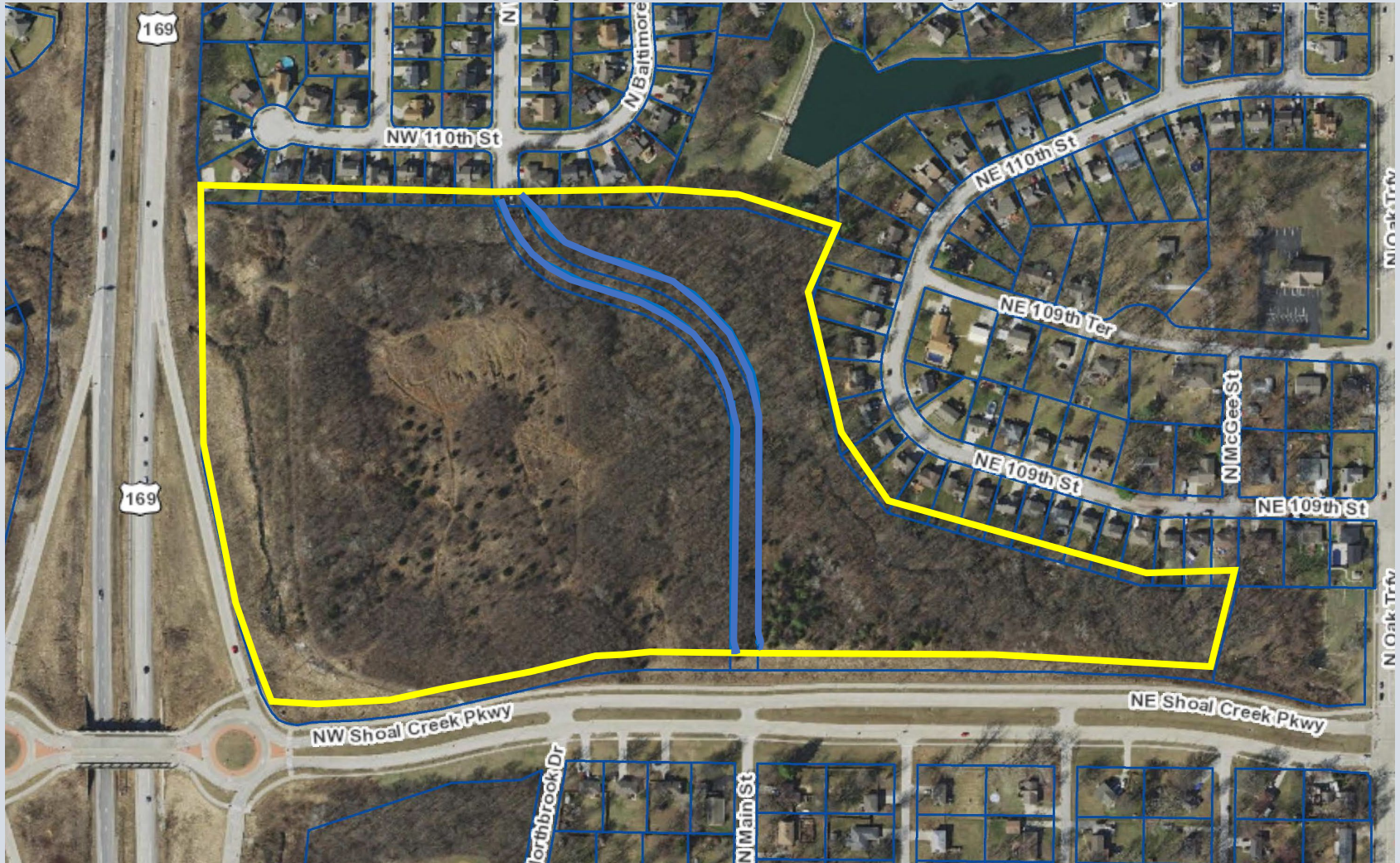


Ordinance No. 230055

PC Homes | Orchards Development

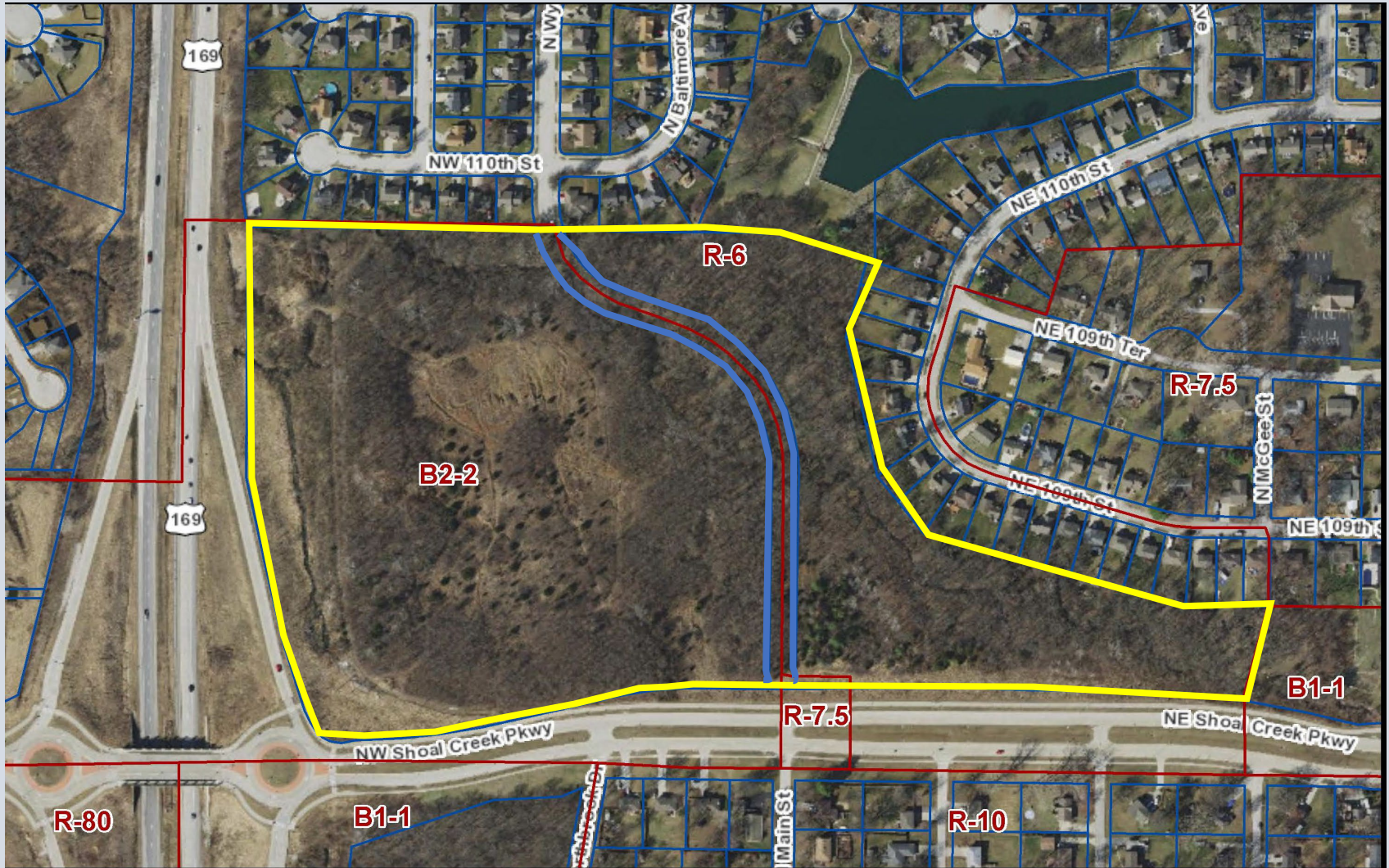


Neighborhood, Planning and Development Committee
CD-CPC-2022-00196
January 25, 2023

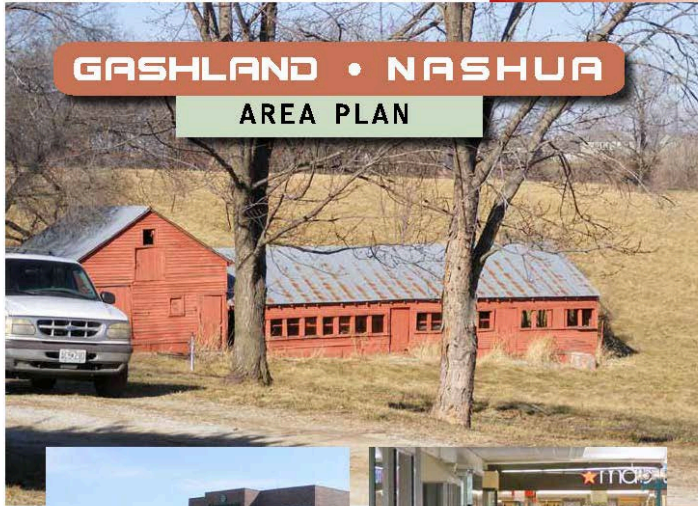
Request of City

- 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



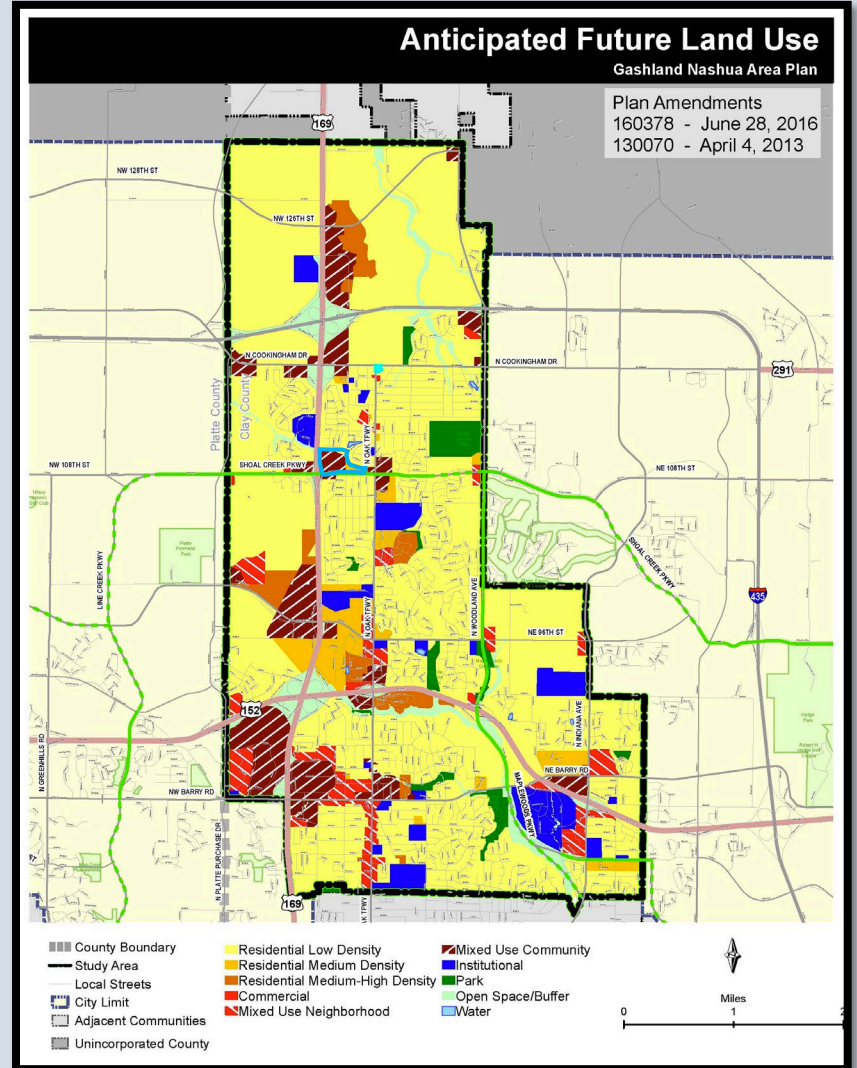
GASHLAND • NASHUA AREA PLAN



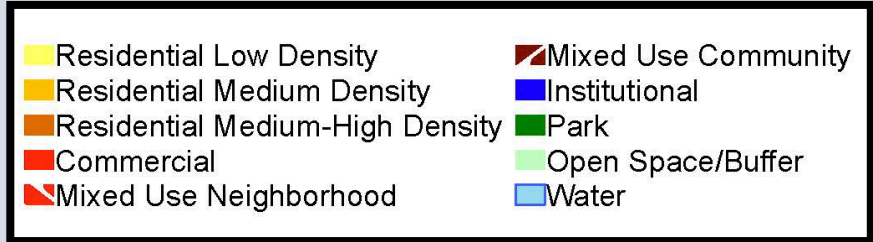
KANSAS CITY
MISSOURI



City Planning and Development Department
Citywide Planning Division
Adopted January 8, 2012



Gashland Area Plan - Land Use



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 – 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

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

Thursday, Dec 1 2022

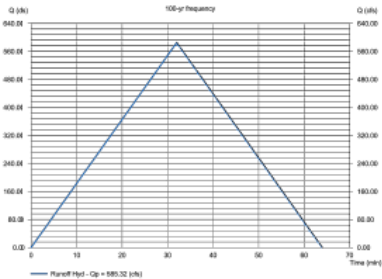
Culvert Drainage

Hydrograph type = Rational
 Storm frequency (yrs) = 100
 Drainage area (ac) = 210.000
 Rainfall Inten. (in/hr) = 5.485
 IDF Curve = KCMO.IDF

Peak discharge (cfs) = 585.32
 Time Interval (min) = 1
 Runoff coeff. (C) = 0.51
 To by User (min) = 32
 Rec limb factor = 1.00

Hydrograph Volume = 1,103,878 (cu-ft) (26,789 (cu-ft))

Runoff Hydrograph



Culvert Report

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

Thursday, Dec 1 2022

Orchards Culvert

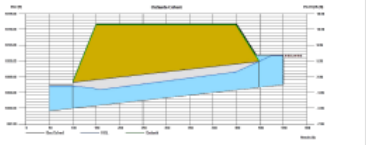
Invert Elev. Din (ft) = 1000.00
 Pipe Length (ft) = 400.00
 Slope (%) = 1.50
 Invert Elev. Lip (ft) = 1004.00
 Pipe (in) = 60.0
 Shape = Box
 Span (in) = 60.0
 No. Barrels = 3
 n-Value = 0.012
 Culvert Type = Flared Wingwalls
 Culvert Entrance Coeff. (Kd) (C1-C3) = 0.025, 1.0, 0.047, 0.01, 0.4

Calculations
 Crown (ft) = 400.00
 Crown (ft) = 600.00
 Tailwater Elev. (ft) = (d+D)/2

Highlighted
 C1 (ft) = 575.00
 C2 (ft) = 575.00
 C3 (ft) = 575.00
 C4 (ft) = 575.00
 C5 (ft) = 575.00
 C6 (ft) = 575.00
 C7 (ft) = 575.00
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 C99 (ft) = 575.00
 C100 (ft) = 575.00

Embankment
 Top Elevation (ft) = 1016.00
 Top Width (ft) = 300.00
 Crown Width (ft) = 250.00

Flow Regime = Intake Control



ENGINEERING SOLUTIONS
 CONSULTING & DESIGN
 1000 W. UNIVERSITY
 SUITE 1000
 P.O. BOX 20887, OMAHA, NE 68120

Professional Registration
 Missouri
 Engineering 2000070186.0
 Surveying 2000000000.0
 Kansas
 Engineering Survey
 Surveying 0.0109
 Civil/Struct
 Engineering 4506
 Professional Engineering 040807

Orchards
 KANSAS CITY, CLAY COUNTY, MISSOURI

Project
 Name: Orchard
 Issue Date: October 15, 2022

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

North
 10/15/22
 10/15/22
 10/15/22

C-301

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

Land Use	Qty	Unit	ADT (VPD)	AM Peak Hour (VPH)			PM Peak Hour (VPH)		
				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.