

# **CEEn-2017CPST-005**

## **Project Coordination, Planning, & Program Management**

*“People, Planet, and Profit”*

**KAM Engineering**

**Austin Fox  
Kaela Nichol  
& Megan Peffer**

# Introduction

- Fritzi Realty interested in developing four parcels of land in Spanish Fork
- Currently, Arrowhead center is the only existing development on site
- The task given to team was to propose a development plan that would balance the interests of
  - The developer
  - The community
  - The local government



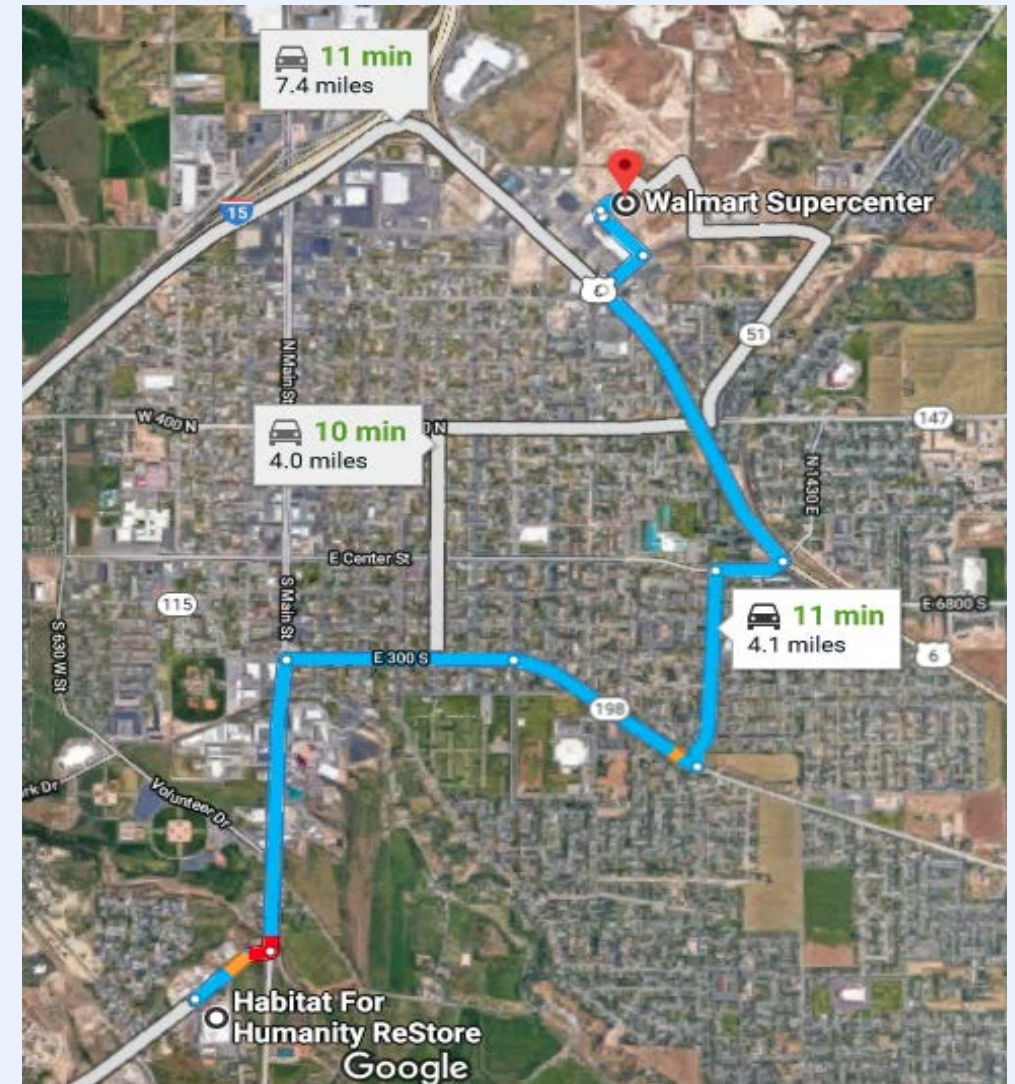
## Parcel 1 - Green space

- Recreation space for the new housing developments
- Give back to community
- Create a riverwalk/bike trail for recreational use
- Flooding wetland concern



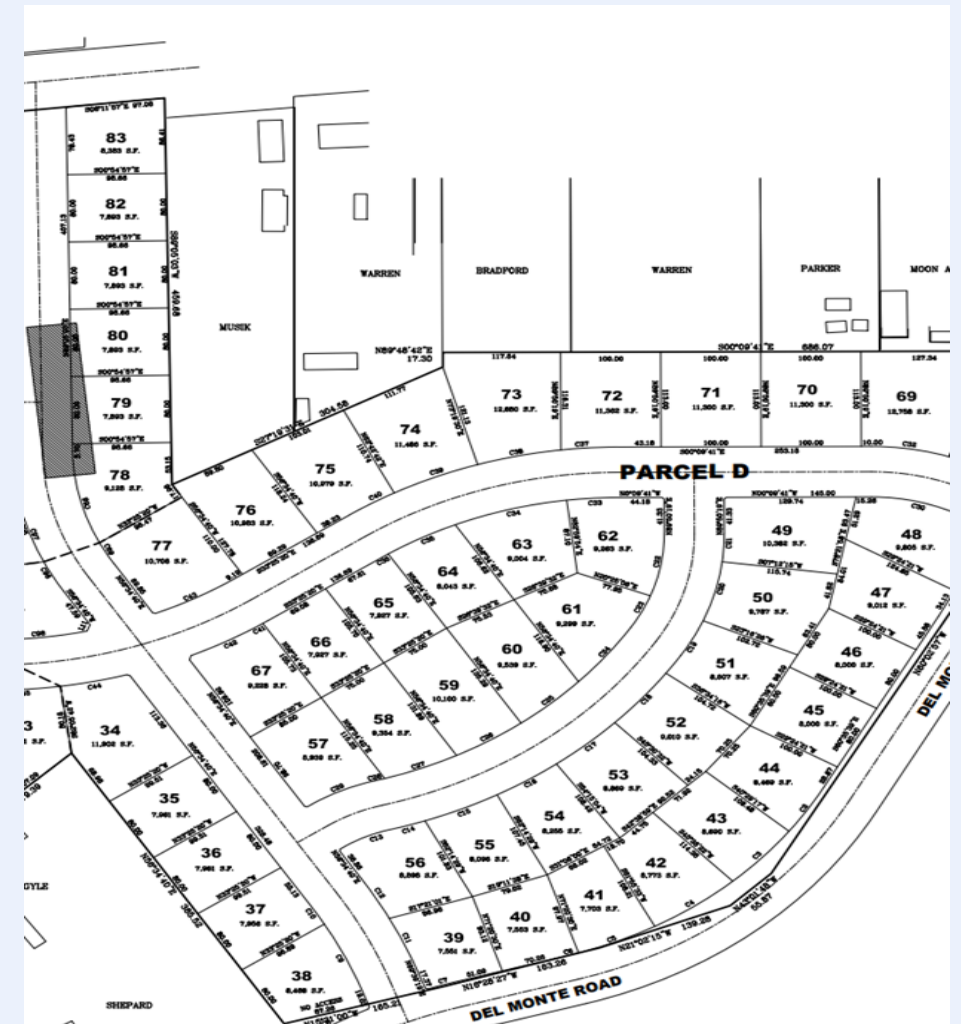
## Parcels 2 & 3 - Commercial buildings

- Small grocery store will be provided for the new housing developments occurring in the area as well as surrounding neighborhoods
- Small retail/office spaces will allow for existing businesses in Parcel 3 to relocate to newer buildings
- Create a new center for commercial area



## Parcel 4 - Residential

- Medium-sized lots
- Spanish Fork city goal is to incorporate a variety of lot sizes and home types
- Anticipate for the increased population expected to occur over next twenty years



# Design, Analysis & Results



		Parameters													
		City Council Preference	Citizen Preference	Increase in Population	Construction Cost	ROI	Industry Output	# new jobs	City Tax revenue	Water quality	Air Quality	Zoning	Construction limits	Total Score	
	Weight value	2	3	1.5	3	5	2	2	3	3	1	4	5		
<b>Parcel 1</b>	Fritzi Relaty	Mixed Use/Residential, possibly 55+ community at medium density	0	0	1	0	1	1	1	0	0	0	0	13.5	
	KAM Engineering	Green Space for recreation	1	1	0	1	0	0	0	1	1	1	1	21	
<b>Parcel 2</b>	Fritzi Relaty	Commercial and mixed-use including possible light or live/work office and medium density multifamily residential	1	1	1	1	1	1	1	1	1	1	1	34.5	
	KAM Engineering	Small retail and office space	1	1	1	1	1	1	1	1	1	1	1	34.5	
<b>Parcel 3</b>	Fritzi Relaty	Possibly retain industrial building or low-density residential	0	0	0	0	1	1	0	1	1	0	1	19	
	KAM Engineering	Grocery Store	1	1	1	1	0	1	0	1	0	1	1	25.5	
<b>Parcel 4</b>	Fritzi Relaty	Low-density residential	1	1	1	1	1	1	1	1	1	1	1	34.5	
	KAM Engineering	Family Housing, medium sized plots	1	1	1	1	1	1	1	1	1	1	1	34.5	
<b>Key</b>		Social Factors	Economic Factors	Environmental Factors	Feasibility										
														<b>Total</b>	
														Fritzi	101.5
														KAM	115.5

## Social Factors

- City Council preference
  - accommodate the increase in residents
  - provide high quality, stable residential neighborhoods
- Citizens preference
  - new grocery store decreases driving distance and time
  - more convenient location for surrounding neighborhoods
- Increase in population
  - boost city's economy with new housing, commercial buildings, and grocery store



# Environmental Factors

## Water

- Runoff into the Spanish Fork River
- Wetland Flooding

## Air

- Increased car emissions from extra commercial/recreational patrons
- Increased air pollutants from new buildings (residential and business)





## Construction Factors

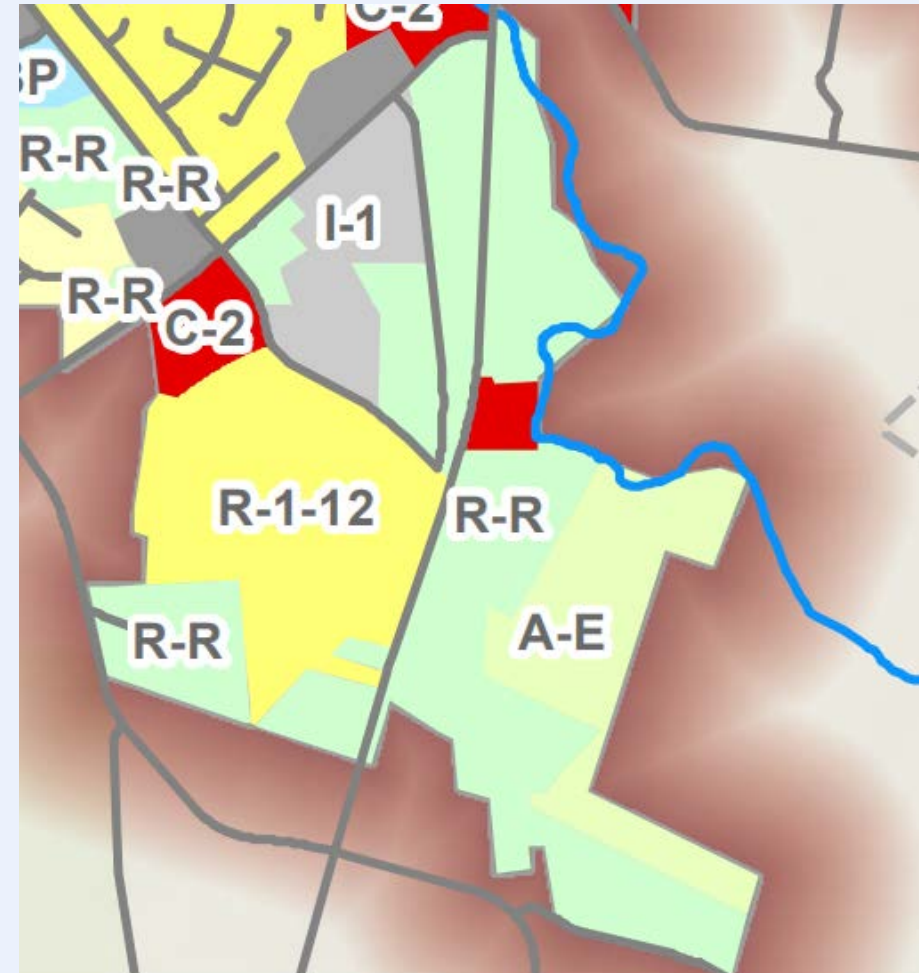
### Current Zoning

- Parcel 1 and 2: R-R (Rural Residential)
- Parcel 3 and 4: I-1 (Light Industrial)

### General Plan

- Parcel 1 and 2: Mixed use
- Parcel 3 and 4: Low Density Residential

### Construction Feasibility



## Economic Factors

- 1.Total additional output of all industries in the area
- 2.Total number of new jobs created
- 3.Total value added ( the sum of all goods and services produced)
- 4.Total amount of additional personal income (wages, profits, dividends, interest, rents, transfer payments)
- 5.Total amount of additional labor income
- 6.Total amount of additional city and county tax revenue

## Economic Factors

### Parcel 1 : Mixed-Use/Residential

- 10.05 Acres, 1.4 Acres in floodplain
- 22 3-Plex Buildings
- 7.63 Units/Acre

### Parcel 2 : Commercial/ Mixed-Use

- 9.19 Acres
- 25 3-Plex Buildings Lots
- 8.16 Units/Acre



## Economic Factors

### Parcel 3 : Single Family Residential

- 13.95 Acres
- 50 Lots
- 3.58 Units/Acre

### Parcel 4 : Single Family Residential

- 13.09 Acres
- 45 Lots
- 3.44 Units/Acre



# Economic Factors

Parcel 1  
 Fritzi Plan

New Mixed-Use Construction:	
Square Feet	90,000
Cost per sq. ft.	\$142.5
Construction Cost	\$12,825,000
Development Cost:	
Parking Lot Stalls	80+
Parking Lot Cost	\$250,000
Landscaping	\$150,000
Total Construction Cost	\$13,225,000

## Economic Factors

Parcel 3  
 Fritzi Plan

New Home Construction:	
Square Feet	2,500
Cost per sq. ft.	\$112
Construction Cost	\$280,000
Subdivision Cost:	
Number of Homes	50
Land	-
Total Project Cost	14,000,000
Total Construction Cost	14,000,000

# Economic Factors

Parcel 4  
 Fritzi Plan

New Home Construction:	
Square Feet	2,500
Cost per sq. ft.	\$112
Construction Cost	\$280,000
Subdivision Cost:	
Number of Homes	45
Land	-
Total Project Cost	\$12,600,000
Total Construction Cost	\$12,600,000

## Economic Factors

Parcel 3  
 KAM Plan

New Grocery Store Construction:	
Square Feet	48,333
Cost per sq. ft.	\$77.06
Construction Cost	\$3,724,541
Development Cost:	
Parking Lot Stalls	80+
Parking Lot Cost	\$250,000
Landscaping	\$150,000
Total Construction Cost	\$4,124,541



# Economic Factors

Parcel 2  
 KAM Plan

New Mixed-Use Construction:	
Square Feet	50,000
Cost per sq. ft.	\$91.51
Construction Cost	\$4,575,500
Development Cost:	
Parking Lot Stalls	80+
Parking Lot Cost	\$250,000
Landscaping	\$150,000
Total Construction Cost	\$4,975,500

# Conclusions & Recommendations

		Parameters												
		City Council Preference	Citizen Preference	Increase in Population	Condruction Cost	ROI	Industry Output	# new jobs	City Tax revenue	Water quality	Air Quality	Zoning	Construction limits	Total Score
	Weight value	2	3	1.5	3	5	2	2	3	3	1	4	5	
<b>Parcel 1</b>	Fritzi Relaty	Mixed Use/Residential, possibly 55+ community at medium density	0	0	1	0	1	1	1	0	0	0	0	13.5
	KAM Engineering	Green Space for recreation	1	1	0	1	0	0	0	1	1	1	1	21
<b>Parcel 2</b>	Fritzi Relaty	Commercial and mixed-use including possible light or live/work office and medium density multifamily residential	1	1	1	1	1	1	1	1	1	1	1	34.5
	KAM Engineering	Small retail and office space	1	1	1	1	1	1	1	1	1	1	1	34.5
<b>Parcel 3</b>	Fritzi Relaty	Possibly retain industrial building or low-density residential	0	0	0	0	1	1	0	1	1	0	1	19
	KAM Engineering	Grocery Store	1	1	1	1	0	1	1	0	1	0	1	25.5
<b>Parcel 4</b>	Fritzi Relaty	Low-density residential	1	1	1	1	1	1	1	1	1	1	1	34.5
	KAM Engineering	Family Housing, medium sized plots	1	1	1	1	1	1	1	1	1	1	1	34.5

Key	Social Factors
	Economic Factors
	Environmental Factors
	Feasibility

Total	
Fritzi	101.5
KAM	115.5