

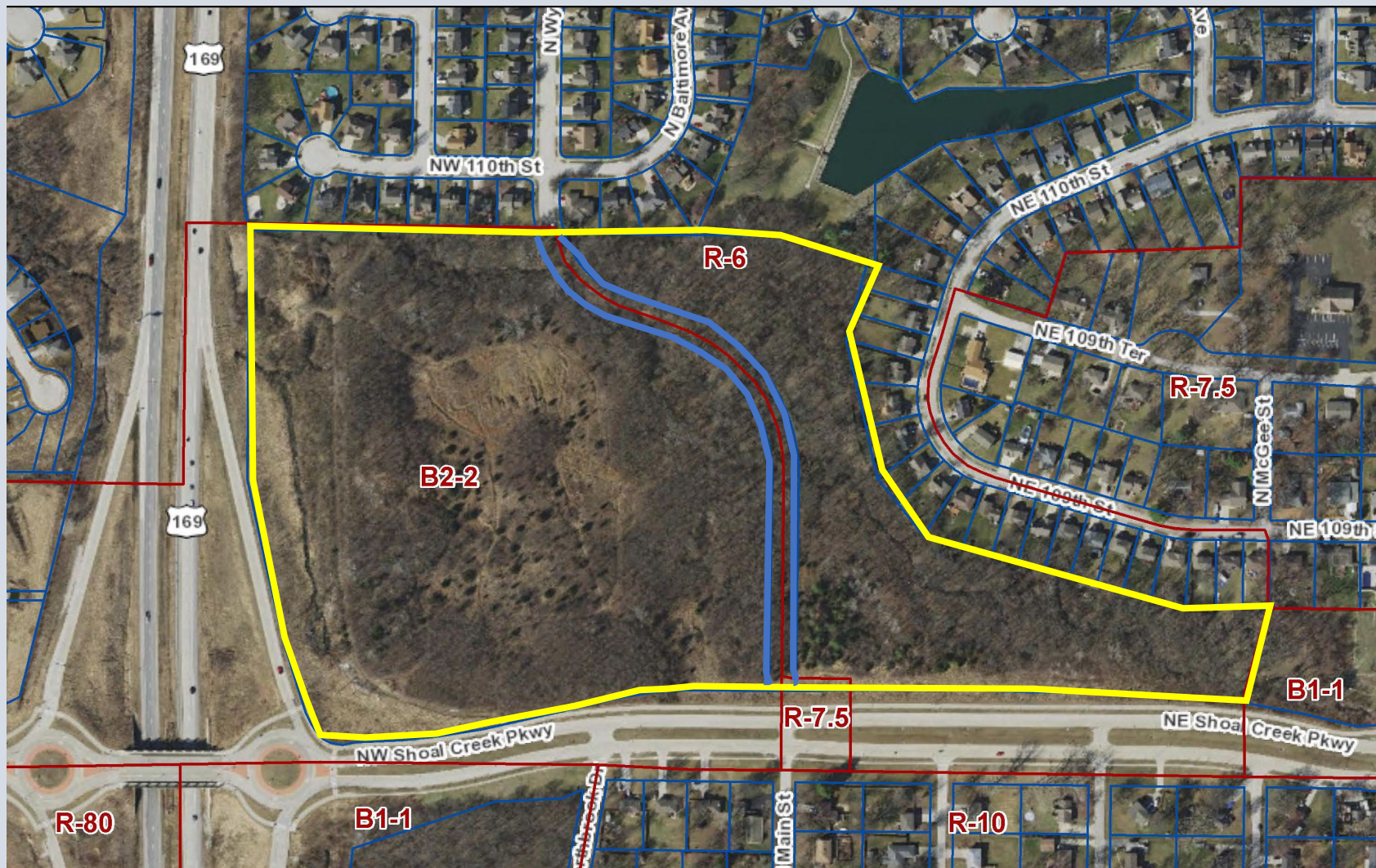
An aerial photograph of a residential area with a yellow boundary line and blue contour lines. The map shows NW 110th St, NE 110th St, NE 109th Ter, NE 109th St, NW Shoal Creek Pkwy, NE Shoal Creek Pkwy, N Main St, Northbrook Dr, N McGee St, N Oak Trv, and N/C 52 Trv. A highway 169 is also visible.

#981145

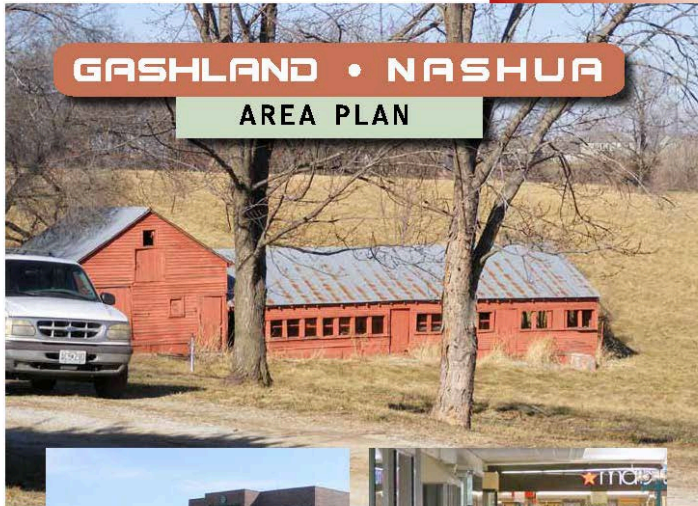
Request of City

- Approval of a Development Plan for the Orchards development.
- No rezoning request. Existing zoning is B2-2 and R6.

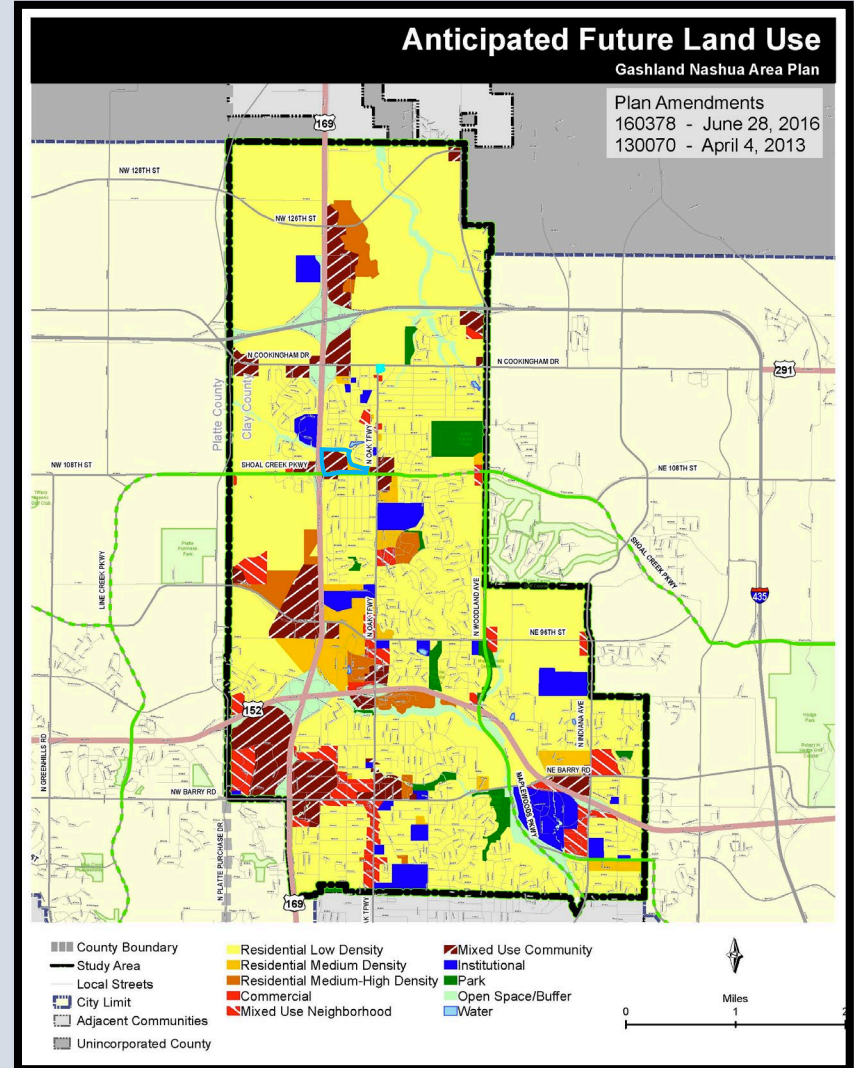
Existing Zoning



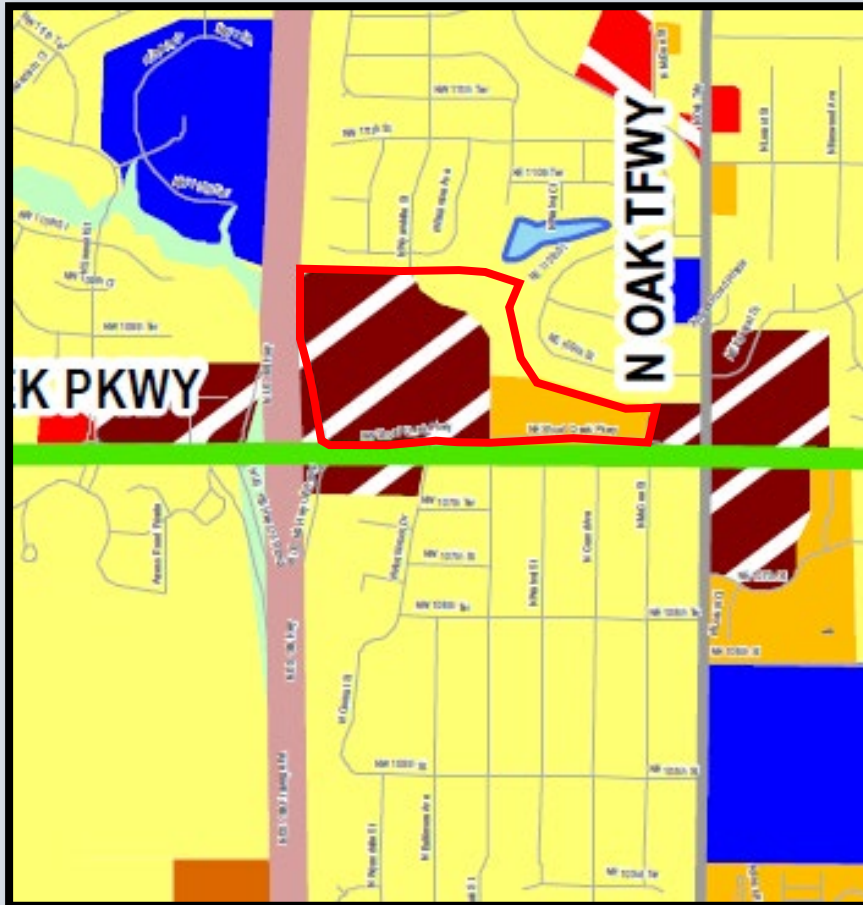
Gashland Area Plan - Land Use



City Planning and Development Department
Citywide Planning Division
Adopted January 5, 2012



Gashland Area Plan - Land Use



- | | |
|--|---|
| Residential Low Density | Mixed Use Community |
| Residential Medium Density | Institutional |
| Residential Medium-High Density | Park |
| Commercial | Open Space/Buffer |
| Mixed Use Neighborhood | Water |

Mixed-Use Community: Primarily intended to accommodate and promote a variety of community-serving retail sales or service uses generally of a higher intensity and larger scale than what is allowed in Mixed-Use Neighborhood areas. This category should include a mix of business and residential uses designed to enhance the pedestrian environment of the community, and correspond with the "B3" zoning category.

Residential Medium: Intended for a variety of building types that allows up to 8.7 units per acre. This land use classification corresponds with the "R5", "R6" and "R7.5" zoning categories.

Facts

- Orchards is in conformance with existing B2-2 and R-6 zoning.
- Orchards is in conformance with Gashland-Nashua Area Plan land use: Mixed Use Community and Residential Medium.
- Orchards Development Plan proposes construction of:
 - 25 single family homes;
 - 2 duplexes (4 units);
 - 22 four-plexes (88 units);
 - 2 84 unit apartment buildings (168 units)
 - 1 40 unit apartment building (40 units)
 - 2 42 unit apartment buildings (84 units)
- Orchards will retain existing buffers on north, east and west sides.

Photos



Looking south at property



Shoal Creek Parkway looking west 7

Photos



Shoal Creek Parkway looking east



Looking Southeast on N. Main Street at Shoal Creek Parkway

Photos



Looking south on N. Main Street



Looking south at N. Wyandotte Street

Photos



Looking north along N. Wyandotte Street from N.W. 110th Street

Orchards – Site Plan



Orchards – Public Engagement

- December 1, 2022: Public Engagement Meeting Held Via Zoom.
- December 20, 2022: Second Public Engagement Meeting Held In Person at Neighbors' Request.

Orchards – Drainage

Hydrology Report

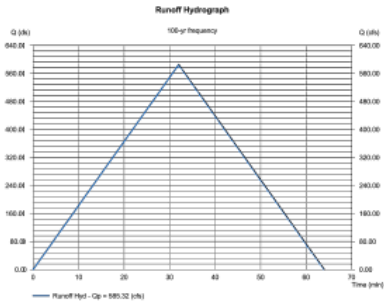
HydFlow Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Thursday, Dec 9 2022

Culvert Drainage

Hydrograph type	= Rational	Peak discharge (cfs)	= 585.32
Storm frequency (yrs)	= 100	Time interval (min)	= 1
Drainage area (ac)	= 210.000	Runoff coeff. (C)	= 0.51
Rainfall inten (in/hr)	= 5.465	To by User (min)	= 32
IDF Curve	= KCMO.IDF	Rec limb factor	= 1.00

Hydrograph: Volume = 1,133,878 (cuft), 28,780 (ac-ft)



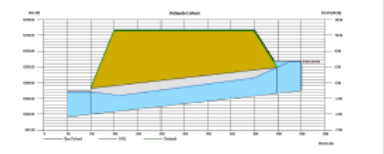
Culvert Report

Hydrex Express Extension for Autodesk® Civil 3D® by Autodesk, Inc.

Thursday, Dec 7 2023

Orchards Culvert

Input Length (ft)	1000.00	Calculations	
Wave Length (ft)	60.00	Qmin (cfs)	= 400.00
Slope (ft)	= 1.50	Qmax (cfs)	= 600.00
Input Elev (ft)	= 1004.00	Tailwater Elev (ft)	= (csc)2
Riser (in)	= 60.0		
Shells	= Box	Highlighted	
Spae (in)	= 60.0	Water (cfs)	= 575.00
No. Barrels	= 60.0	Grope (cfs)	= 0.00
N-Value	= 0.02	GropeTop (cfs)	= 0.00
Q-Value	= 3.00	Water Cn (ft)	= 8.00
Coast Elevation	= Paved to 7500 wingwall faces	Velocity (ft/s)	= 10.74
Coast R.M.Y.A.K	= 0.0261, 1.0347, 0.91, 0.4	HGL Den (ft)	= 1004.29
		HGL Up (ft)	= 1004.29
		Flow Elev (ft)	= 1010.07
		FlowID (ft)	= 1.21
		Flow Regime	= Inter Control
Embarkment			
Top Elevation (ft)	= 1010.00		
Base Elevation (ft)	= 1000.00		
Crest Width (ft)	= 250.00		



North

0 100 200 300

Drainage Area Map

SCALE: 1" = 200'

ENGINEERING SOLUTIONS
—ENGINEERING & SURVEYING—
5008 10TH STREET
LEWISBURG, MO 64603
P: 616-432-9188 F: 616-623-9949

Professional Registration
Missouri
 Engineering 2006002186-D
 Surveying 2006000670-D
Kansas
 Engineering 96200
 Surveying 18-218
Oklahoma
 Engineering 4294
Nebraska
 Engineering CA2071

Orchards
KANSAS CITY, CLAY COUNTY, MISSOURI

For just
Contrasts at
Site of Creek

Issue Date:
October 31, 2012

DRAINAGE AREA PLAN
Plans for:
Orchards at Shoal Creek
Kansas City, Clay County, Missouri

Matthew J. Sordani
MD, PE 200809708
MS, PE 180371
CN, PE 252226
NE, PE E-14325

REFERENCES

C.301

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Orchards – Connectivity

- N. Wyandotte right-of-way has been platted for a number of years.
- Connectivity is required by Section 88-405-10 (see below) for the public health, safety and welfare:

88-405-10 Streets

88-405-10-A. Traffic Movement And Pedestrian Circulation Principles

The street and pedestrian circulation layout for all new subdivisions must conform to the arrangement, width and location indicated on the major street plan, comprehensive plan, the walkability plan, or approved area plan. Street and pedestrian circulation systems must be laid out and designed with due regard for topography and drainage and to:

1. create an integrated system of lots, streets, trails, and infrastructure that provides for efficient movement of pedestrians, bicycles, and automobiles within the subdivision and to and from adjacent development;
2. provide for the efficient movement of through traffic by providing an interconnected hierarchy of streets in order to avoid isolation of residential areas and over-reliance on major roads;
3. provide safe and attractive pedestrian routes to nearby commercial centers, as well as nearby public/civic, employment, and recreates uses; and
4. be uncomplicated, so that emergency services, public services, and visitors can find their way to their intended destinations.

Connectivity is an important element in Gashland-Nashua Area Plan.

Orchards – Traffic

Trip Generation Comparison

				AM Peak Hour (VPH)			PM Peak Hour (VPH)		
Land Use	Qty	Unit	ADT (VPD)	TOTAL	IN	OUT	TOTAL	IN	OUT
Proposed Orchards Development									
Land Use 210 – Single-Family Detached Housing	25	DU	282	21	5	16	27	17	10
Land Use 215 – Single-Family Attached Housing	92	DU	651	42	11	31	51	30	21
Land Use 220 – Multifamily Housing (Low-Rise)	292	DU	1,947	113	27	86	146	92	54
Total Trips			2,880	176	43	133	224	139	85
If Developed with Allowed Density of 874 Units									
Land Use 222 – Multifamily Housing (High-Rise)	874	DU	3,968	211	55	156	250	155	95
Total Trips			3,968	211	55	156	250	155	95
If Developed as Commercial									
Land Use 820 – Shopping Center (>150k)	397,485	SF	16,242	368	228	140	1,524	732	792
Total Trips			16,242	368	228	140	1,524	732	792

Orchards – Traffic

Site Layout & “Cut-Through” Traffic

- Traffic volumes indicate that traffic will generally be 60% to and from the west on Shoal Creek Pkwy and 40% to/from the east on Shoal Creek Pkwy
- No Origins or Destinations to the north other than other homes
- Not a direct nor attractive route to travel north on N Wyandotte Street through the existing subdivisions
- More likely that traffic from Pine Lake and Beacon Hill will travel south on N Wyandotte for a more direct access to NW Shoal Creek Pkwy.

Estimated Pine Lake & Beacon Hill Trips on N Wyandotte Street

				AM Peak Hour (VPH)			PM Peak Hour (VPH)		
Land Use	Qty	Unit	ADT (VPD)	TOTAL	IN	OUT	TOTAL	IN	OUT
Land Use 210 – Single-Family Detached Housing	206	DU	1,962	144	36	108	196	123	73
Total Trips			1,962	144	36	108	196	123	73



Orchards – Apartment Elevations



① EXTERIOR
FRONT ELEVATION
1/8" = 1'-0"



① EXTERIOR
BACK
1/8" = 1'-0"



② EXTERIOR
LEFT
1/8" = 1'-0"

Orchards - Townhomes



Orchards – Single Family Homes



Summary

PC Homes requests approval of Ordinance No. 230055, the Orchards Development Plan, subject to conditions as contained in the Ordinance.