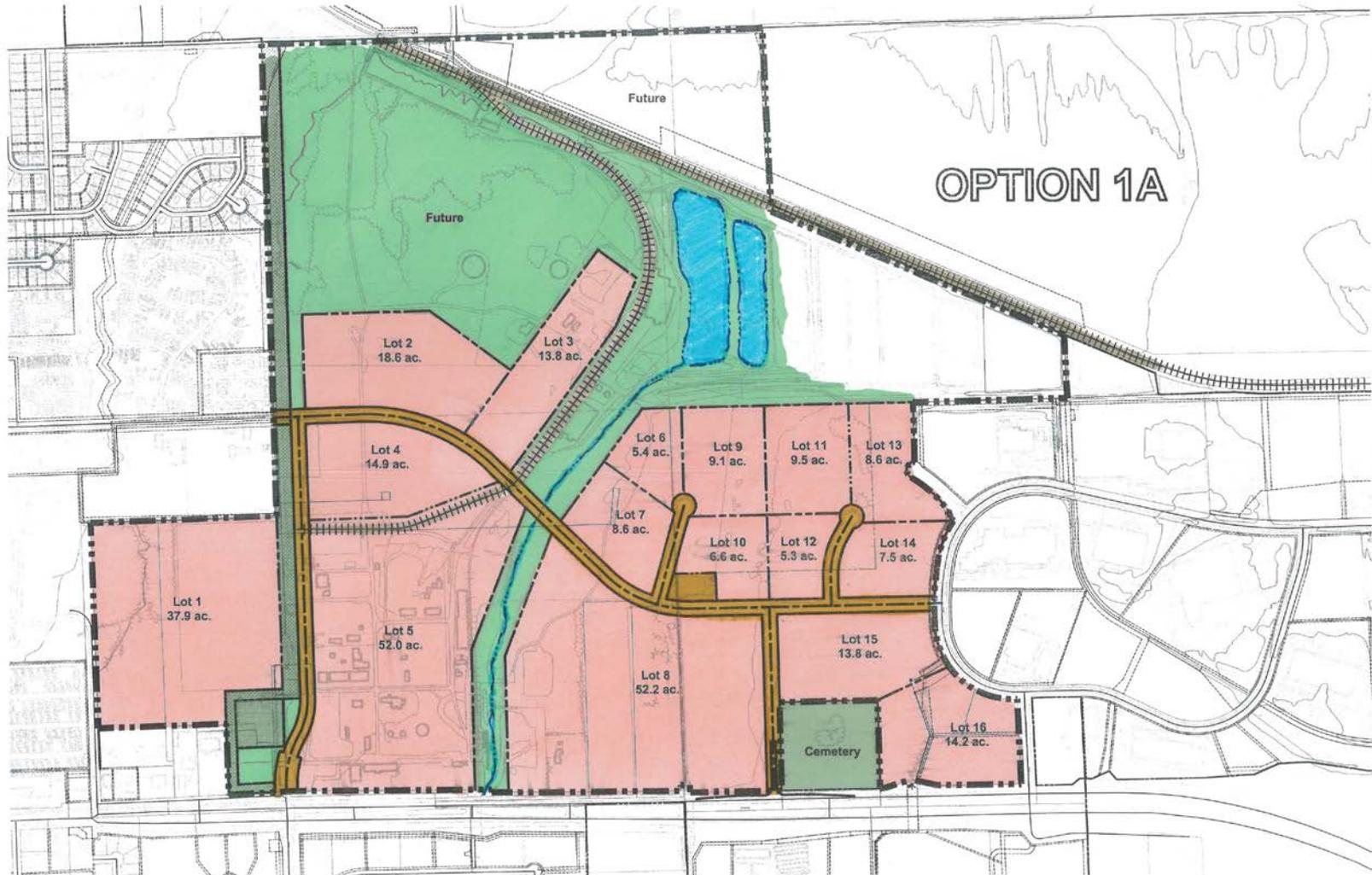
Evaluating Grading Challenges



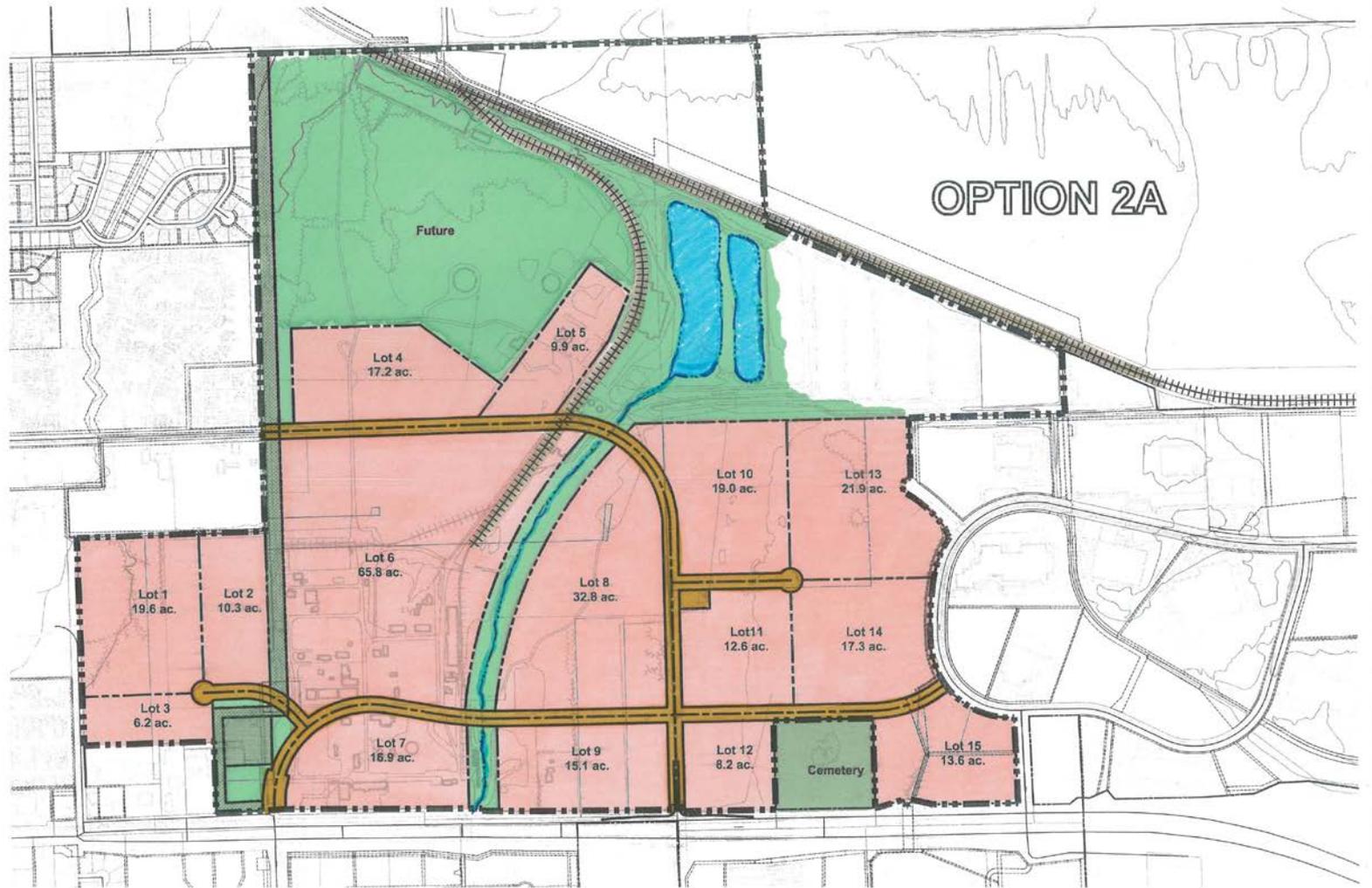
Westar Energy Substation & Southern Star Gas Pipeline



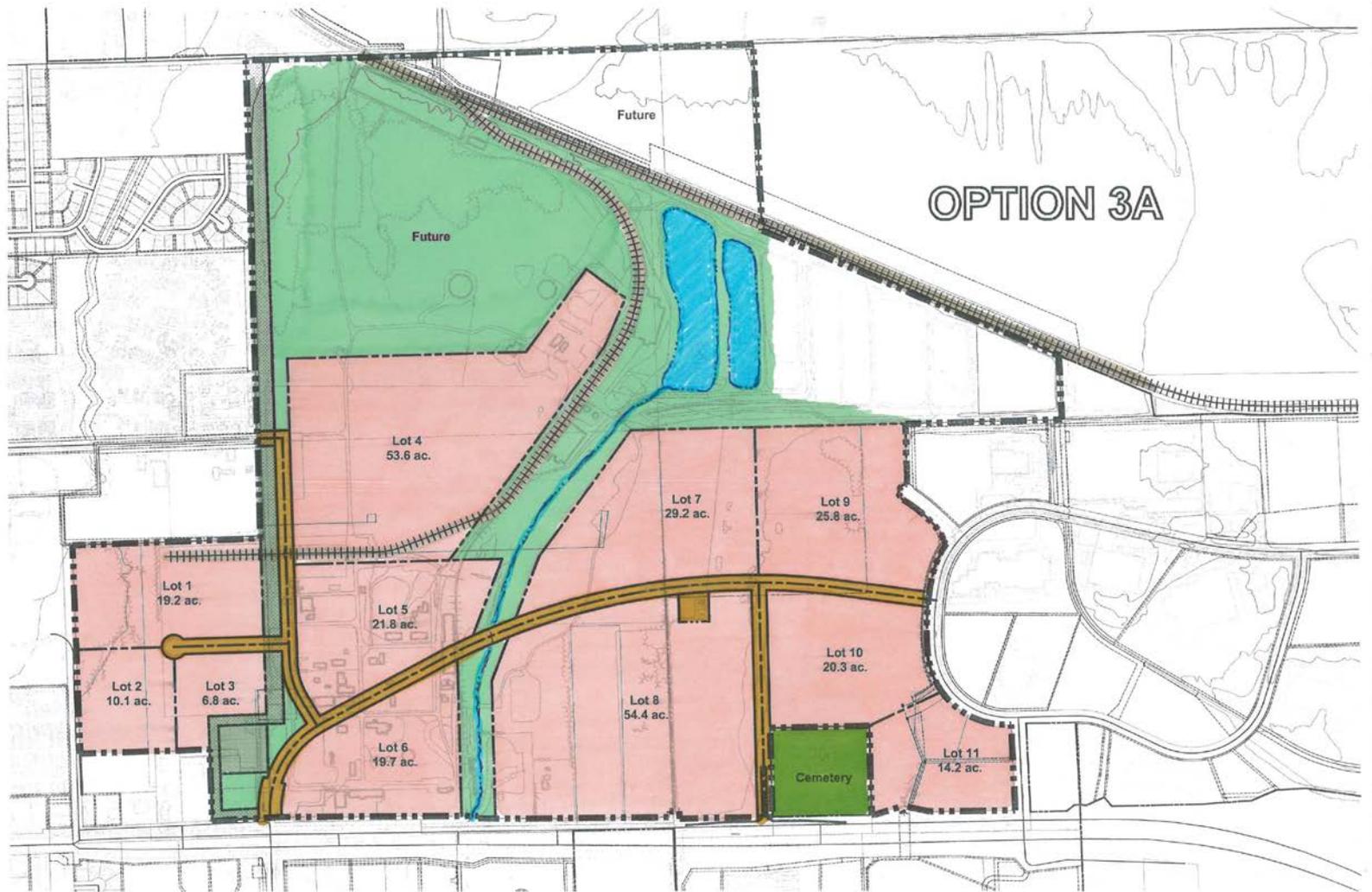
Conceptual Master Planning



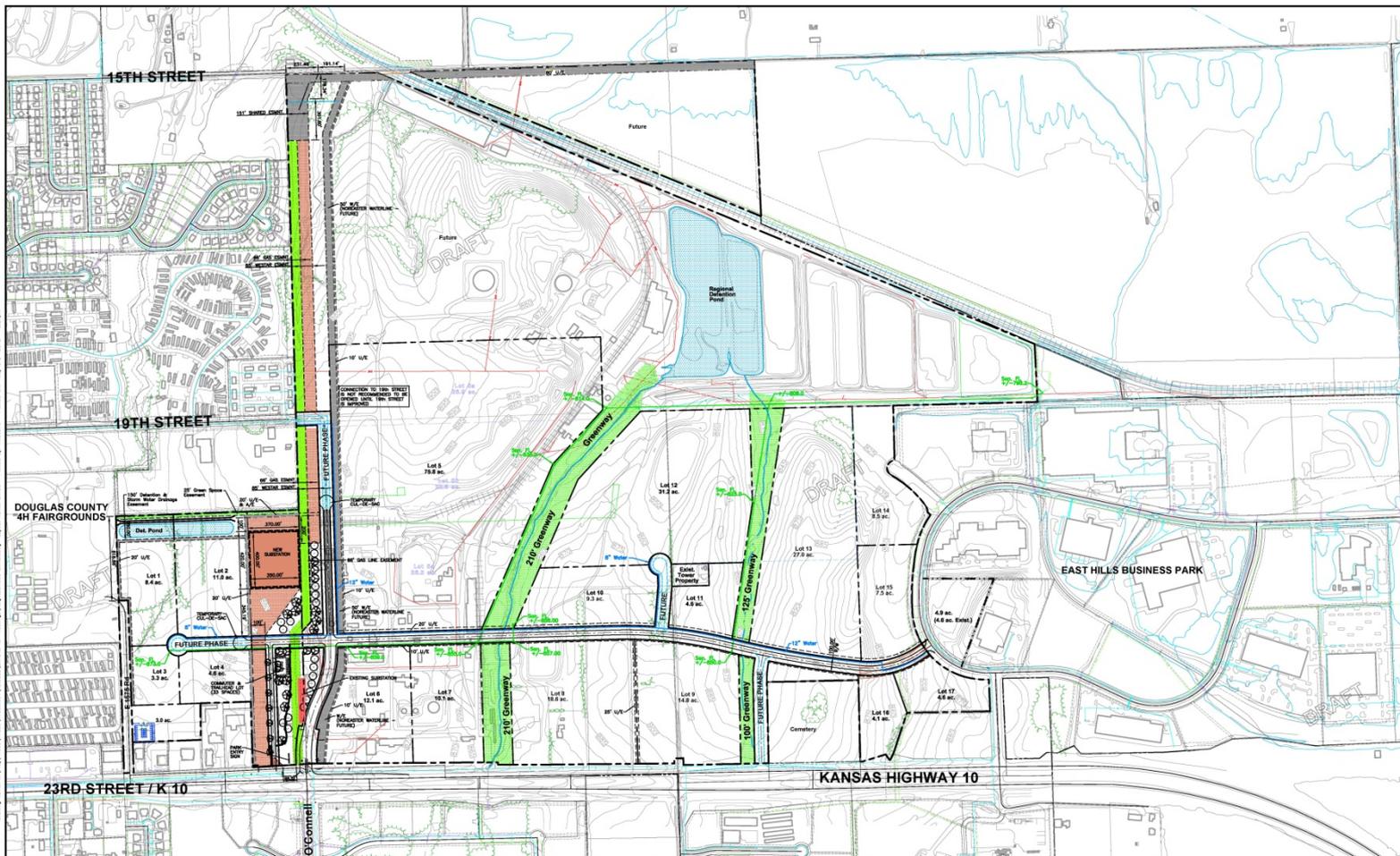
Conceptual Master Planning



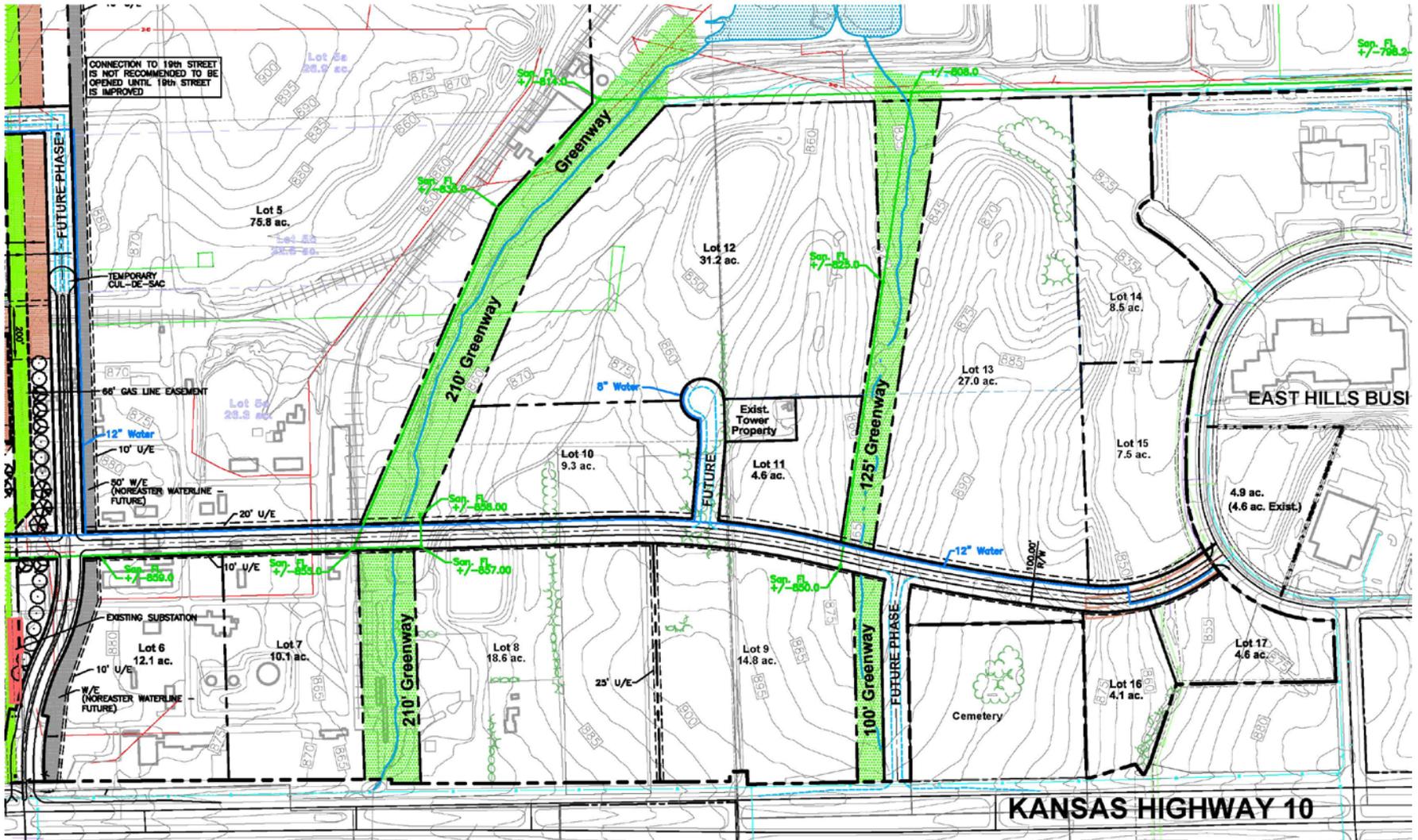
Conceptual Master Planning



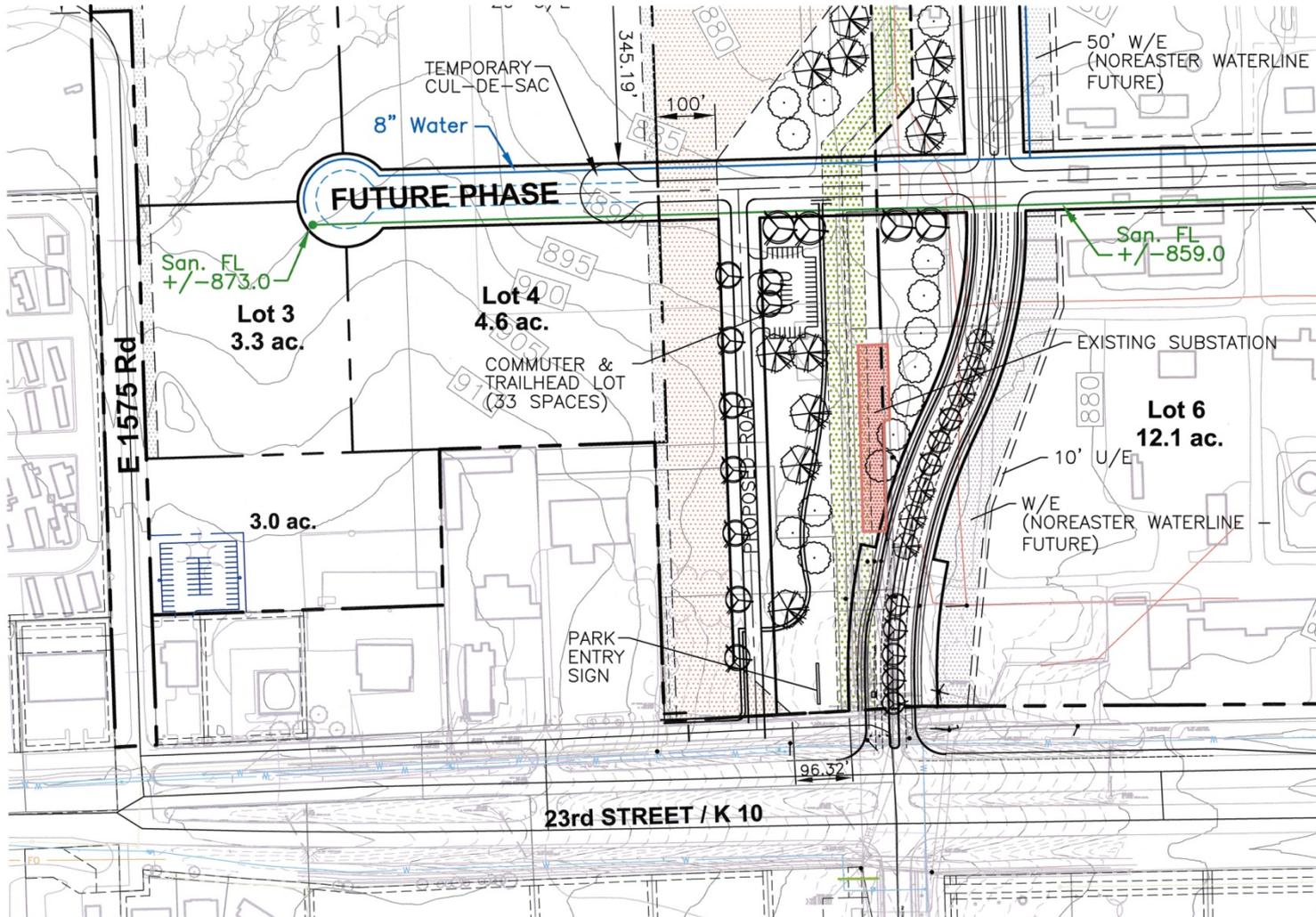
Recommended Concept



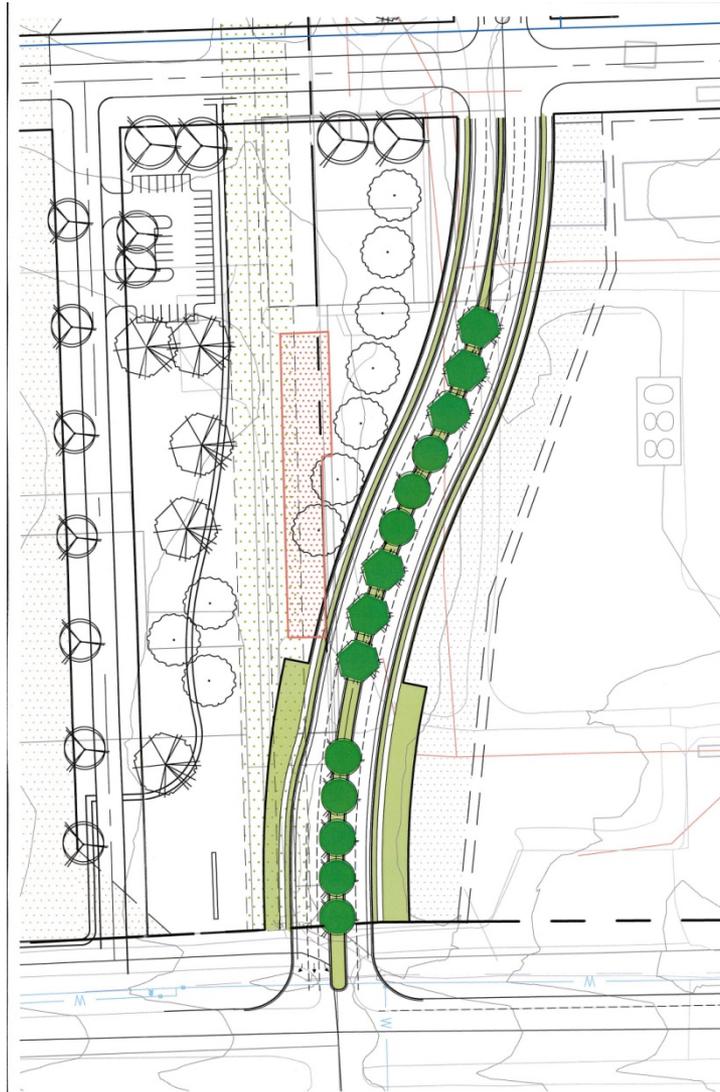
Eastern 2/3 of Property



Intersection Solution

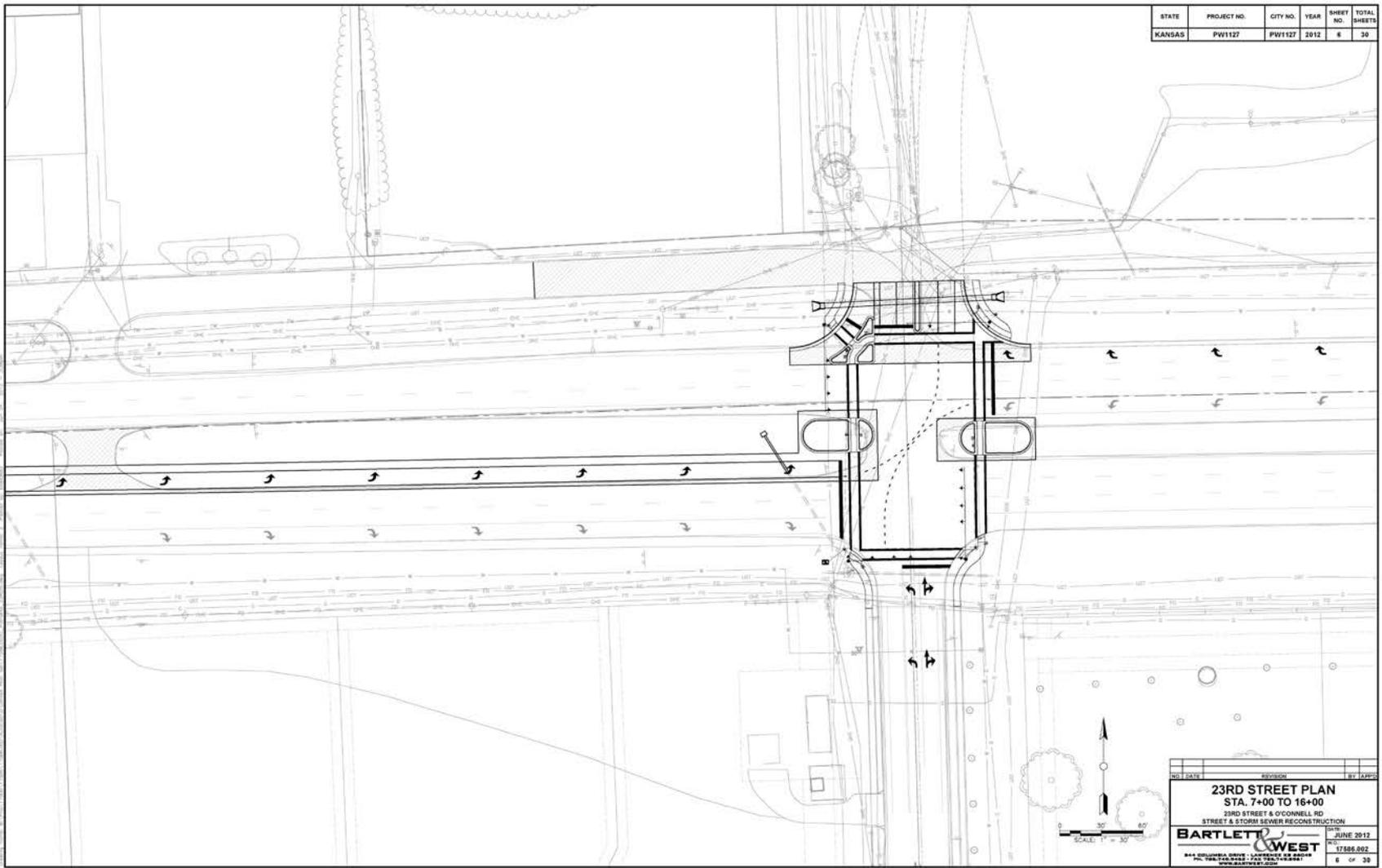


Intersection Solution



K-10 & O'Connell Solution

STATE	PROJECT NO.	CITY NO.	YEAR	SHEET NO.	TOTAL SHEETS
KANSAS	PW1127	PW1127	2012	6	30



NO.	DATE	REVISION	BY	APP'D

23RD STREET PLAN
STA. 7+00 TO 16+00
23RD STREET & O'CONNELL RD
STREET & STORM SEWER RECONSTRUCTION

BARTLETT & WEST
444 OLLIVIER DRIVE - LAWRENCE, KS 66044
TEL: 785.842.2400 FAX: 785.842.2401
WWW.BARTLETTWEST.COM

DATE: JUNE 2012
PROJECT NO.: 17886.002
SHEET NO.: 6 OF 30

Sustainable Ideas Moving Forward

Four Key Areas Identified for Further Study

- * Solar Photovoltaic Panels for on-site electricity generation
- * Biogas production at Wastewater Treatment Plant
- * Algae to Biofuels project on mitigation ponds
- * Biomass plant for potential energy production

Sustainable Ideas Moving Forward

Status Report: Opportunities for sustainability and green design elements at Farmland –June 2012

The redevelopment of the former Farmland Industries site represents an opportunity for the City to simultaneously remediate a contaminated industrial site, while creating economic development opportunities and primary jobs. The master planning process currently includes a focus on renewable energy opportunities for on-site green power, and best practices for stormwater management.

The redevelopment of Farmland into a “green” business park also provides significant opportunity for the City to expand our vision to include pilot projects of various sustainable building and design elements. By piloting these projects out at the Farmland site, the City will have the opportunity to study sustainable building practices for incorporation into future City projects. Also, many of these elements will provide LEED credits for interested business park occupants, and could support their green-building plans as well.

Below is an overview of the sustainability projects currently being researched for the former Farmland site, and a list of potential pilot projects to consider as well.

Projects Currently in Research or Design Stage:

1. Renewable energy for on-site green power:

Solar photovoltaic panels for electricity generation on site.

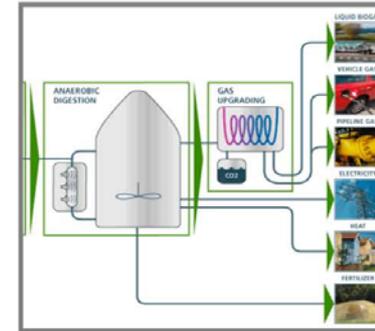
- **Scale:** Depends upon future tenants and power needs. Options include sizing system to current load of stormwater and mitigation pumps, or building a larger system and entering a Purchase Power Agreement with Westar Energy (currently paying 2.9cents/kWh).
- Current annual load used by mitigation/stormwater pumps: 264,000 kWh (\$32,920)
Utilities’ pump station #25: 40,000 kWh (\$5,000)
- **Location Options:**
 - SE of water tank (1.7 MW array) \$10.5 million
 - Over capped ponds (1.1 MW array and 1.5 MW array options) \$7-9.5 million
- **Lead Contact:** CDM-Smith Mike Beezhold & Cambridge Office
- **Next Steps:** Eileen will continue to research PPA options, and potential for selling commercial tax credits. CDM-Smith will propose a system sized to city-owned loads (irrigation pumps, pump station #25).



Sustainable Ideas Moving Forward

Biogas production at wastewater treatment plant.

- **Scale:** Two options: (1) Utilize biogas from existing biosolids at plant (generates 200-250 kW), or (2) increase biogas by adding food waste to biosolids (adds approximately 20-30kW).
- **Source of biomass:** Identified industrial partners (i.e. Del Monte) or institutional food service providers (i.e. KU Dining Services or County Correctional Facility or Haskell University).
- **Considerations:** The building for the microturbines exist, but would need to purchase generators and gas clean-up equipment. Adding food waste adds significant logistical challenges with transport and processing and additional receiving facilities.
- **Capital Cost Estimates:** Processing only biosolids (\$2 mil). Biosolids + food waste (\$5.5 mil).
- **Lead Contact:** CDM-Smith Scott Carr
- **Next Steps:** B&W and CDM-Smith will research feasibility of industry/WWTP partnership, and calculate Return on Investment for two scenarios.



Algae to biofuels research project on mitigation ponds.

- **Description:** Would utilize nitrogen-rich water in mitigation ponds to grow algae for eventual processing into biofuels. Nearby phosphorous (ICL) also an asset.
- **Scale:** Would be a collaboration b/t City and KU for scaling up of research at WWTP.
- **Lead Contact:** KU Engineering, Dr. Belinda Sturm
- **Next Steps:** Eileen & Dr. Sturm will continue to assess feasibility/funding.



Biomass plant for production of steam heat/electricity or biomass pellets.

- **Scale:** Depends upon future tenants and uses. Options include a biomass steam plant or biomass pelletizing manufacturer.
- **Lead Contact:** Gregg Tomberlin, NREL
- **Next Steps:** NREL will conduct a feasibility analysis of biomass power and provide final written report to city by November (although we can review drafts sooner).



**Note: It is against state law for an entity to provide power in another utility's service territory. The City cannot generate electricity and provide it to business park tenants. However, the option exists to enter into a Purchase Power Agreement with Westar Energy. Further research on this topic remains a key priority.*

Sustainable Ideas Moving Forward

2. Complete Streets design elements :

- All streets through business park will be designed with complete streets elements such as bike lanes and sidewalks.
- The main E-W road will also include a 10' recreational path both for commuting and recreational use.
- The N-S road (extension of O'Connell) will include a divided street and landscaped median.



3. Stormwater management best practices:

- Property will include regional detention basin to manage stormwater from site.
- Grass filter strips, sediment forebays, and bioretention (i.e. rain gardens) and other stormwater sustainability best practices will be considered.
- Greenbelt that runs N-S through site will include include vegetation and terracing to slow water flow and improve water quality.
- Water elements and fountains are under consideration for K-10 frontage.



Sustainable Ideas Moving Forward

Additional Sustainability Projects for Consideration:

Many of these elements will provide LEED credits for interested business park occupants, and could support their green-building plans.

Transportation:

- Provide a Park-n-Ride lot on site for carpooling commuters.
- Promote alternative fueled vehicles in these lots by providing preferred parking for low emissions and fuel efficient vehicles.
- Promote electric vehicles by providing EV charging stations in the lot.
- Promote bicycle commuting by providing covered bike lockers.
- Provide a T-stop with a covered shelter to encourage bus ridership.



Site Design and Management:

- Protect habitat by leaving undeveloped areas as habitat for wildlife. Establish corridors for wildlife to move through site, and encourage restoration of native prairie habitat.
- Minimize water usage in landscaping design by utilizing xeriscape or other low-water usage techniques.
- Use reflective paving materials to reduce the heat island effect.
- Use open grid pavement in parking lots (aka porous pavers) to allow for infiltration of stormwater.
- Use permeable asphalt on bike paths or commuter lot to reduce stormwater runoff.

Sustainable Ideas Moving Forward

- Reduce light pollution by reducing the lighting power density of streetlights, and ensure that all light is cast downward toward street surfaces. Utilize small-scale renewable energy for streetlights (i.e. solar PV).

Waste Reduction and Recycling:

- Manage construction and demotion (C&D) waste by builders. Require a C&D Waste Management Plan that identifies:
 - The construction and demolition waste materials that will likely be generated on a building site
 - The procedures that will be used to collect and sort the waste materials
 - Who will haul away the waste material
 - The location to which the materials will be hauled
 - How the materials will be reused or recycled
- Build an on-site recycling aggregation center to encourage business park tenants to recycle.

Miscellaneous:

- Engage community members and recreation path users in sharing the story of the Farmland cleanup and redevelopment. Include signage around the business park educating passersby on the stormwater practices, renewable energy usage, etc.
- Consider providing incentives for businesses locating within the park to be LEED-certified.
- Partner with KU to offer opportunities for research and incubator businesses.
- Build a spec building that is built to LEED standards, and showcases best practices in green buildings.
- Consider small-scale renewable energy:
 - Wind turbine to power front fountain and signage lighting.
 - Solar PV streetlights for streets throughout complex.





What's Next?

Kanza Fire Commerce Park

BARTLETT & WEST

CDM



Construct the Vision



15th Street
 19th Street
 Douglas County 4H Fairgrounds
 Future Phase
 O'Connell
 Kansas Highway 10
 East Hills Business Park
 Cemetery
 Regional Detention Pond
 210' Greenway
 215' Greenway
 100' Greenway
 Lot 1 8.8 ac.
 Lot 2 11.8 ac.
 Lot 3 2.3 ac.
 Lot 4 4.8 ac.
 Lot 5 12.1 ac.
 Lot 6 12.1 ac.
 Lot 7 12.1 ac.
 Lot 8 18.8 ac.
 Lot 9 14.8 ac.
 Lot 10 21.4 ac.
 Lot 11 4.9 ac.
 Lot 12 21.4 ac.
 Lot 13 27.9 ac.
 Lot 14 2.3 ac.
 Lot 15 7.3 ac.
 Lot 16 4.1 ac.
 Lot 17 4.8 ac.



**PROPOSED BUSINESS PARK
AT FARMLAND PROPERTY**
LAWRENCE, KANSAS

SCALE: 1"=300'
DATE: 03-14-12



Questions?