AGENDA
for the
CITY OF WILDWOOD'S
PLANNING AND ZONING COMMISSION
City Hall Council Chambers - 16860 Main Street
July 20, 2020 - Monday
7:00 P.M.
This Meeting will be held LIVE, accommodating in-person attendance but will also be offered in a "Zoom Webinar Platform," and be Broadcast on the City of Wildwood’s YouTube Channel

Please Visit to Participate via Zoom: https://us02web.zoom.us/j/91923951015

If you would like to submit a comment regarding an item on this meeting agenda, please visit the Meeting Comment Form

I. Welcome To Attendees And Roll Call Of Commission Members
II. Review Tonight’s Agenda/Questions Or Comments
III. Approval Of Minutes From The Committee’s Meeting Of June 15, 2020
   Documents:
   DRAFT JUNE 15, 2020 MINUTES.PDF
IV. Department Of Planning’s Opening Remarks/Updates
V. Public Comment Session- All Public Comments On The Active Agenda Items Accepted Here, Excluding Public Hearings. Special Procedures Will Be In Place To Address The Requirements Of Social Distancing, Gathering Size, And Access To Common Areas. Please Be Prepared To Follow Instructions That Are Provided By City Personnel.
VI. Public Hearing – No Items For Consideration
VII. Old Business – Four (4) Items For Consideration
   1. Information Reports – Four (4) Items
      a. POSTPONEMENT REQUESTED BY PETITIONER - P.Z. 20, 21, And 22-15 Ackerley Place, Payne Family Homes L.L.C. (Amended), C/O Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132
         -A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner's intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan (Street Network Map) modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-6A...
3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-8 Planned Commercial District (Town Center "Workplace District") and R-3 10,000 square foot Residence District (Town Center "Neighborhood Edge District" and "Neighborhood General District"), with a Planned Residential Development Overlay District (PRD), for the same tract of land, again being located on the west side of State Route 109, north of Manchester Road (Locator Numbers: 23V110022 and 23W320013/Street Addresses: 2431 State Route 109 and 17225 Manchester Road). Proposed Use - A total of one hundred forty (140) detached single-family dwellings, on individual lots, with common ground, required public space areas, and a minimum of one (1) commercial outletfronting onto State Route 109. This revised advertisement supplement P.Z 9-18 The Reserve at Wildwood, which had been posted for public hearing on July 16, 2018 by the Planning and Zoning Commission. (Ward One)

Documents:

THE RESERVE - PAYNE FAMILY HOMES.PDF

b. P.Z. 4-20 ERC Multiple Family Development, C/O Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758
   - A request for a change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel of land, which is located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109 (St. Louis County Locator Number: 24V130913/Street Address: 2665 State Route 109). The subject property is designated "Cultural/Institutional Overlay District" under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off street and structured parking accommodations, stormwater management facilities, and required public space components. (Ward One)

Documents:

P.Z. 4-20 ERC.PDF

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c. P.Z. 3-20 City Of Wildwood Planning And Zoning Commission, C/O Department Of Planning, 16860 Main Street, Wildwood, Missouri 63040
   - A request to consider the development of new legislation to possibly be included within Chapter 415 (Zoning Ordinance) of the Code of Ordinances of the City of Wildwood relating to properties that are located within the City of Wildwood that present unique histories of use or character, which must be considered needing greater scrutiny and protections due to their environmental legacies, site, soil, and/or physical characteristics, or proximity to a stream, creek, or ephemeral drainageways that ultimately presents a higher than acceptable risk to the public, if they are to be disturbed, developed, and placed into active use. Such situations necessitate the need for the consideration of a new Special Procedures Overlay District, with associated regulations, that provides a minimum level of protections to all parties that are assessed as necessary, while ensuring a thorough and complete review and comment period for the community. (Wards -All)

Documents:

P.Z. 3-20 SPECIAL CIRCUMSTANCES OVERLAY DISTRICT (SCOD).PDF

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d. P.Z. 17-19 Michelle And Geoffrey Nash, 388 Steeple Lane, Wildwood, Missouri 63005, C/O Sunsource Homes Inc., 322 Southwest Boulevard, Kansas City, Missouri 64108
   - A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District (Street Address: 388 Steeple Lane/Locator Number: 19V430291) for the installation of ground-mounted solar panels upon this three (3) acre parcel of ground, which is located on the east side of Steeple Lane, south of Wildhorse Creek Road. The petitioner is also seeking to install certain roof-mounted solar panels, which are to be so situated on the existing dwelling, as to be visible from an abutting roadway. These installations are required to be reviewed in accordance with Chapter 415.090 NU Non-Urban Residence District Regulations of the City of Wildwood Zoning Ordinance, which establishes standards and requirements for the installation of solar panels. The requested permit is required due to the proposed solar panels being of a groundmounted design type, as well as roof-mounted panels situated on an area of the dwelling’s roof, that causes them to be visible from an
VIII. New Business - Correspondence Item – No Items For Consideration

IX. Site Development Plans - Public Space Plans - Record Plats – One (1) Item For Consideration

1. Site Development Plan – One (1) Item

   a. A Recommendation Report By The Site Plan Subcommittee Of The Planning And Zoning Commission On A Site Development Plan (SDP) For P.Z. 15-17 Babier Farms, L.L.C., C/O Tom Roberts, 550 Laurey Lane, Wildwood, Missouri, 63005; A Conditional Use Permit (CUP) In The NU Non-Urban Residence District For A Fifty-Nine Point Nine (59.9) Acre Tract Of Land That Is Located At The Terminus Of Laurey Lane (Locator Numbers: 20X630015 And 20X630024/Street Addresses: 500 And 550 Laurey Lane); Which Supports The Allowance For The Retention Of The Existing Large Water Feature - Lake - And Associated Waterfall Structure - (As Defined By §415.030 Of The City Of Wildwood's Zoning Regulations). The Large Water Feature Is Three Point Four (3.4) Acres In Size. (Ward One)

   Documents:

   P.Z. 15-17 ROBERTS LARGE WATER FEATURE.PDF

   a.1. –

     a. Documents:

     P.Z. 15-19 MAUE-NASH SOLAR.PDF

     d.1. –

X. Other Items - One (1) Item For Consideration

1. Nominating Committee Recommendation For The 2020/2021 Commission Year And Its Officers (Wards -All)

XI. Closing Remarks And Adjournment By Chair Of Commission

The Planning and Zoning Commission will consider and act upon these matters listed above and any such others as may be presented at the meeting and determined appropriate for discussion at that time.

The City of Wildwood will provide reasonable accommodations for persons attending Planning and Zoning Commission meetings. Requests for reasonable accommodations should be made directly to Megan Eldridge, City Clerk, at 636-458-0440, or email at megan@cityofwildwood.com, at least 48 hours prior to the start of the meeting.

If you would like to submit a comment regarding an item on this meeting agenda, please visit the Form Center.
The meeting of the Planning and Zoning Commission was called to order, at 7:00 p.m., on Monday, June 15, 2020, at Wildwood City Hall, 16860 Main Street, Wildwood, Missouri and via the videoconferencing tool Zoom.

I. Welcome to Attendees and Roll Call of Commission Members

Chair Lee requested a roll call be taken by Planner Newberry. The roll call was taken, with the following results:

**PRESENT – (10)**
- Chair Lee
- Commissioner Helfrey
- Commissioner Deppeler
- Commissioner Levitt
- Commissioner Beattie
- Commissioner Kohn
- Commissioner Jackson
- Commissioner Broyles
- Council Member Woerther
- Mayor Bowlin

**ABSENT – (0)**

Other City officials present in the City Council Chambers, via the videoconferencing tool Zoom, included the Director of Planning and Parks Vujnic, Assistant Director of Planning and Parks Arnett, Planner Newberry, and City Attorney Young.

II. Review Tonight’s Agenda / Questions or Comments

There were no questions or comments on the agenda.

III. Approval of Minutes from the June 1, 2020 Meeting

A motion was made by Commissioner Jackson, seconded by Commissioner Levitt, to approve the minutes from the June 1, 2020 meeting. A voice vote was taken regarding the motion for approval of the minutes. Hearing no objections, Chair Lee declared the motion approved by a vote of 9-0, with one (1) abstention (Mayor Bowlin).

IV. Department of Planning Opening Remarks

The Department did not have any opening remarks.
V. Public Comment Session

No members of the public wished to speak at the Public Comment Session for tonight’s meeting.

VI. Public Hearings – One (1) Item for Consideration

a) P.Z. 4-20 ERC Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758 – A request for a change in zoning from the NL Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel of land, which is located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109 (St. Louis County Locator Number: 24V130913/Street Address: 2665 State Route 109). The subject property is designated ‘Cultural/Institutional Overlay District’ under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off-street and structured parking accommodations, stormwater management facilities, and required public space components. (Ward One)

Planner Newberry read the request into the record.

Director Vujnic submitted into the official record for tonight’s public hearing the City’s Charter, Master Plan, Chapter 415 of the City’s Code of Ordinances, the Department’s file regarding this request, and any testimony, exhibits, or other items provided as part of this meeting and discussion.

Planner Newberry shared a brief slideshow of photographs of the subject site.

Chair Lee invited the petitioner and its representative to address the Commission and provide a presentation of the proposal.

George Stock, Stock and Associates, provided a presentation summarizing the characteristics of the site and the specific request under consideration. Mr. Stock provided a detailed outline of the proposal for the one hundred seventeen (117) multiple-family units and associated common areas, leasing office, pool house, in-ground pool, shared office space, public improvements, parking areas, and stormwater components. Mr. Stock’s presentation was formally submitted, as part of the official record for this item.

Discussion was held among Commission Members regarding the number of multiple-family units being proposed; the proposed parking ratio and whether or not it is adequate for this type of use; concerns regarding traffic and roadway improvements, particularly regarding New College Avenue, Generations Drive, and Turkey Track Road; and details and clarification regarding the Traffic Impact Study (TIS) submitted by the petitioner in advance of tonight’s public hearing.

Rob Coleman, Petitioner, Earnest R. Coleman (ERC), introduced himself and thanked Mr. Stock for his thorough presentation. Mr. Coleman provided clarification regarding the proposed parking ratio. He thanked the Commission for its consideration of the subject request.

Chair Lee invited members of the public to address the Commission regarding this matter.
Sheelah Yawitz, 213 Meadows of Wildwood Boulevard, stated she is in attendance at tonight’s public hearing representing the residents of the Meadows of Wildwood Subdivision. She stated her opposition to the proposal, particularly in regard to the proposed density of the multiple-family development and concerns regarding its impact on traffic and roadways in the area.

Michael Kiefer, 17044 Westridge Oaks Drive, read his comments into the record, which are attached to these meeting minutes.

Jerry Perales, 17009 Westridge Oaks Drive, read his comments into the record, which are attached to these meeting minutes.

Denny Welker, 16903 Westridge Oaks Drive, stated he is opposed to the proposed multiple-family development and requested the notification radius for future meetings be increased to ensure all impacted parties are notified, particularly those property owners in the Westridge Oaks Subdivision.

Joe Garritano, Ward 8 Council Representative, stated he has received concerns from residents regarding this proposal, particularly as it relates to additional traffic and related matters.

Paul Zinck, St. Louis County Community College, stated the St. Louis County Community College is the owner of the subject site and noted he is available for any questions the Commission Members might have at tonight’s public hearing.

A motion by Mayor Bowlin, seconded by Commissioner Beattie, to close the public hearing regarding this matter. A voice vote was taken regarding the motion. Hearing no objections, Chair Lee declared the motion approved by a vote of 10-0.

VII. Old Business – One (1) Item for Consideration

a) P.Z 7-20 City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri 63040 – A request to review the current regulations and requirements associated with rocf and ground-mounted solar panels and how such petitions for installations are processed by the Planning and Zoning Commission and City Council. The current regulations and requirements were approved by the City of Wildwood, Missouri in August 2014 and intended to ensure that such installations would have limited impacts on adjoining property owners and publicly-owned sites, while also preserving important woodland areas and ‘Grand Tree’ Specimens within the community. These existing regulations and requirements are applicable in all residential zoning district designations (“R” Districts), including the NU Non-Urban Residence District. (Wards – All)

Planner Newberry read the request into the record.

Director Vujnic provided a brief history and summary of the Commission’s consideration of this item. He stated the Department did contact Ameren Missouri regarding the Commission’s question about the possibility of that utility notifying the City when a solar energy system was no longer in use. The representative from the utility company stated it cannot provide such notification. Director Vujnic then went on to state the Planning and Zoning Commission acted at its June 1, 2020 meeting to unanimously support the proposed amended regulations regarding solar energy systems. He stated the draft Letter of
Recommendation reflects this action and is in the appropriate form to forward to City Council for its consideration and action.

No discussion was held among Commission Members regarding this agenda item.

A motion by Commissioner Beattie, seconded by Council Member Woerther, to approve the draft Letter of Recommendation, as presented.

A roll call vote was taken regarding the motion, with the following results:

Ayes: Commissioner Helfrey, Commissioner Deppeler, Commissioner Levitt, Commissioner Beattie, Commissioner Kohn, Commissioner Jackson, Commissioner Broyles, Council Member Woerther, Mayor Bowlin, and Chair Lee
Nays: None
Absent: None
Abstain: None

Chair Lee declared the motion approved by a vote of 10-0.

VIII. New Business – No Items for Consideration

IX. Site Development Plans-Public Space Plans-Record Plats – One (1) Items for Consideration

a) A recommendation report by the Department of Planning on a Site Development Plan (SDP) for P.Z. 15-19 Chesterfield Montessori School, 1400 Ladue Road, Chesterfield, Missouri 63017; Conditional Use Permit (CUP) in the NU Non-Urban Residence District and FPNU Floodplain Non-Urban Residence District; southeast side of Babler Park Drive, west of State Route 109 (Locator Number: 20W420051/Street Address: 17950 Pond Bridge Road); authorizing the use of the for a seven point nineteen (7.19) acre tract of land for an outdoor education center to be utilized by a private, not-for-profit elementary school, with supporting storage structure, which is inclusive of a covered patio area, associated parking lot, and vault-type restroom facility. (Ward One)

Planner Newberry read the request into the record.

Director Vujnicheck stated the Commission previously authorized a Conditional Use Permit (CUP) for this outdoor education center to be located on the subject property, with associated improvements. Director Vujnicheck provided an overview of the proposed Site Development Plan (SDP), first noting there is limited disturbance planned on the site to accommodate the improvements anticipated for this allowable use. He stated the school, Chesterfield Montessori School, intends to use the site for the upcoming 2020-2021 school year. Director Vujnicheck stated the Department has determined the Site Development Plan (SDP) is in compliance with the approved Conditional Use Permit (CUP) and recommending a favorable action on it by the Commission.

Discussion was held among Commission Members regarding the planned restroom facilities and their location on the site.
A motion by Commissioner Helfrey, seconded by Council Member Woerther, to approve the Site Development Plan Recommendation, as presented, and it be forwarded to City Council for receipt and filing.

A roll call vote was taken regarding the motion, with the following results:

Ayes: Commissioner Helfrey, Commissioner Deppeler, Commissioner Levitt, Commissioner Beattie, Commissioner Kohn, Commissioner Jackson, Commissioner Broyles, Council Member Woerther, Mayor Bowlin, and Chair Lee
Nays: None
Absent: None
Abstain: None

Chair Lee declared the motion approved by a vote of 10-0.

X. **Other – Two (2) Items for Consideration**

a) Selection of a Citizen Commission Member to be Liaison to the Historic Preservation Commission (HPC).

A motion by Commissioner Helfrey, seconded by Commissioner Deppeler, to select Commissioner Broyles to serve as the Planning and Zoning Commission Liaison to the Historic Preservation Commission (HPC). A voice vote was taken regarding the motion. Hearing no objections, Chair Lee declared the motion approved by a vote of 10-0.

b) Formation of the Nominating Committee for the 2020/2021 Commission Year and its Officers (Wards - All)

Chair Lee requested volunteers to serve on the Nominating Committee for the 2020/2021 Commission Officers. The following Commission Members volunteered to serve on the Committee: Commissioner Levitt, Commissioner Kohn, Commissioner Beattie, and Commissioner Deppeler.

XI. **Closing Remarks and Adjournment**

A motion by Commissioner Helfrey, seconded by Council Member Woerther, to adjourn. A voice vote was held regarding the motion. Hearing no objections, Chair Lee adjourned the meeting at 8:55 p.m.

Approved by:
Secretary – City of Wildwood Planning and Zoning Commission

Note: Recordation of the opinions, statements, and/or other meeting participation in these minutes shall not be deemed to be an acknowledgement or endorsement by the Commission of the factual accuracy, relevance, or propriety thereof.

* If comment cards were submitted indicating they did not wish to speak at tonight’s meeting, they have been attached and made part of the official record.
Ladies and Gentlemen of the commission, thank you for taking the time to hear from me today in regards to the proposed zoning change to the 4.31 acre parcel adjacent to the Wildwood YMCA. My name is Michael Kiefer and I am a resident of the Westridge Oaks subdivision whose only entrance and exit is directly across from the Y. My family and I moved to the Saint Louis area three years ago and decided to purchase a home and live in the city of Wildwood due to the environment that it presented; that of a family friendly city focused on maintaining the green space areas and focusing on improvements that the residents of the city wanted in order to constantly improve the lifestyle of the area.

I understand that the matter under discussion in today’s meeting is simply a zoning change, and not the construction proposal itself, but such a change paves the way for the project, so to speak, and I am directly opposed to a block 120 apartments being built at the proposed location. Prior to moving to the area, we lived in a housing development that was configured with a senior living center in the middle and houses around the perimeter, where we owned and lived. Just outside the entrance to our neighborhood was an apartment complex, and the difference in the level of care taken by the residents was readily apparent. A transient population will have no pride of ownership, and standards of upkeep will fall to the property management company, which will generally do exactly what is required and no more in order to maximize profits. I moved away from that situation happily, and have no desire to have it recreated here when we specifically purchased our home in Wildwood with that lack of proximal apartments in mind.

One of the largest impacts to the residents of Westridge Oaks will be the increase in traffic on Highway 109 that an additional 120 residences would bring. All of that residential traffic will funnel out through New College, and while I have seen the traffic study that was done, the timing of its execution and limit on hours studied have ensured that it does not accurately capture full traffic patterns. Additionally, the impact numbers presented for estimated traffic increase from the 120 unit structure are farcical at best, since I would have to assume that at least one of the dwellers in each apartment would be working.

As the recent elections have highlighted, there have been some contentious decisions with regards to development in the city of Wildwood with more densely spaced housing developments. The platforms represented by those elected was to keep faith with the City Plan unless the residents of the city say otherwise. I greatly support this platform, and hope that I am clearly heard when I say that I, as a resident of Wildwood, have no desire to see this deviation come to pass. If there is a need for apartments in the city of Wildwood, have them built in City Center, as would fit within the plan.
Negatives - Traffic increase to the current HWY 109 traffic.

Ingress /egress – Entire Westridge Oaks Subdivision is affected due to additional incoming /outgoing increased traffic activity. A new “accurate” traffic study needs to be performed. Until the traffic study is performed, there is to be NO building activity by the developer.

Increased potential for traffic trying to go “North bound” onto HWY 109 out of the Turkey Track exit which is currently designed ONLY as a “South bound” exit onto HWY 109. (Already, this is constantly going on out of the YMCA South bound exit for HWY 109.) This illegal U-turn or left turn activity increases potential for traffic accidents out of the proposed new Multi-Family subdivision.

There “will” be an increase in commuter traffic at commute hours as new residences will be leaving to work and also coming home from work. Increase in overall traffic at the light at HWY 109 & New College “will” increase during commute hours, STLCC hours, school hours and throughout YMCA operation hours.

As this new development is geared toward families with school age children there will also be an increase in School Bus trips, for Elementary, Middle School and High School for BOTH Lafayette and Eureka School systems. Increased school traffic through the “ONE” in/out street which is New College and Generations Drive.

“Entire” Westridge Oaks subdivision directly impacted by potential for the increase in HWY 109 traffic. Getting in and out of Westridge Oaks subdivision is already impacted by the new HWY 109 traffic circle increase. Wait times can potentially increase to egress from Westridge Oaks. There is only this one exit out of Westridge Oaks.

Traffic impact on existing businesses at HWY 109 & New College, including YMCA.

Building Design - Current Plans

This development “requires” changing the current Master Plan zoning code.

Multi-family housing is not compatible with a 55+ housing development next door to it.

The two/three story buildings do NOT comply with any residential structures of the surrounding area. It would set a precedence the start of multi-story buildings in this residential area which, all of the current residents DO NOT WANT.

No plans for school children activities appears to be in current design. Where are they going to play.

VERY limited greenspace.

High density design for a low density zoned residential area.

We the residents of Westridge Oaks subdivision are strongly opposed to any Zoning changes to this track of land. Multi-Family housing is not appropriate for this single family home residential area.

Jerry Perales – 17009 Westridge Oaks Drive, (432) 853-9392
P.Z. 20, 21, and 22-15 Ackerley Place
Payne Family Homes L.L.C., c/o Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132

A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner's intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan (Street Network Map) modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-6A 3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-8 Planned Commercial District (Town Center "Workplace District") and R-3 10,000 square foot Residence District (Town Center "Neighborhood Edge District" and "Neighborhood General District"), with a Planned Residential Development Overlay District (PRD), for the same tract of land. Proposed Use - A total of one hundred forty (140) detached single-family dwellings, on individual lots, with common ground, required public space areas, and a minimum of one (1) commercial outlet fronting onto State Route 109. This revised advertisement supplants P.Z. 9 18 The Reserve at Wildwood, which had been posted for public hearing on July 16, 2018 by the Planning and Zoning Commission.

Tract Size: 50.65 acres
Location: West side of State Route 109, north of Manchester Road
Locator Numbers: 23V110022 and 23W320013
Street Addresses: 2431 State Route 109 and 17225 Manchester Road
Public Hearing Date: February 6, 2017
Other Key Dates:

September 18, 2017 – Matter postponed by Planning and Zoning Commission to allow for Traffic Study to be completed for all of Town Center Area

March 19, 2018 – Presentation of Town Center Traffic Study to Planning and Zoning Commission

August 20, 2018 – 2nd Public Hearing

September 17, 2018 – Matter postponed by petitioner, after issuance of Department’s Information Report, with recommendation

November 5, 2018 - Matter postponed by Planning and Zoning Commission to allow for a Work Session to be held within thirty (30) days of this meeting date

November 28, 2018 – Work Session held by Planning and Zoning Commission on this matter

December 7, 2018 – Matter postponed by Planning and Zoning Commission to allow for further meetings between the Department and Payne Family Homes

January 22, 2019 - Matter postponed by Planning and Zoning Commission to allow for further discussions between the Department and Payne Family Homes

February 4, 2019 – Matter postponed by petitioner to ensure full Planning and Zoning Commission membership can attend meeting

February 19, 2019 – Matter postponed at the request of the Department of Planning due to a posting error on its part

March 4, 2019 – Matter referred to the Town Center Update Team (TCUT) for review and recommendation.

January 6, 2020 – Planning and Zoning delays action on Town Center Update Team’s recommendation to change land use categories on this site to ‘Neighborhood Edge Transition’ District by a vote of 10 to 0 (Voting Aye – Deppeler, Helfrey, Levitt, Gragnani, Kohn, Beattie Simpson, Woerther, Bowlin, and Lee).

January 20, 2020, March 2, 2020, and May 4, 2020 - Matter postponed by Planning and Zoning Commission to allow for further meetings between the Department and Payne Family Homes.

Information Report
Decision Date and Vote: July 20, 2020 - TBD
Report: Attachment A
Conditions: Attachment B
Preliminary Development Plan: Attachment C
Background Information: Attachment D
School District: Rockwood
Fire District: Metro West
Ward: One
Department’s Recommendation: Approval, with conditions, as set forth in Attachment B.

ATTACHMENT A - Report

BACKGROUND OF SITE AND ZONING HISTORY

Property Description - The subject site of these requests is the compilation of two (2) parcels of ground that form the approximately fifty (50) acre tract of land. This tract of land is located within the southwest quadrant of the State Route 100 and State Route 109 intersection. Given the size of this parcel of ground, it also has frontage onto Manchester Road. The property is oddly shaped due to its boundaries being defined by surrounding property lines and rights-of-way areas. The primary frontage of this property is State Route 109, which is approximately nine hundred seventy (970) feet in length.

State Route 109 - State Route 109, along petitioner’s frontage, is a two (2) lane arterial roadway, maintained by the State of Missouri. The most recent improvements to this roadway were completed by the City of Wildwood, which were north of State Route 100, to Clayton Road. These improvements included two (2), multiple lane roundabouts, additional traffic lanes, and improved trail corridors and stormwater management facilities. Other plans are in development by the State of Missouri and the City of Wildwood to address the State Route 109 bridge over State Route 100, add additional roundabouts on State Route 109, south of State Route 100, and provide a pedestrian tunnel under State Route 109, just to the south of its interchange with State Route 100. All of these improvements and plans reflect the importance of this roadway to traffic flow in this area of the Town Center and Wildwood.

This roadway is the primary north/south connector between Interstate 44 and Wild Horse Creek Road, with traffic volumes fluctuating between certain non-peak and peak hour periods. State Route 109 bisects this community into unequal halves and serves a low density residential pattern, several park and open space holdings, and a large number of institutional uses, such as churches and schools, and Town Center. The roadway has improved shoulders, some stormwater drainage facilities, but limited frontages with sidewalks. The right-of-way area along this portion of State Route 109 is in excess of two hundred (200) feet in width due to required dedications, as part of past developments and purchases.

This roadway provides a key linkage in the City’s proposed Town Center Area and has been discussed in both that plan and the Master Plan. These documents support the roadway maintaining its current character, with topical changes for safety. The City Council has also passed a resolution on the issue of improving State Route 109 through Wildwood, which sought to define a clear position in this regard. In all instances, the City’s long-range plans and policy on the change of State Route 109 reiterates that it should not be improved to an outerbelt standard or to a roadway without character and sensitivity to its surroundings.
Manchester Road - Manchester Road is a City-maintained roadway, which includes two (2) driving lanes and a five (5) foot wide shoulder for bicycle/pedestrian purposes. Other improvements along this site’s frontage are limited. These improvements include stabilized shoulders, earthen ditches, and signage, with striping. The roadway lacks sidewalks. Manchester Road is the City’s main east-west arterial roadway, which extends from its eastern boundary to State Route 100, several miles to the west. The roadway serves a mix of land uses, including commercial, residential, institutional, and recreational activities. Traffic volumes along the roadway range from a high of approximately 7,000 vehicles per day on the east end of Manchester Road to less than 2,000 vehicles per day on the westernmost end.

Existing Development Pattern - The subject property is currently vacant and has not experienced any recent site disturbance.

Physical Description of Site - The current condition of the property includes a mix of woodlands and overgrown grasses and pastures. The largest extent of these woodlands is within the north and south portions of the site, where Bonhomme Creek meanders through it and topography is more restrictive. This creek borders the site, and is located in and out of the State Route 109 right-of-way, and turns to the west, then passes under State Route 100 via a culvert. The portion of the creek within the right-of-way of State Route 109 is situated in a large swale area that ultimately drains to the north. It appears this swale was constructed as part of the roadway modifications made previously to State Route 109. Relief across this site is substantial and has a varied set of topographic characteristics.

Zoning and Land Use History - The property has an unclear zoning district designation, given the C-8 Planned Commercial District approved by St. Louis County in 1989 had certain performance standards in it in terms of timeframes for the completion of the Site Development Plan process and then commencement of construction; none of which have been met. The lack of compliance creates a zoning void, but, for the purposes of this advertisement of this request, the City identified the site’s current zoning district designation as C-8 Planned Commercial District and R-6AA 3,000 square foot Residence District, with a Planned Environment Unit (PEU), all of which were again approved by St. Louis County in 1989. This particular zoning authorized the development of a regional-sized, enclosed mall, with nine (9) outlots, and multiple family units. Overall, this project would have utilized a significant portion of the site for some type of improvement or activities.

In 1995, prior to the incorporation of the City, another business entity (Dierbergs) placed a contract on the property to develop it with a major retail center anchored by a supermarket. This design concept also included outlots along the perimeter of the overall site. St. Louis County, via a Conceptual Site Development Plan, approved the design of this site for this petitioner. Before construction could proceed on any component of this plan, the City of Wildwood incorporated, and discussions began about its use relative to the Master Plan that was being developed for this community by the Planning and Zoning Commission and City Council.

With the incorporation, and the completion of the Master Plan, the property became part of the Town Center Area, which was to be developed under the principles and practices of New Urbanism. The planning process for Town Center began with a charette hosted by the City’s consultant – Duany Plater-
Zyberk (DPZ). The owner under contract of this large property participated in these sessions held during the charette and provided input into this planning process and, specifically, this site. Ultimately, the property was designated as ‘Commercial,’ which was the most intensive district in the Town Center Plan relative to retail, service, restaurant, and other similar uses, but still requires a lower parking ratio, buildings orientated toward abutting roadways, themed infrastructure improvements, and engaging architecture for all buildings and structures. These requirements were somewhat contrary to the owner under contract’s desire in terms of site design and its interest eventually lapsed. Despite this action, the property’s designation by the Regulating Plan of the Town Center Plan remained ‘Commercial,’ which allows again for more intensive use of property and building footprints that can be up to forty thousand (40,000) square feet in size, without special authorization.

Starting in 2007, the Desco Group began a process of rezoning the site to accommodate a major-sized commercial center that would have been anchored by a Target Department Store. Along with this building, with a footprint that was over one hundred thousand (100,000) square feet in size, two (2) other junior anchor stores were proposed, along with additional in-line retail activities. The total square footage that was sought for commercial purposes was approximately 350,000 square feet. No portion of the site was planned for residential use, as part of this proposal. Many considerations were discussed, as part of this major commercial project, and included some of the following items:

a. The roadway improvements to State Route 109, Manchester Road, and the extension of Hawthorne Village Parkway.
b. The extension of utilities to the site, which included a major water main construction from State Route 100 south to the subject property.
c. The disturbance of the site, given Bonhomme Creek is located along its eastern and northern boundaries.
d. The parking design and numbers, the building’s placement relative to the Main Street extension, the architecture of the buildings, and integration of residential uses on the southern end of the property that fronted onto Manchester Road.
e. The request for public financing in this regard.

These items led to many discussions, exploration of grants, and redesigns of the site, but ultimately the Desco Group withdrew the petition and chose not to proceed with the project.

**Current Land Use** - Development patterns in the vicinity of the site remain relatively unchanged, since the adoption of the 1965 Comprehensive Zoning Ordinance by St. Louis County. Many of the surrounding properties still retain the NU Non-Urban Residence District designation adopted in 1995 by the City of Wildwood. These limited changes have, for the most part, preserved the rural land use pattern of the area, except for a commercial use approved in 1999 at the southwest corner of State Route 109 and State Route 100. This pattern can be demonstrated by a review of the surrounding land use and zoning patterns in the vicinity of the site, which includes the following:

**To the north:** Abutting in this direction is the Wildwood Auto Village Project. This development includes four (4) lots, two (2) of which are small parcels of common ground. The other two (2) lots
Currently are authorized for a convenience store, with a car wash, and gasoline pumps and an office building or restaurant. The convenience store has been constructed and in operation for a number of years. The office building/restaurant site remains vacant at this time. These properties are zoned Amended C-8 Planned Commercial District and were designated by the Regulating Plan of the Town Center Plan as ‘Workplace.’ Further to the north is the right-of-way of State Route 100, which is a limited-access, State-maintained cross-county arterial roadway. Somewhat to the northwest of the subject site is a vacant, eight (8) acre parcel of ground that is zoned NU Non-Urban Residence District. This parcel of ground’s Town Center Plan designation is ‘Neighborhood Edge’ District.

To the south: Adjoining in this direction is a series of lots that are zoned NU Non-Urban Residence District. These lots front onto Manchester Road and are used for a variety of purposes, including the Old Pond School Park and Historic Site (Cultural/Institutional), single family dwellings (Neighborhood Edge), and vacant property (the lot at the intersection of State Route 109 and Manchester Road - Workplace). Further to the south are Manchester Road and several large parcels of ground that include the St. Louis Community College site (NU Non-Urban Residence District – Cultural/Institutional Overlay District), Emmanuel Presbyterian Church (NU Non-Urban Residence District – Neighborhood Edge), the Church of the Latter Day Saints (NU Non-Urban Residence District – Neighborhood Edge), and New Pond School (NU Non-Urban Residence District – Neighborhood Edge). The City had approved zoning for a new development in this area. This development was zoned C-8 Planned Commercial District and was to be a mix of office/restaurant/retail uses. This site is designated ‘Workplace’ by the Town Center Regulating Plan. However, the project never came to fruition and another developer is reviewing it at this time.

To the west: Adjacent in this direction is the Southwestern Bell Telephone Company Workstation that is zoned Amended C-8 Planned Commercial District (Workplace District). Abutting a major portion of the subject site is an approximately forty (40) acre parcel of ground that is vacant and was formerly used for agricultural purposes and a dwelling. This large parcel of ground is zoned NU Non-Urban Residence District.

To the east: Crossing State Route 109 are five (5) properties that front onto this roadway. The property located at the southeast corner of the State Route 109 and State Route 100 is utilized for a convenience store, with a car wash, and gasoline pumps and is zoned Amended C-8 Planned Commercial District. This property was designated by the Town Center’s Regulating Plan as ‘Workplace.’ Directly across State Route 109 from the subject site is an eight (8) acre tract of land that retains a ‘Workplace’ District designation under the Town Center Regulating Plan. These eight (8) acres were subdivided from a larger thirty-six (36) acre tract of and that extends to Eatherton Road to the east. The remaining twenty-eight (28) acres was rezoned to the R-4 7,500 square foot Residence District, with a Planned Residential Development Overlay District (PRD), to allow for its development with one hundred four (104) single family dwellings on individual lots – Main Street Crossing by Payne Family Homes (the current petitioner on Ackerley Place) – being authorized by the
City in 2016 and well underway currently. This property is designated ‘Neighborhood Edge’ under the Town Center Regulating Plan. A residential subdivision abuts this large tract of land to its south and is called Wildwood Trails, which has recently completed developmen: by Pulte Homes of St. Louis, with twenty (20) homesites. This site is zoned R-4 7,500 square foot Residence District, with a Planned Residential Development Overlay District (PRD), and designated by the Town Center’s Regulating Plan as ‘Neighborhood Edge’ District. The last property along this east side of State Route 109 is the Metro West Fire Protection District Headquarters and Station. This site is zoned NU Non-Urban Residence District, with a Conditional Use Permit, for a one hundred ninety-nine (199) foot telecommunications tower and equipment shelter.

**PETITIONER’S REQUEST >>>**

*< Original Design – February 6, 2017 >*

The petitioner, Payne Family Homes, is requesting a change in the Town Center’s Street Network Map to allow for Main Street to differ in design from the pattern that has been established in the nearby projects. The petitioner notes this change is justified, given the development pattern on this lot is almost entirely residential in nature, whereas other locations include more ‘Downtown or Workplace’ District uses, thereby necessitating the need for on-street parking and other improvements to accommodate that more intense use pattern. The proposed design includes a variable right-of-way width, from forty (40) feet to seventy (70) feet, with a section of the proposed Main Street having multiple traffic lanes, with medians. The roadway also includes two (2) roundabouts, some on-street parking, pedestrian facilities, stormwater improvements and streetlights, street trees, and signage. Main Street traverses through the entirety of the site, connecting State Route 109 and Manchester Road and vice-a-versa. The proposed roundabout on State Route 109, which would serve this site and the abutting development to the east (Main Street Crossing), is shown on the Preliminary Development Plan as being constructed by others, i.e. City of Wildwood.

Along with the Street Network Map change, the petitioner is also seeking a change in the property’s zoning from C-8 Planned Commercial District and R-6AA 3,000 square foot Residence District, with a Planned Environment Unit, to the Amended C-8 Planned Commercial District and the R-3 10,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD) to allow for the development of the 50.1 acre site with two (2) commercial outlots and 158 single family detached dwellings on individual lots. These lots range in size from approximately 4,800 square feet to over 9,000 square feet in area. The design of the subdivision creates four (4) distinct villages, with lot widths varying from forty (40) feet to seventy-two (72) feet. The lots with the forty (40) feet of frontage are the neo-traditional types, with rear entry garages from a service lane, while the remainder are more traditional types of residential units, with front entry garages. The neo-traditional area consists of fifty-four (54) total units and is located on the southern end of the site, with frontage onto Manchester Road, while the remaining 104 lots and dwellings are the majority of the site. Front-entry garages serve these units from the abutting public street network. Setback distances regardless of the village are twenty (20) feet for front yard areas, five (5) for side yard areas, and fifteen (15) feet for the rear yard areas.
A system of proposed public streets will serve these lots and dwellings. These streets are interconnected into blocks, a number of them greater than one thousand (1,000) feet around their respective perimeters. The design of the overall development includes two (2) stub streets and the extension of Hawthorne Village Parkway into the site from the northeast corner of the property. The intersection of Main Street at Manchester Road includes the installation of a roundabout planned by the City for that location. The internal street network includes curbs, gutters, stormwater facilities, pedestrian facilities, and street trees, lights, and signage. The Town Center Plan’s Street Specifications and Streetscape Requirements establish the level of improvements for the hierarchy of the streets, roadways, and service lanes that are planned, as part of the development. Specifics on these streets, roadways, and service lanes are identified in the cross-section drawings that have been provided by the petitioner on Sheet 6.1 of the Preliminary Development Plan submittal for the public hearing.

Other major features of this development, as reflected on the most recently submitted Preliminary Development Plan, include the following:

1. The proposed public space plan contains a number of elements, including a useable approximately one (1) acre area on Main Street as the community’s focal point. Other accommodations on the plan for public space include Phase II Stormwater Improvements and privately-held common ground. On-street parking will be provided in this area as well.
2. The amount of required public space is 275,299 square feet, where the developer noted that approximately 318,000 square feet is provided (approximately 7.3 acres), which includes the one (1) acre community square that accommodates two (2) pavilions, picnic tables, and barbecue grills.
3. The proposed landscaping plan for this development would comply with the City’s requirements in this regard. This information is identified by note on the Title Page of the Preliminary Development Plan package.
4. The lighting design and implementation would again comply with the City’s Outdoor Lighting Requirements, which again is reflected by a note on the Title Page of the submittal package.
5. The area of no disturbance in association with this design is limited to the northern boundary of the site, where Bonhomme Creek is located.
6. The design of the development includes at least ten (10) stormwater management facilities placed throughout the site, many of which have been engineered with three (3) to one (1) slopes.
7. The developer, based upon input from the public hearing that was held on these requests, has included a twenty (20) foot wide, easement area along the entire western boundary of the site, as a transition zone where a continuous retaining wall will be constructed.
8. The amount of the site to be dedicated to right-of-way purposes is indicated at 8.85 acres of area.
9. The area of tree preservation in association with the current design is 2.6 acres or 9.5% of the existing amount in place there at this time.
10. The amount of common ground, which is to be dedicated as part of this project, is 5.51 acres.
11. The termination of Street “D” at the northern boundary line lacks a formal turnaround component, such as a t-turnaround or a cul-de-sac.
12. The area of the site abutting the right-of-way of State Route 109, which is designated as ‘Workplace’ District under the Town Center Plan, is shown as two (2) future outlots for commercial development. These lots total over one (1) acre in size.

Also, at the public hearing during petitioner’s presentation, it was noted the type of housing would be identical to Main Street Crossing, another Payne Family Homes’ project in Wildwood.

< Revised Design – July 17, 2017 >

Since the initial public hearing and the May 1, 2017 Executive Meeting of the Planning and Zoning Commission certain changes have occurred to the proposed design of this site. The changes to the original design were the product of the two (2) Work Sessions that were held by the Planning and Zoning Commission with the petitioner. These Work Sessions were held at the end of May and June and resulted in modifications to a number of main design features associated with the residential use of this particular property and can be summarized as follows:

1. Increased the number of lots from the original plan provided at the May 1, 2017 Public Hearing by a total of one (1).
2. Revised the access and turnaround capabilities in the northwest corner of the site.
3. Altered the design of the stormwater facilities to increase access and usability, as part of the development’s overall common ground and public space components.
4. Increased the size of the Village Green and added more active play areas as part of it.
5. Removed the stub street that would have accessed the property abutting to the west of the subject site.
6. Returned the stub street along the southern boundary of the site, which had been removed in the version of the plan submitted for the June 23, 2017 Work Session.
7. Modified a majority of the “A” lots to accommodate rear entry garages.
8. Eliminated the two (2) lots located to the south of Commercial Outlot “B,” which backed to State Route 109.
9. Eliminated the construction of the Manchester Road roundabout and the extension of Hawthorne Village Parkway, but does provide for the rights-of-way dedications for future use, if determined needed.
10. Increased the level of tree preservation in the area of Bonhomme Creek (north end of the subject site).
11. Improved the function through design changes to Main Street within the site.
12. Provided a twenty (20) foot wide trail easement along the entirety of the site’s State Route 109 frontage.

< 2nd Revised Design – August 7, 2017 >

1. Reduced the lot count to a total of 156.
2. Added the ninety (90) foot wide lots along the western boundary of the site, where it abuts NU Non-Urban Residence District zoned property, which led to the loss of three (3) lots.
3. Preserved more existing woodlands in the northwest corner of the site by redesigning the stormwater management facility.
4. Eliminated the twenty (20) foot wide multiple-use trail easement bordering State Route 109, given difficult topography that is already necessitating the construction of a retaining wall system in that area of the subject site.

< 3rd Revised Design – September 17, 2018 >

The recent submittal of this revised plan, now called the Reserve at Wildwood, represents a completely different approach to the development of this site. The overall design of the residential subdivision focuses on more traditional lot and home designs, while capturing an ecological approach to the management of stormwater through the design of streets, homesites, and other subdivision related improvements. This approach includes the following items:

1. The reduction in the total number of lots to 135.
2. The elimination of a focal point public space, which was the Village Green in earlier plan submittals. Replacing the Village Green is a public space design that provides multiple nodes of activities, all interlinked by a system of trails and sidewalks.
3. The reworking of Main Street in terms of its specifications and location through the subject site.
5. The development of a stormwater management system that addresses runoff more at its sources, than in more traditional basin locations.
6. The reduction in the total number of detention basins across the entirety of the site.
7. The reduction in the ‘Workplace’ District designated area of the site’s frontage onto State Route 109.
8. The reconfiguration of lots and street designs, thereby eliminating rear entry garages accessed from the fronting street, transitioning of lots along the south and west boundaries of the site, and introducing an all cul-de-sac design.

< 4th Revised Design – November 28, 2018 >

The recent, and revised, submittal of the earlier August 20, 2018 plan, identified as the Reserve at Wildwood, remains a completely different approach to the development of this site. The overall design of the residential subdivision focuses on more traditional lot and home designs, while again intending to capture an ecological approach to the management of stormwater, through the design of streets, homesites, and other subdivision related improvements. This further revised approach includes the following items:

1. The total number of lots has been reduced again, now 133 on this proposed residential site.
2. The design of this residential subdivision includes four (4) distinct lot widths for the planned homesites, ranging from fifty (50) feet to eight (80) feet in size. Lot widths are critical in residential subdivision design, since they establish the parameters for requested building setbacks for side
yard areas, the number of garage spaces that are available, and the width of the dwelling’s front elevation that will be visible from the street.

3. The proposed coving associated with these homesites does vary the placement of the dwellings relative to the front yard build-to lines, while also siting the individual homes on lots to maximize views to public/open spaces. Driveway lengths to the dwellings from the abutting streets also vary, another component of coving, but, in most instances, are limited in terms of lengths, i.e. larger versus smaller driveway lengths.

4. The public space areas are identified, but eight (8) detention facilities are still planned in many of them. These facilities are intended to be dry types and are part of the overall stormwater management plan for the development, which includes the aforementioned stormwater swales along the edges of the proposed street network.

5. The design of Main Street, from a construction standpoint, remains unchanged, but the width of the right-of-way and associated easement areas now measure seventy (70) feet in size.

6. The design lacks any pedestrian improvements along State Route 109, in conjunction with these requested 133 homesites, with individual cul-de-sac streets typically showing only one (1) side of them with pedestrian improvements of this nature. This pedestrian improvement is a six (6) foot wide trail, not formal sidewalks, as typically required and constructed in all other Town Center Area residential projects. The State Route 109 frontage also lacks any roadway improvements attributable to this project’s impact in terms of new trip generation by it onto this existing street network.

7. The street network includes a system of cul-de-sacs, with grades associated with them ranging from two (2) percent to just over four (4) percent.

8. The proposed design of this development places the ten (10), eighty (80) foot wide lots (the largest in terms of overall sizes) along the property’s western boundary line to act as the transition area for this property. Many of the rear yard areas of these lots are supported by a tiered retaining wall system.

9. The placement of street trees will be outside the public right-of-way area due to the stormwater swales that are planned.

10. The extent of public space improvements has been identified on one (1) of the plan sheets submitted by the petitioner and generally include passive overlook areas, along with small gazebos, as part of each of them, particularly along the northern property line, and facing toward Bonhomme Creek. Despite these overlook areas, grading is indicated up to a minimal buffer area along this waterway.

11. The tree stand delineation that has been completed, as part of this revised plan submittal process, indicates approximately six (6) grand trees are located on the site, with the majority of the existing vegetation categorized as second or third growth types and are to be removed.

12. The access to the one (1) planned commercial outlot appears to be placed from Main Street, not State Route 109.

13. The relocation of Main Street intersection at Manchester Road to align with the community college’s property has led to the nearby area lot design components being changed as well. The design of the cul-de-sac area that is to be located in the southeast corner of the subject property, abutting State Route 109, has been revised to address the previous double cul-de-sac design, but still leaves a long, graded hillside, minus any trees, facing this major arterial corridor.
These changes are reflected on the attached plan sheets that have been provided by the petitioner to the City.

<5th Revised Design – December 17, 2018 through January 22, 2019>

At the meeting held on January 22, 2019 that was attended by the developer, the Department provided to them a list of options to address the impact of front-entry garages on the character of the subdivision, the individual streetscapes themselves, and the future compliance of other projects in the Town Center Area, if allowed as planned, and shown on the submitted Preliminary Development Plan. The list of options that were provided in this regard were as follows (no order of preference is established):

a. Setback distances greater than thirty (30) feet; may also use variable distances for the front yard areas of the lots as well.
b. Garden walls at edge of public easements that defined the hybrid public rights-of-way areas.
c. Narrower driveways @ the street intersections.
d. Side or rear-entry garage types used in the development, in lieu of front-entries.
e. Offset from fronts of dwellings from the garages, i.e. dwellings or components first, garage second.
f. Deeper front porch depths that extend beyond the garages.
g. No double door garages; must be split, not individual parts.
h. Tandem garages be provided, which reduces the number of garage doors by elongating the depths of them.
i. Architectural treatments added to the areas of the dwellings, where the garages are located, such as trellises, arbors, gates, landscaping, or enhanced pavement surfaces.
j. Minimum front areas of dwellings must have exposed living spaces, not garage doors (50%).
k. Block dimensions needed to be shortened.
l. Main Street Crossing dwellings should be considered for construction on the Reserve at Wildwood site. The units are being built within the project located on the east side of State Route 109 (across the roadway) and have been accepted and acted upon by the Planning and Zoning Commission, City Council, and the Architectural Review Board.

The Department’s position at this meeting with the developer was that not all of these suggested design components needed to be included in a revised plan, but as many as possible should be considered, if the Town Center Plan were to be amended to accommodate front-entry garages within this project’s boundaries.

Thereafter, the developer responded and is proposing to incorporate four (4) of the suggested options in a revised design for this residential subdivision. These four (4) items were as follows:

1. Setback distances greater than thirty (30) feet; may also use variable distances for the front yard areas of the lots as well.
2. Narrower driveways @ the street intersections.
3. Tandem garages be provided, which reduces the number of garage doors by elongating the depths of them.
4. Carriage doors will be used on all garages (not one (1) of the list of twelve (12) options provided above).

It is important to note that Payne Family Homes was already providing tandem garages as an option for the dwellings in this residential development, while the City has always mandated the use of carriage doors in Town Center Area, where projects lack service lanes and rear-entry garages. Therefore, the commitment on the part of the developer was the varying setback distances of the dwellings from the
edge of public rights-of-way and the narrower widths of the driveways through the same public rights-of-way areas.

The Department identified at the January 22, 2019 Planning and Zoning Commission meeting that it believed the addition of the following items to the list that was provided by the developer should be considered. These items are:

I. Garden walls at edge of public easements that defined the hybrid public rights-of-way areas.
II. Offset from fronts of dwellings from the garages, i.e. dwellings or components first, garages second.
III. Deeper front porch depths that extend beyond the garages.
IV. Minimum front areas of dwellings must have exposed living spaces, not garage doors (50%).
V. Main Street Crossing dwellings should be considered for construction on the Reserve at Wildwood site. The units being built within the project located on the east side of State Route 109 (across the roadway) have been accepted and acted upon by the Planning and Zoning Commission, City Council, and the Architectural Review Board.

It is important to note that, if the Main Street Crossing units were to be constructed in this project, many of the other items on the list would be included. Regardless, though, with the addition of these five (5) components to the others being offered by the developer, the front-entry garage design would be mitigated to an extent and result in a more compliant, compatible, and consistent residential project from the standpoints of the character of the units and their respective appearances from the network of streets.

Another discussion was held between the petitioner, after the January 22, 2019 Planning and Zoning Commission meeting, and it was noted at that time that seventy (70) percent of the allowable lots could accommodate for Main Street Crossing units, but, of those types of models, they would be limited to two (2) elevation plans and only be placed upon the fifty (50) foot and sixty-two (62) foot wide lots associated with the project. A plot of these lots is provided as an attachment to the Department’s report in this regard. The remaining lots would, in principle, be subject to the units that were presented at the public hearing on this matter in August 2018 (see attachment in this regard).

< Town Center Update Team (TCUT) Review Process – Background – January 6, 2020 >

This referred item was received by the Town Center Update Team (TCUT) at its March 12, 2019 meeting from the Planning and Zoning Commission, via the Department of Planning. The receipt of this major Town Center Area residential project came shortly after the formation of this group, not long after it just began to meet regarding the Town Center Plan, and its five (5) major components that are associated with it. The lack of background caused the Team to delay action on this matter, until it had completed its desired visioning efforts and began working on certain components of the plan, while also hearing from many parities about New Urbanism, as practiced in Wildwood, its application over the last approximately ten (10) years, and its relative strengths and weaknesses. With this background information, the Team Members believed each would be better capable of understanding of the complexities and considerations of this land use philosophy, and their interrelationships, when it came to this fifty (50) acre site that is located on State Route 109, just to the south of its intersection with State Route 100. Certainly, the size, location, and number of units being proposed on the site made this process daunting in many regards.
The Town Center Update Team (TCUT) was provided a significant amount of information regarding this proposal that had been developed and used by the Planning and Zoning Commission in its consideration of these requests. Additionally, the Members were able to hear from the petitioner (Payne Family Homes) at several of the meetings regarding this proposal and its unique aspects relative to its design – ‘Prefuribia.’ Along with these two (2) sources, the Department of Planning also responded to comments and questions relative to this property, its past zoning history, and current request that had been submitted by Payne Family Homes for consideration and action. Supporting information was also provided as well, including all plans and aerial photography to assist the Team Members in this regard. With this information, and these other resources, the Town Center Update Team (TCUT) decided that, before it could address the requested matters from the Planning and Zoning Commission, it still needed a better understanding the five (5) major components of the Town Center Plan. Therefore, the Team Members agreed to address the Street Network Map first, then to be followed by the Town Center Area Boundary Map, the Regulating Plan and related permitted land use activities, and concluding with the Neighborhood Design Standards and Architectural Guidelines of the same. It was noted by the group that, after working through the first two (2) components of the plan document, the Team Members could then discuss this matter in better context and reach an improved conclusion for the Planning and Zoning Commission’s consideration. Therefore, with this schedule, the Town Center Update Team (TCUT) acted upon this matter, after much time and effort had been expended on the first components of the plan’s update.

The process led to several key decisions in the period from March to November 2019. These decisions included prioritizing certain streets in the Town Center Area for completion or future construction. Main Street, which a major, planned portion of it is identified through this subject site, was recognized in this process as a high priority, particularly between its current terminus in front of the Wildwood City Hall and Eatherton Road. However, the Team Members did not alter the characteristics of Main Street relative to the portions of it that are currently not completed, of which, again, two (2) segments remain, one (1) of such being planned through this subject site. Therefore, the request by the current petitioner for an alteration of Main Street was not addressed by the update team, as part of its review of the series of proposals, nor its conversion from a major arterial roadway to a residential street, as proposed on the current plan from Payne Family Homes.

**Major Action on Land Use:** The Town Center Update Team (TCUT) allocated the majority of its time on this item discussing the impact of the proposed 133 homesites on this rolling and wooded site. The Team Members were concerned with the impact another major residential development would have on the natural beauty of the Town Center Area and how best to transition from this site’s western boundary to the abutting, and nearby, Non-Urban Residential Areas, where three (3) acre lot sizes for single family residential purposes are the principle land use. Some of the discussion among the Team Members related to past projects in the Town Center Area and the impacts on abutting sites, given the feedback the City had received in this regard from residents, both in the immediate vicinities of these development locations, along with others travelling through this portion of the City.

As part of the overall discussion of the Regulating Plan, the Members agreed that transitioning of the Town Center Area’s density and design concepts should be altered to better address this need. To this
end, the Town Center Update Team (TCUT) agreed to add certain properties into the Town Center Area, but through a new land use district designation named ‘Neighborhood Edge Transition’ District (NET). This district would be used along the perimeters, or edges, of the Town Center Area’s established boundary and offer a more gradual transition zone between higher density residential areas and existing, suburban-type or rural land use patterns. Key in this new district’s development was the decision of the Team Members to limit density associated with any property designated therein to no greater than two (2) units for every three (3) acres of land area, with the minimum lot size being one (1) acre in area. To accomplish the minimum lot size, certain lot depths and widths were also established.

This new district was utilized upon two (2) new locations that were added to the existing Town Center Area boundary, while also one (1) existing property, which is the Ackerley Place (The Reserve) location, also being designated by the Team Members. The Team Members believed that certain environmental and physical characteristics of this property, the amount of traffic, and certain other considerations, including the need to reduce the number of honesties associated with it, justified this change from ‘Workplace, Neighborhood General and Neighborhood Edge’ Districts to the new transition district - NET. This recommendation by the update team has a major impact on this site and clearly changes its role in fulfilling the goals of Town Center Area, which included the provision of higher density residential housing options to better protect the remaining low-density areas of Wildwood, while also creating increased population to assist the business community by their future patronage. In more practical terms, the change recommended by the update team would reduce the lot count associated with this site that was being proposed by the current petitioner from 133 units to 33 units in total. A major change relative to the existing allowances of the current Regulating Plan’s designations, as applied to this site.

**Petitioner’s Response to the Town Center Update Team’s Recommendation - Payne Family Homes:** The petitioner that is associated with this 50.65 acre site, Payne Family Homes, has received the recommendation from the update team and noted it is not acceptable to it due to the impact on the site’s density is very substantial and makes such difficult to develop, given current requirements relative to infrastructure, utilities, stormwater management improvements, and public spaces. The petitioner has also noted the property’s long commercial zoning history and that, at no time, was it ever considered for low-density residential, given its proximity to three (3) major roadways, including State Routes 100 and 109 and Manchester Road. With this recommended change by the update team, the likelihood of the project being submitted on this site is very limited and, again, the petitioner did not support the action of the Team.

**Department’s Response to Town Center Update Team’s Recommendation - Neighborhood Edge Transition District:** The Department of Planning has considered the action of the Town Center Update Team (TCUT) in regards to this Town Center Area site and does not believe it is an appropriate action for the betterment of this special area of the City, nor the community, as a whole. This statement is premised on the significant impacts such a change causes to the site’s potential use, with a reduction of over seventy-five (75%), percent in terms of requested yield and recommended allowance. Such a change on a site of this nature does not follow generally accepted principles associated with New Urbanism, the core basis of the City’s longstanding Town Center Plan. In the Town Center Area, density
is encouraged to balance and protect the low-density residential areas that form most of the land area of the City of Wildwood. Without such, the availability of housing options, of different sizes, designs, costs, and lots, would dissipate from the City and could lead to a host of unintended consequences for the community in the future.

Additionally, the Department would note the following reasons in regard to its position relative to the Town Center Update Team’s recommendation in this regard:

1. The site is located along three (3) major arterial roadways, which include State Routes 100 and 109 and Manchester Road. Low-density housing developments generally seek locations, where quiet and less traffic are present.
2. The site is bounded by a gas station, with a convenience store, an AT&T Work Center, both commercially zoned, and a number of institutional uses, including schools and churches.
3. The property has been designated as part of the Town Center Area, since the adoption of the plan in 1998, and was intended for a higher level of use.
4. The City of Wildwood previously designated this property as an Amended C-8 Planned Commercial District to allow for its development as a Target Store.
5. The current plan may not meet all of the requirements of the Town Center’s Street Network Map and Neighborhood Design Standards, but this reduction in density will even further increase its level of non-compliance, given the yield of lots will not provide the capital to accomplish the construction of the Main Street Extension through the site, nor have the anticipated amenities associated with a site of this stature.
6. The site is served by all utilities, including sanitary sewer lines, which were installed as part of a Neighborhood Improvement District (NID) authorized by the property owners and the City. Low density sites generally lack this existing range of utility services that are available to this location.
7. The current supply of low-density housing options far exceeds the amount of new, Town Center-type housing, which, by changing the land use designation here, will only exacerbate the shortfall.
8. The Master Plan, in the Conceptual Land Use Classifications Section of it, is clear in the intent that this area of the City, where “with their traditional heritage, as the commercial centers of the area, Pond and Grover, and the surrounding properties, offer an excellent location for the Town Center, which would include a mix of high density residential developments and commercial uses of a neighborhood orientation.”
9. The reduction in potential yield associated with this site is substantial and certainly can be interpreted as a hardship to its longstanding owners.
10. The current Reserve Plan has been identified by the Department, and others, as having several design components that are non-compliant, but those comments should not be used to assume the final design cannot be changed to address those design cues that are most critical to creating a solid New Urbanism environment.
11. The Town Center Update Team (TCUT) did create a transition area, with the addition of certain properties located between this subject site and Pond Road. This new transition area includes a church and a commercial dog park and provides a defined area to achieve a reasonable step-down in density and character from the more traditional areas of Town Center.
12. The Department would note that, growth for growth sake, has never been a philosophy of the City of Wildwood. However, managed, plan-compliant, and quality development is an asset to the community and brings new residents to it, which assists businesses, schools, places of worship, and revenues for all levels of government. Without growth, communities often struggle, particularly as housing options and stocks become limited or age. Offering a level of housing vibrancy and quality through planned developments can be the lifeblood of a community.

Summary - The Department noted its respect for the Town Center Update Team’s (TCUT) action, but did believe a less radical approach could be considered by the Planning and Zoning Commission to address the current plan for this site and maintain reasonable density, while meeting many, if not all, of the standards and guidelines associated with the Town Center Plan. Accordingly, the Department of Planning recommended, and the Planning and Zoning Commission concurred, the current land use designations associated with this subject site be retained and considerations be given to addressing the current plan, as has been the case in the past, thereby offering improvements to it, such being relative to the Town Center Plan and its current design standards and guidelines.

ANALYSIS >>>

All of the members of the Planning and Zoning Commission are aware of the history of this project and the time and resources that have been invested by the developer, City officials, and the public that has participated in its discussion. The project has been in three (3) phases, from the perspective of the Department of Planning. These three (3) phases began with the original Ackerley Place proposal, which mirrored, more so, than recent submittals, the tenets of New Urbanism. Thereafter, the Reserve at Wildwood was submitted by the developer and its design was fashioned after a development concept that is termed ‘Prefurbia.’ The last phase of this process was undertaken at the direction of the Planning and Zoning Commission by the Town Center Update Team (TCUT), which was asked to review and provide a recommendation on this subject matter. Collectively, these phases have led to almost five (5) years of meetings, Work Sessions, individual discussions, site tours, and other activities.

The outcome of this process can be summarized as follows:

1. The Ackerley Place proposal received a favorable action from the Planning and Zoning Commission, but was dropped by the developer due to concerns about the dissenting votes and anticipated action of City Council.
2. The Reserve at Wildwood was submitted and not supported by the Department of Planning due to certain non-compliance issues relating to the Town Center Plan.
3. The Reserve at Wildwood was re-worked on several occasions to address the concerns that were identified by the Department of Planning, as well as the Planning and Zoning Commission.
4. The Reserve at Wildwood was referred to the Town Center Update Team (TCUT) by the Planning and Zoning Commission to seek its opinion on it, as part of the review of the overall plan.
5. The Reserve at Wildwood was considered by the update team and it recommended reducing any allowed residential density to no more than two (2) units per every three (3) acres.
6. The Reserve at Wildwood was placed on the Planning and Zoning Commission’s January 6, 2020 agenda for consideration by its members of the update team’s recommendation, which they received, filed, and sought more time to find a middle ground solution in this regard.
7. The Reserve at Wildwood is being presented to the Planning and Zoning Commission for consideration and action at tonight’s meeting (July 20, 2020).

The process has been thorough, and all parties have attempted to find common elements of support. Acknowledging such, the Department has prepared a revised report that addresses the following considerations regarding this major Town Center Area residential development:

1. The Department has prepared an updated report, with recommendation, regarding this proposal.
2. The issue of Main Street and its overall design has been identified and changes have been made to the roadway’s character. These changes either fully or partially address the considerations about Main Street residential access, meandering sidewalks, and others.
3. The density of the project remains at 133 units, but alterations have been considered in this regard. A recommendation in this regard has been developed by the Department for consideration.
4. The extent of tree removal has also been identified during this review process and a majority of the existing woodlands are to be removed. A recommendation in this regard has been developed by the Department for consideration.
5. The overall roadway network, both planned inside the site, and associated with the existing streets that serve the property have also been identified in past Department reports and alterations/additions are being recommended.

Collectively, the Department has formulated a determination from the discussions and actions of the Planning and Zoning Commission, as well as the Town Center Update Team, which leads it to believe that, despite certain major departures from New Urbanism, as described in the City’s plan, the project does have merit, if the above five (5) items can be addressed.

In order of the list, the Department has the following supporting information for each.

1. The Department has prepared an updated report, with recommendation, regarding this proposal.
   a. The Department of Planning had previously prepared a report, with recommendation, that was not supportive of the changes to the Street Network Plan, related zoning of the property, and the use of an overlay district upon it. The rationales for this recommendation related to the Main Street and the application of the Town Center Plan’s Neighborhood Design Standards and Architectural Guidelines, which were not met to the degrees necessary for the Department’s support. However, this recommendation did note compliance to the Town Center Regulating Plan in terms of type of use (residential) and allowable density associated with this residential proposal upon the subject site.
   b. The Department of Planning would note that, over the course of time, this matter was being considered by the Town Center Update Team (TCUT), and then its discussion of it, such became apparent that many of the key Neighborhood Design Standards and Architectural Guidelines of the Town Center Plan are not as critical to be met, as other considerations relating to density,
tree preservation, public space, and roadway improvements. This switch in some respects reflects a pattern that had begun with the residential proposal identified as the Manors at the Meadows of Cherry Hills and that transitions between existing and new subdivisions must be introduced to foster more consistent character and design keys between the old and new. These priorities favored front-entry garages, more traditional street designs, and lesser density in some instances. As part of the current proposal, the Reserve at Wildwood, these priorities are apparent in its character and design and, now, more so consistent in many regards with developments approved by the City in the Town Center Area, such as Main Street Crossing, Villages at Bright Leaf, and the Manors at the Meadows of Cherry Hills.

c. The Town Center Update Team (TCUT), despite allowances for greater densities in Town Center Area, reduced the Reserve at Wildwood proposal from its requested 133 units to approximately 30 units. Again, the trend in Town Center Area is for less density, more consistent character with surrounding development, and designs that are less formal.

d. The Department of Planning would still note the land use categories associated with this site accommodate the proposed residential development pattern associated with the Reserve at Wildwood and its density is within the range established by the Town Center Plan. Given these factors, the Department believes a residential project of this nature is consistent with the Town Center Plan. Again, this statement is premised on use and density, not standards and guidelines.

2. The issue of Main Street and its overall design has been identified and changes have been made to the roadway’s character. These changes either fully or partially address Main Street residential access, meandering sidewalks, and others.

a. The design and character of Main Street through this project’s boundaries is very different than the existing two (2) segments that have been constructed. Even those two (2) segments of Main Street that have been constructed have utilized different specifications, which were based upon type of land use associated with them, i.e. Downtown District versus Neighborhood Edge District. However, in no case, has direct residential access been allowed to Main Street to this point.

b. The current design does allow direct residential access from a number of lots. The design of the street is truly more residential, than collector or arterial.

c. The developer, in acknowledging the Planning and Zoning Commission concerns in this regard, has increased the number of traffic calming measures within its proposed right-of-way area, while also retaining its curvilinear design to also assist in the management of speeds and other use characteristics. These design components are intended to improve the safety associated with vehicles accessing it from front-facing garages toward the street.

d. The Department of Planning would also note the developer has addressed the meandering trail that was associated with the original design of Main Street, to a more traditional location along the front of the lots. Also, in association with Main Street, the developer is now proposing to install individual picket fences along the frontages of all lots that are located along both sides of Main Street to improve its character and aesthetics. These changes are intended to help with the transition of Main Street from an arterial type to the east to a residential type now on its western end.

e. The Department of Planning does believe a transition of design and function can be accommodated as part of this project, given the priorities of Town Center Area developments
appear now to seek more standard designs versus New Urbanism types. Therefore, accommodating the requested change to the Street Network Map of the Town Center Plan can be considered in this situation, given the residential nature of the development.

f. The design of this street is unique in many regards; however, regardless of its non-compliance to the Street Specifications and Streetscape Requirements of the Town Center Plan. Many of the design components of this segment of proposed Main Street are consistent with low-impact development techniques, which are intended to manage stormwater more effectively, while also creating a more random pattern of dwelling placements along the build-to lines associated with each of the lots. Although different in character, this segment of Main Street does provide a continuous connection between State Route 109 and Manchester Road. Along with this continuous connection, this segment of Main Street provides pedestrian improvements consistent with its other constructed segments.

3. The density of the project remains at 133 units, but alterations have been considered in this regard. A recommendation on the density of the project, which can effect lot frontages, has been developed by the Department for consideration by the Planning and Zoning Commission.

a. The conversation about density of this development has been a consistent theme by the Planning and Zoning Commission, which was reinforced by the Town Center Update Team (TCUT). The Town Center Update Team (TCUT) made a recommendation to substantially reduce the density associated with the use of this site to retain more of the character of the property and lessen tree removal and site disturbance in association with it. The Planning and Zoning Commission was presented this recommendation from the update team and wanted to defer final action upon it to allow further consideration of the Reserve at Wildwood proposal, but with potential changes.

b. The Department has noted the density of the project is within the parameters of the Town Center Plan’s Regulating Map and its associated Land Use Category. Therefore, under the plan, the density is acceptable. However, the Planning and Zoning Commission and the Town Center Update Team (TCUT) have noted the density as too great.

c. The discussion on reducing density has included increasing the minimum lot width to a minimum of seventy (70) feet. Lot widths, as set forth in the Neighborhood Design Standards of the Town Center Plan, allow for distances to be less than seventy (70) feet.

d. The Department understands the desire to address density, which could equate to more tree preservation, less site disturbance, improved stormwater management, given less of the subject site becomes impervious types of surfaces, and a different character for this residential development than others in the Town Center Area. These reasons, and others, have led the Department to seek a reduction in lots within the project, but not solely for density reasons, but to address the provision of more green space, the removal of difficult building sites necessitating greater engineering solutions, the protection of the Bonhomme Creek buffer area (one hundred (100) foot distance: that must be maintained from its centerline), and the desired preservation of grand trees.

e. The recommendation of the Department relative to this matter would reduce the lot count by a total of six (6), bringing the recommended lot count to one hundred twenty-seven (127). These lots are identified on the attached plan sheet and identified as such.
4. The extent of tree removal has also been identified during the review process and a majority of the existing woodlands are to be removed. A recommendation in this regard has been developed by the Department for consideration.
   a. The current Tree Preservation Plan (TPP) for the Reserve at Wildwood indicates the subject site has 22.64 acres covered in woodlands. With the development of the site for the requested 133 lots, 3.70 acres of these woodlands are to be retained, along with three (3) of the six (6) grand trees. This amount of preservation equates to approximately sixteen (16) percent.
   b. The developer is also proposing to replant an area of almost five (5) acres of the subject site with new trees to address the City’s thirty (30) percent tree preservation requirement for the overall property (new plantings + preservation areas = 37.5%).
   c. The Department, in Item #3 of this list (specifically #3e.), is recommending two (2) of the three (3) grand trees to be removed by the elimination of two (2) lots, which lead to their protection.
   d. The Department is also recommending the grand tree located in the center of the proposed commercial lot be retained by the City requiring this area to be designated private or public open space and eliminate all grading associated with it, except for access purposes to the site. This action is supported by the Workplace District designation of it, since this land use category allows, as a permitted use, parks and open space, both public and private.
   e. The Department would note, by this approach, more area is preserved on the subject site, less stormwater is generated, protection of the property’s frontages is accomplished, and the Workplace District designation is retained for consistency purposes relative to both sides of State Route 109.
   f. The Department also believes the Manchester Road frontage lacks certain aesthetics, which must be addressed to create a more appealing area along this historic corridor through the use of landscaping, berms boulders, and other treatments. These treatments would offset some of the site disturbance and tree removal that is planned in this area and add to the character of the project as well.

5. The overall roadway network, both planned inside the site, and associated with the existing roadway network that serves the property has also been identified in past Department reports and additions are being recommended.
   a. The Street Network Map does not just address Main Street for this subject site, but other components of the existing network of streets and roadways, as well as the new internal types.
   b. The Street Network Map indicates, along with the Town Center Plan, the dedication of land area for public right-of-way purposes for the installation of a roundabout on Manchester Road, along the property’s respective frontage.
   c. The developer does not indicate such on the submitted Preliminary Development Plan. The Department would note such is required.
   d. The zoning process allows the City to defer construction of this improvement, since the south half of the right-of-way of Manchester Road is not inclusive of this site’s frontage, and collected a cash escrow for its future installation, which will be required of this developer.
e. The northern one-half ½ of the Manchester Road right-of-way area must be constructed in accordance with the Street Specifications and Streetscape Requirements of the Town Center Plan. The costs associated with such shall be the sole responsibility of the developer.

f. The developer does not indicate the extension of Hawthorne Village Parkway, which is set forth in the Town Center Plan, when the development associated with it was approved by the City of Wildwood.

g. The Department is not recommending the construction of this extension, but the dedication of land area for public right-of-way purposes in the future, if needed. Dedication, as part of the zoning process, eliminates the need to purchase it in the future or condemn it for its use.

h. The Department is not recommending the collection of escrow for this extension of Hawthorne Village Parkway, given the current and relative need of such.

i. The cul-de-sac areas of the internal streets, all of which are not inter-connected, have oversized green areas associated with them, which, in the opinion of the Department, could be used for stormwater management purposes, which may eliminate some, or reduce sizes, of the proposed seven (7) detention basins that are indicated on the Preliminary Development Plan.

j. The construction specification for Main Street, and all unnamed internal streets within the project’s boundaries, are intended to be constructed without curb and gutter and use open swales for the transport of stormwater. This design, as mentioned earlier in this Analysis, is a low-impact development technique, but appears to require more maintenance than traditional stormwater management practices in the public rights-of-way areas of Wildwood and Town Center Area. An understanding of the maintenance costs and best management practices needs to be completed, before the City of Wildwood would accept them.

k. The pedestrian network associated with this project is extensive, but must be designed and constructed to ADA standards, along with minimum widths of all of these improvements at eight (8) to ten (10) feet, depending on locational characteristics.

l. The collection of Traffic Generation Assessment Fees will be required of this development and no credits will be provided.

SUMMARY AND RECOMMENDATION >>>

Given these recommended modifications and additions associated with the current Reserve at Wildwood Plan, if accepted and incorporated into the final design of the project, the Department of Planning is recommending the Planning and Zoning Commission support the modification of the Town Center Street Network Map. Additionally, along with this Town Center Street Network Map change, the Department is recommending the requested change in zoning from the C-8 Planned Commercial District and R-6A 3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-8 Planned Commercial District and R-3 10,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD), be considered favorably by the Planning and Zoning Commission. This support is premised on the above analysis associated with the design of the residential portion of the site, which appears to represent Wildwood’s direction on New Urbanism and its application in its Town Center Area.
The Department of Planning has now prepared Attachment B – Conditions, which were not available at the January 20, 2020 meeting of the Planning and Zoning Commission, given the change in recommendation, i.e. from denial of request to support of it. With the conditions completed and incorporated into the Department’s Information Report, it is now ready to be acted upon by the Planning and Zoning Commission. The conditions are reflective of the last meeting of the petitioner with the Department of Planning, as directed by the Planning and Zoning Commission, and the ‘Analysis’ and its salient points contained therein. The Department would note the favorable support of this request is premised on full and complete compliance of the petitioner to the conditions herein referenced in Attachment B of this report.
ATTACHMENT B – CONDITIONS

1. PERMITTED USES

a. This Planned Residential Development (P.R.D.) Overlay District shall authorize the maximum development of one hundred thirty-two (132), detached single family dwellings on individual lots, with common ground and public space areas, and all permitted accessory structures normally found in conjunction with the primary use of each of the allowable residential properties. The developer or the eventual Homeowners Association shall have the right to construct a community pool within any designated common ground area, excepting the Village Green. If a community pool is constructed within the boundaries of this Planned Residential Development (PRD) Overlay District, the Site Development Plan (SDP) must be amended in the future and permits obtained from the City of Wildwood and St. Louis County.

b. An outlot, having direct frontage onto State Route 109 and Main Street, shall be established on the subject site and is authorized for all “Workplace” District permitted activities, as set forth in the Town Center Plan for the same (Regulating Plan). These permitted activities are limited to, however, stores, shops, and open-air markets for retail purposes, service uses, professional and general offices, financial institutions, with drive-through facilities, and restaurants, but without drive-through facilities. This outlot cannot be larger in size than one point eight (1.8) acres in area.

2. LOT SIZES, DEPTHS, AND BUILDING REQUIREMENTS

a. Each detached dwelling unit to be constructed within this planned residential subdivision shall be located on an individual lot of record and, collectively, all such parcels of ground shall have an average distance of no less than sixty-five (65) feet in width at its respective front building line, with a corresponding depth of no less than one hundred fifty (150) feet, which shall be as approved by the Planning and Zoning Commission on the Site Development Plan. Additionally, any lot having frontage onto Main Street, along with direct residential access to same, shall be required to have a minimum distance of seventy (70) feet in width at its respective front building line and be designed to accommodate on-site turnaround capabilities for vehicles exiting these lots onto Main Street.

i. Individual dwelling placement on each of the allowable lots shall be undertaken in coordination with the Department of Planning to replicate the “Prefurbia” approach, so as no two (2) dwellings shall be in line on any set of abutting lot areas.

ii. No two (2) dwellings, whether on the same side of the street, opposite each other on a common frontage, or occupying any of the four (4) common corners of an intersection, shall be of the same color, elevation, design, or type.

b. All detached single family dwellings shall have a minimum finish floor elevation of their front porches of eighteen (18) inches in height above the adjoining sidewalk grade. All dwelling units
shall have a front porch, which must extend across at least forty percent (40%) of the façade’s elevation facing the frontage line, at a minimum depth of no less than six (6) feet. No building facade shall show more than four (4) corners to the frontage line or as approved by the Architectural Review Board on the required elevations.

c. No building and/or structure shall be more than two (2) stories above final grade, as measured from the front building line on any individual lot.

d. Direct residential drive access from front-facing garages shall be allowed for all permitted lots within this development to the system of public, internal streets, but the garage door(s) on each unit must be a minimum of six (6) feet behind an imaginary line formed by an extension of the front elevation of the dwelling (including the front porch) parallel to the lot’s frontage. Individual garage doors shall not be greater than twenty (20) feet in width and must be carriage types, including windows, and incorporate other architectural treatments, as determined by the City’s Architectural Review Board to be appropriate, to lessen their prominence within the visual corridor formed by these interior streets within the development, unless a suitable alternative design is provided for these openings. The developer shall provide a minimum of two (2) options that incorporate these requirements to the Planning and Zoning Commission for its consideration, as part of the Site Development Plan review and action process, regarding the front of the garages that further reduces their prominence from the abutting street view. Architectural type shingle selections shall be required on all residential units of a minimum thirty (30) year standard.

e. The first story, interior clear height for all single family dwellings shall be not less than nine (9) feet.

f. Detached single family dwelling units, which face the frontage line, but also places the side of the building along another right-of-way, shall be designed to incorporate the elements of the front facade along that portion of the structure. The placement and design of these units shall be approved by the Planning and Zoning Commission on the Site Development Plan and the elevations of these units by the Architectural Review Board.

g. The proposed architectural design, character, and style of all buildings and dwelling units shall adhere to the City of Wildwood’s Town Center Architectural Guidelines, Neighborhood Design Standards, and any other applicable requirements of the Town Center Plan, excepting no vinyl siding shall be allowed on any dwelling unit within the boundaries of this Planned Residential Development Overlay District (PRD). All materials used on any facade of a residential unit shall be either brick, stone, fiber cement siding and backer board, or some combination. Approval of the required design shall be by the Architectural Review Board. Minimally, all buildings shall maintain a consistent theme throughout the boundaries of this Planned Residential Development Overlay District in terms of materials, colors, and styles.
h. Any residential lot, with frontage onto Main Street, through this project, shall have a picket fence installed along its respective frontage with this public street and said fence shall be placed in an easement to the Homeowners Association for ownership, maintenance, and repairs. The picket fence fronting the street shall be made of wood pickets painted white. These wood fences may have brick piers. Vinyl materials may be used as a substitute for fences, but shall be subject to review, consideration, and action by the City's Architectural Review Board to ensure acceptable quality. The locations and extents of these fence components on individual lots shall also be reviewed and acted upon by the Planning and Zoning Commission, as part of its Site Development Plan review process.

i. The overall area of this Planned Residential Development Overlay District (PRD) shall be no less than fifty (50) acres.

3. PLAN SUBMITTAL REQUIREMENTS

Within twelve (12) months of the P.R.D. Overlay District approval by the City Council, and prior to any site disturbance, the developer shall submit to the Planning and Zoning Commission for their review and approval a Site Development Plan. Where due cause is shown by the developer, time intervals may be extended once by the Planning and Zoning Commission in accord with requirements of Section 420.060 of the City of Wilwood Zoning Ordinance. Said Site Development Plan shall include, but not be limited to, the following information:

a. Outboundary plat and legal description of the property.

b. A general numbered lot plan with setback lines from all streets and roadways on and adjacent to the property. A typical lot diagram, indicating all site design information such as, but not limited to, right-of-way width, improvement dimensions and locations, setbacks, and building placement.

c. The location and size of all parking areas, pavement widths, and right-of-way dedications of all internal roadway improvements and drives.

d. A general plan indicating setback lines along the perimeter of the subject tract of land and surrounding property lines and related improvements within four hundred (400) feet of this site's boundaries.

e. Location of all roadways adjacent to the property, including required roadway right-of-way dedication and pavement widening with existing and proposed improvements, and general location, size, right-of-way, and pavement width of all interior drives.

f. The location and size of all freestanding signs, lighting, fences, sidewalks, and other above ground structures, except retaining walls less than two (2) feet in height per section.

g. Existing and proposed contours at vertical intervals of not more than two (2) feet.

h. General location of sanitary sewer facilities.

i. Parking and density calculations.

j. Conceptual location and size of common ground areas.

k. A typical section of the proposed road indicating the placement and design of required streetscape improvements.
I. A Landscape Plan including, but not limited to, the location, size, and general type of plant materials to be used in accord with the City of Wildwood’s Ordinance 410 and accompanying Tree Manual.

m. An inventory of the percent of tree canopy or individual trees to be retained on the site.

n. Location of all existing and proposed easements.

o. All other information not mentioned above, but required on a preliminary plat in accord with Section 420.060 of the City of Wildwood Subdivision and Development Regulations.

If the Planning and Zoning Commission determines, through its standard review processes, the Site Development Plan cannot be acted upon due to non-compliance to the site-specific ordinance, the Zoning Ordinance, or other land use regulations applicable to this type of subdivision, as interpreted by it, then the Street Network changes, the rezoning of the subject site, and the application of the Planned Residential Development Overlay District shall not remain effective thereafter and the City must initiate the revocation process described in the Zoning Ordinance for this type of circumstance.

4. SITE DEVELOPMENT PLAN DESIGN CRITERIA

The above Site Development Plan shall adhere to the following specific design criteria:

Build-To Lines - Residential

a. Any building or structure, other than boundary and/or retaining walls, fences, detention facilities, and/or light standards, shall adhere to the following build-to lines, as specified in the Town Center Plan’s Neighborhood Design Standards:

   i. Twenty-five (25) feet from any right-of-way line.

   ii. Eight (8) feet for any side yard property line and ten (10) feet for side yard areas that abut the perimeter of the Planned Residential Development Overlay District.

   iii. Thirty (30) feet for all rear yard areas.

Parking Setbacks – Residential

b. All parking stalls or loading spaces, excluding points of ingress or egress for the detached dwelling units, shall be located behind the front elevation of the dwelling or a minimum of thirty-one (31) feet from the edge of public right-of-way. Driveway widths serving these required parking spaces, specifically between the edge of the public right-of-way and the front building line, shall be as approved by the Planning and Zoning Commission on the Site Development Plan, but be minimized in their respective distances to the greatest extent possible.
Access and Roadway Improvements

c. Establish and dedicate the required amount of right-of-way and/or easements along this property’s State Route 109 frontage to the Missouri Department of Transportation (MoDOT) for public roadway purposes, which shall accommodate the ultimate design for the installation of any future roadway, multiple-use trail, pedestrian facility, and related item, along with any other improvements that may be required therein. Improvements to State Route 109 shall conform to the requirements of the Missouri Department of Transportation (MoDOT) and the City of Wildwood’s Street Specifications of the Town Center Plan, as directed and approved by the State of Missouri and the City of Wildwood’s Department of Public Works. All streetscape requirements (street trees, lights, signs, waste receptacles, benches, sidewalks/trails, and other items consisting of approved materials) shall be installed by the developer, as specified by the City of Wildwood’s Town Center Plan within the right-of-way of State Route 109 and directed by the Department of Public Works.

d. Establish and dedicate a seventy (70) foot wide land area through the subject site for the required amount of public right-of-way for the construction of Main Street within the site, which shall adhere to the Town Center Plan’s Street Specifications and the Streetscape Design Requirements, as directed by the Department of Public Works and approved by the Planning and Zoning Commission on the Site Development Plan. Thereafter dedication, the developer shall be responsible for the construction of said Main Street within the dedicated right-of-way of Main Street. Along with this dedication of right-of-way, the developer shall provide a five (5) foot wide roadway, maintenance, landscaping, sewer, sidewalk, and utility easement along both sides of this public dedication area. All streetscape requirements (street trees, lights, signs, waste receptacles, benches, and other items consisting of approved materials) shall be installed by the developer, as specified by the City of Wildwood’s Town Center Plan within the right-of-way of Main Street and directed by the Department of Public Works.

e. Complete the necessary dedication of land area within this subject site for public right-of-way purposes associated with the internal network of streets. These dedications for public rights-of-way shall be used for the construction by the developer of a network of internal residential streets for service to the authorized lots. These dedications shall be a minimum of seventy (70) feet in width to accommodate the construction of two (2) lanes of roadway surface, stormwater management facilities and improvements, and eight (8) foot wide sidewalks, including a tree lawn area, which all adhere to the Town Center Plan’s Street Specifications and the Streetscape Design Requirements, as directed by the Department of Public Works and approved by the Planning and Zoning Commission on the Site Development Plan. Along with this dedication of these rights-of-way areas, the developer shall provide a five (5) foot wide roadway, maintenance, landscaping, sewer, sidewalk, and utility easement along both sides of this public dedication area. All streetscape requirements (street trees, lights, signs, waste receptacles, benches, and other items consisting of approved materials) shall be installed by the developer, as specified by the City of Wildwood’s Town Center Plan within the rights-of-way of these unnamed streets and directed by the Department of Public Works.
f. Dedicate the required amount of right-of-way and/or easements along this property’s Manchester Road frontage to the City of Wildwood, Missouri for public roadway purposes and the future construction of required roadway improvements, which includes a roundabout. A future roundabout, and related channelization islands and other improvements required therein, shall not be required of the developer, but the dedication of right-of-way for such shall be made at the time of the Record Plat. Future improvements to Manchester Road shall conform to all of the requirements of the City of Wildwood’s Street Specifications of the Town Center Plan, as directed and approved by the City of Wildwood’s Department of Public Works. All streetscape requirements (street trees, lights, signs, waste receptacles, benches, and other items consisting of approved materials) shall be installed by the developer, as specified by the City of Wildwood’s Town Center Plan within the right-of-way of Manchester Road and directed by the Department of Public Works.

g. Dedicate the necessary and prescribed easement area for multiple-use trail purposes to accommodate the extension of Hawthorne Village Parkway through the subject site to the proposed pedestrian network therein, of which shall adhere to the Town Center Plan’s Street Specifications and the Streetscape Design Requirements, as directed by the Department of Public Works and approved by the Planning and Zoning Commission on the Site Development Plan. The multiple-use trail extension, in association with Hawthorne Village Parkway, shall not be the responsibility of the developer of this site in terms of its construction or escrow.

h. Provide a stub street study for review and recommendation by the Department of Public Works and action by the Planning and Zoning Commission. Land dedications, design criteria, and safety components determined necessary for any stub street extension shall be indicated on the Site Development Plan and reviewed and acted upon by the Planning and Zoning Commission.

i. Any planned traffic island/cul-de-sac shall be designed and constructed by the developer of this residential subdivision in accordance with City of Wildwood standards, and as directed by the Department of Public Works. The Planning and Zoning Commission, on the Site Development Plan, shall approve the final design of all traffic calming improvements, which shall be inclusive of pedestrian safety measures within the Main Street right-of-way area. These pedestrian safety measures can include, but not be limited to, speed tables, raised crosswalks, with special lighting and signage components, landscaped medians, and other measures, as necessary.

**Miscellaneous Roadway Requirements**

j. Installation of landscaping and ornamental entrance monument or identification signage, if proposed, shall be reviewed by the Department of Public Works for sight distance considerations and approved prior to its installation or construction. All signage shall be located in an easement to the benefit of the Homeowners Association or common ground.
k. If required sight distance cannot be provided at the access location, acquisition of right-of-way, reconstruction of pavement, including correction to vertical alignment and other off-site improvements, may be required to provide the required sight distance as directed by the Department of Public Works.

l. **Construction access shall be limited to and from State Route 109 and Manchester Road during the development of this site.**

m. Sidewalks shall be required on all public and private streets and provide for a continuous and logical layout of this pedestrian network. Design and construction requirements for all sidewalks within the entire development shall be as established in the Street Specifications and Streetscape Elements of the Town Center Plan. Approval of their location, design, and material shall be by the Planning and Zoning Commission, as part of the Site Development Plan review process. However, no sidewalk shall be less than eight (8) feet in width.

n. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public road right-of-way. Utility relocation cost shall not be considered as an allowable credit against the petitioner’s Traffic Generation Assessment contributions. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of roadway improvements. The City of Wildwood will assist, where applicable, with the discussions on said utility requirements, so as to minimize delays and costs to the developer. Any decision in this regard shall be acted upon by the City Council, if funding is associated with such.

o. All internal streets, access drives, or lanes, whether public or private, shall comply with the Streetscape Requirements of the Town Center Plan in terms of improvements, such as drive lane widths, sidewalks, stormwater drainage facilities, garden walls, street trees and lights, and pedestrian furniture. If certain streets, drives, or lanes are to be private, an easement shall be provided to the City granting public use of them for pedestrian and vehicular purposes. These easements shall be granted at the time of the Record Plat approval by the City Council.

**Parking Requirements - Residential**

p. Parking spaces shall be provided as required by the Town Center Plan’s Neighborhood Design Standards and Section 415.340 Off-Street Parking and Loading Requirements of the City of Wildwood Zoning Ordinance for the R-3 10,00 square foot Residence District.

**Landscape Requirements - Specific**

q. Landscaping shall adhere to all requirements of Chapter 410 Tree Preservation and Restoration Code of the City of Wildwood, and its accompanying Tree Manual, including the submittal of a Tree Preservation Plan, in conjunction with the Site Development Plan. Grand Trees, as
defined by this Chapter, shall be a priority in terms of their preservation and no such designated tree can be removed from the project site’s boundaries (see Condition 4w.).

r. All streets, roads, and lanes shall be appropriately landscaped as required by the Streetscape Design Requirements of the Town Center Plan and approved by the Planning and Zoning Commission on the Site Development Plan.

s. The areas of existing vegetation within the P.R.D. Overlay District boundaries identified as to be retained shall be marked on the site prior to the commencement of any disturbance in accord with the City of Wildwood’s Chapter 410 Tree Preservation and Restoration Code. These areas shall be indicated on the Site Development Plan submitted to the City of Wildwood for Planning and Zoning Commission review and approval. Existing mature tree canopy shall be preserved in accordance with the requirements of City of Wildwood’s Ordinance 410 Tree Preservation and Restoration Code.

t. Landscaping within the defined common ground areas shall comply with Chapter 410 Tree Preservation and Restoration Code requirements and accompanying Tree Manual. The Planning and Zoning Commission, on the Site Development Plan, shall approve the planting pattern. Amenities, such as benches, lights, and walking paths shall be installed in the open space area of the residential development by the developer of these one hundred twenty-seven (127) dwelling units.

u. The developer shall provide a minimum ten (10) foot wide, landscape buffer strip, within a perpetual easement dedicated to the Homeowners Association for its maintenance and care, along the entire western boundary of the site, including upon individual rear lot areas, for plantings, as reviewed and acted upon by the Planning and Zoning Commission.

v. A Landscape Architect shall sign and submit all plans for review and approval for this development.

w. All grand trees, as defined by the Chapter 410 Tree Preservation and Restoration Code, shall be preserved on this site and protected in accordance with the recommendations of the City’s Landscape Architect during the entirety of the construction phase in association with the subject site.

**Signs - Residential**

x. Signs for this P.R.D. Overlay District shall be erected in accordance with the Town Center Plan Architectural Guidelines and Section 415.410 Sign Regulations of the City of Wildwood Zoning Ordinance for the R-3 10,000 square foot Residence District.
y. The location of all signage shall be as approved on the Site Development Plan by the Planning and Zoning Commission. Signage not located on common ground must be erected within an easement.

**Lighting Requirements**

z. The location of all lighting standards shall be as approved on the Site Development Plan. No on-site illumination source shall exceed sixteen (16) feet in height or be so situated that light is cast directly on adjoining properties. Illumination levels for all lighting shall comply with the provisions of the City of Wildwood’s Zoning Code, Section 415.450 “Outdoor Lighting Requirements.” A Lighting Study shall be submitted in conjunction with the Site Development Plan indicating compliance to these requirements. The Planning and Zoning Commission shall approve the location, design, and appearance of all light standards and fixtures as part of the Site Development Plan review process.

**Miscellaneous Conditions**

aa. The design, color, material, and location of all garden and screen walls or fences, if planned or required, shall be consistent with the requirements of the Town Center Plan’s Architectural Guidelines and be shown on the Site Development Plan for review and action by the Planning and Zoning Commission and the Architectural Review Board.

bb. Improvements associated with public infrastructure, such as roadways, sidewalks, and access points, shall comply with general design principles that will provide for safe and efficient movement of traffic in and around these sites and improve overall circulation in the area. These improvements shall be reviewed and approved by the Department of Public Works.

cc. Hours of construction and grading activity shall be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. No development (grading and construction) activity shall be authorized on Sundays.

dd. All retaining walls exceeding three (3) feet in height per section or crossing individual property lines shall be constructed of an appropriate inter-locking concrete block system. Walls crossing property lines shall be located in a maintenance easement. The design, color, material, and location of all walls shall be consistent with the requirements of the Town Center Plan’s Architectural Guidelines and be shown on the Site Development Plan for review and action by the Planning and Zoning Commission.

ee. The location of all utility easements for proposed service to this development shall be as approved by the Planning and Zoning Commission on the Site Development Plan. All utilities installed to serve this site shall be placed underground, including any existing overhead lines located on the subject property.
5. **TRAFFIC GENERATION ASSESSMENT FEE**

The developer shall contribute to the West Area Traffic Generation Assessment Trust Fund established by Section 140.210 of the City of Wildwood's Revised Codes. This assessment must be paid in full at the time of the first Zoning Authorization for any building or structure or when the individual issuances of building permits for the authorized lots are approved. This contribution shall not exceed the amount established by multiplying the number of parking spaces provided by the following rate:

<table>
<thead>
<tr>
<th>Type of Development</th>
<th>Required Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Family Dwelling <em>(detached)</em></td>
<td>$1,271.72/Parking Space</td>
</tr>
</tbody>
</table>

*(Parking space is defined by Section 415.280 of the City of Wildwood Zoning Code.)*

If type of development proposed differs than those listed, rates shall be provided by the Department of Public Works.

As this development is located within a Trust Fund area established by the City of Wildwood, any portion of the traffic generation assessment contribution, which remains, following completion of roadway improvements required by the development shall be retained in the appropriate trust fund.

The amount of this required contribution, if not submitted by January 1, 2021, shall be adjusted on that date and on the first day of January in each succeeding year thereafter in accord with the construction cost index as determined by the City of Wildwood Department of Public Works.

The Planning and Zoning Commission is recommending these fees be credited to the developer for use for the purposes of assisting with completion of required roundabout construction on Manchester Road. The granting of these credits is at the sole discretion of the City Council.

6. **VERIFICATIONS PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN**

Prior to approval of the Site Development Plan, the developer shall provide the following:

**Stormwater Improvements**

a. Submit to the Planning and Zoning Commission an engineering plan approved by the City of Wildwood Department of Public Works and the Metropolitan St. Louis Sewer District showing that adequate handling of the stormwater drainage of the site is provided.

1. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood and the Metropolitan St. Louis Sewer District standards.
2. All stormwater shall be discharged at an adequate natural discharge point.
3. Retention/detention of differential runoff of stormwater shall be required. Stormwater management shall be provided in permanent retention/detention facilities, such as ponds or other acceptable alternatives. These retention/detention facilities shall be completed and
in operation prior to the issuance of building permits for an approved dwelling unit, except display lots.

4. All proposed retention/detention facilities and related stormwater improvements shall be located in a common ground area and insure perpetual maintenance to the Homeowners Association to be created at the time of platting of this development.

5. The developer of this site shall be solely responsible to provide the necessary mechanisms, as part of the Site Development Plan/Improvement Plan process, to implement "best management practices" for stormwater management and the construction of related facilities. Minimally, these practices/facilities should include rain gardens, vegetative swales, and other options to substantially reduce the amount of stormwater leaving the subject site.

6. The developer shall provide adequate detention and/or hydrologic calculations for review and approval of all stormwater that will encroach on City of Wildwood/Missouri Department of Transportation (MoDOT) rights-of-way.

7. A bond or letter of credit will be required by the City of Wildwood to cover any downstream damage to abutting or adjacent properties, common ground areas, or drainageways caused by the developers' use of this subject site (land/disturbance/grading/construction activities, etc.), which shall be used for the restoration of damaged areas to their pre-development condition, if the developers fail to meet their responsibilities in this regard. The amount of this bond and the establishment of the process for creating an accurate baseline condition for the existing downstream facilities shall be at the discretion of the City of Wildwood Department of Public Works, in conjunction with input from the petitioner's engineer.

**Geotechnical Report**

b. Provide a Geotechnical Report covering development and grading required by improvements involved with this site, as directed by the Department of Public Works. Said report shall verify the adaptability of grading and improvements with soil and geologic conditions which are susceptible to rapid erosion, landslide, and/or creep. A statement of compliance with this study, signed by the Geotechnical Engineer preparing the report, shall be included on all Site Development Plans. The development and construction plans shall be designed to conform to the requirements and conditions of the Geotechnical Report. The Geotechnical Engineer shall be required to sign and seal all plans with a certification the proposed construction will be completed in accordance with the grading and soils requirements and conditions contained in the report.

**Stormwater Pollution Prevention Plan**

c. Submit a Stormwater Pollution Prevention Plan, as part of the Site Development Plan review process, indicating compliance to all Federal, State, and local requirements regarding the management of stormwater runoff to prevent siltation and erosion, while preserving water quality, both upon the site and on downstream properties.
Environmental Assessment – Phase One

d. The developer shall provide to the Planning and Zoning Commission, as part of the Site Development Plan submittal package, a Phase I Environmental Assessment Report of the property, which indicates its current condition relative to its past utilization by other owners. Determination regarding any required mediation shall be identified and completed, prior to the approval of the Record Plat and before the occupancy of any residential unit, all being in accordance with State and federal standards and guidelines, as set forth by the United States Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR), for any determined contaminant exceeding a residential cleanup standard/guideline, with the cost borne for such by the developer and not the City of Wildwood.

Floodplain Study and Plans

e. The developer shall provide a floodplain/wetlands study to the Department of Public Works indicating compliance to the requirements of the City of Wildwood, the U.S. Army Corps of Engineers, and the Federal Emergency Management Agency (FEMA) regarding disturbance or development in the protected waterways and floodplain areas. This study shall minimally provide information relating to disturbance of any protected area and be reviewed and acted upon by the Department of Public Works, as part of the Site Development Plan submittal process.

Archeological Inventory

f. The archeological assets of this subject site, such as remnants of buildings, structures, or other improvements, shall be cataloged, photographed, and preserved, if possible, by a professional/firm with expertise in this field. This survey shall meet generally accepted industry practices and procedures for the delineation of areas, assets, and other considerations to guarantee that these features are catalogued, recorded, and addressed before any land disturbance can occur on the site. The City of Wildwood’s Historic Preservation Commission shall approve the professional/firm chosen by the developer of this project to conduct this assessment and survey, before any of this related activity occurs on the site.

7. RECORDING

Within ninety (90) days of approval of the Site Development Plan by the Planning and Zoning Commission, the approved plan shall be recorded with the St. Louis County Recorder of Deeds.
8. VERIFICATION PRIOR TO PERMITS

Notification to Department of Planning

a. Subsequent to approval of the Site Development Plan and prior to issuance of any grading, foundation, or building permit, all approvals from the Department of Public Works (Wildwood), the Missouri Department of Transportation (MoDOT), the Metro West Fire Protection District, the Missouri Department of Natural Resources (MDNR), and the Metropolitan St. Louis Sewer District (MSD) must be received by the Department of Planning.

b. Prior to the issuance of a foundation or building permit for any lot, which adjoins the common ground area and/or detention, basin, written certification from a Professional Engineer which verifies these areas are graded in accordance with the approved plans, must be received by the Department of Planning.

Roadway Improvements

c. Roadway improvements must be completed prior to the issuance of building permits in excess of twenty (20) percent of the total authorized units. The Manchester Road off-site improvements may be credited against the overall Traffic Generation Assessment Fee (TGA) charge associated with these allowable residential units, if authorized by the City Council. Any delays in utility company relocation and adjustments will not constitute a cause to allow occupancy prior to completion of roadway improvements.

Land Subdivision

d. Record a proper subdivision of the property and comply with all other applicable Subdivision and Development Regulations sections affecting the development of land, except as otherwise specified by this ordinance.

Indentures

e. With the filing of the record plat establishing separate lots, the developer shall record an approved indenture, which defines the necessary assessments and specific trustee obligations in accord with provisions of Section 415.470 and 415.510 of the City of Wildwood Zoning Code.

Escrow Requirements

f. All improvement and landscaping costs shall be submitted to the City of Wildwood through the standard subdivision escrow procedures.
Improvement Plans

g. The developer of this residential subdivision shall provide to the City Improvement Plans indicating construction details relative to public and private infrastructure associated with its development. Said plans will be used to calculate escrow requirements for these identified improvements.

Sanitary Sewage System

h. The developer shall provide verification from the Metropolitan St. Louis Sewer District that public sewer service has been provided to this site. Verification shall be in a form acceptable to the City of Wildwood. The developer shall be responsible to pay, as a single lump sum, any remaining fee/assessment associated with the Neighborhood Improvement District’s establishment for sanitary sewers constructed and serving this site.

Potable Water Service

i. The developer shall provide verification from the Missouri American Water Company (MOAM) that service to this subdivision can be provided at acceptable levels relative to the density of the project and not cause service issues to other households served by the same.

9. GENERAL DEVELOPMENT CONDITIONS

a. Provide adequate temporary off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driving conditions.

b. A grading permit is required prior to any grading on the site. Interim stormwater drainage control in the form of siltation control measures is required.

c. A copy of the most recently approved Site Development Plan for this P.R.D. Overlay District development shall be prominently displayed at all times in all sales offices for this development.

d. The petitioner shall be responsible for obtaining all necessary permits from the Department of Natural Resources Clean Water Commission as they relate to the development of this tract of land.

e. If cut and fill operations occur during a season not favorable for immediate establishment of a permanent ground cover, a fast germinating annual, such as Rye or Sudan Grasses, shall be utilized to retard erosion.
f. Failure to comply with any or all of the conditions of this ordinance shall be adequate cause for revocation of permits by issuing City of Wildwood Departments or Commissions.

g. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accord with Site Development Plans approved by the Planning and Zoning Commission and the Department of Planning.

h. Any other applicable zoning, subdivision, or other regulations or requirements of the City, whether in effect at the adoption of this ordinance or as may be hereinafter adopted, shall further apply to the development of this property as authorized by this Planned Residential Development Overlay District Ordinance, except as may be provided by law. Nothing herein shall be deemed a waiver of any subdivision, zoning or other development regulation of the City whether by implication or reference.

i. This zoning approval is conditioned on compliance with the Zoning Code, Subdivision Code, and all applicable laws of the City. Such additional regulations are supplemental to the requirements herein and no modification of any applicable regulations shall result from this Planned Residential Development Overlay District ordinance, except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.

10. PUBLIC SPACE REQUIREMENTS

a. Developer shall construct improved public space in conformance with or otherwise satisfying the requirements of the City’s Public Space Ordinance, Chapter 415.260 and 415.270 of the City of Wildwood’s Zoning Ordinance. The City Council accepts the findings of the Public Space Study adopted therein and determines the compliance with the Public Space Ordinance provisions will address the impact of this specific development on public space needs in a manner and amount that is equal to or less than an amount that is roughly proportional to the actual or anticipated impact. The installation of required public space improvements shall be as required by the applicable ordinances, but shall be completed prior to issuance of any occupancy (temporary or final) permit authorized by this ordinance. Unless otherwise approved pursuant to the procedures set forth in the Public Space Ordinance, the public space attributable to this development, based upon the number of authorized dwelling units at a rate of 1,742.4 square feet per new single family dwelling, is 221,284.8 square feet in total (5.08 acres).

1. The proposed Public Space Plan shall not be less than five (5) acres in overall size. The design and amenities associated with this plan shall substantially comply with the representations that have been submitted/shown on the Preliminary Development Plan starting with the date of December 17, 2018, with its final design subjected to review and action by the Planning and Zoning Commission and City Council, as part of the Site Development Plan process. Said Public Space Plan must be completed and acted upon by
the Planning and Zoning Commission, prior to any final action on the Site Development Plan by the same.
ATTACHMENT C
PRELIMINARY DEVELOPMENT PLAN PACKAGE
The Reserve at Wildwood
Wildwood, Missouri
ATTACHMENT D
BACKGROUND INFORMATION
Hello Joe, I am following up to my email this morning. Attached are the revised and updated Preliminary Development Plan Package which incorporate items discussed Monday 7/6/2020 at City Hall. We offer the Following:

1) Loomis and Associates went to the site to re validate the Existing Grand Trees, during their investigation they noticed discrepancies in the Previous location of the Grand Trees. Mr. Saunders attributed the mistakes to errors in their Arborist GPS techniques. As a result the 3 Grand Trees on the eastern portion of the site have moved in directions that we find more favorable to “PRESERVATION”. The two (2) southernmost Grand Trees (4 and 5) are not located in the 1.01 acre Preserve Area. Grand Tree 6 is located on the western portion of Proposed OUTLOT A, adjacent to the rear lot line of proposed Lot 34. Regarding the Three (3) Grand Trees (1,2 and 3), they are actually located considerably further North West, generally in the location of original proposed Lot 76. In order to Preserve all (3) Trees we are eliminating one (1) Lot in the Northwest corner. Lastly, while revalidating the six (6) Grand Trees Loomis found four (4) additional trees on the property, north of Bonhomme Creek those are shown as Grand Trees 1C,11,12 and 13 as shown on the attached plan.

2) We have added a Proposed Trail easement on the North of the Site from the Proposed Trail “Overlook” of Bonhomme Creek to existing Hawthorne Village Parkway ROW.

3) Loomis has increased the Landscaping, berms and Hardscape along Manchester Road.

4) Lastly, we are working to provide you an annual estimate for the BMP maintenance..

Once you have the opportunity to review please advise of any questions and confirm how many sets of plans you need from our office for the Monday evening 7/20/2020 Planning Commission meeting.

Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Desk: 636.681.2403
George,
Attached are the revised drawings and landscape plans.
Thanks, Chuck

Chuck Hulse, P.E., P.L.S.
Associate
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Desk: 636.681.2405
Cell: 636.368.5895
http://www.stockassoc.com
I. Maintenance Procedures

Following the maintenance procedures outlined in this plan for the stormwater facilities is imperative to ensure the proper function of the systems. The first year of operation of the system is especially critical for establishing benchmarks for the specific system onsite.

Bioretention:

A. Routine Maintenance Activities

Routine (every 3 months) inspection of stormwater facilities shall consist of the following:

1. Inspect each sewer structure for any silt or debris build-up.
2. Check to see that all sewer structures grates and lids are seated properly and no damage has occurred.
3. Bioretention and appurtenances shall be inspected by a qualified individual to ensure that they operate in good working condition acceptable to MSD. Items in need of repair shall be promptly addressed. Detailed inspections shall include the following items:
   - Condition of grass cover on the embankment and filter perimeter, mow grass if needed.
   - Sediment accumulation.
   - Debris and trash accumulation, remove trash and debris if needed.
   - Species distribution / survival of plantings and other vegetation shown on the design plans essential to the Bioretention filter system, provide weeding if needed.

Plantings:

1. During the first growing season, inspect new or re-established vegetation bi-weekly. Look for any stressed vegetation. Replace any dead or dying vegetation.
2. Quarterly inspection of landscaping in Bioretention BMP’s to confirm health of plantings. Prune landscaping and replace dead vegetation as necessary with vegetation specified on the landscaping plan.

Underdrains:

1. Inspect quarterly via access cleanouts to ensure proper drainage of pipes. Verify no sediment accumulation.

Mulch:

1. Mulch layer should be pea gravel. Pine wood, mulch chips and grass clippings are not acceptable.
These activities can be completed without any prior correspondence with the Metropolitan St. Louis Sewer District or engineering consultant.

B. Non-Routine Maintenance Activities

1. All erosion gullies noted during the growing season shall be backfilled with topsoil, reseeded and protected (mulched) until vegetation is established.

2. Inspect the Bioretention Filter to determine if 25% of the volume has been lost due to sediment build-up, or 3 inches of sediment measured anywhere within the filter area. Sediment shall be removed from the Bioretention Filter bed when it is noticed that the filtering capacity of the filter has diminished substantially (i.e. when water ponds on the surface of the filter bed for more than 48 hours). If ponding occurs for more than 48 hours the top few inches of the Bioretention Filter bed shall be removed and replaced to the original specifications shown in Appendix A.

3. Flush underdrains if sediment is visible.

4. Areas devoid of mulch should be re-mulched on an annual basis.

These activities can be completed without any prior correspondence with the Metropolitan St. Louis Sewer District or engineering consultant.

For all BMP’s:

C. Corrective Actions and Modifications
Any corrective actions required that will modify the BMP(s) design components are considered design modifications and must be reviewed by MSD. The owner must consult the Metropolitan St. Louis Sewer District, and will likely need an approved plan from a professional engineering consultant.

D. Maintenance Materials

In the event that any of the media or other surface materials needed to be replaced during routine or non-routine maintenance, follow the original requirements and project specifications shown in Appendix A.

E. Safety

Safety considerations should be taken when conducting maintenance. Hazards should be anticipated and avoided. Confined spaces should not be entered without proper training, monitoring and equipment.
II. Inspection Procedures

Stormwater Management Facilities shall be inspected by a qualified individual familiar with the operation of the facilities. Inspections during the first year shall take place at least once each quarter during the spring, summer and early fall, using the BMP inspection checklists in Appendix C. At least one of the inspections should be performed after a storm exceeding 1 inch of rainfall in a 24 hour period, ideally approximately 24 to 48 hours after the storm to determine if the facility is draining as desired.

Bi-monthly inspections should be conducted from November through March to determine how leaf litter will impact the flow capacity of the structures.

After the first year of operation routine inspections shall take place every 3 months.

III. Annual Reporting Requirements & Record Keeping

To help ensure BMP maintenance, MSD requires an Annual BMP Maintenance Report to be submitted. The Annual Report should provide documentation that maintenance was performed in accordance with the O&M Plan. The Annual Report should be submitted to MSD no later than March 31st of the year following the previous calendar year ending December 31st, i.e. 2020 Annual Report is due March 31, 2021. A MSD inspector will also periodically inspect the BMP.

The Annual Report should be mailed to:
Metropolitan St. Louis Sewer District
Division of Environmental Compliance
c/o Phase II Stormwater Management Program
10 E. Grand Avenue
St. Louis, MO 63147

Property owner should refer to MSD’s website for the current version of the Annual Report template developed by MSD. A copy of the most recent version of the Annual Report template, at the time of this report, is attached in Appendix D.

The property owner should also keep an inspection log detailing dates of inspection, findings, and corrective actions taken, including all routine and non-routine maintenance activities completed.

Per MSD Ordinance 12559, MSD may require submittal of additional reports and/or development of compliance schedules as deemed necessary to assure compliance with the Ordinance and/or storm water discharge standards.
14 July 2020

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Parkway
St. Louis, MO 63005

RE: The Reserve @ Wildwood

George,

Thank you for the opportunity to review the linear BMP structures planned for the Wildwood residential project, The Reserve @ Wildwood. In reviewing the current concept plan we would recommend the following stewardship schedule for the site for future success. For the sake of the discussion, we characterize stewardship as the following activities: weeding, trash removal, silt removal, mowing, herbicide application (selective and non-selective), height-controlled mowing and debris removal. Our typical scope of work includes removal of debris from site in addition to providing necessary equipment and materials to carry out the scope of work. In the event a larger scope of work event were to occur we provide a proposal uniquely to address that scope of work.

**The Reserve @ Wildwood Stewardship Budget (in concept)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring Clean-up: March</td>
<td>$ 4,685.00</td>
</tr>
<tr>
<td>Four Stewardship Visits: (April- October @ $2,175.00):</td>
<td>$ 8,700.00</td>
</tr>
<tr>
<td>MSD Site Inspections (quarterly @ $95.00 each):</td>
<td>$ 380.00</td>
</tr>
<tr>
<td>MSD Annual Report (to be submitted prior to 3/31):</td>
<td>$ 600.00</td>
</tr>
</tbody>
</table>

Annual Total: $ 14,365.00

George, please let me know what other questions you may have. Our cost estimates were based on expected conceptual BMP design. The estimate may change upon review of the final approved plans.

All the Best,

*Charles G Caverly*

Charles G Caverly
Director of Business & Industry Development
Native Landscape Solutions, Inc

9814 Gravois Road
Affton, Missouri 631213
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

<table>
<thead>
<tr>
<th>Request Being Considered</th>
<th>Planning &amp; Zoning Commission Agenda Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Description</td>
<td>P.Z. 9-18</td>
</tr>
<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>Please DO NOT allow Payne Homes to add any more homes to our common ground! They are asking to add an additional 140 single-family dwelling. We are losing our common ground right and left. Please stop this nonsense. The reason we live in Wildwood is for our beautiful landscape, parks, and trails.</td>
</tr>
</tbody>
</table>

| Suggestions               | Field not completed.                     |

Name  
Nancie Scaglione

Address  
2333 Windsor Meadow Blvd.

City  
Wildwood

State  
MO

Zip  
63038

Phone Number  
3145801850

Email  
nms4028@hotmail.com

Email not displaying correctly? View it in your browser.
December 10, 2019

Sent via E-mail and U.S. Mail

City of Wildwood Planning & Zoning Commission
c/o Mr. Joe Vujnich
Director of Planning & Parks
16860 Main Street
Wildwood, Missouri 63040

Re: P.Z. 20, 21, and 22-15 Ackerley Place, Payne Family Homes (Amended)(“The Reserve”)

Dear Mr. Vujnich:

Please accept this letter as a statement of Payne Family Homes’ objection to action taken by the Town Center Update Team (“TCUT”) at its meeting on November 5, 2019. At that meeting TCUT recommended by majority vote that a Neighborhood Edge Transition District (“Transition District”) be applied to the property that is the subject of The Reserve proposal (the “Property”). At a prior meeting, TCUT had recommended that the Transition District be adopted as a new zoning district within Town Center.

If ultimately adopted as recommended by TCUT and applied to the Property, the Transition District would limit the number of homes on the Property to approximately thirty-four (34) homes. At that density, it will not be feasible for Payne Family Homes or any other residential developer to develop the Property given the cost of land acquisition and development (including the cost of all necessary infrastructure).

The reason for Payne Family Homes’ objection goes beyond feasibility and is based upon fundamental fairness. The Application has been pending since 2015. The original plan (the “Ackerley Plan”) was supported by the Department of Planning & Parks because it complied with the existing Town Center Regulating Plan and Guidelines. Payne Family Homes and its development team worked very hard to submit a feasible plan that complied with the Regulating Plan and Guidelines. Despite compliance and the Department’s support it became clear that the Ackerley Plan would not be supported by the Commission or the City Council.

Payne Family Homes then pursued The Reserve Plan in an attempt to address issues and concerns that were raised by the Commission and others while still preserving many of the attributes of a residential development that is appropriate for the objectives of the Town Center. Unfortunately, even though The Reserve Plan complies with the Regulating Plan the Department did not support it because it did not sufficiently comply with the Guidelines. The Commission then sent The Reserve Plan to TCUT for what we understood was to be comment on the Reserve Plan which many have said has merit and is “far better than the Ackerley Plan”. Instead of
comments, TCUT recommended a drastic change in the rules by recommending application of the Transition District to the Property.

For the foregoing reasons, Payne Family Homes objects to the application of the Transition District to the Property.

Thank you for your consideration.

Sincerely,

William R. Allen, P.E.
Vice President Land
Payne Family Homes
The Town Center Update Team meeting was called to order by Chair Loyal, at 6:30 p.m., on Tuesday, November 5, 2019, at Wildwood City Hall, 16860 Main Street, Wildwood, Missouri.

I. Welcome and Opening Remarks by Chair Loyal and Pledge of Allegiance

Chair Loyal welcomed the Team Members and thanked them for their attendance this evening.

Chair Loyal led the attendees in the Pledge of Allegiance. He then turned over the management of the meeting to Dr. Jones.

The Roll Call was requested and taken, with the following results:


Absent Team Members: Weiss, Risdall, Marion, Sedlak, Hoffmann, and Council Member Stephens.

Vacancy exists with Member Baugus’s relocation out-of-state, which was effective October 23, 2019.

Staff in attendance: Director of Planning Vujnich and Senior Planner Gaston.

II. Review and Action on Draft Minutes from October 8, 2019 Team Meeting

Dr. Jones questioned if there were any changes or comments on the minutes from any of the Team Members. Hearing none, Dr. Jones declared the minutes approved by consent, as prepared.

III. Public Comments and Input by Moderator (Dr. Jones) [Other items than those listed for discussion]

Dr. Jones opened the floor to the audience for any public comment and stated the time limitations per speaker. Director Vujnich noted the agenda listed a number of other opportunities for general comments, as well as the desired input from Town Center Area property owners with regard to the action taken by TCUT to date.

Jim Bowlin, 2165 Timberline Valley Drive, Ward 6, mentioned an item on the agenda includes Ackerley Place, of which contains Workplace, Neighborhood Edge and Neighborhood General
District designations. The latter two (2) districts require only minimum 20-foot lot widths. He stated that, when the Team considers the design standards, these minimums should be increased to 60-70 feet, based upon 1) providing a better transition with respect to Town Center properties and those zoned Non-Urban; 2) no project has been requested to be developed with such limited lot classifications [i.e. 20-foot lot widths]; 3) land does not depreciate. He discussed and cleared this recommendation with the City Attorney and the Director of Planning, and both were in support of it.

Mike Saunchezraw, 16919 Niere Acres Drive, stated he is a homeowner upon a 3.8-acre property in Town Center. His home is 50’ from the lot on Crestview Drive and Main Street, while also only 100’ from the lots purchased by the City. He is concerned for the future value and use of his property being viable for residential use, now being even closer to increased development, or even its potential sale.

Mary Kay Corsair, 17617 Melrose Road, owner of property at 16815 Manchester Road, requested this 11.2 acres of land in Town Center be considered for Neighborhood General and not split between the Workplace and Neighborhood Edge designations. Under such new designation, there would be more possibilities for development of this site, while the others are more limited and not practical, when surrounding uses are taken into account [i.e. a tavern, City Hall, a church, and proposed commercial]. She mentioned sewage treatment facilities are also a use in the Neighborhood Edge District, but is not a favorable activity in the heart of Town Center. The current designations for ‘split uses’ creates a hardship for selling her property.

Mary Ann Heinsz, 2441 Indian Tree Run, Ward 3, informed the Team of a survey she conducted on www.nextdoor.com. She stated the survey was performed informally, but needed given to a statement made at a prior meeting that very few people were opposed to said conversion of the properties at Woods and Pond Roads. She also explained the survey was for residential properties only and one (1) vote per household; not per resident. The results of her survey indicated households were not in favor of the 75-acre portion of land being converted to Town Center, from 3-acre tracts of land to 1.5-acres, nor in favor of changing these areas from Non-Urban to Town Center, regardless of lot sizes.

Based upon feedback from the speakers, Chair Loyal commented that a thorough review of the Town Center Plan is being made by the Team, which will allow for continued public comment and its recommendations will eventually be considered by the Planning and Zoning Commission then, ultimately, the City Council. Director Vujich mentioned a prior City-wide survey in 2016 and contained as an appendix of the Master Plan. He also noted the Town Center Plan has been in place since 1996 and has always specified smaller lot sizes.

Mike Doster, 16090 Swingley Ridge Road, Chesterfield, Missouri 63017, land use counsel for Payne Family Homes [PFH], stated The Reserve Project, which is an agenda item for discussion tonight, was submitted to the Planning and Zoning Commission in 2015. The original plan, called Ackerley Place, was not well received; therefore, the petitioner modified the plan to The Reserve, which did receive positive feedback from the Commission, yet the staff recommendation was for denial, given it did not substantially comply to all guidelines. He
requested the Team send The Reserve plan back to the Commission, since its review has been much longer than the 60-90-day timeline previously proposed for review by the Team. Also representing for Payne Family Homes, Tom Cummings elected to state his comments later, when The Reserve would be discussed.

Joe Garritano, 163:2 Cherry Orchard Drive, noted that, during his service as Council Member, his constituents have voiced their desire for larger lot sizes. While the City comprises more than 66-square miles, Town Center is only 1.8% of it, so more than 98% of the City is not Town Center. His subdivision, over 20 years old and consisting of quarter-acre lots, is not in Town Center, but just beyond its boundary. There are ten (10) lots in his subdivision at this boundary which were, at one time, to border up to nineteen (19) new lots. This was not consistent with the surrounding development – the existing residents wanted lesser density, with a transition, which is referenced in Ordinance 415.

Public comment concluded at this time, with another opportunity for more later in the meeting.

IV. Distribution & Explanation of Meeting Materials by Department of Planning and Parks

Director Vujnich provided a brief explanation of the items in the packet, as they relate to the discussion on tonight’s agenda: The Reserve Project, the Regulating Plan of Town Center, and the list of land use activities permitted by the district designations of the Regulating Plan, as well as the timeline and chart representing discussion and the formal actions taken by the Team.

V. Discussion of Proposal Forwarded by the Planning and Zoning Commission to this Team

a. P.Z. 20, 21, and 22:15 Ackerley Place, Payne Family Homes, 2431 Highway 109 and 17225 Manchester Road

As noted during Public Participation, Director of Planning Vujnich stated Payne Family Homes proposal came before the Planning and Zoning Commission in 2015, as the Ackerley Place Plan. Now, almost 5 years later, the plan, which since evolved into what is known as The Reserve, was sent to this review team by the Commission in March of this year. The plan, consisting of 133 single-family detached dwellings on individual lots, situated upon a 50+ -acre tract of land, complied with the Regulating Plan and does have certain merits, such as larger lot sizes and increased widths, and the integration of public space, with Workplace [commercial] District Uses along State Route 109. However, the Regulating Plan is only one of five major elements of the Town Center Plan, and, of the other four, three remain problematic, when compared to the current proposal, those being the Street Network Map, the Neighborhood Design Standards, and the Architectural Guidelines. It is important to note that, since the Team’s receipt of this item for review in Spring 2019, improvements to State Route 109 began, which will provide better and safer access into this site, with new roundabouts, lane widenings, and pedestrian upgrades.

Dr. Jones requested clarification from the Department for the Team, regarding consideration of The Reserve – to either approve or disapprove the plan this evening. Director Vujnich stated
such would be the ultimate goal, but the Team could simply offer suggestions for consideration by the Planning and Zoning Commission, preferably for its December meeting.

Chair Loyal requested further clarification regarding the designations of the overall tract, those being Workplace, Neighborhood General and Neighborhood Edge, and whether the Reserve Plan met the requirements of them. Director Vujnich did note it was compliant with the Regulating Plan, but only that aspect of the Town Center Plan. While the architectural plans for the dwelling units have yet to be submitted and reviewed, if the petitioner followed suit with its other developments that have received favorable action from the City’s Architectural Review Board, the Department could consider it acceptable. Chair Loyal then asked, if the Team were to recommend a change, its options would be to have the 50+-acres removed from the Town Center or propose a change from the three-district designation to Neighborhood Edge, it would increase required lot sizes and widths. Director Vujnich stated such would need to be in the form of a recommendation, sent on to the Planning and Zoning Commission then, ultimately, be decided upon by the City Council.

Discussion centered on area improvements: again, the current state Route 109 project and future Manchester Road widening, with the extension of Generations Drive through the community college’s property. Based upon a traffic analysis by HR Green and the college’s growth, the Reserve Plan can meet traffic study requirements with roadway improvement within the next five (5) years. Concerns were expressed regarding commercial use along State Route 109, with respect to the creek and the existing treeline.

A motion was made by Team Member Rowton, seconded by Team Member Edwards, to convert the current three land-use designations [Workplace, Neighborhood Edge, and Neighborhood General Districts] to the Neighborhood Edge Transition District.

Before a call for a vote was requested, Director Vujnich suggested hearing from the petitioner. While the motion remained on the floor, Mr. Doster returned to the podium. He stated Payne Family Homes would be amenable to removing the commercial aspect along State Route 109; however, doing so, the proposal would then not be in compliance with the Regulating Plan, unless the Workplace District designation is changed to a residential use. That being said, such a change would take additional time for approval; it has been five (5) years and they need to move forward now.

The Reserve Plan was better received than Ackerley Place. Mr. Doster suggested Main Street not be extended west of State Route 109, being that the roadway design should be more residential in nature. Lastly, with respect to the motion, he noted that any change at this stage would be drastic, not right and certainly unfair, which would make development of this tract unfeasible. The petitioner has compromised over the years of review, changing the number of proposed units from 189 to 133; they are opposed to the motion.

The petitioner, Tcm Cummings came forward and stated, in his opinion, the Commission believed the plan did, in fact, have merit. The plan included trails and open space, providing the largest dedication of public area from a developer in Wildwood, to date. It also includes a mix
of lot sizes for variation, with the larger lots to the west. The crux of the situation for the petitioner is: does the City require strict adherence of the guidelines, whether that be the Ackerley Place proposal or The Reserve Plan? While the Town Center Plan isn’t easy to understand, Director Vujnic stated it does allow residential uses in both Neighborhood General and Neighborhood Edge. Again, it’s not a question of the proposal meeting the Regulating Plan - it does; the issues are with the Street Network Map, Neighborhood Design Standards, and the Architectural Guidelines. Mr. Cummings concluded with a request for favorable action from the Team to return with this proposal before Planning and Zoning Commission.

Discussion ensued, which included the desire for more greenspace, transition of uses from east to west of State Route 109, traffic mitigation, and lesser density. Team members commented on the fact that a transition is in place with the Neighborhood Edge District and now the Neighborhood Edge Transition [NET] District. Finally, it was questioned what the density would be for this tract of land, if changed to this new transition district. Director Vujnic indicated it would yield a maximum of 34 lots on the 50+ acres, being equivalent to two (2) units per three (3) acres.

Team Member Rowton called the question. Dr. Jones requested a roll call vote on ending discussion then immediately voting on the motion on the floor. Roll call vote was taken with the following results:


Nays – none

The motion passed [11/0].

Dr. Jones called for a roll call vote on the motion, which was taken with the following results:


Nays – Team Members Kohn, Helfrey, and Lee.

The motion passed [8/3]. It was noted that the three (3) nay votes were all from the Planning and Zoning Commission liaisons.

VI. Property Owner Input on Potential Regulating Plan Changes per City Invitation

Sandra Christenson, 16905 Niere Acres, stated she was tired of not being informed of what is going on since she moved here in 1962. Her property backs up to City Hall property and was not included in any survey. Ms. Christenson asked to know what is in store for her property’s future.
Dale Lindhorst, 1407 Bald Eagle Road, noted he has been a resident, since before the incorporation, and has heard of a number of variances approved by the City over the years. He stated his opinion that there does not need to be more commercial on State Route 109 and would like all the properties west of it be removed from the Town Center Area. He requested a lower density in the Town Center Area, which the middle of it is Taylor Road, not the highway.

James ‘Jim’ Schmidt, 2470 Eatherton Road, stated he and his wife have lived here for 75 years. He believes the City is affecting people’s lives and no one wants to buy his family’s property, which originally totaled 90 acres.

Merilee Dauster, 16910 Niere Acres Drive, noted she would be remiss for not speaking, given most of her neighbors have participated in this regard. Her property backs up to Jeanie Hood’s business [Three French Hens] and stated her being a great neighbor. She is unsure as to what is in the future for her property, requesting the Team to consider her and her neighbors as ‘the people’ and not as ‘the property.’

VII. Discussion of Regulating Plan Changes [time permitting]

Director Vujnich noted this evening’s timeframe has been exceeded and, therefore, this item will be up for discussion at the next meeting.

VIII. Questions/Comments from Team Members about Information Provided to Date

None

IX. Final Public Comments and Input

Team members expressed their opinion that they are volunteers to help make the City better for everyone.

X. Other Items

None

XI. Next Meeting Date – December 10, 2019 (Tuesday)

XII. Closing Remarks and Adjournment by Chair Loyal

Chair Loyal extended his thanks to those individuals in the audience that spoke this evening, providing feedback on the Town Center review. There being no further business to conduct and, hearing no objections, the Chair declared the meeting adjourned at 8:39 p.m.
Listed below is a request that was presented to the Planning and Zoning Commission at a public hearing that was held on August 20, 2018. The Department of Planning has prepared its Information Report, with recommendation, which has been under consideration by the Planning and Zoning Commission at several of its meetings over the course of the past several months. At its December 17, 2018 meeting, the Commission postponed action on the matter to allow the petitioner additional time to address certain items regarding the proposed development's design. You and many of your neighbors may have expressed interest in its outcome and the Commission is again scheduled to take action upon this item at its upcoming meeting. If inclined, the Commission encourages you to attend this meeting and hear the Department of Planning's recommendation on this matter and participate in its discussion. Regardless if you have comments or not, your attendance is always welcomed. Again, the meeting will be held on TUESDAY, January 22, 2019, at 6:30 p.m., in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040. The specific request under consideration is as follows:

P.Z. 20, 21, and 22-15 Ackeryle Place, Payne Family Homes L.L.C. (Amended), c/o Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132 – A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner's intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan (Street Network Map) modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-6A 3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-4 Planned Commercial District (Town Center “Workplace District”) and R-3 10,000 square foot Residence District (Town Center “Neighborhood Edge District” and “Neighborhood General District”), with a Planned Residential Development Overlay District (PRD), for the same tract of land, again being located on the west side of State Route 109, north of Manchester Road (Locator Numbers: 23W1010022 and 23W3200013/Street Addresses: 2431 State Route 109 and 17125 Manchester Road). Proposed Uses: A total of one hundred forty (140) detached single-family dwellings, on individual lots, with common ground, required public space areas, and a minimum of one (1) commercial outlot fronting onto State Route 109. This revised advertisement supplants P.Z. 9-18 The Reserve at Wildwood, which had been posted for public hearing on July 16, 2019 by the Planning and Zoning Commission. (Ward One)

*RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:*

1) Submitting a comment online by visiting: http://www.cityofwildwood.com/comments.
2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
3) Viewing the Planning and Zoning Commission’s agenda, which is available on the City’s website at: www.cityofwildwood.com, the Friday before the aforementioned meeting date.

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 453-0440. Thank you in advance for your interest in this matter.
Mr. Cummings,

The Departments of Planning and Public Works would like to extend our appreciation to Payne Family Homes and its development team for attending and participating in the November 28, 2018 Planning and Zoning Commission Work Session regarding the proposed Reserve at Wildwood (formerly Ackerley Place). A number of items were discussed and identified for further study and presentation at a future Planning and Zoning Commission meeting, as the proposal progresses through the City’s review process. Specifically, Commission Members in attendance identified these items, as part of their discussion. A summary of these items is listed below:

1.) Please provide a plan identifying location, quantity, and species of planned plantings for street trees, common ground areas, and bioretention areas. As part of this plan, please provide a phasing analysis and depiction that identifies areas of the development that can be finished graded, planted, and seeded or sodded, once home construction can begin.

2.) Please provide the tree stand delineation that was referenced in the meeting, identifying the ‘Grand Trees’ throughout the site.

3.) Please consider and include traffic calming features, at appropriate locations along the proposed Main Street through the site.

4.) Please consider larger lot sizes along the western boundary of the site, where it abuts property designated NU Non-Urban Residence District.

5.) Please consider providing narrower pavement width for the planned cul-de-sac streets (26 feet, as a maximum).

6.) Please study the past proposed stub street along the southern boundary of the site, abutting the Tschannen parcel of ground, and consider the appropriateness of including it at this location, as part of the new land plan, or in this general area.

7.) Please be advised pedestrian improvements along the site’s frontage with State Route 109 will be required and be the responsibility of the petitioner.

8.) Please be advised the Departments of Planning and Public Works will require a minimum ten (10) foot width for any newly constructed trails.

9.) Please clarify the locations of the proposed public space areas and their planned amenities.

10.) Please identify the large stormwater management areas planned on the site.

11.) Please study further the future access point to the proposed commercial outlet, specifically minimizing its impact on nearby residential lots.

12.) Please be advised the Commission Members in attendance also note the following concerns for consideration:

   a. the lack of rear-entry type garages;
   b. the placement of the sidewalks further into the front yard areas;
   c. the future maintenance of the planned amended soils within the front yard areas;
   d. the number of proposed cul-de-sacs and the consideration of minimizing them;
   e. the planned loading of vehicles from residences directly onto Main Street, specifically as it relates to safety; and
   f. the design of the planned retaining wall along the southern boundary of the site, and the preference that it be shorter, terraced walls, not one (1) large wall.
Listed below is a request that was presented to the Planning and Zoning Commission at a public hearing that was held on August 20, 2018. The Department of Planning presented a short Information Report, with recommendation to the Planning and Zoning Commission on November 5, 2018. At this meeting, the Commission postponed any action upon this matter to allow it to hold a Work Session regarding the various components of the proposal, which was held on November 28, 2018. You and many of your neighbors may have expressed interest in its outcome and the Commission is again scheduled to take action upon this item at its upcoming meeting. If inclined, the Commission encourages you to attend this meeting and hear the Department of Planning’s recommendation on this matter and participate in its discussion. Regardless if you have comments or not, your attendance is always welcomed. Again, the meeting will be held on Monday, December 17, 2018, at 6:30 p.m. in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63060. The specific request under consideration is as follows:

P.Z. 20, 21, and 22-15 Ackerly Place, Payne Family Homes LLC (Amended), c/o Thomas Cummings, 10407 Beur Boulevard, Suite B, St. Louis, Missouri 63132 – A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner’s intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan (Street Network Map) modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-3 3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-8 Planned Commercial District (Town Center “Workplace District”) and R-3 10,000 square foot Residence District (Town Center “Neighborhood Edge District” and “Neighborhood General District”), with a Planned Residential Development Overlay District (PRD), for the same tract of land, again being located on the west side of State Route 109, north of Manchester Road. (Locator Numbers: 23V110012 and 23V120012; Street Addresses: 24151 State Route 109 and 17225 Manchester Road).

Proposed Use – A total of one hundred forty (140) detached single-family dwellings, on Individual lots, with common ground, required public space areas, and a minimum of one (1) commercial outlet fronting onto State Route 109. This revised advertisement supplants P.Z. 9-18 The Reserve at Wildwood, which had been posted for public hearing on July 16, 2018 by the Planning and Zoning Commission. (Ward One)

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0460. Thank you in advance for your interest in this matter.
Public Hearing Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

Request Being Considered: P.Z. 20, 21, and 22-15 Ackley Place

Item Description: Field not completed.

Position on Request: Other

General Comments: It appears this is taking away more viable Commercial Zoning options in the Town Center area.

Suggestions: Leave Planned Commercial Zoning in place. The Town Center is supposed to draw all residents/shoppers to the area. If residential living fills up the Town Center it limits the destinations for residents to shop/buy goods, etc., forcing them to shop out of town. Roadways and proper traffic-flow needs to be addressed before the project is completed.

Name: Katie
Address: 2500 block of Easterton Road
City: Wildwood
State: Missouri
Zip: 63040
Phone Number: 3149542187
Email: nakazonokatie@gmail.com
Listed below is a request that was presented to the Planning and Zoning Commission at a public hearing held on August 20, 2018. Subsequently, this matter was scheduled to be considered by the Planning and Zoning Commission at its September 17, 2018 meeting; however, it was postponed at the request of the petitioner. You and many of your neighbors may have expressed interest in its outcome and the Commission is again scheduled to take action upon this item at its upcoming meeting. If inclined, the Commission encourages you to attend this meeting and hear the Department of Planning's recommendation on this matter and participate in its discussion. Regardless of whether you have comments or not, your attendance is always welcomed. The meeting will be held on Monday, November 5, 2018, at 6:30 p.m., in the City Council Chambers, 16860 Main Street, Wildwood, Missouri 63040. The specific request under consideration is as follows:

P.Z. 20, 21, and 22-15 Ackerly Place, Payne Family Homes L.L.C. (Amended), c/o Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132 - A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner's intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan (Street Network Map) modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-1A 2,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-8 Planned Commercial District (Town Center "Workplace District") and R-3 10,000 square foot Residence District (Town Center "Neighborhood Edge District" and "Neighborhood General District"), with a Planned Residential Development Overlay District (PRO), for the same tract of land, again being located on the west side of State Route 109, north of Manchester Road. (Locator Numbers: 23V110022 and 25W32013/Street Address: 2431 State Route 109 and 17225 Manchester Road). Proposed Use - A total of one hundred forty (140) detached single-family dwellings, on individual lots, with common ground, required public space areas, and a minimum of one (1) commercial outlet fronting onto State Route 109. This revised advertisement supplants P.Z. 5-18 The Reserve at Wildwood, which had been posted for public hearing on July 16, 2018 by the Planning and Zoning Commission. (Ward One)

RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/ OR TRACK THIS REQUEST BY:
1) Submitting a comment online by visiting: www.cityofwildwood.com/comment.
2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
3) Viewing the project on the City's Current Developments & Zoning Reviews page by visiting: www.cityofwildwood.com/zoningreviews.
4) Viewing the Planning and Zoning Commission's agenda, which is available on the City's website at www.cityofwildwood.com, the Friday before the aforementioned meeting date.

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you in advance for your interest in this matter.
Public Hearing Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

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<th>P.Z. 9-18 The Reserve at Wildwood c/o Payne Family Homes</th>
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<td>Item Description</td>
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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
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<tr>
<td>General Comments</td>
<td>The continued growth of new builds spoils the charm of wildwood, and puts strain on wildlife. Wildlife is moved out of their own homes and onto streets and highways. This only increases dangers on the road. Wildwood will turn into another community of over population, without the beauty of the wilderness if we keep tearing it down.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
</tbody>
</table>

(Section Break)

Name                     Natasha Goodwin
Address                  17161 Windsor Crest Blvd
City                     Wildwood
State                    MO
Zip                      63038
Phone Number             3098401388
Email                    ndoty0216@gmail.com
Public Hearing Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

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(Section Break)

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<tr>
<th>Name</th>
<th>Victoria Renner</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>2402 Kilrea Ln N</td>
</tr>
<tr>
<td>City</td>
<td>Wildwood</td>
</tr>
<tr>
<td>State</td>
<td>MO</td>
</tr>
<tr>
<td>--------</td>
<td>------</td>
</tr>
<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>7023240468</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:vmrenner@outlook.com">vmrenner@outlook.com</a></td>
</tr>
</tbody>
</table>

Email not displaying correctly? [View it in your browser.]
**Public Hearing Comment Form**

*By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.*

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<td>Once again, I make the point that ward 1 residents are at a disadvantage when developers bring these proposals to the table since few will actually qualify to receive the notice. The signage is also well hidden again. Please attempt to make this process more fair for your taxpaying residents! Can we please address the daily safety issues affecting those of us living here now. It has become significantly more dangerous on our roads in last few years alone. Please address now rather than later after the area has been hurriedly and overtly built up and your residents are subjected to more dangerous traffic conditions. Meanwhile the developers walk away and are well paid while the quality of life of your residents has declined. We don't need more nail salons and dentists and housing. We need safer roads. Thank you for your time.</td>
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<th><strong>Name</strong></th>
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<td>17300 cougar trails drive</td>
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<td>3145047774</td>
</tr>
<tr>
<td><strong>Email</strong></td>
<td><a href="mailto:meghan_e_kelly@yahoo.com">meghan_e_kelly@yahoo.com</a></td>
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Listed below is a request that was presented to the Planning and Zoning Commission at a public hearing held on August 20, 2018. You and many of your neighbors may have expressed interest in its outcome and the Commission is scheduled to take action upon this item at its upcoming meeting. If inclined, the Commission encourages you to attend this meeting and hear the Department of Planning’s recommendation on this matter and participate in its discussion. Regardless of whether you have comments or not, your attendance is welcomed. The meeting will be held on Monday, September 17, 2018, at 6:30 p.m. in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040. The specific request under consideration is as follows:

P.Z. 20, 21, and 22-15 Ackerly Place, Payne Family Homes L.L.C. (Amended), c/o Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132 – A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 59.55 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner’s intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan [Street Network Map] modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-6A 3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the Amended C-8 Planned Commercial District (Town Center “Workplace District”) and R-3 10,000 square foot Residence District (Town Center “Neighborhood Edge District” and “Neighborhood General District”), with a Planned Residential Development Overlay District (PRD), for the same tract of land, again being located on the west side of State Route 109, north of Manchester Road (Locator Numbers: 22V10022 and 23W320013/Street Addresses: 2431 State Route 109 and 17225 Manchester Road). Proposed Use – A total of one hundred forty (140) detached single-family dwellings, on individual lots, with common ground, required public space areas, and a minimum of one (1) commercial outlet fronting onto State Route 109. This revised advertisement supplants P.Z. 9-18 The Reserve at Wildwood, which had been posted for public hearing on July 16, 2018 by the Planning and Zoning Commission. (Ward One)

**RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:**

1. Submitting a comment online by visiting: [www.cityofwildwood.com/comment](http://www.cityofwildwood.com/comment).
2. Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16850 Main Street, Wildwood, Missouri 63040.
4. Viewing the Planning and Zoning Commission's agenda, which is available on the City's website at: [www.cityofwildwood.com](http://www.cityofwildwood.com), the Friday before the aforementioned meeting date.
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Request Being Considered: P.Z. 20, 21, and 22-15 Ackerley Place

Item Description: Field not completed.

Position on Request: Do Not Support

General Comments: This proposed dense development on the west side of 109 is inappropriate for the area. Bringing such development into this historic and larger-plotted area of Ward 1 makes no sense and is purely developer-driven, not resident-driven. Please stop ruining Wildwood with this newer, cheap, dense, cookie-cutter suburban sprawl.

Suggestions: Once again, I make the point that Ward 1 residents are at a disadvantage when developers bring these proposals to the table when few will actually qualify to receive the notice. The signage is also well hidden again. Please attempt to make this process more fair for our taxpayers and residents. Can we please address the daily safety issues affecting those of us living here now. It has become significantly more dangerous on our roads in the last few years. Please address now rather than later after the area has been hurriedly and overly built up and your residents are subjected to more dangerous traffic conditions. Meanwhile the developers walk away and are well paid while the quality of life for your residents has declined. We don’t need more nail salons and dentists and housing. We need safer roads. Thank you for your time.
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<td><strong>Email</strong></td>
<td><a href="mailto:meghan_e_kelly@yahoo.com">meghan_e_kelly@yahoo.com</a></td>
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Travis Newberry

From: noreply@cvcplus.com
Sent: Tuesday, August 21, 2018 11:40 PM
To: Ryan Thomas; Laura Rechtin; Amanda Foster; Travis Newberry; Julian Jacquin; Kathy Arnett; Terri Gaston; Travis Newberry
Subject: Online Form Submission: Public Hearing Comment Form

Public Hearing Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

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Name: Victoria Ranner
Address: 2402 Klara Ln N
City: Wildwood
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<td><a href="mailto:vmenner@outlook.com">vmenner@outlook.com</a></td>
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Email not displaying correctly? [View it in your browser.]
QTY OF WILLOWD
NOTICE OF
PUBLIC HEARING
before the Planning and Zoning Commission
Monday, August 20, 2018 @ 6:30 p.m.

The City of Willowd will conduct a public hearing on Monday, August 20, 2018, at 6:30 p.m., in the City Hall Council Chambers, 16860 Main Street, Willowd, Missouri 63040 for the purpose of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in the underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required at your part, but your participation is welcomed. Written comments are requested to be submitted prior to the hearing and addressed to the Planning and Zoning Commission, City of Willowd, 16860 Main Street, Willowd, Missouri 63040 or via the City’s website at www.cityofwillowd.com/comment. The following request will be considered at this time:

P.Z. 20, 21, and 22-15 Ackley Place, Payne Family Homes L.L.C. (Amended), c/o Thomas Cummings, 10407 Bauer Boulevard, Suite B, St. Louis, Missouri 63132—A request for modifications of the Street Network Map of the Town Center Plan, as set forth for a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road. The requested modifications to the Street Network Map reflect the petitioner’s intent to alter the location and design components of the proposed Main Street extension through the subject site, along with other changes to the network of internal roadways. Accompanying the aforementioned Town Center Plan (Street Network Map) modifications is a request for a change in zoning from the C-8 Planned Commercial District and R-6A 3,000 square foot Residential District, with a Planned Environment Unit (PEU), to the Amended C-3 Planned Commercial District (Town Center “Workplace District”) and R-3 10,000 square foot Residential District (Town Center “Neighborhood Edge District” and “Neighborhood General District”), with a Planned Residential Development Overlay District (P RO), for the same tract of land, again being located on the west side of State Route 109, north of Manchester Road (Locator Numbers: 23V110002 and 23W320113; Street Addresses: 2431 State Route 109 and 17225 Manchester Road). Proposed Use—A total of one hundred forty (140) detached single-family dwellings, on industrial lots, with common ground, required public space areas, and a minimum of one (1) commercial outlet fronting onto State Route 109. This revised advertisement supplements P.Z. 9-18 The Reserve at Willowd, which had been posted for public hearing on July 16, 2018 by the Planning and Zoning Commission. (Ward One)

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 456-0460. Thank you in advance for your interest in this matter.
PETITION

before the
CITY OF WILDWOOD'S
PLANNING AND ZONING COMMISSION

FOR THE PURPOSE OF HEARING REQUESTS
FOR ONE OR A COMBINATION OF THE FOLLOWING:
( PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)

✓ Change of Zoning
✓ Approval of a Planned District or other special procedure (C-8/M-3/PRD)

APPLICANT/OWNER INFORMATION

Applicant's Name: Payne Family Homes
Mailing Address: 10407 Baur Blvd, Suite B
St. Louis, Mo. 63137
Telephone Number, with Area Code: 314-796-0355
Fax Number, with Area Code: __________
E-Mail Address: __________
Interest in Property (Owner or Owner Under Contract):
owner under contract

If owner under contract, please attach a copy of the contract.

Copy attached — SEE ALSO ATTACHMENT IT

Owner's Name (if different than applicant's):
Slavik Associates Ltd.
Address: 9811 Eagle Crest Court
St. Louis, Mo. 63127
Telephone Number, with Area Code: __________

Page 1 of 3
SKT INFORMATION

Postal Address of the Petitioned Property(Lots):
2431 Highway 109 & 17225 Manchester Road

Lot(he) Numbers of the petitioned Property(Lots):
231/1100 22 & 236/1200 13

Total Acres of the Site to the Nearest Tenth of an Acre:
50.16 acres

Current Zoning District Designation:
Commercial - mixed open space - Neighborhood Center (Town Center)

Proposed Zoning District Designation:
Commercial - mixed open space - associated uses & P-3 with PEB

Proposed/Used District or Special Procedures:
P-EB Planned Residential District

USE INFORMATION

Vacant

Current Use of Petitioned Sites:
Detached single-family residential lots and commercial with common ground facility space

Proposed Use of Site:
Autobahn Group: THE RESERVE @ WILLOWWOOD

Proposed Title of Project:
Anticipate developing Spring 2016 and start construction of phases Fall of 2016

CONSULTANT INFORMATION

Engineer/Architect's Name:
Shanding Engineering and Surveying Co.
Address:
5666 New Barington Road, St. Louis, Mo. 63127

Telephone Number, with area code:
314-497-0440
Fax Number, with area code:
314-487-8444
E-Mail Address:
Shanding@ShandingEngineering.com

Geologist/Forester's Name:
Scott
Address:
130 Point West Blvd
St. Charles, Mo. 63301

Telephone Number, with area code:
636-749-8000
Fax Number, with area code:
636-749-8269
E-Mail Address:
Shanding@ShandingEngineering.com
ACKNOWLEDGEMENT INFORMATION

The petitioner(s) states that they (he) (she) will comply with all the requirements of the city of Wildwood with regard to the procedures relating to its administration of land use and development controls within its boundaries, including the payment of all applicable fees.

The petitioner(s) further represent(s) and agree(s) that they (he) (she) have (have) not made any arrangement to pay any commission, gratuity, or consideration, directly or indirectly, to any official, employee, or appointee of the City of Wildwood with respect to this application.

The petitioner(s) hereby certify(s) that (indicate one):

( ) I am (we are) the duly appointed agent of the petitioner(s) and that all information given and represented on this application is an accurate and true statement of fact. Any misrepresentation of information on this application or accompanying information shall constitute grounds for the City of Wildwood, Missouri to terminate review of this petition and return all materials, minus any fees, associated with its review up to and through that point.

SIGNATURE: Thomas P. Cummins
NAME (PRINTED): Thomas P. Cummins
ADDRESS: 10407 Barr Road
ST. LOUIS, MO 63132
TELEPHONE NUMBER: 314-784-8310

[PLEASE NOTE: THE ABOVE NAMED PERSON SHALL RECEIVE ALL OFFICIAL NOTICES REGARDING THIS REQUEST, INCLUDING THE PUBLIC HEARING NOTICE]

SUBSCRIBED AND SWORN BEFORE ME THIS 14TH DAY OF SEPTEMBER, 2012

SEAL:
NOTARY PUBLIC, NOTARY SEAL
State of Missouri
St. Charles County
Commission # 1126033
My Commission Expires October 04, 2016
NOTARY PUBLIC Nancy Cangelosi
My Commission Expires 10/4/15

FOR OFFICE USE ONLY

1ST SUBMITTAL DATE: 
REC'D: YES NO
PRELIMINARY DEVELOPMENT PLAN: YES NO
PACKET COMPLETED: YES NO

2ND SUBMITTAL DATE: 
PACKET COMPLETED: YES NO

3RD SUBMITTAL DATE: 
PACKET COMPLETED: YES NO

4TH SUBMITTAL DATE: 
PACKET COMPLETED: YES NO
CITY OF WILDWOOD
NOTICE OF
PUBLIC HEARING
before the Planning and Zoning Commission
Monday, July 16, 2018 @ 6:30 p.m.

As a resident or property owner located within or near the site, you are invited to attend the public hearing of the Planning and Zoning Commission on Monday, July 16, 2018, at 6:30 p.m. at the City Hall Council Chambers, 15690 Main Street, Wildwood, Missouri 63040.

The City welcomes and encourages your comments and participation in its public processes.

Street Addresses of Subject Site:
2015 State Route 109 & 17225 Manchester Road

The Planning and Zoning Commission of the City of Wildwood will conduct a public hearing on Monday, July 16, 2018, at 6:30 p.m., in the City Hall Council Chambers, 15690 Main Street, Wildwood, Missouri 63040 for the purposes of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required on your part, but your participation is welcomed.

Written comments are requested to be submitted prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 15690 Main Street, Wildwood, Missouri 63040 or via the City's website at www.cityofwildwood.com/comment. The following request will be considered at this time:

P.Z. 9-18 The Reserve at Wildwood, Payne Family Homes LLC, c/o Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132 — A request for the following land use considerations upon a property that totals 50.65 acres of area, which is located on the west side of State Route 209, north of Manchester Road (Locator Numbers: 28V110022 and 28W320013/Street Addresses: 2431 State Route 109 and 17225 Manchester Road):

1. A modification of the Street Network Map of the Town Center Plan, which reflects the petitioner's intent to modify the location and design standards of the proposed extension of Main Street through the site, along with the accompanying planned network of internal roadways.

2. A modification to the current Town Center Regulating Plan designations associated with the tract of land from the 'Workplace District', 'Neighborhood Edge District', and 'Neighborhood General District', to the 'Neighborhood Edge District' designation for the entirety of the site.

3. A request for a change in zoning from the C-8 Planned Commercial District and R-2A 3,000 square foot Residential District, with a Planned Environment Unit (PEU), to the R-3 10,000 square foot Residential District, with a Planned Residential Development Overlay District (PRD).

These requests have been made upon the same tract of land that was under consideration by the Planning and Zoning Commission as P.Z. 20, 21, and 22-15 Ackerley Place, which has been postponed indefinitely. Proposed Uses: A total of one hundred forty (140) detached single-family dwellings on individual lots, with common ground, and required public space areas. [Land One]
Public Hearing Comment Form

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Request Being Considered: P.Z. 20, 21, and 22-15 Ackerley Place

Item Description: Field not completed.

Position on Request: Support

General Comments: Field not completed.

Suggestions: Field not completed.

Name: Carolyn

Address: 2619 Larksgon Dr So

City: Wildwood

State: MO

Zip: 73940

Phone Number: 314-775-9939

Email: c-pryor@hotmell.com

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<tr>
<th>Request Being Considered</th>
<th>P.Z. 9-18 The Reserve at Wildwood c/o Payne Family Homes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Description</td>
<td>The development on west side of 109 and south of 100.</td>
</tr>
<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>As a resident of Ward 1, I would like more clearly explained information about these submitted proposals and how they affect our landscape. The notices sent are not enough information and the language, quite frankly, caters to the developers and the City planners, not the taxpaying residents whose property values and quality of living area to be forever impacted by this encroachment of dense development. The proposed dense development does not belong in Ward 1. Ward 1 is the last remnant of Wildwood (aside from the parks) that has not been ruined and bulldozed by a rash of ugly development. I am alarmed and sickened by the altering landscape of Wildwood, not to mention the safety issues arising from the growing congestion and traffic and the constant construction. The pastoral landscape and wildlife of Wildwood is being destroyed at an alarming rate and to stay on top of the constant flood of proposals and to compete with the money making agendas of the developers is a full time job, something I already have. The reason Wildwood was created was to stop this type of dense, suburban sprawl development driven by developers taking advantage of economic climate. And I consider the terminology &quot;Town Center&quot; as an excuse and disguise for what it really is, and that is suburban sprawl. More does not equal better.</td>
</tr>
</tbody>
</table>
I would like the playing field made fair for the residents of Ward 1, which cannot produce the turn out at public meetings that other Wards can for these type of meetings. Because of the larger parcels and spread of properties, the majority of residents impacted by this development won’t be informed (I did not receive notice) until the decisions have been made or put in motion. And it’s always harder to stop something that is already in motion. The whole system favors the developers.

The fact Ward 1 properties are spread out puts us at a disadvantage. What may seem as lackluster turn out or input is simply because most residents (unless you watch the website like a hawk) are not even aware there is a meeting tonight in which the motions will be put in place for more development that won’t have citizen input. I happened to see the signage that was well hidden off road. The whole system caters to the developers, and they should not be calling the shots and be the biggest influence when it comes to permanently altering our landscapes. Again, the layout of our ward and the practice of sending notices to residents within a certain radius puts our ward at a severe disadvantage, something our elected Ward 1 officials should be consolation of when representing us. We are at a disadvantage before this supposed “fair” process even begins. The less informed we are as residents, the easier and faster it is for developers to push through their agendas (which are always about the bottom dollar for them). The more dense the construction and less trees they have to work around, the more money for developer and contractor pockets. I cannot provide suggestions when I don’t even fully understand the nuances of what’s on the table at tonight’s meeting. But I do not support any dense development of the land west of 109 and on top of the Historic district and larger parcel land. Please keep “Town Center” on the east side of 109. I can only shoot off this poorly informed and emotional submission during my lunch hour on my tiny phone screen as a desperate attempt to give resident input at a meeting I cannot attend. This comment form sent in haste is poor competition against the well prepared, well versed developers who do this day in and day out when pushing for developments that will fill their bank accounts. How do your residents compete with that when most of us aren’t even aware of a meeting tonight because we do not live within certain feet of site because as a population we live further apart...so majority won’t qualify to be notified. And that is exactly why we chose to live/or remain out here...the space, the nature, the quiet, less light pollution, less traffic, the wildlife...all of which Wildwood seems intent on ruining with the onslaught of development. Let’s take a breath and assess, please! Thank you for your time.
<table>
<thead>
<tr>
<th>Name</th>
<th>Meghan Kelly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>17900 Cougar Trails Drive</td>
</tr>
<tr>
<td>City</td>
<td>Wildwood</td>
</tr>
<tr>
<td>State</td>
<td>MO</td>
</tr>
<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>314-604-7774</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:meghan_e_kelly@yahoo.com">meghan_e_kelly@yahoo.com</a></td>
</tr>
</tbody>
</table>

Email not displaying correctly? View it in your browser.
From: Cummings, Thomas <tec@paynefamilyhomes.com>
Sent: Thursday, August 9, 2018 5:01 PM
To: Joe Vujnic
Cc: Ryan Thomas; George M. Stock, P.E.; Mike Doster; Allen, William; Kruse, Ken; John Young; Rick Brown
Subject: The Reserve @ Wildwood (P.Z. 20, 21 and 22-15 Ackerley Place, Payne Family Homes, L.L.C.
(Amended))

Importance: High

Joe:

The above referenced petition has been amended to reflect the new marketing name, "The Reserve at Wildwood", and the revised accompanying preliminary development plan which is the culmination of many meetings, conversations, consultation with experts and study ("The Reserve Plan"). Payne Family Homes believes the Reserve Plan is financially feasible, and fairly addresses all issues and concerns that have been raised throughout the entitlements process to date.

Payne Family Homes has been asked by the City to state whether it is willing to contribute funds to the total cost of the City's proposed round-a-bout at the intersection of Main Street and Hwy 109 which is a portion of the City's proposed Hwy 109 Improvement Project (the "Total Cost").

Since entitlements for the proposed development have not yet been approved, it is premature for Payne Family Homes to make a specific monetary commitment to contribute to the Total Cost, as the extent of other conditions and cost requirements that may be imposed by the City in the future are unknown at this time, and could negatively affect the financial feasibility of the Reserve Plan.

However, Payne Family Homes is willing to contribute to the Total Cost provided the following occur:

- The amended petition and The Reserve Plan are approved as presented by all governmental authorities with competent jurisdiction over the development of The Reserve Plan (the "Approvals");
- Conditions, including but not limited to any required improvements imposed as a part of the Approvals, are financially feasible;
- The Site Development Plan for The Reserve as subsequently approved conforms to The Reserve Plan, and imposes no additional cost items to the construction of the homes, the development of the land, or the development of The Reserve Plan as proposed; and
- The Total Cost becomes known and the amount of Payne Family Homes' contribution to it is financially feasible and finite.

Please feel free to contact me by cell phone if you should have any questions or require additional information on the above.

tom

Thomas E. Cummings
Vice President of Land Acquisition
May 12, 2018

Tom Cummings
Payne Family Homes
10411 Baur Boulevard
St. Louis, Missouri 63132

Re: The Reserve at Wildwood; a request for a change to the Town Center Plan’s Regulating Plan, its Street Network Map, and Streetscape Requirements/Street Specifications, along with a modification of the overall tract of land’s zoning to the R-3 10,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD), for a one hundred forty (140) lot subdivision located on the west side of State Route 109, south of Hawthorne Village Parkway

Dear Mr. Cummings:

The Department of Planning, in conjunction with the Department of Public Works, have completed their initial review of the application for the above-referenced Town Center and rezoning requests. This review centered on the plan’s compliance with the applicable sections of the City’s Zoning Ordinance and its related requirements, along with the Town Center Plan’s standards and guidelines, and other design criteria used by the City of Wildwood for any type of land use request or development. In this comparison, a number of preliminary items were discovered that must be addressed, prior to this item being scheduled for public hearing before the Planning and Zoning Commission. These items are as follows:

1. Sheet C-1 > Please note the request that will be considered by the Planning and Zoning Commission will consist of a Regulating Plan change to eliminate the “Workplace” District designation on a portion of the overall lot, a Street Network Change to address the following items: Main Street; State Route 109, which indicates no improvements to the Town Center Plan’s requirements and specifications; the proposed internal roadways, as part of the overall project (different specifications and designs); Hawthorne Village Parkway (not being extended, nor any land dedication for its future use); and the Manchester Road roundabout (it not being included and no frontage improvements along it); a change in zoning district designations to a single residential district; and the application of the Planned Residential Development Overlay District (PRD). There are a number of considerations in association with this submitted and proposed design.

2. Sheet C-2 > Please add all utility providers to the list that is provided on the cover sheet, as part of the ‘Partnership Data’ column. Please also include on this list the St. Louis County Police Department – Wildwood Precinct and an Identifier for the subject property located in Ward One.

3. Sheet C-1 > Please see the attached Sheet C-1 for corrections to notes and additions as well. Be advised the phasing note has a different number of total homes than the included density calculations.

4. Sheet C-1 > Please be advised the Department is not able to discern the Public Space Requirements, based upon the provided table. Please reference the City’s Zoning Ordinance for an understanding...
of how public space in association with new residential development should be calculated. Be
advised that public space must be usable and have improvements associated with it.
5. Sheet C-3 >Please be advised the Department is questioning the use of all dry detention type basins,
with integrated water quality, after several of these facilities have been constructed within the city.
The lack of plantings and the character of these stacked facilities, along with the depths, create
aesthetic and maintenance issues with them. If this project does proceed to construction in the
future, the Department will seek more retention-based solutions.
6. Sheet C-2 >Please be advised, as mentioned in Item #1, the design of Main Street is not consistent
with the Town Center Plan & Street Network Map, nor any section of it constructed to date. The
Department understands the 'low-impact' design approach, but the site is located within the Town
Center Area, which has specific requirements for all of its planned roadways, including street lights,
trees, and signage, along with the associated specifications.
7. Sheet C-2 >Please be advised the internal roadways being proposed to serve the 140 lots located in
this project area do not comply with the Town Center Plan & Street Network Map, nor the
Street/cape Requirements and Street Specifications of the same.
8. Sheet C-2 >Please be advised the design, placement, build-to/setback requirements associated with
the individual lots and the corresponding building placements do not comply with the City's Town
Center Plan & Neighborhood Design Standards and Architectural Guidelines. As you are aware from
related discussions on Ackerley Place, garages are to be rear entry types, served by alleys. None of
the proposed homes and lots are design in this manner.
9. Sheet C-2 >Please be advised the elimination of the Workplace District area upon the site is not
consistent with the Town Center Plan & Regulating Plan and will cause the established land use
pattern to change at the street, not behind a tier of properties fronting it. This elimination of the
designation and change in land use pattern is a major departure from the Town Center Plan.
10. Sheet C-2 >Please be advised the grading design, although preliminary in nature, indicates
disturbance up to the property lines and within fifty (50) feet of Bonhomme Creek. Additionally, an
issue that was identified, as part of the Ackerley Place discussion, was the height of retaining walls
along the perimeter of the property, which again appear to be used to create the current design. The
Planning and Zoning Commission had previously questioned this design approach.
11. Sheet C-2 >Please align the planned street that will intersect Manchester Road to the area of current
dedication abutting the property owned by the St. Louis Community College – Wildwood Campus,
where an intended roundabout is planned. Please advise as to why no roadway improvements are
indicated on the submitted plan for Manchester Road, including the aforementioned roundabout.
12. Sheet C-2 >Please be advised the new plan for this property does not indicate the dedication of land
area for future public right-of-way for the purposes of Hawthorne Village Parkway's extension.
Additionally, the roadway is to be extended into this site, under the Town Center Plan.
13. Sheet C-2 >Please be advised the lack of roadway improvements on State Route 109 must be
addressed. Although Main Street Crossing, a development of your company located to the east of
this subject site, was not required to participate in improving this State arterial roadway, this site has
direct frontage and access to it, which the other project did not.
14. Sheet C-3 >Please be advised the Public Space Plan depends, to a large degree, on the credits for
stormwater management features, which, as noted, are not useable and isolated throughout the
site. The layout of the public space does not appear to address what the Department believes will be
a future substantial demand upon it from the future 140+ new homeowners located within the
project. The Department can provide suggestions in this regard, once the process requires such.
15. **Sheet C-4** > Please be advised the cross-section detail of the roadway surface does not provide a depth of the asphalt. Additionally, this design will have to be reviewed by the City's Department of Public Works to determine its appropriateness, along with the Planning and Zoning Commission's acceptance of the same, given it is not compliant to the Town Center Plan.

16. **Sheets TSD and TPP** > Please provide a comparison of the amount of tree preservation achieved by this plan versus the earlier submittal for Ackerley Place. The Department's review of this matter seems to indicate the extent of tree preservation has not substantially changed in terms of a greater area being protected, as a result of this new plan.

17. **Sheets TSD and TPP** > Please note that, for a non-Town Center design, the amount of tree preservation and restoration effort needs to be increased and, as part of the City's new regulations regarding **Grand Trees**, the Tree Stand Delineation (TDD) must identify all of them currently located on the subject property for review by the Planning and Zoning Commission in determination of the site's design suitability.

18. **Sheet TPP** > Please advise if the calculation of the number of trees to be preserved includes the off-site references, such as abutting properties and the right-of-way area of State Route 109.

19. **Sheets L-1 through L-3** > Please be advised these sheets are being reviewed by the City's Landscape Architect and comments will be provided, prior to the public hearing on this project.

20. Please provide preliminary comments from the Missouri Department of Transportation (MoDOT), Metro West Fire Protection District, and the Metropolitan St. Louis Sewer District (MSD) on this design and its certain unique approaches to access, stormwater management, and design.

Although the Department is requesting these revisions, and if provided, does not indicate its support of this proposal, until all comments are heard, justifications developed, and questions contained herein addressed. Please also be advised that, at the conclusion of the Department's review, the request will then be forwarded to the Planning and Zoning Commission for its review and action. The review process of the Planning & Zoning Commission includes a public hearing, where public comments may be provided and considered, before issuing a final recommendation for approval/denial. Therefore, proceeding forward with these requested revisions and additions does not assure a favorable recommendation or action by the City, but certainly will be helpful in future deliberations about this site.

Once the revisions are completed, please resubmit three (3) full sets of the revised Preliminary Development Plan and other requested items to the Department of Planning for further review. Please be advised that additional comments may follow after this resubmittal, given the extent of information that is being requested, as part of the rezoning application. If you should have any questions or comments in this regard, please feel free to contact the Departments of Public Works and/or Planning at (636) 458-0440.

Sincerely,

**City of Wildwood**

Joe Vujich, Director
Department of Planning and Parks

Cc: The Honorable James R. Bowlin, Mayor
Council Members Gragnani and McGowen, Ward One
Ryan S. Thomas, P.E., City Administrator
John A. Young, City Attorney
Rick C. Brown, P.E. and P.T.O.E., Director of Public Works
Kathy Arnett, Assistant Director of Planning and Parks
Travis Newberry, Planner
June 4, 2018

City of Wildwood
16260 Main St.
Wildwood, MO, 63040

Attention: Mr. Joe Vujicich—Director, Department of Planning and Parks

Re: The Reserve at Wildwood—Preliminary Development Plans
(Stock Project No. 6270)

Dear Mr. Vujicich:

The following are written responses to comments in your review letter dated May 12, 2018:

1. Sheet C-1 > Please note the request that will be considered by the Planning and Zoning Commission will consist of a Regulating Plan change to eliminate the 'Workplace District' designation on a portion of the overall lot, a Street Network Change to address the following items: Main Street; State Route 109, which indicates no improvements to the Town Center Plan's requirements and specifications; the proposed internal roadways, as part of the overall project (different specifications and designs); Hawthorne Village Parkway (not being extended, nor any land dedication for its future use); and the Manchester Road roundabout (it not being included and no frontage improvements along it); a change in zoning district designations to a single residential district; and the application of the Planned Residential Development Overlay District (PRD). There are a number of considerations in association with this submitted and proposed design.

Response: So noted.

2. Sheet C-1 > Please add all utility providers to the list that is provided on the cover sheet, as part of the 'Pertinent Data' column. Please also include on this list the St. Louis County Police Department - Wildwood Precinct and an identifier the subject property is located in Ward One.

Response: Utility providers have been listed and Police Department and Ward One has been added to the cover sheet 'Pertinent Data'.

3. Sheet C-1 > Please see the attached Sheet C-1 for corrections to notes and additions as well. Be advised the phasing note has a different number of total homes than the included density calculations.

Response: Notes and additions have been added. Phasing note has been corrected.
June 4, 2018
City of Wildwood
Page 2

4. Sheet C-1 > Please be advised the Department is not able to discern the Public Space Requirements, based upon the provided table. Please reference the City's Zoning Ordinance for an understanding of how public space in association with new residential development should be calculated. Be advised that public space must be usable and have improvements associated with it.

Response: The Public Space calculation has been updated to only include those areas with improvements such as benches, trails, gazebo and playgrounds.

5. Sheet C-2 > Please be advised the Department is questioning the use of all dry detention type basins, with integrated water quality, after several of these facilities have been constructed within the City. The lack of plantings and the character of these stacked facilities, along with the depths, create aesthetic and maintenance issues with them. If this project does proceed to construction in the future, the Department will seek more retention-based solutions.

Response: The dry bottom detention areas proposed will not include water quality requirements. Water Quality requirements will be met with linear Bio retention basins at the 10' common ground adjacent to the road along with the incorporation of amended soils at the roof drain disconnects. (See attached MSD Conceptual Approval Letter dated 5/22/2018)

6. Sheet C-2> Please be advised, as mentioned in Item #1, the design of Main Street is not consistent with the Town Center Plan's Street Network Map, nor any section of it constructed to date. The Department understands the 'low-impact' design approach, but the site is located within the Town Center Area, which has specific requirements for all of its planned roadways, including street lights, trees, and signage, along with the associated specifications.

Response: So noted.

7. Sheet C-2 > Please be advised the internal roadways being proposed to serve the 140 lots located in this project area do not comply with the Town Center Plan's Street Network Map, nor the Streetscape Requirements and Street Specifications of the same.

Response: So noted.

8. Sheet C-2 > Please be advised the design, placement, build-to setback requirements associated with the individual lots and the corresponding building placements do not comply with the City's Town Center Plan's Neighborhood Design Standards and Architectural Guidelines. As you are aware from related discussions on Ackerley Place, garages are to be rear entry types, served by alleys. None of the proposed homes and lots are design in this manner.

Response: So noted.

9. Sheet C-2 > Please be advised the elimination of the Workplace District area upon the site is not consistent with the Town Center Plan's Regulating Plan and will cause the established land use pattern to change at the street, not behind a tier of properties fronting it. This elimination of the designation and change in land use pattern is a major departure from the Town Center Plan.

Response: So noted.
10. Sheet C-2 >Please be advised the grading design, although preliminary in nature, indicates disturbance up to the property lines and within fifty (50) feet of Bonhomme Creek. Additionally, an issue that was identified, as part of the Ackerley Place discussion, was the height of retaining walls along the perimeter of the property, which again appear to be used to create the current design. The Planning and Zoning Commission had previously questioned this design approach.

Response: Grading along the Creek has been revised so there will be no disturbance within 50'. The retaining walls have been revised to be tiered. Thus eliminate the 8'-10' high walls.

11. Sheet C-2 >Please align the planned street that will intersect Manchester Road to the area of current dedication abutting the property owned by the St. Louis Community College - Wildwood Campus, where an intended roundabout is planned. Please advise as to why no roadway improvements are indicated on the submitted plan for Manchester Road, including the aforementioned roundabout.

Response: The planned street intersection at Manchester Road has been relocated to align with the area of current dedication abutting the property owned by the college. An illustrative sidewalk along the north site of Manchester Road has been added, and Petitioner will coordinate with the City as to the final location once upon receipt of the details of the current City sidewalk project. Petitioner's information is that the roundabout is not currently warranted by the traffic conditions in the area, and that it will be built in the future by others.

12. Sheet C-2 >Please be advised the new plan for this property does not indicate the dedication of land area for future public right-of-way for the purposes of Hawthorne Village Parkway's extension. Additionally, the roadway is to be extended into this site, under the Town Center Plan.

Response: So noted.

13. Sheet C-2 >Please be advised the lack of roadway improvements on State Route 109 must be addressed. Although Main Street Crossing, a development of your company located to the east of this subject site, was not required to participate in improving this State arterial roadway, this site has direct frontage and access to it, which the other project did not.

Response: Improvement to State Route 109 have been shown as provided by MODOT's consultant.

14. Sheet C-3 >Please be advised the Public Space Plan depends, to a large degree, on the credits for stormwater management features, which, as noted, are not useable and isolated throughout the site. The layout of the public space does not appear to address what the Department believes will be a future substantial demand upon it from the future 1401 new homeowners located within the project. The Department can provide suggestions in this regard, once the process requires such.

Response: So noted.

15. Sheet C-4 >Please be advised the cross-section detail of the roadway surface does not provide a depth of the asphalt. Additionally, this design will have to be reviewed by the City's Department of Public Works to determine its appropriateness, along with the Planning and Zoning Commission's acceptance of the same, given it is not compliant to the Town Center Plan.

Response: The depth of asphalt has been shown on the typical section.
16. Sheets T3D and TPP > Please provide a comparison of the amount of tree preservation achieved by this plan versus the earlier submittal for Ackerley Place. The Department's review of this matter seems to indicate the extent of tree preservation has not substantially changed in terms of a greater area being protected, as a result of this new plan.

Response: Plan's code compliant.

17. Sheets T3O and TPP > Please note that, for a non-Town Center design, the amount of tree preservation and restoration effort needs to be increased and, as part of the City's new regulations regarding Grand Trees, the Tree Stand Delineation (TDD) must identify all of them currently located on the subject property for review by the Planning and Zoning Commission in determination of the site's design suitability.

Response: Mapping of Grand Trees is in progress.

18. Sheet TPP > Please advise if the calculation of the number of trees to be preserved includes the off-site references, such as abutting properties and the right-of-way area of State Route 109.

Response: Offsite and ROW woodlands ARE NOT calculated as part of the preservation areas.

19. Sheets L-1 through L-3> Please be advised these sheets are being reviewed by the City's Landscape Architect and comments will be provided, prior to the public hearing on this project.

Response: So noted.

20. Please provide preliminary comments from the Missouri Department of Transportation (MoDOT), Metro West Fire Protection District, and the Metropolitan St. Louis Sewer District (MSD) on this design and its certain unique approaches to access, stormwater management, and design.

Response: Comments will be forwarded upon receipt.

Should you have any further questions and/or comments please feel free to contact us.

Sincerely,

Charles Kehoe
Charles A. Kehoe, P.E.,
Project Manager

CC: George M. Stock, P.E., President
Tom Cummings, Payne Family Homes
May 22, 2018

Stock and Associates Consulting Engineers  
Attn: Mr. Chuck Hulse  
257 Chesterfield Business Parkway  
Chesterfield, MO 63005

RE: The Reserve at Wildwood  
Basic Conceptual Review of Preliminary Development Plans  
MSD Rec# 18CNCPB-00031

Dear Mr. Hulse:

MSD has completed a basic conceptual review of preliminary plans for a proposed 140 single family residential subdivision located at 2431 Highway 109 in Wildwood, Missouri.

Project Overview

The project is located in the Bonhomme Creek watershed and Missouri River Wastewater Treatment Plant service area. Based on historical aerial photography, the approximately 50.65 acre subject tract is wooded and undeveloped. Access to the site is off of the North side of Manchester Road or the West side of Highway 109. Topography consists of a tributary that crosses the northwest corner of the property. This tributary collects the runoff from the site and conveys it to the west/southwest.

Existing sanitary sewer service is located on the south and east sides of the site.

Peyna Family Homes proposes to construct 140 single family lots, along with public streets, curbs, sidewalks, utilities, sewers, and common ground areas on the property. Storm water management is proposed with storm water detention / Water Quality Bioretention Basins, linear bio-retention and amended soils situated at various locations throughout the site.

Stormwater Management

The overall stormwater management plan as outlined on the preliminary development plans and the conceptual stormwater management report is conceptually approved.

An existing natural resource inventory map will need to be prepared in order to adequately plan for stormwater management. The natural resource inventory should assess and acknowledge the presence or absence of wetlands, streams, floodplains,
and Karst; the nature of the existing topography (i.e. slopes exceeding 20%), the extent of vegetated cover and preservation, and the existing property use and surrounding property use. The extent of these features should be summarized in a table presented on the map. Please refer to the 2009 Site Design Guidance document that was prepared by MSD in conjunction with the St. Louis Municipalities Phase II Storm Water Steering Committee for guidance on this deliverable.

Given the quantity of land disturbance and additional runoff proposed by this preliminary plan, post-construction storm water quality BMPs will be required as mandated by our region's MS4 permit. The site is undeveloped, which designates it "new development" for the purpose of establishing BMP performance levels that are necessary for Phase II compliance. Water quality strategies and practices that provide for runoff volume reduction shall be employed such that the site's post-developed runoff condition reasonably mimics its preconstruction runoff condition.

Note that a project that affects wetlands or waters of the U.S. or State (jurisdictional waters) will likely be accompanied by an additional assessment of the feature as required by U.S. Army Corps of Engineers and/or Missouri Department of Natural Resources under the Clean Water Act section 401/404 permitting requirements. As part of the due diligence process, the two smaller tributaries and the main channel that bisect the site should be investigated for any jurisdictional nature. MSD will require documentation that the project has satisfied 401/404 permitting requirements necessary to begin construction prior to issuing formal plan approval, or documentation from the appropriate agency confirming that the project's development activities are exempt.

Channel Protection (extended detention of the runoff originating from the 1yr 24 hour storm) is required. Detention is required such that the site's post-developed flow rates resulting from the 2yr 24 hr and 100yr 24 hour storms do not exceed the site's predeveloped flow rates.

Site grading shall provide overland flow paths such that proposed homes will not be subject to overland flooding. Where swales are proposed, cross sections and open channel calculations should be provided with the formal design submittal in order to demonstrate their adequacy.

The grading plan shall also provide a sufficient overflow overland flow path for conditions in which the proposed storm sewer system becomes blocked or surcharged. If topography will not allow for an overland flow path, designated ponding areas shall be provided based on the 100yr-24 hour storm and identified in the improvement plans. The finish floor/flow sills of adjacent homes will need to be established above any 100yr-24 hour high water ponding elevations and overland conveyance limits.
Sanitary

Sanitary loading calculations will be required and evaluated during the Development review process. Sanitary storage or upgrades to the existing sanitary sewer system or pump station is not anticipated at this time.

Sewers and manholes shall be located out of the zone of influence of nearby buildings and retaining walls. Working room shall be provided, including a six foot diameter flat area centered at the manhole structures (Sanitary and Storm).

Other Items

A subdivision plat will need to be submitted to MSD during the plan review process. Easements will be required for new public sewers.

A Maintenance Agreement is required to ensure long term maintenance and operations of all storm water BMPs and detention basins. The BMP reserve areas required for all storm water Best Management Practices should be shown on the improvement plans and can be established on the record plat separately from the maintenance agreement. BMP reserve areas shall not encroach upon MSD maintained sewers or easements.

Natural areas, if intended to be preserved as buffers for stormwater management credits shall be protected by a BMP Reserve Area, acceptable conservation easement, or other enforceable instrument that ensures perpetual protection of the proposed area.

The connection fee for this project will be determined during the formal plan review, based on the fee schedule that is in place at that time. The current single family rate is $1126/residence.
Limitations of Conceptual Review

Detailed improvement plans for this project are not under formal review by the District at this time. Those plans and supporting engineering calculations shall be formally submitted to MSD for review, approval and permits prior to the commencement of construction activities.

Unless otherwise indicated, any requirements mentioned in the conceptual review should be addressed during the formal plan review process.

This conceptual review is based upon an evaluation of preliminary plans and preliminary information, and is subordinate to the review and approval of the detailed improvement plans and engineering design.

Sincerely,

Eugene Johnson, P.E.
Senior Civil Engineer
Engineering/Planning-Development Review
Attachment –

PUBLIC

COMMENT
Travis Newberry

From: Amanda Foster
Sent: Monday, July 09, 2018 1:48 PM
To: Travis Newberry
Subject: FW: The 109 Roundabout

Travis,

Please see below for P&Z.

Thanks,

Amanda Foster
City Clerk
City of Wildwood
18860 Main St.
Wildwood, MO 63040
636-459-0440 ext. 106
cfoster@cityofwildwood.com

Hi Amanda,
Please include the following in packets for P & Z when the Payne Family Homes proposal is presented.

Thanks,
Sue

The 109 Roundabout

Several years ago representatives of Payne Family Homes approached Wildwood regarding a subdivision in Town Center (Main Street Crossing). This development would have it’s primary access off Highway 109. They were told upfront that they would be responsible for the costs of a roundabout as it was the only solution to maintaining the 109 traffic flow and accessing their proposed subdivision. That did not happen.

Instead Payne was granted a major adjustment to their portion of the design of Main Street. TGA funds were virtually depleted as cost offsets for their infrastructure costs. They had proposed an additional development across 109 and wanted additional “incentives” for that. That request, in modified form, is working its way through the planning process as The Reserve. Wildwood can’t afford and shouldn’t have to do business with developers who demand handouts at every turn. Obviously a roundabout is needed at the Main Street location. Let the company that created this current and future need pony up for a major portion of these costs before dipping into taxpayer funds.

Their current right in, right out entrance is woefully inadequate, both for their subdivision and as the Main Street entrance to Town Center. Further, the several retail lots, as yet undeveloped, will demand a safer access
than the current right in, right out entrance. The owners of these lots should also have to contribute to the roundabout when that proposal comes forward.

This Planning and Zoning Commission needs to hold Payne’s feet to the fire and forward proposed legislation that will require upfront payment of a major portion of the cost of the roundabout before any approval of either the retail outlets or any development on the Slavic Property west of 109. The taxpayers of Wildwood should not have to pay for an infrastructure improvement that primarily benefits developers.

Sue Cullinan
Former Council Member

Sent from my iPad
The Reserve at Wildwood

Proposed Single-Family Residential Community and Commercial Outlot

August 20, 2018 – Public Hearing before the Planning and Zoning Commission
Wildwood, Missouri

Development Team:
Mr. Thomas Cummings – Vice President of Land Acquisition – Payne Family Homes
Mr. Mike Doster – Zoning Attorney – Doster, Ullom, Boyle, LLC
Mr. George Stock, P.E. – President – Stock & Associates Consulting Engineers, Inc.
Mr. Chuck Hulse, P.E., P.L.S. – Associate – Stock & Associates Consulting Engineers, Inc.
Mr. Rusty Saunders, ASLA – Loomis Associates, Inc. – Landscape Architect
Project History

- The subject property is located within the southwest quadrant of the State Route 100 and State Route 109 intersection, within the City of Wildwood, St. Louis County.

- The current Zoning District Designation is C-8 Planned Commercial and R-6A Residence District with Planned Environment Unit (PEU).

- The request is for modifications of the Street Network Map of the Town Center Plan, and Streetscape Requirements/Street Specifications, along with a modification of the overall tract of land’s zoning to the Amended C-8 Planned Commercial District (Town Center “Workplace District”) and R-3 10,000 s.f. Residence District (Town Center “Neighborhood Edge District” and Neighborhood General District”), with a Planned Residential Development Overlay District (PRD).

- This development is identified as TAZ1 in the HRGreen Traffic Engineering Study dated 2/2018 with rev. 3/16/2018
Town Center Regulating Plan Map

Project Location
50.65 ac (6.5% of Total)
Proposed Preliminary Development Plan

Project Data
- Minimum lot size: 6,129 sf
- Maximum lot size: 18,874 sf
- Average lot size: 9,815 sf
- Bulk density: 135 lots/48.783 ac = 2.767 lots/ac
- City density calculation: (44.071 ac x 43,560 sf/acre) / 10,000 = 192 lots
- Common ground: 13.65 ac (27%)
- Front yard setback: 20'
- Side yard setback: 5'
- Rear yard setback: 15'
- Min. lot width at building line: 50'

135 single-family residential lots
Proposed Roundabout
Commercial Outlot 1.867 ac
Terraced Retaining Walls
Public Space & Amenities

- Overlook
- No Disturbance Area
- Terraced Retaining Walls
- Community Garden
- Proposed Roundabout
- 8’ wide Multi-Use Trail
- Playgrounds
- Terraced Retaining Walls

MAJOR FEATURES
- Public Space Required = 235,224 sf
- Public Space Provided = 413,005 sf
- No Disturbance area along creek
- 1,180 feet of 8’ Multi Use Trail
- Overlook
- 1,200 sf Community Garden
- Street Raingardens
- 9.5 acres that accommodate
  - Gazebos
  - Playgrounds
  - Benches

DESIGN INTENT
- Create meaningful connections between various spaces in the land plan
- Create a feeling of openness, and large spaces throughout the neighborhood
- Increase safe and efficient movement of multimodal traffic throughout the community
- Increase value of homes by purposefully orienting the homes in relation to space
- Improve the appearance of the community from adjacent streets
- Increase pedestrian connectivity
- Add appeal and diversity to the streetscape by placing meandering walks at varying distances from the streets
Landscape Plan

**Tree Canopy**
- Existing: 986,279 SF (22.64 AC)
- Proposed: 1,699,547 SF (38.24 AC)
- STREET TREES: 220,531 SF (5.06 AC)
- Percentage Provided: 37.5%
- Percentage Required: 30%

**Planting Totals**
- STREET TREES:
  - Canopy Trees = 267
- BUFFERYARD PLANTINGS:
  - Canopy Trees = 51
  - Understory Trees = 51
  - Evergreen Trees = 103
  - Shrubs = 510
- CUL-DE-SAC AND COMMON GROUND PLANTINGS
  - Canopy Trees = 23
  - Shrubs = 266
Typical Pavement Section
Traffic Impacts

Information taken from City’s Traffic Engineering Study prepared by HRGreen 2/2018 rev. 3/16/2018

....It is anticipated the new trips to and from the Town Center Area will be as follows:

<table>
<thead>
<tr>
<th>Town Center Total</th>
<th>TAZ1</th>
<th>TAZ2</th>
<th>TAZ1</th>
<th>TAZ2</th>
</tr>
</thead>
<tbody>
<tr>
<td>1,177 inbound</td>
<td>29</td>
<td>25</td>
<td>97</td>
<td>65</td>
</tr>
<tr>
<td>1,257 inbound</td>
<td></td>
<td></td>
<td>1,262 outbound</td>
<td>66</td>
</tr>
<tr>
<td>745 outbound</td>
<td>87</td>
<td>20</td>
<td>57</td>
<td>65</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>1,574 inbound</td>
<td>77</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>(8.3%)</td>
</tr>
<tr>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

(TAZ1 and TAZ2 from Table 5) Pg. iii

...Route 109 is a secondary arterial route which provides local and regional access between I-64 to the north (via Batherton Road, Chesterfield Airport Road, and Route CC) and I-44 to the south. ...Pg. 3

The Reserve at Wildwood average daily trips (ADT)

Single Family Detached Housing (135 Lots) ITE code 210: 135 x 9.57 trips/home = 1291 trips
Discount Pharmacy (13,000 sf) ITE code 820: 88.16/1000 x 13,000 = 1146 trips
Total 2427 trips

Average Daily Trips along Route 109 per HRGreen study Fig 24 pg. 35 = 24500

Percent added to ADT 2427/24500 = 9.9%

Payne Family Homes proportional contribution to Hwy 109 widening & Roundabout in addition to TGA:
10% x .5 x $1,850,000.00 = $92,500.00

Projected Traffic Generation Assessment Fees:
Residential Lots = 135 lots x $2,483.60 = $335,286.00
Potential Commercial = 65 stalls x $2,276.60 = $147,979.00
Total = $483,265.00
MONUMENT SIGN
Payne Family Homes

Our House. Your Home.
Payne Family Homes is honored to have served as the St. Jude Dream Home Builder since 2014.

St. Jude Children’s Research Hospital is leading the way the world understands, treats and cures childhood cancer and other life-threatening diseases. Treatments developed at St. Jude have helped push the overall childhood cancer survival rate from 20% to 80% since the hospital opened more than 50 years ago. Families never receive a bill from St. Jude because all they should worry about is their child.

With the help of our trade partners, we have delivered 4 homes at zero cost to St. Jude and look forward to delivering many more!
OUR HOUSE. Your Home.
Thank You
Petition Number: P.Z. 4-20
Petitioner: ERC Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758
Request(s): A request for a change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a parcel of land generally being located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109. The subject property is designated ‘Cultural/Institutional Overlay District’ under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off-street and structured parking accommodations, stormwater management facilities, and required public space components.
Zoning: NU Non-Urban Residence District
Location: West side of State Route 109, at its intersection with Turkey Track Road
Tract Size: 4.31 acres
Street Address and Locator Number: 2665 State Route 109 and St. Louis County Locator Number: 24V130913
Public Hearing Date: June 15, 2020
Date and Vote on Information Report: July 20, 2020 - TBD
Report: Attachment A
Conditions: Attachment B
Preliminary Development Plan: Attachment C
Background Information: Attachment D
Ward: One
Fire District: Metro West
School District: Rockwood
The Department of Planning is recommending these petitions for development in the Town Center Area be approved, but with certain modifications, as set forth in Attachment B of this report.

1. The requested change in the zoning district designation of the subject property will create an opportunity for diversity of housing choices within the City of Wildwood, i.e. life-cycle housing.
2. The development type, which is multiple-family units, was anticipated when the Cultural-Institutional Overlay District was adopted by the Planning and Zoning Commission and endorsed and ratified by the City Council in 2002.
3. The layout of improvements relative to the site is consistent with the Neighborhood Design Standards of the Town Center Plan.
4. The Department’s support is premised on the acceptance of all conditions identified in Attachment B of this Information Report.
BACKGROUND OF SITE AND HISTORY >>>

Site Description (General) - The site of the current request is a four point three (4.3) acre tract of land that is located on the northwest corner of State Route 109 and Turkey Track Road. The parcel of ground that forms this subject site is a legal lot of record and was platted, as part of the development of the St. Louis Community College – Wildwood Campus and the construction of New College Avenue and Generations Drive. This property has three (3) frontages onto the aforementioned roadways, along with Generations Drive. The subject lot is rectangular in shape and a corner lot.

State Route 109 - State Route 109, along petitioner’s frontage, is a two (2) lane arterial roadway, maintained by the State of Missouri. The most recent improvements to this roadway were completed by the City of Wildwood, which were north of Manchester Road, to Clayton Road. These improvements included four (4), multiple lane roundabouts, additional traffic lanes, and improved trail corridors and stormwater management facilities. These efforts by the State of Missouri and the City of Wildwood have also addressed the State Route 109 bridge over State Route 100. All of these improvements and plans reflect the importance of this roadway to traffic flow in this area of the Town Center and Wildwood.

This roadway is the primary north/south connector between Interstate 44 and Wild Horse Creek Road, with traffic volumes fluctuating between certain non-peak and peak hour periods. State Route 109 bisects this community into unequal halves and serves a low density residential pattern, several park and open space holdings, and a large number of institutional uses, such as churches and schools, and Town Center. The roadway has improved shoulders, some stormwater drainage facilities, but limited frontages with sidewalks. The right-of-way area along this portion of State Route 109 is in excess of sixty (60) feet in width due to required dedications, as part of past developments and purchases.

This roadway provides a key linkage in the City’s Town Center Area and has been discussed in both that plan and the Master Plan. These documents support the roadway maintaining its current character, with topical changes for safety. The City Council has also passed a resolution on the issue of improving State Route 109 through Wildwood, which sought to define a clear position in this regard. In all instances, the City’s long-range plans and policy on the change of State Route 109 reiterates that it should not be improved to an outerbelt standard or to a roadway without character and sensitivity to its surroundings.

Turkey Track Road - Turkey Track Road is a private street that is wholly contained within a sixty (60) foot wide public right-of-way dedication, which includes approximately two (2) lanes of roadway width and no other major improvements. This roadway serves a limited purpose, given its rural nature and turning restrictions at its intersection with State Route 109 (right-out only). This purpose is important, given it is the only other access point into this area onto State Route 109, where the college campus, the Meadows of Wildwood residential area, the Wildwood Family YMCA, and Wildwood Square are located (emergency access purposes). The orientation of the roadway is east-west and traffic volumes are low. This segment of Turkey Track Road is intended to become, at some point, a public street.
Generations Drive - Generations Drive is a City-maintained street that was dedicated to Wildwood, as part of a collaborate effort between the owner of Wildwood Square, the developer of the Meadows of Wildwood, the Wildwood Family YMCA, the St. Louis Community College – Wildwood Campus, and the City of Wildwood. The roadway is two (2) lanes in width, has vertical curbs and concrete gutters, with wide sidewalks and street grates, trees, signs and lighting standards, all themed, according to the Town Center Plan. The orientation of this roadway is north/south and traffic volumes are moderate to high, given surrounding uses.

Current Condition of Site - The subject lot is currently vacant. The property was utilized for years for agricultural purposes and has limited trees and woodland areas associated with it. Slope is to the west and northwest for the majority of the property’s land area. Currently, the field is grass and cut several times per year. Topographically, relief is not severe and generally level to moderately sloping.

Site Zoning - The zoning of this lot is NU Non-Urban Residence District and has been since 1995. This zoning reflects St. Louis County’s designation, which at that time was a holding category for the future use of the site. This designation was not a true residential district for zoning purposes. The incorporation of the City of Wildwood changed the NU Non-Urban District designation of St. Louis County to the NU Non-Urban Residence District, which established it as a true residential category, reflecting its almost exclusive use in the Wildwood Area for detached dwellings located upon three (3) acres or greater sized lots. This zoning district designation now applies to most of the land area of Wildwood, except for the industrial, suburban, and town center locations.

Town Center Land Use Designation - This site is located in Town Center and designated for ‘Cultural-Institutional Overlay District’ types of uses. The intended uses associated with the ‘Cultural-Institutional Overlay District’ designation are varied in nature and can generally be more intense in terms of square footages and activities than allowed anywhere else within the City. The application of these requirements and the allowances for uses are reflected in the development pattern associated with this general area. Other areas of ‘Cultural-Institutional Overlay District’ designations include the site of the Metro West Fire Protection District headquarters and several properties located around, and including, Wildwood City Hall.

Surrounding Land Uses - Other land use in its vicinity of the subject site includes the following descriptions:

To the North: Abutting to the north is the campus of the Wildwood Family YMCA. This site is approximately ten (10) acres in size and zoned C-8 Planned Commercial District. Beyond this lot is New College Avenue and Wildwood Square, a C-8 Planned Commercial District zoned site, with two (2) buildings currently in place, with a number of retail, service and restaurant users located within them.

To the South: Adjoining in this direction is the Meadows of Wildwood residential area, which is zoned R-6A 4,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD). This residential area includes a total of sixty-two (62) single family detached dwellings on individual lots, which was accomplished in three (3) total phases. The homesites are served by a
community center building and other amenities located within the common ground of the subdivision. Further to the south is public space owned by the Missouri Department of Conservation and over 2,000 acres in size – Rockwoods Reservation.

**To the West:** Crossing Generations Drive is a portion of the St. Louis Community College – Wildwood. This property is zoned NU Non-Urban Residence District and sixty-six (66) acres in overall size. One (1) building is located on the site, along with associated parking areas.

**To the East:** Beyond this property is State Route 109, the City’s major north-south arterial roadway, which is maintained by the State of Missouri. Further east is the Westridge Oaks Subdivision, which is zoned a combination of R-1 One Acre Residence District and R-3 10,000 square foot Residence District, with a St. Louis County Planned Environment Unit (PEU). This residential area includes 101 homesites on its overall --- acre tract of land.

**CURRENT REQUEST >>>**

The petitioner is seeking to develop this four point three (4.3) acre site with 117 multiple family units in a total of eight (8) buildings. Two (2) other buildings are planned on the site. The first other building is a single-story leasing office and common work area location, while the other is the pool house. A summary of the total ten (10) buildings planned on the subject site is provided below:

<table>
<thead>
<tr>
<th>Building Id.</th>
<th>Height – Footprint Size</th>
<th>Number of Units</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester Building #1</td>
<td>3 stories – 7,678 sq. ft.</td>
<td>21 units</td>
<td>Location is NW corner of site.</td>
</tr>
<tr>
<td>Prospect Building #1</td>
<td>2 stories – 3,245 sq. ft.</td>
<td>12 units</td>
<td>Location is directly south of Wildwood Family YMCA.</td>
</tr>
<tr>
<td>Bradford Building #1</td>
<td>3 stories – 7,376 sq. ft.</td>
<td>20 units</td>
<td>Location is NE corner of the site.</td>
</tr>
<tr>
<td>Prospect Building #2</td>
<td>2 stories – 3,245 sq. ft.</td>
<td>12 units</td>
<td>Location abuts State Route 109.</td>
</tr>
<tr>
<td>Rayburn Building #1</td>
<td>2 stories – 3,790 sq. ft.</td>
<td>8 units</td>
<td>Location is the center of the site.</td>
</tr>
<tr>
<td>Salford Building #1</td>
<td>2 stories – 4,477 sq. ft.</td>
<td>12 units</td>
<td>Location is SE corner of the site.</td>
</tr>
<tr>
<td>Salford Building #2</td>
<td>2 stories – 4,477 sq. ft.</td>
<td>12 units</td>
<td>Location is along Turkey Track Road.</td>
</tr>
<tr>
<td>Bradford Building #2</td>
<td>3 stories – 7,376 sq. ft.</td>
<td>20 units</td>
<td>Location is SW corner of the site.</td>
</tr>
<tr>
<td>Pool House</td>
<td>1 story – 512 sq. ft.</td>
<td>N/A</td>
<td>Location is center of site, east half of it.</td>
</tr>
<tr>
<td>Leasing Office/Clubhouse/Shared Work Area</td>
<td>1 story – 800 sq. ft.</td>
<td>N/A</td>
<td>Location is center of site, west half of it.</td>
</tr>
</tbody>
</table>

An in-ground pool is also planned as part of this multiple-family community, which would be limited to residents of the units. Supporting these units are a planned 165 parking spaces, which equates to a parking ratio of approximately one point four (1.4) spaces per unit, which is less than the required two (2) spaces per unit. A number of these parking spaces are to be provided under several of the buildings and provide cover for certain tenants’ vehicles – twenty-two (22) spaces.
The proposed residential subdivision is to be developed under the Neighborhood Design Standards and Architectural Guidelines of the Town Center Plan. These design cues are reflected in the submitted Preliminary Development Plan and conceptual elevations of the building housing the dwelling units. These items are summarized below:

1. The design of the site identified that no building or structure will be located within fifty (50) feet of State Route 109, ten (10) feet along Generations Drive, and fifteen (15) feet along the north property line and Turkey Track Road.
2. The proposed multiple-family development will be served by all utilities. Letters from these utility providers have been provided by the petitioner’s engineer.
3. The proposed project is intended to provide twenty-nine (29) percent of its overall area as green space, when stormwater management facilities and other improvements are calculated toward such.
4. The major feature of the stormwater management facility is the planned underground detention basins, which will be placed beneath planned off-street parking areas on the subject site.
5. The major public space features of this multiple-family community are the in-ground swimming pool, the community green, and a multiple-use trail along State Route 109.
6. The development has two (2) planned access points from it; Turkey Track Road and Generations Drive.
7. The design of the system of roadways and access points does not include any improvements or curb cuts from the subject site to State Route 109.
8. The provided Preliminary Development Plan does not indicate any roadway or pedestrian improvements to Turkey Track Road.
9. The interior portion of the project is served by Crescent Street, a private roadway for the multiple-family community. In addition, all areas are linked by pedestrian facilities. Crescent Street will also provide several on-street parking spaces as well.
10. The design of the project includes seventy-nine (79), one-bedroom units and thirty-eight (38), two (2) bedroom units. Thirty-one (31) of the total 117 units are to be designed for senior-aged occupants, which are all ground-floor types.
11. The design of the project also includes street lighting, area lighting, and certain building lighting in association with it.
12. The petitioner has provided a detailed landscaping plan to comply with City of Wildwood requirements. The petitioner, in regards to landscaping, is proposing a berm and other features along the site’s portion of Turkey Track Road to screen lighting from vehicles and other aesthetic purposes.
13. The electrical meter banks will be located on the rear of buildings. Free standing elements, such as electrical transformers and telephone pedestals, will be screened by landscaping.

At the public hearing, the petitioner noted the primary outdoor features are as follows:

1. Crescent Street: Parallel parking with six (6) foot wide sidewalks, street trees, landscaped planting strips, and engaging architecture make Crescent Street a place that will be inviting to walkers, joggers, and baby strollers.
2. The Central Lawn: An area that is a flat open space that will be planted with well-maintained turf grasses. This area is for picnics and lawn games such as badminton and croquet. There is a paved decorative concrete terrace to the west of the Central Lawn for deck chairs and outdoor dining. This terrace is adjacent to the Fitness Center. The Central Lawn is located at the heart of the neighborhood and cannot be seen from off the property.

3. Pool Court and Pergola: This private pool area is a well-landscaped area for swimming, wading, and lounging. The area is completely screened from view.

4. Multiple-Use Trail: This trail along Highway 109 will be a valuable amenity. The sidewalk system of Crescent Street will connect to this trail, which allows foot traffic and cyclists to move between Generations Drive and the Multi-Use Trail, which is an integral part of the City’s local trail network.

ANALYSIS >>>

INTRODUCTION >>> In considering this request, the Department must first identify its relative components that are needed to determine if the rezoning is reasonable at this location. These components, when identified and considered, must indicate a reasonable land use pattern will remain for the future within this site’s vicinity, a design of the development that is compliant to the Town Center Plan, and its associated standards and guidelines, and the use of the planned district procedure is a benefit to the overall community and nearby area in terms of type of use, its relative need, and provided amenities. If the Department’s analysis determines these components are met by this proposal, it can only then recommend a favorable action to the Planning and Zoning Commission.

CONSIDERATION OF LAND USE AND ZONING COMPONENTS >>>

In presenting the components of this request that are integral to a recommendation on this matter, the Department has considered them in groupings of like characteristics or areas of study.

The first of these groupings relates to the Town Center Plan’s Boundary Map. The Boundary Map is a reflection of the extent of properties that are part of the Town Center, or not. In this case, the following items can be noted relative to this request:

1. The property is part of the Town Center boundary. The inclusion of the subject site in this overall boundary equates to certain allowances for its use that do not exist anywhere else within the City of Wildwood.
2. The allowances for the property’s use include the list of permitted activities that are strategically allocated to the Town Center Area land use districts based upon certain characteristics that are present, including access, utility availability, topography and other physical features, past zoning and land use actions, and the surrounding land use pattern.
3. The inclusion of the subject site and six (6) other lots as part of the Town Center Area was not accomplished at the time of the plan’s initial adoption, but, thereafter, in 2002, when the Planning
and Zoning Commission adopted the ‘Cultural/Institutional Overlay District’ for inclusion, as part of this special area of Wildwood.

4. The rationale at that time for expanding the Town Center Area’s boundaries was a desire to develop a congregate care center, where the Meadows of Wildwood Subdivision is now located.

By the location of the subject site within the Town Center Area boundary, it can be considered for a more intense utilization than most other locations in this community.

The second of these groupings is the Town Center Regulating Plan, which establishes the land use districts and potential permitted activities for all properties located within the Town Center Area. This designation determines what potential uses might be authorized on a property so designated. In this case, the following items can be noted relative to this request:

1. The ‘Cultural/Institutional Overlay District’ has a distinctive list of permitted activities that can be considered on properties associated with this land use classification.

2. The ‘Cultural/Institutional Overlay District’ is intended to be a design/land use district to permit a variety of institutional uses that will reinforce the unique attractions of the Town Center Area as a place to work, shop, and live. The design and character of public open spaces is particularly important in this district. The topography of watersheds and creeks should be respected in all development proposals. Along with these uses, other complementary activities and additional housing opportunities were programmed as well for this set of collective properties and reflected on said list (see attached).

3. These housing opportunities were intended to complement nearby institutional uses, which is the college activity and, now, to a degree, would add additional housing options for seniors therein (thirty-one (31) ground floor units are being specifically designed for seniors).

4. The impetus for this land use district was the development of surrounding properties relative to the subject site, which included the community college use and the Wildwood Family YMCA. Thereafter, the congregate care facility, which is now Meadows of Wildwood, was approved for the approximately nineteen (19) acre site. The care facility was to be a mix of independent and assisted care units, some of which were to be in a large, multiple-story building.

5. This current list of permitted activities for this overlay district includes multiple family dwellings.

6. This district, given that it is an overlay district, was intended to accommodate primarily “Neighborhood General” District type activities, which includes multiple-family units.

7. The Planning and Zoning Commission’s Letter of Recommendation that established the Cultural/Institutional Overlay District specifically mentions additional housing opportunities as appropriate land use for this area of Town Center.

The request that has been submitted by petitioner for the use of this 4.13 acre site for multiple-use family units is allowed by the Town Center Plan’s Regulating Plan. Despite being a permitted use within this overlay district, said inclusion does not, on its own, allow for a favorable recommendation, given the remaining three (3) other major components of the Town Center Plan exist for consideration and also must be met.
The **third of these groupings** is the Town Center Street Network Map, which identifies and sets the needed systems of streets, roads, and other infrastructure improvements to accommodate the uses that are identified as permitted activities within the established list of them for the land use districts. Connecting land use and the increase in demand that such causes on existing and surrounding streets, roads, and other infrastructure requires the identification of the needed parameters to understand if the existing network of roadways is sufficient or, if not, what extent of improvements are needed to ensure levels of service are appropriate and use of them are safe. In this regard, the following items can be noted relative to this request:

1. The property has triple frontages onto three (3), separate roadways. The design of access into and out of the site includes utilizing two (2) of these three (3) roadways for such. The intent is not to utilize State Route 109 for such.
2. The network of roadways was planned in the early 2000's.
3. The improvement of Turkey Track Road for this use, or any other activity, needs to address roadway improvements, particularly pedestrian facilities within its established right-of-way area.
4. The increase in use of Turkey Track Road cannot be accommodated without commensurate improvement to it, but would not include any changes to the right-out configuration of it at State Route 109.
5. The Traffic Impact Study (TIS) indicates that certain off-site roadway changes are needed on New College Avenue and at State Route 109, including its signalization, to maintain reasonable Levels of Services (LOS). The Department does believe these improvements must be made and, if not, the rezoning request and the development of this site cannot proceed forward favorably.
6. The same Traffic Impact Study (TIS) indicates the overall impact of the multiple-family project on the area roadway system can be accommodated, with these referenced changes.
7. This general area needs an improved and secondary access into and out of it for safety and traffic flow purposes. This second access area would logically be from the properties situated here to Manchester Road.
8. The interior street will be required to be platted for public access purposes, but for only pedestrian, bicyclists, runners, and others on foot. Vehicle allowances for access to this area by the general public is at the discretion of the petitioner.
9. The street specifications and streetscape requirements applied by the City to the Generations Drive would be applicable to Turkey Track Road and the new Crescent Street. Specifically, these specifications address the standard for roadway widths, improvement levels, and stormwater drainage, while also the aesthetic elements to create the desired ‘outdoor room,’ which is melded to the buildings’ architecture at the street.
10. The lack of cross-access to the Wildwood Family YMCA property to the north is understandable for vehicular purposes, but, from a pedestrian perspective, must be provided.

Collectively, the issue of a single access point into and out of this area of Town Center is problematic and needs to be addressed as a priority. However, based upon the provided Traffic Impact Study (TIS), certain improvements to the system of existing public streets in this area will maintain current Level of Services (LOS). These off-site improvements must be agreed to by the developer through the use of
credits, via the Traffic Generation Assessment Impact Fee, or the project’s requested rezoning not be approved.

The Department also believes the project could be considered in phases, with the first phase based upon the improvements noted in the Traffic Impact Study (TIS), followed by the second phase, when a second access point is established to Manchester Road. The first phase could constitute up to five (5) of the planned eight (8) multiple-family buildings, or no more than seventy-four (74) units. The Department recognizes this approach may not be agreeable to the petitioner, but, the point of such, is to generate action on a secondary access into and out of this area to Manchester Road. If another option does exist that can accommodate such, then the City should explore it and accept it, if reasonable.

The fourth of these groupings is the Town Center Plan’s Neighborhood Design Standards (or the recipe book for building placement and aesthetics). The design standards cover building locations and their heights, along with façade and site standards. The application of these standards are applicable to all building types in the Town Center Area and intended to create the New Urbanism type of setting in this regard. Relative to these standards, the following items can be noted relative to this request:

1. The placement of buildings along Generations Drive is consistent with the standards for this particular street, which is the primary type in this regard.
2. The other placements of buildings are also consistent as well with these standards.
3. The heights of the buildings are within the parameters set forth in the standards.
4. The location of parking, behind the buildings or screened by walls or landscaped berms, is consistent with standards for such.
5. The parking ratio in this regard is too low and the Department believes the minimum number of spaces per unit needs to be increased from the petitioner’s requested 1.4 spaces/unit to one point seventy-five (1.75) spaces/unit.
6. The design of utility boxes and other equipment is appropriate, so as to eliminate them from common view.
7. The placement of air conditioning equipment, if roof mounted, shall not be visible from any adjoining property or roadway.
8. The use of a fence or wall, both along Generations Drive and an area of the frontage of the subject site to Turkey Track Road must be included for screening purposes, consistent with Neighborhood Design Standards. Such screening is a key component of the site standards. Said construction shall comply with said standards and the Town Center Architectural Requirements.
9. The design of the stormwater management is compliant to the Metropolitan St. Louis Sewer District’s (MSD) standards and the City of Wildwood as well. The use of underground detention, as an option for the subject site, is appreciated by the City.
10. The public open space design reflects a mix of improvements that provide a comprehensive range of activities, including an outdoor pool, central lawn area, indoor facilities within the clubhouse building, a trail, and pedestrian network, all to be provided in the confines of a four (4) acre site.
11. This site, is one (1) of a very few, where no mature woodlands are to be removed to accommodate its development, reflecting its past use as an agricultural use.

The proposed design of this site appears, from the Department’s perspective, to be one (1) of the better applications of the Town Center Plan’s Neighborhood Design Standards in this special area of the City.

The fifth of these groupings is the Town Center Plan’s Architectural Guidelines (or the pattern book for building appearances and aesthetics). Building architecture is a broad canopy of options in the ‘Cultural/Institutional Overlay District.’ Relative to these guidelines, the following items can be noted relative to this request:

1. The proposed architecture of these buildings includes quality material and mix of them as well, as reflected on provided renderings.
2. The final review and approval of the design of all buildings and their associated components will be by the City’s Architectural Review Board (ARB).
3. The Department believes the architecture of the buildings will complement the area’s built environment.

The character and architecture of buildings in Town Center has been successful in creating a unique environment, very different from any area of the City, along with many communities around the metropolitan area. This project, and its architectural components, should be no different.

As set forth in the analysis of these five (5) groupings, the project’s design components are consistent with the Town Center Plan. Concerns voiced regarding traffic are appropriate and the Department does believe by requiring off-site improvements through the crediting of the Traffic Generation Assessment Impact Fees and phasing the project, such can be adequately addressed in this regard. The provision of multiple family units within the City’s Town Center Area will provide a diversity of housing options (lifecycle housing), affordability, and assist the business community in its endeavors, all either goals, objectives, or recommendations of the City’s Master Plan.

SUMMARY AND RECOMMENDATION

The Department of Planning is recommending the requested change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District be considered favorably. This support is premised on the above analysis associated with the design of this project and the compliance of such to the five (5) major groupings of the Town Center Plan. Said recommendation is contingent on the petitioner agreeing and meeting all of the conditions contained in Attachment B of this Information Report.
ATTACHMENT B – Conditions

1. PERMITTED USES

   a. This C-8 Planned Commercial District shall authorize the maximum development of one hundred seventeen (117) multiple-family units in a total of eight (8) buildings, inclusive of parking lots and structures, common recreational areas, and other public space locations, along with all permitted accessory structures normally found in conjunction with the primary use of this property.

      i. A leasing office, clubhouse, and common work area building shall also be allowed within the boundaries of this C-8 Planned Commercial District.

      ii. A pool house building and in-ground swimming pool shall also be authorized within the boundaries of this C-8 Planned Commercial District.

      iii. A central lawn area shall be authorized within the boundaries of this C-3 Planted Commercial District.

2. LOT SIZES, DEPTHS, AND BUILDING REQUIREMENTS

   a. Building footprint sizes, heights, and other specifications shall comply with the following table:

<table>
<thead>
<tr>
<th>Building Id.</th>
<th>Height – Footprint Size</th>
<th>Number of Units</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manchester Building #1</td>
<td>3 stories – 7,678 sq. ft.</td>
<td>21 units</td>
<td>Location is NW corner of site.</td>
</tr>
<tr>
<td>Prospect Building #1</td>
<td>2 stories – 3,245 sq. ft.</td>
<td>12 units</td>
<td>Location is directly south of Wildwood Family YMCA.</td>
</tr>
<tr>
<td>Bradford Building #1</td>
<td>3 stories – 7,376 sq. ft.</td>
<td>20 units</td>
<td>Location is NE corner of the site.</td>
</tr>
<tr>
<td>Prospect Building #2</td>
<td>2 stories – 3,245 sq. ft.</td>
<td>12 units</td>
<td>Location abuts State Route 109.</td>
</tr>
<tr>
<td>Rayburn Building #1</td>
<td>2 stories – 3,790 sq. ft.</td>
<td>8 units</td>
<td>Location is the center of the site.</td>
</tr>
<tr>
<td>Salford Building #1</td>
<td>2 stories – 4,477 sq. ft.</td>
<td>12 units</td>
<td>Location is SE corner of the site.</td>
</tr>
<tr>
<td>Salford Building #2</td>
<td>2 stories – 4,477 sq. ft.</td>
<td>12 units</td>
<td>Location is along Turkey Track Road.</td>
</tr>
<tr>
<td>Bradford Building #2</td>
<td>3 stories – 7,376 sq. ft.</td>
<td>20 units</td>
<td>Location is SW corner of the site.</td>
</tr>
<tr>
<td>Pool House</td>
<td>1 story – 512 sq. ft.</td>
<td>N/A</td>
<td>Location is center of site, east half of it.</td>
</tr>
<tr>
<td>Leasing Office/Clubhouse/Shared Work Area</td>
<td>1 story – 800 sq. ft.</td>
<td>N/A</td>
<td>Location is center of site, west half of it.</td>
</tr>
</tbody>
</table>

   b. All multiple-family units shall have a patio or balcony in association with it and as reviewed and acted upon by the Architectural Review Board on the required elevations.
c. All garden walls, fences, or screen walls shall be reviewed and acted upon by the Architectural Review Board and then the Planning and Zoning Commission, before any permitting or construction is allowed.

d. No building and/or structure shall be more than three (3) stories above final grade, as measured from the front building line.

e. Architectural type single selections shall be required on all residential units of a minimum thirty (30) year standard, while all penetrations, stacks, and vents shall be painted or of an integral color to match the color of the roof.

f. The first story, inter or clear height of all ground floor multiple-family units shall be not less than nine (9) feet.

g. Multiple-family buildings, which face the frontage line, but also places the side of the structure along another right-of-way, shall be designed to incorporate the elements of the front facade along that portion of it, including grilles in windows and trim around the entirety of each frame. The placement and design of these units shall be approved by the Planning and Zoning Commission on the Site Development Plan and the elevations of these units by the Architectural Review Board.

h. The proposed architectural design, character, and style of all buildings shall adhere to the City of Wildwood's Town Center Architectural Guidelines, Neighborhood Design Standards, and any other applicable requirements of the Town Center Plan, excepting no vinyl siding shall be allowed on any building within the boundaries of this C-8 Planned Commercial District (PRD). All materials used on any facade of a residential unit shall be fiber cement siding and backer board and/or brick or stone. Approval of the required design shall be by the Architectural Review Board. Minimally, all buildings shall maintain a consistent theme throughout the boundaries of this C-8 Planned Commercial District in terms of material, color, and style.

i. The foundations of all buildings, including the interior parking areas to them, shall be painted a complementary color to the selected palette for the buildings themselves, with that information and selections to be provided as part of the required application packet to the City's Architectural Review Board.

j. The overall area of this C-8 Planned Commercial District shall be no less than four (4) acres.

3. PLAN SUBMITTAL REQUIREMENTS

Within twelve (12) months of the P.R.D. Overlay District approval by the City Council, and prior to any site disturbance, the developer shall submit to the Planning and Zoning Commission for their review and approval a Site Development Plan. Where due cause is shown by the developer, time intervals may be extended once by the Planning and Zoning Commission in accord with requirements of Section
420.060 of the City of Wildwood Zoning Ordinance. Said Site Development Plan shall include, but not be limited to, the following information:

a. Outboundary plat and legal description of the property.
b. A general numbered lot plan with setback lines from all streets and roadways on and adjacent to the property. A typical lot diagram, indicating all site design information such as, but not limited to, right-of-way width, improvement dimensions and locations, setbacks, and building placement.
c. The location and size of all parking areas, pavement widths, and right-of-way dedications of all internal roadway improvements and drives.
d. A general plan indicating setback lines along the perimeter of the subject tract of land and surrounding property lines and related improvements within four hundred (400) feet of this site’s boundaries.
e. Location of all roadways adjacent to the property, including required roadway right-of-way dedication and pavement widening with existing and proposed improvements, and general location, size, right-of-way, and pavement width of all interior drives.
f. The location and size of all freestanding signs, lighting, fences, sidewalks, and other above ground structures, except retaining walls less than two (2) feet in height per section.
g. Existing and proposed contours at vertical intervals of not more than two (2) feet.
h. General location of sanitary sewer facilities.
i. Parking and density calculations.
j. Conceptual location and size of common ground areas.
k. A typical section of the proposed road indicating the placement and design of required streetscape improvements.
l. A Landscape Plan including, but not limited to, the location, size, and general type of plant materials to be used in accord with the City of Wildwood’s Ordinance 410 and accompanying Tree Manual.
m. An inventory of the percent of tree canopy or individual trees to be retained on the site.
n. Location of all existing and proposed easements.
o. All other information not mentioned above, but required on a preliminary plat in accord with Section 420.060 of the City of Wildwood Subdivision and Development Regulations.

4. SITE DEVELOPMENT PLAN DESIGN CRITERIA

The above Site Development Plan shall adhere to the following specific design criteria:

Build-To Lines/Setback Distances - Residential

a. Any building or structure, other than boundary and/or retaining walls, fences, detention facilities, and/or light standards, shall adhere to the following build-to lines, as specified in the Town Center Plan’s Neighborhood Design Standards:

(i) No less than fifty (50) feet from the right-of-way line of State Route 109.
(ii) Ten (10) feet) from the right-of-way line of Generations Drive.
(iii) No less than fifteen (15) feet from the northern boundary line of this C-8 Planned Commercial District, as well as the right-of-way line of Turkey Track Road.

Parking Setbacks – Residential

b. All parking stalls or loading spaces, excluding points of ingress or egress for this multiple-family development, shall be located no less than twenty (20) feet from any boundary line of this C-8 Planned Commercial District, except as follows:

(i) Five (5) feet from the northern boundary line of this C-8 Planned Commercial District.
(ii) Five (5) feet from Turkey Track Road, except a berm, with landscaping, garden wall, or fence shall be required to be installed between the parking setback area and the roadway right-of-way line.

The location of all parking spaces and required screening shall be as acted upon by the Planning and Zoning Commission on the Site Development Plan.

Access and Roadway Improvements

c. **STATE ROUTE 109** – Access from the subject site to State Route 109 shall not be authorized. However, the developer shall be responsible to correct any deficiencies in the current right-of-way area relative to its existing shoulder, stormwater improvements, and maintenance features. Any work in this right-of-way shall be as reviewed and acted upon by the Missouri Department of Transportation (MoDOT) and the City of Wildwood Department of Public Works, as part of the Site Development Plan approval process.

d. **INTERNAL STREET** - Complete the necessary dedication of land area within this subject site for private right-of-way purposes associated with the internal street. The dedication for private rights-of-way shall be used for the construction by the developer of an internal residential street for service to the authorized buildings. This dedication shall be a minimum of forty (40) feet in width to accommodate the construction of two (2) lanes of asphalt roadway, with concrete curb and gutter, and five (5) foot wide sidewalks, including a three (3) foot tree lawn area, which all adhere to the Town Center Plan's Street Specifications and the Streetscape Design Requirements, as directed by the Department of Public Works and approved by the Planning and Zoning Commission on the Site Development Plan. Along with this dedication of this private right-of-way area, the developer shall provide within this same area, a sidewalk, trail, pedestrian, and utility easement. All streetscape requirements (street trees, lights, signs, waste receptacles, benches, and other items consisting of approved materials) shall be installed by the developer, as specified by the City of Wildwood's Town Center Plan within the right-of-way of the unnamed street (Crescent Street) and directed by the Department of Public Works.

e. **TURKEY TRACK ROAD** - Construct the required roadway improvements, which include a widening of the current roadway width, a five (5) foot wide sidewalk, and street trees and lights,
including a minimum three (3) foot wide tree lawn area for these improvements, along the north side of Turkey Track Road. Improvements to Turkey Track Road shall conform to all of the requirements of the City of Wildwood’s Street Specifications of the Town Center Plan, as directed and approved by the City of Wildwood’s Department of Public Works. All streetscape requirements (street trees, lights, signs, waste receptacles, benches, and other items consisting of approved materials) shall be installed by the developer, as specified by the City of Wildwood’s Town Center Plan within the right-of-way of Turkey Track Road and directed by the Department of Public Works.

f. **TRAFFIC CALMING** - Any planned speed tables/roundabouts or other traffic calming methods shall be designed and constructed by the developer of this multiple-family development in accordance with City of Wildwood standards, and as directed by the Department of Public Works. The Planning and Zoning Commission, on the Site Development Plan, shall review and act upon the final design of all traffic calming improvements.

g. **ACCESS** - Access to this site from the system of public right-of-way areas from this C-8 Planned Commercial District shall be limited to one (1) commercial curb cut onto Generations Drive and one (1) residential curb cut to Turkey Track Road. The design and construction of these curb cuts shall be as specified by the City of Wildwood’s Town Center Plan and directed by the Department of Public Works. No access to State Route 109 right-of-way shall be authorized.

h. **OFF-SITE ROADWAY IMPROVEMENTS** – The developer shall be responsible for the installation of off-site roadway improvements within the New College Avenue right-of-way area, which are consistent with the recommendations of the Lochmueller Associates’ Traffic Impact Study (TIS) completed for this project. This work shall also include any restriping of lane configurations and signalization work at the intersection of New College Avenue and State Route 109. All components of this work shall be a creditable charge to this development’s required Traffic Generation Assessment Impact Fee.

**Miscellaneous Roadway Requirements**

i. Installation of landscaping and ornamental entrance monument or identification signage, if proposed, shall be reviewed by the Department of Public Works for sight distance considerations and approved prior to its installation or construction.

j. If required sight distance cannot be provided at the access location, acquisition of right-of-way, reconstruction of pavement, including correction to vertical alignment and other off-site improvements, may be required to provide the required sight distance as directed by the Department of Public Works.

k. Construction access shall be via New College Avenue and Generations Drive during the development of this site, not Turkey Track Road, nor shall any project-related traffic access the Meadows of Wildwood Subdivision.
I. Sidewalks shall be required on all public and private streets and provide for a continuous and logical layout of this pedestrian network. Design and construction requirements for all sidewalks within the entire development shall be as established in the Street Specifications and Streetscape Elements of the Town Center Plan. Approval of their location, design, and material shall be by the Planning and Zoning Commission, as part of the Site Development Plan review process.

m. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public road right-of-way. Utility relocation cost shall not be considered as an allowable credit against the petitioner's Traffic Generation Assessment Impact Fee. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of roadway improvements.

n. All internal streets, access drives, or lanes, whether public or private, shall comply with the Streetscape Requirements of the Town Center Plan in terms of improvements, such as drive lane widths, sidewalks, stormwater drainage facilities, garden walls, street trees and lights, and pedestrian furniture. If certain streets, drives, or lanes are to be private, an easement shall be provided to the City granting public use of them for pedestrian and vehicular purposes. These easements shall be granted at the time of the Record Plat approval by the City Council.

o. The developer shall provide a cross-access easement from the subject site to the Wildwood Family YMCA property through and along the northern boundary of the property, per an agreement to be reviewed and acted upon by the City Attorney and the Planning and Zoning Commission. Said location, extent, and other details of this cross-access easement shall be shown on the required Site Development and reviewed and acted upon by the Planning and Zoning Commission.

**Parking Requirements - Residential**

p. Parking spaces shall be provided as required by the Town Center Plan's Neighborhood Design Standards and Section 415.340 Off-Street Parking and Loading Requirements of the City of Wildwood Zoning Ordinance for the R-6A 4,500 square foot Residence District. However, the required parking ratio shall be a minimum of 1.75 spaces per multiple-family unit.

**Landscape Requirements - Specific**

q. Landscaping shall adhere to all requirements of Ordinance 410 and its accompanying Tree Manual, including the submittal of a Tree Preservation Plan in conjunction with the Site Development Plan.
r. All streets, roads, and lanes shall be appropriately landscaped as required by the Streetscape Design Requirements of the Town Center Plan and approved by the Planning and Zoning Commission on the Site Development Plan.

s. The areas of existing vegetation within the C-8 Planned Commercial District boundaries identified as to be retained shall be marked on the site prior to the commencement of any disturbance in accord with the City of Wildwood’s Ordinance 410. These areas shall be indicated on the Site Development Plan submitted to the City of Wildwood for Planning and Zoning Commission review and approval. Existing mature tree canopy shall be preserved in accordance with the requirements of City of Wildwood’s Ordinance 410 Tree Preservation and Restoration Code.

t. Landscaping within the defined common and public space areas shall comply with Ordinance 410 Tree Preservation and Restoration Code requirements and accompanying Tree Manual. The Planning and Zoning Commission, on the Site Development Plan, shall approve the planting pattern. Amenities, such as benches, lights, and walking paths shall be installed in the open space area of the residential development by the developer of these ten (10) total buildings.

(i) Buildings, structures, and all parking areas associated with this multiple-family development shall be screened from view by landscaping and berms and/or fences and walls, or a combination of the same, along the entirety of the southern boundary of this C-8 Planned Commercial District (Turkey Track Road right-of-way).

u. A Landscape Architect shall sign, seal, and submit all plans for review and approval for this residential development.

Signs - Residential

v. Signs for this P.R.D Overlay District shall be erected in accordance with the Town Center Plan Architectural Guidelines and Section 415.410 Sign Regulations of the City of Wildwood Zoning Ordinance for the R-6A 4,500 square foot Residence District.

w. The location of all signage shall be as approved on the Site Development Plan by the Planning and Zoning Commission.

Lighting Requirements

x. The location of all lighting standards shall be as approved on the Site Development Plan. No on-site illumination source shall exceed sixteen (16) feet in height or be so situated that light is cast directly on adjoining properties. Illumination levels for all lighting shall comply with the provisions of the City of Wildwood’s Zoning Code, Section 415.450 “Outdoor Lighting Requirements.” A Lighting Plan shall be submitted in conjunction with the Site Development Plan

(18.)
indicating compliance to these requirements. The Planning and Zoning Commission shall approve the location, design, and appearance of all light standards and fixtures as part of the Site Development Plan review process.

Miscellaneous Conditions

y. The design, color, material, and location of all garden and screen walls or fences, if planned or required, shall be consistent with the requirements of the Town Center Plan’s Architectural Guidelines and be shown on the Site Development Plan for review and action by the Planning and Zoning Commission and the Architectural Review Board.

z. Improvements associated with public infrastructure, such as roadways, sidewalks, and access points, shall comply with general design principles that will provide for safe and efficient movement of traffic in and around these sites and improve overall circulation in the area. These improvements shall be reviewed and approved by the Department of Public Works.

aa. Hours of construction and grading activity shall be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturday. No development (grading and construction) activity shall be authorized on Sundays.

bb. All retaining walls exceeding three (3) feet in height per section or crossing individual property lines shall be constructed of an appropriate inter-locking concrete block system. Walls crossing property lines shall be located in a maintenance easement. The design, color, material, and location of all walls shall be consistent with the requirements of the Town Center Plan’s Architectural Guidelines and be shown on the Site Development Plan for review and action by the Planning and Zoning Commission.

c. The location of all utility easements for proposed service to this development shall be as approved by the Planning and Zoning Commission on the Site Development Plan. All utilities installed to serve this site shall be placed underground, including any existing overhead lines located on the subject property.

dd. All utility meters, pedestals, boxes, and other devices shall be placed on the inward sides of allowable buildings, painted to match the common façades, where attached, and not be visible from the abutting roadways.

ee. All rooftop mechanical equipment shall be screened from view on all sides of the facade in an architecturally consistent manner in terms of color and style with the building. Screening shall be reviewed and considered by the Architectural Review Board at the time of the renderings’ submittal.
ff. All exterior trash areas shall be enclosed with a six (6) foot high sight-proof fence and their locations shall be as approved on the Site Development Plan. Trash pickup shall not occur before 7:00 a.m. in the mornings or after 6:00 p.m. in the evenings, seven (7) days per week.

5. TRAFFIC GENERATION ASSESSMENT FEE

The developer shall contribute to the East Area Traffic Generation Assessment Trust Fund established by Section 140.210 of the City of Wildwood’s Revised Codes. This assessment must be paid in full at the time of the first Zoning Authorization for any building or structure or when the individual issuances of building permits for the authorized lots are approved. This contribution shall not exceed the amount established by multiplying the number of parking spaces provided by the following rate:

<table>
<thead>
<tr>
<th>Type of Development</th>
<th>Required Contribution</th>
</tr>
</thead>
<tbody>
<tr>
<td>Apartments</td>
<td>$508.69/Parking Space</td>
</tr>
</tbody>
</table>

(Parking space is defined by Section 415.280 of the City of Wildwood Zoning Code.)

If type of development proposed differ than those listed, rates shall be provided by the Department of Public Works.

As this development is located within a Trust Fund area established by the City of Wildwood, any portion of the traffic generation assessment contribution, which remains, following completion of roadway improvements required by the development shall be retained in the appropriate trust fund.

The amount of this required contribution, if not submitted by January 1, 2021, shall be adjusted on that date and on the first day of January in each succeeding year thereafter in accord with the construction cost index as determined by the City of Wildwood Department of Public Works.

The granting of any credits to this assessment fee is at the sole discretion of the City Council, but shall be allowed for requested improvements on New College Avenue and State Route 109 (approximately $104,000.00).

6. VERIFICATIONS PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN

Prior to approval of the Site Development Plan, the developer shall provide the following:

Stormwater Improvements

a. Submit to the Planning and Zoning Commission an engineering plan approved by the City of Wildwood Department of Public Works and the Metropolitan St. Louis Sewer District (MSD) showing that adequate handling of the stormwater drainage of the site is provided.
i. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood and the Metropolitan St. Louis Sewer District (MSD) standards.

ii. All stormwater shall be discharged at an adequate natural discharge point.

iii. Retention/detention of differential runoff of stormwater shall be required. Stormwater management, in this case, shall be provided in permanent retention/detention facilities, specifically in the form of an underground detention facility, thereby allowing the air space above to be used for public space purposes. These underground retention/detention facilities shall be completed and in operation prior to the issuance of building permits for an approved dwelling unit, except display lots.

iv. All proposed retention/detention facilities and related stormwater improvements shall be located in a common ground area and ensure perpetual maintenance to the Homeowners Association to be created at the time of platting of this development.

v. The developer of this site shall be solely responsible to provide the necessary mechanisms, as part of the Site Development Plan/Improvement Plan process, to implement “best management practices” for stormwater management and the construction of related facilities. Minimally, these practices/facilities should include rain gardens, vegetative swales, and other options to substantially reduce the amount of stormwater leaving the subject site.

vi. The developer shall provide adequate detention and/or hydrologic calculations for review and approval of all stormwater that will encroach on City of Wildwood rights-of-way.

**Geotechnical Report**

b. Provide a Geotechnical Report covering development and grading required by improvements involved with this site, as directed by the Department of Public Works. Said report shall verify the adaptability of grading and improvements with soil and geologic conditions which are susceptible to rapid erosion, landslide, and/or creep. A statement of compliance with this study, signed by the Geotechnical Engineer preparing the report, shall be included on all Site Development Plans. The development and construction plans shall be designed to conform to the requirements and conditions of the Geotechnical Report. The Geotechnical Engineer shall be required to sign and seal all plans with a certification the proposed construction will be completed in accordance with the grading and soils requirements and conditions contained in the report.

**Stormwater Pollution Prevention Plan**

c. Submit a Stormwater Pollution Prevention Plan, as part of the Site Development Plan review process, indicating compliance to all Federal, State, and local requirements regarding the management of stormwater runoff to prevent siltation and erosion, while preserving water quality, both upon the site and on downstream properties.
Environmental Assessment – Phase One

d. The developer shall provide to the Planning and Zoning Commission, as part of the Site Development Plan submittal package, a Phase I Environmental Assessment Report of the property, which indicates its current condition relative to its past utilization by other owners. Determination regarding any required mediation shall be identified and completed, prior to the approval of the Record Plat and before the occupancy of any residential unit, all being in accordance with State and federal standards and guidelines, as set forth by the United States Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR), for any determined contaminant exceeding a residential cleanup standard/guideline, with the cost borne for such by the developer and not the City of Wildwood.

Archeological Inventory

e. The archeological assets of this subject site, such as remnants of buildings, structures, or other improvements, shall be cataloged, photographed, and preserved, if possible, by a professional/firm with expertise in this field. This survey shall meet generally accepted industry practices and procedures for the delineation of areas, assets, and other considerations to guarantee that these features are catalogued, recorded, and addressed before any land disturbance can occur on the site. The City of Wildwood’s Historic Preservation Commission shall approve the professional/firm chosen by the developer of this project to conduct this assessment and survey, before any of this related activity occurs on the site.

7. RECORDING

Within ninety (90) days of approval of the Site Development Plan by the Planning and Zoning Commission, the approved plan shall be recorded with the St. Louis County Recorder of Deeds.

8. VERIFICATION PRIOR TO PERMITS

Notification to Department of Planning

a. Subsequent to approval of the Site Development Plan and prior to issuance of any grading, foundation, or building permit, all approvals from the Department of Public Works (Widwood), the Metro West Fire Protection District, the Missouri Department of Natural Resources (MDNR), the Missouri Department of Transportation (MoDOT), and the Metropolitan St. Louis Sewer District (MSD) must be received by the Department of Planning.

b. Prior to the issuance of a foundation or building permit for any structure, which adjoins the common ground area and/or detention, basin, written certification from a Professional Engineer which verifies these areas are graded in accordance with the approved plans, must be received by the Department of Planning.
Roadway Improvements

c. Improvements to Turkey Track Road must be completed prior to the issuance of building permits in excess of forty (40) percent of the allowable buildings. Any delays in utility company relocation and adjustments will not constitute a cause to allow additional building permit issuance, prior to completion of roadway improvements.

Land Subdivision

d. Record a proper subdivision of the property and comply with all other applicable Subdivision and Development Regulations sections affecting the development of land, except as otherwise specified by this ordinance.

Escrow Requirements

e. All improvement and landscaping costs shall be submitted to the City of Wildwood through the standard subdivision escrow procedures.

Improvement Plans

f. The developer of this multiple-family residential subdivision shall provide to the City Improvement Plans indicating construction details relative to public and private infrastructure associated with its development. Said plans will be used to calculate escrow requirements for these identified improvements.

Sanitary Sewage System

g. The developer shall provide verification from the Metropolitan St. Louis Sewer District (MSD) that public sewer service has been provided to this site. Verification shall be in a form acceptable to the City of Wildwood.

Potable Water Service

h. The developer shall provide verification from the Missouri American Water Company (MOAM) that service to this multiple-family can be provided at acceptable levels relative to the density of the project and not cause service issues to other households served by the same.

9. GENERAL DEVELOPMENT CONDITIONS

a. Provide adequate temporary off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driving conditions.
b. A grading permit is required prior to any grading on the site. Interim stormwater drainage control in the form of siltation control measures is required.

c. A copy of the most recently approved Site Development Plan for this C-8 Planned Commercial District development shall be prominently displayed at all times in any leasing office/space for this development.

d. The petitioner shall be responsible for obtaining all necessary permits from the Department of Natural Resources Clean Water Commission as they relate to the development of this tract of land.

e. If cut and fill operations occur during a season not favorable for immediate establishment of a permanent ground cover, a fast germinating annual, such as Rye or Sudan Grasses, shall be utilized to retard erosion.

f. Failure to comply with any or all of the conditions of this ordinance shall be adequate cause for revocation of permits by issuing City of Wildwood Departments or Commissions.

g. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accord with Site Development Plans approved by the Planning and Zoning Commission and the Department of Planning.

h. Any other applicable zoning, subdivision, or other regulations or requirements of the City, whether in effect at the adoption of this ordinance or as may be hereinafter adopted, shall further apply to the development of this property as authorized by this C-8 Planned Commercial District Ordinance, except as may be provided by law. Nothing herein shall be deemed a waiver of any subdivision, zoning or other development regulation of the City whether by implication or reference.

i. This zoning approval is conditioned on compliance with the Zoning Code, Subdivision Code, and all applicable laws of the City. Such additional regulations are supplemental to the requirements herein and no modification of any applicable regulations shall result from this C-8 Planned Commercial District ordinance, except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.

10. **PUBLIC SPACE REQUIREMENTS**

a. Developer shall construct improved public space in conformance with or otherwise satisfying the requirements of the City’s Public Space Ordinance, Chapter 415.260 and 415.270 of the City of Wildwood’s Zoning Ordinance. The City Council accepts the findings of the Public Space Study adopted therein and determines the compliance with the Public Space Ordinance provisions will address the impact of this specific development on public space needs in a manner and amount that is equal to less than an amount that is roughly proportional to the actual or anticipated
impact. The installation of identified public space improvements shall be as required by the applicable ordinances but shall be completed prior to issuance of any occupancy (temporary or final) permit for the units authorized by this ordinance. Unless otherwise approved pursuant to the procedures set forth in the Public Space Ordinance, the public space attributable to this development, is based upon the number of authorized dwelling units at a rate of 828 square feet per new multiple-family unit/dwelling. A total of 96,876 square feet (2.2 acres) of creditable public space must be provided as part of this use.

b. A minimum green space area of this C8 Planned Commercial District shall be no less than twenty-nine (29%) of the 4.13 acre site.

c. Part of the required Public Space Plan shall include an in-ground swimming pool, a central green area, a pergola, and a multiple use trail, which will extend along the entire frontage of the site with the State Route 109 right-of-way.
ATTACHMENT C
PRELIMINARY DEVELOPMENT PLAN PACKAGE
ATTACHMENT D
BACKGROUND INFORMATION
CITY OF WILDWOOD
NOTICE OF
PUBLIC MEETING
before the Planning and Zoning Commission
Monday, July 20, 2020 @ 7:00 p.m.

AS A RESIDENT OR PROPERTY OWNER NEAR THE SITE
THAT IS IDENTIFIED ON THIS MAILER, THE CITY OF
WILDWOOD WOULD LIKE TO ENSURE YOU ARE
AWARE OF THIS REQUEST/PROPOSAL BECAUSE IT IS
LOCATED WITHIN 3,000 FEET OF YOUR PROPERTY.
YOUR COMMENTS ARE ENCOURAGED, ALONG WITH
YOUR PARTICIPATION AT THE SCHEDULED HEARING
OR MEETING. THIS ITEM IS SCHEDULED FOR DISCUSSION
AND ITS OUTCOME MAY IMPACT YOUR HOME,
NEIGHBORHOOD, OR AREA, SO PLEASE CAREFULLY
READ THE DESCRIPTION AND PARTICIPATE AT YOUR
DISCRETION. THE CITY OF WILDWOOD ENCOURAGES
CITIZEN INPUT AT ALL OF ITS HEARINGS OR MEETINGS AND
YOUR INVOLVEMENT WILL ASSIST IT IN REACHING THE
BEST DECISION POSSIBLE FOR ALL PARTIES.
* PLEASE SEE YELLOW BOX ON OPPOSITE SIDE OF
THIS MAILER FOR A LIST OF WAYS TO EITHER COM-
MENT ON AND/OR TRACK THIS ITEM.

St. Louis Community College
YMCA
SUBJECT SITE

Street Addresses of Subject Site:
2665 State Route 109, 63040

THE CITY WELCOMES AND ENCOURAGES *OUR
COMMENTS AND PARTICIPATION IN ITS
PUBLIC PROCESSES.
THANK YOU!

If you should have any questions regarding this
information, please feel free to contact the
Department of Planning at (636) 458-0440.
Thank you in advance for your interest in this matter.

Listed below is a request that was presented to the Planning and Zoning Commission at a public hearing held on June 15, 2020. You and many of your neighbors may have expressed interest in its outcome and the Commission is scheduled to hear the Department of Planning’s recommendation on this matter and potentially take action upon it at its upcoming meeting. The meeting will be held on Monday, July 20,
2020, at 7:00 p.m., in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040. Please be advised that, given the current COVID-19 coronavirus pandemic, certain restrictions do exist relative to number of attendees allowed at any hearing or meeting. These restrictions also include social distancing. Therefore, please anticipate certain delays and potential alterations to the standard public meeting procedures. Additionally, depending on the actions taken by St. Louis County Government and/or the City of Wildwood, the meeting may only be accessed virtually, if public health circumstances continue to dictate or mandate such. Written comments are encouraged and requested to be submitted prior to the meeting and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City’s website at https://www.cityofwildwood.com/1976/Virtual-P2-Meetings. The following request will be considered at this time:

P.Z. 4-20 ERC Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758 – A request for a change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel of land, which is located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109 (St. Louis County Locator Number: 24V130913/Street Address: 2665 State Route 109). The subject property is designated ‘Cultural/Institutional Overlay District’ under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off-street and structured parking accommodations, stormwater management facilities, and required public space components. (Ward One)

RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:
1) Submitting a comment online by visiting: www.cityofwildwood.com/comment.
2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
3) Viewing the project on the City’s Current Developments & Zoning Reviews page by visiting: www.cityofwildwood.com/zoningreviews.
4) Viewing the Planning and Zoning Commission’s agenda, which is available on the City’s website at: www.cityofwildwood.com, the Friday before the aforementioned meeting date.
MEADOWS OF WILDWOOD SUBDIVISION WATER PERFORMANCE

TO P & Z COMMISSENORS --- Vote NO on RE-Zoning, P.Z. 4-20

The plumbing code used by the state of Missouri is the National Uniform Plumbing Code. It references a few basic guidelines which I would like to point out. Normal water pressure is 40-80 psi. Most utilities provide 55-60 psi. Low water pressure is anything below 40 psi. Anything below 40 psi will cause poor performance of plumbing fixtures i.e toilets, ice makers, showers, sprinkler systems.

New construction can cause a large drop in water pressure.

In March of 2018 I contacted Missouri American Water Co. and asked if anything could be done to improve our low water pressure problem. One week later 2 water company technicians arrived at my door. They went to the meter in my front yard and did a pressure check which showed 50 psi. I asked them to come into my home and look at the pressure where it comes into the house.

“They stated that they were not allowed to come into my home, but it is well known that the pressure on the west side of 109 is significantly lower that the east side, normally 60-65 psi. Pressure drop also takes place going from a 1 inch pipe at the meter to a ¾ pipe into the house.”

In the next 3 weeks 2 more of my neighbors requested the same service, again they checked at the meter, but these technicians went into the homes and looked at where the water came into the house. They informed both elderly ladies that the plumbing was incorrectly installed. The water spicket was below the pressure reducing valve. I don’t know where they went to school but that is standard installation on new construction!
All new homes built in St. Louis County have a pressure reducing valve, factory set at 50 psi, installed in line with the water pipe coming into the house. (This is a safety device to prevent excess pressure). Our pressure reducing valve has never been used. When all water appliances are shut off in my home the water pressure is 40-41 psi.

When the dishwasher, laundry washer or shower is turned on pressure drops to as low as 32 psi. I have checked 3 other neighbors who also experience the same thing but drop as low as 30 psi. Two homes have, at their expense, installed pressure tanks and pumps. Average cost has been $1200. Per household.

An internal E Mail between Derek R Linam, Engineering Manager, Missouri American Water Company and George M Stock P.E., President Stock & Associates Consulting Engineers Inc, dated March 12, 2020, concerning water pressure associated with a planned new apartment complex at Generations Drive and Turkey Track Road.

Derek to George:

“Pressure during peak demand at this location will be between 30-35 psi at times. The bigger issue at this location will be the fire flow that is required. Most likely an offsite main extension will be required to achieve fire flow.”

I find it extremely interesting that we have suffered with this problem for over 10 years with no offer of fixing the problem. Yet, offer American Water a chance to have 116 new water meters in the proposed complex, that something can easily be done!

110 Meadows of Wildwood Resident
Bill Schneider

636-821-1277 land line   wm.schneider1050@charter.net
July 7, 2020

Dear Mr. Joe Vujnich, Director of Planning,

I am opposed to the rezoning of the 4.31 acres of land behind the YMCA, for the following reasons.

My address is 265 Meadows of Wildwood Blvd. My home backs up to Turkey Track Road. This would effect & affect my senior life in everyday living.

1. Occupants in 116 apartments.

2. More traffic along on Generations Drive and New College Avenue.

3. No Privacy

4. Not a Senior development!

5. 8 – 3 plus story buildings would be like looking at walls.

6. Density, Noise and Traffic

7. No quality of life and safety for our Senior residents, that bought with the confidence we would remain very protected!

Please, VOTE NO to RE-ZONING P.Z. 4-20.

Thank you,

[Signature]

Alice Agee
636-273-1360 land line
July 7, 2020

Mr. Joe Vujnich, Director of Planning,

First, I want to thank you for your service to Wildwood Residents. My name is Gloria Morrison, I reside at 253 Meadows of Wildwood Blvd. The back of my home faces Turkey Track Road and the small parcel of land, (4.31) acres South of the YMCA.

I am against the proposed ULTRA-HIGH DENSITY DEVELOPMENT of 116 Apartments in 8 buildings, 3 plus stores high. There is NO Limit of Occupants per 1 or 2 bedrooms, If they are related by blood, marriage, or adoption. St. Louis County applies the building code requirements.

* Stop the creation of even more Hazardous Traffic Congestion at the intersection of Hwy. 109 and New College Avenue, as well as Generations Drive and Turkey Track Road. College students race down Turkey Track Road to exit South. My concern is for children from these proposed apartments riding their bikes could get hurt or even killed The Traffic Study presented by the Developer is flawed.

* The Meadows is a 55 plus community. Will an ambulance or fire vehicle arrive in a timely manner to save a life?

* We also need an approved Traffic Study during the Peak hours for the St. Louis Community College and the YMCA. Empirical data used from across the nation is not valid for this location.

I respectfully ask you to oppose and VOTE NO to this Re-Zoning to preserve the quality of life and safety for nearby residents.

Thank you again for your service.

Gloria Morrison

636-821-1421 land line
To P&Z Commissioners.
As a resident of Wildwood I would like to express my thought on this development.
The high traffic will be a large problem on all the roads. One hundred sixteen units
thirty two cars using this exit on Generation Drive due to the amount of residents. Where will guest Park?

What will be the distance of the apartments off Turkey Track Road and Generations Drive? I

Will there be some kind of green space between the apartments and Turkey Trace community?

If there are children as residents where will they play, is space provided outside?

This Multi-Apartment Complex is just too large for the site of 4.31 acres.
Would this Development be an asset to Wildwood in ten years, think about it.

Please take in consideration all the people and things that will change if you allowed this dense structure to be built. Please vote no, against the request.

Barbara Burr
201 Meadows of Wildwood
Fw: Opposition to Re-Zoning P.Z. 4-20

From: Marilyn Michalak (artmarm1937@sbcglobal.net)
To: ebroylespz@cityofwildwood.com; vhelfreypz@cityofwildwood.com; ekohnpz@cityofwildwood.com; mleepz@cityofwildwood.com; cdeppelerpz@cityofwildwood.com; sjackson@cityofwildwood.com; jlevittpz@cityofwildwood.com; dbattiepz@cityofwildwood.com
Cc: lbrost@cityofwildwood.com; ibowlin@cityofwildwood.com; joe@cityofwildwood.com
Date: Saturday, July 11, 2020, 11:58 AM CDT

----- Forwarded Message -----
From: Marilyn Michalak <artmarm1937@sbcglobal.net>
Cc: Marilyn Michalak <artmarm1937@sbcglobal.net>
Sent: Saturday, July 11, 2020, 11:38:51 AM CDT
Subject: Opposition to Re-Zoning P.Z. 4-20

We are Marilyn and Art Michalak, residents of the Meadows of Wildwood. We moved to this area in 1968 when my husband came to work at AT&T at Clayton and Woods Mill Rd. and lived in this area before it was incorporated into Wildwood.

After my husband retired in 1989, we chose to remain here because it offered what we desired in a living area. As we are aging and this was going to be our "forever home", an opportunity arose for us to move to The Meadows of Wildwood in December, 2011. We are both 83 years old now and chose to live here in the MOW for our forever home. Since this is a 55+ community, many residents also chose it for a forever home.

We are opposed to the re-zoning plan for the Ultra High Density Proposed Development of 116 or so apartments on the undeveloped land behind the YMCA for many reasons:

1. Our Villa backs up to Turkey Track Rd. and our primary living areas are in the rear of our home in close proximity to the aforementioned proposed apartment buildings directly behind the Master Bedroom, Great Room, Kitchen and the lower level Family Room and Bedroom.

2. When we moved into our home in 2011, the MOW wasn't completed and we lived for about 3 years or more with construction noise, dirt and it was in the front and next to us, not directly where our primary living area is located and it was a lot to deal with, but in the end this is our desired home and we don't want to and can't endure this for the estimated year and a half or more of what we experienced in the past.

3. We have many Senior residents older than we, who need proper rest, cleaner air to breathe and also have and will need the services of responders to 911 emergency calls. Their vehicles shouldn't be hampered by traffic congestion.

2. We object to 8 - 3+ story buildings on the small parcel of land, 4.31 acres behind the YMCA and in back of our home that are visually incompatible with the adjacent residential neighborhoods and aesthetic environment. This will inevitably diminish residential property values in the areas.

Also, we understand that there is NO limit of occupants per 1 or 2 Bedroom apartments if they are related by blood, marriage or adoption.

With the close proximity of all of the residents of the proposed project, there will be some, if not many, who will choose to walk their pets and use our lawns, which are private property and our posted private property lake for which we are responsible.

3. PLEASE STOP the creation of more hazardous traffic congestion on Highway 109, New College Ave, Generations Drive and Turkey Track Road!!!

We, personally, have had problems with students leaving the school parking lot onto Generations Drive after class and incoming students at the

(OVER)
same time. We were coming home and in a line of many cars entering the school and were the 5th car in line on
Generations Dr. approaching the
exit/entrance to the school on Generations Dr. The exiting students who had a STOP SIGN easily seen, saw the
line of the first 4 cars enter the lot.
By this time the exiting cars had SPED past the sign and as we approached, a student who thought we were
going in did as the others and came
within inches of colliding with our car at a high rate of speed. This happened TWICE to us and we are lucky to
be here to tell about it. There are
students who I see coming to Turkey Track which is a Southbound exit only and don't want to get into the exiting
traffic to go to the traffic light at
109 to go North so they go to 109 on Turkey Track and turn left to go North. THIS IS A TRAFFIC VIOLATION. I
am able to see this because, as I said earlier, this is the side of our living area where I am during the day and
have view of this road.

4. PROTECT Wildwood's Master Plan with development that is responsible and desired by the existing residents.

5. LISTEN to your residents/constituents who oppose this project.

6. VOTE NO Re-Zoning to preserve the quality of life and safety for the nearby existing residents.

Thank you for your consideration of our comments and for your service to our city of Wildwood.

Marilyn and Art Michalak
249 Meadows of Wildwood Blvd
636-273-5117
Dear Sir,

I am a 25 year resident of Wildwood.

I understand consideration is coming up at the July 20th meeting to allow high density apartments to be built.

I am voicing my strong objection to this concept as it is not in keeping at all with the Wildwood image.

My family feels the same.

If you are not the person to direct this opinion to please let me know who that person is and I will communicate it to them.

Thank you, Douglas P Toth, 1622 Ashford Hill Ct, Wildwood 63038, Cell 636 579 5322
Travis Newberry

From: FRANK SCHWEGEL <fschwegel@msn.com>  
Sent: Tuesday, July 14, 2020 12:49 PM  
To: jbolin@cityofwildwood.com; Joe Vujnic; Rick Brown; Kathy Arnett; Travis Newberry; Larry Brost; vhelfreypz Michael Lee; edepplerpz@cityofwildwood.com; sjacksonpz@cityofwildwood.com; Jeff Levitt; David Beattie; Ed Kohn; Elizabeth Broyles  
Subject: Against Rezoning P.Z. 4-20

When voting on rezoning P. Z. 4-20 please consider the following:

We in Wildwood have been fortunate not to be impacted by the pandemic like our brothers and sisters in the more densely populated areas of the city and county. Perhaps that is NOT luck or an accident. Perhaps because of our community planning to keep "green space" and NOT stack people in close proximity we avoided the spread of the virus. Should we really change our "green space" strategy to allow 300+ people to be packed in a small area. I did NOT invest 23 years in Wilwood to see our government not consider the consequences of changing strategies. We have a great community let's keep it GREEN.

This "ultra-high" density project will reduce property values in the adjacent communities. This is our second home in Wildwood, we stayed in Wildwood because property holds and increases in value as well as the "green space" strategy.

Eight 3 story buildings on 4.3 acres! How is that visually attractive in the "green space" of Wildwood?

No limits on occupancy per St Louis County ordinance? Does the leadership in Wildwood really think the tax revenue will be enough to add the additional police, building inspectors and the other "fantastic" services offered in Wildwood?

Please consider when voting the traffic issues and the certain congestion from adding 500+ motor vehicles of every type and description access to highway 109, Generations Drive, New College Blvd and the entrance to Westridge Oaks.

Noise pollution: 300+ people, parking lots for 500+ vehicles, a swimming pool, this is a quiet residential area. The people intentionally moved to Wildwood to escape the noise of the city!

Protect Wildwood’s master plan with "responsible" development, that is the desire of the existing residents. That is why we invested in Wildwood!

Please vote NO on rezoning and preserve the quality of life and safety of the nearby residents as well as the entire community.

Thanks for your attention.
Frank and Marie Schwegel  
237 Meadows of Wildwood Blvd  
Grover Mo 63040
Planning and Zoning Members,

I respectfully ask that you please vote NO to rezoning the land behind the Wildwood YMCA.

Such HIGH DENSITY apartments will diminish the adjacent and near by residential properties. Having a high number of 3 or more story buildings is NOT visually compatible with the adjacent residential neighborhoods and aesthetic environment Wildwood has worked hard to create. Again, this will negatively impact the area... not positively.

Please stop the creation of even more HAZARDOUS TRAFFIC CONGESTION on Highway 109 near New College Avenue and Generations Drive.

Please protect your existing residents. This proposed re-zoning is not an example of responsible development. Please listen to your residents/constituents and VOTE NO to re-zoning in order to preserve the quality of life and safety for nearby residents.

THANK YOU for your service and support!

Kind regards,
Jon Sonntag
Resident of Wildwood, MO
Travis Newberry

From: Kathy Arnett
Sent: Tuesday, July 14, 2020 8:46 AM
To: Travis Newberry
Cc: Joe Vujnic
Subject: FW: Rezoring the property behind the YMCA

Trav,
For the record on PZ 4-20.
Thanks,
Kathy

Kathy Arnett
Assistant Director of Planning & Parks
City of Wildwood
16860 Main Street
Wildwood, MO 63040
kathy@cityofwildwood.com
636-458-0440 x135

From: Mary Wildt <wildtsm@gmail.com>
Sent: Monday, July 13, 2020 9:06 PM
To: Joe Vujnic <joe@cityofwildwood.com>; Kathy Arnett <Kathy@cityofwildwood.com>
Subject: Rezoning the property behind the YMCA

Dear Mr. Vujnic and Ms. Arnett:

I am emailing to ask you to Oppose rezoning the very small and undeveloped piece of property behind the YMCA. My husband and I are residents of the Meadows of Wildwood community adjacent to this property. While I understand that this property will eventually be developed, this proposed development of 116 high density apartments directly behind our +55 community is ill advised. The development of high density apartments so close to our community will most certainly affect our property values and diminish the desirability of current or future residents to live in Meadows of Wildwood.

In addition, the traffic issues presented by this development will make traffic even more hazardous and congested both on Generations Drive and New College Drive. Plus, the stretch of 109 between Highway 100 and Woods Drive will be stressed by the extra volume of traffic coming from these apartments. While there is not a lot of traffic today due to COVID 19 restrictions, prior to the closure of the college in March the traffic just from the student population alone was significant at various times during the day. Add all the additional apartment residents’ traffic to that mix and this thoroughfare becomes a significant congestion concern when it comes to getting in or out of our community.

Most importantly, I am concerned about the Master Plan that Wildwood has had in place for many years. We moved to Wildwood specifically to escape the congestion of Ballwin, Ellisville and Manchester. The Master Plan calls for thoughtful and responsible development and should take into account the wishes of the residents of Wildwood; many of which specifically moved to Wildwood because of this. The quality of life that we currently have in Wildwood is the result of the Master Plan, in my opinion, and rezoning this property is in direct opposition with the intent of the Plan.
Please consider our remarks as you make your decision on this rezoning proposal. We appreciate your service to the community of Wildwood and value your participation in this wonderful city.

Sincerely,
Steve and Mary Wildt
193 Meadows of Wildwood Blvd.
Wildwood, MO 63040
314-882-2646
Travis Newberry

From: Steven Yoder <syoder@sbcglobal.net>
Sent: Tuesday, July 14, 2020 7:58 AM
To: Elizabeth Broyles; vhelfreyzp; Michael Lee; Cindy Deppeler; sjacksonpz@cityofwildwood.com; Jeff Levitt; David Beattie
Cc: Jim Bowlin; Joe Vujich; Rick Brown; John Young; Kathy Arnett; Travis Newberry; Larry Bros; Donna Yoder
Subject: P.Z. 4-20

Dear Members Of the Planning and Zoning Commission,

With regard to the proposed development of 116 apartments behind the YMCA, I respectfully ask that you OPPOSE and VOTE “NO” to rezoning the undeveloped land behind the YMCA.

If this rezoning were to be approved, it would result in adjacent residential property values being diminished as well as an increase to hazardous traffic congestion on Highway 109, New College Avenue and Generations Drive. Please protect Wildwood’s Master Plan with responsible development that is desired by existing residents. Eight 3+ story buildings are not visually compatible with the aesthetic of the adjacent residential neighborhoods.

Please listen to your residents/constituents who oppose this project

Please VOTE NO to preserve the quality of life and safety for nearby residents.

Thank You

Steve Yoder
2857 Westridge Oaks Ct
Wildwood, MO 63040
314-324-9324
I love Wildwood, please don’t make it illegitimate to its own heritage. Having lived in Chesterfield for 15 years, in 1995 we moved to Wildwood and in 2014 downsized to the Meadows of Wildwood. When we moved to Wildwood, the requirement was homes to be built on ‘3’ acre lots not very appropriate now to build 10 apartment buildings ‘3’ stories high. I feel this is creating area instability and a definite reversal of the Wildwood Mission Statement. This project would deflate property values in this area. These 10 buildings, pool, parking, entertainment area and “green spaces” appear to be similar to placing a full sheet of stamps on a size 10 business envelop. Every time I drive past this 4.8 acres at Generations and Turkey Track, I dread potentially seeing these 10 buildings and the traffic created onto 109 in both directions (but not north off Turkey Track). This track of land can be better utilized vs. stacking it with apartments. The city of Wildwood and the Meacows of Wildwood will be a loser if this is approved!

Thanks for your consideration to the Meadows of Wildwood,
Don Heffington
166 Meadows of Wildwood Blvd.

So many considerations:

- **Emergency vehicles in and out on Generations Drive.** (We are all over 55). I have waited as many as 5 stop light changes at Generation Dr. onto New College Ave. to get through the stop light and go north on 109.
- **120 multi-family units** (possible 240-400 transient residents of all ages and all income levels?)
- Parking (possible 200-300 cars, their noise, their headlights facing into the MOW, no matter how the green fence row is situated at the edge of Turkey Track)
- Noise from the outside interaction of these residents
- The water supply to MOW is at the very low end of acceptable water pressure (a resident once said “if he turned the water on in his bathtub on Monday, he would have enough water to take a bath on Friday”. This is something that will need to be addressed with Missouri American Water)
- I have a concern about these transient residents from the apartments accessing our private MOW lake (safety concern, fishing, trying to swim?, horse play, skate boarding, biking, etc. of all ages) How will they be kept out of MOW?
- I see the trash container was relocated but still is an area to attract critters, rats, animals, snakes, etc.
- The traffic study I last saw appeared to be a rocking chair assessment, fictitious study and didn’t address the true high traffic times onto 109. (Entrance and exit consideration was not given to peak School times, YMCA times, Mall times or MOW).
- MOW property values will be drastically devalued
- These are just a few of my concerns and I know they are echoed by all the others here in the Meadows!
Dear Mr. Brown,
Director of Public Works

Sir, we are writing this in regard to the proposed zoning change to allow a development of 16 apartments on the 4.31 acre lot just south of the West County YMCA. First let me tell you about who we are. We are Donald and Kathleen Baniak and have lived at 149 Meadows of Wildwood Blvd (636 273-9512) for almost 10 years. Prior to this we lived in Ballwin for over 32 years, where we raised 4 children — all of whom live in west county with our nine grandchildren, one family resides in Wildwood also. I retired from AT&T as an IT supervisor and Kathy retired from Mercy Hospital as an X-Ray technician. I am also a US Army veteran from the Viet Nam Era and an election supervisor, working in the West County area. Kathy has sewn many Covid-19 masks and donated them mostly to a senior care center and to seniors in the area. We vote and are aware of the issues affecting our community. The aforementioned development is a serious issue that will affect our lives if it is passed.

Our concerns are many, but I will mention just a few. First, the cramming of ten buildings (eight of which would be three plus stories tall) on this lot along with a swimming pool and a “Terrace Central Lawn” represents an ultra-high density development and a true eye sore and is not, as I understand it, in the concept of greenspace and protection of Wildwood’s Master Plan. The schematics provided by the developer show buildings 1, 7 and 10 being almost on the sidewalks and I believe would require an additional variance from the city to be built that close to the road. Another potential variance would be needed to modify the one way status of Turkey Track Road between the proposed Crescent Street and Generations Drive to two way on a service road that is only wide enough for one vehicle.

Next, there will be a combination of 1 and 2 bedroom apartments totaling 116 apartments. This raises the question of parking. The developer's schematic displays surface parking places of 118 - only 4 of which are designated as handicapped. How many cars will be generated by 116 apartments? Additional information provided by the developer stated that the average per apartment according to standards is 1.4 per apartment. Even at this low rate it would require over 160 parking places. Where will the overflow parking be? This doesn't even account for parking for visitors or guests of residents. This development will not provide housing for Community College attendees on the whole. The students are commuters – we know this as both of us attended different community colleges in St. Louis after high school and we both commuted.

Then there is the problem we perceive as a true issue to the entire community surrounding this proposed development, traffic!! With only one exit onto Highway 109 going north and only one entrance coming into not only the proposed development, but also the YMCA, the Community College, Wildwood Plaza and our subdivision of Meadows of Wildwood (MOW), this proposed development would truly be a nightmare for our residents. Also the subdivision of Westridge Oaks has only one entrance and exit which is just across from the YMCA and the proposal development. Traffic from the 109 and New College traffic light would cause backups along north bound 109 and therefore impact Westridge Oaks residents adversely. Speaking of traffic, how would this impact emergency vehicles trying to enter our subdivision?

Lastly, is the secure feeling within MOW, our neighborhood. We walk to the YMCA. We walk to the Wildwood Plaza. We are a unique community where we all know each other. We have groups for singles, happy hour, bridge, quilting, book club, Sunday morning donuts and more. We have people drive into MOW asking if we know of any homes for sale or coming onto the market. Literally it is a wonderful place to live. Please don’t jeopardize the safety and tranquility of our home - MOW. Your vote against this proposed development is greatly appreciated.

Sincerely,

Donald and Kathleen Baniak
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

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<td>Item Description</td>
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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>Respectfully please vote NO to rezoning the land behind the Wildwood YMCA. Such HIGH DENSITY apartments will diminish the adjacent and near by residential properties. Having a high number of 3 or more story buildings is NOT visually compatible with the adjacent residential neighborhoods and aesthetic environment Wildwood has worked hard to create. Again, this will negatively impact the area... not positively. Please stop the creation of even more HAZARDOUS TRAFFIC CONGESTION on Highway 109 near New College Avenue and Generations Drive. Please protect your existing residents. This proposed re-zoning is not an example of responsible development. Please listen to your residents/constituents and VOTE NO to re-zoning in order to preserve the quality of life and safety for nearby residents. THANK YOU for you your service and support!</td>
</tr>
<tr>
<td>Suggestions</td>
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<tr>
<td>City</td>
<td>Wildwood</td>
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<tr>
<td>State</td>
<td>MO</td>
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<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>3149733636</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:otmtrish.2355@gmail.com">otmtrish.2355@gmail.com</a></td>
</tr>
</tbody>
</table>

Email not displaying correctly? [View it in your browser](#).
Planning and Zoning Members,

Respectfully please vote NO to rezoning the land behind the Wildwood YMCA.

Such HIGH DENSITY apartments will diminish the adjacent and near by residential properties. Having a high number of 3 or more story buildings is NOT visually compatible with the adjacent residential neighborhoods and aesthetic environment Wildwood has worked hard to create. Again, this will negatively impact the area... not positively.

Please stop the creation of even more HAZARDOUS TRAFFIC CONGESTION on Highway 109 near New College Avenue and Generations Drive.

Please protect your existing residents. This proposed re-zoning is not an example of responsible development. Please listen to your residents/constituents and VOTE NO to re-zoning in order to preserve the quality of life and safety for nearby residents.

THANK YOU for you your service and support!

Tricia Sonntag
Resident of Wildwood, MO
Travis Newberry

From: donna yocer <doderyoder@gmail.com>
Sent: Monday, July 13, 2020 11:05 AM
To: Elizabeth Broyles; vhelfreypz; Michael Lee; Cindy Deppeler; sjacksonpz@cityofwildwood.com; Jeff Levitt; David Beattie
Cc: Larry Brost; Jim Bowlin; Joe Vujnic; Rick Brown; John Young; Kathy Arnett; Travis Newberry
Subject: P.Z. 4-20

Dear Members Of the Planning and Zoning Commission,

With regard to the proposed development of 116 apartments behind the YMCA, I respectfully ask that you OPPOSE and VOTE “NO” to rezoning the unevolved land behind the YMCA.

If this rezoning were to be approved, it would result in adjacent residential property values being diminished as well as an increase to hazardous traffic congestion on Highway 109, New College Avenue and Generations Drive. Please protect Wildwood’s Master Plan with responsible development that is desired by existing residents. Eight 3+ story buildings are not visually compatible with the aesthetic of the adjacent residential neighborhoods.

Please listen to your residents/constituents who oppose this project

Please VOTE NO to preserve the quality of life and safety for nearby residents.

Thank you.

Donna Yoder
2857 Westridge Oaks Court
Wildwood, MO 63040
(314) 566-6115
doderyoder@gmail.com
Travis Newberry

From: Westendorf <lanwes@aol.com>
Sent: Sunday, July 12, 2020 1:46 PM
To: vhelfreypz.ekohnypz@cityofwildwood.com; Michael Lee; Cindy Deppeler; sjacksonpz@cityofwildwood.com; Jeff Levitt; David Beattie; Larry Brost; Jim Bowlin; Joe Vujrich; Rick Brown; jyoung@cityofwildwood.com; Kathy Arnett; Travis Newberry

Subject: P.Z. 4-20 ERC Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758

My name is Lance Westendorf and my wife’s name is Kathleen. We live in the Meadows of Wildwood Subdivision (a 55+ Community) and own the home at 395 Meadows of Wildwood Court, Wildwood, MO 63040. We moved to this address in August, 2019 and have lived in Wildwood since 1999.

We respectfully request P&Z Commission Members to VOTE NO on July 20, 2020 for a proposed zoning change for the undeveloped 4.31 acres of property located immediately north of the Meadows of Wildwood Subdivision, and immediately south of the YMCA, for the purpose of developing a Rob Coleman and Earnest R. Coleman proposed 10 building apartment complex containing 116 +/- living units.

My wife or I have attended all Wildwood public meetings on this matter and have done significant follow up and research on the details of the proposed project.

We oppose rezoning for the proposed apartment development because...

1) A high living density apartment complex is not consistent with the nature of the existing neighboring developments such as the St. Louis Community College, YMCA, Meadows of Wildwood Subdivision (55+), Wildwood Square, Westridge Oaks Subdivision and the Rockwood Reservation. A 55+ retirement community and an apartment complex sitting right next to each other is not an ideal or a hoped for situation for 99% of our Meadows of Wildwood home owning neighbors. Our community has 64 homes and over 100 residents. If an apartment complex was on the proposed site one year ago, my wife and I would not have purchased our existing home.

2) The high living density proposed for this small parcel would be practically and visually unattractive in a number of ways. Several three (3) story buildings with the addition of essentially an additional story of roof structure will significantly destroy the current visual ines, particularly when combined with very little in the way of building setback and green space. Acreage not being used for the building floor plates will become a sea of asphalt to park the population density. The parking strategy proposed is not adequate to deal with the number of anticipated residents, not to mention any visiting friends, relatives, or needed service vendors. Any resident of driving age will have a car and some more than one. The parking solution proposed requires on street parking for the entire length of the proposed single street running through the complex with parking on both sides of the street. The amount of usable green space left after the building construction, water run off management and needed parking areas amounts to almost nothing for the proposed apartment residents. Children and pets would not be pleased. What is to be done after the fact when you find out the complex cannot park the residents and the ownership is effectively land locked?

3) An apartment development of this scale would more than double the immediate vicinity resident population which would create troublesome traffic issues for Wildwood to solve. Turkey Track Road offers little in the way of any ability to deal with incremental traffic flow for many reasons. Generations Drive and New College Avenue traffic would increase significantly as for all practical purposes this will be the only way in or out of the area for the affected residents. The multiple daily peak traffic wait times to get through the New College Avenue traffic light to Highway 109 will become unbearable (it is already compromised) as Highway 109 will always have a traffic flow priority. The existing traffic study performed for this development seems to rely more on statistical modeling than any actual on site observational fact finding. The study is at best incomplete and the recommended traffic trouble solution seems to be of no practical benefit.

4) An apartment development is just wrong for this particular Wildwood site. Any apartment development. There are more attractive sites in Wildwood for an apartment complex if that is what our City desires. Sites that are of much greater economic and utility benefit to Wildwood. This proposal is conceived to maximize density (profit) rather than any
long term livability or practicality. Wildwood, and in particular the neighboring residents to the proposed project, would have to live with a flawed apartment development for a long time. On the other hand, the developer will be gone soon after the construction is complete and the property will likely be quickly sold. The problems and complaints will then be directed to Wildwood and an apartment ownership entity other than the one who made the original development assumptions and promises. We fear the proposed project will result in nothing but regret on multiple fronts for all Wildwood concerns.

If you have not already done so, my wife and I encourage you to take a drive over to this site and visualize what is being proposed before your July 20, 2020 P&Z vote.

Thank you for your consideration.

Lance & Kathleen Westendorf
All,

I am a resident of the Westridge Oaks subdivision and I respectfully ask that you all OPPOSE and vote NO to rezoning undeveloped land, behind the YMCA. I am strongly against for the following reasons:

- Ultra high density apartments will be the project’s result and adjacent residential property values will be diminished
- No limit of occupants per 1 or 2 bedroom apartments that are related by blood, marriage or adoption! St. Louis County applies the building code requirement
- Object to 8 - 3 or more story buildings that are not visually compatible with the adjacent residential neighborhoods and aesthetic environment
- Stop the creation of even more hazardous traffic congestion on highway 109, New College Ave, Westridge Oaks Dr and Generations dr.
- It does not protect Wildwood’s Master Plan with responsible development and what is desired by the existing residents

Thank you For your service and than you for your help with opposing the plan.

David
We are Margaret and Bud Waite, 165 Meadows
We are writing to respectfully request a "NO" vote from the Commissioners of the Planning and Zoning committee as they consider a proposed development of 116 apartments behind the YMCA and bordering the Meadows of Wildwood community. We were the first owners of a villa behind the YMCA in the Meadows of Wildwood and were attracted to the property because of the privacy as Rockwood Reservation is directly behind our villa, and it is a 55+ community. The Junior College was just being completed as we moved in.
Fast Forward 14 years, the traffic congestion has become difficult as is evidenced by the closing of Turkey Track Rd. to one way out only. Imagine adding 116 vehicles to this situation. If the apartment development comes to this area our quality of life and safety as well as our privacy, peace and quiet would be gone as the traffic congestion would be terrible. There is also a concern of accessibility of emergency vehicles getting through the area for the needs of the Meadows of Wildwood residents.
We watched the community grow to become what it is today--a senior living community that is the envy of all St. Louis. It is unmatched due to its location and privacy. There has to be a better common sense use of this property.
Thank you for your service to our beautiful city.
Travis Newberry

From: Susan Duitsman <sduitsman@charter.net>
Sent: Tuesday, July 7, 2020 4:51 PM
To: Jim Bowlin; Joe Vujnich; Rick Brown; Kathy Arnett; Travis Newberry; Elizabeth Broyles; vhelfreyzp; Michael Lee; Cindy Deppeler; sjacksonzp@cityofwildwood.com; Jeff Levitt; David Beattie; Larry Brost
Subject: ARE YOU REPRESENTING YOUR CONSTITUENTS? ERC Development proposal P & Z vote on 7/20/20 - Opposition Statement

As residents of the Meadows o' Wildwood community, we are respectfully asking the Planning and Zoning Commissioners to vote "NO" on the above zoning change request by developer ERC of Arkansas for the following reasons:

- Ultra high-density housing & adjacent residential property values will be diminished
- 8 three plus story buildings not visually compatible with adjacent neighborhoods
- Increased traffic congestion on HWY 109, New College Ave & Generations Drive
- Deviation from Wildwood's Master Plan with lack of responsible development
- ALL residential neighborhoods adjacent to project oppose the project

The initial traffic study was flawed in many ways as previously indicated and based on "empirical data" not relevant to this unique community setting. For example, the study indicated that the "peak traffic hours" occurred between 7:15am-8:15 am and 4:15pm and 5:15pm - this is NOT accurate. Anyone can pull up the "peak hours" on the YMCA website and view their graphs - peak hours are in the middle of the day, especially at noon. The same pattern is reflected in the Community college attendance, in fact 50% of the students are off campus by 2:30 pm. As a resident of the senior Meadows adjacent community, I can assure the commission that there is no traffic at 7 am in our community. As residents we were informed by the Director of Planning that an additional traffic study would be done when the COVID pandemic is over and all patterns are back to normal - we should see that happen before any consideration is given to adding to the traffic volume.

Finally, and perhaps most importantly, we must ask the question: ARE YOU LISTENING TO YOUR CONSTITUENTS? We do not know a single resident in the adjacent communities, the Meadows of Wildwood, Westridge Oaks, or YMCA members who are in favor of this project. We have indicated, in a clear and unanimous fashion we are "against this development". Of course, ERC wants to make money - and perhaps some P & Z commissioners think additional tax revenue is more important - BUT, in our opinion, our elected officials have the duty to represent what their constituents want and VOTE ACCORDINGLY. To quote President Obama "If the people cannot trust their government (in this case, the City of Wildwood) to do the job for which it exists - to protect them and promote their common welfare - all else is lost". Recently, the Ellisville City Council listened to their residents and voted against a high density apartment project. We respectfully ask that Wildwood Planning and Zoning Commissioners listen and do the same by voting "NO" to this proposal.

Sue Duitsman & Art Rink
118 Meadows of Wildwood
Sduitsman@charter.net
Art_Rink@yahoo.com

Sent from my iPad
Travis Newberry

From: Judith Delarosa Yokum <judiyokum@gmail.com>
Sent: Tuesday, July 7, 2020 2:11 PM
To: Elizabeth Broyles; vhelfrey@z; Ed Kohn; Michael Lee; Cindy Deppeler; sjackson@cityofwildwood.com; Jeff Levitt; David Beattie; lbrost@cityofwildwood.com; Jim Bowlin; Joe Vujnic; Rick Brown; John Young; Kathy Arnett; Travis Newberry
Subject: Proposed Development

As a resident of the Meadows of Wildwood community, I strongly oppose the proposed development of apartments behind the YMCA and respectfully ask that you oppose and vote “no” to the rezoning of this undeveloped land.

For those of you who may not know, we have very limited access into and out of our community. If we make the mistake of leaving home when classes at the Community College and/or YMCA let out, we currently may have to wait up to five or more times for the signal light at the corner of 109 and New College. If you allow this development to proceed, traffic will be much, much worse.

Meadows of Wildwood is a 55+ community. Sadly, 911 is frequently called because of illness and/or accidents of our residents. Our streets are already narrow, but during construction, access to our community will be complicated by numerous large trucks putting the health and safety of our residents at risk. Upon completion of 116 apartments, traffic will be much more than double making it more difficult for emergency vehicles to enter and leave our community.

Not only would these proposed apartments be unsightly and potentially dangerous to the health and well-being of our residents, but they would also decrease the value of our property.

Once again, I respectfully ask that you vote “no” and help preserve the beauty and safety of our lovely city.

Thank you for all you do for our city!

Sincerely,
Judith D Yokum
218 Meadows of Wildwood Blvd
Wildwood MO 63040

Sent from my iPad
To: Members of the Planning and Zoning Commission

From: Lee J. Zadra
371 Meadows of Wildwood Court

On Monday, July 20 you will be asked to consider a change in the current NU mon-urban Residence district south of the YMCA to ultimately permit a proposed development of 116 apartments.

I respectfully request that the Commissioners oppose and vote “no” to the proposed zoning change. Having moved into the Meadows of Wildwood some ten years ago from Michigan, a major consideration that my wife and I made when we chose to retire at the Meadows of Wildwood was the attractiveness of the community enhanced by its speciousness, wooded adjacent land and commitment of its government to responsible development.

The property under consideration is an attractive site for development, however, the proposed project of 116 apartments is not an appropriate choice for the following reasons:

1. 116 apartments will create a traffic congestion that is already problematic when the College and YMCA return to operating at full capacity. One point of access and exit for an additional 116 -plus automobiles, further complicated during construction by construction vehicles is unsafe and unconscionable.
2. The proposed plan is ultra-high in density and totally changes the present environment of safety and solitude enjoyed by current residents of the Meadows.
3. Eight 3+ story apartments are visually and ethically incompatible with the neighboring villas in the Meadows, a community of age 55+ seniors which community is operating by governing documents which assure an attractive, safe and ethically-pleasing community. The proposed development would bring only congestion, noise and major traffic conditions.

For the above reasons, I request that on July 20 the Commissioners vote “No” on the zoning change.

Vujnich email 07/06/20
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>do not support - bad for Wildwood over all plan</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Please deny</td>
</tr>
</tbody>
</table>

Name: antonio F Hladky  
Address: 16947 Westridge Oaks Dr  
City: Wildwood  
State: MO  
Zip: 63040  
Phone Number: 636-458-2219  
Email: tonytwaaa@earthlink.net

Email not displaying correctly? View it in your browser.
Meeting Comment Form

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<td>Position on Request</td>
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<tr>
<td>General Comments</td>
<td>Very bad idea. Will cause a lot more congestion on major roads and intersections near there. Will also cause crowding and congestion in local schools. Apartments do nothing to upgrade the quality of living in the overall Wildwood area they actually lower it.</td>
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<tr>
<th>Name</th>
<th>Philip Tomsich</th>
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<tr>
<td>Address</td>
<td>16301 Nantucket Sound Ct</td>
</tr>
<tr>
<td>City</td>
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<td>State</td>
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<td>Phone Number</td>
<td>3146079583</td>
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<tr>
<td>Email</td>
<td><a href="mailto:ptomsich@yahoo.com">ptomsich@yahoo.com</a></td>
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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>We do not support any multiple family developments within Wildwood, especially along this section of rt. 109. The speed limit is too high in this area as it is currently. The additional traffic load from this development and the curve and hill at this location along with the increased speed limit will create major safety problems. We visit Westridge Oaks several times a week under normal circumstances and feel the subdivision entrance is hazardous as is with the speed of northbound traffic on 109.</td>
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<th>Suggestions</th>
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Name       Tim and Pat Churnley
Address    304 Mission Bay Ct.
City       Wildwood
State      MO
Zip        63040
Phone Number 6364580305
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

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<td>Position on Request</td>
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<tr>
<td>General Comments</td>
<td>I do not believe the current road and intersections in this area can support the additional traffic that would be seen by adding 120 units. I also do not believe that those units would bring in enough tax revenue to cover the modifications needed to the roads and contribute the city. The master plan spells it out pretty well on page 83/84 &quot;The adjoining land use pattern is principally low density residential or parkland and access is limited to a network of rural roadways characterized by narrow widths, one lane bridges, no shoulders, steep hills, and poor alignments. These characteristics are aesthetically desirable, but also at the same time dictate a low density residential pattern (generally three (3) acre lots or greater in size) for the future.&quot;</td>
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Suggestions
Have them develop elsewhere where it is already zoned C-8. Otherwise, the developer should bear the cost of all street improvements (widening of 109, median to control illegal left turns, increased visibility, etc). If left to whatever tax dollars are said to be generated by the buildings, it will never get done as those dollars will go to other projects and the priority of the needed improvements will flounder and burden will be on other
residents of the city who may very well not use or get any use from their improvement.

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<tr>
<th>Name</th>
<th>Scott Corio</th>
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<tbody>
<tr>
<td>Address</td>
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</tr>
<tr>
<td>City</td>
<td>Wildwood</td>
</tr>
<tr>
<td>State</td>
<td>MO</td>
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<tr>
<td>Zip</td>
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</tr>
<tr>
<td>Phone Number</td>
<td>3162957090</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:scott.corio@gmail.com">scott.corio@gmail.com</a></td>
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<tr>
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<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>Please do not allow this high-density residential development to go here. There is already way too much traffic at that intersection with the college.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Keep this green space in tact, put in a park here. Maybe an outdoor classroom for the college?</td>
</tr>
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Name                  Kristina Quinn
Address               16907 Westridge Oaks Drive
City                  Wildwood
State                 MO
Zip                   63040
Phone Number          6363463731
Email                 kristi.quinn@yahoo.com

Email not displaying correctly? View it in your browser.
Dear Planning & Zoning Commission Members,

My husband and I have lived in the Westridge Oaks Subdivision for 18 years and love our Wildwood community. We appreciate our quality of life here in Wildwood and have always appreciated how Wildwood has taken special care of our area with responsible development and preserving our community standards with thoughtful planning. We are very concerned about the ultra high density proposed development of 116 apartments on a very small area of land behind the YMCA and ask that you all oppose this and vote "no" to rezoning this undeveloped parcel of land.

A project like this poses a lot of risks to our community and we very much need each of you to hear our plea as there are many residents who feel like we do and are opposed to this project.

Some of the risks that this project introduces to your long time Wildwood adjacent residents are:

-Diminished property values of our homes due to the ultra-high density apartments
-8-3 + story buildings that are not visually compatible with the adjacent residential neighborhoods and aesthetic environment
-More hazardous traffic congestion on highway 109, New College Avenue and Generations Drive
-No limit of occupants per 1 or 2 bedroom apartments that are related by blood, marriage or adoption. St. Louis County applies the Building Code requirements.

Please continue to protect Wildwood’s Master Plan with responsible development that is desired by your existing residents and vote "no" to re-zoning to preserve our quality of life and safety for nearby residents.

Respectfully,

KC and Nicole Klein
17021 Westridge Oaks Drive
Wildwood, MO 63040
636-628-8234
Dear Members of the Planning and Zoning Commission:

I am writing to you to voice my opposition to the proposed 116 apartments behind the Wildwood YMCA and adjacent to the 55+ retirement/senior community of the Meadows of Wildwood.

I have been a resident of the Meadows of Wildwood for the past 5 years and have enjoyed our quiet senior community.

My main objection is the added traffic this will create. In the past, on a normal day when the Wildwood Community College is in session, the traffic is terrible trying to get out at the light onto Hwy. 109 at New College. We have to plan our departures in between when classes aren’t letting out. There have been times when traffic is backed up on New Generations by the college entrance, even before we turn on to New College. The light only lets 3-4 cars out on 109 to keep heavy traffic moving on 109, so we end up sitting through a light cycle multiple times. Also, people coming out of the YMCA, where they have 7,000 members, add to this congestion, and also those exiting the strip mall where the Wildwood Pub and Grill and other businesses are. With an added 150-200 cars from the apartments, this only will add to this already existing problem.

Since these apartments are going to have 3, 6, and 12-month leases, it will be a very transient community. We would expect families with children which means school buses will have to enter and exit.

We in the Meadows of Wildwood have a private lake where only the residents are allowed to fish. I can envision the apartment residents walking here to fish, which is prohibited, and we would constantly have to “police” this.

The Meadows of Wildwood is a small, quiet community with 64 villas, all seniors. We feel very safe taking a walk in the evenings without locking our homes, or attending an event at our clubhouse without locking our homes. This won’t happen any more with 116 apartments next door. We won’t feel safe.

Any of us who want to sell our homes will no doubt get negative comments and concerns about being adjacent to these apartments and we fear our property values can’t help but decrease.

The construction traffic and noise will last for 1-1/2 years and also cause disruptions for us trying to get down New Generations, our only exit to go north on 109.

If any of you are old enough to live in a 55+ community, or have parents who would, think about if you would want to live next door to 116 apartments after enjoying years of a quiet community, tucked away and surrounded. Y Rockwood Reservations. We fear the ambulances and fire trucks will have difficulty getting to us and exiting quickly, and they are called frequently. We have many residents in their 80s and 90s.
The Arkansas developer does not care about our concerns or Wildwood. They conducted the traffic assessment when the college wasn't even in session and at the off-peak times. And they didn't take into consideration the high peak times for the YMCA.

Please take into consideration the residents' concerns when deciding how to vote on this rezoning. Thank you for taking the time to read this.

Thank you for your service.

Sent from Jean Fisher, 234 Meadows of Wildwood Blvd.
TO: Travis Newberry, Department of Planning - City of Wildwood

DATE: July 7, 2020

FROM: Dennis Welker on behalf of the Westridge Oaks Subdivision’s Residents who have signed the attached Petition.

RE: Zoning Change for PZ-40 ERC Multiple Family Development

Please transmit the following attached items to the Mayor and each member of the Planning and Zoning Commission:

1) Westridge Oaks Subdivision’s position statement in opposition to the referenced rezoning.
2) Signatures of 100 residents of the Westridge Oaks Subdivision who are opposed to the proposed rezoning. The petition signatories represent 75 of our 101 residences.
Citizens in Westridge Oaks Subdivision in Opposition to P.Z. 4-20 ERC Multiple Family Development Change in Zoning from NU Non-Urban Residence to the C-8 Planned Commercial District

TO: Wildwood Planning & Zoning Commission members, The Honorable James R. Bowlin, Mayor; Joe Vujnich, Director Department of Planning and Parks; Sam Anselm, City Administrator; Rick Brown, P.E.,P.T.O.E., Director of Department of Public Works; Travis Newberry, Planner; Council member Joe Garritano, Ward Eight; and all City of Wildwood Council members.

FROM: Residents of the Westridge Oaks Subdivision, Ward Eight.

SUBJECT: P.Z. 4-20, Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758 – A request for a change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel of land, which is located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109 (St. Louis County Locator Number: 24V130913/Street Address: 2665 State Route 109). The subject property is designated ‘Cultural/ Institutional Overlay District’ under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off-street and structured parking accommodations, stormwater management facilities, and required public space components. (Ward One)

We, the undersigned owners of property directly affected by the requested change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel, oppose this change in zoning.

We thank the visionaries who created the Master Plan for the City of Wildwood. The current and past Planning & Zoning Committee members and Council members implemented the Master Plan taking the following into consideration:

- Sustaining Low Density Housing;
- Developing projects that are visually compatible with the surrounding areas;
- Maintaining Green Space for the benefit of adjoining communities;
- Preserving and promoting the public health, safety and welfare in the City of Wildwood; and
- Studying traffic patterns and construction traffic keeping in mind the privacy and safety for neighborhoods.
The current proposal is in direct contrast to the above criteria that made Wildwood what it is today.

**We oppose this proposal for the following reasons:**

- The project proposal results in ultra-high density;
- 3+ story buildings are not visually compatible with the adjacent developments;
- In lieu of green space, this proposal is 10 buildings, asphalt and a swimming pool on 4.31 acres;
- The traffic study performed for this development was based on limited data obtained in January 2020; a time of the year when traffic volumes are typically lighter and more erratic than normal. A new traffic study needs to be performed after the Community College and the YMCA are operating under normal conditions so that the impacts of the proposed development can more accurately be determined.
- The existing traffic volumes on Hwy 109 and the speed at which the traffic on Hwy 109 is moving makes turning movements at the Westridge Oaks Drive intersection difficult and dangerous for drivers on both roadways. During peak periods traffic is often backed up on Hwy 109 south of the signals at New College Ave. to the extent that it blocks the Westridge Oaks Drive intersection. Traffic generated by the proposed development will only exacerbate an already unsafe situation.
- The traffic study performed for the proposed development did not address the impacts on the Westridge Oaks Drive intersection. A new study, based on actual turning movement counts at this intersection, needs to be performed. If this development were to occur, it is likely that the signal timing at the New College Ave. intersection will be changed to give the increased traffic on New College Ave. a longer green light and traffic on Hwy 109 a longer red (stop) cycle. The impacts of a potential signal timing adjustment needs to be evaluated as well.
- This proposed development does not complement the existing community adjacent to the site; which includes the Meadows of Wildwood (a 55+ Residential Community), the Westridge Oaks Subdivision, the Wildwood Family YMCA, and the St. Louis Community College.

We thank you for the opportunity to voice our opinion. We hope this Council will reject this re-zoning request and work with the Wildwood Ward One and Eight residents to pursue a different, more suitable option for this parcel of land.
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Citizens of Westridge Oaks Subdivision Opposed to P.Z. 4-20 ERC Multiple Family Development Change in Zoning from NU Non-Urban Residence to the C-8 Planned Commercial District

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<td>16950 Westridge Oaks</td>
<td></td>
</tr>
<tr>
<td>6/10</td>
<td>Tony Hadden</td>
<td></td>
<td>16947 Westridge</td>
<td></td>
</tr>
<tr>
<td>6/20</td>
<td>Debbie Tsang</td>
<td></td>
<td>16935 Westridge Oaks</td>
<td></td>
</tr>
<tr>
<td>6/20</td>
<td>Nagesh Kambo</td>
<td></td>
<td>16398 Westridge</td>
<td></td>
</tr>
<tr>
<td>6/20</td>
<td>Tracy Stanley Johnson</td>
<td></td>
<td>16902 Westridge Oaks</td>
<td></td>
</tr>
<tr>
<td>6/20</td>
<td>Stacy Rasner</td>
<td></td>
<td>2810 Westridge Oak</td>
<td></td>
</tr>
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</table>

Page 9 of 10
<table>
<thead>
<tr>
<th>Date</th>
<th>Printed Name</th>
<th>Signature</th>
<th>Address Wildwood 63040</th>
</tr>
</thead>
<tbody>
<tr>
<td>6/28/20</td>
<td>Francisco Rherez</td>
<td></td>
<td>16918 Westridge Oks Dr</td>
</tr>
<tr>
<td>6/24/20</td>
<td>Robert Wandor</td>
<td></td>
<td>16953 Westridge Oks Dr</td>
</tr>
<tr>
<td>6/17/20</td>
<td>Robert Partin</td>
<td></td>
<td>16922 Westridge Oks Sts, MO 63040</td>
</tr>
<tr>
<td>6/22/20</td>
<td>Carol Schwarmer</td>
<td></td>
<td>2824 Westridge Oks Sts, Wildwood, MO 63040</td>
</tr>
<tr>
<td>6/9/20</td>
<td>Kristina Schwarmer</td>
<td></td>
<td>2824 Westridge Oks Sts, Wildwood, MO 63040</td>
</tr>
<tr>
<td>7/1/20</td>
<td>Sharon Wojciechowsk</td>
<td></td>
<td>16939 Westridge Oks Dr, Wildwood, MO 63040</td>
</tr>
<tr>
<td>7/1/20</td>
<td>Paul Wojciechowsk</td>
<td></td>
<td>16939 Westridge Oks Dr, Wildwood, MO 63040</td>
</tr>
<tr>
<td>7/2/20</td>
<td>Debbie Linan</td>
<td></td>
<td>2817 Westridge Oks Dr, Wildwood, MO 63040</td>
</tr>
<tr>
<td>7/2/20</td>
<td>Stephen May</td>
<td></td>
<td>2724 Westridge Manor, Wildwood, MO 63040</td>
</tr>
<tr>
<td>7/2/20</td>
<td>Mari May</td>
<td></td>
<td>2724 Westridge Manor, Wildwood, MO 63040</td>
</tr>
</tbody>
</table>
Meeting Comment Form

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<tr>
<th>Request Being Considered</th>
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<tbody>
<tr>
<td>Item Description</td>
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</tr>
<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>We are owners of a home in The Meadows of Wildwood. We believe that the proposed rezoning is a severe change from the current zoning and will have severe impacts on our development. We are concerned that the density of the proposed development is far too high for the size of the property and that that will cause traffic issues, and potentially increase non resident use of the streets, sidewalks, and common areas of our development.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>The current concerns about the traffic study and the timing of traffic on New Generations and Turkey Track need to be considered. Traffic patterns based on use by the mostly retired residents of The Meadows of Wildwood.and the community college do not match normal commuting patterns and times that were apparently used with the existing study.</td>
</tr>
</tbody>
</table>

Name                        | Maurice & Marcia Painter      |
Address                     | 185 Meadows of Wildwood Blvd  |
City                        | Wildwood                      |
<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>MO</td>
</tr>
<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>205-873-0535</td>
</tr>
<tr>
<td>Email</td>
<td>pete.painter1951@gmail.</td>
</tr>
</tbody>
</table>

Email not displaying correctly? [View it in your browser.]
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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>As trustee for Westridge Oaks Subdivision, Planner and engineer, the addition of dense development south of the YMCA and north of the Meadows is a very bad idea. I was on the P and Z when the Meadows went through the process. This development was questionable with the independent units as build, but it also included a main multi unit building that made the development difficult to approve, however since it was ag in place we ultimately approved it. In this case these multi-family units create a similar issue without the benefit of being a part of a planned age in place development. The street connections are minimal at best and there is one way in, and one good way out. The exit to 109 is a very bad location on a curve at the top of the hill. Living in Westridge Oaks our exit is a challenge most of the time. While this location is designated as Cultural Institutional element of the Town Center, this was really done for the age in place situation at the Meadows, and did not have this development in mind. There are plenty of location in the Town center, east of Rte. 109 with the infrastructure to support this multi-family development, but it is not here.</td>
</tr>
</tbody>
</table>

Regards,

Paul Wojciechowski
<table>
<thead>
<tr>
<th>Field</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name</td>
<td>Paul Wojciechowski</td>
</tr>
<tr>
<td>Address</td>
<td>16939 Westridge Oaks Drive</td>
</tr>
<tr>
<td>City</td>
<td>Wildwood</td>
</tr>
<tr>
<td>State</td>
<td>MO</td>
</tr>
<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>314-952-8570</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:wojoplans@yahoo.com">wojoplans@yahoo.com</a></td>
</tr>
</tbody>
</table>

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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>We oppose - far too dense, congestion, traffic concerns in beautiful relaxed area, and not a worthy addition in a residential relaxed area.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
</tbody>
</table>

Name: Lon and Lana Schwake
Address: 17037 Westridge Oaks Dr
City: Grover
State: MO
Zip: 63040
Phone Number: 3142397433
Email: lschwake@sbcglobal.net

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<tr>
<td>General Comments</td>
<td>My wife, Renee, and I and a number of our neighbors are adamantly opposed to the proposed multi-family on this property. Multi-family dwellings at this location will: 1) totally change the character of the neighborhood, making it less desirable area; 2) overtax the existing amenities (restaurants and YMCA); and 3) exacerbate an already unsafe traffic condition on Route 109. In spite of the fact that this use is permitted under the current zoning, it is a bad idea and will be detrimental to the existing surrounding residential development. I doubt of any of the current homeowners would have purchased their homes if the proposed multifamily housing existed at the time of purchase. Why devalue our properties now? A couple years ago the Council and Mayor rejected the extension of the Pond Grover Loop, an essential, long planned, critical component of City's transportation infrastructure because the adjacent residences objected on the negative impact on their properties. Shouldn't those of us living near this proposed development have the same consideration?</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
<tr>
<td>Name</td>
<td>Dennis J. and Renee L. Welker</td>
</tr>
<tr>
<td>Address</td>
<td>16903 Westridge Oaks Drive</td>
</tr>
<tr>
<td>--------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>City</td>
<td>Wildwood</td>
</tr>
<tr>
<td>State</td>
<td>MO</td>
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<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>3143086777</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:reneelaelle@att.net">reneelaelle@att.net</a></td>
</tr>
</tbody>
</table>

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<tr>
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<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>The proposed land use does not comply with the requirements of the Master Plan which is intended to be followed with few if any exceptions. This protects the values of the community and insures that development interests are not put ahead of the residents of Wildwood. Furthermore, sufficient multi-use housing already exists within the area - adding additional high density developments will cause further traffic and infrastructure problems in Wildwood. The interests of residents must be first and foremost regarding planning decisions and not those of outsiders who only seek to achieve financial gain.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
</tbody>
</table>

Name  
Adam Williams

Address  
3066 Woodlands Road

City  
Wildwood

State  
Missouri

Zip  
63038
<table>
<thead>
<tr>
<th>Phone Number</th>
<th>636-405-1502</th>
</tr>
</thead>
<tbody>
<tr>
<td>Email</td>
<td><a href="mailto:agwsjw@netzero.net">agwsjw@netzero.net</a></td>
</tr>
</tbody>
</table>

Email not displaying correctly? [View it in your browser.]
July 14, 2020

Planner
Travis Newberry
16860 Main Street
Wildwood, MO 63040

Subject: Re-Zoning P. Z. 4-20

This proposal will decrease our privacy and create noise. The privacy and quiet setting are two things we cherish and love about living in the Meadows of Wildwood.

The proposal will have inadequate parking spots. Statistically the average couple has two cars. As you well know, West County St Louis has poor public transportation and is not pedestrian friendly. The proposal calls for 116 apartments but much less than 232 parking spaces. Parking spaces are an important part of a rental property that it’s one of the top frustrations and sources of conflict between landlords and tenants.

I’m pretty sure that you don’t want to live next door to a noisy 116 unit high density apartment complex with inadequate parking and we don’t want to either.

Please consider us here in the Meadow of Wildwood and vote no on the Re-Zoning P. Z. 4-20.

Thank you,

[Signature]

Alan G. Mawhinney
July 17, 2020

Mr. George Stock, PE
Stock & Associates, Inc.
257 Chesterfield Business Parkway
Chesterfield, MO 63005

RE: 2665 Route 109 Development
Wildwood, Missouri
520-0008-OTE

Dear Mr. Stock:

In accordance with your request, Lochmueller Group has prepared the following traffic impact study to evaluate a proposed multi-family residential development at 2665 Route 109 in Wildwood, Missouri. The subject site is bounded by Route 109 to the east, Generations Drive to the west, New College Avenue to the north, and Turkey Track Lane to the south, as shown in Exhibit 1.

A total of 116 apartments are proposed, arranged in multiple three-story apartment buildings. Access to the site is proposed via a newly constructed Crescent Street, which traverses the site and connects to Generations Drive on the west and Turkey Track Lane to the south. The proposed development plan dated January 28, 2020 is illustrated in Exhibit 2 (as provided by others). Access onto Route 109 would be provided via Turkey Track Lane (right-out access only) or via New College Avenue (which is signalized).

This study forecasts the amount of traffic that would be generated by the proposed multi-family residential development, evaluates the impact of the additional residential trips on the study area road system, evaluates the ability of traffic to safely enter and exit the site, and determines if roadway or traffic improvements are necessary to mitigate the residential development’s impacts.

This study evaluates conditions during the morning and afternoon peak periods on a typical weekday, as these periods represent the most critical times of day for traffic operations and roadway capacity. If the traffic can be accommodated during these peak periods, it stands to reason that adequate capacity would be available throughout the remainder of the day.

Forecasted conditions, which include approved future expansion of Wildwood Square, were evaluated for the opening year of the proposed development, which was conservatively assumed to be 2020. This study was prepared in accordance with the requirements of the City of Wildwood.

411 North 10th Street, Suite 200
St. Louis, Missouri 63101
PHONE: 314.621.3395
Exhibit 1. 2665 Route 109 Development Study Area Map
**EXISTING CONDITIONS**

In order to identify the traffic impacts associated with the proposed residential development, it was first necessary to quantify roadway, traffic, and operating conditions as they currently exist. The study area includes several connections to the regional road system. New College Avenue and Turkey Track Lane provide connections to Route 109, and Route 109 provides connections to Manchester Road and Route 100. The study area includes the following intersections:

- Route 109 and Turkey Track Lane (unsigned)
- Route 109 and Westridge Oaks Drive (unsigned)
- Route 109 and New College Avenue (signed)
- New College Avenue and Wildwood Family YMCA/Wildwood Square (unsigned)
- New College Avenue and Generations Drive (unsigned)
- Proposed Crescent Street and Generations Drive (unsigned)
- Proposed Crescent Street and Turkey Track Lane (unsigned)

Route 109 is functionally classified as a principal arterial with a speed limit of 40 mph north of New College Avenue and 45 mph south of New College Avenue. In general, Route 109 is comprised of one travel lane in each direction, plus turn lanes at major intersections. Route 109 is maintained by the Missouri Department of Transportation (MoDOT).

New College Avenue is classified as a local road with a speed limit of 25 mph and is comprised of two travel lanes in each direction. Generations Drive, also a local road, is comprised of one travel lane in each direction with a speed limit of 25 mph. The intersection of Route 109 and New College Avenue is signalized and maintained by MoDOT. Dedicated left-turn, thru, and right-turn lanes are provided on the northbound and southbound approaches of Route 109. Shared left-turn/thru lanes and dedicated right-turn lanes are provided for the eastbound and westbound approaches on New College Avenue.

Turkey Track Lane is classified as a local road and has one eastbound travel lane with no posted speed limit. There is no existing westbound lane. The intersection of Route 109 and Turkey Track Lane is unsigned. Eastbound traffic is channelized to the right to turn south on Route 109, implicitly to dissuade left-turning movements. However, there is no sign restricting left turns. Field observations revealed some vehicles making left turns. Westbound traffic is also restricted on Turkey Track Lane, as reinforced by “Do not enter”, “no left turn”, and “no right turn” signs oriented to traffic on Route 109.

The intersection of Route 109 and Westridge Oaks Drive is unsigned, with a dedicated southbound left turn lane. The west leg of the intersection is a right-in, right-out (RIRO) drive serving the Wildwood Family YMCA, whereas the east leg accommodates full access. The intersection of New College Avenue and Wildwood Family YMCA/Wildwood Square is unsigned, with one of the westbound through lanes dropping after the intersection. Both the Wildwood Family YMCA and the Wildwood Square driveway approaches provide separate left- and right-turn lanes. The intersection is unsigned, with the minor approaches operating under stop control. The intersection of New College Avenue and Generations Drive is an unsigned, 2-leg intersection, which includes an unused stub to the north. The westbound left turn movement is stop-controlled while northbound vehicles are free to make right-turns onto New College Avenue without stopping. Exhibit 3 illustrates the existing intersection lane configurations and traffic control.
Legend

- Existing Lane Configuration
- Signalized Intersection
- Stop Controlled Approach
- Yield Controlled Approach
- XXX' Turn Bay Storage Length

Exhibit 3. Existing Lane Configuration and Traffic Control
Existing multi-modal facilities are limited in the study area. There are currently no dedicated bicycle facilities; however, signs indicating bicycles should share the road with vehicles are posted along Route 109. There are sidewalks along both sides of New College Avenue and Generations Drive. Route 109 has sidewalks along its east side along the developed parcels throughout the study area; however, the network is incomplete south of the access drive to the Wildwood Family YMCA. The sidewalk terminates just south of the residential homes along the east side of Route 109.

To quantify existing volumes, turning movement counts were collected in January 2020, while St. Louis Community College was in session. Counts were performed at Route 109 and New College Avenue and at Generations Drive and Turkey Track Lane during the weekday morning (7:00 to 9:00 AM) and evening commuter (4:00 to 6:00 PM) peak periods. Volumes at Route 109 and Westridge Oaks Drive and at New College Avenue and Wildwood Family YMCA/Wildwood Square were estimated based on information provided by the Institute of Transportation Engineers (ITE) in *Trip Generation, 10th Edition*. Volumes at New College Avenue and Generations Drive and at Route 109 and Turkey Track Lane were determined by volume balancing adjacent intersections. From the counts, the peak hours of traffic flow occur from 7:15 to 8:15 a.m. and from 4:15 to 5:15 p.m. Existing traffic volumes are summarized in *Exhibit 4*.

Intersection performance or traffic operations are quantified by six Levels of Service (LOS), which range from LOS A ("Free Flow") to LOS F ("Fully Saturated"). LOS C is normally used for design purposes and represents a roadway with volumes ranging from 70% to 80% of its capacity. LOS D is generally considered acceptable for peak period conditions in urban and suburban areas and would be an appropriate benchmark of acceptable traffic for the study area road system.

Levels of service for intersections are determined based on the average delay experienced by motorists. Signalized intersections reflect higher delay tolerances as compared to unsignalized and roundabout locations because motorists are accustomed to and accepting of longer delays at signals. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and then aggregated for each approach and the intersection as a whole. For intersections with partial (side-street) stop control, the delay is calculated for the minor movements only (side-street approaches and major road left-turns) since thru traffic on the major road is not required to stop.

Table 1 summarizes the criterion for both signalized and unsignalized intersections, as defined by the *Highway Capacity Manual* (HCM) 6th Edition, last updated in 2016 by the Transportation Research Board.
Legend

X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)

AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM

Exhibit 4. 2020 Existing Traffic Volumes
Operating conditions at the study intersections were evaluated using Synchro 10, which is a traffic flow model based on the HCM. The existing operating conditions are summarized in Table 2. As shown, basec upon the Synchro analysis, the study intersections generally have favorable conditions during the peak hours. All unsignalized intersections operate acceptably, with LOS C or better for all movements.

The intersection of Route 109 and New College Avenue operates efficiently overall at LOS B or LOS C during the peak hours. However, the eastbound approach experiences longer delays consistent with LOS E for both the AM and PM peak hours. Additionally, queueing on the eastbound approach in the PM peak hour occasionally extends to the driveway entrance to the Wildwood Family YMCA/Wildwood Square. This poor level of service can be attributed to the current shared left/thru lane configuration on the eastbound and westbound approaches of New College Avenue, which requires split phase signal timings. Split phase timings are inherently less efficient because they dictate that all movements on a given approach receive the same amount of green time, regardless of traffic demands for individual movements.

<table>
<thead>
<tr>
<th>Intersection &amp; Movements</th>
<th>LOS (Delay, sec) [Queue Length, feet] &lt;v/c ratio&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak Hour</td>
</tr>
<tr>
<td>Route 109 &amp; Turkey Track Ln (unsignalized, side street yield)</td>
<td></td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.6) [25] &lt;0.01&gt;</td>
</tr>
<tr>
<td></td>
<td>B (13.6) [25] &lt;0.02&gt;</td>
</tr>
<tr>
<td>Route 109 &amp; Westridge Oaks Drive (unsignalized, side street stop)</td>
<td></td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.5) [25] &lt;0.01&gt;</td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>C (18.9) [25] &lt;0.20&gt;</td>
</tr>
<tr>
<td>Southbound Left</td>
<td>A (9.2) [25] &lt;0.01&gt;</td>
</tr>
<tr>
<td></td>
<td>A (9.0) [25] &lt;0.04&gt;</td>
</tr>
<tr>
<td>Route 109 &amp; New College Ave (signalized)</td>
<td></td>
</tr>
<tr>
<td>Overall Intersection</td>
<td>B (14.3)</td>
</tr>
<tr>
<td>Eastbound Approach</td>
<td>E (56.3) [97] &lt;0.47&gt;</td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>C (31.4) [25] &lt;0.15&gt;</td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>B (12.8) [358] &lt;0.51&gt;</td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>B (10.3) [336] &lt;0.40&gt;</td>
</tr>
<tr>
<td>New College Ave &amp; YMCA/Wildwood Square (unsignalized, side street stop)</td>
<td></td>
</tr>
<tr>
<td>Eastbound Left</td>
<td>A (0.0) [25] &lt;0.00&gt;</td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (7.3) [25] &lt;0.02&gt;</td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>A (8.5) [25] &lt;0.02&gt;</td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>B (10.6) [25] &lt;0.03&gt;</td>
</tr>
<tr>
<td>New College Ave &amp; Generations Dr (unsignalized, side street stop)</td>
<td></td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (9.3) [25] &lt;0.17&gt;</td>
</tr>
</tbody>
</table>

# - 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles
**Baseline Conditions**

The addition of three new buildings within the Wildwood Square development, located west of Route 109 and north of New College Avenue, was previously approved. These buildings would consist of approximately 12,000 square feet (SF) of retail, and 14,000 SF of office space, and could be constructed and occupied at any time in the future. The trips that would be generated by this future development were forecasted based on data published in *Trip Generation, 10th Edition*.

The future development is forecasted to generate approximately 51 and 64 trips during the AM and PM peak hours, respectively. All of the additional trips were assumed to access Wildwood Square via the Route 109 and New College Avenue intersection, and have a directional distribution split of 80% to/from the north and 20% to/from the south along Route 109. To be conservative, no pass-by trips were assumed for the retail uses. These trips were added to the existing traffic volumes (shown in Exhibit 4), resulting in 2020 baseline traffic volumes, shown in Exhibit 5.

Baseline operating conditions were evaluated using the same methodology applied to existing conditions, as summarized in Table 3. As can be seen, the study area intersections largely operate similarly to existing conditions despite the addition of future development at Wildwood Square. However, without any improvements, the eastbound approach at Route 109 and New College Avenue would degrade from LOS E to LOS F and the 95th percentile queue would extend past the Wildwood Family YMCA/Wildwood Square entrance during the PM peak hour.

<table>
<thead>
<tr>
<th>Intersection &amp; Movements</th>
<th>LOS (Delay, sec) [Queue Length, feet]</th>
<th>&lt;c/ratio&gt;</th>
<th>AM Peak Hour</th>
<th>PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Route 109 &amp; Turkey Track Ln (unsignalized, side street yield)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.6) [25] &lt;0.01</td>
<td>B (13.7) [25] &lt;0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Route 109 &amp; Westridge Oaks Drive (unsignalized, side street stop)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.5) [25] &lt;0.01</td>
<td>B (13.8) [25] &lt;0.02</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>C (19.1) [25] &lt;0.20</td>
<td>C (19.1) [25] &lt;0.14</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southbound Left</td>
<td>A (9.3) [25] &lt;0.01</td>
<td>A (9.0) [25] &lt;0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Route 109 &amp; New College Ave (signalized)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Intersection</td>
<td><strong>B (14.4)</strong></td>
<td></td>
<td><strong>C (26.1)</strong></td>
<td></td>
</tr>
<tr>
<td>Eastbound Approach</td>
<td>E (57.9) [108] &lt;0.53</td>
<td>F (95.8) [264] &lt;1.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>C (31.4) [25] &lt;0.15</td>
<td>C (26.8) [46] &lt;0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>B (12.7) [358] &lt;0.51</td>
<td>B (15.1) [364] &lt;0.49</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>A (9.9) [336] &lt;0.41</td>
<td>B (17.0) [528] &lt;0.63</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>New College Ave &amp; YMCA/Wildwood Square (unsignalized, side street stop)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound Left</td>
<td>A (0.0) [25] &lt;0.00</td>
<td>A (0.0) [25] &lt;0.00</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (7.3) [25] &lt;0.02</td>
<td>A (7.4) [25] &lt;0.01</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>A (8.5) [25] &lt;0.02</td>
<td>A (8.6) [25] &lt;0.04</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>B (11.0) [25] &lt;0.04</td>
<td>B (10.3) [25] &lt;0.13</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>New College Ave &amp; Generations Dr (unsignalized, side street stop)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (9.3) [25] &lt;0.17</td>
<td>A (8.9) [25] &lt;0.06</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* # - 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles
Exhibit 5. 2020 Baseline Traffic Volumes

Legend

X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)

AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM
**Forecasted Trip Generation and Directional Distribution**

The number of trips that would be generated by the proposed development was forecasted based on data published in *Trip Generation, 10th Edition*. Land Use 221: Multi-Family House – Mid-Rise was applied. Based on guidance in the *Trip Generation Handbook, 3rd Edition*, the fitted curve equation was used to forecast site-generated traffic volumes, and the number of residential units was used as the independent variable. The forecasted trips that would be generated by the proposed development are summarized in Table 4. As shown, the proposed development would generate a total of 41 and 53 trips during the weekday morning and evening peak hours, respectively.

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Unit</th>
<th>Size</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family Housing Mid-Rise (221)</td>
<td>Dwelling Units</td>
<td>116</td>
<td>In: 11  Out: 30  Total: 41</td>
<td>In: 32  Out: 21  Total: 53</td>
</tr>
</tbody>
</table>

The residential development’s trip generation would be assigned to the study area roadways in accordance with an anticipated directional distribution that reflects prevailing traffic patterns as well as the anticipated commuter routes for residents. The proposed directional distribution percentages for site generated trips are presented in Table 5.

The majority of trips are expected to use Route 109 to travel to and from the north, as Manchester Road and Route 100 – major east/west thoroughfares in the area – are located to the north of the site. A smaller percentage of trips would travel south to Eureka, as I-44 is approximately 5 miles to the south. In an effort to present a conservative, worst-case scenario with respect to left-turning traffic at the intersection of Route 109 and New College Avenue, 80 percent of the site’s traffic was assumed to be distributed to/from the north.

The resulting site generated traffic for the 2665 Route 109 residential development is reflected in Exhibit 6. It should be noted that Turkey Track Lane was analyzed as an eastbound right-out only preserving the existing access configuration at Route 109. All traffic forecasted to exit the site and proceed north on Route 109 was directed to the eastbound left-turn at Route 109 and New College Avenue.

<table>
<thead>
<tr>
<th>Routes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To/From the North via Route 109</td>
<td>80%</td>
</tr>
<tr>
<td>To/From the South via Route 109</td>
<td>20%</td>
</tr>
</tbody>
</table>
Legend

X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)

AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM

Exhibit 6. Proposed Development Site Generated Traffic
SITE ACCESS
The proposed site plan, shown in Exhibit 2, includes two points of access to the proposed development. A new street, Crescent Street, would traverse the site and connect to Generations Drive on the west and Turkey Track Lane to the south. No improvements are proposed to Turkey Track Lane; it is to remain a one-way eastbound roadway. A striped left-turn arrow and a no right-turn sign is recommended on the southbound approach at Crescent Street and Turkey Track Lane to alert traffic exiting the site that Turkey Track Lane is one-way eastbound.

Crescent Street at both Turkey Track Lane and Generations Drive should have a minimum of 24 feet in throat width with one lane in each direction. Traffic exiting the site from Crescent Street should be placed under STOP control via the installation of signage. Crescent Street approaching Turkey Track Lane and Generations Drive should conform to the sight distance requirements set forth by the American Association of State Highway and Transportation Officials (AASHTO). Furthermore, as part of the design process, care should be taken to ensure that signage and/or landscaping does not pose sight distance limitations at any of the proposed intersection locations.

2020 FORECASTED CONDITIONS
Forecasted operating conditions were evaluated using the same methodology applied to existing and baseline conditions. The site generated traffic, shown in Exhibit 6, was aggregated with baseline traffic volumes (Exhibit 5) to produce a forecasted conditions scenario that reflects the proposed development. The resulting 2020 traffic forecast is shown in Exhibit 7.

Table 6 shows forecasted operating conditions that reflect the additional trips generated by the proposed development. As can be seen, the study area intersections would operate similar to existing and baseline conditions. The average delay at the intersections of Route 109 with Westridge Oaks Drive and New College Avenue at Wildwood Family YMCA/Wildwood Square would increase by less than one second during the AM and PM peak hours. Therefore, the proposed development would have an imperceptible impact upon motorists traveling through those intersections. However, without any improvements, conditions on eastbound New College Avenue at Route 109 would worsen. The 95th percentile queue for the eastbound left-turn movement would extend nearly 300 feet, which is beyond the Wildwood Family YMCA/Wildwood Square entrances.

To mitigate eastbound congestion on New College Avenue, it is recommended that the eastbound approach at Route 109 be modified to provide a dedicated left-turn lane and the split phase operations be eliminated in favor of protected-plus-permissive left-turn phasing. To accomplish this, the existing median on New College Avenue, east of the Wildwood Family YMCA/Wildwood Square entrances, would be removed and replaced with a dedicated left-turn lane, with a storage bay length of at least 175 feet. The existing combination left-turn/thru lane would be restriped as a thru only lane to maintain lane alignment across Route 109, and the existing right turn lane would remain in place.

Additionally, the westbound approach at Route 109 and New College Avenue would need to be modified by re-stripping the current lane configuration. Specifically, the shared left turn/thru lane would be converted to a dedicated left-turn lane, and the right-turn lane would be converted to a shared thru/right-turn lane. Adjustments to the signal equipment at Route 109 and New College Avenue would also be necessary to implement the proposed lane configuration changes.
Legend

X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)

AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM

Exhibit 7. 2020 Forecasted Traffic Volumes
<table>
<thead>
<tr>
<th>Intersection &amp; Movements</th>
<th>LOS (Delay, sec) [Queue Length, feet] &lt;v/c ratio&gt;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>AM Peak Period</td>
</tr>
<tr>
<td><strong>Route 109 &amp; New College Ave (signalized)</strong></td>
<td></td>
</tr>
<tr>
<td>Overall Intersection</td>
<td>B (16.3)</td>
</tr>
<tr>
<td>Eastbound Approach</td>
<td>E (67.4) [150] &lt;0.70&gt;</td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>C (31.4) [25] &lt;0.15&gt;</td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>B (13.4) [358] &lt;0.54&gt;</td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>B (10.2) [336] &lt;0.43&gt;</td>
</tr>
<tr>
<td><strong>Route 109 &amp; Turkey Track Ln (unsigned, side street yield)</strong></td>
<td></td>
</tr>
<tr>
<td>Overall Intersection</td>
<td>B (15.0)</td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.7) [25] &lt;0.02&gt;</td>
</tr>
<tr>
<td><strong>Route 109 &amp; Westridge Oaks Drive (unsigned, side street stop)</strong></td>
<td></td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.5) [25] &lt;0.01&gt;</td>
</tr>
<tr>
<td>Westbound Right</td>
<td>C (19.2) [25] &lt;0.20&gt;</td>
</tr>
<tr>
<td>Southbound Left</td>
<td>A (9.3) [25] &lt;0.01&gt;</td>
</tr>
<tr>
<td><strong>New College Ave &amp; YMCA/Wildwood Square (unsigned, side street stop)</strong></td>
<td></td>
</tr>
<tr>
<td>Eastbound Left</td>
<td>A (0.0) [25] &lt;0.00&gt;</td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (7.4) [25] &lt;0.02&gt;</td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>A (8.6) [25] &lt;0.02&gt;</td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>B (11.3) [25] &lt;0.04&gt;</td>
</tr>
<tr>
<td><strong>New College Ave &amp; Generations Dr (unsigned, side street stop)</strong></td>
<td></td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (9.8) [25] &lt;0.23&gt;</td>
</tr>
<tr>
<td><strong>Proposed Crescent St &amp; Generations Dr (unsigned, side street stop)</strong></td>
<td></td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>A (8.5) [25] &lt;0.03&gt;</td>
</tr>
<tr>
<td>Southbound Left Turn</td>
<td>A (7.3) [25] &lt;0.01&gt;</td>
</tr>
<tr>
<td><strong>Proposed Crescent St &amp; Turkey Track Ln (unsigned, side street stop)</strong></td>
<td></td>
</tr>
<tr>
<td>Southbound Left</td>
<td>A (8.7) [25] &lt;0.00&gt;</td>
</tr>
</tbody>
</table>

# - 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.

With the proposed improvements, the eastbound approach at Route 109 and New College Avenue would operate at LOS D during both the AM and PM peak hours, thereby fully mitigating the LOS F conditions reflected in baseline conditions. Additionally, the eastbound 95th percentile queue length
would be reduced to approximately 175 feet, which would no longer obstruct the access drive to the Wildwood Family YMCA/Wildwood Square during either peak hour.

Assuming the recommended mitigation improvements are implemented, it is evident that the proposed residential development would have a minimal impact upon traffic in the study area. Therefore, it was determined that the need to extend Generations Drive north to Manchester Road to more broadly distribute site-generated traffic does not exist at this time. The need for the street extension should be revisited in the future when additional development occurs in the area.

**ROUTE 109 AND NEW COLLEGE AVENUE MIDDAY ANALYSIS**

Due to the presence of St. Louis Community College opposite the proposed site, questions have been raised regarding the ability of New College Avenue to accommodate traffic throughout the day, including during brief class change peaks that occur periodically. Reportedly, the eastbound left-turn movement on New College Avenue at Route 109 experiences congestion and queuing during these periods.

A traffic count of Route 109 and New College Avenue was obtained from 2018 that included counts from 11:00 AM to 1:00 PM and from 2:00 PM to 4:00 PM. From this count, the busiest midday traffic period for the eastbound approach at the intersection occurred between 12:00 PM and 1:00 PM. An analysis of existing conditions, summarized in Table 7, confirmed that the eastbound approach on New College Avenue at Route 109 operates at LOS F during the peak midday period, with queues extending well beyond the Wildwood Family YMCA/Wildwood Square entrances. This reflects peak periods for students departing St. Louis Community College at class changes.

Forecasted conditions, including traffic generated by the proposed development and future development at Wildwood Square, were evaluated for the same midday period. As shown in Table 7, with the recommended mitigation improvements in place at New College Avenue and Route 109 as described in the preceding section, conditions on the eastbound approach would be significantly improved. The approach would improve to LOS D and the 95th percentile queue length would be reduced to approximately 135 feet, which would avoid interfering with the Wildwood Family YMCA/Wildwood Square entrances. Therefore, the recommended mitigation improvements would actually alleviate existing midday traffic congestion pertaining to students departing St. Louis Community College at class change periods.

<table>
<thead>
<tr>
<th>Route 109 and New College Avenue (signalized) Midday Eastbound Queues</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Table 7.</strong> Route 109 and New College Avenue (signalized) Midday Eastbound Queues</td>
</tr>
<tr>
<td>Route 109 and New College Avenue Eastbound Approach</td>
</tr>
<tr>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>Existing Conditions</td>
</tr>
<tr>
<td>With Proposed Mitigation</td>
</tr>
</tbody>
</table>

# - 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles.
FINDINGS AND CONCLUSIONS
Based on the preceding traffic impact study for the 2665 Route 109 multi-family residential development, the following can be concluded:

• The proposed development would generate a total of approximately 41 and 53 trips during the weekday morning and evening peak hours, respectively.

• Based on the existing road geometry at Route 109 and Turkey Track Lane, a no left-turn sign and a striped right-turn arrow is recommended on the eastbound approach to discourage motorists from making a left-turn onto Route 109.

• The proposed intersections of Crescent Street & Generations Drive and Crescent Street & Turkey Track Lane should operate under side-street STOP control with one lane of traffic in each direction on each intersection leg.

• A striped left-turn arrow and a no right-turn sign is recommended on the southbound approach on Crescent Street at Turkey Track Lane to alert traffic exiting the site that Turkey Track Lane is a one-way eastbound roadway.

• Under existing conditions, the eastbound approach at Route 109 and New College Avenue experiences delays consistent with LOS E for both the AM and PM peak hours, with queueing on the eastbound approach in the PM peak hour occasionally extending to the driveway entrances to the Wildwood Family YMCA/Wildwood Square.

• Under baseline operating conditions, which reflect the addition of trips generated by future approved development at Wildwood Square, the eastbound approach at Route 109 and New College Avenue would degrade from LOS E to LOS F, and the 55th percentile queue would likely extend past the Wildwood Family YMCA/Wildwood Square entrances during the PM peak hour.

• Under forecasted operating conditions, which include the proposed development, the average delay at the intersections of Route 109 with Westridge Oaks Drive and New College Avenue at Wildwood Family YMCA/Wildwood Square would increase by less than one second during the AM and PM peak hours. Therefore, the proposed development would have an imperceptible impact upon motorists traveling through those intersections.

• The following improvements are recommended at Route 109 and New College Avenue to mitigate the impact of the proposed development:
  o Remove the existing median on New College Avenue between the Wildwood Family YMCA/Wildwood Square entrances and Route 109 to provide a dedicated eastbound left-turn lane at Route 109 with a storage bay length of at least 175 feet;
  o Restripe the existing eastbound left-turn/thru to a thru only lane in order to maintain lane alignments across Route 109 and restripe the westbound approach lane as a single dedicated left turn lane and a shared thru/right turn lane;
  o Remove the existing east-west split phasing and introduce protected-plus-permissive left-turn phases for eastbound and westbound approaches; and
  o Modify the traffic signal equipment at Route 109 and New College Avenue to accommodate the preceding improvements.
• The recommended mitigation improvements would actually alleviate existing midday traffic congestion on eastbound New College Avenue at Route 109 pertaining to students departing St. Louis Community College at class change periods. LOS F conditions under existing conditions would improve to LOS D under forecasted conditions, including traffic generated by the proposed development.

• The need to extend Generations Drive north to Manchester Road to accommodate site-generated traffic does not exist at this time.

Assuming the implementation of the recommended mitigation improvements, it is evident that the traffic generated by the proposed residential development would have a minimal impact upon the study intersections. We trust that you will find this information useful in the evaluation of the proposed 2665 Route 109 residential development. Please contact me at (217) 673-7636 with any questions or comments concerning this report.

Sincerely,

Lochmueller Group

Kate Swinford, PE, PTOE
Senior Traffic Engineer
CITY OF WILDWOOD
NOTICE OF
PUBLIC HEARING
before the Planning and Zoning Commission
Monday, June 15, 2020 @ 7:00 p.m.

AS A RESIDENT OR PROPERTY OWNER NEAR THE SITE
THAT IS IDENTIFIED ON THIS MAILER, THE CITY OF
WILDWOOD WOULD LIKE TO ENSURE YOU ARE
AWARE OF THIS REQUEST/PROPOSAL BECAUSE IT IS
LOCATED WITHIN 1,500 FEET OF YOUR PROPERTY.
YOUR COMMENTS ARE ENCOURAGED, ALONG WITH
YOUR PARTICIPATION AT THE SCHEDULED HEARING
OR MEETING. THIS ITEM IS SCHEDULED FOR DISCUSSION
AND ITS OUTCOME MAY IMPACT YOUR HOME,
NEIGHBORHOOD, OR AREA, SO PLEASE CAREFULLY
READ THE DESCRIPTION AND PARTICIPATE AT YOUR
DISCRETION. THE CITY OF WILDWOOD ENCOURAGES
CITIZEN INPUT AT ALL OF ITS HEARINGS OR MEETINGS
AND YOUR INVOLVEMENT WILL ASSIST IN REACHING
THE BEST DECISION POSSIBLE FOR ALL PARTIES.
* PLEASE SEE YELLOW BOX ON OPPOSITE SIDE OF
THIS MAILER FOR A LIST OF WAYS TO EITHER COMMENT ON AND/OR TRACK THIS ITEM.

Street Addresses of Subject Site:
2655 State Route 109, 63040

The Planning and Zoning Commission of the City of Wildwood will conduct a public hearing on Monday, June 15, 2020, at 7:00 p.m., within the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040 for the purposes of obtaining testimony regarding request(s) for either the modification of zoning district designations, application of special procedures, change in the underlying regulations of the Zoning Ordinance, action on Record Plats, update on zoning matters, or amendment of the Master Plan, which will then be considered for action. This hearing is open to all interested parties to comment upon this request, whether in favor or opposition, or provide additional input for consideration. If you do not have comments regarding this request, no action is required on your part. Please be advised that, given the current COVID-19 coronavirus pandemic and Executive Orders associated with it, certain restrictions do exist relative to number of attendees allowed at any hearing or meeting. These restrictions also include social distancing. Therefore, please anticipate certain delays and potential alterations to the standard public hearing procedures. Additionally, depending on the actions taken by St. Louis County Government and/or the City of Wildwood, the meeting may only be accessed virtually, if public health circumstances continue to dictate or mandate such. Written comments are encouraged, preferred, and requested to be submitted prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City’s website at www.cityofwildwood.com/comment. The following request will be considered at this time:

P.Z. 4-20 ERC Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758 – A request for a change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.33 acre parcel of land, which is located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109 (St. Louis County Locator Number: 24V130913/Street Address: 2655 State Route 109). The subject property is designated ‘Cultural/Institutional Overlay District’ under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off-street and structured parking accommodations, stormwater management facilities, and required public space components. (Ward One)

RESIDENT OR PROPERTY OWNER – PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:
1) Submitting a comment online by visiting: www.cityofwildwood.com/comment,
2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
3) Viewing the project on the City’s Current Developments & Zoning Reviews page by visiting: www.cityofwildwood.com/zoningreviews
4) Viewing the Planning and Zoning Commission’s agenda, which is available on the City’s website at: www.cityofwildwood.com, the Friday before the aforementioned meeting date.
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

<table>
<thead>
<tr>
<th>Request Being Considered</th>
<th>P.Z. 4-20 ERC Multiple Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Description</td>
<td>Multiple Family Dwelling off of Highway 109 at the YMCA.</td>
</tr>
<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>Residence saturation is becoming &quot;TOO&quot; dense in this area and continued construction of dwellings is destroying the charm of what is Wildwood, MO. The total removal of all of the forested area that was done at the intersection of HWY 100 &amp; Taylor Road is a prime example of the City of Wildwood council &quot;NOT&quot; listening to the Wildwood citizens about unwanted dwelling growth in the city. The Mayor, the City Council and the Planning Commission need to listen to the wildwood residents voices about the continued unwanted expansion in Wildwood. There is insufficient access/egress for the amount of additional traffic that will be accessing the current neighborhood there, the STLCC Campus and the YMCA. We the residents of Wildwood Oppose the development being proposed.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Do not make HWY 109 any busier than it already is. Getting in and out of the Westridge Oaks neighborhood is already a chore since HWY 109 is a major pass thru to HWY 64. DO NOT approve this NEW development.</td>
</tr>
</tbody>
</table>

Name: Jerry Perales
Address: 17009 Westridge Oaks Drive
<table>
<thead>
<tr>
<th>City</th>
<th>Wildwood</th>
</tr>
</thead>
<tbody>
<tr>
<td>State</td>
<td>MO</td>
</tr>
<tr>
<td>Zip</td>
<td>63040</td>
</tr>
<tr>
<td>Phone Number</td>
<td>432.853.9392</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:jp1966ii@aol.com">jp1966ii@aol.com</a></td>
</tr>
</tbody>
</table>

Email not displaying correctly? [View it in your browser.]
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

<table>
<thead>
<tr>
<th>Request Being Considered</th>
<th>P.Z. 4-20 ERC Multiple Family</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Description</td>
<td>Field not completed.</td>
</tr>
<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>We absolutely oppose this multiple family development! Our beautiful Wildwood community is disappearing right before our eyes!</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
</tbody>
</table>

Name: Beverly and Jerry Perales
Address: 17009 Westridge Oaks Dr
City: Wildwood
State: MO
Zip: 63040
Phone Number: 636-628-6790
Email: chilli1997@aol.com

Email not displaying correctly? [View it in your browser.]

1
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

<table>
<thead>
<tr>
<th>Request Being Considered</th>
<th>Planning &amp; Zoning Commission Agenda Item</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Description</td>
<td>P.Z. 4-20 ERC Multiple Family Development, c/o Rob Coleman, ERC</td>
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<tr>
<td>Position on Request</td>
<td>Do Not Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>I live in the Meadows of Wildwood (55+ community) that is next to this proposed development. I can tell you that the traffic is already bad on Generations Drive &amp; New College Avenue when college is in session and it is not uncommon at that time to sit waiting for many minutes to even make your way SLOWLY toward the stop light. There is no way these streets could handle the volume of traffic this development would add. This development does not seem in alignment with the surrounding area or Wildwood’s Master Plan to preserve green spaces and not turn into these other soulless and over-developed communities. The property is currently zoned appropriately and should not be changed!</td>
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<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
<tr>
<td>Name</td>
<td>Gina Threlkeld</td>
</tr>
<tr>
<td>Address</td>
<td>242 Meadows of Wildwood Blvd.</td>
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<tr>
<td>Phone Number</td>
<td>6363901891</td>
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<tr>
<td>Email</td>
<td><a href="mailto:kevinandginat@hotmail.com">kevinandginat@hotmail.com</a></td>
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Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

Request Being Considered: P.Z. 4-20 ERC Multiple Family

Item Description: Field not completed.

Position on Request: Do Not Support

General Comments: As a resident of the city of Wildwood and the Westridge Oaks subdivision I am strongly opposed to the construction of apartment dwellings the the site adjacent to Wildwood YMCA grounds. Having previously lived in proximity to apartment dwellings, we specifically chose to purchase and live where we are in order to avoid being so close to the transient populations that those dwellings bring. The current trend in terms of new development within this city has been away from compact collections of dwellings and I would like to see that trend continue, and this proposed development would be in direct opposition to the aesthetic of the neighborhood, and the city of Wildwood as a whole.

Suggestions: Maintain current zoning for the site.

Name: Michael A Kiefer
Address: 17044 Westridge Oaks Drive
City: Wildwood
State: MO
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<td>Phone Number</td>
<td>3215061341</td>
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<tr>
<td>Email</td>
<td><a href="mailto:mkiefer.usaf@gmail.com">mkiefer.usaf@gmail.com</a></td>
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</tbody>
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Email not displaying correctly? [View it in your browser.]
TO: Travis Newberry, Department of Planning  
DATE: June 10, 2020  
FROM: Sheelah Yawitz on behalf of The Meadows of Wildwood  
RE: P.Z 4-20 Multiple Family Development Change in Zoning  

We would appreciate the enclosed items be given to each member of the Wildwood Planning and Zoning Commission:  

1. Meadows of Wildwood position paper in Opposition to the Multiple Family Development Proposed Change in Zoning.  
2. Signatures of 90 residents of the Meadows of Wildwood Opposing the Proposed Multiple Family Development.  
3. History of Meadows of Wildwood’s concerns dating back to February 8, 2020 as presented to Mr. Joe Vujnich, Director of Planning, to be presented to Rob Colman, CEO Developer, for written responses to the Meadows Community.  

[Signature]  
Sheelah Yawitz
February 8, 2020
Meadows of Wildwood Residents

The Developer’s conceptual/preliminary Development Plan for the 4.873 acre site in Town Center Lot 14 which is South of the YMCA and North of Turkey Track Road and East of Generations Drive is under review.

The Meadows of Wildwood Community created two lists, one addressing the Potential Positive Benefits and/or Potential Negative Outcomes that may or will arise from the Plan submitted to Wildwood’s Development and Zoning Review Committee at the January 6, 2020 (Open) meeting. The second is a List of Questions for the Developer and/or the Dept. of Planning to answer.

List # 1. Potential Positive Benefits

* Infrastructure - Roadway Improvements — Necessary Traffic Control
  Extension of Generations Drive to Manchester Road -
  Upgrade Turkey Track Road — New College Ave. intersection
* No Balconies on All Buildings
* Improved Water Pressure ???
* Fiber Optic Increased Internet

List # 1. Potential Negative Outcomes

*** Proposed Project too Dense — Too many Vehicles/Parking Spaces, Number, Location and Building Sizes within this Acreage of the Preliminary Plan

* Increased Traffic - Crowded Safety Issues In & Out of the Proposed Project.

* Traffic Congestion at Generations Drive, Turkey Track Road, New College Ave. due to Project.
  Only One Exit North at the Intersection of New College Ave. & Hwy 109 - Creating Backlog Jams ncnw.
  Entering & Exiting hazards from Crescent Street on to Generations Dr. & Turkey Track Road.

* If Parallel Parking Appears on (both sides) of Crescent Street this will block traffic for Fire and Emergency Vehicles, Delivery Trucks and Snow Removal. Consider one side Parallel Parking only.

* Trash & Recycle Receptacles — Only One in Rendering — Location is Not Appropriate — Too Visual to Meadows Community & Corner of Generations Drive & Turkey Track Road. Consider moving all Receptacles to the Northeast Corner of the Project.

* Building # 1, & # 10 are too Close to Generations Drive and the Sidewalk — It Appears to be a Wall to People Walking or Driving by it.

* MODOT Currently Only Allows a Right Turn South from Turkey Track Road onto Hwy 109.

* Consider continuing to include an access walkway/trail from the project East & South toward Turkey Track Road which will connect to a Wildwood Trailhead.

* Wildwood is known for all of its Open Natural Spaces. Green Space is limited in this 111 Apartment Project Conceptual/Preliminary Plan.
* Behind Building #8, Face Vehicles toward this building North rather than the South side to prevent Lights from Disturbing Residents of the Meadows.

* Exterior Storage for Apartments are not to be allowed.

* If Parking Garages are Ground Level that would indicate closer to 4½ Stories with Roof Line where HVAC would be placed for Noise Abatement. This indicates the reasons for possible Parallel Parking on Crescent Street, because of not blocking Garage entrances.

* Private Lake in the Meadows Community.

List #2. Questions These Compiled Questions were Based on the Wildwood’s Development and Zoning Review Committee Meeting on January 6, 2020 and the Developer’s Presentation of their Design Conceptual Plan for 111 apartments, 8 buildings, 3 stories on 4.873 acre site in Town Center. These Questions are limited by the information received from the Developer at the aforementioned meeting. Subsequent Revisions to the Developer’s Designs may Elicit Additional Questions from the Meadows Community.

*** What are the Developer’s Alternative Plans for this Lot 14 to Decrease the Number of Units and/or Limit the Number of Buildings.

* What is the Parking Code and Ratio for this development?

* Who are the References and Locations of Similar Completed projects Comparable to the One Currently Proposed in the City of Wildwood’s Town Center by this Developer?

* Where are the Utility/Electrical Boxes Located on the Renderings?

* Will the Developer Better Describe Underground Parking & how many spaces for vehicles are included? Will this Increase the Height of these Buildings?

* Could the Developer Increase more Green Space within any Alternate Plan?

* Will the Meadow’s Water Pressure be effected by this project?

* How will the Grounds be adequately maintained?

* Will the Developer Support Sight Line Barriers such as 8 ft Trees plus Large Bushes to be used appropriately where vehicle headlights shine onto Hwy 109 and Turkey Track Road & toward the Meadows Community plus the entire circumference of the proposed Development?

* How will the Developer Accommodate Specified units for Seniors?

* Clarify Outside Green Space Activity Use, besides the Pool?

* How do the Plans Provide for Adequate Trash/Recycle, Delivery and Moving Trucks with Congested Parking on the streets for residents & guests?
* How will the Developer Address the Abatement of Noise within this Entire Project?

* Will the Developer Continue to Work with Wildwood by Providing Subsequent Drawings to promote a Middle-Ground Approach to Address Contested Issues?

* Do the Stairway Specifications Allow for Extended Width for the Movement of Items Easily to the Upper Levels?

* Are the two Bio-Retention ponds Wet or Dry most of the Time?

* Is Underground Garage Parking Below Grade Level?

* Will the Developer provide Storage space in Basements for Rental Residents?

* Will the Developer provide Washer & Dryer hook-ups for each Unit?

* What is the timeline to Complete Construction on this Development, with Weather as a Consideration?

* Where do Workers Park during Construction? How is the Mud and Dirt on the Streets Controlled?

* The Residents along Turkey Track Road would request the Developer to provide a Landscape Wall on their side of the Road. Turkey Track will increase in Width because of Development. Will the Developer agree to this Request?

* Does the Developer have any Similar Completed Projects Comparable to the one Proposed in Wildwood Town Center for Review?

* How will the Development be Marketed?

* How Many Units are in each Numbered Building 1 through 8?

* Describe the Type of Street Lighting, Parking areas and Building Entrance Lighting? Will Street Lighting match the same Lamp Post with White bulbs as the Meadows?

*** Including the aforementioned statements/questions, will the Developer consider Investing in an Alternative Plan for Condominiums with 2-3 bedrooms, as opposed to apartments? This type of a proposal approach would create a more Firmly Established Residential complex and be more Complimentary to the surrounding land usage, the Community College, YMCA and the Meadows, an age restricted development.
MEADOWS OF WILDWOOD CITIZENS IN OPPOSITION TO
P.Z. 4-20 ERC Multiple Family Development Change in
Zoning from NU Non-Urban Residence to the C-8
Planned Commercial District

TO: Wildwood Planning & Zoning Commission members, The Honorable James R. Bowlin, Mayor; Joe Vujnic, Director Department of Planning and Parks; Sam Anselm, City Administrator; Rick Brown, P.E., P.T.O.E., Director of Department of Public Works; Travis Newberry, Planner; Council members Larry Brost & Teresa Clark, Ward One; and all Wildwood Council members.

FROM: Residents of the Meadows of Wildwood community, Ward One.

SUBJECT: P.Z. 4-20, Multiple Family Development, c/o Rob Coleman, Earnest R. Coleman (ERC), 5102 South Pinnacle Hills Parkway, Rogers, Arkansas 72758 – A request for a change in zoning from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel of land, which is located on the northeast corner of Turkey Track Road and Generations Drive, west of State Route 109 (St. Louis County Locator Number: 24V130913/Street Address: 2665 State Route 109). The subject property is designated ‘Cultural/ Institutional Overlay District’ under the current Town Center Regulating Plan. Proposed Use: A total of one hundred twenty (120) multiple-family units that are to be contained within a ten (10) building layout, as well as including certain public improvements, off-street and structured parking accommodations, stormwater management facilities, and required public space components. (Ward One)

We, the undersigned owners of property directly affected by the requested change in zoning by (ERC) from the NU Non-Urban Residence District to the C-8 Planned Commercial District for a 4.31 acre parcel, oppose this change in zoning.

We thank the visionaries who created the Master Plan for the City of Wildwood. The current and past Planning & Zoning Committee members and Council members implemented the Master Plan taking the following into consideration:

- Sustaining Low Density Housing.
- Developing projects that are visually compatible with the surrounding areas;
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- Sustaining Low Density Housing.
- Developing projects that are visually compatible with the surrounding
  areas;
• Maintaining Green Space for the benefit of adjoining communities;
• Preserving and promoting the public health, safety and welfare in the City of Wildwood; and
• Studying traffic patterns and construction traffic keeping in mind the privacy and safety for neighborhoods.

The current proposal is in direct contrast to the above criteria that made Wildwood what it is today.

**We oppose this proposal for the following reasons:**

• The project proposal results in ultra-high density;
• 3+ story buildings are not visually compatible with the adjacent developments;
• In lieu of green space, this proposal is 10 buildings, asphalt and a swimming pool on 4.31 acres;
• When normalcy returns, a follow-up traffic study needs to be taken during periods of high traffic on Generations Drive, New College Avenue, Turkey Track Road and the intersection of State Route 109; and
• Normal traffic in addition to construction traffic is intrusive to the privacy and safety of the existing community.
• This proposed development does not complement the existing community that includes the 55+ Residential Community, the Wildwood Family YMCA, and the St. Louis Community College.

We thank you for the opportunity to voice our opinion. We hope this Council will reject this re-zoning request and work with the Wildwood Ward One residents to pursue a different option for this parcel of land which will enhance preservation of our green spaces instead of high density residential development.
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<tr>
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<th>Printed Name</th>
<th>Signature</th>
<th>Address Wildwood 63040</th>
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<td>Lenore Dean</td>
<td>Lenore Dean</td>
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<td>William Dean</td>
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<td>Lucille Legner</td>
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<td>John Sim</td>
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<td>Mildred Berin</td>
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Page 1 of 10
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| 5/15/20 | Susan Duttsmon  
Art Rink | [Signature]     | 118 Meadows of Wildwood Blvd               |
<p>| 5/15/20 | Shirley Guffy      | Shirley Guffy   | 123 Meadows of Wildwood Blvd              |
| 5/15/20 | Chloe Kienzberger  | [Signature]    | 126 Meadows of Wildwood Blvd              |
| 5/15/20 | Maxine Eisen       | Maxine Eisen    | 130 Meadows of Wildwood Blvd              |
| 5/15/20 | Irene Warner       | Irene Warner    | 261 Meadows of Wildwood Blvd              |
| 5/15/20 | Gloria Morrison    | Gloria Morrison | 253 Meadows of Wildwood Blvd              |
| 5/15/20 | Bill &amp; Jane Schmide | [Signature] | 110 Meadows of Wildwood Blvd              |
| 5/20   | Art &amp; Marilyn Michalek | [Signature] | 249 Meadows of Wildwood Blvd              |
| 5/20   | Ralph &amp; Barb Asdell | [Signature]   | 245 Meadows of Wildwood Blvd              |
| 5/4    | Alice Agee         | Alice Agee      | 265 Meadows of Wildwood Blvd              |</p>
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<td>Kathleen C. Baniak</td>
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Meadows of Wildwood Citizens in Opposition to
P.Z. 4-20 ERC Multiple Family Development Change in
Zoning from NU Non-Urban Residence to the C-8
Planned Commercial District

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<td>Mark Liberatore</td>
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Page 9 of 10
Meadows of Wildwood Citizens in Opposition to P.Z. 4-20 ERC Multiple Family Development Change in Zoning from NU Non-Urban Residence to the C-8 Planned Commercial District

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<tr>
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<td>Hal Schott</td>
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<td>Robert Weite</td>
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<td>Barry Rinderknecht</td>
<td>Barry Rinderknecht</td>
<td>161 Meadows Wildwood Blvd</td>
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Page 10 of 10
PETITION

before the

CITY OF WILDWOOD'S
PLANNING AND ZONING COMMISSION
FOR THE PURPOSE OF HEARING REQUESTS
FOR ONE OR A COMBINATION OF THE FOLLOWING:
(PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)

- Change in Zoning
- Conditional Use Permit
- Approval of a Planned District or other special procedure (C-8/M-3/PRD)

APPLICANT/OWNER INFORMATION

Applicant's Name: Mr. Rob Coleman - CEO, ERC
Mailing Address: 5102 South Pinnacle Hills Parkway
                    Rogers Arkansas, 72758
Telephone Number, with Area Code: (479)478-5103
Fax Number, with Area Code: 
E-Mail Address: rabc@erc.com

Interest in Property (Owner or Owner Under Contract):
Owner Under Contract

If owner under contract, please attach a copy of the contract.

Owner's Name (if different than applicant):
Junior College District of St. Louis
Address: 2665 Highway 109
         Wildwood, MO 63040
Telephone Number, with Area Code: 

Planning Tomorrow Today
Page 1 of 3
SITE INFORMATION
Postal Address of the Petitioned Property(ies):
2665 Highway 109
Wildwood, MC 63040
Locator Number(s) of the petitioned Property(ies):
24V130913

Total Acreage of the Site to the Nearest Tenth of an Acre:
4.312 Acres
Current Zoning District Designation: NU
Proposed Zoning District Designation: C8
Proposed Planned District or Special Procedure: C8

Current Use of Petitioned Site:
Undeveloped

Proposed Use of Site:
Multi-Family Residential Development
120 Units

Proposed Title of Project: ERC Multi-Family Development
Proposed Development Schedule (include approximate date of start and completion of the project):
Fall 2020 Start
Complete

CONSULTANT INFORMATION
Engineer's/Architect's Name: Stock & Associates Consulting Engineers, Inc.
Address: 257 Chesterfield Business Parkway
St. Louis, MO 63005
Telephone Number, with area code: (636) 530-9100
Fax Number, with area code: (636) 530-9130
E-Mail Address: george.stock@stockassoc.com

Soil Scientist/Forester's Name: SCI Engineering Inc. - Mr. Timothy Barrett
Address: 130 Point West Blvd.
St. Charles, MO 63301
Telephone Number, with area code: (636) 949-8200
Fax Number, with area code: (314) 595-3641
E-Mail Address: tbarrett@sciengineering.com
ACKNOWLEDGEMENT INFORMATION

The petitioner(s) state(s) they (he) (she) will comply with all the requirements of the city of Wildwood with regard to the procedures relating to its administration of land use and development controls within its boundaries, including the payment of all applicable fees.

The petitioner(s) further represent(s) and agree(s) that they (he) (she) has (have) not made any arrangement to pay any commission, gratuity, or consideration, directly or indirectly, to any official, employee, or appointee of the City of Wildwood with respect to this application.

The petitioner(s) hereby certify(ies) that (indicate one):
( X ) I (we) have a legal interest in the hereinabove described property.
(    ) I am (we are) the duly appointed agent of the petitioner(s) and that all information given and represented on this application is an accurate and true statement of fact. Any misrepresentation of information on this application or accompanying information shall constitute grounds for the City of Wildwood, Missouri, to terminate review of this petition and return all materials, minus any fees, associated with its review up to and through that point.

SIGNATURE: 

NAME (PRINTED): Mr. Rob Coleman
ADDRESS: 5232 South Pinnacle Hills Parkway
Rogers Arkansas, 72778

TELEPHONE NUMBER: (479) 478-5103

[PLEASE NOTE: THE ABOVE NAMED PERSON SHALL RECEIVE ALL OFFICIAL NOTICES REGARDING THIS REQUEST, INCLUDING THE PUBLIC HEARING NOTICE.]

SUBSCRIBED AND SWORN BEFORE ME THIS
2ND DAY OF MARCH, 2023
SIGNED:
(NOTARY PUBLIC)

STATE OF MISSOURI
NOTARY PUBLIC
CARLA GABBAARD
8/19/2025
MY COMMISSION EXPIRES

FOR OFFICE USE ONLY

1ST SUBMITTAL DATE: RECEIVED BY:
PRELIMINARY DEVELOPMENT PLAN: YES NO
PACKET COMPLETE: YES NO

2ND SUBMITTAL DATE:
PACKET COMPLETE: YES NO

3RD SUBMITTAL DATE:
PACKET COMPLETE: YES NO

4TH SUBMITTAL DATE:
PACKET COMPLETE: YES NO
Department of Planning

WILDWOOD

Checklist for Zoning Petition Application

www.cityofwildwood.com  (636) 458-0440  16860 Main Street, Wildwood, MO 63040

- Application form with original signatures and notary seal.
- Filing fee. **$500.00**
- Metes and bounds legal description, with acreage noted. If the site is a portion of a legal lot, a separate legal description will be required for both the legal lot and the area of the request. The description should be typed, single spaced, on the attached form.
- Outboundary survey providing the following information:
  - Metes and bounds correspond exactly with legal description.
  - North arrow.
  - Scale of 1” = 100’ or less.
  - Locator map.
  - Survey is signed and sealed by a registered engineer or land surveyor.
- Three copies of a preliminary development plan, with the following information:
  - All proposed uses and structures.
  - The parcel locator number(s).
  - All service districts in which the project is located, including utilities, school, and fire district.
  - Ingress and egress to the site, including adjacent streets.
  - Direction and distance of the nearest major intersection.
  - Label all adjacent roadways, including right-of-way and pavement width.
- Three cross-section profiles through the site, showing preliminary building form and existing and proposed grade.
- Sufficient additional information to indicate compliance with the City’s Subdivision Code, Zoning Code, Telecommunications Ordinance (as applicable), and Town Center Design and Architectural requirements (as applicable). This information will include:
  - Aerial photograph.
  - Existing and proposed contours at intervals of five (5) feet or less, referred to mean sea level.
- Street cross-section, if new street is proposed.
- A geotechnical report.  
- Sanitary sewer and stormwater information.
- Density calculations (for residential development).
- Parking calculations.
- Sign location and detail with dimensions, if proposed.
- A copy of proposed subdivision indentures, if applicable, or a statement on the plan that a copy of such an agreement will be provided prior to approval of a record plat.
- If requesting a Planned Residential Development Overlay District (PRD), a written statement addressing the items requested on page 146 of the Zoning Code.
- Comments/conceptual approval letters from the fire district, MoDOT, St. Louis County Department of Highways and Traffic, Spirit of St. Louis Airport, and MSD, as applicable.
- A traffic study.

Three copies of a Tree Preservation Plan and Landscape Plan, meeting the requirements of Chapter 410 and the City of Wildwood Tree Manual.

Three copies of a Natural Resource Protection Plan, meeting the requirements of Section 1005.200 of the City's Subdivision Code. (Not applicable in the Town Center.)
PURCHASE AND SALE AGREEMENT

THIS PURCHASE AND SALE AGREEMENT (this "Agreement") is made effective as of September 14, 2019 (the "Effective Date"), by and between Community College District of St Louis, (collectively, "Seller"), and ERC HOLDINGS, LLC, an Arkansas limited liability company, and/or its assigns ("Buyer").

RECITALS

WHEREAS, Seller is the owner of the Property (as hereinafter defined) and desires to sell the Property to Buyer; and

WHEREAS, Buyer desires to purchase the Property from Seller on the terms and conditions hereinafter set forth.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing recitals, the mutual covenants and agreements set forth herein and other good and valuable consideration the receipt and sufficiency of which are hereby acknowledged, Seller and Buyer hereby agree as follows:

1. Purchase and Sale. Seller agrees to sell and convey to Buyer, and Buyer agrees to purchase from Seller, upon the terms and conditions herein set forth, all of Seller’s right title and interest in and to the following (collectively, the "Property"): (a) that certain real property, containing approximately 4.87 acres of land, to be verified by the Survey (as hereinafter defined), situated in the County of St Louis, City of Wildwood, State of Missouri, as more particularly described on Exhibit A attached hereto and incorporated herein by this reference (the "Land"); (b) all easements appurtenant to the Land; (c) all mineral interests associated with the Land; (d) all water rights associated with the Land; and (e) all other rights, privileges and appurtenances pertaining to any of the foregoing, including, without limitation, all of Seller’s right, title and interest in and to all rights-of-way, open or proposed streets, alleys, easements and strips or gorges of land adjacent thereto.

2. Purchase Price/Payment Terms. The purchase price for the Property shall be (the "Purchase Price"). The Purchase Price shall be paid as follows:

(a) On or before the date that is ten (10) days after the Effective Date, Buyer shall deposit with Old Republic Title, 9645 Clayton Road, 2nd Floor, Ladue, Missouri 63124, Attn: Steven Bolla (the "Title Company"), an amount equal to Twenty-Five Thousand and NO/100 Dollars ($25,000.00) (the "Deposit"), as earnest money and part payment of the Purchase Price for the Property. Upon receipt of the Deposit, the Title Company shall place the Deposit in an interest-bearing account, with all interest earned thereon accruing to Buyer, except in the event of default by Buyer that results in a termination of this Agreement. The Deposit and any interest accrued thereon shall be credited against the Purchase Price at Closing.

(b) The balance of the Purchase Price (after application of the Deposit and any interest accrued thereon), as adjusted for prorations and apportionments pursuant to this Agreement, shall be paid in immediately available funds at the Closing (as hereinafter defined).

3. Buyer Obligations. Seller hereby acknowledges and agrees that the matters set forth below (the "Buyer Obligations") are the sole responsibility and obligation of Buyer. Buyer shall complete all the Buyer Obligations, at Buyer’s sole cost and expense, as soon as reasonably possible following the Effective Date of this Agreement. Seller shall reasonably cooperate with Buyer, at no cost to Seller, in connection
with Buyer's completion of the Buyer Obligations. The "Effective Date" of this Agreement shall be the date that Buyer and Seller have both executed this Agreement.

(a) MDNR Approvals. Intentionally Omitted.

(b) Army Corps of Engineers Approvals. Intentionally Omitted.

(c) Title Commitment. Within fifteen (15) days after the Effective Date of this Agreement, Buyer shall obtain a current commitment for an ALTA 2006 extended coverage owner's title insurance policy (the "Commitment") (and copies of any documents referenced therein creating or evidencing any exceptions to Title noted therein) from the Title Company with respect to the Property, which will name Buyer as the proposed insured party and will reflect an insured amount equal to the Purchase Price.

(d) Survey. Within sixty (60) days after the Effective Date of this Agreement, Buyer shall, at Buyer's sole cost and expense, obtain a new ALTA/ACSM survey with topo (the "Survey") of the Property made by a duly licensed surveyor in the State of Missouri and certified to Buyer, the Title Company and any other party designated by Buyer, which Survey be in a form reasonably acceptable to Buyer.

(e) Property Documents. Intentionally Omitted.

4. Title Matters.

(a) Title and Survey Review. Buyer shall have until the date that is fifteen (15) days after Buyer's receipt of the Survey, to notify Seller in writing of any exceptions to title noted in the Commitment or matters shown on the Survey of which Buyer disapproves, in its sole and absolute discretion (each, a "Disapproved Title Matter"). Other than Mandatory Cures (as hereinafter defined), all title exceptions or survey matters not timely disapproved by Buyer in writing shall be deemed approved and shall be hereinafter referred to as "Permitted Exceptions." In the event Buyer gives Seller timely notice of a Disapproved Title Matter, Seller shall give written notice to Buyer within five (5) days after receipt of Buyer's notice thereof (the "Seller's Notice Period") stating whether Seller elects to cause the cure or removal of such Disapproved Title Matter (the "Seller's Notice"). If Seller fails to provide Buyer with the Seller's Notice prior to the expiration of the Seller's Notice Period (in which case, Seller will be deemed to have elected not to cure any Disapproved Title Matters), or if Seller notifies Buyer that it elects not to cause the cure or removal of a Disapproved Title Matter, then Buyer shall, within five (5) days after the expiration of the Seller's Notice Period, either waive its objections to the Disapproved Title Matter or terminate this Agreement by providing Seller written notice thereof. If Buyer terminates this Agreement, the Deposit, together with any accrued interest thereon, shall be returned to Buyer and neither party shall have any further obligations hereunder except as otherwise expressly specified herein. If Buyer does not terminate this Agreement as provided above or in Section 4(a) below, then Buyer shall be deemed satisfied with the state of Seller's title and the applicable Disapproved Title Matters shall be deemed Permitted Exceptions. If any update of the Commitment or the Survey delivered to Buyer after the expiration of the Inspection Period and prior to the Closing discloses new exceptions, matters or conditions (other than Mandatory Cures), then Buyer shall have ten (10) days to review such exceptions, matters or conditions and to disapprove in writing any such exceptions, matters or conditions, which are not acceptable to Buyer, in Buyer's sole and absolute discretion. In such event the procedure set forth above for Disapproved Title Matters shall apply to such new exceptions, matters or conditions of which Buyer disapproves. Seller will have no obligation to cure any Disapproved Matters other than the Mandatory Cures. Notwithstanding anything in this Agreement to the contrary, Seller shall cause to be removed as exceptions to title from the Commitment as/or the Survey prior to Closing (i) all mortgages or deeds of trust, monetary liens and judgments (including without limitation, mechanics' liens); and (ii) all encumbrances and exceptions
created by Seller after the Effective Date without the prior written consent of the Buyer (the "Mandatory Cures").

(b) **Condition of Title at Closing.** Subject to the payment of the Purchase Price as hereinabove provided, at the Closing, Seller shall execute and deliver a Special Warranty Deed (the "Deed") to Buyer, conveying fee simple title to the Real Property to Buyer free and clear of all liens and encumbrances, except the following: (i) taxes and assessments for the year of Closing; and (ii) the Permitted Exceptions.

5. **Inspection of Property; Site Plan Approval.**

(a) **Inspection Period.** Unless extended by a written agreement between Buyer and Seller, Buyer shall have until 11:59 p.m. Central Time on the date that is sixty (60) days after the date that Buyer has received the Survey (the "Inspection Period") to review, inspect and approve, in its sole and absolute discretion, any and all matters relevant to the Property and Buyer’s purchase and use of the Property, including, without limitation, the following: (a) suitability of the Property for Buyer’s intended uses; (b) environmental conditions; (c) zoning; (d) governmental approval(s); (e) utilities and other necessary services; (f) physical condition; and (g) any matters related to the Property Documents. During the Inspection Period, Buyer and Buyer’s representatives shall have the right to enter upon the Property to conduct any tests of the Property that Buyer deems necessary, including, without limitation, physical inspections, soils tests, environmental tests and engineering studies. Should Buyer materially disturb the Property during the above inspections, Buyer shall return the property to as near its original condition as reasonably possible.

At any time prior to the expiration of the Inspection Period, Buyer shall have the option, in its sole and absolute discretion, for any reason or for no reason, to terminate this Agreement by providing written notice thereof to Seller. Upon such termination, Seller shall cause the Title Company to return the Deposit to Buyer, together with any accrued interest thereon, and neither party shall have any further obligations hereunder except as otherwise expressly specified herein. If Buyer fails to provide written notice of its termination of this Agreement pursuant to this Section 5 prior to the expiration of the Inspection Period, Buyer shall be deemed to have waived its rights to terminate this Agreement pursuant to this Section 5. The parties hereby expressly acknowledge that any entry upon the Property by Buyer or Buyer’s representatives shall not, unless arising out of Seller’s or Seller’s agents’ or employees’ negligence or willful misconduct, form the basis of any claim for personal injury, liability, or harm to any person and Buyer shall and hereby does agree to defend, save, hold harmless and indemnify Seller from and against any injury, liability or cause of action that arises from or relates to Buyer’s and Buyer’s representatives’ entry upon the Property including, without limitation, any claims for wrongful death, personal injury, or other harm that may result to Buyer or any person acting in connection with Buyer in such entry. This Section 5 shall survive Closing (and shall not merge with title), termination or expiration of this Agreement.

(b) **Site Plan and Zoning Approval Period.** Unless extended by a written agreement between Buyer and Seller, Buyer shall have until 11:59 p.m. Central Time on the date that is one hundred eighty (180) days after the expiration of the Inspection Period (the "Site Plan Approval Period") to obtain approval from the City of Wildwood, Missouri (the "City") for the development of the Property in accordance with Buyer’s plans and specifications, including without limitation, zoning (including, any required re-zoning, variances, or conditional use permits), density permits, and site plans ("Site Plan Approval"), which Site Plan Approval (including zoning) must be acceptable to Buyer in its sole and absolute discretion. At any time prior to the expiration of the Site Plan Approval Period, Buyer shall have the option, in its sole and absolute discretion, to terminate this Agreement by providing written notice thereof to Seller; if Buyer is unable to obtain Site Plan Approval acceptable to Buyer in its sole and absolute discretion or if any terms, conditions fees, processes or requirements imposed by the City in connection with Site Plan Approval are unacceptable to Buyer in its sole and absolute discretion. Upon such termination, Seller shall cause the Title Company to return the Deposit to Buyer, together with any accrued
interest thereon, and neither party shall have any further obligations hereunder except as otherwise expressly specified herein. If Buyer fails to provide written notice of its termination of this Agreement pursuant to this Section 5(b) prior to the expiration of the Site Plan Approval Period, Buyer shall be deemed to have waived its rights to terminate this Agreement pursuant to this Section 5(b). Notwithstanding the foregoing, Buyer, upon written notice to Seller given at any time prior to the expiration of the Site Plan Approval Period, may elect to extend the Site Plan Approval Period for up to an additional ninety (90) days.

6. Conditions Precedent to Obligations of Buyer. The obligation of Buyer to consummate the transactions contemplated by this Agreement is subject to the satisfaction of the following conditions precedent:

(a) Seller shall have performed or observed all of its obligations under this Agreement, including, without limitation, completion of all the Seller Obligations.

(b) The representations and warranties of Seller contained in this Agreement shall be true, correct and accurate on the Closing Date in all material respects.

(c) Seller shall have delivered all documents and instruments required to be delivered by Seller pursuant to the provisions of this Agreement.

(d) The Title Company shall have irrevocably committed to issue the title policy, subject only to the Permitted Exceptions.

(e) There shall have been no material change to the income, operation, physical condition or prospects of the Property.

(f) The title to the Property shall be conveyed to Buyer in the form provided by Section 4(b) above.

(g) Buyer shall be satisfied that no person has any written or oral right to remain in possession of any portion of the Property after the Closing Date.

(h) Buyer shall have obtained Site Plan Approval from the City.

(i) Buyer shall have obtained all necessary approvals or permits from the Missouri Department of Natural Resources, and any other similar governmental authorities having jurisdiction over the Property, for the development of the Property in accordance with Buyer's plans and specifications, including, without limitation, any approvals or permits required due to the presence or alleged presence of any endangered species on the Property, if needed.

If any of the foregoing conditions are not satisfied on the Closing Date, Buyer shall have the right (in addition to any right Buyer may have under Section 11 below in the event that the non-satisfaction of a condition is as a result of a breach or default by Seller), to (i) terminate this Agreement by written notice given to Seller, whereupon Seller shall cause the Title Company to return the Deposit to Buyer, together with any accrued interest thereon, and neither party shall have any further obligations hereunder except as otherwise expressly specified herein, or (ii) at Buyer's sole option, waive any unsatisfied condition and consummate the transactions contemplated hereby.

7. Closing.

(a) Closing Date. Closing of the purchase and sale of the Property (the "Closing") shall occur at 10:00 a.m. Central Time (or such other time as Buyer and Seller may agree), on the date that is ten (10) business days after the earlier of (i) the expiration of the Site Plan Approval Period or (ii) the
date on which Buyer receives Site Plan Approval (including zoning) acceptable to Buyer in its sole and absolute discretion, but not later than June 30, 2020 (the "Closing Date"), at the offices of the Title Company. Possession of the Property shall be delivered to Buyer at Closing. At the option of either party, the closing documents may be executed in advance and deposited with the Title Company, together with all other required deliveries, as so to avoid the necessity for a Closing at which all parties are present.

(b) Seller’s Closing Deliveries. At the Closing, Seller shall deliver or cause to be delivered to the Title Company the following:

(i) Deed. The Deed, which shall convey to Buyer all of Seller’s right, title and interest in and to the Property, in the condition described in Section 4(b) above, subject to the Deed Restriction, fully executed and acknowledged by Seller, in the form acceptable to Buyer in its reasonable discretion.

(ii) Update Certificate. A certificate signed by Seller confirming that the representations and warranties contained in Section 10(a) of this Agreement are true, accurate and complete as of the Closing Date.

(iii) Non-Foreign Status Affidavit. A non-foreign status affidavit as required by Section 1445 of the Internal Revenue Code, fully executed and acknowledged (if required) by Seller.

(iv) Evidence of Authority. Documentation to establish to the Title Company’s reasonable satisfaction the due authorization of Seller’s sale of the Property and Seller’s delivery of the documents required to be delivered by Seller pursuant to this Agreement (including, but not limited to, the organizational documents of Seller, as they may have been amended from time to time, resolutions of Seller and incumbency certificates of Seller).

(v) Property Files. (1) To the extent in the possession of Seller, all original (or, if unavailable, copies of) certificates, licenses, permits, authorizations and approvals issued for or with respect to the Property by governmental and quasi-governmental authorities having jurisdiction; and (2) all of the files relating to the Property.

(vi) Title Company Requirements. Such fully executed title affidavits or certifications and other documentation required to satisfy the requirements set forth on Schedule B-1 of the Commitment from Seller to the Title Company, to the extent required by the Title Company and in a form reasonably required by the Title Company, including (where applicable) a so-called “gap undertaking” covering title matters that may arise between the latest date for which record title information is available and the Closing Date, so that the Title Company can provide title coverage to Buyer as of the Closing Date in accordance with the provisions of this Agreement.

(vii) Other Documents. Closing statements, any documents required to close the transaction contemplated by this Agreement in accordance with its terms under the laws of the State of Missouri and the locality in which the property is located and such other documents as may be agreed upon by Seller and Buyer to close the transaction contemplated by this Agreement, or as may be required by Title Company to close the transaction contemplated by this Agreement, fully executed and acknowledged (if required) by Seller.

(c) Buyer Closing Deliveries. At the Closing, Buyer shall deliver or cause to be delivered to the Title Company the following:

(i) Balance of Purchase Price. The balance of the Purchase Price, as provided by Section 2(b) above, plus any other amounts required to be paid by Buyer at Closing.
(ii) **Evidence of Authority.** Documentation to establish to the Title Company's reasonable satisfaction the due authorization of Buyer's acquisition of the Property and Buyer's delivery of the documents required to be delivered by Buyer pursuant to this Agreement (including, but not limited to, the organizational documents of Buyer, as they may have been amended from time to time, resolutions of Buyer and incumbency certificates of Buyer).

(iii) **Other Documents.** Closing statements, any documents required to close the transaction contemplated by this Agreement in accordance with its terms under the laws of the State of Missouri and the locality in which the property is located and such other documents as may be agreed upon by Seller and Buyer to close the transaction contemplated by this Agreement, or as may be required by Title Company to close the transaction contemplated by this Agreement, fully executed and acknowledged (if required) by Buyer.

(d) **Delivery of Deed.** Effective upon delivery of the Deed, possession and risk of loss to the Property shall pass from Seller to Buyer.

(e) **Closing Costs.** The costs of the Closing shall be paid as follows:

(i) Buyer shall pay the costs for Buyer's owner's title insurance policy (including the extended coverage premium to delete the standard preprinted exceptions).

(ii) Seller shall pay the costs associated with removing any monetary liens and encumbrances affecting the Property.

(iii) Buyer shall reimburse Seller for the cost of the Survey at Closing.

(iv) Buyer shall pay for all recording costs relating to the Deed, and Buyer shall pay for all recording costs related to any loan documents of Buyer.

(v) The Title Company's closing and escrow fees shall be divided equally between Seller and Buyer; provided, that any fees related to preparation of Closing documents shall be paid solely by Buyer.

(vi) Any state and/or county documentary tax levied with respect to the conveyance of the Property shall be paid by Seller.

(vii) All real estate transfer taxes shall be paid by Seller.

(viii) Any other costs associated with the Closing shall be paid and allocated between the parties in accordance with the custom for similar real estate transactions occurring within the County of St. Louis, State of Missouri, as reasonably determined by the Title Company.

(viii) Each party shall pay its own counsel fees.

### 8. Prorations.

(a) **Taxes.** Any personal property taxes, if any, special taxing district assessments, if any, and real estate taxes (collectively, "Taxes"), for the year or other applicable assessment period and/or billing period thereafter in which Closing occurs shall be prorated as of the Closing Date; provided that any special assessments levied prior to the Closing Date shall be the sole responsibility of Seller. If the rate or amount of these Taxes has not been fixed prior to the Closing Date, the adjustment shall be upon the basis of the mill levy or tax rate for the preceding year applied to the latest assessed valuation as of the Closing Date.
(b) **Association Assessments.** All charges and/or assessments of any association having authority or jurisdiction over the Property shall be prorated as of the Closing Date, and any transfer fees, status letter fees, or other fees charges by any such association related to the sale of the Property, shall be paid or charged to Seller. Seller shall be solely responsible for any special assessments imposed by any such association prior to the Closing Date.

(c) **Other Items.** Any other items which are customarily prorated in connection with the purchase and sale of properties similar to the Property shall be prorated as of the Closing Date, in accordance with the custom for similar real estate transactions occurring within the County of St. Louis, State of Missouri, as reasonably determined by the Title Company.

(d) **Final Settlement.** All prorations made pursuant to this Section 8 shall be a final settlement.

9. **Assignment.** Buyer shall have the right to assign this Agreement and all of its rights and obligations under this Agreement to any entity which controls, or is under common control with Buyer or any of the principals of Buyer, As used herein, "control" means (i) the direct or indirect ownership or control of more than fifty percent (50%) of the voting interests of an entity, or (ii) the effective power to direct the management and policies of an entity.

10. **Representations and Warranties: As-is Condition.**

(a) **Sellers Representations and Warranties.** Seller represents and warrants that the following are true and correct as of the Effective Date and shall be true and correct as of the Closing and shall survive for a period of six (6) months after the Closing Date:

(i) **To Seller's knowledge, there are no actions, suits, claims or proceedings pending or threatened against the Property or Seller that would affect the Property or this Agreement.**

(ii) **To Seller's knowledge there are no pending or threatened condemnation proceedings or litigation of any kind affecting the Property, or any part thereof.**

(iii) **Seller has no knowledge that it is in violation of any term of any agreement, instrument, judgment, decree, or any order, statute, rule or governmental regulations applicable to it, that adversely affects the Property. To Seller's knowledge, the execution, delivery and performance of, and compliance with, this Agreement by Seller will not be in conflict with or constitute a default under any term of any agreement, instrument, judgment, decree, order, statute, rule or governmental regulation applicable to Seller.**

(iv) **Seller has received no written notices from any government agency or employee, nor has Seller received any written notice from any other party with knowledge respecting environmental conditions at the Property, nor does Seller have any knowledge that: (A) the Property does not comply with any applicable governmental laws, regulations and requirements relating to environmental matters; (B) any Hazardous Materials are located on the Property or are being released into the environment, or discharged, placed or disposed of at, on or under the Property; and (C) any underground storage tanks are located on the Property or that the Property has ever been used as a landfill. The term "Hazardous Materials" shall mean any substance, material, waste, gas or particulate matter which is regulated by any local governmental authority, the State of Missouri, or the United States Government.**

(v) **Seller has not received written notice from any governmental, quasi-governmental or private agency or party requiring or demanding the correction of any condition with respect to the Property.**
(vi) The Property Documents provided to Buyer are complete, accurate and (if applicable) in full force and effect, and that there are no others.

(vii) To Seller's knowledge, no special assessments or special improvement districts that would impose special assessments on the Property are being formed or are proposed.

(viii) Seller is a political subdivision of the State of Missouri duly organized, validly existing and in good standing under the laws of the State of Missouri and has the full right, power and authority and has obtained any and all consents required to enter into this Agreement and consummate or cause to be consummated the purchase and sale transaction contemplated by this Agreement. This Agreement and all of the documents to be delivered by Seller at Closing have been and will be properly executed and duly authorized by all requisite action on the part of Seller in accordance with Seller's organizational documents. This Agreement constitutes the legal, valid and binding obligations of the Seller, enforceable against Seller in accordance with its terms.

(ix) Seller has not (A) made an assignment for the benefit of creditors; (B) filed or, to Seller's knowledge, had filed against it any petition in bankruptcy; (C) suffered the appointment of a receiver to take possession of all or substantially all of its assets; or (D) suffered the attachment or other judicial seizure of, or substantially all, of its assets.

(x) Seller has not given or granted any third party any unrecorded right or option to acquire all or any portion of the Property.

(xi) Seller is not a "foreign person," as that term is used and defined in the Internal Revenue Code, Section 1445, as amended.

(xii) There are no other contracts, agreement or the like entered into with or held by any person or entity with respect to the Property that will survive the Closing.

(xiii) There are no leasehold or possessory interests held by any person or entity with respect to the Property.

As used in this Agreement, the phrase "Seller's knowledge", or words of similar import, shall mean the actual knowledge of Paul W. Zinek, as Vice Chancellor of Seller. All of the foregoing representations and warranties of Seller shall not be deemed merged into any instrument of conveyance delivered at Closing and will survive Closing for a period of six (6) months after the Closing Date.

(b) Buyer's Representations and Warranties. Buyer represents and warrants that the following are true and correct as of the Effective Date and shall be true and correct as of the Closing, and shall survive for a period of six (6) months after the Closing Date:

(i) Buyer is a limited liability company duly organized, validly existing and in good standing under the laws of the State of Arkansas and has the full right, power and authority and has obtained any and all consents required to enter into this Agreement and consummate or cause to be consummated the purchase and sale transaction contemplated by this Agreement. This Agreement and all of the documents to be delivered by Buyer at Closing have been and will be properly executed and duly authorized by all requisite action on the part of Buyer in accordance with Buyer's organizational documents. This Agreement constitutes the legal, valid and binding obligations of the Buyer, enforceable against Buyer in accordance with its terms.

(ii) To Buyer's knowledge, there are no actions, suits or proceedings pending or threatened against Buyer that would affect this Agreement.
As used in this Agreement, the phrase "Buyer's knowledge", or words of similar import, shall mean the current actual knowledge of Rob Coleman, as President/CEO of Buyer. All of the foregoing representations and warranties of Buyer shall not be deemed merged into any instrument of conveyance delivered at Closing and will survive Closing for a period of six (6) months after the Closing Date.

11. Default: Remedies.

(a) Time is of the essence hereof, and if any payment or condition hereof is not made, tendered or performed by either Seller or Buyer as provided in this Agreement, then this Agreement, at the option of the party that is not in default, may be terminated by such party as provided herein. In the event of any default by Seller that is not cured within ten (10) days after written notice from Buyer, Buyer may: (i) elect to treat this Agreement as terminated, by providing written notice thereof to Seller, upon which termination the Deposit, and all interest accrued thereon, shall be returned to Buyer; or (ii) elect to treat this Agreement as being in full force and effect, and Buyer shall thereupon have the right of specific performance. In the event of any default by Buyer that is not cured within ten (10) days after written notice from Seller, Seller may elect to treat this Agreement as terminated, by providing written notice thereof to Buyer, upon which termination the Deposit (to the extent received by the Title Company), together with interest accrued thereon, shall be forfeited by Buyer and retained by Seller as liquidated damages and as SELLER'S SOLE AND EXCLUSIVE remedy for Buyer's breach of this Agreement. Seller expressly waives the remedies of specific performance and any additional damages. It is acknowledged and agreed to by the parties hereto that due to the difficulty, inconvenience and uncertainty of ascertaining actual damages for such breach by Buyer that retention of the Deposit, together with interest accrued thereon, by Seller as liquidated damages is a reasonable and fair estimate of damages. The terms hereof shall not be deemed to preclude or limit those remedies that may be expressly set forth elsewhere in this Agreement.

(b) The limitations on the parties' remedies set forth in Section 11(a) above, will not be deemed to prohibit either party from (i) seeking indemnification from the other for any matter with respect to which such other party has agreed to provide indemnification in this Agreement or from seeking damages from such other party in the event it fails or refuses to provide such indemnification; (ii) subject to Section 10(a) and Section 10(b) above, seeking damages incurred during the period of time after Closing that a representation or warranty given as of the Closing Date by the other party hereunder survives Closing; (iii) seeking damages or such equitable relief as may be available for the other party's failure to perform after Closing hereunder any obligation hereunder which expressly survives Closing; or (iv) seeking damages or such equitable relief as may be available for the other party's failure to perform after any termination of this Agreement any obligation hereunder which expressly survives such termination; provided, however, that in no event whatsoever will either party be entitled to recover from the other any punitive, consequential or speculative damages in any of such events.

12. Dispute Resolution and Damages.

(a) EACH PARTY WAIVES THE RIGHT TO A JURY TRIAL IN ANY ACTION OR PROCEEDING BASED UPON OR RELATED TO ANY ASPECT OF THE PROPERTY, THE TRANSACTION CONTEMPLATED BY THIS AGREEMENT, ANY DOCUMENT EXECUTED OR DELIVERED IN CONNECTION WITH THIS TRANSACTION OR FOR ANY OTHER CLAIM RELATING TO OR BETWEEN THE PARTIES TO THIS AGREEMENT OF WHATSOEVER KIND OR NATURE, INCLUDING (WITHOUT LIMITING THE GENERALITY OF THE FOREGOING) ANY AND ALL CLAIMS ARISING FROM, RELATED TO OR IN CONNECTION WITH INJURIES SUSTAINED IN CONNECTION WITH THE PROPERTY. EACH PARTY MAKES THIS WAIVER KNOWINGLY, INTENTIONALLY, AND VOLUNTARILY AND EACH PARTY ACKNOWLEDGES THAT NO ONE HAS MADE ANY REPRESENTATION OF FACT TO INDUCE SUCH PARTY TO MAKE THIS JURY TRIAL WAIVER OR IN ANY MANNER OR IN ANY WAY TO MODIFY OR NULLIFY ITS EFFECT. EACH PARTY FURTHER ACKNOWLEDGES HAVING HAD THE OPPORTUNITY TO BE
REPRESENTED BY INDEPENDENT LEGAL COUNSEL IN CONNECTION WITH THIS AGREEMENT AND IN THE MAKING OF THIS WAIVER, SELECTED BY SUCH PARTY S OWN FREE WILL, AND THAT EACH PARTY HAS HAD THE OPPORTUNITY TO DISCUSS THIS WAIVER WITH SUCH COUNSEL.

(b) It is expressly agreed and understood that all waivers, releases and limitations on damages in this Agreement shall survive the Closing, for a period of six (6) months after the Closing Date, (and shall not merge with title), termination or expiration of this Agreement and shall be binding upon the parties, their successors and assigns.


(a) Broker Disclosure. Buyer and Seller acknowledge and agree that Buyer shall be under no obligation to pay a commission to any brokers in connection with its acquisition of the Property, and Seller hereby protects, defends, indemnifies and holds Buyer and the Property harmless from and against any and all commissions owing to any brokers in connection therewith. Buyer is represented by Matt Bukshaiter, Vice Chairman of CBRE and Buyer’s agent will be entitled to the agreed upon commission with listing agent for the Seller, Ed Holthaus Realty LLC, pursuant to a separate agreement between Buyer’s agent and Seller’s agent. This Section 13(a) shall survive the termination of this Agreement, the closing of this transaction and the recordation of the Deed conveying title to the Property.

(b) Approval and Binding Effect. This Agreement shall become effective only after it has been mutually executed by both parties. Upon such mutual execution, this Agreement shall become a binding contract between Seller and Buyer and shall inure to the benefit of the heirs, representatives, successors and permitted assigns of said parties.

(c) Captions and Gender. The captions used herein are merely for easy reference and have no effect on this Agreement or the terms and conditions herein contained. As used herein, the singular shall include the plural and the masculine shall include the feminine and neuter genders as appropriate.

(d) Governing Law. This Agreement shall be construed and enforced in accordance with the laws of the State of Missouri. Seller hereby irrevocably submits to the jurisdiction of any Missouri state court or Missouri federal court in any action or proceeding arising out of or relating to this Agreement, and the parties hereby irrevocably agree that all claims in respect of such action or proceeding may be heard and determined only in such Missouri courts.

(e) Time of Essence. Seller and Buyer agree that time is of the essence in the performance of each and every provision of this Agreement.

(f) Entire Agreement. This Agreement contains the entire agreement between the Parties with respect to the subject matter hereof. In entering into this Agreement, neither party has relied upon any promise, representation or assurance of any nature except as specifically provided herein.

(g) Computation of Time. Unless otherwise expressly indicated in this Agreement, in computing any period of time herein, the date of the act or event from which the designated period of time begins to run shall not be included. The last day of the period so computed shall be included unless it is a Saturday, Sunday or legal holiday in the State of Missouri, in which case the period of time shall run until the end of the next day which is not a Saturday, Sunday or legal holiday in the State of Missouri.

(h) Attorney’s Fees. In the event of any litigation arising out of or in connection with this Agreement, the prevailing party shall be awarded its reasonable attorneys’ fees, costs and expenses.
(i) **Joint Preparation.** This Agreement will be deemed to have been prepared equally and jointly by the parties, and the normal rule of construction that any ambiguities be resolved against the drafting party shall not apply to the interpretation of this Agreement.

(j) **Escrow Instructions/Closing Instructions.** Seller and Buyer may execute and deliver to Title Company any additional or supplementary instructions (so-called "escrow instructions" or "closing instructions") as they may deem necessary or convenient to implement the terms of this Agreement and close the transactions contemplated hereby; provided such instructions are consistent with and merely supplement this Agreement and shall not in any way modify, amend or supersede this Agreement.

(k) **Return of Deposit.** If Buyer timely terminates this Agreement pursuant to any right of termination granted to Buyer, within ten (10) business days thereafter, Seller shall execute and deliver to the Title Company such documents as may be required by the Title Company in order for the Title Company to return the Deposit to Buyer.

(l) **Counterparts: Electronic Signatures.** This Agreement may be executed in a number of identical counterparts. Electronic signatures (i.e., signatures delivered via email or facsimile) shall be treated as if they were original signatures.

14. **Additional Provisions.**

(a) **Property Restrictions.** Except in connection with the Seller Obligations, Seller shall not, without the prior written consent of Buyer: (i) grant, license or lease any interest in the Property or pledge or subject to lien or other encumbrance any interest in the Property; (ii) agree to or permit to be placed on or with respect to the Property any restrictions, covenants, conditions, easements, licenses, permits, encroachments, leases or any similar matter; (iii) seek or consent to any zoning, platting, replatting, subdivision or other change affecting the use of the Property; (iv) construct any improvements on the Property or extend or add to any existing improvements; or (v) take any other action which would render, or which reasonably may be expected to render, any covenant, representation or warranty made by Seller in this Agreement untrue in any material adverse manner at any time prior to the Closing. At all times prior to Closing, Seller shall promptly notify Buyer in writing of (A) any material defaults under any contracts or any other agreements in any way relating to the Property, (B) any violations of any laws, rules, regulations, ordinances, covenants or restrictions, (C) any litigation, arbitration, or any other significant action concerning or affecting the Property or the use of the Property that is instituted or threatened after the date of this Agreement, (D) any emergency or other material change in the normal course of the operation of the Property (including any environmental release or other contamination at, under, on or from the Property, the existence of any material dispute with any person or entity, any tax claims, governmental or third party complaints, investigations or hearings or communications indicating that the same may be contemplated), or (E) any other matter which could reasonably be expected to adversely affect the Property in a material manner.

(b) **Inspection of the Property.** At all times prior to Closing, Seller shall permit Buyer and such persons as Buyer may designate to undertake such investigations and inspections of the Property as Buyer may desire, as more particularly set forth in Section 5 hereof, and shall furnish to Buyer all subject Property information, if available, respecting the Property in Seller’s possession as Buyer may request.

(c) **Casualty.** If, at any time after the Effective Date and on or before the Closing Date, all or any portion of the Property is damaged or destroyed by fire, flood, natural elements or other causes, then Buyer shall have the right to elect: (i) to terminate this Agreement by written notice to Seller given at or prior to the Closing, whereupon the Title Company and Seller shall immediately return the Deposit and all interest accrued thereon to Buyer and, upon Buyer’s receipt thereof, neither party shall have any further rights against, or obligations to, the other under this Agreement, except as otherwise expressly specified herein, or (ii) to close the purchase of the Property in its condition on the Closing Date and receive a credit against the Purchase Price in the amount of any insurance deductible, and take an assignment of the

\[\text{Page 11}\]
insurance proceeds, in which event Seller shall assign such insurance proceeds to the Buyer and remit to Buyer any insurance proceeds already received by Seller.

(d) **Condemnation.** If, at any time after the Effective Date and on or before the Closing Date, all or any portion of the Property is taken (or is the subject of a pending or threatened taking which has not yet been consummated) by one or more condemnation or eminent domain proceedings ("Condemnation"), then Buyer shall have the right to elect: (i) to terminate this Agreement by written notice to Seller given at or prior to the Closing, whereupon the Title Company and Seller shall immediately return the Deposit and all interest accrued thereon to Buyer and, upon Buyer's receipt thereof, neither party shall have any further rights against, or obligations to, the other under this Agreement, except as otherwise expressly specified herein, or (ii) to close the purchase of the Property; provided, that, at the Closing, Seller shall pay to Buyer the amount of any award for or other proceeds on account of such Condemnation which have been actually paid to Seller prior to the Closing Date as a result of such Condemnation and, to the extent such award or proceeds have not been paid, Seller shall assign to Buyer at the Closing the rights of Seller to, and Buyer shall be entitled to receive and retain, all awards for the Condemnation of the Property or such portion thereof.

(e) **Material Adverse Change.** Notwithstanding anything contained herein to the contrary, if after expiration of the Inspection Period and prior to the Closing, a material adverse change occurs in the physical or environmental condition of the Property, then (i) if such change exists as a result of the act or omission of Seller or its employees, agents, contractors or representatives, then such event shall constitute a default by Seller and Buyer shall have the rights under Section 11 above, or (ii) if such change does not come into existence as a result of the act or omission of Seller or its employees, agents, contractors or representatives, Buyer shall have the option, in its sole and absolute discretion, to terminate this Agreement by providing written notice thereof to Seller, in which event neither party shall be in default of this Agreement. Upon such termination, Seller shall cause the Title Company to return the Deposit to Buyer, together with any accrued interest thereon, and neither party shall have any further obligations hereunder except as otherwise expressly specified herein.

(f) **Communications with Governmental Entities.** Seller agrees that Buyer may communicate directly with any governmental entities regarding the Property and Buyer's intended development of the Property, as Buyer deems necessary or desirable in its sole and absolute discretion.

15. **Notices.** All notices required to be given hereunder shall be in writing and shall be addressed as follows. All notices shall be delivered by electronic mail, certified or registered mail; recognized overnight delivery service, or hand-delivery and shall be deemed effective upon: (i) transmission by electronic mail; (ii) on the second business day after being sent by certified or registered mail; (iii) on the first business day after deposit with a recognized overnight delivery service; or (iv) upon receipt by hand-delivery:

If to Buyer: ERC Holdings, LLC 5102 South Pinnacle Hills Parkway Rogers, Arkansas 72758 (479) 478-5103 Email: roboc@erc.com

With a copy to: Pless Law Firm, LLC 201 Columbine Street, Suite 300 Denver, Colorado 80206 Attn: Justin D. Pless (303) 454-3712 Email: jpless@plesslaw.com
If to Seller:  
Community College District of St Louis  
Paul W. Zinok, Vice Chancellor  
3221 McKelvey Road  
Bridgeton, MO 63044  
Phone: 314-539-5291  
Email: pzinok@stlcc.edu

With copy to:  
Ed Holthaus  
Ed Holthaus Realty LLC  
18102B Chesterfield Airport Road  
Chesterfield, MO 63005  
Mobile 314.378.0060  
ed@ehrsl.com  
Office 636.532.2171  
Fax 636.532.1920

A party's address may be changed by written notice to the other party; provided, however, that no notice of a change of address shall be effective until actual receipt of such notice.

16. **Section 1031 Exchange.** Buyer and Seller each agree, upon the request of the other, to cooperate with the requesting party in closing this transaction as an exchange pursuant to Internal Revenue Code Section 1031, provided that:

(a) The party to whom the request is made shall incur no additional costs or liability in connection therewith;

(b) The requesting party shall indemnify and hold the other harmless from any claims, demands, causes of action, judgments, expenses, costs and attorneys' fees which result from Seller's, Buyer's, or a third party's non-performance of any exchange agreement(s); and

(c) The Closing shall not be delayed beyond the Closing Date by the exchange. In the event the parties execute an exchange agreement and the exchange escrow is not in a position to close as of the Closing, Seller and Buyer shall immediately execute documents to effectuate a direct sale of the Property to Buyer from Seller as if the exchange document had never been executed.

[SIGNATURE PAGE Follows]
IN WITNESS WHEREOF, the parties hereto have executed this Agreement as of the date first set forth above.

BUYER:

ERC HOLDINGS, LLC
an Arkansas limited liability company, and/or its assigns

By: [Signature]
Name: Louis Coleman
Title: Manager
Date: 9-27-19

SELLER:

The Community College District of St Louis

By: [Signature]
Name: Paul W. Zinck
Title: Vice Chancellor
Date: 9/19/2019
EXHIBIT A

LEGAL DESCRIPTION OF THE LAND

2665 Hwy 109, Wildwood, MO, aka Lot 14 of Turkey Tract Corner as recorded in Deed Book 11859, pg. 683, containing 4.87 acres, aka locator # 24V130913
FIRST AMENDMENT TO PURCHASE AND SALE AGREEMENT

THIS FIRST AMENDMENT TO PURCHASE AND SALE AGREEMENT (this "Amendment") effective December ____, 2019 ("Effective Date"), is made and entered into by and between COMMUNITY COLLEGE DISTRICT OF ST. LOUIS ("Seller"), and ERC HOLDINGS, LLC, an Arkansas limited liability company, and/or its assigns (the "Purchaser").

RECITALS

A. Seller and Purchaser are parties to that certain Purchase and Sale Agreement dated as of September 19, 2019, (the "Purchase Agreement"), pertaining to that certain real property commonly known as 2665 Highway 109, Wildwood, Missouri, as more particularly described in the Purchase Agreement (the "Property").

B. Seller and Purchaser now desire to amend the Purchase Agreement on the terms and conditions hereinafter set forth.

C. Terms initially capitalized herein and not defined herein shall have the meanings ascribed to them in the Purchase Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller and Purchaser hereby agree as follows:

1. Inspection Period. The Inspection Period, as defined in Section 5(a) of the Purchase Agreement, shall be extended until 11:59PM (Central Time) on February 4, 2020. All other Purchase Agreement deadlines that are determined based on the Inspection Period shall also be adjusted accordingly.

2. Other Terms. If there is any conflict between the terms and provisions of this Amendment and the terms and provisions of the Purchase Agreement, the terms and provisions of this Amendment shall govern. Except as herein specifically set forth, all other provisions of the Purchase Agreement shall remain in full force and effect and the Purchase Agreement as hereby amended is hereby reinstated, ratified and affirmed by the parties, and is binding upon the parties in accordance with its terms.

3. Counterparts. This Amendment may be executed in multiple counterparts, each of which shall be deemed an original and all of which when taken together, shall constitute a whole. It shall be fully executed when each party whose signature is required has signed at least one counterpart notwithstanding that all parties have not executed the same counterpart. The parties agree that signatures transmitted electronically shall be binding as if they were original signatures.

[Remainder of Page Intentionally Left Blank]
IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first set forth above.

SELLER:

COMMUNITY COLLEGE DISTRICT OF ST. LOUIS

By: [Signature]

Name: [Name]

Title: [Title]

Date: [Date]

PURCHASER:

ERC HOLDINGS, LLC,
an Arkansas limited liability company,

By: [Signature]

Name: [Name]

Title: [Title]

Date: [Date]
SECOND AMENDMENT TO PURCHASE AND SALE AGREEMENT

THIS SECOND AMENDMENT TO PURCHASE AND SALE AGREEMENT (this "Amendment") effective February 4, 2020 ("Effective Date"), is made and entered into by and between COMMUNITY COLLEGE DISTRICT OF ST. LOUIS ("Seller"), and ERC HOLDINGS, LLC, an Arkansas limited liability company, and/or its assigns (the "Purchaser").

RECATALS

A. Seller and Purchaser are parties to that certain Purchase and Sale Agreement dated as of September 19, 2019, as amended by that certain First Amendment to Purchase and Sale Agreement dated December 2, 2019, (collectively, the "Purchase Agreement"), pertaining to that certain real property commonly known as 2665 Highway 109, Wildwood, Missouri, as more particularly described in the Purchase Agreement (the "Property").

B. Seller and Purchaser now desire to amend the Purchase Agreement on the terms and conditions hereinafter set forth.

C. Terms initially capitalized herein and not defined herein shall have the meanings ascribed to them in the Purchase Agreement.

AGREEMENT

NOW, THEREFORE, in consideration of the foregoing and other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, Seller and Purchaser hereby agree as follows:

1. Inspection Period. The Inspection Period, as defined in Section 5(a) of the Purchase Agreement, shall be extended until 11:59PM (Central Time) on May 4, 2020. All other Purchase Agreement deadlines that are determined based on the Inspection Period shall also be adjusted accordingly.

2. Other Terms. If there is any conflict between the terms and provisions of this Amendment and the terms and provisions of the Purchase Agreement, the terms and provisions of this Amendment shall govern. Except as herein specifically set forth, all other provisions of the Purchase Agreement shall remain in full force and effect and the Purchase Agreement as hereby amended is hereby reinstated, ratified and affirmed by the parties, and is binding upon the parties in accordance with its terms.

3. Counterparts. This Amendment may be executed in multiple counterparts, each of which shall be deemed an original and all of which when taken together, shall constitute a whole. It shall be fully executed when each party whose signature is required has signed at least one counterpart notwithstanding that all parties have not executed the same counterpart. The parties agree that signatures transmitted electronically shall be binding as if they were original signatures.

[Remainder of Page Intentionally Left Blank]
IN WITNESS WHEREOF, the parties hereto have executed this Amendment as of the date first set forth above.

SELLER:

COMMUNITY COLLEGE DISTRICT OF ST. LOUIS

By: ____________________________
Name: Paul Zinck
Title: Vice Chancellor
Date: Feb 4, 2020

PURCHASER:

ERC HOLDINGS, LLC,
an Arkansas limited liability company,

By: ____________________________
Name: ____________________________
Title: ____________________________
Date: ____________________________
May 15, 2020

City of Wildwood
16860 Main Street
Wildwood, MO 63040

Attention: Mr. Joe Vujnic, Director

Re: Proposed Multiple Family Development at 2665 State Route 109
Stock Project No. (218-6641.1)

Mr. Vujnic:

The following responses are in reference to your comment letter dated April 21, 2020.

1.) On Sheet #1, please capitalize “Cultural Institutional Overlay District”, under ‘General Notes’, item one (1).
Revised as requested.

2.) On Sheet #2, please add to the ‘General Notes’ Section an item that identifies certain information about the site, as follows:
Address: 2665 State Route 109
Locator Number: 24V130913
Existing Zoning: NU Non-Urban Residence District
Proposed Zoning: C-8 Planned Commercial District
Town Center District: Cultural/Institutional Overlay District
Fire District: Metro West Fire Protection District
Police Service: St. Louis County Police – Wildwood Precinct
School District: Rockwood R-6
Sanitary Sewer District: Metropolitan St. Louis Sewer District (MSD)
Electric Service: Ameren UE
Water Service: Missouri American Water Company
Natural Gas Service: Spire
Watershed: Bonhomme Creek
FEMA Map Panel and Date: ????
Council Ward: Ward One

This information was added as requested.

3.) Please provide a metes and bounds legal description of the site. This is shown on sheet #1.

4.) On all plan sheets, please remove the existing NU Non-Urban Residence District structure setback distances and substitute them with the proposed structure setback/build-to-lines for the C-8 Planned Commercial District. Existing setbacks were removed and proposed setback were added as requested.

5.) Please identify the proposed parking setback distances from all property boundaries. Proposed setbacks were labeled as requested.

6.) Please identify all streets as either public or private, as well as indicating each of their respective right-of-way widths. Crescent Street is private street and is labeled accordingly on plans.

7.) Please provide a site distance analysis at each of the proposed street intersection. Site Distance Analysis was performed. A sheet was added showing the site distance information. See sheet #5.
8.) Please adjust the extent of the Preliminary Development Plan to show more of the adjacent properties, particularly to the south and west. Please also depict existing improvements on the portion of these adjacent properties and identify ownership information. Preliminary Site Plan was revised to show improvements on adjacent properties by use of Google Earth Imagery.

9.) Please add streetscape components along the street labeled ‘Crescent Street’, including street trees, lights, and furniture (i.e. benches, trash cans, bike racks, etc.). Please consider a planting method, which is an alternative to what has been completed elsewhere in Town Center, for the street trees, to best ensure their future health and success. The City can provide you information regarding a pilot project it has completed to test an alternative planting method in this regard. DTLS has provided a minimum of small-medium trees along the narrow planting strip along Crescent Street. We have not addressed site furnishings at this time within the Conceptual Landscape Plan. We would appreciate the City’s information on the pilot project to further assist owner.

10.) Please depict and dimension a typical parking stall and ADA accessible space. Typical detail was added and shown on sheet #6.

11.) Please provide the applicable calculation for the minimum requirement of the number of ADA accessible parking spaces, including the number of ADA accessible spaces, which are planned for the covered parking areas. Calculations are shown on preliminary site plan.

12.) Please dimension all sidewalks on the site and provide a cross-section construction specifications for such. Dimensions were added to preliminary site plan and section was added to on sheet #6.

13.) Please review and consider a different design for the parking stalls and drive lane at the northeast corner of the site. This was revised as requested.

14.) Please advise if a cross-construction easement or similar instrument should be considered along the property’s northern boundary, in order to construct the planned improvements, while not trespassing onto the abutting property. All grading is located within the property and/or right-of-way and does not encroach on any adjacent properties.

15.) Please provide more information regarding the planned underground stormwater management structure(s). Typical cut sheet of underground stormwater storage system is shown on sheet #6.

16.) Please provide a Preliminary Landscape Plan. DTLS has provided a revised Conceptual Landscape Plan which is included along with this letter. See sheet L1.

17.) Please provide a Preliminary Public Space Plan, with calculations. See the attached table for your use in this regard. This was provided as requested. See sheet #3.

18.) Please provide a Preliminary Lighting Plan. All lighting shall confirm to City Code. This note was added to plans.

19.) Please advise if a fence or other means of controlling access to the pool area are planned, and, if so, please identify such on the plan sheets. Fence is shown around pool area. Refer to current preliminary site plan set included along with this letter.

20.) Please consider a different location for the placement of the trash area. If this current location is retained, access by trash service will be restricted to Generations Drive, but relocation of it farther away from the existing residences is strongly encouraged. Landscaping was enhanced in this area and trash service hours shall be restricted.

21.) Please be advised certain improvements to Turkey Track Road will be required. Understood. City shall provide information so we can coordinate as necessary.

22.) Please add a pedestrian connection to the Wildwood Family YMCA property, specifically within the northwest corner of the site. We will entertain a discussion with the YMCA.

23.) Please provide information regarding steps that will be taken to mitigate light from car headlights from trespassing onto the properties to the south, particularly at the intersection of Crescent Street and Turkey Track Road (i.e. off-site landscaping, etc.). DTLS has addressed this on their revised Landscape Plan included along with this letter.

24.) Please add a fence or grading wall along the site’s frontage onto Turkey Track Road, east of its intersection with the planned Crescent Street. DTLS has addressed this comment on their revised Concept Landscape Plan included along with this letter. See sheets L1 and L2.

25.) Please identify the area south of the intersection of Crescent Street and Turkey Track Road as a berm and provide a cross-section detail of it that indicates its dimensions. DTLS has addressed this comment and provided information as requested. See sheet L2.
26.) Please provide additional information regarding the planned trail along State Route 109, particularly its dimensions, including slope calculations, and a cross-section of its construction specifications. The trail is designed for 5% max. slope and 2% max. cross slope. Pavement section was added on sheet #6.

27.) Please dimension all structures and buildings, including pool, and indicate the area of their respective footings and number of proposed residential units, where applicable, on the appropriate plan sheets. Please also consider adding a table to the plan sheet summarizing the same information. Dimensions for all buildings were added to the preliminary site plan as requested. Refer to sheet 3 within the preliminary site plans for information on number of units and square feet per building.

28.) Please solicit and provide comments from the following agencies and organizations:
   a. Missouri Department of Transportation (MODOT) particularly regarding any required roadway improvements and the storm water components along State Route 109; Attached email string dated 11/12/2019.
   b. Missouri American Water Company (MOAW); Attached email string 03/13/2020.
   c. Metropolitan St. Louis Sewer District (MSD); and Attached conceptual review letter dated 03/05/2020.

   Site plan was distributed to the aforementioned agencies and comments were received from all. See attached.

29.) Please be advised that concerns have been raised regarding the traffic analysis of this site that was completed. These concerns are due to time of year (no classes at the college) and the nontraditional patterns of use of the college and Wildwood Family YMCA, relative to peak-hour activities. Please consider these concerns and provide a detailed response. Such would be appreciated. Please find Lochmueller’s response to this comment: The Spring 2020 semester at St. Louis Community College began on January 21st. Traffic counts were collected on January 30th while classes were in session. The Community College’s peak arrival period coincides with the AM peak hour evaluated by the traffic study. Approximately 35 percent of the College’s course offerings begin during that peak hour. The course schedule is distributed more uniformly throughout the afternoon. For example, 11 percent of courses begin between 2:00 and 4:00 pm, whereas 10 percent begin between 4:00 and 6:00 pm. Hence, the Community College does not have a pronounced afternoon peak period as a K-12 school would.

   Therefore, the afternoon commuter peak hour based on Route 109 traffic is representative of the heaviest afternoon traffic, including the Community College. Regarding the YMCA, ITE data shows that traffic generated by Recreational Community Center land uses peaks from 7:15 to 8:15 am and from 5:00 to 6:00 p.m. These periods also overlap with the peak hours evaluated by the traffic study. Therefore, the traffic impact study’s analysis encompasses peaks for both St. Louis Community College and the YMCA as well as the study area road system.

Please contact our office with any questions regarding the above information.

Thank you,

George M. Stock

George M. Stock, P.E.
President

CC: Ty Gramling – Project Manager
    Eric Fischer - Associate
    Rob Coleman - ERC
    Robert Sharp – Robert Sharp Architect
    David McElvea – Arch-Craft Design
    Rick Kacenski – dtls

Enclosures:
    Preliminary Site Plan Package (Dated May 15, 2020)
    Utility agency/organizations emails
Subject: FW: City of Wildwood comment letter regarding the ReZoning Petition for 2665 State Route 109 (6641.1)

Date: Wednesday, April 29, 2020 at 11:53:44 AM Central Daylight Time

From: George M. Stock, P.E. <george.stock@stockassoc.com>

To: Joe Vujnic <joe@cityofwildwood.com>, Travis Newberry <travis@cityofwildwood.com>, Rob Coleman <robco@erl.com>, Eric Fischer, P.E. <eric.fischer@stockassoc.com>, Ty Gramling, P.E. <ty.gramling@stockassoc.com>, Cheri Evans <cheri.evans@stockassoc.com>

Attachments: image676167.png

Joe/Travis, Please see the attached response from Lochmueller Group regarding Comment #29. We will incorporate this into our response letter, but wanted you to be aware of their response. It certainly seems to address the issue raised, do you agree? Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Desk: 636.681.2403
Cell: http://www.stockassoc.com

From: Kate Swinford <kswinford@lochgroup.com>
Sent: Wednesday, April 29, 2020 11:43 AM
To: George M. Stock, P.E. <george.stock@stockassoc.com>
Cc: Chris Beard <cbeard@lochgroup.com>

Subject: RE: City of Wildwood comment letter regarding the ReZoning Petition for 2665 State Route 109 (6641.1)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

George,

Please find Lochmueller’s response to comment #29 below. If you need anything else, please let us know. Thanks, Kate

The Spring 2020 semester at St. Louis Community College began on January 21st. Traffic counts were collected on January 30th while classes were in session. The Community College’s peak arrival period coincides with the AM peak hour evaluated by the traffic study. Approximately 35 percent of the College’s
course offerings begin during that peak hour. The course schedule is distributed more uniformly throughout the afternoon. For example, 11 percent of courses begin between 2:00 and 4:00 pm, whereas 10 percent begin between 4:00 and 6:00 pm. Hence, the Community College does not have a pronounced afternoon peak period as a K-12 school would. Therefore, the afternoon commuter peak hour based on Route 109 traffic is representative of the heaviest afternoon traffic, including the Community College. Regarding the YMCA, ITE data shows that traffic generated by Recreational Community Center land uses peaks from 7:15 to 8:15 am and from 5:00 to 6:00 p.m. These periods also overlap with the peak hours evaluated by the traffic study. Therefore, the traffic impact study's analysis encompasses peaks for both St. Louis Community College and the YMCA as well as the study area road system.

Kate Swinford, PE, PTOE
Senior Traffic Engineer
Lochmueller Group
217.673.7633 (main)
217.673.7636 (direct) Ext. 7636
217.249.5627 (mobile)
kswinford@lochgroup.com

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February 14, 2020

Mr. George Stock, PE
Stock & Associates, Inc.
257 Chesterfield Business Parkway
Chesterfield, MO 63005

RE: 2665 Route 109 Development
Wildwood, Missouri
520-0008-0TE

Dear Mr. Stock:

In accordance with your request, Lochmueller Group has prepared the following traffic impact study to evaluate a proposed multi-family residential development at 2665 Route 109 in Wildwood, Missouri. The subject site is bounded by Route 109 to the east, Generations Drive to the west, New College Avenue to the north, and Turkey Track Lane to the south, as shown in Exhibit 1.

A total of 120 apartments are proposed arranged in multiple three-story apartment buildings. Access to the site is proposed via a newly constructed Crescent Street, which traverses the site and connects externally to Generations Drive on the west and Turkey Track Lane to the south. The proposed development plan dated January 28, 2020 is illustrated in Exhibit 2 (provided by others). Access onto Route 109 would be provided via Turkey Track Lane (right-out access only) or via New College Avenue (which is signalized).

This study forecasts the amount of traffic that would be generated by the proposed multi-family residential development, evaluates the impact of the additional residential trips on the study area road system, evaluates the ability of traffic to safely enter and exit the site, and determines if roadway or traffic improvements are necessary to mitigate the residential development’s impacts.

This study evaluates conditions during the morning and afternoon peak periods on a typical weekday, as these periods represent the most critical times of day for traffic operations and roadway capacity. If the study area traffic can be accommodated during these peak periods, it stands to reason that adequate capacity would be available throughout the remainder of the day. Forecasted conditions including the proposed development were evaluated for the opening year of development, which was conservatively assumed to be 2020. This study was prepared to address the requirements of the City of Wildwood.
Exhibit 2. 2665 Route 109 Multi-Family Development Site Plan (Provided by others)
**Existing Conditions**

In order to identify the traffic impacts associated with the proposed residential development, it was first necessary to quantify roadway, traffic, and operating conditions as they currently exist. The study area includes several connections to the regional road system. New College Avenue and Turkey Track Lane provide connections to Route 109, and Route 109 provides connections to Manchester Road and Route 100. The study area includes the following intersections:

- Route 109 and Turkey Track Road (unsignalized)
- Route 109 and New College Avenue (signalized)
- New College Avenue and Generations Drive (unsignalized)
- Proposed Crescent Street and Generations Drive (unsignalized)
- Proposed Crescent Street and Turkey Track Road (unsignalized)

Route 109 is functionally classified as a principal arterial with a speed limit of 40 mph north of New College Avenue and 45 mph south of New College Avenue. In general, Route 109 is comprised of one travel lane in each direction, although auxiliary turn lanes are provided north and south of the intersection with New College Avenue. Route 109 is maintained by the Missouri Department of Transportation (MoDOT). New College Avenue is classified as a local road with a speed limit of 25 mph and is comprised of two travel lanes in each direction. Generations Drive, also a local road, is comprised of one travel lane in each direction with a speed limit of 25 mph. Turkey Track Lane is classified as a local road and has a one-way eastbound travel lane with no posted speed limit. There is no existing westbound lane on Turkey Track Lane.

The intersection of Route 109 and New College Avenue is signalized and maintained by MoDOT. Dedicated left-turn, thru, and right-turn lanes are provided on the northbound and southbound approaches of Route 109. Shared left-turn/thru lanes and dedicated right-turn lanes are provided for the eastbound and westbound approaches on New College Avenue. The intersection of New College Avenue and Generations Drive is currently an unsignalized 2-leg intersection which includes an unused stub to the north. The westbound left turn movement is stop-controlled while northbound vehicles are free to make right-turns onto New College Avenue without stopping.

The intersection of Route 109 and Turkey Track Lane is unsignalized. The eastbound approach channelizes traffic to the right to turn south on Route 109, implicitly to dissuade left-turning vehicles. However, there is no sign restricting left turning movements. Field observations revealed some vehicles making left turns onto Route 109. Westbound traffic is also restricted on Turkey Track Lane. “Do not enter” and “no left turn” signs are provided for northbound traffic on Route 109 and “no right turn” signage is provided for southbound traffic on Route 109 to discourage turns onto Turkey Track Lane. Exhibit 3 illustrates the existing intersection lane configuration and traffic control.

Existing multi-modal facilities are limited in the study area. There are currently no dedicated bicycle facilities; however, there are signs indicating that bicycles should share the road with vehicles along Route 109. There are sidewalks along both sides of New College Avenue and Generations Drive. Route 109 has sidewalks along its east side along the developed parcels throughout the study area; however, the network is incomplete south of the access drive to the Wildwood Family YMCA. The sidewalk terminates just south of the residential homes along the east side of Route 109.
Exhibit 3. Existing Lane Configuration and Traffic Control
To quantify existing traffic volumes, turning movement counts were collected in January 2020 at Route 109 and New College Avenue and at Generations Drive and Turkey Track Lane during the weekday morning and evening peak periods. Volumes at study intersections that were not counted were determined with volume balancing from counted intersections. From the counts, it was determined that the peak hours of traffic flow occur from 7:15 to 8:15 a.m. and from 4:15 to 5:15 p.m. Existing traffic volumes are summarized in Exhibit 4.

Intersection performance or traffic operations are quantified by six Levels of Service (LOS), which range from LOS A ("Free Flow") to LOS F ("Fully Saturated"). LOS C is normally used for design purposes and represents a roadway with volumes ranging from 70% to 80% of its capacity. LOS D is generally considered acceptable for peak period conditions in urban and suburban areas and would be an appropriate benchmark of acceptable traffic for the study area road system.

Levels of service for intersections are determined based on the average delay experienced by motorists. Signalized intersections reflect higher delay tolerances as compared to unsignalized and roundabout locations because motorists are accustomed to and accepting of longer delays at signals. For signalized and all-way stop intersections, the average control delay per vehicle is estimated for each movement and then aggregated for each approach and the intersection as a whole. For intersections with partial (side-street) stop control, the delay is calculated for the minor movements only (side-street approaches and major road left-turns) since thru traffic on the major road is not required to stop.

The thresholds for each level of service vary based upon the type of control to reflect different driver expectations. Signalized intersections are designed to carry higher traffic volumes, and therefore motorists accept heavier delays as compared to unsignalized intersections. Table 1 summarizes the criterion for both signalized and unsignalized intersections, as defined by the Highway Capacity Manual (HCM) 6th Edition, last updated in 2016 by the Transportation Research Board.

<table>
<thead>
<tr>
<th>Level of Service</th>
<th>Control Delay per Vehicle (sec/veh)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Signalized</td>
</tr>
<tr>
<td>A</td>
<td>0-10</td>
</tr>
<tr>
<td>B</td>
<td>&gt;10-20</td>
</tr>
<tr>
<td>C</td>
<td>&gt;20-35</td>
</tr>
<tr>
<td>D</td>
<td>&gt;35-55</td>
</tr>
<tr>
<td>E</td>
<td>&gt;55-80</td>
</tr>
<tr>
<td>F</td>
<td>&gt;80</td>
</tr>
</tbody>
</table>
Legend

X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)

AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM

Exhibit 4. 2020 Existing Traffic Volumes
Operating conditions at the study intersections were evaluated using Synchro 10, which is a traffic flow model based on the HCM. The existing operating conditions at the study intersections are summarized in Table 2. As shown, based upon the Synchro analysis, the study intersections generally have favorable conditions during the peak hours. Both unsignalized intersections operate acceptably, with LOS B or better for all movements.

The intersection of Route 109 and New College Avenue operates efficiently overall at LOS B or LOS C during the peak hours. However, the eastbound approach experiences longer delays consistent with LOS E for both the AM and PM peak hours. Additionally, queuing on the eastbound approach in the PM peak hour occasionally extends to the driveway entrance to the Wildwood Family YMCA. This poor level of service is likely due to the current shared left/thru lane configuration on the eastbound and westbound approaches of New College Avenue, which requires the approaches to utilize split phase signal timings. Split phase timings are inherently less efficient because they dictate that all movements on a given approach receive the same amount of green time, regardless of traffic demands for individual movements.

### Table 2. 2020 Existing Traffic Operating Conditions

<table>
<thead>
<tr>
<th>Intersection &amp; Movements</th>
<th>LOS [Delay, sec]</th>
<th>Queue Length, feet</th>
<th>v/c ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>AM Peak Hour</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route 109 &amp; Turkey Track Ln (unsignalized, side street yield)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Eastbound Right</td>
<td>B (11.6) [25]</td>
<td>&lt;0.01&gt;</td>
<td></td>
</tr>
<tr>
<td><strong>PM Peak Hour</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Route 109 &amp; New College Ave (signalized)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall Intersection</td>
<td>B (14.3)</td>
<td>C (21.7)</td>
<td></td>
</tr>
<tr>
<td>Eastbound Approach</td>
<td>E (56.3) [97]</td>
<td>&lt;0.47&gt;</td>
<td></td>
</tr>
<tr>
<td>Westbound Approach</td>
<td>C (31.4) [25]</td>
<td>&lt;0.15&gt;</td>
<td></td>
</tr>
<tr>
<td>Northbound Approach</td>
<td>B (12.8) [358]</td>
<td>&lt;0.51&gt;</td>
<td></td>
</tr>
<tr>
<td>Southbound Approach</td>
<td>B (10.3) [336]</td>
<td>&lt;0.40&gt;</td>
<td></td>
</tr>
<tr>
<td>New College Ave &amp; Generations Dr (unsignalized, side street stop)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Westbound Left</td>
<td>A (9.8) [25]</td>
<td>&lt;0.23&gt;</td>
<td></td>
</tr>
</tbody>
</table>

Delay presented in seconds per vehicle
# - 95th percentile volume exceeds capacity, queue may be longer. Queue shown is maximum after two cycles

**FORECASTED TRIP GENERATION AND DIRECTIONAL DISTRIBUTION**

The number of trips that would be generated by the proposed development was forecasted based on data published in the Institute of Transportation Engineers (ITE) Trip Generation Manual, 10th Edition. Land Use 221: Multi-Family House – Mid-Rise was applied. Based on guidance in the Trip Generation Handbook, 3rd Edition, the fitted curve equation was used to forecast site-generated traffic volumes as there were more than 20 data points for land use 221: Multi-Family House – Mid-Rise. The number of residential units was used as the independent variable. The forecasted trips that would be generated by the proposed development are summarized in Table 3. As shown, the proposed development would generate a total of 41 and 53 trips during the weekday morning and evening peak hours, respectively.
Table 3. 2665 Route 109 Development Forecasted Trip Generation

<table>
<thead>
<tr>
<th>Land Use</th>
<th>Unit</th>
<th>Size</th>
<th>Weekday AM Peak Hour</th>
<th>Weekday PM Peak Hour</th>
</tr>
</thead>
<tbody>
<tr>
<td>Multi-Family Housing</td>
<td>Dwelling Units</td>
<td>120</td>
<td>11</td>
<td>32</td>
</tr>
<tr>
<td>Mid-Rise (221)</td>
<td></td>
<td></td>
<td>30</td>
<td>21</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>41</td>
<td>53</td>
</tr>
</tbody>
</table>

The residential development site’s trip generation would be assigned to the study area roadways in accordance with an anticipated directional distribution that reflects prevailing traffic patterns as well as the anticipated commuter routes for residents. The proposed directional distribution percentages for site generated trips are presented in Table 4.

The majority of trips are expected to use Route 109 to travel to and from the north, as Manchester Road — a major east/west thoroughfare in the area — is located less than 1 mile north of the site. A smaller percentage of trips would travel south to Eureka, as I-44 is approximately 5 miles to the south. In an effort to present a conservative, worst-case scenario with respect to left-turning traffic at the intersection of Route 109 and New College Avenue, 80 percent of the site’s traffic was assumed to be distributed to/from the north.

The resulting site generated traffic for the 2665 Route 109 residential development is reflected in Exhibit 5. It should be noted that Turkey Track Lane was analyzed as an eastbound right-out only preserving the existing access configuration at Route 109. All traffic forecasted to exit the site and proceed north on Route 109 was directed to the eastbound left-turn at Route 109 and New College Avenue.

Table 4. Directional Distribution Percentages

<table>
<thead>
<tr>
<th>Routes</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>To/From the North via Route 109</td>
<td>80%</td>
</tr>
<tr>
<td>To/From the South via Route 109</td>
<td>20%</td>
</tr>
</tbody>
</table>

SITE ACCESS AND INTERNAL CIRCULATION

The proposed site plan shown in Exhibit 2 includes two points of access to the development. A new street, Crescent Street, would traverse the site and connect externally to Generations Drive on the west and Turkey Track Lane to the south. No improvements are proposed to Turkey Track Lane; it is to remain a one-way eastbound roadway. A striped left-turn arrow and a no right-turn sign is recommended on the southbound approach at Crescent Street and Turkey Track Lane to alert traffic exiting the site that Turkey Track Lane is a one-way eastbound roadway.

Crescent Street at both Turkey Track Lane and Generations Drive should have a minimum of 24 feet in throat width with one lane in each direction. It is recommended that traffic exiting the site from Crescent Street be placed under STOP control via the installation of signage. Crescent Street approaches to Turkey Track Lane and Generations Drive should conform to the sight distance requirements set forth by the American Association of State Highway and Transportation Officials (AASHTO). Furthermore, as part of the design process, care should be given to ensure that signage and/or landscaping does not pose sight distance limitations at any of the proposed intersection locations.
Exhibit 5. Proposed Development Site Generated Traffic

Legend
X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)
AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM
2020 Forecasted Conditions
Forecasted operating conditions were evaluated using the same methodology applied to existing conditions. The site generated traffic shown in Exhibit 5 was aggregated with existing traffic volumes (Exhibit 4) to produce a forecasted conditions scenario that reflects the proposed multi-family residential development. The resulting 2020 traffic forecast is shown in Exhibit 6.

Table 5 shows forecasted operating conditions that reflect the additional trips generated by the proposed development added to the study area road system. As can be seen, without any improvements, the eastbound approach at Route 109 and New College Avenue would degrade from LOS E to LOS F and the 95th percentile queue would extend into the intersection with the YMCA entrance during the afternoon peak hour.

To mitigate the LOS F condition, it is recommended that the eastbound approach at Route 109 and New College Avenue be modified to provide a dedicated eastbound left-turn lane and eliminate split phase operations in favor of protected-plus-permissive left-turn phasing. To accomplish this, the existing median on New College Avenue east of the YMCA entrance should be removed and replaced with a dedicated left-turn lane with a storage bay length of at least 150 feet. The existing eastbound combination left-turn/thru lane should be restriped as a thru only lane to maintain lane alignment across Route 109, and the existing eastbound right turn lane should remain in place.

In combination with removing the east-west split phasing, the westbound approach at Route 109 and New College Avenue would also need to be modified. Only a re-striping of the current lane configuration would be necessary. Specifically, the shared left turn/thru lane should be converted to a dedicated left-turn lane and the right-turn lane would become a shared thru/right-turn lane. Adjustments to the signal would also be necessary to implement the proposed lane configuration changes.
Legend

X/Y – Weekday AM/Weekday PM
Peak Hour Traffic Volumes (vph)

AM Peak Hour: 7:15 AM – 8:15 AM
PM Peak Hour: 4:15 PM – 5:15 PM

Exhibit 6. 2020 Forecasted Traffic Volumes
With the proposed improvements, the eastbound approach would operate at LOS D during both the AM and PM peak hours. Additionally, the eastbound 95th percentile queue length would be reduced and no longer obstruct the access drive to the YMCA during either peak hour.

Given the favorable conditions with the recommended mitigation improvements in place, it is clear that the traffic generated by the proposed residential development would have a minimal impact upon the study intersections. Therefore, it was determined that the need to extend Generations Drive north to Manchester Road to accommodate site-generated traffic does not exist at this time. The need for the street extension should be revisited in the future when additional development occurs in the area.

**FINDINGS AND CONCLUSIONS**

Based on the preceding traffic impact study for the 2665 Route 109 multi-family residential development, the following can be concluded:
• The proposed development would generate a total of approximately 41 and 53 trips during the weekday morning and evening peak hours, respectively.

• Based on the existing road geometry at Route 109 and Turkey Track Lane, a no left-turn sign and a striped right-turn arrow is recommended on the eastbound approach to discourage motorists from making a left-turn onto Route 109.

• The proposed intersections of Crescent Street & Generations Drive and Crescent Street & Turkey Track Lane should operate under side-street STOP control with one lane of traffic in each direction on each intersection leg.

• A striped left-turn arrow and a no right-turn sign is recommended on the southbound approach at Crescent Street and Turkey Track Lane to alert traffic exiting the site that Turkey Track Lane is a one-way eastbound roadway.

• The following improvements are recommended to mitigate the impact of the proposed development at Route 109 and New College Avenue:
  o Remove the existing median on New College Avenue between YMCA entrance and Route 109 to provide a dedicated eastbound left-turn lane at Route 109 with a storage bay length of at least 150 feet;
  o Restripe the existing eastbound left-turn/thru to a thru only lane in order to maintain lane alignments across Route 109 and restripe the westbound approach lane as a single dedicated left turn lane and a shared thru/right turn lane;
  o Remove the existing east-west split phasing and introduce protected-plus-permissive left-turn phases for eastbound and westbound approaches; and
  o Modify the traffic signal at Route 109 and New College Avenue to accommodate the preceding improvements.

• The need to extend Generations Drive north to Manchester Road to accommodate site-generated traffic does not exist at this time.

Assuming the implementation of the recommended mitigation improvements, it is evident that the traffic generated by the proposed residential development would have a minimal impact upon the study intersections. We trust that you will find this information useful in the evaluation of the proposed 2665 Route 109 residential development. Please contact me at (217) 673-7636 with any questions or comments concerning this report.

Sincerely,

Lochmueller Group

Kate Swinford, PE, PTOE
Senior Traffic Engineer
February 27th, 2020

ERC Construction
5102 S. Pinnacle Hill Pkwy.
Rogers, AR 72758

To Whom It May Concern,

In the building process I found working with the contractors, subcontractors, foreman and many others they followed directions and were easy to work with. I appreciate this process and the ease of working with your company.

Sincerely,

Clinton P. Gussner

Clinton P. Gussner
Fire Chief
Joe

Here are our demographics for Wildwood through our friend and broker, Matt Bukhshtaber. Please include these as part of our package for the upcoming meeting.

Do you have a moment to discuss the traffic study tomorrow (Tuesday)?

Rob Coleman
ERC, 5102 South Pinnacle Hills Parkway, Rogers, 72758
479.478.5103 - phone | robco@erc.com

Begin forwarded message:

From: "Bukhshtaber Matt @ St. Louis" <Matt.Bukhshtaber@cbre.com>
Date: January 13, 2020 at 4:32:12 PM CST
Subject: Wildwood Demographics

Rob,

See attached 1 mile, 3 mile, and 5 mile radius demographics on your site in Wildwood. On page 3 what jumps out at me is average home value is: 1 mile ($378,812), 3 mile ($386,211), and 5 mile ($407,628). If you are a growing community that wants to offer the citizens another option of being a resident, multifamily creates this vehicle with high home values that everyone can afford. In addition, you are able to build Class A multifamily since the household income on page shows: 1 mile ($145,181), 3 mile ($152,123), and 5 mile ($157,271). The home values and household income strength of the area allows the community to grow with multifamily for empty nesters staying in Wildwood, for young families to move into Wildwood without buying a home, or allow a family of a single parent to stay close to their kids.

Thanks,

-Matt

Matt Bukhshtaber | Vice Chairman
Investment Properties | Multifamily
CBRE | Capital Markets
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T: 314.655.6060 | C: 314.632.6685 | F: 314.655.6100
matt.bukhshtaber@cbre.com | www.cbre.com
## PLACE OF WORK

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Businesses</td>
<td>131</td>
<td>571</td>
<td>1,851</td>
</tr>
<tr>
<td>2019 Employees</td>
<td>1,325</td>
<td>6,087</td>
<td>21,832</td>
</tr>
</tbody>
</table>

## POPULATION

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Population - Current Year Estimate</td>
<td>2,346</td>
<td>27,626</td>
<td>67,874</td>
</tr>
<tr>
<td>2024 Population - Five Year Projection</td>
<td>2,419</td>
<td>26,101</td>
<td>68,966</td>
</tr>
<tr>
<td>2010 Population - Census</td>
<td>2,178</td>
<td>26,679</td>
<td>65,593</td>
</tr>
<tr>
<td>2000 Population - Census</td>
<td>1,958</td>
<td>25,386</td>
<td>62,129</td>
</tr>
<tr>
<td>2010-2019 Annual Population Growth Rate</td>
<td>0.81%</td>
<td>0.38%</td>
<td>0.37%</td>
</tr>
<tr>
<td>2019-2024 Annual Population Growth Rate</td>
<td>0.61%</td>
<td>0.34%</td>
<td>0.33%</td>
</tr>
</tbody>
</table>

## AGE

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age 0-4</td>
<td>117</td>
<td>1,323</td>
<td>3,271</td>
</tr>
<tr>
<td>Age 5-9</td>
<td>149</td>
<td>1,632</td>
<td>3,993</td>
</tr>
<tr>
<td>Age 10-14</td>
<td>196</td>
<td>2,158</td>
<td>5,298</td>
</tr>
<tr>
<td>Age 15-19</td>
<td>189</td>
<td>2,197</td>
<td>5,287</td>
</tr>
<tr>
<td>Age 20-24</td>
<td>110</td>
<td>1,444</td>
<td>3,435</td>
</tr>
<tr>
<td>Age 25-29</td>
<td>111</td>
<td>1,495</td>
<td>3,479</td>
</tr>
<tr>
<td>Age 30-34</td>
<td>101</td>
<td>1,320</td>
<td>3,173</td>
</tr>
<tr>
<td>Age 35-39</td>
<td>121</td>
<td>1,308</td>
<td>3,310</td>
</tr>
<tr>
<td>Age 40-44</td>
<td>137</td>
<td>1,503</td>
<td>3,805</td>
</tr>
<tr>
<td>Age 45-49</td>
<td>204</td>
<td>2,066</td>
<td>4,912</td>
</tr>
<tr>
<td>Age 50-54</td>
<td>205</td>
<td>2,443</td>
<td>5,794</td>
</tr>
<tr>
<td>Age 55-59</td>
<td>201</td>
<td>2,499</td>
<td>6,130</td>
</tr>
<tr>
<td>Age 60-64</td>
<td>166</td>
<td>2,054</td>
<td>5,130</td>
</tr>
<tr>
<td>Age 65-69</td>
<td>132</td>
<td>1,620</td>
<td>4,011</td>
</tr>
<tr>
<td>Age 70-74</td>
<td>93</td>
<td>1,107</td>
<td>2,845</td>
</tr>
<tr>
<td>Age 75-79</td>
<td>54</td>
<td>629</td>
<td>1,671</td>
</tr>
<tr>
<td>Age 80-84</td>
<td>29</td>
<td>378</td>
<td>1,041</td>
</tr>
<tr>
<td>Age 85 and Older</td>
<td>32</td>
<td>449</td>
<td>1,290</td>
</tr>
<tr>
<td>2019 Median Age</td>
<td>42.9</td>
<td>43.1</td>
<td>43.5</td>
</tr>
</tbody>
</table>

## GENERATIONS

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generation Alpha (Born 2017 or Later)</td>
<td>67</td>
<td>755</td>
<td>1,860</td>
</tr>
<tr>
<td>Generation Z (Born 1999-2016)</td>
<td>610</td>
<td>6,873</td>
<td>16,768</td>
</tr>
<tr>
<td>Millennials (Born 1981-1998)</td>
<td>389</td>
<td>4,974</td>
<td>11,926</td>
</tr>
<tr>
<td>Generation X (Born 1965-1980)</td>
<td>572</td>
<td>6,287</td>
<td>15,204</td>
</tr>
<tr>
<td>Baby Boomers (Born 1946-1964)</td>
<td>577</td>
<td>7,096</td>
<td>17,638</td>
</tr>
<tr>
<td>Greatest Generations (Born 1945 or Earlier)</td>
<td>130</td>
<td>1,640</td>
<td>4,479</td>
</tr>
</tbody>
</table>

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### RACE AND ETHNICITY

<table>
<thead>
<tr>
<th>2019 Population</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>White</td>
<td>2,346</td>
<td>27,526</td>
<td>67,874</td>
</tr>
<tr>
<td>Black or African American</td>
<td>2,117</td>
<td>24,617</td>
<td>60,216</td>
</tr>
<tr>
<td>Asian</td>
<td>1,684</td>
<td>20,271</td>
<td>47,629</td>
</tr>
<tr>
<td>American Indian or Alaska Native</td>
<td>1,426</td>
<td>1,687</td>
<td>4,210</td>
</tr>
<tr>
<td>Pacific Islander</td>
<td>1,058</td>
<td>12,757</td>
<td>30,422</td>
</tr>
<tr>
<td>Other Race</td>
<td>1,440</td>
<td>17,971</td>
<td>43,951</td>
</tr>
<tr>
<td>Two or More Races</td>
<td>1,408</td>
<td>17,653</td>
<td>43,181</td>
</tr>
<tr>
<td>Hispanic</td>
<td>1,108</td>
<td>13,675</td>
<td>32,960</td>
</tr>
<tr>
<td>White Non-Hispanic</td>
<td>1,438</td>
<td>18,051</td>
<td>45,673</td>
</tr>
</tbody>
</table>

### EDUCATION

<table>
<thead>
<tr>
<th>2019 Population 25 and Over</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 9th Grade</td>
<td>1,587</td>
<td>18,872</td>
<td>46,590</td>
</tr>
<tr>
<td>9-12th Grade - No Diploma</td>
<td>16,148</td>
<td>19,818</td>
<td>46,468</td>
</tr>
<tr>
<td>High School Diploma</td>
<td>1,699</td>
<td>20,325</td>
<td>47,009</td>
</tr>
<tr>
<td>GED or Alternative Credential</td>
<td>1,269</td>
<td>15,096</td>
<td>37,358</td>
</tr>
<tr>
<td>Some College - No Degree</td>
<td>1,389</td>
<td>16,872</td>
<td>42,307</td>
</tr>
<tr>
<td>Associate’s Degree</td>
<td>1,299</td>
<td>15,735</td>
<td>38,895</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>690</td>
<td>7,757</td>
<td>17,562</td>
</tr>
<tr>
<td>Graduate or Professional Degree</td>
<td>315</td>
<td>4,585</td>
<td>12,263</td>
</tr>
</tbody>
</table>

### HOUSEHOLDS

<table>
<thead>
<tr>
<th>2019 Households - Current Year Estimate</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2024 Households - Five Year Projection</td>
<td>1,018</td>
<td>9,596</td>
<td>24,035</td>
</tr>
<tr>
<td>2010 Households - Census</td>
<td>1,048</td>
<td>9,846</td>
<td>24,385</td>
</tr>
<tr>
<td>2000 Households - Census</td>
<td>950</td>
<td>9,373</td>
<td>23,272</td>
</tr>
<tr>
<td>2010-2019 Annual Household Growth Rate</td>
<td>1,018</td>
<td>9,596</td>
<td>24,035</td>
</tr>
<tr>
<td>2019-2024 Annual Household Growth Rate</td>
<td>1,018</td>
<td>9,596</td>
<td>24,035</td>
</tr>
<tr>
<td>2019 Average Household Size</td>
<td>1,018</td>
<td>9,596</td>
<td>24,035</td>
</tr>
</tbody>
</table>

### HOUSEHOLD INCOME

<table>
<thead>
<tr>
<th>2019 Households</th>
<th>1,018</th>
<th>9,596</th>
<th>24,035</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $15,000</td>
<td>145</td>
<td>1,213</td>
<td>15,217</td>
</tr>
<tr>
<td>$15,000-$24,999</td>
<td>161</td>
<td>1,704</td>
<td>17,451</td>
</tr>
<tr>
<td>$25,000-$34,999</td>
<td>110</td>
<td>1,178</td>
<td>11,572</td>
</tr>
<tr>
<td>$35,000-$49,999</td>
<td>83</td>
<td>863</td>
<td>8,786</td>
</tr>
<tr>
<td>$50,000-$74,999</td>
<td>94</td>
<td>925</td>
<td>9,754</td>
</tr>
<tr>
<td>$75,000-$99,999</td>
<td>117</td>
<td>1,232</td>
<td>12,999</td>
</tr>
<tr>
<td>$100,000-$149,999</td>
<td>107</td>
<td>1,070</td>
<td>11,289</td>
</tr>
<tr>
<td>$150,000-$199,999</td>
<td>251</td>
<td>2,372</td>
<td>25,032</td>
</tr>
<tr>
<td>$200,000 and Over</td>
<td>143</td>
<td>1,529</td>
<td>15,557</td>
</tr>
<tr>
<td>2019 Average Household Income</td>
<td>1,460</td>
<td>15,062</td>
<td>157,271</td>
</tr>
<tr>
<td>2024 Average Household Income</td>
<td>1,610</td>
<td>17,042</td>
<td>174,951</td>
</tr>
<tr>
<td>2019 Median Household Income</td>
<td>1,150</td>
<td>11,789</td>
<td>115,572</td>
</tr>
<tr>
<td>2024 Median Household Income</td>
<td>1,192</td>
<td>13,009</td>
<td>128,820</td>
</tr>
<tr>
<td>2019 Per Capita Income</td>
<td>53,322</td>
<td>535,459</td>
<td>55,686</td>
</tr>
<tr>
<td>2024 Per Capita Income</td>
<td>58,949</td>
<td>598,786</td>
<td>61,804</td>
</tr>
</tbody>
</table>

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## TRAVEL TIME

<table>
<thead>
<tr>
<th>2013-2017 Work Away From Home 16+</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under 5 Minutes</td>
<td>1,015</td>
<td>12,419</td>
<td>30,449</td>
</tr>
<tr>
<td>5-9 Minutes</td>
<td>28</td>
<td>205</td>
<td>507</td>
</tr>
<tr>
<td>10-14 Minutes</td>
<td>59</td>
<td>839</td>
<td>1,948</td>
</tr>
<tr>
<td>15-19 Minutes</td>
<td>63</td>
<td>1,066</td>
<td>2,734</td>
</tr>
<tr>
<td>20-24 Minutes</td>
<td>90</td>
<td>1,286</td>
<td>3,600</td>
</tr>
<tr>
<td>25-29 Minutes</td>
<td>123</td>
<td>1,626</td>
<td>3,773</td>
</tr>
<tr>
<td>30-34 Minutes</td>
<td>113</td>
<td>1,158</td>
<td>2,567</td>
</tr>
<tr>
<td>35-39 Minutes</td>
<td>170</td>
<td>2,064</td>
<td>5,602</td>
</tr>
<tr>
<td>40-44 Minutes</td>
<td>82</td>
<td>691</td>
<td>2,080</td>
</tr>
<tr>
<td>45-59 Minutes</td>
<td>76</td>
<td>1,195</td>
<td>2,552</td>
</tr>
<tr>
<td>60-89 Minutes</td>
<td>152</td>
<td>1,667</td>
<td>3,579</td>
</tr>
<tr>
<td>Over 90 Minutes</td>
<td>43</td>
<td>424</td>
<td>843</td>
</tr>
</tbody>
</table>

## HOUSING VALUE

<table>
<thead>
<tr>
<th>2019 Owner Occupied Housing Units</th>
<th>905</th>
<th>8,189</th>
<th>20,699</th>
</tr>
</thead>
<tbody>
<tr>
<td>Under $50,000</td>
<td>2</td>
<td>21</td>
<td>82</td>
</tr>
<tr>
<td>$50,000-$99,999</td>
<td>6</td>
<td>17</td>
<td>69</td>
</tr>
<tr>
<td>$100,000-$149,999</td>
<td>14</td>
<td>55</td>
<td>329</td>
</tr>
<tr>
<td>$150,000-$199,999</td>
<td>44</td>
<td>316</td>
<td>1,242</td>
</tr>
<tr>
<td>$200,000-$249,999</td>
<td>87</td>
<td>702</td>
<td>2,056</td>
</tr>
<tr>
<td>$250,000-$299,999</td>
<td>145</td>
<td>1,365</td>
<td>3,039</td>
</tr>
<tr>
<td>$300,000-$399,999</td>
<td>358</td>
<td>3,161</td>
<td>6,407</td>
</tr>
<tr>
<td>$400,000-$499,999</td>
<td>110</td>
<td>1,430</td>
<td>3,517</td>
</tr>
<tr>
<td>$500,000-$749,999</td>
<td>109</td>
<td>901</td>
<td>2,874</td>
</tr>
<tr>
<td>$750,000-$999,999</td>
<td>24</td>
<td>134</td>
<td>653</td>
</tr>
<tr>
<td>$1,000,000-$1,499,999</td>
<td>4</td>
<td>45</td>
<td>248</td>
</tr>
<tr>
<td>$1,500,000-$1,999,999</td>
<td>0</td>
<td>20</td>
<td>86</td>
</tr>
<tr>
<td>$2,000,000 and Over</td>
<td>2</td>
<td>19</td>
<td>99</td>
</tr>
</tbody>
</table>

- **2019 Median Value of Owner Occ. Housing Units**: $343,156
- **2019 Average Value of Owner Occ. Housing Units**: $378,812

## HOUSING UNITS

<table>
<thead>
<tr>
<th>2013-2017 Housing Units</th>
<th>1,039</th>
<th>9,751</th>
<th>24,371</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Unit - Detached</td>
<td>863</td>
<td>8,372</td>
<td>20,858</td>
</tr>
<tr>
<td>1 Unit - Attached</td>
<td>50</td>
<td>253</td>
<td>974</td>
</tr>
<tr>
<td>2 Units</td>
<td>0</td>
<td>22</td>
<td>126</td>
</tr>
<tr>
<td>3-4 Units</td>
<td>2</td>
<td>131</td>
<td>474</td>
</tr>
<tr>
<td>5-9 Units</td>
<td>34</td>
<td>255</td>
<td>477</td>
</tr>
<tr>
<td>10-19 Units</td>
<td>82</td>
<td>407</td>
<td>633</td>
</tr>
<tr>
<td>20-49 Units</td>
<td>0</td>
<td>79</td>
<td>159</td>
</tr>
<tr>
<td>50 and Over</td>
<td>5</td>
<td>216</td>
<td>635</td>
</tr>
<tr>
<td>Mobile Home</td>
<td>3</td>
<td>15</td>
<td>33</td>
</tr>
<tr>
<td>Other Units</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

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## HISPANIC ORIGIN

<table>
<thead>
<tr>
<th>2019 Hispanic Population</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic: White</td>
<td>43</td>
<td>598</td>
<td>1,469</td>
</tr>
<tr>
<td>70.5%</td>
<td>74.0%</td>
<td>73.5%</td>
<td></td>
</tr>
<tr>
<td>Hispanic: Black or African American</td>
<td>1</td>
<td>11</td>
<td>22</td>
</tr>
<tr>
<td>1.6%</td>
<td>1.4%</td>
<td>1.1%</td>
<td></td>
</tr>
<tr>
<td>Hispanic: Asian</td>
<td>5</td>
<td>17</td>
<td>25</td>
</tr>
<tr>
<td>8.2%</td>
<td>2.1%</td>
<td>1.3%</td>
<td></td>
</tr>
<tr>
<td>Hispanic: American Indian or Alaska Native</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>0.0%</td>
<td>0.0%</td>
<td>0.2%</td>
<td></td>
</tr>
<tr>
<td>Hispanic: Pacific Islander</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>0.0%</td>
<td>0.1%</td>
<td>0.1%</td>
<td></td>
</tr>
<tr>
<td>Hispanic: Other Race</td>
<td>10</td>
<td>132</td>
<td>336</td>
</tr>
<tr>
<td>16.4%</td>
<td>16.3%</td>
<td>16.1%</td>
<td></td>
</tr>
<tr>
<td>Hispanic: Two or More Races</td>
<td>2</td>
<td>48</td>
<td>142</td>
</tr>
<tr>
<td>3.3%</td>
<td>5.9%</td>
<td>7.1%</td>
<td></td>
</tr>
</tbody>
</table>

## GENDER

<table>
<thead>
<tr>
<th>2019 Population</th>
<th>57,874</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>2,346</td>
</tr>
<tr>
<td>1,158</td>
<td>49.4%</td>
</tr>
<tr>
<td>Females</td>
<td>34,900</td>
</tr>
<tr>
<td>1,187</td>
<td>50.6%</td>
</tr>
</tbody>
</table>

## MARITAL STATUS

<table>
<thead>
<tr>
<th>2019 Population 15+</th>
<th>55,313</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Married</td>
<td>1,885</td>
</tr>
<tr>
<td>411</td>
<td>21.8%</td>
</tr>
<tr>
<td>Married</td>
<td>22,513</td>
</tr>
<tr>
<td>1,260</td>
<td>66.8%</td>
</tr>
<tr>
<td>Widowed</td>
<td>55</td>
</tr>
<tr>
<td>56</td>
<td>3.0%</td>
</tr>
<tr>
<td>Divorced</td>
<td>158</td>
</tr>
<tr>
<td>8.4%</td>
<td></td>
</tr>
</tbody>
</table>

## EMPLOYMENT STATUS

<table>
<thead>
<tr>
<th>2019 Civilian Population 15+ in Labor Force</th>
<th>37,301</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Employed Civilian Population 15+</td>
<td>1,269</td>
</tr>
<tr>
<td>1,234</td>
<td></td>
</tr>
<tr>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>15,051</td>
<td></td>
</tr>
<tr>
<td>97%</td>
<td></td>
</tr>
<tr>
<td>35</td>
<td></td>
</tr>
<tr>
<td>2.8%</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td></td>
</tr>
<tr>
<td>2.7%</td>
<td></td>
</tr>
<tr>
<td>858</td>
<td></td>
</tr>
<tr>
<td>2.3%</td>
<td></td>
</tr>
</tbody>
</table>

## CLASS OF WORKER

<table>
<thead>
<tr>
<th>2019 Employed Civilian Population 15+</th>
<th>36,443</th>
</tr>
</thead>
<tbody>
<tr>
<td>White Collar</td>
<td>1,234</td>
</tr>
<tr>
<td>998</td>
<td></td>
</tr>
<tr>
<td>80.9%</td>
<td></td>
</tr>
<tr>
<td>Services</td>
<td>139</td>
</tr>
<tr>
<td>11.3%</td>
<td></td>
</tr>
<tr>
<td>Blue Collar</td>
<td>97</td>
</tr>
<tr>
<td>7.9%</td>
<td></td>
</tr>
<tr>
<td>1,164</td>
<td></td>
</tr>
<tr>
<td>7.7%</td>
<td></td>
</tr>
</tbody>
</table>

## DAYTIME POPULATION

<table>
<thead>
<tr>
<th>2019 Daytime Population</th>
<th>53,036</th>
</tr>
</thead>
<tbody>
<tr>
<td>Daytime Workers</td>
<td>2,556</td>
</tr>
<tr>
<td>1,425</td>
<td></td>
</tr>
<tr>
<td>55.8%</td>
<td></td>
</tr>
<tr>
<td>Daytime Residents</td>
<td>19,344</td>
</tr>
<tr>
<td>1,131</td>
<td></td>
</tr>
<tr>
<td>44.2%</td>
<td></td>
</tr>
<tr>
<td>12,829</td>
<td></td>
</tr>
<tr>
<td>66.3%</td>
<td></td>
</tr>
</tbody>
</table>
### OCCUPATION

**2019 Employed Civilian Population 16+**

<table>
<thead>
<tr>
<th>Occupation</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Management</td>
<td>163</td>
<td>2,175</td>
<td>5,327</td>
</tr>
<tr>
<td>Business and Financial</td>
<td>98</td>
<td>1,345</td>
<td>3,457</td>
</tr>
<tr>
<td>Computer and Mathematical</td>
<td>46</td>
<td>665</td>
<td>1,716</td>
</tr>
<tr>
<td>Architecture and Engineering</td>
<td>32</td>
<td>367</td>
<td>829</td>
</tr>
<tr>
<td>Life, Physical and Social Science</td>
<td>5</td>
<td>248</td>
<td>488</td>
</tr>
<tr>
<td>Community and Social Service</td>
<td>18</td>
<td>169</td>
<td>408</td>
</tr>
<tr>
<td>Legal</td>
<td>29</td>
<td>269</td>
<td>892</td>
</tr>
<tr>
<td>Education, Training and Library</td>
<td>104</td>
<td>1,233</td>
<td>2,838</td>
</tr>
<tr>
<td>Arts, Design and Entertainment, Sports and Media</td>
<td>21</td>
<td>356</td>
<td>835</td>
</tr>
<tr>
<td>Healthcare Practitioner and Technical</td>
<td>81</td>
<td>1,231</td>
<td>2,844</td>
</tr>
<tr>
<td>Healthcare Support</td>
<td>8</td>
<td>109</td>
<td>317</td>
</tr>
<tr>
<td>Protective Service</td>
<td>33</td>
<td>278</td>
<td>562</td>
</tr>
<tr>
<td>Food Preparation and Serving Related</td>
<td>51</td>
<td>601</td>
<td>1,426</td>
</tr>
<tr>
<td>Building and Grounds Cleaning and Maintenance</td>
<td>16</td>
<td>137</td>
<td>680</td>
</tr>
<tr>
<td>Personal Care and Service</td>
<td>31</td>
<td>291</td>
<td>1,020</td>
</tr>
<tr>
<td>Sales and Related</td>
<td>245</td>
<td>2,644</td>
<td>5,819</td>
</tr>
<tr>
<td>Office and Administrative Support</td>
<td>158</td>
<td>1,760</td>
<td>3,908</td>
</tr>
<tr>
<td>Farming and Fishing and Forestry</td>
<td>10</td>
<td>19</td>
<td>21</td>
</tr>
<tr>
<td>Construction and Extraction</td>
<td>29</td>
<td>287</td>
<td>899</td>
</tr>
<tr>
<td>Installation, Maintenance and Repair</td>
<td>4</td>
<td>136</td>
<td>462</td>
</tr>
<tr>
<td>Production</td>
<td>22</td>
<td>250</td>
<td>810</td>
</tr>
<tr>
<td>Transportation and Material Moving</td>
<td>32</td>
<td>472</td>
<td>887</td>
</tr>
</tbody>
</table>

### COMMUTE

**2013-2017 Workers 18 and Older**

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Drive Alone</td>
<td>894</td>
<td>11,489</td>
<td>28,207</td>
</tr>
<tr>
<td>Carpool</td>
<td>102</td>
<td>738</td>
<td>1,743</td>
</tr>
<tr>
<td>Bus</td>
<td>1</td>
<td>29</td>
<td>63</td>
</tr>
<tr>
<td>Streetcar</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Subway</td>
<td>3</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Railroad</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Ferryboat</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Taxi/Cab</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Motorcycle</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Bicycle</td>
<td>0</td>
<td>0</td>
<td>23</td>
</tr>
<tr>
<td>Walked</td>
<td>10</td>
<td>84</td>
<td>212</td>
</tr>
<tr>
<td>Other Means</td>
<td>6</td>
<td>68</td>
<td>189</td>
</tr>
<tr>
<td>Work at Home</td>
<td>55</td>
<td>988</td>
<td>2,644</td>
</tr>
</tbody>
</table>

©2020 CBRE. This information has been obtained from sources believed reliable. We have not verified it and make no guarantee, warranty or representation about it. Any projections, opinions, assumptions or estimates used are for example only and do not represent the current or future performance of the property. You and your advisors should conduct a careful, independent investigation of the property to determine to your satisfaction the suitability of the property for your needs. Source: Envi Page 5 ProjectID:532269
### INDUSTRY

<table>
<thead>
<tr>
<th>Industry</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Employed Civilian Population 16+</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Agriculture, Forestry, Fishing, and Hunting</td>
<td>3 0.2%</td>
<td>115 0.8%</td>
<td>203 0.6%</td>
</tr>
<tr>
<td>Mining, Quarrying, and Oil and Gas Extraction</td>
<td>1 0.1%</td>
<td>12 0.1%</td>
<td>58 0.2%</td>
</tr>
<tr>
<td>Construction</td>
<td>68 5.5%</td>
<td>655 4.4%</td>
<td>2,086 5.8%</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>103 8.3%</td>
<td>1,580 10.5%</td>
<td>3,988 10.9%</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>52 4.2%</td>
<td>512 3.4%</td>
<td>1,249 3.5%</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>168 13.6%</td>
<td>1,633 10.8%</td>
<td>3,701 10.2%</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>21 1.7%</td>
<td>369 2.5%</td>
<td>879 2.4%</td>
</tr>
<tr>
<td>Utilities</td>
<td>6 0.5%</td>
<td>67 0.4%</td>
<td>142 0.4%</td>
</tr>
<tr>
<td>Information</td>
<td>41 3.3%</td>
<td>395 2.6%</td>
<td>830 2.3%</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>188 15.2%</td>
<td>1,928 12.8%</td>
<td>3,911 10.7%</td>
</tr>
<tr>
<td>Real Estate and Rental and Leasing</td>
<td>26 2.3%</td>
<td>539 3.6%</td>
<td>902 2.5%</td>
</tr>
<tr>
<td>Professional, Scientific, and Technical Services</td>
<td>123 10.0%</td>
<td>1,523 10.1%</td>
<td>3,897 10.7%</td>
</tr>
<tr>
<td>Management of Companies and Enterprises</td>
<td>0 0.0%</td>
<td>50 0.3%</td>
<td>159 0.4%</td>
</tr>
<tr>
<td>Admin. and Support and Waste Mgmt. Services</td>
<td>27 2.2%</td>
<td>330 2.2%</td>
<td>935 2.6%</td>
</tr>
<tr>
<td>Educational Services</td>
<td>123 10.0%</td>
<td>1,474 9.8%</td>
<td>3,713 10.3%</td>
</tr>
<tr>
<td>Health Care and Social Assistance</td>
<td>124 10.0%</td>
<td>1,836 12.2%</td>
<td>4,493 12.3%</td>
</tr>
<tr>
<td>Arts, Entertainment and Recreation</td>
<td>21 1.7%</td>
<td>217 1.4%</td>
<td>737 2.0%</td>
</tr>
<tr>
<td>Accommodation and Food Services</td>
<td>52 4.2%</td>
<td>807 5.4%</td>
<td>1,748 4.8%</td>
</tr>
<tr>
<td>Other Services, Except Public Administration</td>
<td>57 4.6%</td>
<td>608 4.0%</td>
<td>1,715 4.7%</td>
</tr>
<tr>
<td>Public Administration</td>
<td>29 2.4%</td>
<td>400 2.7%</td>
<td>1,080 3.0%</td>
</tr>
</tbody>
</table>

### VEHICLES

<table>
<thead>
<tr>
<th>Household Type</th>
<th>No Vehicles</th>
<th>1 Vehicles</th>
<th>2 Vehicles</th>
<th>3 Vehicles</th>
<th>4 Vehicles</th>
<th>Over 5 Vehicles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2017 Households</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>16 1.7%</td>
<td>212 23.0%</td>
<td>432 46.8%</td>
<td>194 21.0%</td>
<td>53 5.7%</td>
<td>16 1.7%</td>
</tr>
<tr>
<td></td>
<td>923</td>
<td>9,306</td>
<td>23,259</td>
<td>703</td>
<td>3.0%</td>
<td>3.0%</td>
</tr>
</tbody>
</table>
### Year Built

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2017 Housing Units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Served Later than 2010</td>
<td>34</td>
<td>96</td>
<td>361</td>
</tr>
<tr>
<td>Served 2000-2009</td>
<td>135</td>
<td>1,257</td>
<td>2,957</td>
</tr>
<tr>
<td>Served 1990-1999</td>
<td>369</td>
<td>3,925</td>
<td>8,244</td>
</tr>
<tr>
<td>Served 1980-1989</td>
<td>293</td>
<td>2,825</td>
<td>5,804</td>
</tr>
<tr>
<td>Served 1970-1979</td>
<td>111</td>
<td>965</td>
<td>3,653</td>
</tr>
<tr>
<td>Served 1960-1969</td>
<td>11</td>
<td>138</td>
<td>1,301</td>
</tr>
<tr>
<td>Served 1950-1959</td>
<td>31</td>
<td>177</td>
<td>1,093</td>
</tr>
<tr>
<td>Served 1940-1949</td>
<td>5</td>
<td>31</td>
<td>175</td>
</tr>
<tr>
<td>Served Before 1939</td>
<td>21</td>
<td>167</td>
<td>480</td>
</tr>
</tbody>
</table>

### Housing Units

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2019 Housing Units</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2019 Vacant Housing Units</td>
<td>47</td>
<td>271</td>
<td>720</td>
</tr>
<tr>
<td>2019 Occupied Housing Units</td>
<td>1,018</td>
<td>9,696</td>
<td>24,035</td>
</tr>
<tr>
<td>2019 Owner Occupied Housing Units</td>
<td>905</td>
<td>8,189</td>
<td>20,699</td>
</tr>
<tr>
<td>2019 Renter Occupied Housing Units</td>
<td>113</td>
<td>1,507</td>
<td>3,337</td>
</tr>
</tbody>
</table>

### Household Size

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010 Households</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1 Person Household</td>
<td>192</td>
<td>1,593</td>
<td>4,014</td>
</tr>
<tr>
<td>2 Person Household</td>
<td>296</td>
<td>3,015</td>
<td>7,645</td>
</tr>
<tr>
<td>3 Person Household</td>
<td>169</td>
<td>1,702</td>
<td>4,227</td>
</tr>
<tr>
<td>4 Person Household</td>
<td>183</td>
<td>1,941</td>
<td>4,645</td>
</tr>
<tr>
<td>5 Person Household</td>
<td>83</td>
<td>816</td>
<td>1,979</td>
</tr>
<tr>
<td>6 Person Household</td>
<td>18</td>
<td>230</td>
<td>557</td>
</tr>
<tr>
<td>7 or More Person Household</td>
<td>7</td>
<td>.77</td>
<td>205</td>
</tr>
<tr>
<td>2010 Average Household Size</td>
<td>2.29</td>
<td>2.84</td>
<td>2.80</td>
</tr>
<tr>
<td>2019 Average Household Size</td>
<td>2.30</td>
<td>2.84</td>
<td>2.81</td>
</tr>
</tbody>
</table>

### Language

<table>
<thead>
<tr>
<th>Year</th>
<th>1 Mile</th>
<th>3 Miles</th>
<th>5 Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>2013-2017 Pop 5+ by Language Spoken at Home</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Only English</td>
<td>1,982</td>
<td>23,227</td>
<td>57,415</td>
</tr>
<tr>
<td>Spanish</td>
<td>23</td>
<td>325</td>
<td>829</td>
</tr>
<tr>
<td>Other Indo-European Language</td>
<td>20</td>
<td>572</td>
<td>1,768</td>
</tr>
<tr>
<td>Asian-Pacific Island Language</td>
<td>23</td>
<td>764</td>
<td>2,188</td>
</tr>
<tr>
<td>Other Language</td>
<td>0</td>
<td>57</td>
<td>238</td>
</tr>
</tbody>
</table>
February 24, 2020

Rob Coleman
ERC Building Company
5102 South Pinnacle Hills Parkway
Rogers, AR 72758

Re: Zoning – Pure Apartment – 2100 Pure Street

Dear Mr. Coleman:

Please be advised that the 5.9 acre property located on the north and south sides of Cloverleaf Drive, east of Jungerman Road is located in the City of St. Peters, Missouri and is currently zoned PUD Planned Urban Development. The PUD agreement was originally entered into by the City and a prior owner under contract as approved by Ord. 5971. The PUD agreement was amended via Ord. 6392 to allow an extension of time for the construction of any public improvements and again amended in March of 2016 to amend the site plan, building elevations and specific conditions related to the building setback, unit size, and density. A plan modification approved the location and design of carports within the development. The PUD agreement was also modified to remove a fence requirement.

Variances approved for the site included one in 2016 and another in 2017 which allowed additional density and to allow building encroachments over the front building line. A variance to allow some reduced unit sizes was also approved in 2017. A variance was approved on June 19, 2019 to allow a unit density of 143.

The City worked well with ERC in the development of this property; the project manager and contractors obtained all needed approvals and coordinated well with City staff, including building and engineering inspectors.

Please call upon this office with any questions or comments regarding this information.

Sincerely,

Julie T. Powers, AICP
Director of Planning, Community and Economic Development
MSD CORRESPONDENCE
March 5, 2020

Rubi Coleman
5102 South Pinnacle Hills Parkway
Rogers, TX 72753

RE: ERC Multi Family Development
    (2665 Highway 109)
    Basic Conceptual Review
    MSD Rec. No. 20CNCNPB-00012

Dear Mr. Coleman:

We have completed a basic conceptual review of a preliminary planning study, the ERC Multi Family Development located at 2665 Highway 109 in the City of Wildwood, MO.

Project Overview

The project is located in the Missouri River WWTP service area and in the Bonhomme Creek watershed (storm water). Separate storm and sanitary sewers service this area of the District.

Stormwater Management

The existing site has a drainage break that creates two drainage areas. This drainage pattern shall be maintained. The areas tributary area to each drainage area shall be maintained as closely as possible.

The project is located in a release rate watershed. If the calculated runoff differential for the project is greater than 5 CFS, the watershed release rates will be in effect for this project. If the project differential is less than 5 CFS, the site will be reviewed under the zero increase criteria.

The differential runoff for the site shall be calculated based on the MSD Rules and Regulations. The pervious pavers may use a minimum PI factor of 1.7. All proposed site improvements shall be included in the differential calculation, including the proposed trail and improvements within the road right-of-way.

The proposed site will disturb more than one acre. Post Construction Best Management Practices (BMPs) are required to treat the extents of the projects disturbed areas per our regions MS4 permit. A maintenance agreement and reserve area will need to be executed by the property owner to ensure perpetual maintenance and operation of the BMP.

Water Quality Volume, Channel Protection Storage Volume, and Flood Protection Volume will be required for this site. Offsite drainage areas should be routed around the detention basins.

Per the provided plan, the chambers used to provide flood protection volume overlap the pervious paver area. The underground basin should not encroach into the BMP reserve area.
The maximum runoff ratio to the BMP shall not be exceeded.

The project is new development. The water quality will be required to mimic existing conditions. This shall be verified by a having maximum value of zero in the “Total Additional Volume Reduction Needed” on the MEP Spreadsheet tool.

The existing culvert under Highway 109 is not currently maintained by MSD.

All storm sewers that serve only this development and are wholly located within the development shall be private.

The storm sewer along Generations Drive is not currently mapped. The developer will be required to provide adequate information so that the sewer may be added to the MSD basemap.

**Sanitary Sewer Service**

The project is tributary to the Fastrak pump station. Sanitary flow estimates must be provided. These shall include the estimated average daily and peak flow rates. These estimates are needed to determine the sanitary requirements for the site. Sanitary improvements, including pump station upgrades may be required based on the flow rates provided.

The pool backwash may be connected to the sanitary sewer per the MSD Rules and Regulations.

All sanitary sewers that serve only this development and are wholly located within the development shall be private.

Easements may be required to serve adjacent unserved parcels.

The connection fee for this project will be determined during the formal plan review, based on the number and size of the domestic water services.

**Other Items**

Zone of influence sections may be required. The bottom of the footings needs to be outside of a 1:1 slope to the flowline of the sewer, BMP, or detention basin. Building footings may be extended to meet this requirement.

The proposed garages shall be connected to the sewer system per the Rules and Regulations. Care shall be taken not to allow storm water into the sanitary system through the garage drains.

New encroachments into MSD easements or reserve areas will not be allowed.

Approval from the Missouri Department of Transportation will be required.

Approval from the City of Wildwood will be required.

A G76 permit may be required from the Missouri Department of Natural Resources.
Limitations of Conceptual Review

Detailed improvement plans for this project are not under formal review by the District at this time. Those plans and the supporting engineering calculations shall be formally submitted to MSD for review, approval and permits prior to the commencement of construction activities.

This conceptual review is based upon an evaluation of preliminary plans and preliminary information, and is subordinate to the review and approval of the detailed improvement plans and engineering design.

Sincerely,

Robert A. Miller
Principal Engineer
Engineering/Planning-Development Review
METRO FIRE CORRESPONDENCE
The NFPA 13R system puts you at the 3000 gpm, it would have to be an NFPA 13 system to get the reduced flow.

NFPA 13R min hydrant flow 1500 gpm with the next two hydrants flowing 750 gpm at 20 PSI residual. Total of 3000 GPM.

NFPA 13 min hydrant flow 1000 gpm with the next two hydrants flowing 500 gpm at 20 PSI residual. 2000 GPM.
George,

The buildings will be sprinklered as per 903.1.2 which is a NFPA 13 R sprinkler system. Please pass this information on and let me know if you need any additional information.

Robert Sharp
100 W. Center Street, Suite 300
Fayetteville, Arkansas 72701
Tel: 479.442.0225 rob@sharparch.net

From: George M. Stock, P.E. [mailto:george.stock@stockassoc.com]
Sent: Wednesday, April 08, 2020 9:01 AM
To: Rob Coleman; rob@sharparch.net; Eric Fischer, P.E.; Cheri Evans
Subject: FW: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (63461)

Gentlemen, please see note below, before I send to MAWC please confirm if the Buildings will meet the specification he describes below. Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100

From: Rod Cook <rodcro@metrowest-fire.org>
Sent: Wednesday, April 08, 2020 8:40 AM
To: George M. Stock, P.E. <george.stock@stockassoc.com>
Subject: RE: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (63461)

CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

George,

The fire flow for the complex would be 3000 GPM. The hydrants would be at 450' spacing. 1500 GPM at 20psig residual from any single hydrant. If the buildings were protected by an NFPA 13 system 903.3.1.1 2015 IFC. The flow could drop to 2000 GPM.

Let me know if you have additional questions
From: George M. Stock, P.E. <george.stock@stockassoc.com>
Sent: Monday, March 16, 2020 8:41 AM
To: Rod Cook <rcook@metrowest-fire.org>
Subject: FW: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (6641)

Rodney, pursuant to our call this morning, attached is the Preliminary Site Plan for the 120 unit Multi Family project. In addition, I have included the Water map. I will get the other information you requested regarding Building sizes and if planned to be sprinkled... Thanks, George
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100
MAWC CORRESPONDENCE
George,

When the YMCA and the subdivision were constructed approx. 15 years ago, fire flows were lower than what is typically required today. I won't know for sure until we get the actual required amount from Metro West, but I'm sure it will be at least 1500 gpm. We are looking at the area to determine what additional ppe is needed but most likely (if needed) it will have to come from the north side of Hwy 100 & 109 intersection south to Old Manchester at 109. Perhaps something equivalent will work and we will look at additional options, but this is the optimal location to provide better flows to the area.

I’ll follow up later next week once we’ve had a chance to take a more detailed look at the hydraulics specific to this development.

Thanks,
Derek

---

**EXTERNAL EMAIL:** The Actual Sender of this email is george.stock@stockassoc.com "Think before you click!"

Derek, How are the Fire Flows met with the College, YMCA immediately North and adjacent to this site, as well as the Residential to the South? What Fire Flow is available off the existing system? Lastly, a Main extension from where to where? Thanks, George

---

**George M. Stock, P.E.**
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63035
Pressure during peak demand at this location will be between 30-35 psi at times. In non-peak times it is usually in the mid 40 psi range. There shouldn’t be anything consistently below this. The bigger issue at this location will be the fire flows that are required. Most likely an offsite main extension will be required to achieve the fire flows that are now required in this area.

Please let me know if you would like to discuss further.

Thanks,
Derek

Derek Linam, P.E.
Engineering Manager
Missouri American Water Company
derek.linam@amwater.com
P: 314-996-2456
C: 314-486-0508

EXTERNAL EMAIL: The Actual Sender of this email is george.stock@stockassoc.com "Think before you click!"
George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100

From: Sue A Moyihan <Sue.Moyihan@amwater.com>
Sent: Wednesday, March 04, 2020 2:08 PM
To: George M. Stock, P.E. <george.stock@stockassoc.com>; Charles D Pruitt <Dave.Pruitt@amwater.com>; Eric Fischer, P.E. <eric.fischer@stockassoc.com>; Derek R Linam <Derek.Linam@amwater.com>; Cheri Evans <cheri.evans@stockassoc.com>; Rob Coleman <robco@erc.com>
Subject: RE: 2655 Highway 109 - Wildwood, MO (6641)

Let me look into this for you.

Sue

From: George M. Stock, P.E. <george.stock@stockassoc.com>
Sent: Wednesday, March 4, 2020 1:43 PM
To: Sue A Moyihan <Sue.Moyihan@amwater.com>; Charles D Pruitt <Dave.Pruitt@amwater.com>; Eric Fischer, P.E. <eric.fischer@stockassoc.com>; Derek R Linam <Derek.Linam@amwater.com>; Cheri Evans <cheri.evans@stockassoc.com>; Rob Coleman <robco@erc.com>
Subject: FW: 2665 Highway 109 - Wildwood, MO (6641)

EXTERNAL EMAIL: The Actual Sender of this email is george.stock@stockassoc.com "Think before you click!".

Hello Sue and Dave, we are working on a New 120 Unit Multi-Family project at above the address. The existing residential development to our South “The Meadows at Wildwood” is telling us that the Water pressure is only 25-30 psi within in their development. Can you confirm if the Pressure range they are quoting is accurate? They are worried our development may impact those existing operating pressures... Please advise. Thanks, George
From: Eric Fischer, P.E. <eric.fischer@stockassoc.com>
Sent: Wednesday, February 05, 2020 9:30 AM
To: Sue A. Moylinan <sue.moylinan@amwater.com>
Cc: George M. Stock, P.E. <george.stock@stockassoc.com>
Subject: 2655 Highway 109 - Wildwood, MO (6641)

Good morning Sue,

We have a project located at 2665 Highway 109 in Wildwood just south of the YMCA. Attached is a site plan and your water maps. Would you happen to have any flow or pressure information on these mains along our site?

Thanks.
Thanks George. We will review and determine what offsite improvements, if any, are needed to achieve the 2000 gpm requirement.

Derek Linam, P.E.
Engineering Manager
Missouri American Water Company
derek.linam@amwater.com
P: 314-996-2456
C: 314-486-0508

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100

From: George M. Stock, P.E. <george.stock@stockassoc.com>
Sent: Wednesday, April 8, 2020 11:59 AM
To: radco@matrwest-fire.org; Cheri Evans <cheri.evans@stockassoc.com>; Eric Fischer, P.E.
<eric.fischer@stockassoc.com>

Subject: FW: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (6641)

Rod, see confirmation from Architect. Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100

From: Robert Sharp <rob@sharparch.net>
Sent: Wednesday, April 08, 2020 11:57 AM
To: George M. Stock, P.E. <george.stock@stockassoc.com>; Rob Coleman <robco@erc.com>; Eric Fischer, P.E. <eric.fischer@stockassoc.com>; Cheri Evans <cheri.evans@stockassoc.com>
Subject: RE: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (6641)

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George,

The buildings will be sprinklered as per 903.1.2 which is a NFPA 13 R sprinkler system. Please pass this information on and let me know if you need any additional information.

Robert Sharp
100 W. Center Street, Suite 300
Fayetteville, Arkansas 72701
Tel: 479.442.0229 rob@sharparch.net

From: George M. Stock, P.E. [mailto:george.stock@stockassoc.com]
Sent: Wednesday, April 08, 2020 9:01 AM
To: Rob Coleman; rob@sharparch.net; Eric Fischer, P.E.; Cheri Evans
Subject: FW: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (6641)

Gentlemen, please see note below, before I send to MAWC please confirm if the Buildings will meet the specification he describes below. Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

George,

The fire flow for the complex would be 3000 GPM. The hydrants would be at 450' spacing. 1500 GPM at 20psi residual from any single hydrant. If the buildings were protected by an NFPA 13 system 903.3.1.1.2015 IFC. The flow could drop to 2000 GPM.

Let me know if you have additional questions

J. Rodney Cook
Deputy Chief, Fire Marshal
Division of Community Risk Reduction
Metro West Fire Protection District
636.458.2100
636.821.5806 Direct
RodCo@MetroWest-Fire.org
MetroWest-Fire.org

From: George M. Stock, P.E. <george.stock@stockassoc.com>
Sent: Monday, March 16, 2020 8:41 AM
To: Rod Cook <rodc@metrowest-fire.org>
Subject: FW: Proposed 120 Unit Multi Family - 2665 Highway 109 - Wildwood, MO (63041)

Rodney, pursuant to our call this morning, attached is the Preliminary Site Plan for the 120 unit Multi Family project. In addition, I have included the Water map. I will get the other information you requested regarding Building sizes and if planned to be sprinkled... Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100
http://www.stockassoc.com

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Office: (636) 530-9100

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MODOT CORRESPONDENCE
CAUTION: This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Thank you, Mr. Stock, for the plan proposal. It appears that there is minor grading proposed within the right of way and will need a MoDOT excavation permit. We recommend you adjust the grading to avoid the need for a MoDOT permit.

Please be advised that MoDCT finds your concept acceptable, subject to review and approval of design details. Should the plan change to propose no work within the right of way, we will expect to receive a plan revision for further review and comment.

Please let me know if you need anything further.

Jim Bodart
MoDOT St. Louis District-SW St. Louis County Permits
Senior Traffic Specialist
Traffic Management Center
14301 South Outer Forty, Chesterfield, MO 63017
314.565.6713

From: george.stock.stockassoc.com <george.stock@stockassoc.com>
Sent: Monday, May 11, 2020 8:07 AM
To: JAMES E BODART <James.Bodart@modot.mo.gov>; Ty Gramling, P.E. <ty.gramling@stockassoc.com>; Eric Fischer, P.E. <eric.fischer@stockassoc.com>; Cheri Evans <cheri.evans@stockassoc.com>
Subject: FW: Proposed 120 unit MultiFamily Development at 2665 State Route 109 (6641.1)

Good morning Jim, I am circling back with you from our email string on 11/12/19. We have revised our Preliminary Plans to remove any access additions to Hwy 109 and any proposed modifications along Hwy. 109. The work within MoDot ROW will be associated with the implementation of the City Trail, i.e. grading and Drainage. Could you please review and issue us a Conceptual letter f approval? Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Pkwy.
St. Louis, MO 63005
Desk: 636.681.2403
Cell:
Cheri Evans

From: JAMES E BODART <James.Bodart@modot.mo.gov>
Sent: Tuesday, November 12, 2019 12:09 PM
To: George M. Stock, P.E.; Chuck Hulse, P.E., P.L.S.; Kate Stock Gitto, E.I.; Cheri Evans
Subject: RE: Proposed Multi- Family Development on Lot 14 of Turkey Track Corner Subdivision (6641) , adj. to 5935 and 4771
Attachments: We sent you safe versions of your files; 20191111100105148.pdf; Rte 109- Proposed Crescent Street.kmz

Mimecast Attachment Protection has deemed this file to be safe, but always exercise caution when opening files.

Thank you, George. And I would appreciate a copy of the deeds for review.

Sight distance is not ideal for left turns out, but you should have access to Generations Drive, which will get you to the signal at New College Avenue...looks like it's a public street. We would resist full access at the proposed location, but may be able to permit a Right In/Right Out similar to the YMCA. You may want to consider widening Rte 109 to construct an inbound left turn lane. The widening will, likely, require R/W dedication within this frontage to assure cur standards.

Please let me know if this helps.

Jim Bodart
MoDOT St. Louis District-SW St. Louis County Permits
Senior Traffic Specialist
601 Salt Mill Road, Chesterfield, MO 63017
314.565.6713

From: george_stock.stockassoc.com
Sent: Monday, November 11, 2019 10:44 AM
To: JAMES E BODART; Chuck Hulse, P.E., P.L.S.; Kate Stock Gitto, E.I.; Cheri Evans
Subject: FW: Proposed Multi- Family Development on Lot 14 of Turkey Track Corner Subdivision (6641) , adj. to 5935 and 4771

Good morning Jim, we are just getting started on a New Multi Family Development in the City of Wildwood. The site is located on the west side of Hwy. 109, immediately south of the existing YMCA. Attached is our Alta Survey as well as a Conceptual Site Plan prepared by the Developer and Architect. The purpose of my email this morning to you is to request your review of the attached concept which includes a ne Full access drive to Hwy. 109... We have reviewed the Title Work on the Property and we don't find that the Access along this property's Frontage ( 350.86 ft. ) has been restricted by deed. Please confirm the proposed access is Feasible to MoDot. Any questions please feel free to give me a call. Thanks, George

George M. Stock, P.E.
President
Stock & Associates Consulting Engineers, Inc.
257 Chesterfield Business Plz.
St. Louis, MO 63005
Office: (314) 920-9100
Information Report
for
P.Z. 3-20 Planning and Zoning Commission c/o Department of Planning and Parks
City of Wildwood, Missouri
Prepared by the Department of Planning and Parks
July 20, 2020 Meeting
"Planning Tomorrow Today"

Petition: P.Z. 3-20
Petitioner: City of Wildwood, Missouri c/o Department of Planning, 16860 Main Street, Wildwood, Missouri, 63040

Request: A request to consider the development of new legislation to possibly be included within Chapter 415 (Zoning Ordinance) of the Code of Ordinances of the City of Wildwood relating to properties that are located within the City of Wildwood that present unique histories of use or character, which must be considered needing greater scrutiny and protections due to their environmental legacies, site, soil, and/or physical characteristics, or proximity to a stream, creek, or ephemeral drainageways that ultimately presents a higher than acceptable risk to the public, if they are to be disturbed, developed, and placed into active use. Such situations necessitate the need for the consideration of a new Special Procedures Overlay District, with associated regulations, that provides a minimum level of protections to all parties that are assessed as necessary, while ensuring a thorough and complete review and comment period for the community.

Zoning District(s): All
Location: City-Wide
Wards: All
Public Hearing Dates: March 16, 2020 and April 6, 2020
Date and Vote on Information Report: July 20, 2020 - TBD
Presentation of Draft Regulations: April 20, 2020
Report: Attachment A
New Regulations: Attachment B
Background Information: Attachment C
<table>
<thead>
<tr>
<th><strong>School District:</strong></th>
<th>Rockwood</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fire Districts:</strong></td>
<td>Eureka, Metro West, and Monarch</td>
</tr>
<tr>
<td><strong>Law Enforcement:</strong></td>
<td>St. Louis County Police Department – Wildwood Precinct</td>
</tr>
</tbody>
</table>
BACKGROUND >>>

The City of Wildwood has had under review for a number of years a development site that adjoins the Russell Bliss Property, which was the location of a federal cleanup effort due to the illegal dumping of dioxin tainted oil, chemicals, and other toxic materials. A proposed residential subdivision was submitted to the City in 1998 that shared a common property line with the Bliss Site, which, again, had designated areas upon it that have been described as locations where illegal dumping did occur and were addressed by a cleanup action or protected from disturbance and use for the very foreseeable future. The owners of the property that sold it to the current developer noted they had never allowed Mr. Bliss to access their property and knew his activities were a problem. Regardless, the nature of the dumping by Mr. Bliss, which appeared to be indiscriminate of boundary lines or ownerships and the types of materials, has led to serious environmental harm and increased health risks. This situation means the impact of the flow of these dangerous chemical compounds on downstream properties was substantial and widespread, as they followed natural drainage areas and the bedrock patterns found below the surface.

These circumstances have caused a number of different actions by a diverse groups of constituencies, which ultimately led to a decision by the City Council to stop any further reviews associated with this proposed residential site and hold all permit issuances on the planned development of this property, until greater assurances could be provided regarding the safety of it for long-term use for residential uses. This action, a stay or moratorium, was authorized by a vote of City Council and then led to a new round of testing, analysis, debate, and finally litigation by the developer/owner of the property. The date of this action of the stay or moratorium by the City Council was December 10, 2007.

RECENT ACTIONS >>>

During this period of time between the December 10, 2007 action by City Council, i.e. the stay or moratorium, and a new affirmation of it on November 12, 2019, it has become increasingly apparent the zoning tools that are currently in place are not as comprehensive or appropriate as such would be under normal circumstances, when difficult sites and special circumstances are encountered relative to the property or properties under consideration. Extreme examples of these types of circumstances are properties that are listed on the Environmental Protection Agency’s National Priorities List (NPL), which indicates sites with major legacies from past uses or on-going issues. Acknowledging these types of contaminated sites, along with others that present the other difficult characteristics, or have experienced past disasters, such as flooding, the need to have better approaches to these locations became clearer to all City decisionmakers.

The Planning and Zoning Commission held public hearings regarding this matter on March 16, 2020 and April 6, 2020 and heard presentations from the Department of Planning upon it. The subject of these presentations was a newly-proposed zoning overlay district that would be used to address the most distressed, environmentally impacted, or otherwise specific sites that would potentially create a
high risk to the public’s health, safety, and welfare, if developed for certain activities. The origin of this concept for a new type of overlay district was the Ellisville-Bliss Properties and the impact it has had on certain Wildwood sites.

With the hearing process completed, the matter was then presented to the Planning and Zoning Commission, but with only the new, draft regulations being offered, with no formal report at first. This approach was taken, given the item includes a complete, and new, set of regulations relating to this zoning overlay district. The Department wanted to first present the regulations, in draft form, to the Planning and Zoning Commission for discussion purposes, while also offering the specifics of certain major points contained therein, and then hear opinions, comments, and suggestions from members, before completing its Information Report. This approach is different than the typical process that has been used by the Department of Planning in its development of new zoning or land use regulations, but it believes appropriate, in this case, given the subject matter, the potential restrictiveness of the draft regulations, and their relative complexity.

CURRENT REQUEST >>>

P.Z. 3-20 City of Wildwood Planning and Zoning Commission, c/o Department of Planning, 16860 Main Street, Wildwood, Missouri 63040 – A request to consider the development of new legislation to possibly be included within Chapter 415 (Zoning Ordinance) of the Code of Ordinances of the City of Wildwood relating to properties that are located within the City of Wildwood that present unique histories of use or character, which must be considered needing greater scrutiny and protections due to their environmental legacies, site, soil, and/or physical characteristics, or proximity to a stream, creek, or ephemeral drainageways that ultimately presents a higher than acceptable risk to the public, if they are to be disturbed, developed, and placed into active use. Such situations necessitate the need for the consideration of a new Special Procedures Overlay District, with associated regulations, that provides a minimum level of protections to all parties that are assessed as necessary, while ensuring a thorough and complete review and comment period for the community. *(Wards – All)*

ANALYSIS >>>

In considering these types of sites, the Department had noted at the public hearing on this matter that a new zoning tool should be considered for use that would include certain investigative components, data development and/or collection, beyond that of a typical site, integration with other agencies, of which they are not focused on stormwater management, and long-term monitoring and dissemination of information from the first buyers to the last of the subject project or lots. The zoning tool would be modelled to ensure it addresses these matters, while also offering the following items to improve the review processes in this regard:

1. More information about the anticipated or existing environmental hazards or physical characteristic situations, as part of the initial application process for future use of the site, versus depending more so on best available data.
2. More engagement by the development entity or property owner of experts in the applicable field, which would be verified by credentials submitted to the City for review. Costs associated with these experts would be borne by applicant, not the City.
4. Greater deductions in the gross acreage of the site for environmental or physical factors than those currently set forth in the Planned Residential Development Overlay District (PRD) regulations or the Natural Resource Protection Standards. Currently, the Planned Residential Development Overlay District (PRD) eliminates floodplain areas and rights-of-way from the calculation of net acreage for the final determination of allowable densities for residential projects.
5. Greater prohibitions for any site disturbances in identified areas of concerns, regardless of soil and slope characteristics.
6. Greater remediation efforts by the developer through cooperation with federal and State agencies, when applicable.
7. Longer comment periods and more reviews by outside agencies with pertinent roles in the development process associated with these types of sites.
8. Increase the levels of scrutiny of public space allocations, so as to avoid unsuitable areas being dedicated as such.
9. Greater oversight of construction processes, if development allowances are granted on a special circumstances site.
10. Improve disclosures to users and buyers beyond the first set of them, specifically as properties are transferred years or decades later.
11. More after-development inspections and site monitoring to ensure all components of the governing ordinances for the projects are still adhered to, are in place, being maintained, or otherwise still applicable and germane.
12. Apply the State of Missouri's land disturbance permit requirements to all sites, regardless if they are one (1) acre or greater in size (application of such is currently limited to that area threshold).

Not all of these items may be applicable to each special circumstance site that is under consideration and review by the City, but would be so structured in a new set of zoning regulations to achieve the intended outcome, all being based upon the individual situations of each proposal.

The Department is also recommending in this regard the format for such new regulations for these types of sites mirror that of the Planned Residential Development Overlay District (PRD) in terms of process, from its application components to the hearing procedures, and then beyond to plan submittals and considerations. This mirroring of format between these two (2) special procedures ensures a degree of consistency and familiarity for property owners, the development community, City decisionmakers, and others. Additionally, this format has been used in the City for over twenty-four (24) years with success, which would indicate a similar experience would be found for these special circumstances' sites.

The need for such a new set of regulations could be argued by some not supportive of such on the grounds that other procedures are already available to the City in its land use codes and regulations that could achieve the same levels of protection and review. However, the Department believes that such may not be the case, while, even if acknowledging this argument as accurate, is ripe for omissions, when drawing on multiple sources to achieve a singular goal. Therefore, the Department does believe this new overlay district concept has merits to better protect sites, users, and others from potential
harmful and contaminatec properties, locations that flood, or other circumstances that are unique and not found in most settings within the City of Wildwood. This new overlay district would focus all components into a single set of regulations, while identifying potential locations as well, which was the identified and the Planning and Zoning Commission Members' focus during its discussion at the April 20, 2020 discussion on this matter.

A critical component of this proposed overlay district that was identified by the Planning and Zoning Commission, at its meeting on April 20, 2020, was the need to identify the potential locations for the application of this new zoning procedure. The identification of potential locations would not necessarily be all inclusive, but certainly could identify other sites, when determined to fit its criteria. Additionally, if a location would be included and determined not needed to be on such, it could be eliminated, if applicable. The locations the Department is recommending for inclusion and would be subject to this new overlay district, and associated regulations, comprise the following sites:

1. Any site, lot, or property that is listed, or has been listed, on a federal, State, or local registry of hazardous, toxic, or contaminated locations.
2. Any site, lot, or property that is a first-tier location to one (1) of these types of parcels of ground identified in Item #1 of this list.
3. Any site, lot, or property that has a history of flooding, which would include defined locations within identified areas of floodway or Zone AE (100-Year) floodplains, per Federal Emergency Management Agency’s Federal Insurance Rate Maps (FIRM).
4. Any site, lot, or property that has a portion of its defined boundaries that are within one hundred (100) feet of top of banks of Caulks Creek, Bonhomme Creek, and Wild Horse Creek.
5. Any site, lot, or property that has a historical use, such as industrial type, that by its nature used or stored certain materials, vehicles, or other substances that are harmful to human health, but not listed on an environmental registry.

These locations are identified on the attached map that has been prepared for the purposes of this presentation of information on this new and proposed planned overlay district. Certainly, the identification of locations can be viewed as impactful upon them, but the intent of this special produce permit is to ensure development is appropriate and presents no threat to human health and the natural environment of this community. The intent is not to preclude well-planned and appropriate development of properties that exist within the City of Wildwood.

To this end, the Department of Planning presented to the Planning and Zoning Commission, approximately sixty (60) days ago, a proposed set of regulations for its consideration. At that time, the Members requested the City Attorney provide a thorough review of these draft regulations, which has occurred. This revised set of draft regulations are attached to this report and included in Attachment B of this packet of information. These regulations have been revised by the City Attorney and reviewed by the Department of Planning as well. Accordingly, the Department is recommending the favorable consideration of this new overlay district, along with the list of potential sites, as well as the draft regulations herein attached.
This overlay district and associated regulations will achieve many goals, which includes the following items:

1. The overlay district will protect the public’s health, safety, and welfare.
2. The overlay district will allow the City’s most environmentally sensitive sites to receive a higher level of attention and ensure development that does occur upon them is appropriate for the setting and consistent with all of the land use codes of the City.
3. The overlay district will provide greater and longer protections for future buyers of those special circumstance sites, and subsequent divisions into more properties, by the more rigorous requirements associated with them.
4. The overlay district will complement other land use codes of the City as well.

When taken into context, the establishment of this new overlay district, per the regulations set forth herein, will place the City of Wildwood in a county-wide position to lead in the protection of any party from problem sites and gauge development proposals to the true carrying capacity of the land areas. These outcomes are positives for the City, and its property owners and residents.

**SUMMARY AND RECOMMENDATION >>>

The Department of Planning is recommending the Planning and Zoning Commission support the requested adoption of a new overlay district for special circumstances sites that are part of Wildwood. This new overlay district will promote better management of unique sites and allow for greater scrutiny of them as well. The draft, proposed regulations are provided below relative to this new overlay district process and achieve the list of goals developed by the Planning and Zoning Commission for this purpose.

**ATTACHMENT B – NEW REGULATIONS**

**ZONING ORDINANCE – CITY OF WILDCOOD, MISSOURI**

Chapter 415.505 Special Circumstances Overlay District (SCOD) - Revised
Prepared by the Department of Planning
July 20, 2020 Planning and Zoning Commission Meeting
“Planning Tomorrow Today”

A. **Scope Of Provisions.** This Section contains the Special Circumstances Overlay District (SCOD) procedure and standards. These regulations are in addition to general regulations appearing elsewhere in this Chapter, which are incorporated as part of this Section by reference.

B. **Purpose and Intent.** The purpose of the Special Circumstances Overlay District (SCOD) is to protect public health and the environment while allowing appropriate development activities within the SCOD. The requirements of the SCOD establishes a protective zoning process that places more focus on the assessment of public and environmental hazards that may exist on a property through a multiple step review process.
The requirements applicable to the SCOD will:

1. Assure that future land use in the SCOD is protective of human health;

2. Establish appropriate remediation of environmental hazards and the preservation of such remedial measures;

3. Require that development in the SCOD employ construction practices that are consistent with the protection of public health and the environment, as determined by the applicable federal, State, and/or local agency with jurisdictional background; and

4. Assure soil containing metal concentrations in excess of permissible levels is addressed in accordance with all federal, State, and local regulations/guidance.

The specific goals of the Special Circumstances Overlay District (SCOD) and procedure are to:

1. Obtain more information about the anticipated or existing environmental hazards or physical characteristic situations, as part of the initial application process for future use of the site, versus depending more so on best available data.

2. Establish longer comment periods and more reviews by outside agencies with pertinent roles in the development process associated with these types of sites.

3. Create more engagement by the development entity or property owner of experts in the applicable field, which would be verified by credentials submitted to the City for review. Costs associated with these experts would be borne by applicant, not the City.

4. Require more detailed presentation materials for the public hearing processes.

5. Assess greater deductions in the gross acreage of the site for environmental or physical factors than that are currently set forth in the Planned Residential Development Overlay District (PRD) regulations or the Natural Resource Protection Standards. Currently, the Planned Residential Development Overlay District (PRD) eliminates floodplain areas and rights-of-way from the calculation of net acreage for the final determination of allowable densities for residential projects.

6. Place greater prohibitions for any site disturbances in identified areas of concerns, regardless of soil and slope characteristics.

7. Increase the level of scrutiny of public space allocations, so as to avoid unsuitable areas being dedicated as such.

8. Authorize greater remediation efforts by the developer through cooperation with federal and State agencies, when applicable.

9. Improve disclosures to users and buyers beyond the first set of them, specifically as properties are transferred years or decades later.
10. Provide for greater oversight of construction processes, if development allowances are granted on a special circumstances site.

11. Integrate more after-development inspections and site monitoring to ensure all components of the governing ordinances for the projects are still adhered to, are in place, being maintained, or otherwise still applicable and germane.

C. Designation of Overlay District. The procedure for the establishment or amendment of the boundaries of the SCOD shall be as set forth in Section 415.560.

D. Procedures. Except as otherwise set forth herein, the procedures for approval of the development of any property, or part thereof, located within the SCOD shall be the same as set forth in Section 415.510 of this Code, provided, however, that any reference to “Planned Residential District” or “PRD” in Section 415.510 shall be read to mean “Special Circumstances Overlay District”.

E. Applicable Zoning Districts. The SCOD may be applied to any zoning district in the City, and may be included in the Planned Residential Development (“PRD”) Overlay District pursuant to Section 415.510.

F. Modification Of District Regulations. Notwithstanding the provisions of Section 415.510(D) of this Code to the contrary, the procedures set forth herein may be utilized to modify otherwise applicable underlying district regulations by authorizing any of the following development types and allowing modification to any of the following district standards:

1. Any residential, commercial, or industrial use, along with their respective supporting facilities

2. Any accessory use permitted in the zoning district within which the special circumstances development is overlaid. The area and yard requirements for non-dwelling uses shall not be diminished, unless otherwise authorized by the ordinance approving the special circumstances development.

3. Lot area, lot dimensions, setback distances, and height requirements shall be as established in the ordinance authorizing the special circumstances development with the following restrictions:

   a. Height limitations for structures may be modified by the Planning and Zoning Commission with respect to any structure proposed in an application for a special circumstances development, provided that any residential structure exceeding three (3) stories in height or thirty-five (35) feet shall be set back from all special circumstances development boundary lines at least one (1) additional foot for each foot of height above thirty-five (35) feet above the average finished ground elevation at the perimeter of such structure.

   b. Setbacks along boundary lines of a special circumstances development and off-street parking requirements applicable in any district shall in no event be diminished.

   c. No authorized minimum lot size shall be less than fifteen thousand (15,000) square feet in the Suburban Residential Area or such other minimum amount as may be authorized by the Master Plan or any amendment endorsed by the City Council.

   d. No lot in a "SCOD" that is located within a "NU" Non-Urban Residence District or within the Non-Urban Residential Area established by the Master Plan shall be less than one (1) acre in size.

4. Design specifications for public and other required improvements.
5. In no instance shall the required public space allocations set forth herein be an environmental hazard, as defined by the federal, State, County, or City of Wildwood governments.

6. Land disturbance within setback areas, excepting for the purposes of access and necessary utility installations, preservation area locations, and tree canopy requirements applicable in any district shall in no event be diminished.

G. Limited Authority To Modify Other Development Regulations. In approving a "SCOD", the City Council may change, alter, modify, or waive any other provisions of the Zoning Ordinance, Subdivision and Development Regulations or any other requirements, as they apply to the proposed special circumstances development. No modification under this Subsection shall occur, except where necessary to avoid substantial practical difficulties particular to the site, where the City Council has made a specific finding to this effect, and where all other requirements for modification have been satisfied, including the standards in Subsection (H).

H. Standards For Modifications. No change, alteration, modification or waiver authorized by Subsections (F) or (G) shall authorize a change, prior to review of such modification by the Planning and Zoning Commission and Director of Planning. Unless otherwise specifically authorized by the subject zoning or subdivision provision, no such change, alteration, modification or waiver shall be approved, unless the City Council shall determine the proposed modification:

1. Will achieve the specific purposes a "SCOD" is intended to meet as a condition of its approval pursuant to this Section;

2. Will not violate the general purposes, goals and objectives of the zoning and subdivision ordinances, other applicable development regulations, and the City of Wildwood Master Plan; and

3. Will address any negative impacts that may result from such change, alteration, modification, or waiver to such provisions through appropriate mitigating actions.

I. "SCOD" District Application Submission Requirements. No person shall develop or cause the development of any property, or part thereof, located within the SCOD unless an application for such development has been submitted and approved pursuant to the requirements of this Section. The SCOD application form and/or the preliminary development plan shall contain and provide the information required pursuant to Section 415.510(H) of this Code, and the following:

1. **SCOD application requirements.** A complete application shall contain the information required under Section 415.510(H) of this Code, and an Environmental Site Assessment required pursuant to subsection O of this Section. Along with this information, the applicant shall also provide, as part of this application filing, the following items:

   a. Federal and State mapping, and any associated documentation, of any environmental hazards that are known or assumed to exist on the site.

   b. Current letters from the U.S. Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR) regarding any existing conditions of the subject site and other pertinent information relative to the safety of it for its intended use.

   c. Engagement by the development entity or property owner of experts in the applicable fields, which would be verified by credentials submitted to the City for review. Costs associated with these experts would be borne by applicant, not the City, if determined necessary by it.
2. "SCOD" application filing fee per requirements of Chapter 415.550 "Fees". A "SCOD" application filing fee, as required by Chapter 415.550 "Fees", shall be submitted with a "SCOD" application.

**J. Residential Density Limitation—Method Of Calculation.** The maximum density of any proposed "SCOD" shall not contain more dwelling units than otherwise permitted by the requirements of the underlying zoning district or districts within which it is proposed. The maximum number of allowable dwelling units shall be calculated by dividing the net site area of the development by the minimum lot area requirements for a residential dwelling unit in the respective zoning district in which the "SCOD" is proposed to be located. In addition to the requirements of Section 415.510(l), the following square footage shall be excluded from the meaning of the term "net site area":

1. All land that is designated and/or controlled by an environmental covenant between the U.S. Environmental Protection Agency (EPA) or the Missouri Department of Natural Resources (MDNR) and a landowner due to contamination caused by hazardous wastes, toxic wastes, or other defined public health threats;

2. All and that is designated under the Natural Resource Protection Standards Regulations as exhibiting slopes that are greater than thirty (30) percent or identified as sinkholes, wetlands, and ephemeral drainageways;

3. Notwithstanding the provisions of Section 415.510(R) of this Code to the contrary, land designated for the dedication for public school or public park use may not be considered in the calculation of gross acreage in computing the maximum number of lots that may be created or dwelling units that may be authorized.

**K. "SCOD" District Application And Preliminary Development Plan Review Procedures.**

1. **Distribution of complete application for review.** Upon receipt of a complete "SCOD" application, the Planning Director shall transmit a copy of the "SCOD" application and preliminary development plan to each member of the Planning and Zoning Commission, the Department of Public Works, the Architectural Review Board (ARB), and to such other City, County, State or federal agencies, as appropriate, for their review and comment.

2. **City Council action.** Upon receipt of the Planning and Zoning Commission's recommendation, the City Council shall either approve the preliminary development plan by adopting an ordinance approving the preliminary development plan or deny the application. If the application is approved, the matter shall be returned to the Planning Commission for consideration of a site development plan. In instances where the Planning Commission has recommended denial of a preliminary development plan, the City Council will receive and file the Letter of Recommendation on said request and a public hearing shall not be required, unless supported by its members. If a public hearing is supported by the City Council, a minimum two-thirds (2/3) majority of its members must authorize such to allow for its scheduling.

   a. In instances, where the Planning and Zoning Commission has recommended support of a preliminary development plan, the City Council shall receive and file the Letter of Recommendation on said request and a hold a public hearing on the matter before its members. For legislation to be adopted approving the preliminary development plan, a minimum two-thirds (2/3) majority of the City Council members must approve it.
3. **Successive “SCOD” applications.** Except for an amendment under Section 415.510(O) of this Code, no application submitted pursuant to this Section shall be considered by the Planning and Zoning Commission or the City Council if the real property to be affected by the proposed change was the subject of a similar application subject to a public hearing by the Planning and Zoning Commission within twelve (12) months prior to the submittal of such application.

**L. Standards For “SCOD” Application And Preliminary Development Plan Review.** The Planning and Zoning Commission recommendation, along with the City Council’s action on the same, shall be based upon the collective compliance of the application and plan to all of the four (4) standards set forth in Section 415.510(K) of this Code and, the following:

1. Public health and safety considerations.
2. Adequate remediation efforts by the developer through cooperation with federal and State agencies, when applicable.
3. Livability and building design/placement/architecture and their relationships to the surrounding neighborhoods.

**M. Conditions For Approval.** Notwithstanding the provisions of Section 415.510(M) to the contrary, consistent with the standards or objectives of the “SCOD”, the Planning and Zoning Commission may or may not support a proposal subject to conditions relating to, but not limited to, the following, which shall apply to any action of the City Council as well:

1. The type and extent of mitigation or compliance to federal, State, County, and City environmental laws, standards, regulations, and/or requirements relating to public or environmental hazards existing on the site.
2. The methods or type of development practices, improvements and common ground required.
3. The integration of more after-development inspections and site monitoring to ensure all components of the governing ordinance for the project is still adhered to, are in place, being maintained, or otherwise still applicable and germane, which must be described as part of the application process for a “SCOD.”
4. The assurance that disclosures to users and buyers, beyond the first set of them within a new project area, specifically as properties are transferred years or decades later, are in place and cannot be eliminated, unless acted upon by the City Council, after review and recommendation by the Planning and Zoning Commission.
5. Dedication of land or payment of fees for public open space, road improvements, schools or for other infrastructure or public facilities impacted by the development;
6. An adequate plan for greater oversight of construction processes, if development allowances are granted on a special circumstances site, relative to those considerations generating the applicability of this overlay district’s use.
7. Agreement to and representation of all materials submitted by the developer to the State of Missouri are met and indicating an understanding and compliance to the Missouri Department of Natural Resource’s Land Disturbance Permit processes.

8. Required provisions for funding of maintenance agreements or trust indentures.

N. Trust Indentures And Warranty Deeds.

In developments where common areas exist, which may include open spaces, recreational grounds, environmentally protected areas by covenants or other restrictive agreements, or natural resource protection areas, are provided and the acreage of which is or is not included in the gross acreage for density calculation purposes, a trust indenture shall be recorded simultaneously with the record plat. The indenture shall provide for the proper and continuous maintenance and supervision of said lands by trustees to be selected and to act in accordance with the terms of such indenture and these land shall be deeded to the trustees under said indenture by general warranty deed. The trust indenture and warranty deed shall comply with the requirements established in Chapter 415.470 “Trust Indentures and Warranty Deeds”. In addition, the trust indenture shall contain the following provisions:

1. That common areas, excepting environmentally protected areas by covenants or other restrictive agreements, and including open spaces, natural resource protection areas, or recreational grounds, shall be for the sole benefit, use and enjoyment of the lot or unit owners, present and future, of the entire special circumstances development or that the common areas may also be used by residents outside the special circumstances development. If residents outside the special circumstances development are permitted to use the common areas, the indenture shall contain provisions, which shall provide, in essence, the following:

   a. No resident of the special circumstances development shall be denied the use of the open space, natural resource protection areas, recreational facilities, or other common ground for any reason related to the extension of such privilege to non-residents of the special circumstances development; and

   b. At any time after the recording of the indenture, a majority of the residents of the special circumstances development, by election duly called, may elect to allow or disallow usage of the open space, natural resource protection areas, recreational facilities, or other common grounds by non-residents of the special circumstances development.

2. The indenture shall contain provisions for the maintenance of all common areas and facilities and the means of collecting assessments necessary for the maintenance thereof.

3. In special circumstances developments containing attached dwelling units, the indenture shall contain provisions for maintenance of common walls.

4. The indenture shall contain specific language restricting any disturbance of natural resource protection areas formally preserved under the application of Chapter 420.200 of the subdivision ordinance by any resident or non-resident of this special circumstances development, as well as any environmentally protected areas by covenants or other restrictive agreements.
5. The indenture shall contain no language inconsistent with any requirements or regulations of any of the City of Wildwood's ordinances, including the Zoning Ordinance and Subdivision and Development Regulations and related development standards.

In addition to these requirements, indentures shall contain specific language restricting any alteration or disturbance of any area of the development subject to an environmental covenant or restriction other than restrictive agreement by any person.

O. **Environmental Site Assessment.**

As part of any submitted application for a residential, institutional, and public facility use, or action upon the same, where a Special Circumstances Overlay District (SCOD) is requested, the applicant shall provide a Phase I Environmental Site Assessment (ESA) to the City of Wildwood for review and consideration. A Phase II Environmental Site Assessment (ESA) may be required on the basis of results from the Phase I Environmental Site Assessment (ESA).

1. The environmental professional or firm completing these assessments shall meet minimum qualifications to perform such. Said qualifications shall include, but not be limited to, past experience in the preparation of said assessments and a combination of pertinent education and experience determined to be appropriate by the Planning and Zoning Commission of the City of Wildwood for this type of study.

2. In addition to the requirements outlined in this Section, Phase I Environmental Site Assessments (ESA) must be conducted in accordance with the current version of American Society for Testing and Materials International (ASTM) Standard E1527 “Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process”, ASTM International, in conjunction with ASTM Standard E1528 “Standard Practice for Environmental Site Assessments: Transaction Screen Process”, ASTM International. For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to Revised 06/2010 Environmental Site Assessments Page 17-2 the standard’s Document Summary page on the ASTM website. Phase I ESAs will not be greater than 6 months old per ASTM Standard E1527-4.6 & 4.7, which states that for the continued viability of environmental site assessment and prior assessment usage, when utilizing data from a Phase I ESA that is greater than 6 months old, at a minimum a new site reconnaissance, interviews, and an update of the records review should be performed.

3. Phase II Environmental Assessments (ESA) must be conducted in general accordance with the current version of ASTM Standard E1903 (2002) “Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process”, ASTM International. For referenced ASTM standards, visit the ASTM website, www.astm.org, or contact ASTM Customer Service at service@astm.org. For Annual Book of ASTM Standards volume information, refer to the standard’s Document Summary page on the ASTM website. All soil, surface water, ground water, and sediment sampling and analyses conducted in association with Phase II ESAs must follow approved state and federal methodology.

**Editor’s Note:** Highlighted text (yellow color) reflects changes to draft regulations over the last sixty (60) days of review by the City Attorney and the Department of Planning.
ATTACHMENT C
BACKGROUND INFORMATION
Information Report
for
P.Z. 3-20 Planning and Zoning Commission c/o Department of Planning and Parks
City of Wildwood, Missouri
Prepared by the Department of Planning and Parks
April 20, 2020 Meeting
"Planning Tomorrow Today"

Petition: P.Z. 3-20
Petitioner: City of Wildwood, Missouri c/o Department of Planning, 16860 Main Street, Wildwood, Missouri, 63040
Request: A request to consider the development of new legislation to possibly be included within Chapter 415 (Zoning Ordinance) of the Code of Ordinances of the City of Wildwood relating to properties that are located within the City of Wildwood that present unique histories of use or character, which must be considered needing greater scrutiny and protections due to their environmental legacies, site, soil, and/or physical characteristics, or proximity to a stream, creek, or ephemeral drainageways that ultimately presents a higher than acceptable risk to the public, if they are to be disturbed, developed, and placed into active use. Such situations necessitate the need for the consideration of a new Special Procedures Overlay District, with associated regulations, that provides a minimum level of protections to all parties that are assessed as necessary, while ensuring a thorough and complete review and comment period for the community.

Zoning District(s): All
Location: City-Wide
Wards: All
Public Hearing Dates: March 16, 2020 and April 6, 2020
Presentation of Draft Regulations: April 20, 2020
Primer: Attachment A
Background Information: Attachment B
School District: Rockwood
Fire Districts: Eureka, Metro West, and Monarch
Law Enforcement: St. Louis County Police Department – Wildwood Precinct
The Planning and Zoning Commission held public hearings regarding this matter on March 16, 2020 and April 6, 2020 and heard presentations from the Department of Planning upon it. The subject of these presentations was a newly-proposed zoning overlay district that would be used to address the most distressed, environmentally impacted, or otherwise specific sites that would potentially create a high risk to the public’s health, safety, and welfare, if developed for certain activities. The origin of this concept for a new type of overlay district was the Ellisville-Bliss Properties and the impact it has had on certain Wildwood sites.

This matter was posted for consideration at tonight’s meeting, where the Department of Planning’s Information Report, with recommendation, was to be presented. However, given this matter includes a completed, and new, set of regulations relating to this zoning overlay district, the Department wanted to first present the regulations, in draft form, to the Planning and Zoning Commission for discussion purposes, while also offering the specifics of certain major points contained therein, and then hear opinions, comments, and suggestions from members, before completing its Information Report. This approach is different than the typical process that has been used by the Department of Planning in its development of new zoning or land use regulations, but it believes appropriate, in this case, given the subject matter, the potential restrictiveness of the draft regulations, and their relative complexity.

Accordingly, at tonight’s meeting, the draft regulations have been provided and will be the center point of discussions in this regard. After opinions, comments, and suggestions have been provided by the members, the Department will address them both in its written report and the proposed regulations. With that information, the overall report, and recommendation, will then be provided to the Planning and Zoning Commission for review and a first action upon it.

If any of the Commission Members should have questions or comments in this regard, or would like to discuss the specific request, please feel free to contact the Department of Planning at (636) 458-0440. Again, a presentation is planned on these draft regulations at tonight’s meeting. Thank you for your consideration of this information and hoped for acceptance of this approach.
ZONING ORDINANCE – CITY OF WILLOWOOD, MISSOURI

Chapter 415.505 Special Circumstances Overlay District (SCOD) – New
Prepared by the Department of Planning
April 20, 2020 Planning and Zoning Commission Meeting
“Planning Tomorrow Today”

A. Scope Of Provisions. This Section contains the Special Circumstances Overlay District (SCOD) procedure and standards. These regulations are in addition to general regulations appearing elsewhere in this Chapter, which are incorporated as part of this Section by reference.

B. Purpose and Intent. The purpose of the Special Circumstances Overlay District (SCOD) is to protect public health and the environment while allowing appropriate development activities within the SCOD. The requirements of the SCOD establishes a protective zoning process that places more focus on the assessment of public and environmental hazards that may exist on a property, through a multiple step review process.

The requirements applicable to the SCOD will:

1. Assure that future land use in the SCOD is protective of human health;
2. Establish appropriate remediation of environmental hazards and the preservation of such remedial measures;
3. Require that development in the SCOD employ construction practices that are consistent with the protection of public health and the environment, as determined by ??????
4. Assure soil containing metal concentrations in excess of permissible levels is addressed in accordance with ???????? regulations/guidance.

The specific goals of the Special Circumstances Overlay District (SCOD) and procedure are to:

1. Obtain more information about the anticipated or existing environmental hazards or physical characteristic situations, as part of the initial application process for future use of the site, versus depending more so on best available data.
2. Establish longer comment periods and more reviews by outside agencies with pertinent roles in the development process associated with these types of sites.
3. Create more engagement by the development entity or property owner of experts in the applicable field, which would be verified by credentials submitted to the City for review. Costs associated with these experts would be borne by applicant, not the City.
4. Require more detailed presentation materials for the public hearing processes.
5. Assess greater deductions in the gross acreage of the site for environmental or physical factors than that are currently set forth in the Planned Residential Development Overlay District (PRD) regulations or the Natural Resource Protection Standards. Currently, the Planned Residential Development Overlay District (PRD) eliminates floodplain areas and rights-of-way from the calculation of net acreage for the final determination of allowable densities for residential projects.
6. Place greater prohibitions for any site disturbances in identified areas of concerns, regardless of soil and slope characteristics.

7. Increase the levels of scrutiny of public space allocations, so as to avoid unsuitable areas being dedicated as such.

8. Authorize greater remediation efforts by the developer through cooperation with federal and State agencies, when applicable.

9. Improve disclosures to users and buyers beyond the first set of them, specifically as properties are transferred years or decades later.

10. Provide for greater oversight of construction processes, if development allowances are granted on a special circumstances site.

11. Integrate more after-development inspections and site monitoring to ensure all components of the governing ordinances for the projects are still adhered to, are in place, being maintained, or otherwise still applicable and germane.

C. Designation of Overlay District. The procedure for the establishment or amendment of the boundaries of the SCOD shall be as set forth in Section 415.560.

D. Procedures. Except as otherwise set forth herein, the procedures for approval of the development of any property, or part thereof, located within the SCOD shall be the same as set forth in Section 415.510 of this Code, provided, however, that any reference to "Planned Residential District" or "PRD" in Section 415.510 shall be read to mean "Special Circumstances Overlay District".

E. Applicable Zoning Districts. The SCOD may be applied to any zoning district in the City, and may be included in the Planned Residential Development ("PRD") Overlay District pursuant to Section 415.510.

F. Modification Of District Regulations. Notwithstanding the provisions of Section 415.510(D) of this Code to the Contrary, the procedures set forth herein may be utilized to modify otherwise applicable underlying district regulations by authorizing any of the following development types and allowing modification to any of the following district standards:

1. Any residential, commercial, or industrial use, along with their respective supporting facilities.

2. Any accessory use permitted in the zoning district within which the special circumstances development is overlaid. The area and yard requirements for non-dwelling uses shall not be diminished, unless otherwise authorized by the ordinance approving the special circumstances development.

3. Lot area, lot dimensions, setback distances, and height requirements shall be as established in the ordinance authorizing the special circumstances development with the following restrictions:

   a. Height limitations for structures may be modified by the Planning and Zoning Commission with respect to any structure proposed in an application for a special circumstances development, provided that any residential structure exceeding three (3) stories in height or thirty-five (35) feet shall be set back from all special circumstances development boundary lines at least one (1)
additional foot for each foot of height above thirty-five (35) feet above the average finished ground elevation at the perimeter of such structure.

b. Setbacks along boundary lines of a special circumstances development and off-street parking requirements applicable in any district shall in no event be diminished.

c. No authorized minimum lot size shall be less than fifteen thousand (15,000) square feet in the Suburban Residential Area or such other minimum amount as may be authorized by the Master Plan or any amendment endorsed by the City Council.

d. No lot in a "SCOD" that is located within a "NU" Non-Urban Residence District or within the Non-Urban Residential Area established by the Master Plan shall be less than one (1) acre in size.

4. Design specifications for public and other required improvements.

5. In no instance shall the required public space allocations set forth herein be an environmental hazard, as defined by the federal, State, County, or City of Wildwood governments.

6. Land disturbance within setback areas, excepting for the purposes of access and necessary utility installations, preservation area locations, and tree canopy requirements applicable in any district shall in no event be diminished.

G. Limited Authority To Modify Other Development Regulations. In approving a "SCOD", the City Council may change, alter, modify, or waive any other provisions of the Zoning Ordinance, Subdivision and Development Regulations or any other requirements, as they apply to the proposed special circumstances development. No modification under this Subsection shall occur, except where necessary to avoid substantial practical difficulties particular to the site, where the City Council has made a specific finding to this effect, and where all other requirements for modification have been satisfied, including the standards in Subsection (H).

H. Standards For Modifications. No change, alteration, modification or waiver authorized by Subsections (J) or (G) shall authorize a change, prior to review of such modification by the Planning and Zoning Commission and Director of Planning. Unless otherwise specifically authorized by the subject zoning or subdivision provision, no such change, alteration, modification or waiver shall be approved, unless the City Council shall determine the proposed modification:

1. Will achieve the specific purposes a "SCOD" is intended to meet as a condition of its approval pursuant to this Section;

2. Will not violate the general purposes, goals and objectives of the zoning and subdivision ordinances, other applicable development regulations, and the City of Wildwood Master Plan; and

3. Will address any negative impacts that may result from such change, alteration, modification, or waiver to such provisions through appropriate mitigating actions.

I. SCOD District Application Submission Requirements. No person shall develop or cause the development of any property, or part thereof, located within the SCOD unless an application for such development has been submitted and approved pursuant to the requirements of this Section. The SCOD application form and/or the preliminary development plan shall contain and provide the information required pursuant to Section 415.510(h) of this Code, and the following:

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Deleted: G. Procedures. Except as established by this Section, procedures and requirements for filing, review and approval of the special circumstances development shall be those set forth in Chapter 415.550 for other amendments to Zoning Ordinance. Any application for the consideration of a special circumstances development by the City shall be subject to the review process of the City’s Development and Zoning Review Committee.

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Deleted: An applicant for a "SCOD" shall be filed on an application form provided by the City and shall be accompanied by a preliminary development plan.

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1. **SCOD application requirements.** A complete application shall contain all information required under Section 415.510(1) of this Code, and an Environmental Site Assessment required pursuant to subsection D of this Section.

   a. Federal and State mapping, and any associated documentation, of any environmental hazards that are known or assumed to exist on the site.

   b. Current letters from the U.S. Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR) regarding any existing conditions of the subject site and other pertinent information relative to the safety of it for its intended use.

   c. Engagement by the development entity or property owner of experts in the applicable fields, which would be verified by credentials submitted to the City for review. Costs associated with these experts would be borne by applicant, not the City, if determined necessary by it.

2. **SCOD application filing fee per requirements of Chapter 415.550 “Fees.”** A “SCOD” application filing fee, as required by Chapter 415.550 “Fees,” shall be submitted with a “SCOD” application.

3. **Residential Density Limitation—Method Of Calculation.** The maximum density of any proposed “SCOD” shall not exceed more residentized units than otherwise permitted by the requirements of the underlying zoning district or districts within which it is proposed. The maximum number of allowable dwelling units shall be calculated by dividing the net site area of the development by the minimum lot area requirements for a residential dwelling unit in the respective zoning district in which the “SCOD” is proposed to be located. In addition to the requirements of Section 415.510(1), the following square footage shall be excluded from the meaning of the term “net site area”:

4. All land that is designated and/or controlled by an environmental covenant between the U.S. Environmental Protection Agency (EPA) or the Missouri Department of Natural Resources (MDNR) and a landowner due to contamination caused by hazardous wastes, toxic wastes, or other defined public health threats.

5. All land that is designated under the Natural Resource Protection Standards Regulations as exhibiting slopes that are greater than thirty (30) percent or identified as sinkholes, wetlands, and ephemeral drainageways.

6. Notwithstanding the provisions of Section 415.510(1) of this Code to the contrary, land designated for the dedication for public school or public park use may not be considered in the calculation of gross acreage in computing the maximum number of lots that may be created or dwelling units that may be authorized.

K. **SCOD District Application And Preliminary Development Plan Review Procedures.**
1. **Distribution of complete application for review.** Upon receipt of a complete “SCOD” application, the Planning Director shall transmit a copy of the “SCOD” application and preliminary development plan to each member of the Planning and Zoning Commission, the Department of Public Works, the Architectural Review Board (ARB), and to such other City, County, State or federal agencies, as appropriate, for their review and comment.

2. **City Council action.** Upon receipt of the Planning and Zoning Commission’s recommendation, the City Council shall either approve the preliminary development plan by adopting an ordinance approving the preliminary development plan or deny the application. If the application is approved, the matter shall be returned to the Planning Commission for consideration of a site development plan. In instances where the Planning Commission has recommended denial of a preliminary development plan, the City Council will receive and file the Letter of Recommendation on said request and a public hearing **shall not be required** unless supported by its members. If a public hearing is supported by the City Council, a minimum two-thirds (2/3rds) majority of its members must authorize such to allow for its scheduling.

In instances, where the Planning and Zoning Commission has recommended support of a preliminary development plan, the City Council shall receive and file the Letter of Recommendation on said request and hold a public hearing on the matter before its members. For legislation to be adopted approving the preliminary development plan, a minimum two-thirds (2/3rds) majority of the City Council members must approve it.

3. **Successive “SCOD” applications.** Except for an amendment under Section 415.510(G) of this Code, no application submitted pursuant to this Section shall be considered by the Planning and Zoning Commission or the City Council if the real property to be affected by the proposed change was the subject of a similar application subject to a public hearing by the Planning and Zoning Commission within twelve (12) months prior to the submission of such application.

4. **Standards for “SCOD” Application and Preliminary Development Plan Review.** The Planning and Zoning Commission recommendation, along with the City Council’s action on the same, shall be based upon the collective compliance of the application and plan to all of the four (4) standards set forth in Section 415.510(K) of this Code and, the following:

1. **Public health and safety considerations.**
2. **Adequate remediation efforts by the developer through cooperation with federal and State agencies, when applicable.**
3. **Livability and building design/placement/architecture and their relationships to the surrounding neighborhoods.**

5. **Conditions for Approval.** Notwithstanding the provisions of Section 415.510(M) to the contrary, consistent with the standards or objectives of the “SCOD”, the Planning and Zoning Commission may or may not approve a

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Deleted: 3. - Planning Commission public hearing. After a determination by the Director that the application is complete, a public hearing on the proposed “SCOD” application and preliminary development plan shall be held by the Planning and Zoning Commission in accordance with the provisions of Chapter 415.560, Procedures for Amending the Zoning Ordinance.**

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Deleted: 5. - Registration and recording. An approved “SCOD” and site development plan shall be registered and recorded, by the applicant, with the St. Louis County Recorder of Deeds within sixty (60) days of the City Council approval date. The official Zoning Map of the City shall be amended by City Planning staff to designate the area included in the approved “SCOD” plan as “Special Circumstances Overlay District # __”. Failure to record the approved “SCOD” plan within the time specified shall cause the approval of the plan to terminate. Upon written request of the applicant, an extension to the recording time may be granted by the Planning and Zoning Commission for a period of up to an additional sixty (60) days.

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Deleted: No application for a change of zoning classification with an accompanying “SCOD” shall be made by an applicant concerning any land area, of which any portion thereof had been subject to a...
proposal subject to conditions relating to, but not limited to, the following, which shall apply to any action of the City Council as well:

1. The type and extent of mitigation or compliance to federal, State, County, and City environmental laws, standards, regulations, and/or requirements relating to public or environmental hazards existing on the site.

2. The methods or type of development practices, improvements and common ground required.

3. The integration of more after-development inspections and site monitoring to ensure all components of the governing ordinance for the project is still adhered to, are in place, being maintained, or otherwise still applicable and germane, which must be described as part of the application process for a "SCOD."

4. The assurance that disclosures to users and buyers, beyond the first set of them within a new project area, specifically as properties are transferred years or decades later, are in place and cannot be eliminated, unless acted upon by the City Council, after review and recommendation by the Planning and Zoning Commission.

5. Dedication of land or payment of fees for public open space, road improvements, schools or for other infrastructure or public facilities impacted by the development.

6. An adequate plan for greater oversight of construction processes, if development allowances are granted on a special circumstances site, relative to those considerations generating the applicability of this overlay's district's use.

7. Agreement to and representation of that all materials submitted by the developer to the State of Missouri are met and indicating an understanding and compliance to the Missouri Department of Natural Resource's Land Disturbance Permit processes.

8. Required provisions for funding of maintenance agreements or trust indentures.

N. Trust Indentures And Warranty Deeds.

In addition to the requirements of Section 415.510(S), Indentures shall contain specific language restricting any alteration or disturbance of any area of the development subject to an environmental covenant or restriction, other restrictive agreement by any person.

O. Environmental Site Assessment.
Joe:

Attached is a redlined working draft of the ordinance establishing the SCOD. This draft is not intended to be complete, but I wanted to share with you for your review and input the concepts contained therein. By way of summary, the concept of my revisions and additional suggestions for further review and consideration are, as follows:

1. The assignment of the SCOD overlay to any property may be prompted by the City Council or Planning and Zoning Commission. I would ask your thoughts on establishing certain objective criteria for the Council and the P&Z to consider when designating a property for inclusion in the SCOD. Such standards could be included in subsection C;

2. Once a property is located within the SCOD, it triggers an expanded review process consistent with the process for review of a PRD preliminary development plan and site development plan, which have been adopted, except where specifically revised in the Section. This helps consolidate the procedural language contained in the legislation, but maintains familiar procedures for purposes of review of a proposed development (see subsection D);

3. In addition to the development related information required consistent with a PRD, an Environmental Site Assessment is required. Because of the resolution of the matter by the EPA as it relates to Callahan and Streeker Forest, simply relying upon a Phase I or Phase II may be insufficient to provide additional protections to that which has already been provided by DNR and the EPA. As such, I would suggest requiring both a Phase I and, if necessary, a Phase II with supplemental requirements. I have copied below a link to an example of such requirements for the City of Chesapeake, Virginia. I would suggest that the City engage an expert in such Site Assessments to provide recommendations as to specific supplemental requirements to apply and state in this proposed regulation. (See subsections I and O)
   http://www.cityofchesapeake.net/Assets/documents/departments/development_permits/pfm/volumeI/chapters/17-Environmental-Site-Assessment.pdf; and

4. I would suggest reviewing and considering the inclusion of objectively identifiable standards for determining unacceptable levels of contamination and best practices for construction activities for environmentally sensitive sites. (see subsections B, H, L and O).

Please feel free to contact me to further discuss the attached.

Very Truly Yours,

John
**This message, including attachments, is from the law firm of Hamilton Weber LLC and contains information that may be confidential and protected by the attorney-client or attorney work product privileges. E-mail communication is not a secure method of communication. Any e-mail that is sent to you or by you may be copied and held by various computers it passes through as it goes from our office to you or vice versa. Persons not participating in our communication may intercept our communications by improperly accessing your computer or our computers or even some computer unconnected to either of us which the e-mail passes through. If you prefer communications be sent via a different method, please let our office know immediately. Any and all metadata contained in this communication, or any attachment hereto, has been inadvertently sent to you, and you must not access, or mine, such metadata. If you are not the intended recipient, you are hereby notified that any reading, use or dissemination of this message is strictly prohibited. Forwarding, printing, copying, distributing, or using such information is prohibited. If you are not the intended recipient, promptly delete this message and notify the sender of the delivery error by return e-mail or call us at 636.947.4700. Although this e-mail and any attachments are believed to be free of any virus or other defect that might affect any computer system into which it is received and opened, it is the responsibility of the recipient to ensure that it is virus free, and no responsibility is accepted by Hamilton Weber LLC for any loss or damage arising in any way from its use.**
Attachment C –
Background
Information
ZONING PRIMER (Re-Issued and Updated)
for
Planning and Zoning Commission c/o Department of Planning and Parks
City of Wildwood, Missouri
Prepared by the Department of Planning and Parks
March 16, 2020 (Original Date of Hearing) and April 6, 2020 Meeting (Held Open for Further Comments)
“Planning Tomorrow Today”

Petition: P.Z. 3-20
Petitioner: City of Wildwood, Missouri c/o Department of Planning, 16860 Main Street, Wildwood, Missouri, 63040
Request: A request to consider the development of new legislation to possibly be included within Chapter 415 (Zoning Ordinance) of the Code of Ordinances of the City of Wildwood relating to properties that are located within the City of Wildwood that present unique histories of use or character, which must be considered needing greater scrutiny and protections due to their environmental legacies, site, soil, and/or physical characteristics, or proximity to a stream, creek, or ephemeral drainageways that ultimately presents a higher than acceptable risk to the public, if they are to be disturbed, developed, and placed into active use. Such situations necessitate the need for the consideration of a new Special Procedures Overlay District, with associated regulations, that provides a minimum level of protections to all parties that are assessed as necessary, while ensuring a thorough and complete review and comment period for the community.

Zoning District (s): All
Location: City-Wide
Wards: All
Public Hearing Dates: March 16, 2020 and April 6, 2020
Prime: Attachment A
Background Information: Attachment B
School District: Rockwood
Fire Districts: Eureka, Metro West, and Monarch
Law Enforcement: St. Louis County Police Department – Wildwood Precinct
BACKGROUND >>>

The City of Wildwood has had under review for a number of years a development site that adjoins the Russell Bliss Property, which was the location of a federal cleanup effort due to the illegal dumping of dioxin tainted oil, chemicals, and other toxic materials. A proposed residential subdivision was submitted to the City in 1998 that shared a common property line with the Bliss Site, which, again, had designated areas upon it that have been described as locations where illegal dumping did occur and were addressed by a cleanup action or protected from disturbance and use for the very foreseeable future. The owners of the property that sold it to the current developer noted they had never allowed Mr. Bliss to access their property and knew his activities were a problem. Regardless, the nature of the dumping by Mr. Bliss, which appeared to be indiscriminate of boundary lines or ownerships, and the type of materials, has led to serious environmental harm and increased health risks. This situation means the impact of the flow of these dangerous chemical compounds on downstream properties was substantial and widespread, as they followed natural drainage areas and the bedrock patterns found below the surface.

These circumstances have caused a number of different actions by a diverse groups of constituencies, which ultimately led to a decision by the City Council to stop any further reviews associated with this proposed residential site and hold all permit issuances on the planned development of this property, until greater assurances could be provided regarding the safety of it for long-term use for residential uses. This action, a stay or moratorium, was authorized by a vote of City Council and then led to a new round of testing, analysis, debate, and finally litigation by the developer/owner of the property. The date of this action of the stay or moratorium by the City Council was December 10, 2007.

RECENT ACTIONS >>>

During this period of time between the December 10, 2007 action by City Council, i.e. the stay or moratorium, and a new affirmation of it on November 12, 2019, it has become increasingly apparent the zoning tools that are currently in place are not as comprehensive or appropriate as such would be under normal circumstances, when difficult sites and special circumstances are encountered relative to the property or properties under consideration. Extreme examples of these types of circumstances are properties that are listed on the Environmental Protection Agency’s National Priorities List (NPL), which indicate of sites with major legacies from past uses or ongoing issues. Acknowledging these types of contaminated sites, along with others that present the other difficult characteristics, or have experienced past disasters, such as flooding, the need to have better approaches to these locations became clearer to all City decisionmakers.

NEXT STEPS >>>

In considering these types of sites, the Department would note a new zoning tool could be considered for use that might include certain investigative components, data development and/or collection beyond that of a typical site, integration with other agencies, of which they are not focused on stormwater management, and long-term monitoring and dissemination of information from the first
buyers to the last of the subject project or lots. The zoning tool can be modelled to ensure it addresses these matters, while also offering the following items to improve the review process in this regard:

1. More information about the anticipated or existing environmental hazards or physical characteristic situations, as part of the initial application process for future use of the site, versus depending more so on best available data.
2. More engagement by the development entity or property owner of experts in the applicable field, which would be verified by credentials submitted to the City for review. Costs associated with these experts would be borne by applicant, not the City.
4. Greater deductions in the gross acreage of the site for environmental or physical factors than that are currently set forth in the Planned Residential Development Overlay District (PRD) regulations or the Natural Resource Protection Standards. Currently, the Planned Residential Development Overlay District (PRD) eliminates floodplain areas and rights-of-way from the calculation of net acreage for the final determination of allowable densities for residential projects.
5. Greater prohibitions for any site disturbances in identified areas of concerns, regardless of soil and slope characteristics.
6. Greater remediation efforts by the developer through cooperation with federal and State agencies, when applicable.
7. Longer comment periods and more reviews by outside agencies with pertinent roles in the development process associated with these types of sites.
8. Increase the levels of scrutiny of public space allocations, so as to avoid unsuitable areas being dedicated as such.
9. Greater oversight of construction processes, if development allowances are granted on a special circumstances site.
10. Improve disclosures to users and buyers beyond the first set of them, specifically as properties are transferred years or decades later.
11. More after-development inspections and site monitorings to ensure all components of the governing ordinances for the projects are still adhered to, are in place, being maintained, or otherwise still applicable and germane.
12. Apply the State of Missouri’s land disturbance permit requirements to all sites, regardless if they are one (1) acre or greater in size (application of such is currently limited to that area threshold).

Not all of these items may be applicable to each special circumstances site that is under consideration and review by the City, but would be so structured in a new set of zoning regulations to achieve the intended outcome, all being based upon the individual situations of each proposal. Other items may exist as well and can be added, if beneficial to the public’s health, safety, and general welfare, as was the case with Item #12 indicated in blue, bolded type. Additional items can begin to be developed at tonight’s continuation of the public hearing that was originally posted on March 16, 2020.
CONTACT AND FURTHER INFORMATION >>>
At tonight's public hearing, the City Attorney and the Department of Planning are seeking input on this matter in preparation of a recommendation on this advertised matter (see advertisement for this matter below). If any of the Commission members should have questions or comments in this regard, please feel free to contact the City Attorney (John A. Young) at (636) 947-4700 or the Department of Planning at (636) 458-0440. Thank you for your review of this information in preparation of tonight's hearing on this topic.

PUBLIC HEARING INFORMATION >>>
P.Z. 3-20 City of Wildwood Planning and Zoning Commission, c/o Department of Planning, 16860 Main Street, Wildwood, Missouri 63040 – A request to consider the development of new legislation to possibly be included within Chapter 415 (Zoning Ordinance) of the Code of Ordinances of the City of Wildwood relating to properties that are located within the City of Wildwood that present unique histories of use or character, which must be considered needing greater scrutiny and protections due to their environmental legacies, site, soil, and/or physical characteristics, or proximity to a stream, creek, or ephemeral drainageways that ultimately presents a higher than acceptable risk to the public, if they are to be disturbed, developed, and placed into active use. Such situations necessitate the need for the consideration of a new Special Procedures Overlay District, with associated regulations, that provides a minimum level of protections to all parties that are assessed as necessary, while ensuring a thorough and complete review and comment period for the community. (Wards – All)
September 16, 2019

The Honorable City Council
The City of Wildwood, Missouri
16860 Main Street
Wildwood, Missouri 63040

Council Members:

The Planning and Zoning Commission has completed its review of the posted request regarding the proposed consideration of an extension to the moratorium that is in placed relative to the site located on Strecker Road (Strecker Forest Site), and prepared the following recommendation upon it for City Council’s consideration. This recommendation was completed in accordance with the requirements of Chapter 89 of Missouri Revised Statutes and those regulations of the City relating to public notice, publications, and amendments to the City’s codes (Chapter 415.560 of the City of Wildwood Zoning Ordinance). This recommendation, and associated action, are as follows:

Petition: P.Z. 13-19
Petitioner: City of Wildwood Planning and Zoning Commission c/o Department of Planning, 16860 Main Street, Wildwood, Missouri, 63040
Request: A request for the preparation of a recommendation by the Planning and Zoning Commission upon an item relating to an extension of a moratorium that is associated with P.Z. 1 and 1a–99 W.J. Byrne Builders, Inc., 3112 Shady Glen Estates Drive, Wildwood, Missouri 63038, given the current stay on the issuance of permits for the development of the site, in accordance with the approved Site Development Plan (SDP), has been in place for over eleven (11) years, but still requires certain determinations and actions relative to the subject tract of land
Location: North side of Strecker Road, east of Englebrook Drive (Locator Numbers 22U240024, 22U330031, and 22U330062/Street Addresses 177 Strecker Road, 165 Strecker Road, and 173 Strecker Road)
Zoning District(s): R-1A 22,000 square foot Residence District, with Planned Residential Development Overlay District (PRD)
Tract Size: 18.33 acre
Date of Public Hearing: August 19, 2019
Date and Vote on the Information
Report: September 3, 2019 – Approval of the Department’s recommendation to extend the moratorium that is in place on this tract of land by a vote of 8 to 0 (Voting Aye: Deppeler, Helfrey, Gragnani, Levitt, Beattie, Woerther, Bowlin, and Lee)

Date and Vote on the Letter of Recommendation: September 16, 2019 - Approval to extend the moratorium that is in place on this tract of land by a vote of 10 to 0 (Voting Aye: Deppeler, Helfrey, Gragnani, Levitt, Beattie, Kohn, Simpson, Lee, Woerther, and Bowlin)

Report: Attachment A

Background Information: Attachment B

School District: Rockwood

Police: St. Louis County Police Department – Wildwood Precinct

Fire/EMS District: Metro West Fire Protection District

Ward: Two

Copies of the City of Wildwood’s Master Plan, Charter, and Zoning Ordinance are all on file with the City Clerk’s Office.

Respectfully submitted,

CITY OF WILDWOOD PLANNING AND ZONING COMMISSION

Michael Lee, Chair

ATTEST:

Joe Vujich, Director
Department of Planning

Cc: The Honorable James R. Bowlin, Mayor
    Samuel L. Anselm, City Administrator
    John A. Young, City Attorney
    Kathy Arnett, Assistant Director of Planning and Parks
    Travis Newberry, Planner
BACKGROUND

The City of Wildwood has had under review for a number of years a development site that adjoins the Russell Bliss Property, which was the location of a federal cleanup effort due to the illegal dumping of dioxin tainted oil, chemicals, and other toxic materials. This subject site referenced above shares a common property line with the Bliss Site, which has designated areas upon it that have been described as locations where illegal dumping did occur and now must be addressed by a cleanup action or protected from disturbance and use for the very foreseeable future. The owners of the property that sold it to the current developer noted they had never allowed Mr. Bliss to access their property and knew his activities were a problem. Regardless, the nature of the dumping by Mr. Bliss, which appeared to be indiscriminate of boundary lines or ownership, and the type of materials, such caused serious environmental harm and increased health risks. This situation means the impact of the flow of these dangerous chemical compounds on downstream properties was substantial and widespread, as they followed natural drainage areas and the bedrock patterns found below the surface.

These circumstances have caused a number of different actions by a diverse groups of constituencies, which ultimately led to a decision by the City Council to stop any further reviews associated with this site and hold all permit issuances on the planned development of this property for a possible twenty-three (23) lot residential subdivision, until greater assurances could be provided regarding the safety of it for long-term use for residential purposes. This action, a stay or moratorium, was authorized by a vote of City Council and then led to a new round of testing, analysis, debate, and finally litigation by the developer/owner of the property. The date of this action of the stay or moratorium by the City Council was December 10, 2007.

RECENT ACTIONS

During this period of time between the December 10, 2007 action by City Council, i.e. the stay or moratorium, and the first public hearing (August 19, 2019), those above-referenced additional studies and analysis were conducted under the guidance of the Environmental Protection Agency (EPA) and the Missouri Department of Natural Resources (MDNR), with many meetings and discussions regarding the matter being held too, followed by actions on the part of the developer/owner to allow the project to proceed forward, per the approved Site Development Plan (SDP), along with the City, the State of Missouri, and the federal government itself all attempting to understand the impacts of Russell Bliss’s actions in this general area of the City. The intended outcome of all of these activities was to determine if the site was safe for long-term, residential use and, thereafter, provide a process to advise buyers of these lots of potential issues relative to the remaining surrounding properties still actively listed on the National Priorities List (NPL) of the federal government and the concerns expressed about them in the past by residents, experts, and others. As no surprise, the developer/owner filed a lawsuit against the City for delaying the project, given the rezoning of the eighteen (18) acre site had been authorized by the City and the Site Development Plan favorably acted upon the Planning and Zoning Commission and
City Council as well. These approvals, in other instances, would have allowed the project to move into platting and construction. However, despite the litigation stating to the contrary, the additional testing and analysis that was allowed by the time gained by the stay/moratorium did define at least one (1) additional area on this subject site that had elevated levels of contamination, which required the federal government and the property owner to agree to and implement an environmental covenant to isolate it and not allow this area to be disturbed in the future.

**NEXT STEPS >**

Most recently, a revised plan for the development of the site has been submitted to the City. This revised plan reduces the lot count by a total of five (5), now eighteen (18), not twenty-three (23) lots, and addresses the area of the site, along with shifting the public sanitary sewer line from the east side of the property to west side of it that is subject of the environmental covenant. The submittal of this revised plan and the on-going court case led to a decision to act again on the stay/moratorium, given the length of time it has been in place, over eleven (11) years. The first hearing was to accept comments on such an extension and authorize, thereafter, if determined appropriate and reasonable by the Planning and Zoning Commission the preparation of a recommendation on the same. It is important to note the design associated with the revised plan will require the governing site-specific ordinance to be amended and then acted upon by the City Council, with the revised Site Development Plan (SDP) needing action as well by the Planning and Zoning Commission and City Council. These ordinance and plan review processes will follow shortly thereafter the consideration of the requested extension of the stay/moratorium.

**NEED FOR MORATORIUM TO BE RETAINED >**

The Planning and Zoning Commission is supporting the retention of the moratorium at this time to provide the City the needed time to ensure the public's health, safety, and welfare is protected relative to the future use of this property for any type of land use, including residential activities. The time will allow the City to further the following goals in this regard:

1. The City can seek the missing information relative to required testing of groundwater, which has been requested by it, and the larger community over the course of the last eleven (11) years.
2. The City, once reviewing the information, can have the time to consider it, submit the same to other professionals to comment, and develop the needed conclusions from it.
3. The City can accept additional input from other sources that can assist in understanding the risks, or lack thereof, associated with this site's use for residential and other purposes.
4. The City can seek further explanations from the Environmental Protection Agency (EPA) – Region 7 why the selected residential standard for determination of suitability of the site for residential use is higher than other regions across the United States.
5. The City can consider the development of a special overlay district for sites that have certain types of legacies relating to the past uses or actions that have led to questions about contaminates or actions leading to public health threats.
With the moratorium in place, these important goals can be addressed and ensure the site's eventual use in the future provides a high level of certainty about its safety. The timeline for such will be at the discretion of the participating agencies and the cooperation the City receives in addressing those goals that involve their input and direction. Every effort would be made to address these goals in as reasonable timeframe as possible.

**TIMELINE AND SUMMARY >>>

The initial public hearing on this matter was held on August 19, 2019. Shortly, thereafter, the Department's Information Report, with recommendation, was presented to the Planning and Zoning Commission at its meeting on September 3, 2019, along with the required Resolution for this these proceedings to be undertaken, per the Zoning Ordinance's requirements. The final Letter of Recommendation, anticipated to be acted upon by the Planning and Zoning Commission on September 16, 2019, would then be forwarded to the City Council for its action, which is planned to begin with a public hearing to be held on September 23, 2019.

The Planning and Zoning Commission is recommending the moratorium be extended on this site for the considerations noted in this report. Achieving the goals that have been identified will allow the City to have the best information possible, when needing to make its decision in this regard. Again, the Planning and Zoning Commission believes the extent of time associated with the moratorium will be particularly based on the cooperation it receives from the other agencies that have needed information to achieve those goals identified herein.
P.Z. 17-19 Michelle Maue and Geoffrey Nash, 388 Steeple Lane, Wildwood, Missouri 63005

Prepared by the Department of Planning and Parks

July 20, 2020 Meeting

"Planning Tomorrow Today"

Petition No.: P.Z. 17-19
Petitioner: Michelle Maue and Geoffrey Nash, 388 Steeple Lane, Wildwood, Missouri 63005
Request: A request for a Conditional Use Permit (CUP) to allow for the installation of a ground-mounted solar energy system, as well as roof-mounted panels, all to be situated on an area of the dwelling’s roof that causes them to be visible from an abutting roadway.
Location: 388 Steeple Lane (St. Louis County Locator Number: 19V430291)
Zoning: NU Non-Urban Residence District
Public Hearing Date: December 2, 2019
Information Report Date and Vote: July 20, 2020 - TBD
Report: Attachment A
Conditions: Attachment B
Background Information: Attachment C
School District: Rockwood
Fire District: Monarch
Ward: Ward One

ATTACHMENT A - Report

BACKGROUND and APPLICABLE REGULATIONS

In 2014, the Planning and Zoning Commission recommended, and City Council ultimately established, certain regulations governing solar energy systems, thereby being able to better address the potential impacts caused by them and their various mounting types. These regulations have been applied by the City to all roof and ground-mounted solar energy systems over the past six (6) years. The Commission has reviewed several of these installations through the Conditional Use Permit (CUP) process, most notably over the past two (2) years.
The current zoning district designation of this property – NU Non-Urban Residence District – limits potential permitted anc conditional uses, specifically relating to solar energy systems. Accordingly, for this aforementioned zoning district, the applicable regulations and list of potential conditional uses includes the following from the City's Zoning Ordinance:

Chapter 415. Zoning Regulations
Section 415.090 "NU" Non-Urban Residence District Regulations
[Ord. No. 1324 App. A §1003.115, 8-14-2006; Ord. No. 1874 §1, 6-25-2012; Ord. No. 1880 §1, 8-13-2012; Ord. No. 1934 §1, 5-13-2013]

A. Scope Of Provisions. This Section contains the district regulations of the "NU" Non-Urban Residence District. These regulations are supplemented and qualified by additional general regulations appearing elsewhere in this Chapter (Appendix), which are incorporated as part of this Section by reference.

C. Conditional Land Use And Development Permits Issued By The Commission. The following land uses and developments may be permitted under conditions and requirements specified in Section 415.500 "Conditional Use Permits":

16a. Solar panels, all ground-mounted types. All roof-mounted types, if said installations are visible from an adjoining/adjacent street(s).
[Ord. No. 2028 §§1 — 2, 4, 8-25-2014]

D. Accessory Land Uses And Developments. Subject to compliance with the procedures of this Section, accessory buildings, structures and uses are permitted in conjunction with a permitted land use or development or (unless restricted by applicable condition) a conditional land use or development when such accessory building, structure or use is customarily found in conjunction with the primary use, is a reasonably necessary incident to the primary use, is clearly subordinate to the primary use and serves only to further the successful utilization of the primary use. Accessory uses include the following:

1. Devices for the generation of energy, such as solar panels (roof-mounted types on rear and/or side of dwellings and not visible from the adjoining/adjacent street(s) only), wind generators and similar devices.
[Ord. No. 2028 §§1 — 2, 4, 8-25-2014]

   a. The support rack and framing that is to be installed be flush mounted on the roof of the dwelling, in association with the solar panel arrays, and match the color of the shingles or other roofing materials, as closely as possible.
   b. The capping of the solar panel arrays that are used in this support rack and framing be a dark color and/or match that of the roofing materials in use, as closely as possible.
   c. Compliance with all subdivision declarations, covenants, restrictions, or rules/regulations is required of any solar panel array installation.
   d. The removal of woodlands to accommodate access to the sun be minimized and comply with all City codes in this regard.
The Department would note the Commission recently completed a review of the regulations relating to solar energy systems in all residential districts ("R" Districts), inclusive of the NU Non-Urban Residence District. This review resulted in a recommendation the existing regulations be retained, with certain amendments added to further improve upon them. This recommendation was forwarded to City Council and a public hearing held regarding it on July 13, 2020. The subject request was submitted on October 8, 2019, and, therefore, is not subject to the recommended regulations under consideration by City Council at this time, again, in July 2020. It is important to note that, in preparing its report and recommendation for the subject request, the Department did incorporate certain requirements that are more restrictive than the current regulations, which it believes is prudent and allowable under the City’s Conditional Use Permit (CUP) process.

CURRENT REQUEST

P.Z. 17-19 Michelle Maue and Geoffrey Nash, 388 Steeple Lane, Wildwood, Missouri 63005, c/o Sunsource Homes Inc., 322 Southwest Boulevard, Kansas City, Missouri 64108 – A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District (Street Address: 388 Steeple Lane/Locator Number: 19V430291) for the installation of ground-mounted solar panels upon this three (3) acre parcel of ground, which is located on the east side of Steeple Lane, south of Wildhorse Creek Road. The petitioner is also seeking to install certain roof-mounted solar panels, which are to be so situated on the existing dwelling, as to be visible from an abutting roadway. These installations are required to be reviewed in accordance with Chapter 415.090 NU Non-Urban Residence District Regulations of the City of Wildwood Zoning Ordinance, which establishes standards and requirements for the installation of solar panels. The requested permit is required due to the proposed solar panels being of a ground-mounted design type, as well as roof-mounted panels situated on an area of the dwelling’s roof, that causes them to be visible from an abutting roadway. (Ward One)

ZONING AND SITE CHARACTERISTICS

The location of this proposed request for a Conditional Use Permit (CUP) is an approximately three (3) acre lot that is located on Steeple Lane, a private road, which is rural in character. The subject site is part of a large lot subdivision, Steeple Hill, which includes lots with homes that were built as early as 1948 and as recent as 1996. The subject lot is configured in a roughly square shape and located on the east side of the private roadway, with the dwelling facing it. The dwelling on the subject lot was constructed in 1981 and has 2,091 square feet of gross floor living area associated with it (St. Louis County Assessor Records). The overall lot is largely woodland, with clearance to accommodate the house itself, driveway, deck, patio, and pool areas. The woodland area forms the north, east, and over half of the southern boundaries of the lot, with the southwest area of it being a cleared yard area, with mature landscaping. The petitioner has also recently installed additional landscaping in this area of the lot, which will be discussed in more detail below. This southwest side-yard area is the proposed location of the ground-mounted solar energy system (array).

The NU Non-Urban Residence District allows a limited range of uses, of which, single family dwellings on individual lots are most prevalent. Along with the primary use, this zoning district designation also accommodates some institutional uses and certain limited non-residential types as well. The City, by the granting of a Concitional Use Permit (CUP), may authorize solar energy systems – ground-
mounted and roof-mounted types – in this rural residential setting. The roof-mounted types require a Conditional Use Permit (CUP), if their installations are visible from an adjoining/adjacent street, whether private or public, such as in this current request. Additionally, ground-mounted types require a Conditional Use Permit (CUP) in all instances.

**ANALYSIS**

The Department of Planning, in considering this request for a Conditional Use Permit (CUP), is required to review four (4) defined components that are set forth in the City’s Zoning Ordinance for this process. If these components are determined to be compliant, the Department can recommend its support to the Planning and Zoning Commission in granting of the Conditional Use Permit (CUP) by it. The primary source, in this case, is compliance to the four (4) criteria of Chapter 415.500 of the City’s Zoning Ordinance. The following analysis focuses on these four (4) criteria.

**Four (4) Criteria of Zoning Ordinance:** With regards to the review process required in determining the appropriateness of a Conditional Use Permit (CUP) on a particular property (Chapter 415.500), the Department would note the following criteria must be addressed: (1.) the proposed developments and uses must be consistent with good planning practice; (2.) the proposed developments and uses can be operated in a manner that is not detrimental to the permitted activities in the district; (3.) the proposed developments and uses can be developed and operated in a manner that is visually compatible with the permitted uses in the surrounding area; and (4.) the proposed developments and uses are deemed essential or desirable to preserve or promote the public health, safety, and welfare of the City. The petitioner has the burden of establishing the requested use satisfies these standards and there is a clear public necessity for it.

1. **The proposed developments and uses must be consistent with good planning practice**

   The allowance for certain conditional types of uses in areas of Wildwood is often based upon the surrounding and use pattern, the access to them from the system of public roadways, the availability of a utility network, and their characteristics relative to noise, odor, and other potential nuisance impacts. These considerations form the basis to determine if a conditional use is appropriate or not at the requested location and consistent with good planning practice. If these considerations are determined to be at such levels that even a slight intensification of the use of the property would be detrimental to the area, then such is not consistent with good planning practice.

   In the case of this requested conditional use, the addition of the roof-mounted and ground-mounted solar energy system onto the property has a positive environmental benefit, while not adding any additional noise, odor, traffic to the area, or changing land use conditions in its immediate vicinity. Thus, the proposed use of solar energy systems will reduce the petitioner’s carbon footprint and allows for the generation of an on-site, renewable energy source. This renewable source will produce clean energy that will decrease fossil fuel consumption and pollution. These aspects, and benefits of the use of solar energy systems, are in keeping with certain environmental goals of the City. These goals include the following: [Wildwood’s unique environment is one of its greatest assets and needs to be preserved and protected]; and [Wildwood can and should be a model for sustainable development practices.]

Based on these goals, along with the decrease in pollution that results from the use of solar
energy systems and such being a sustainable development practice, the granting of this permit protects the City’s unique environment and is in keeping with good planning practices.

The Department would note, as part of its report and recommendation regarding this request, certain conditions have been included that would ensure the installations will meet or exceed all building or other code discipline requirements relating to such, including any fire district requirements. Additionally, conditions are identified to ensure the general maintenance of the overall system, including the proper management and future disposal of the batteries associated with such. These steps are also consistent with good planning practices.

In the instance of the ground-mounted solar energy system, the Department strongly believes that all electrical connections and other wiring planned be installed underground, consistent with good planning practices. The installation of utilities underground ensures better aesthetics and greater reliability. The petitioner’s submitted plans indicated the use of conduit for the necessary undergrounding of all lines and utility components. The Department mentions it in this context to ensure the importance of such is clear and concise to all parties.

2. **The proposed developments and uses can be operated in a manner that is not detrimental to the permitted activities in the district >>>

The petitioners currently reside in the subject dwelling associated with this request and plan to remain, which is indicative of the compatibility of the requested conditional use with the permitted activities of this underlying zoning district designation. It is the Department’s opinion the requested conditional use can be granted to this property and not determinately affect any of the permitted uses in this zoning district designation (single family dwellings).

Additionally, for the purposes of review, a table has been developed for the Planning and Zoning Commission by the Department of Planning that indicates all authorizations by the City of solar energy systems. The table reflects widespread use in the City, in all wards, and locations throughout it. The table is attached to this report and includes mostly roof-mounted solar arrays. It is important to note, this application is only the second instance of a proposed ground-mounted solar energy system receiving a recommendation by the Department, under the regulations established in 2014. The first of which was recently authorized by the Planning and Zoning Commission in June 2020 *(P.Z. 2-20 Matthew and Sandra Witt)* and became an effective Conditional Use Permit (CUP) on June 23, 2020. Additionally, this request is the first instance of the City reviewing a proposed solar energy system that includes both roof and ground-mounted components.

The Commission is acutely aware of those concerns expressed in the past regarding solar energy system installations having an impact of the character of a neighborhood. These concerns are the principal reason it created the requirements relating to them and the conditions for their installation on any lot in the City of Wildwood. The Department does not desire to recommend a permit that negatively impacts an area, unless mandated by either the court system and/or federal or State laws, none of which apply here. Additionally, the Department of Planning visited the area to determine, as reasonably as possible, the impacts of the installation of the solar energy systems, both roof and ground-mounted types, at this property and believes their placement, in conjunction with the conditions associated with this
report and recommendation, are appropriate and will not negatively impact any adjoining property owners.

At the public hearing for this request, the discussion of the Commission Members and the petitioner’s representatives focused largely on the need for the ground-mounted solar energy system to be heavily screened from view of the private roadway and neighboring properties. In an effort to address this concern, the petitioner recently installed additional landscaping to create this desired visual screen (see attached photographs). According to the submitted information, the recently installed landscaping includes: eleven (11) Norway Spruce trees (eight (8) to ten (10) feet tall) and one (1) Green Giant Arborvitae tree (eight (8) to ten (10) feet tall). The Department’s favorable recommendation for the granting of the Conditional Use Permit (CUP) for the installation of the proposed solar energy system is conditioned upon this existing installation remaining unchanged and perpetual maintenance of the landscaping at these locations to provide this visual screen. This extent of landscaping, along with its placement pattern, shall remain in place to provide a continuous, year-round screen (evergreen type). Given the plantings were completed in late June, the Department is including in this report and recommendation, a condition the landscaping component be subject to review by the Planning and Zoning Commission one (1) year following the effective date of the Conditional Use Permit (CUP), if so granted. It is also important to note the landscaping that has been installed was a product of the petitioners working with their neighbors.

3. The proposed developments and uses can be developed and operated in a manner that is visually compatible with the permitted uses in the surrounding area. Based upon the petitioner’s information submitted in support of this request, the planned changes to the property, if the Conditional Use Permit (CUP) were granted, do comply with the requirements associated with all solar energy system to be installed within the City of Wildwood, with the intent to lessen the visual impact associated in their placement and not change the surrounding area. This report and recommendation also include certain conditions to ensure the visual compatibility of the ground-mounted solar energy system. These requirements include the following items:

1. The support rack and framing that is to be installed be flush mounted on the roof of the dwelling, in association with the solar panel arrays, and match the color of the shingles or other roofing materials, as closely as possible.

   Ground-Mounted System
   Complies – Requirement not applicable, given ground-mounted design. The proposed ground-mounted solar energy system is oriented to face to the south at a thirty (30) degree angle and will be nine (9) feet tall at its highest point. Given its placement is well outside of all setback areas on the lot, this design is an appropriate height for an accessory structure of this nature. The proposed solar array is 692.19 square feet in area.

   Roof-Mounted System
   Complies - The petitioner’s representative has indicated the solar modules will be flush-mounted and low-profile, which is also shown on the provided plan sheets and
manufacturer cut-sheets. Additionally, the proposed solar modules are dark in color, in order to complement the existing grey colored roof and blend with its appearance, as closely as possible.

2. The capping of the solar panel arrays that are used in this support rack and framing be a dark color and/or match that of the roofing materials in use, as closely as possible.

*Ground-Mounted System***

Conditionally Complies – This requirement is related to roof-mounted solar energy system; however, the Department’s favorable recommendation for this ground-mounted array is conditioned upon the requirement that all support racks and post and framing element be painted black in color, in order to minimize the visual impact of this installation.

*Roof-Mounted System***

Complies – The information provided by the petitioner's representative at the public hearing indicated the capping and support racks are black in color and intended to complement the proposed solar modules.

3. Compliance with all subdivision declarations, covenants, restrictions, or rules/regulations is required for any solar panel array installation.

*Ground-Mounted System***

Complies – At the December 2, 2019 public hearing regarding this proposal, the Commission urged the petitioner to meet with the neighboring property owners to discuss the proposal and consider their input regarding the placement and screening of the ground-mounted solar energy system. As requested, the petitioner has modified the number and placement of the ground-mounted array and installed landscaping, based on feedback from the neighboring property owners. The Department is in receipt of correspondence provided by the petitioner that does indicates approval from subdivision trustees of the Steeple Hill Subdivision expressing support of the petitioner's proposal.

*Roof-Mounted System***

Complies – The Department is in receipt of correspondence provided by the petitioner that indicates approval from subdivision trustees of the Steeple Hill Subdivision expressing support of the petitioner’s proposal for the roof-mounted solar energy system.

4. The removal of woodlands to accommodate access to the sun be minimized and comply with all City codes in this regard.

*Ground-Mounted System***

Conditionally Complies – No trees are planned to be removed in conjunction with the ground-mounted solar energy system. A condition of the Department’s favorable recommendation on this matter does include the perpetual retention and maintenance of the recently installed landscaping, which is also depicted on the plan sheets, and will serve as the landscape plan associated with the installation. Additionally, as noted above, a condition of this report and recommendation is a review of the success of the installed...
landscaping one (1) year following the effective date of the Conditional Use Permit (CUP), if granted.

Roof-Mounted System

Complies – No trees are planned to be removed, in conjunction with the roof-mounted solar energy system.

4. The proposed developments and uses are deemed essential or desirable to preserve or promote the public health, safety, and welfare of the City The granting of this Conditional Use Permit (CUP) achieves several goals of the City in regard to its environmental objectives and policies. These objectives and policies strive to limit impacts on Wildwood’s fragile environment and promote sustainable practices in terms of its resource base. Thus, the proposed roof and ground-mounted solar energy systems reduce such impacts, and are not only benefit the homeowner directly in terms of long-term costs, but also the surrounding community by lessening the amount of pollution caused by the use of fossil fuels.

Through the Department’s review, it has determined the four (4) criteria set forth for the granting of a Conditional Use Permit (CUP) are met by this proposal to allow roof and ground-mounted solar energy systems on this residential property. The petitioner achieves this level of compliance by adhering to the criteria associated with the installation and use of solar energy systems in this residential setting, with associated conditions recommended by the Department. Additionally, as set forth in the regulations for Conditional Use Permits (CUPs), the underlying requirements of the NU Non-Urban Residence District cannot be lessened, so the single-family dwelling and accessory structures will retain the same characteristics of the properties in its vicinity in terms of setback distances, height regulations, and other land use considerations of a similar nature.

SUMMARY AND RECOMMENDATION

The Department has determined the requested Conditional Use Permit (CUP) is consistent with the four (4) required criteria for granting a Conditional Use Permit (CUP), which are required to consider from the Zoning Ordinance. Accordingly, the Department of Planning is recommending the Planning and Zoning Commission favorably consider this permit application and grant such for the proposed roof and ground-mounted solar energy systems. This recommendation is contingent upon the conditions outlined in Attachment B of the report.
ATTACHMENT B – CONDITIONS

This Conditional Use Permit (CUP) shall authorize the following:

   a) A ground-mounted solar energy system, and associated underground utility connections, which shall be subject to specific compliance conditions that are set forth below.

   b) A roof-mounted solar energy system, which shall be subject to specific compliance conditions that are set forth below.

1. The roof and ground-mounted solar energy systems shall comply with the regulations of Chapter 415.090 NU Non-Urban Residence District, as outlined in this report.

2. The ground-mounted solar panel array shall not exceed an overall size of seven hundred twenty-five (725) square feet or nine (9) feet six (6) inches in height, at its tallest point, as measured from existing grade.

3. All support racks and posts and framing elements associated with the ground-mounted solar energy system shall be painted black in color, in order to minimize the visual impact of this installation. This requirement applies to all structural components of the solar panel structure.

4. All electrical connections and any other wiring planned for the ground-mounted installation shall be installed underground. Emergency shut-offs associated with the ground-mounted solar array shall be installed, as required by the applicable codes, and reviewed and acted upon by the St. Louis County Department of Public Works and the Monarch Fire Protection District.

5. The installation of the authorized solar energy systems shall meet or exceed all building and other code discipline requirements, set forth therein, specific, and associated with, the installation for solar energy systems.

5. Landscaping, in addition to the existing vegetation, shall be installed and retained, as depicted on the plan sheets presented to the Planning and Zoning Commission. The Planning and Zoning Commission shall review the health of the installed landscaping one (1) year following the granting of this Conditional Use Permit (CUP).

6. Tree removal in the vicinity of the roof and ground-mounted solar energy systems is not herein authorized, regardless of any potential impact on the effectiveness of the solar panels, unless authorized by the Planning and Zoning Commission, via an application of the property owner to it for said consideration and action. Removal of any ‘Grand Tree,’ as
defined in Chapter 440 of the City of Wildwood Municipal Code – Tree Preservation and Restoration Code, shall only be authorized by a permit issued by the Department of Planning and the restoration of its loss must occur on same property, with such being consistent with the code referenced herein.

7. All batteries associated with this roof and ground-mounted solar energy systems, and the arrays themselves, shall be properly maintained and disposed of at the end of their useful life, based on industry standards and all applicable regulations.

8. This Conditional Use Permit (CUP) shall be authorized for a period of ten (10) years, with any adjustments to it based upon compliance to the requirements of the same. Renewal requests shall be the responsibility of the owner/operator to submit to the City and must be provided a minimum two (2) months in advance of the renewal for consideration and action by the Planning and Zoning Commission, following this initial period of time.

9. The property owner is responsible for any general maintenance of an installed solar energy system and shall also provide the City of Wildwood written notification in the form of a written communication, if it is abandoned, becomes inoperable, or removed from the property. Said notification shall be within sixty (60) days of such event. Failure to advise the City of Wildwood of such change shall subject the property owner to the enforcement penalties of the Zoning Ordinance (Chapter 415).
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City's Solar panel regulations adopted on August 25, 2016


Notes for 2016: R - Residential, NJ - Non-Jurisdictional, Metro West - Metro West, CUP issued by City.

Notes for 2017: R - Residential, NJ - Non-Jurisdictional, Metro West - Metro West, CUP issued by City.

Notes for 2018: R - Residential, NJ - Non-Jurisdictional, Metro West - Metro West, CUP issued by City.

Notes for 2019: R - Residential, NJ - Non-Jurisdictional, Metro West - Metro West, CUP issued by City.
## General Notes

**A.** All electrical work to be installed by a qualified, licensed electrician and apprentices working under the direct supervision of the licensed contractor.

**B.** Contractor shall assume full responsibility and liability for compliance with regulations per federal, state, and local regulations regarding to work practices, protection of workers and visitors to the site.

**C.** Drawings are schematic drawings; site conditions shall prevail. If no scale is given, drawings are not to scale. All dimensions shall be verified by contractor and subcontractors in the field upon commencement of construction.

**D.** It shall be the subcontractors responsibility to investigate the existing conditions at the job site. Existing site conditions shall prevail over drawings. Any conflict or discrepancies between drawings and site conditions. Any information not specified, all specialty trades shall be brought to the attention of the owner.

**E.** All electrical work shall comply with the latest edition of the National Electrical Code, National Fire Protection, and international fire prevention guidelines. Refer to referenced document list.

**F.** All conduits, wires, and types specified in single line, three line diagrams, and/or DC schematic are to be installed.

**G.** All electrical equipment shall comply with the National Electrical Code, NFPA 70.

**H.** Electrical drawings indicate new work, unless otherwise noted. Existing electrical systems are not shown except where interconnecting systems are shown.

**I.** All solar modules shall be UL listed. Grounding, dc and ac appliances shall be UL listed. T SOLAR is approved all electrical components and materials shall be listed for its purpose and installed in accordance with the manufacturer's instructions. All outdoor equipment shall meet appropriate NEMA standards.

**J.** All fabrication and manufacturing shall be performed by certified individuals in approved assembly and fabrication shops.

**K.** Contractor initiated changes shall be submitted in writing to the engineer in the form of a "RFP". Request for information prior to making any changes. Approved changes shall require a drawing revision to maintain control over the engineer approved design.

**L.** The electrical contractor is advised that all drawings and specifications are subject to change without notice. If the electrical contractor is advised to have all switches in the "off" position and fuses removed prior to installation of fuel burning components may be subject to change. The system is intended to be operated in parallel with the utility service provider using arcing protection is a requirement of UL 4741 and is intended to prevent the operation of the PV system which is subject to changes by the utility grid or is not operational.

**M.** No person or organization responsible for device listing or designating recommendations.
## Equipment Specifications and System Data

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</table>

### Wiring Schedule

<table>
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<tr>
<th>CALL OUT</th>
<th>AWG</th>
<th>WIRE TYPE</th>
<th>AMPACITY</th>
<th>AMPS</th>
<th>*1.25 FACTOR</th>
<th>OCP RATING (A)</th>
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<tr>
<td>20</td>
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<td>THHN-3C (Black)</td>
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<td>50.73</td>
<td>78.08</td>
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<td>22.1</td>
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<td>THWN-1C (Aluminum)</td>
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<tr>
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<td>THWN (Copper)</td>
<td>39</td>
<td>41.00</td>
<td>41.00</td>
<td>30</td>
</tr>
</tbody>
</table>
LOCATION OF UTILITY DISCONNECT

EXISTING SERVICE ENTRANCE METER 240 V 1 PH 3 W 200A 400/2000
**ALLMAX®plus**

**FRAMED 120 HALF-CELL MODULE**

**120-Cell MONOCRYSTALLINE MODULE**

**320-335W POWER OUTPUT RANGE**

**19.7% MAXIMUM EFFICIENCY**

**0~+5W POSITIVE POWER TOLERANCE**

**Increased value**
- Reduce BOS cost with high power bias
- Low thermal coefficient for greater energy production at higher temperatures

**Half-cell design brings higher efficiency**
- New cell string layout and back (bifacial) back location to reduce the energy loss caused by inter-cell shading
- Integrated L/G (Light Reflecting Filter) to enhance power, specially for ground mount applications (optional)
- Lower cell connector power loss thanks to half-cell layout (1/2 monocrystalline)

**Highly reliable due to stringent quality control**
- Over 350-house tests (OC, TC, HF etc.)
- Increased module robustness to minimize micro-cracks
- REC optional and free of radial break
- Internal test requirements of Tier one stringent than certification authority

**Certified to withstand the most challenging environmental conditions**
- EN 62896-1 & 2, reverse load test
- EN 62896-3, reverse temperature test

**LINEAR PERFORMANCE WARRANTY**
- 30 Year Product Warranty / 25 Year Linear Power Warranty

**ELECTRICAL DATA (1)**

<table>
<thead>
<tr>
<th>Test Condition</th>
<th>Short-Circuit Current (Isc)</th>
<th>Maximum Power Voltage (Vmp)</th>
<th>Maximum Power (Pmp)</th>
<th>Temperature Coefficient (%)</th>
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</thead>
<tbody>
<tr>
<td>Test Condition</td>
<td>Short-Circuit Current (Isc)</td>
<td>Maximum Power Voltage (Vmp)</td>
<td>Maximum Power (Pmp)</td>
<td>Temperature Coefficient (%)</td>
</tr>
<tr>
<td>Test Condition</td>
<td>Short-Circuit Current (Isc)</td>
<td>Maximum Power Voltage (Vmp)</td>
<td>Maximum Power (Pmp)</td>
<td>Temperature Coefficient (%)</td>
</tr>
</tbody>
</table>

**MECHANICAL DATA**

- Frame: Polycarbonate
- Cell Spacer: 108mm x 130mm
- Module Dimensions: 1660 x 100 x 30mm
- Glass: 6mm x 330 x 10mm
- Frame: 70W x 70W x 4mm
- Backsheet: EVA
- Connectors: 40/40mm 12W, 50/50mm 22W, 60/60mm 32W, 70/70mm 42W

**ENVIRONMENTAL RATING**

- Temperature Coefficient of Pmp: -0.37%/C
- Temperature Coefficient of Vmp: -0.2%/C
- Module Temperature: 45°C

**WARRANTY**

- 25 Year Linear Power Warranty
- 0 Years Product Warranty
- Modules per 40 boxes, 78 boxes per container

**CAUTION: SAFETY AND INSTRUCTION INSTRUCTIONS BEFORE USING THE PRODUCT.**

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**MANUFACTURER CUTSHEETS**

Designed By: Davis & Loe
Physical Number: PV-E7.1
Sheets Page: 11 of 18

**Trina Solar**

- Comprehensively end-to-end process solution provider
- Global leading photovoltaic manufacturer
- Innovative R&D and production
- Strong brand reputation
- Market leader in China
- World class downstream services

**SUNSOURCE**

- One Source for Sustainable Living
- Specializing in solar
- Strong local presence and service
- Rely on trusted quality and reliability
- Innovation and synergy in product development and service
Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready Enphase IQ 7 Micro™ and Enphase IQ 7+ Micro™ dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate seamlessly with the Enphase IQ Envoy™, Enphase IQ Aggregator™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analytics software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and underpin a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.

Easy to Install
- Lightweight and simple installation
- Faster installation with improved, tighter two-wire cabling
- Built-in rapid shutdown compliant (NESC 2016 & 2017)

Productive and Reliable
- Optimized for high-powered 60-cell and 72-cell modules
- More than a million hours of testing
- Class II double-insulated enclosure
- UL listed

Smart Grid Ready
- Complex with advanced grid support, voltage and frequency rate-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 31 (UL, TUV-Sa)

To learn more about Enphase offerings, visit enphase.com

Enphase IQ 7 and IQ 7+ Microinverters

**INPUT DATA (DC)**
- Nominal input voltage: 235 V - 430 V
- Module compatibility: 60-cell and 72-cell PV modules only
- Maximum input DC voltage: 48 V
- Peak power tracking range: 27 V - 45 V
- Maximum power point voltage: 22 V - 48 V
- Maximum short circuit current: 15 A
- Overvoltage class DC port: II
- AC port backfeed current: 0 A
- PV array configuration: 1 x 1 ungrounded array; no additional DC side protection required

**OUTPUT DATA (AC)**
- Nominal output voltage: 240 V / 208 V
- Maximum continuous output power: 240 VA
- Nominal AC voltage range: 240 V / 208 V
- Maximum continuous output current: 1.6 A
- Maximum AC current: 2.0 A
- Overvoltage class AC port: II
- AC port backfeed current: 0 A
- Power factor setting: 1.0
- Power factor (adjustable): 0.7 leading, -0.7 lagging

**EFFICIENCY**
- DC to AC efficiency: 97.5%
- AC to DC efficiency: 97.5%
- DC efficiency: 91.3%
- Inverter efficiency: 91.3%

**MECHANICAL DATA**
- IQ 7 Microinverter
- Ambient temperature range: -40°C to +70°C
- Relative humidity range: 4% to 100% (condensation)
- Connector type: IP65 (NEMA L4-60P 50/120VAC NEMA 14-50P 240VAC 480VAC 130VAC)
- Dimensions (Height): 172 mm x 172 mm x 32.7 mm (4.8 x 4.8 x 1.3 in)
- Weight: 1.08 kg (2.38 lb)
- Cooling: Natural convection - No fans
- Applicable for wet locations: Yes
- Enclosure: Class II double-insulated, corrosion-resistant polypropylene enclosure
- Environmental conditions / UV exposure rating: NEMA Type II / outdoor

**FEATURES**
- Communication: Power Line Communication (PLC)
- Monitoring: Enlighten Manager and Enlighten monitoring tools
- Disconnecting means: The AC and DC connections have been evaluated and approved by UL, for use as the load disconnect required by NEC 690.4
- Compliance: CA Rule 31 (UL, TUV-Sa)
- UL 4792, IEC 61724, 14-50P, 120VAC, 240VAC
- Interconnection: CE mark - Conforms to all relevant standards

**PRODUCT INFORMATION**
- Model: Enphase IQ 7 and IQ 7+
- Power ratings: 240 VA
- Number of Maximum Modules: 48
- Max Array Voltage: 430 V
- Continuous Output Current: 1.6 A
- Short Circuit Current: 15 A
- Maximum AC Voltage: 240 V
- Maximum DC Voltage: 600 V
- Operating Temperature: -40°C to +70°C
- Weight: 1.08 kg (2.38 lb)
- Country of Manufacture: USA
- UL Listed: Yes
- CE Mark: Yes
- Matched PV: Enphase IQ 7+ Micro
- MPPT: Single
- Array String: 3
- Use with: Enphase IQ Envoy

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To learn more about Enphase offerings, visit enphase.com

ENPHASE

MANUFACTURER CUTSHEETS

Sheet Name: 2019-1004-01SS
Sheet Title: PV E7.3
Page Number: 13 of 18
Lumin Smart Panel

Lumin Smart Panel is a fully-integrated energy management system for residential and light commercial applications. It enables full, shared (building owner and utility) control of load via the circuit breaker panel and full mining of detailed, behind-the-meter consumption data. The combination of detailed data and full control will help shape smart energy consumption behaviors and usher in the smart grid of tomorrow.

---

**Environmental Specifications**
- Operating Temperature: -40°C to 50°C (-40°F to 122°F)
- Electrical Type: Indoor (NEMA 12)
- Reliability: Yes

**Physical Specifications**
- Dimensions: 40.0cm x 40.0cm x 13.0cm
- Weight: 15.2kg
- Conductor Length: 50.0m

**Performance Specification**
- AC Voltage: 120/240V
- Feed-In Type: Single and Dual Phase
- Warranty: 10-Year Limited Warranty

**Compatibility and Compliance**
- Panel: Any manufacturer
- Breakers: Any manufacturer

**Installation**
- Licensed electrician: Required
- Type: Wall mount
- Time: 2-3 hours

**Supported Circuit Breakers & Loads**
- Amperage: 6 amperes up to 600A
- F of Circuit Breakers: Up to 12
- Up to 8 split core CTs
- 2x 30A (main service)
- 2x 50A (generation)

**Connectivity and Security**
- Wi-Fi: 10/100Mbps @ 3Gbps with internet access
- Wi-Fi 6E, Wi-Fi 12, MPR, and Wi-Fi6X encryption methods
- DHCP (dynamic) or static IP addressing
- X.509 certificate encryption
- Cryptographic protocol: TLS FFC 1.7.5
- AWS Multi-Region High Availability

---

**LUMINSMART.COM**

---

**Manufacturer Cutsheets**

---

**Company Contact Info**

- **Company Name:** SunSource Homes
- **Company Address:** 350 W. Red, Ste. 120
- **Phone:** 703-720-6363
- **Email:** info@sunsourcehomes.net

---

**Company Logo**

---

**Customer**

- **Name:** John Doe
- **Address:** 123 Main St.

---

**Sheets**

- **Designed By:** Camila A. Cure
- **Sheet Title:** PV E7.4
- **Sheet Number:** 2019-1004-01SS
- **Page Number:** 14 of 18
SolarMount is the professionals' choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. SolarMount is a complete solution with revolutionary universal clamps, Flashkit Pro, full system UL 2703 certification and 25-year warranty. Not only is SolarMount easy to install, but best in class aesthetics make it the most attractive on any block!

Better Designs
Trust the industry's best design tool. Each SolarMount design is featured in a Brochure that's easy to follow and install. It's a great start to your next solar project.

Better Systems
One System, Many Applications
Quickly and easily install to the roof or an ultra-precision mount system. Design a system to complement your house style and maximize your system's aesthetics and functionality. Each system offers a full range of options, allowing you to choose the system that best suits your needs.

Better Results
Maximize Profitability on Every Job
SOLAR Mount's long-termRouter and clamping system ensures that the job is sturdy. The company's proven setup will not be matched. The system is designed for a wide range of applications, from commercial to residential.

Better Support
Work with the industry's most experienced team
SolarMount's technical support team is dedicated to providing customers with the best possible service. They are knowledgeable and dedicated to ensuring your satisfaction.

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

Technical Support
SolarMount's technical support team is dedicated to providing customers with the best possible service. They are knowledgeable and dedicated to ensuring your satisfaction. Our technical support team is available to answer any questions you may have.

Certified Quality Provider
We are the leading provider of solar mounting solutions with UL Type 1 & 2 certifications. We also provide the highest standards for installation and design, ensuring that our customers receive the best possible service.

Bavarian Warranty
Offer your customers with a worry-free warranty. Our protection covers the entire mounting system for a period of 20 years. This warranty is your assurance that your solar system will be无忧无虑地工作.

The Professionals' Choice for Residential Racking
Best Installation Experience - Curb Appeal - Complete Solution - UNIRAC Support

UNIRAC

UNIRAC

UNIRAC
BONDING MIDCLAMP ASSEMBLY
1. Aluminum mid clamp with stainless steel bonding pins that pierce module frame and bond module to module through clamp
2. Stainless steel nut bonds aluminum clamp to stainless steel T-bolt
3. Serrated T-bolt head penetrates rail and isolates module to bond T-bolt, nut, clamp, and modules to SM rail

BONDING MIDCLAMP ASSEMBLY

BONDING RAIL SPLICE BAR
1. Stainless steel clamping screw (W1) and top into splice bar and rail, creating bond between splice bar and each rail section
2. Aluminum splice bar spares across rail gap to create rail to rail bond. Rail on at least one side of splice will be grounded. Note: Splice bar and bolted connection are non-structural. The splice bar function is rail alignment and bonding.

RAIL TO L-FOOT w/BONDING T-BOLT
1. Serrated flange nut removes L-foot attachment to bond L-foot to stainless steel T-bolt
2. Serrated T-bolt head penetrates rail and isolates rail to bond T-bolt, nut, and L-foot to grounded SM rail.

BONDING RAIL SPLICE BAR

BONDING MIDCLAMP ASSEMBLY

BONDING RAIL SPLICE BAR

BONDING MICROINVERTER MOUNT
1. Screw nut with captive lock washer bonds metal microinverter flange to shorn edge steel T-bolt
2. Serrated T-bolt head penetrates rail and isolates rail to bond T-bolt, nut, and L-foot to grounded SM rail. System ground including rails and modules may be achieved through the truck cable of an approved microinverter system. See page 1 for details.

RACK SYSTEM GROUND
1. WEER washer simplifies piece and creates rail to create bond between rail and leg
2. Solid copper wire connected to leg is routed to provide final system ground connection. MTJFS. Each leg can be used to connect to the side of the rail. See page 3 for details.

MANUFACTURER CUTSHEETS
GROUND FIXED TILT (GFT) has evolved from more than 12 years of experience meeting a variety of project requirements. A synergy of steel components and aluminum parts deliver performance with the lowest system cost. Installation savings are captured through efficiently engineered components, optional pre-assembled parts and integrated bonding for optimized construction sequencing. GFT delivers engineered cost savings to meet your project needs.

SCALABLE TO ANY SIZE PROJECT

LESS STEPS • FEWER PARTS • BEST SERVICE • QUALITY PROVIDER

SCALABLE TO ANY SIZE PROJECT

ALUMINUM BEAMS WITH MAXIMUM ADJUSTABILITY

GFT’s all-aluminum, tensioned, flex, design features an innovative variety of modular components allowing for a design to fit any project. Its ability to attach to NorthStar Snap Connectors ensures a solid, quick and simple assembly. Snap Connectors hold the beams together and allow for easy removal of damaged beams and damaged beams, providing an easy way to repair and reassemble without the need for specialized equipment or tools.

ENGINEERED COST SAVINGS

PRE-ASSEMBLY & WIRE MANAGEMENT

Different project specifications includes both apartment style, hanger style, and single home style. The snap-on beam design allows for easy installation, reducing the need for wire management and providing a clean and professional appearance. No additional brackets or wires are needed to complete the installation.

PROJECT SUPPORT SERVICES

DESIGN & QUOTATION ASSISTANCE

Our project management team provides support for the entire project, from design through commissioning. Our team is available to provide assistance with any aspects of the project, ensuring a smooth installation and commissioning process.

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

UNIRAC® Customer Support is dedicated to providing exceptional service and support to our customers. Our team is available to help you with any questions or concerns you may have, ensuring a smooth and rewarding experience.

CERTIFIED QUALITY PROVIDER

UNIRAC® is committed to delivering products of the highest quality. We are proud to be a member of the Solar Trade System, ensuring our customers receive the highest standards in the industry.

BANKABLE WARRANTY

UNIRAC® provides a 25-year warranty on our products, ensuring your investment is protected for years to come. Our products are designed to withstand the harshest weather conditions and are backed by a comprehensive warranty program.

UNIRAC® offers a wide range of products to meet your specific needs, including the GFT system. Our team is available to help you select the right product for your project, ensuring a successful and cost-effective installation.

MANUFACTURER CUTSHEETS

UNIRAC©

One Source for Sustainable Living

UNIRAC® is the leading provider of sustainable solar solutions, offering a wide range of products to meet your specific needs. Our team is dedicated to providing exceptional service and support, ensuring a smooth and rewarding experience.

UNIRAC® Customer Support is dedicated to providing exceptional service and support to our customers. Our team is available to help you with any questions or concerns you may have, ensuring a smooth and rewarding experience.

The GFT system is designed to be easily installed and provides a cost-effective solution for any size project. Our team is available to help you select the right product for your project, ensuring a successful and cost-effective installation.

UNIRAC® is committed to delivering products of the highest quality. We are proud to be a member of the Solar Trade System, ensuring our customers receive the highest standards in the industry.

UNIRAC® offers a 25-year warranty on our products, ensuring your investment is protected for years to come. Our products are designed to withstand the harshest weather conditions and are backed by a comprehensive warranty program.

UNIRAC® is the leading provider of sustainable solar solutions, offering a wide range of products to meet your specific needs. Our team is dedicated to providing exceptional service and support, ensuring a smooth and rewarding experience.

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Possible inclusion on agenda for Planning and Zoning meeting of June 15, 2020

Dear Travis,

Thank you for all your help.

Enclosed find the Approval from all three of our Trustees for the solar panels for roof and ground mount.

I also enclose a copy of the overhead picture showing the new location and size of the single ground mount and the proposed tree installation for the 12 trees we have contracted to buy.

We appreciate your efforts to get us onto the agenda for the June 15, 2020 meeting, as we are worried that waiting to plant these mature trees in late summer will not go well.

Thank you again,

Michele Maue and Geoffrey Nash
314 972 2434 (cell)
REQUEST FOR APPROVAL OF SOLAR INSTALLATION

We have contracted with SunSource, a solar power company, for roof solar panels and a ground-mounted solar array at 388 Steeple Lane.

In connection with that project, Homeowners and SunSource are in the process of obtaining a Conditional Use Permit from the City of Wildwood, which is required if the roof panels and the ground mount array will be visible from the adjoining street.

We are aware of the concerns from neighbors as to the visibility of the ground array, and have therefore instructed SunSource to change the project from two arrays, to one longer array. As per the neighborhood meeting, and the first Wildwood Planning and Zoning meeting, we always intended to screen the ground mount with evergreen plantings.

We recently entered into a contract with Baxter Gardens of Chesterfield for the purchase and planting of eleven 8’-10’ high Norway Spruce trees, as well as one 8’-10’ Green Giant Arbor Vitae. One-half of the contract price for these trees have been paid. The trees were chosen and ribboned at Baxter Gardens for our contract on May 15, 2020. We have been told that the trees will be planted within the next 1-2 weeks, depending upon rainfall.

We enclose a drawing of the new array provided by SunSource. The array site has been staked out and is available for view in our south yard. We have added circles to the drawing showing rough placement of the trees. The trees we picked out are so large that some of the circles may be adjusted at the time of planting.

We also have two trees picked out to plant to close a gap between our yard and the homeowners to the south of us, where a tree died and was removed before we purchased the property.

I enclose the depiction of the new array, a copy of the Baxter Garden Landscape contract showing that 50% of payment was made on 5/4/20, and a copy of the SunSource signed contract for the installation of the roof and ground array dated 9/3/19. (This contract does not include additional charges for the storage batteries which will be installed in the basement of our home.)
We hereby request approval of these plans.

Geoffrey S. Nash  
Date 5/23/2020

Michele M. Mate  
Date 5/23/2020

We, Trustees of Steeple Hill, hereby approve these plans for the installation of roof-mounted solar panels and one ground-mounted array and accompanying evergreen screening with eleven 8-10 foot high Norway Spruce trees.

[Signature]  
Date 5/24/2020

Trustee of Steeple Hill  
4105 Steeple Ln.  
Address 63005

[Signature]  
Date 5/26/2020

Trustee of Steeple Hill  
404 Steeple Ln.  
Address
We hereby request approval of these plans.

Geoffrey S. Nash  
5/23/2020
Date

Michele M. Maue  
5/23/2020
Date

We, Trustees of Steeple Hill, hereby approve these plans for the installation of roof-mounted solar panels and one ground-mounted array and accompanying evergreen screening with eleven 8-10 foot high Norway Spruce trees.

Trustee of Steeple Hill  
5/24/2020
Date

405 Steeple Hill  
Address  
63005

Trustee of Steeple Hill  
5/27/2020
Date

409 Steeple Lane  
Address  
63005
# Landscape Estimate

**MAUE/NASH RESIDENCE**  
388 STEEPLE LN  
CHESTERFIELD, MO 63005

## Estimate Details

<table>
<thead>
<tr>
<th>Estimate #</th>
<th>Typist</th>
<th>Rep</th>
<th>Date</th>
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<tbody>
<tr>
<td>13048</td>
<td>DCW</td>
<td>CW</td>
<td>5/4/2020</td>
</tr>
</tbody>
</table>

**Customer E-mail:** MICHELE@DASHNASH.COM

---

<table>
<thead>
<tr>
<th>Qty</th>
<th>Description</th>
<th>Rate</th>
<th>Total</th>
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</thead>
<tbody>
<tr>
<td>11</td>
<td>NORWAY SPRUCE - 8'-10' FOOT // INSTALLED</td>
<td>755.00</td>
<td>8,085.00</td>
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<tr>
<td>1</td>
<td>GREEN GIANT ARBORVITAE - 8'-10' FOOT // INSTALLED</td>
<td>855.00</td>
<td>855.00</td>
</tr>
</tbody>
</table>

**Total Contract:** 8,940.00

Upon acceptance of contract, please sign one copy and return with a 40% deposit.

**Signature:** [Signature]

**Date:** [Date]

**Checks Preferred or Credit Card:** [Credit Card]

**Exp.** [Expiration Date]  
**Billing Zip:** [Zip Code]

(A 3% Fee will be added to credit card payments on any estimate over $5000.00)

**Yes, I would like to receive electronic estimates, invoices and statements.**

**E-mail Address:** MICHELE@DASHNASH.COM

**Note:** Prices guaranteed for ninety (90) days.

---

**Contract Total:** $8,940.00

---

17259 Wildhorse Creek Road, Chesterfield MO 63005
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

Request Being Considered | P.Z. 7-20 City of Wildwood (Solar Panels)
Item Description | Field not completed.
Position on Request | Support
General Comments | Our subdivision had meeting about the above items and we voted YES to the request of 388 Steeple Lane, 63005
Suggestions | Field not completed.

(Section Break)

Name | Judy Dana
Address | 477 Steeple Lane
City | Wildwood
State | Mo
Zip | 63005
Phone Number | 636-236-8544
Email | j-dana@sbcglobal.net

Email not displaying correctly? View it in your browser.
Attachment C –
Background
Information
CITY OF WILDWOOD
NOTICE OF
PUBLIC MEETING
before the Planning and Zoning Commission
Monday, July 20, 2020 @ 7:00 p.m.

AS A RESIDENT OR PROPERTY OWNER NEAR THE SITE
THAT IS IDENTIFIED ON THIS MAILER, THE CITY OF
WILDWOOD WOULD LIKE TO ENSURE YOU ARE
AWARE OF THIS REQUEST/PROPOSAL BECAUSE IT
IS LOCATED WITHIN 3,000 FEET OF YOUR PROPERTY.
YOUR COMMENTS ARE ENCOURAGED, ALONG WITH
YOUR PARTICIPATION AT THE SCHEDULED HEARING
OR MEETING. THIS ITEM IS SCHEDULED FOR DISCUSSION
AND ITS OUTCOME MAY IMPACT YOUR HOME,
NEIGHBORHOOD, OR AREA. SO PLEASE CAREFULLY
READ THE DESCRIPTION AND PARTICIPATE AT YOUR
DISCRETION. THE CITY OF WILDWOOD ENCOURAGES
CITIZEN INPUT AT ALL OF ITS HEARINGS OR MEET-
INGS AND YOUR INVOLVEMENT WILL ASSIST IN
REACHING THE BEST DECISION POSSIBLE FOR ALL
PARTIES.

* PLEASE SEE YELLOW BOX ON OPPOSITE SIDE OF
THIS MAILER FOR A LIST OF WAYS TO EITHER COM-
MENT ON AND/OR TRACK THIS ITEM.

Street Address of Subject Site:
388 Steeple Lane, 63005

THE CITY WELCOMES AND ENCOURAGES
YOUR COMMENTS AND PARTICIPATION IN
ITS PUBLIC PROCESSES.
THANK YOU!

Listed below is a request that was presented to the Planning and Zoning Commission at a public hearing held on December 2, 2019. You and some of your neighbors may have expressed interest in its outcome and the Commission is scheduled to hear the Department of Planning’s recommendation on this matter and potentially take action upon it at its upcoming meeting. The meeting will be held on Monday, July 20, 2020, at 7:00 p.m., in the City Hall Council Chambers, 16860 Main Street, Wildwood, Missouri 63040. Please be advised that, given the current COVID-19 coronavirus pandemic, certain restrictions do exist relative to number of attendees allowed at any hearing or meeting. These restrictions also include social distancing. Therefore, please anticipate certain delays and potential alterations to the standard public meeting procedures. Additionally, depending on the actions taken by St. Louis County Government and/or the City of Wildwood, the meeting may only be accessed virtually, if public health circumstances continue to dictate or mandate such. Written comments are encouraged and requested to be submitted prior to the meeting and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040 or via the City’s website at https://www.cityofwildwood.com/1976/Virtual-PZ-Meetings. The following request will be considered at this time:

P.Z. 17-19 Michelle and Geoffrey Nash, 388 Steeple Lane, Wildwood, Missouri 63005, c/o Sunsource Homes Inc., 322 Southwest Boulevard, Kansas City, Missouri 64108 – A request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District (Street Address: 388 Steeple Lane/Locator Number: 19V430291) for the installation of ground-mounted solar panels upon this three (3) acre parcel of ground, which is located on the east side of Steeple Lane, south of Wildhorse Creek Road. The petitioner is also seeking to install certain roof-mounted solar panels, which are to be so situated on the existing dwelling, as to be visible from an abutting roadway. These installations are required to be reviewed in accordance with Chapter 415.090 NU Non-Urban Residence District Regulations of the City of Wildwood Zoning Ordinance, which establishes standards and requirements for the installation of solar panels. The requested permit is required due to the proposed solar panels being of a ground-mounted design type, as well as roof-mounted panels situated on an area of the dwelling’s roof, that causes them to be visible from an abutting roadway. (Ward One)

RESIDENT OR PROPERTY OWNER - PLEASE COMMENT ON AND/OR TRACK THIS REQUEST BY:
1) Submitting a comment online by visiting: www.cityofwildwood.com/comment.
2) Submitting a written comment prior to the hearing and addressed to the Planning and Zoning Commission, City of Wildwood, 16860 Main Street, Wildwood, Missouri 63040.
3) Viewing the project on the City’s Current Developments & Zoning Reviews page by visiting: www.cityofwildwood.com/zoningreviews.
4) Viewing the Planning and Zoning Commission’s agenda, which is available on the City’s website at: www.cityofwildwood.com, the Friday before the aforementioned meeting date.

If you should have any questions regarding this information, please feel free to contact the Department of Planning at (636) 458-0440. Thank you in advance for your interest in this matter.
**GENERAL NOTES**

A. PV SOLAR ARRAY COMPRISSED OF 72 MODULES. TOTAL STC POWER RATING 24.62 KWAC. EACH MODULE CONNECTED INDIVIDUALLY TO A DEDICATED ENHANCE MICROINVERTER.

B. TOTAL ARRAY OUTPUT:

- AC OPERATING VOLTAGE: 240 VAC
- AC OPERATING CURRENT: 8 A AC

C. ALL CIRCUIT CONDUIT IS MADE USING P.V. WIRE OR GXL W/ SINGLE POLE MCD CONNECTORS.

D. INTER-MODULAR CONNECTIONS MADE THROUGH ENHANCE G-OABLE 2 CONDUCTOR, THIN 1 THRU 3, 2/0 AWG, UV RESISTANT WIRE W/ SINGLE POLE MCD CONNECTORS.

E. NO NEUTRAL CONDUCTOR REQUIRED.

F. ALL RED CIRCUIT IS MADE USING P.V. WIRE OR GXL W/ SINGLE POLE MCD CONNECTORS.

G. ENHANCE MICROINVERTERS REQUIRE NO GROUNDING OR GROUND CONDUCTORS BECAUSE THE CIRCUIT IS ISOLATED FROM GROUND.

H. ALL EXPOSED WIRING HARNESS ARE CLASS 2 DOUBLE-INSULATED Rated. IF REQUIRED BY LOCAL OR STATE CODES, EXPOSED WIRING HARNESS CAN BE BONDED TO MAILS LEND L.L. 250 HARDWARE.

I. MODULE FRAMES ARE MOUNTED TO ANCHORAGE RACKS DURING INSTALLATION WITH GROUNDING CLIPS THE DC EXCITED SHALL BE CONNECTED TO BOND ALL "0" NODES TO BOND ALL "0" NODES.

J. ENHANCE MICROINVERTERS USE TRANSFORMER COUPLING TO ISOLATE THE DC AND AC CIRCUITS.

K. EQUIPMENT GROUNDING CONDUCTORS SIZED ACCORDING TO "0" NODE.

L. BULK SYSTEM AND EQUIPMENT GROUNDING CONDUCTOR TO BE MADE OF "0" NODE SERVICE GROUND IN SERVICE PANEL.

M. TOTAL SYSTEM VOLTAGE DROP AND RISE DESIGNED TO BE LESS THAN 2%.

N. LIGHTNING PROTECTION DEVICE (L.P.D.) MAY BE INSTALLED IN COMBINE PANEL.

O. UTILITY ACCESSIBLE AC DISCONNECT TO BE LOCATED NEXT TO METER.

P. PV SYSTEM WILL BE CONNECTED AS A BALANCED SYSTEM.

Q. ALL EQUIPMENT TO BE INSTALLED I.N.W. 2014.

R. REFER TO installing-AND-CABLE INSTALLATION INSTRUCTIONS TO PREPARE HOME RUN TO ABBEY ORGANIZATION PANEL.

---

**BILL OF MATERIALS**

<table>
<thead>
<tr>
<th>TAG</th>
<th>DESCRIPTION</th>
<th>PARTS</th>
<th>NOTES</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>PV MODULES</td>
<td>JA SOLAR &amp; TERA SOLAR</td>
<td>520 PANEL 11 1 12, TOTAL 72</td>
</tr>
<tr>
<td>2</td>
<td>MODULES</td>
<td>ENHANCE MICROINVERTER, (52) PANEL</td>
<td>52 PANEL 13 1 12, TOTAL 72</td>
</tr>
<tr>
<td>3</td>
<td>DC-AGGREGATOR</td>
<td>GML-625-5-150</td>
<td>ORS WITH GXL CABLE AND THIN-0G 2 TO COMBINE PANEL.</td>
</tr>
<tr>
<td>4</td>
<td>COMBINE PANEL</td>
<td>COMBINER BOX 220V 240V 50A 150A 200A 240V 220V 200V</td>
<td>COMBINER BOX OUTPUT 240V 220V 150A 100A 1-15 AMP BREAKERS</td>
</tr>
<tr>
<td>5</td>
<td>COMBINE PANEL</td>
<td>COMBINER BOX OUTPUT 240V 220V 150A 150A 200A 240V</td>
<td>COMBINER BOX OUTPUT 240V 220V 150A 1-15 AMP BREAKERS</td>
</tr>
<tr>
<td>6</td>
<td>SERVER PANELS</td>
<td>HOME 2 X 200 AMPS</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>HOME 2</td>
<td>X 200 AMPS</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>POINT OF INTERCONNECTION (POC)</td>
<td>LINE SIDE IN TERMINAL BOX, CUSTOMER SIDE OF METER</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>MOUNTING</td>
<td>G3400V POWERED 24V VAC BY GE COMBINE</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>SOLAR PV DISCONNECT</td>
<td>PANEL 1, DISCONNECT OR EQUIVALENT</td>
<td>ENHANCE MICROINVERTER PANELS WITH 20 AMP BREAKER</td>
</tr>
<tr>
<td>11</td>
<td>COMBINE PANEL</td>
<td>520 PANEL 11 1 12, TOTAL 72</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>LUMEN SMART</td>
<td>330/240 VAC, DISCONNECT CURRENT 200 A, MAX INPUT SHORT CIRCUIT CURRENT 10 K</td>
<td></td>
</tr>
</tbody>
</table>

**CONDUIT/CONDUCTOR SCHEDULE**

<table>
<thead>
<tr>
<th>DESCRIPTION / CONDUCTOR TYPE</th>
<th>GAUGE</th>
<th>QUANTITY &amp; GAUGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>G-CABLE</td>
<td>2M 12C 14 150</td>
</tr>
<tr>
<td>21</td>
<td>LAPP UF 5/0X</td>
<td>14 5 5</td>
</tr>
<tr>
<td>22</td>
<td>THIN-2 (COPPER)</td>
<td>50/0C 16 4</td>
</tr>
<tr>
<td>23</td>
<td>THIN-4</td>
<td>5/0C 16 4</td>
</tr>
<tr>
<td>24</td>
<td>THIN-2 (ALUMINUM)</td>
<td>4/0C 16 4</td>
</tr>
<tr>
<td>25</td>
<td>THIN-2</td>
<td>5/0C 16 4</td>
</tr>
<tr>
<td>26</td>
<td>THIN-2</td>
<td>1/0C 16 4</td>
</tr>
</tbody>
</table>

**SINGLE LINE DIAGRAM**

---

**DRAWING:**

PV E3.1

**DATE:**

2019-1004-0155

**DRAWN BY:**

Carla J. Scott

**INCHES:**

3 of 18
## Electrical Calculations

### Equipment Specifications and System Data

<table>
<thead>
<tr>
<th>Module Data (Roof Mounted)</th>
<th>Module Data (Ground Mounted)</th>
<th>Inverter Data</th>
<th>Service Entrance Panel</th>
<th>System Sizing</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Manufacturer / Model #</strong></td>
<td><strong>Module Quantity</strong></td>
<td><strong>Inverter Quantity</strong></td>
<td><strong>Buss Bar Rating</strong></td>
<td><strong>A</strong></td>
</tr>
<tr>
<td>Trina Solar, TSM-280X-115</td>
<td>50</td>
<td>5</td>
<td>72</td>
<td>200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Maximum Power Point Current (MPP)</strong></th>
<th><strong>Vmax</strong></th>
<th><strong>Maximum DC Voltage Rating</strong></th>
<th><strong>Vmp</strong></th>
<th><strong>Mpp Current</strong></th>
<th><strong>Voltage at MPP</strong></th>
<th><strong>System DC Power (kW)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>8.80</td>
<td>200</td>
<td>60</td>
<td>9.40</td>
<td>80</td>
<td>5.40</td>
<td>20.5 kW</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Open Circuit Voltage (OC)</strong></th>
<th><strong>Value</strong></th>
<th><strong>Maximum DC Input Current (30VDC)</strong></th>
<th><strong>Value</strong></th>
<th><strong>Maximum AC Current</strong></th>
<th><strong>Value</strong></th>
<th><strong>Overcurrent Protection Required</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>40.00</td>
<td>5</td>
<td>44.75</td>
<td>15</td>
<td>20</td>
<td>10</td>
<td>201 A</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>Shunt Circuit Current (SC)</strong></th>
<th><strong>Value</strong></th>
<th><strong>Maximum Power @ 45°C</strong></th>
<th><strong>Value</strong></th>
<th><strong>Maximum AC Power</strong></th>
<th><strong>Value</strong></th>
<th><strong>ATC/ETC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>10.00</td>
<td>480</td>
<td>5</td>
<td>2.50</td>
<td>0.10</td>
<td>50</td>
<td>0.05</td>
</tr>
</tbody>
</table>

### AC Inverter Circuits

<table>
<thead>
<tr>
<th><strong>Module No.</strong></th>
<th><strong>Number of Modules</strong></th>
<th><strong>Number of Inverters</strong></th>
<th><strong>Total Amperes</strong></th>
<th><strong>1.25 Factor</strong></th>
<th><strong>Total</strong></th>
<th><strong>GCP Rating (A)</strong></th>
<th><strong>Fire Rating (A)</strong></th>
<th><strong>ATC/ETC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>20.1</td>
<td>2</td>
<td>3</td>
<td>187.4</td>
<td>20</td>
<td>2</td>
<td>IQ Cable Free Air</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Wiring Schedule

<table>
<thead>
<tr>
<th><strong>Module No.</strong></th>
<th><strong>Number of Modules</strong></th>
<th><strong>Wire Size</strong></th>
<th><strong>Amperage</strong></th>
<th><strong>ATC/ETC</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>2</td>
<td>THHN-240-6 (Copper)</td>
<td>50</td>
<td>10.15</td>
</tr>
</tbody>
</table>

**Note:** The above calculations are for illustration purposes and may need to be adjusted based on specific project requirements.
EXISTING SERVICE ENTRANCE METER
240 VAC 3W 400 AMPS

LOCATION OF
UTILITY DISCONNECT

The diagram shows an existing service entrance meter with a label indicating it's 240 VAC, 3 wire, and 400 amperes. There is also a note about the location of the utility disconnect.
**NEC 240.40(B)**

*Devices rated 600 amperes or less. The next higher standard overcurrent device rating (above the ampacity of the conductors being protected) shall be permitted to be used if:*
1. The conductors being protected are not part of a multioutlet branch circuit supplying receptacles for cord-and-plug-connected portable or fixed loads.
2. The ampacity of the conductors does not correspond with the standard ampere rating of a fuse or circuit breaker in a circuit breaker or fuse panel not having overload trip adjustments above its rating.
3. The next higher standard rating selected does not exceed 800 amperes.

**NEC 240.6(A)**

*Fuses and fixed-trip circuit breakers, the standard ampere ratings for fuses and inverse time circuit breakers shall be considered: 15, 20, 25, 30, 35, 40, 45, 50, 60, 70, 80, 90, 100, 110, 125, 150, 175, 200, 225, 250, 300, 350, 400, 450, 500, 600, 700, 800, 900, 1000, 1200, 1500, 1800, 2000, 2500, 3000, 4000, 5000, 6000 amperes.*

**NEC 240.64(C)**

*Grounding electrodes conductor be continuous, ground cramps NEC 250.160 to be irreversible.*

**NEC 250.87**

*For circuits over 250 volts to ground, the electrical continuity of metal raceways and cables with metal sheaths that contain any conductor other than service conductors shall be ensured by one or more of the methods specified for services in 250.89(B), except or 89(Y).*

**NEC 432.30**

*Connecting means.*

**NEC 432.60**

*Nameplate marking.*

**NEC 422.61(B)**

*Additional nameplate marking.*

**NEC 690.4(C)**

*Module connection arrangement shall be arranged so that removal of a module or panel from a photovoltaic source circuit does not interrupt a grounded conductor to another photovoltaic source current.*

**NEC 690.9**

*Ground fault protection.*

**NEC 690.10**

*Output circuits over 150 volts to ground shall not be accessible to other than qualified persons while energized.*

**NEC 690.6(A)(3)**

*Inverter output circuit current: the maximum current shall be the inverter continuous output current rating.*

**NEC 690.6(A)(6)**

*Size of alternating-current grounding electrode conductor. The size of the grounding electrode conductor at the service, at each building or structure where supplied by a feeder(s) or branch circuit(s), or at a separately derived system of a grounded or ungrounded AC system shall not be less than given in Table 250.66, except as permitted in 250.66(A) through (C).*

**NEC TABLE 250.66**

<table>
<thead>
<tr>
<th>Rating</th>
<th>Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>12 AWG</td>
</tr>
<tr>
<td>0.5</td>
<td>10 AWG</td>
</tr>
<tr>
<td>1.0</td>
<td>8 AWG</td>
</tr>
<tr>
<td>1.5</td>
<td>6 AWG</td>
</tr>
</tbody>
</table>

**NEC TABLE 110.18**

*Allowable amplitudes of insulated conductors rated 0 through 2000 volts, 60°C, through 50°C, not more than three current-carrying conductors in raceway, cable, or earth, based on ambient temperature of 30°C, note correction factors for ambient temperature at end of table.*
Harvest the Sunshine

395W PERC Module
JAM72S09 375-395/PR

Introduction

- 5 busbar solar cell design
- Higher output power
- Excellent low-light performance
- Lower temperature coefficient

Supervisor Warranty
- 10-year product warranty
- 25-year linear power output warranty
- 5-year power output warranty

Comprehensive Certificates
- E20-0120, IEC 61701-1:1703
- ISO 9001:2008 Quality management system
- ISO 14001:2004 Environmental management system
- CH-SGS 14010:2007 Occupational health and safety management system

EnerPac Module - 2016 Tier-1 rated module by TUV Rheinland - Certificate no. TUV-14/00143

JA Solar

JAM72S09 375-395/PR

MECHANICAL DIAGRAM

SPECIFICATIONS

- Cell: Mono
- Height: 324mm
- Width: 2500mm
- Depth: 50mm
- Diameter: 450mm (18.1")
- No. of cells: 72 (3x24)
- Joints: 3 (3x3)
- Connector: MC4 (1 x 100mm)
- QCL: 24 x 24 (800mm)
- Packaging Configuration: 24 Per Box

ELECTRICAL PARAMETERS AT STC

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JAM72S09-375/PR</th>
<th>JAM72S09-395/PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Maximum Power (Pmax) [W]</td>
<td>395</td>
<td>375</td>
</tr>
<tr>
<td>Open Circuit Voltage (V)</td>
<td>46.47</td>
<td>46.04</td>
</tr>
<tr>
<td>Maximum Power Voltage (V)</td>
<td>38.27</td>
<td>38.38</td>
</tr>
<tr>
<td>Short Circuit Current (I)</td>
<td>16.06</td>
<td>16.17</td>
</tr>
<tr>
<td>Maximum Power Current (I)</td>
<td>5.83</td>
<td>5.85</td>
</tr>
<tr>
<td>Module Efficiency [%]</td>
<td>18.8</td>
<td>18.5</td>
</tr>
<tr>
<td>Power Tolerance</td>
<td>0.00%</td>
<td>0.00%</td>
</tr>
<tr>
<td>Temperature Coefficient of Isc [%/°C]</td>
<td>-0.42%</td>
<td>-0.45%</td>
</tr>
<tr>
<td>Temperature Coefficient of Vmp [%/°C]</td>
<td>-0.39%</td>
<td>-0.39%</td>
</tr>
<tr>
<td>Temperature Coefficient of Pmax [%/°C]</td>
<td>-0.39%</td>
<td>-0.39%</td>
</tr>
</tbody>
</table>

ELECTRICAL PARAMETERS AT NOST

<table>
<thead>
<tr>
<th>TYPE</th>
<th>JAM72S09-375/PR</th>
<th>JAM72S09-395/PR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated Max Power (Pmax) [W]</td>
<td>375</td>
<td>395</td>
</tr>
<tr>
<td>Open Circuit Voltage [V]</td>
<td>47.08</td>
<td>46.98</td>
</tr>
<tr>
<td>Maximum Power Voltage (V)</td>
<td>37.34</td>
<td>37.64</td>
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<tr>
<td>Short Circuit Current (I)</td>
<td>1.46</td>
<td>1.47</td>
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<tr>
<td>Maximum Power Current (I)</td>
<td>2.78</td>
<td>2.78</td>
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<tr>
<td>Temperature Coefficient of Isc [%/°C]</td>
<td>-0.39%</td>
<td>-0.39%</td>
</tr>
<tr>
<td>Temperature Coefficient of Vmp [%/°C]</td>
<td>-0.39%</td>
<td>-0.39%</td>
</tr>
<tr>
<td>NOCT</td>
<td>47.08</td>
<td>47.08</td>
</tr>
</tbody>
</table>

OPERATING CONDITIONS

- Maximum System Voltage: 1000V (50V DC/31)
- Operating Temperature: -40°C to +85°C
- Maximum System Voltage (V): 1000V
- Maximum System Current (I): 3.96 A
- Maximum Power (Pmax): 375 W

CHARACTERISTICS

- Current/Voltage Curve: JAM72S09-375/PR
- Power Curve: JAM72S09-375/PR
- Current and Voltage Curve: JAM72S09-375/PR

- CE Certificate
- Module Certification
- Solar Plant Certification
- Product Certification
- Key Features
- System Design
- Performance
- Safety

Manpower Requirements:
- Level 2
- Level 1
- Solar Plant

MANUFACTURER CUTSHEETS

- PV ET.2
- 2019-1004-01SS
- 12 of 18

Designed By: Gaurav & Arvind
Sheet Title: PV ET.2
Page Number: 12 of 18
Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready Enphase IQ 7 Micro™ and Enphase IQ 7+ Micro™ dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ Microinverters integrate seamlessly with the Enphase Envoy®, Enphase Envoy-Aggregator™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.

Easy to Install
- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

Productive and Reliable
- Optimized for high-powered 60-cell and 72-cell P modules
- More than a million hours of testing
- Glass F-encapsulated transparent enclosures
- UL listed

Smart Grid Ready
- Complies with advanced grid support, voltage and frequency ride through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (61.15-XA)

Voted IQ 7 Microverter

INPUT DATA (DC)
- DIMENSIONS
- Max. 90% peak power
- Module compatibility
  - 96-cell and 72-cell P modules
- Maximum input DC voltage
  - 48 V
- Peak power tracking voltage
  - 37 V to 47 V
- Opening range
  - 16 V - 60 V
- Minimum short voltage
  - 21 V
- Minimum short circuit current (module level)
  - 15 A
- Overvoltage class DC port
  - 0
- DC port backfeed current
  - 0 A
- PV array configuration
  - 1 x 1 ungrounded array, no additional DC radiation protection

OUTPUT DATA (AC)
- DIMENSIONS
- Power factor setting
  - 0.7 leading
- Power factor (adjustable)
  - 0.7 leading _ 0.9 lagging

EFFICIENCY
- P vs. DC voltage
  - 0.85 to 0.92
- P vs. AC voltage
  - 0.85 to 0.92

MECHANICAL DATA
- Ambient temperature range
  - -40°C to +90°C
- Relative humidity range
  - 4% to 96% (condensing)
- Connector type
  - MC4 (except Envoy-Aggregator with Envoy IQ 12-Wire with additional Q-DOC 6 adopter)
- Dimensions (L x W x H)
  - 215 mm x 176 mm x 35.2 mm (without bracket)
- Weight
  - 1.56 kg (2.8 lbs)
- Cooling
  - Natural convection - No fans
- Approval for wet locations
  - Yes
- Pollution degree
  - MOB
- Endurance
  - Class K - double-tapped, corrosion resistant polymide enclosure
- Environmental category / UV exposure rating
  - Class K / Class 6 / Type 2

FEATURES
- Communication
  - Power Line Communication (PLC)
- Monitoring
  - Enlighten Manager and Enlighten monitoring interface
- Disconnecting means
  - The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 695
- Compliance
  - UL 2170-1, UL 1943-2012, UL 1699-2009, FZC Part 1 Class B, CEI IEC 62017 Class B
- CSA Can/CSA-C22.2 No. 130-2012
- Product is UL Listed as a PV Rapid Shunt Down Equipment and conforms with NEC 2016 and NEC 2017 section 690.12 and C23-2013 New Rule 64-178 Rapid Shunt Down of PV System, for AC and DC disconnects when installed according to manufacturer's instructions

To learn more about Enphase offerings, visit enphase.com

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**Lumin Smart Panel**

Lumin Smart Panel is a fully integrated energy management system for residential and light commercial applications. It enables full, shared (building owner and utility) control of load via the circuit breaker panel and full trending of detailed, behind-the-meter consumption data. The combination of detailed data and full control will help shape smart energy consumption behaviors and usher in the smart grid of tomorrow.

**Operating Temperature**
-40°C to 55°C (-40°F to 131°F)

**Enclosure Type**
RiNTiX™ EVT 310

**Build-Compliant**
Yes

**Dimensions**
45.0 cm x 42.0 cm x 12.0 cm

**Weight**
15 kg

**Conductor Length**
50 cm

**AC Voltage**
120V/240V

**Feed in Type**
Single & Dual Phase

**Warranty**
10-Year Limited Warranty

**WiFi 802.11b/g/n @ 2.4 GHz with Internet access**

**WEP, WEP 128, WPA, and WPA2 encryption methods**

**DHCP (dynamic) or static IP addressing**

**X.509 certificate encryption**

**Cryptographic protocol TLS 1.2 RC 6176**

**AIoT Multi-Region High Availability**

**Panel**
Any manufacturer

**Breakers**
Any manufacturer

**Compliance**
UL 516

**Authorized list/kit**
Required

**Type**
Weld mount

**Time**
2-3 hours

**Array**
6 channels up to 60A
6 channels up to 30A

**Input**
Up to 12

**Up to 4 split core CT's**
2x 200A (main service)
2x 50A (generation)

**Battery**

**Each dedicated circuit mounted separately**

**Dual phase voltage measurement**

**ANSI C22.20.5 Accuracy Class**

**20kHz sampling frequency per circuit**

**Class 3 PCB Assembly**

**Contact Information**

**Company**
Lumin Smart Panel

**Address**
123 Main Street
Anytown, USA 12345

**Phone**
555-1234

**Website**
lumin.com

**Technical Support**

**Contact Email**
lumin.support@lumin.com
SOLARMOUNT is the professionals’ choice for residential PV mounting applications. Every aspect of the system is designed for an easier, faster installation experience. SOLARMOUNT is a complete solution with revolutionary universal clamps. FLASHKIT PRO, hell system UL 2703 certification and 25-year warranty. Not only is SOLARMOUNT easy to install but best-in-class aesthetics make it the most attractive on any block!

**THE PROFESSIONALS’ CHOICE**

With Superior Aesthetics

**BETTER RESULTS**

OPTIMAL PROFESSIONAL PERFORMANCE

**BETTER SUPPORT**

WORK WITH THE INDUSTRY’S MOST EXPERIENCED TEAM

**UL2703**

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

TECHNICAL SUPPORT

CERTIFIED QUALITY

MANUFACTURER WARRANTY

**BEST INSTALLATION EXPERIENCE • CURB APPEAL • COMPLETE SOLUTION • UNIRAC SUPPORT**
BONDING MIDCLAMP ASSEMBLY
1. Aluminium mid clamp with stainless steel bonding plate that pieces module frame
   and module to module through clamp
2. Stainless steel nut bonds aluminium clamp to stainless steel T-bolt
3. Serrated T-bolt head penetrates rail of module to bond T-bolt, nut, clamp, and
   module to SM rail

BONDING RAIL SPLICE BAR
1. Stainless steel self-drilling screw drill and tap into splice bar and rail. Inserting bond between
   splice bar and rail will not change splice bar strength.
2. Aluminium splice bar spares across rail gap to create rail-to-rail bond. Drill or at least one hole
   of splice bar will be grounded.
3. Inner splice bar and bolted connection are non-structural. The splice bar function is rail
   alignment and bonding.

RAIL TO L-FOOT/W/BONDING T-BOLT
1. Terminal flange nut connects 1-foot to rail on stainless steel T-bolt
2. Serrated T-bolt head penetrates rail and module to bond T-bolt, nut, and L-foot to grounded SM
   rail.

BONDING MICROINVERTER MOUNT
1. Hex nut with captive lock washer bonds metal microinverter flange to stainless steel T-bolt.
2. Serrated T-bolt head penetrates rail and module to bond T-bolt, nut, and L-foot to grounded SM
   rail. System ground including rail and module will be all tied through the round column of
   appropriate microinverters systems. See page 2 for details.

RACK SYSTEM GROUND
1. WEBB washer dips plate productized rail in crane bond between rail and lug.
2. Solid copper wire connected to lug is trimmed to provide flexible system ground connection.

PROJECT INFORMATION
- Client: [Client Name]
- Designer: [Designer Name]
- Project Number: [Project Number]

MANUFACTURER CUTSHEETS
- Manufacturer: [Manufacturer Name]
- Contact Information: [Contact Information]

Sheet Name: [Sheet Name]
- Sheet Title: [Sheet Title]
- Sheet Number: [Sheet Number]
SCALABLE TO ANY SIZE PROJECT

GROUND FIXED TILT (GFT) has evolved from more than 12 years of experience meeting a variety of project requirements. A synergy of steel components and aluminum parts deliver performance with the lowest system cost. Installation savings are captured through efficiently engineered components, optional pre-assembled parts and integrated bonding for optimized construction sequencing. GFT delivers engineered cost savings to meet your project needs.

SCALABLE TO ANY SIZE PROJECT

GROUND FIXED TILT

SCALABLE TO ANY SIZE PROJECT

ALUMINUM FRAME WITH MAXIMUM ADJUSTABILITY

GROUND FIXED TILT

ENGINEERED COST SAVINGS

PRE ASSEMBLY & WIRE MANAGEMENT

GROUND FIXED TILT

PROJECT SUPPORT SERVICES

DESIGN & QUOTATION ASSISTANCE

GROUND FIXED TILT

UNIRAC CUSTOMER SERVICE MEANS THE HIGHEST LEVEL OF PRODUCT SUPPORT

UNIRAC

UL2703
Meeting Comment Form

By utilizing this form, your comments will be considered by the Department of Planning in its development of a recommendation of this request. Additionally, the Planning and Zoning Commission, the City Council, and/or the applicable board or committee will also receive copies of your comments, as they consider the merits of these land use proposals being reviewed by the city. You must submit a separate form for each public hearing for which you have comments.

<table>
<thead>
<tr>
<th>Request Being Considered</th>
<th>Field not completed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item Description</td>
<td>P.Z.17-19 Michelle and Geoffrey Nash, 388 Steeple Lane Solar Panel</td>
</tr>
<tr>
<td>Position on Request</td>
<td>Support</td>
</tr>
<tr>
<td>General Comments</td>
<td>Field not completed.</td>
</tr>
<tr>
<td>Suggestions</td>
<td>Field not completed.</td>
</tr>
</tbody>
</table>

Name: Judith Dana
Address: 477 Steeple Lane
City: Wildwood
State: Mo
Zip: 63005
Phone Number: 6362368544
Email: j-dana@sbcglobal.net

Email not displaying correctly? View it in your browser.
PETITION

before the
CITY OF WILDWOOD’S
PLANNING AND ZONING COMMISSION
FOR THE PURPOSE OF HEARING REQUESTS
FOR ONE OR A COMBINATION OF THE FOLLOWING:
(PLEASE CHECK THOSE ITEMS WHICH ARE APPLICABLE)

- Change in Zoning
  X Conditional Use Permit
- Approval of a Planned District or other special procedure (C-8/M-3/PRD)

APPLICANT/OWNER INFORMATION

Applicant's Name: Sunsource Homes Inc. (John Ingraham)
Mailing Address: 322 Southwest Blvd., Suite 200
                 Kansas City, MO 64108
Telephone Number, with Area Code: 816-783-0625
Fax Number, with Area Code: 
E-Mail Address: john@sunsourcehomes.net
Interest in Property (Owner or Owner Under Contract):

If owner under contract, please attach a copy of the contract.

Owner's Name (if different than applicant):
Maue Michele M & Nash Geoffrey Geoff Nash
Address: 388 Steeple Lane
         Wildwood, MO 63005
Telephone Number, with Area Code: 314-972-2434
SITE INFORMATION

Postal Address of the Petitioned Property(ies):
388 Steeple Lane
Wildwood, MO 63005

Locator Number(s) of the petitioned Property(ies):
PARCEL # 19V430291

Total Acreage of the Site to the Nearest Tenth of an Acre:

Current Zoning District Designation: R
Proposed Zoning District Designation: N/A
Proposed Planned District or Special Procedure: N/A

USE INFORMATION

Current Use of Petitioned Site: Single Family Residential

Proposed Use of Site: Single Family Residential

Proposed Title of Project: Proposed roof-mounted and ground mounted solar panel arrays on an existing home.

Proposed Development Schedule (Include approximate date of start and completion of the project):

CONSULTANT INFORMATION

Engineer’s/Architect’s Name: Sunsource Homes Inc. (John Ingraham)
Address: 322 Southwest Blvd., Suite 200
Kansas City, MO 64108

Telephone Number, with area code: 816-783-0625
Fax Number, with area code: 
E-Mail Address: john@sunsourcehomes.net

Soil Scientist/Forester’s Name:
Address:

Telephone Number, with area code:
Fax Number, with area code:
E-Mail Address:
ACKNOWLEDGEMENT INFORMATION

The petitioner(s) state(s) they (he) (she) will comply with all the requirements of the city of Wildwood with regard to the procedures relating to its administration of land use and development controls within its boundaries, including the payment of all applicable fees.

The petitioner(s) further represent(s) and agree(s) that they (he) (she) has (have) not made any arrangement to pay any commission, gratuity, or consideration, directly or indirectly, to any official, employee, or appointee of the City of Wildwood with respect to this application.

The petitioner(s) hereby certify(ies) that (indicate one):

☐ I (we) have a legal interest in the hereinafore described property.
☐ I am (we are) the duly appointed agent of the petitioner(s) and that all information given and represented on this application is an accurate and true statement of fact. Any misrepresentation of information on this application or accompanying information shall constitute grounds for the City of Wildwood, Missouri to terminate review of this petition and return all materials, minus any fees, associated with its review up to and through that point.

SIGNATURE: ____________________________
NAME (PRINTED): John Ingraham
ADDRESS: 322 Southwest Blvd., Suite 200
Kansas City, MO 64108

TELEPHONE NUMBER: 816-783-0625

[PLEASE NOTE: THE ABOVE NAMED PERSON SHALL RECEIVE ALL OFFICIAL NOTICES REGARDING THIS REQUEST, INCLUDING THE PUBLIC HEARING NOTICE.]

SUBSCRIBED AND SWORN BEFORE ME THIS ______ DAY OF ____________, 2019.

SIGNED: ____________________________
( NOTARY PUBLIC)

NOTARY PUBLIC:

STATE OF MISSOURI:

MY COMMISSION EXPIRES: ________

For Office Use Only

1ST SUBMITTAL DATE: ________
FEE: ________
PRELIMINARY DEVELOPMENT PLAN: YES NO
PACKET COMPLETE: YES NO

2ND SUBMITTAL DATE:
PACKET COMPLETE: YES NO

3RD SUBMITTAL DATE:
PACKET COMPLETE: YES NO

4TH SUBMITTAL DATE:
PACKET COMPLETE: YES NO

Planning Tomorrow Today
Page 3 of 3
October 4, 2019  
SunSource Homes  
322 Southwest Blvd  
Kansas City, MO 64108  

Re: Nash  
388 Steeple LN  
Wildwood, MO 63005  

A structural review was completed for the Nash residence referenced above to support the addition of solar panels to the house roof and a ground mount array as shown on the attached layout.

The house roof is built with 2x6/8/10 rafters spaced at 16”.

- Area 1 & 4  
  - Solar panels to be supported at 32” and anchored at 64”.  
  - No structural modifications required.

- Area 2  
  - Solar panels to be supported and anchored at 48”.  
  - No structural modifications required.

- Area 3  
  - Solar panels to be supported at 32” and anchored at 64”.  
  - No structural modifications required.

- Area 5  
  - Solar panels to be supported at 16” and anchored at 48”.  
  - No structural modifications required.

- Ground mount  
  - 2 tables of 16 panels  
  - 4 piers per table  
  - 30 degree panel tilt

Cody Tarbell
Your Custom Solar Solution
Component List

<table>
<thead>
<tr>
<th>Type</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Module</td>
<td>Trina Solar Energy Co., Ltd</td>
<td>TSM-320DD06H.08(II)</td>
<td>40</td>
</tr>
<tr>
<td>Microinverter</td>
<td>Enphase Energy Inc.</td>
<td>IQ 7+(240V)</td>
<td>72</td>
</tr>
<tr>
<td>Module</td>
<td>JA Solar</td>
<td>JAM72501-200PP</td>
<td>32</td>
</tr>
</tbody>
</table>

System Size: 24.96

Annual Production: 23,710

Energy Offset: 53%

![Solar Production Chart]

<table>
<thead>
<tr>
<th>(kWh)</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
<th>Aug</th>
<th>Sep</th>
<th>Oct</th>
<th>Nov</th>
<th>Dec</th>
<th>Annual</th>
</tr>
</thead>
<tbody>
<tr>
<td>Utility Consumption Pre-Solar</td>
<td>4,063</td>
<td>3,984</td>
<td>3,547</td>
<td>1,813</td>
<td>1,672</td>
<td>3,047</td>
<td>3,266</td>
<td>7,234</td>
<td>6,187</td>
<td>3,992</td>
<td>2,438</td>
<td>3,680</td>
<td>44.9k</td>
</tr>
<tr>
<td>Utility Consumption Post-Solar</td>
<td>2,983</td>
<td>2,755</td>
<td>1,555</td>
<td>(621)</td>
<td>(988)</td>
<td>334</td>
<td>498</td>
<td>4,641</td>
<td>3,896</td>
<td>2,177</td>
<td>1,241</td>
<td>2,740</td>
<td>21.2k</td>
</tr>
<tr>
<td>Solar Production</td>
<td>1,079</td>
<td>1,229</td>
<td>1,992</td>
<td>2,434</td>
<td>2,660</td>
<td>2,713</td>
<td>2,767</td>
<td>2,593</td>
<td>2,291</td>
<td>1,815</td>
<td>1,196</td>
<td>940</td>
<td>23.7k</td>
</tr>
</tbody>
</table>
**ELECTRICAL DATA (STC)**

<table>
<thead>
<tr>
<th>Peak Power Watts-Pmax (Wp)</th>
<th>320</th>
<th>325</th>
<th>330</th>
<th>335</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power Output Tolerance-Pmax (W)</td>
<td>0 - +5</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Power Voltage-Vmax (V)</td>
<td>33.3</td>
<td>33.7</td>
<td>34.0</td>
<td>34.4</td>
</tr>
<tr>
<td>Maximum Power Current-Imp (A)</td>
<td>9.60</td>
<td>9.65</td>
<td>9.70</td>
<td>9.75</td>
</tr>
<tr>
<td>Open Circuit Voltage-Voc (V)</td>
<td>40.6</td>
<td>41.4</td>
<td>41.8</td>
<td>42.2</td>
</tr>
<tr>
<td>Short Circuit Current-Is (A)</td>
<td>10.00</td>
<td>10.07</td>
<td>10.14</td>
<td>10.21</td>
</tr>
<tr>
<td>Module Efficiency Ef (%))</td>
<td>18.8</td>
<td>19.1</td>
<td>19.4</td>
<td>19.7</td>
</tr>
</tbody>
</table>

STC: Insolation 1000W/m², Cell Temperature 25°C. Air Mass: AM1.5G. Measuring tolerance ±3%.

**ELECTRICAL DATA (NMOT)**

<table>
<thead>
<tr>
<th>Maximum Power-Pmax (Wp)</th>
<th>241</th>
<th>245</th>
<th>249</th>
<th>253</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum Power Voltage-Vmax (V)</td>
<td>31.6</td>
<td>32.0</td>
<td>32.2</td>
<td>32.4</td>
</tr>
<tr>
<td>Maximum Power Current-Imp (A)</td>
<td>7.64</td>
<td>7.67</td>
<td>7.72</td>
<td>7.78</td>
</tr>
<tr>
<td>Open Circuit Voltage-Voc (V)</td>
<td>39.2</td>
<td>39.0</td>
<td>39.3</td>
<td>39.6</td>
</tr>
<tr>
<td>Short Circuit Current-Is (A)</td>
<td>8.06</td>
<td>8.12</td>
<td>8.19</td>
<td>8.24</td>
</tr>
</tbody>
</table>

NMOT: Insolation at 800W/m², Ambient Temperature 20°C, Wind Speed 1m/s.

**MECHANICAL DATA**

<table>
<thead>
<tr>
<th>Solar Cells</th>
<th>Monocrystalline</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cell Orientation</td>
<td>120 cells (6 x 20)</td>
</tr>
<tr>
<td>Module Dimensions</td>
<td>1698 x 1004 x 35 mm (66.38 x 39.3 x 1.38 inches)</td>
</tr>
<tr>
<td>Weight</td>
<td>18.7 kg (41.2 lb)</td>
</tr>
<tr>
<td>Glass</td>
<td>3.2 mm (0.13 inches), High Transmission, AR Coated Heat Strengthened Glass</td>
</tr>
<tr>
<td>Encapsulant Material</td>
<td>EVA</td>
</tr>
<tr>
<td>Backsheet</td>
<td>White [DD06H08U2], Black [DD06H08U3]</td>
</tr>
<tr>
<td>Frame</td>
<td>35 mm (1.38 inches) Anodized Aluminum Alloy</td>
</tr>
<tr>
<td>J-Box</td>
<td>IP 68 rated</td>
</tr>
<tr>
<td>Cables</td>
<td>Photovoltaic Technology Cable 4.0mm² (0.006 inches²), Portrait: N 140mm/P 285mm (5.5/11.22 inches), Landscape: N 1200 mm/P 1200 mm (47.24/47.24 inches)</td>
</tr>
<tr>
<td>Connector</td>
<td>MC4</td>
</tr>
</tbody>
</table>

**TEMPERATURE RATINGS**

| NMOT (Nominal Module Operating Temperature) | 41°C (±3°C) |
| Temperature Coefficient of Pmax | -0.37%/°C |
| Temperature Coefficient of Voc | -0.29%/°C |
| Temperature Coefficient of Isc | 0.05%/°C |

<table>
<thead>
<tr>
<th>MAXIMUM RATINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Temperature</td>
</tr>
<tr>
<td>Maximum System Voltage</td>
</tr>
<tr>
<td>Max Series Fuse Rating</td>
</tr>
<tr>
<td>20A</td>
</tr>
</tbody>
</table>

**WARRANTY**

10 year Product Workmanship Warranty
25 year Linear Power Warranty
(please refer to product warranty for details)

**PACKAGING CONFIGURATION**

- Modules per box: 30 pieces
- Modules per 40' container: 780 pieces

---

CAUTION: READ SAFETY AND INSTALLATION INSTRUCTIONS BEFORE USING THE PRODUCT.

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Version number: TSM_DD08H100_{n}_{.\_EN_2019_A}

www.trinasolar.com
19190 - Nash
388 Steeple LN
Wildwood, MO 63005

Area 1 & 4

2x6 rafters at 16" spacing with support wall near midspan

-Support panels at 32" and anchor panels at 64"
-No structural modifications required
<table>
<thead>
<tr>
<th><strong>Rafters at</strong></th>
<th><strong>16 in spacing</strong></th>
</tr>
</thead>
</table>

### Roofing Dead Load

**Shingles**
- 3.5 psf

**Sheeting**
- 3.5 psf

**Total**
- 7 psf

**Roofing DL**
- 7 psf * 1.33 ft = 9.33 plf

### Solar Panel Weight
- 41.23 lb

**Solar Panel Height**
- 66.85 in

**Solar Panel Width**
- 39.53 in

**Inverter Weight**
- 2.84 lb

**Mounting Rail**
- 1.128 lb/ft

**Solar Panel DL**
- 2.81 psf

### Base Roof Live Load
- \( L_0 = 20 \text{ psf} \)

**Roof LL Reduction**
- \( L_R = L_0 \cdot R_1 \cdot R_2 \)

**Tributary area**
\( A_t = 24.0 \text{ ft}^2 \)

\( R_1 = 1.2 \cdot 0.001 \cdot A_t \)

\( R_2 = 1.2 \cdot 0.05 \cdot F \)

**F**
- 10.07 in rise/ft

\( R_2 = 1.2 \cdot 0.05 \cdot 10.07 \)

\( LR = 20 \cdot 1 \cdot 0.7 \)

**LL along rafter**
- 13.93 psf on horizontal projection

**Live Load**
- 10.67 psf

**Rafter LL**
- 14.23 plf along slope

### Snow Load

**Ground snow load**
- \( p_b = 20 \text{ psf} \)

**Flat roof snow load**
- \( p_{rt} = 0.7 \cdot C_e \cdot C_t \cdot I \cdot p_b \)

**Exposure Factor**
- \( C_e = 1 \text{ B, Partially Exposed} \)

**Thermal Factor**
- \( C_t = 1.1 \text{ Cold ventilated roof} \)

**Importance Factor**
- \( I = 1 \text{ II} \)

**Sloped roof snow**
- \( p_s = C_s \cdot p_{rt} \)

**Slope Factor**
- \( C_s = 0.92 \text{ Fig 7-2 of ASCE 7} \)

**Roof Snow Load**
- \( p_s = C_s \cdot p_{rt} \)

**SL along rafter**
- 14.21 psf on horizontal projection

**Snow Load**
- 10.89 psf

**Rafter SL**
- 14.52 plf along slope

### Solar Support Load

**Panel height**
- 66.85 in

**Panel width/support**
- 32 in

**Tributary area**
- \( (66.85 \text{ in} / 2)^2 \cdot (32 \text{ in}) = 7.43 \text{ ft}^2 \)

**Solar Point DL**
- 7.43 ft\(^2 \) * 2.81 psf = 20.85 lb

**Solar Point LL**
- 7.43 ft\(^2 \) * 10.67 psf = 79.26 lb

**Solar Point SL**
- 7.43 ft\(^2 \) * 10.89 psf = 80.88 lb

7.48 plf, along slope
37.15 plf, on horizontal proj.
37.90 plf, on horizontal proj.
Rafters at 
388 Steeple LN
Wildwood, MO 63005

<table>
<thead>
<tr>
<th>roofing dead load</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>shingles</td>
<td>3.5 psf</td>
<td></td>
</tr>
<tr>
<td>sheeting</td>
<td>3.5 psf</td>
<td></td>
</tr>
<tr>
<td>total</td>
<td>7 psf</td>
<td></td>
</tr>
</tbody>
</table>

| solar panel weight            | 41.23 lb                |                         |
| solar panel height            | 66.85 in                |                         |
| solar panel width             | 39.53 in                |                         |
| inverter weight               | 2.84 lb                 |                         |
| mounting rail                 | 1.128 lb/ft             |                         |
| solar panel dl                | 2.81 psf                |                         |

| base roof live load           |                         |                         |
| l0                            | 20 psf                  |                         |

| roof LL reduction             |                         |                         |
| lr                            |                         |                         |
| tributary area, A_t           | 24.0 ft²                |                         |
| R_1                           | 1.2 - 0.001 * A_t       |                         |
| R_2                           | 1.2 - 0.05 * F          |                         |
| F                             | 10.07 in rise/ft        | 40.00 degrees           |
| R_2                           |                         |                         |
| LR                            | 13.93 psf on horizontal projection |
| live load                     | 10.67 psf               |                         |

| rafter LL                     | 13.93 psf * 1.33 ft     | 18.57 psf on horizontal projection |

| snow load                     |                         |                         |
| flat roof snow load           |                         |                         |
| p_f                           |                         |                         |
| exposure factor               |                         |                         |
| thermal factor                |                         |                         |
| importance factor             |                         |                         |
| sloped roof snow              |                         |                         |
| slope factor                  |                         |                         |
| roof snow load                |                         |                         |
| sl along rafter               |                         |                         |
| snow load                     |                         |                         |

| rafter sl                     | 14.21 psf * 1.33 ft     | 18.95 psf on horizontal projection |

| solar support load            |                         |                         |
| panel height                  | 39.53 in                |                         |
| panel width/support           | 32 in                   |                         |
| tributary area                | (39.53 in / 2)² * (32in) |                         |

| solar point dl                | 12.33 lb                | 7.48 psf, along slope   |
| solar point ll                | 46.86 lb                | 37.15 psf, on horizontal proj. |
| solar point sl                | 47.82 lb                | 37.90 psf, on horizontal proj. |
## Design Check Calculation Sheet

**WoodWorks Sizer 11.1**

### Loads:

<table>
<thead>
<tr>
<th>Load</th>
<th>Type</th>
<th>Distribution</th>
<th>Pattern</th>
<th>Location [ft]</th>
<th>Magnitude Start</th>
<th>Magnitude End</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing Dead</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td></td>
<td>9.3</td>
<td></td>
<td>plf</td>
</tr>
<tr>
<td>Roof Live 1</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00 4.33</td>
<td>18.6</td>
<td>18.6</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Live 2</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>15.58 18.00</td>
<td>18.6</td>
<td>18.6</td>
<td>plf</td>
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<tr>
<td>Roof Snow 1</td>
<td>Snow</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00 4.33</td>
<td>19.0</td>
<td>19.0</td>
<td>plf</td>
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<tr>
<td>Roof Snow 2</td>
<td>Snow</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>15.58 18.00</td>
<td>19.0</td>
<td>19.0</td>
<td>plf</td>
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<tr>
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<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>5.25</td>
<td>21</td>
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<td>lbs</td>
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<td>Dead</td>
<td>Point</td>
<td>No</td>
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<td>21</td>
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<td>Dead</td>
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<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>12.33</td>
<td>21</td>
<td></td>
<td>lbs</td>
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<td>Panel Dead 5</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>13.75</td>
<td>12</td>
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<td>lbs</td>
</tr>
<tr>
<td>Panel Dead 6</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>15.17</td>
<td>12</td>
<td></td>
<td>lbs</td>
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<tr>
<td>Panel Live 1</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>5.25</td>
<td>79</td>
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<td>lbs</td>
</tr>
<tr>
<td>Panel Live 2</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>8.00</td>
<td>79</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 3</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>9.58</td>
<td>79</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 4</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>12.33</td>
<td>79</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 5</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>13.75</td>
<td>47</td>
<td></td>
<td>lbs</td>
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<tr>
<td>Panel Live 6</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>15.17</td>
<td>47</td>
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<td>lbs</td>
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<tr>
<td>Panel Snow 1</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>5.25</td>
<td>81</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 2</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>8.00</td>
<td>81</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 3</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>9.58</td>
<td>81</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 4</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>12.33</td>
<td>81</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 5</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>13.75</td>
<td>48</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 6</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>15.17</td>
<td>48</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Self-weight</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td></td>
<td>2.0</td>
<td></td>
<td>plf</td>
</tr>
</tbody>
</table>

### Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):

![Diagram showing load distribution and reaction forces with specified lengths and positions.]

- Maximum Reactions: 24'-0.22''
- Bearing Capacities: 1' 11' 18'
- Bearing Lengths: 1' 11' 18'
### WoodWorks® Sizer 11.1

**Nash, Area 1&4 Rafters.wwb**

<table>
<thead>
<tr>
<th>Unfactored:</th>
<th>Factorized:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dead</td>
<td>97</td>
</tr>
<tr>
<td>Snow</td>
<td>137</td>
</tr>
<tr>
<td>Roof Live</td>
<td>137</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Bearing:</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>F'theta</td>
<td>847</td>
</tr>
<tr>
<td>Capacity</td>
<td>4922</td>
</tr>
<tr>
<td>Joist</td>
<td>4101</td>
</tr>
<tr>
<td>Support</td>
<td>0.05</td>
</tr>
<tr>
<td>Load comb</td>
<td>0.06</td>
</tr>
<tr>
<td>Length</td>
<td>3.50</td>
</tr>
<tr>
<td>Min req'd</td>
<td>0.50</td>
</tr>
<tr>
<td>Cb</td>
<td>1.11</td>
</tr>
<tr>
<td>Cb min</td>
<td>1.75</td>
</tr>
<tr>
<td>Cb support</td>
<td>1.25</td>
</tr>
<tr>
<td>Fcp sup</td>
<td>625</td>
</tr>
</tbody>
</table>

*Minimum bearing length setting used: 1/2" for end supports*

Maximum reaction on at least one support is from a different load combination than the critical one for bearing design, shown here, due to Kd factor. See Analysis results for reaction from critical load combination.

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

---

**Area 1 & 4 Rafters**

Lumber-soft, D.Fir-L, No.2, 2x6 (1-1/2"x5-1/2")

**Supports:**
- 1,2 - Lumber Stud Wall, D.Fir-L Stud;
- 3 - Hanger;

**Roof joist spaced at 16.0" c/c; Total length: 24'-0.22"; Clear span: 1'-1.38", 12'-8.08", 8'-11.05"; volume = 1.4 cu.ft; Pitch: 10.07/12**

**Lateral support:**
- top = full, bottom = at all supports; Repetitive factor. applied where permitted (refer to online help);

---

**Analysis vs. Allowable Stress and Deflection using NDS 2015:**

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Analysis Value</th>
<th>Design Value</th>
<th>Unit</th>
<th>Analysis/Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear (+)</td>
<td>fy = 46</td>
<td>Fv' = 207</td>
<td>psi</td>
<td>fvy/Fv' = 0.22</td>
</tr>
<tr>
<td>Bending (+)</td>
<td>fb = 719</td>
<td>Fb' = 1547</td>
<td>psi</td>
<td>fb/Fb' = 0.46</td>
</tr>
<tr>
<td>Bending (-)</td>
<td>fb = 895</td>
<td>Fb' = 1061</td>
<td>psi</td>
<td>fb/Fb' = 0.84</td>
</tr>
<tr>
<td>Deflection</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Live</td>
<td>0.24 = L/666</td>
<td>0.87 = L/180</td>
<td>in</td>
<td>0.27</td>
</tr>
<tr>
<td>Total</td>
<td>0.43 = L/366</td>
<td>1.31 = L/120</td>
<td>in</td>
<td>0.33</td>
</tr>
<tr>
<td>Cantil. Live</td>
<td>-0.08 = L/200</td>
<td>0.17 = L/90</td>
<td>in</td>
<td>0.45</td>
</tr>
<tr>
<td>Total</td>
<td>-0.14 = L/108</td>
<td>0.26 = L/60</td>
<td>in</td>
<td>0.55</td>
</tr>
</tbody>
</table>
Additional Data:

<table>
<thead>
<tr>
<th>FACTORS:</th>
<th>F/E (psi)C0</th>
<th>CM</th>
<th>Ct</th>
<th>CL</th>
<th>CF</th>
<th>Cfu</th>
<th>Cr</th>
<th>Cfrt</th>
<th>Ci</th>
<th>Cn</th>
<th>LC#</th>
</tr>
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<tr>
<td>Fv'</td>
<td>100</td>
<td>1.15</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>3</td>
</tr>
<tr>
<td>Fb'+</td>
<td>900</td>
<td>1.15</td>
<td>1.00</td>
<td>1.00</td>
<td>1.000</td>
<td>1.300</td>
<td>1.00</td>
<td>1.15</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>Fb'−</td>
<td>900</td>
<td>1.15</td>
<td>1.00</td>
<td>1.00</td>
<td>0.685</td>
<td>1.300</td>
<td>1.00</td>
<td>1.15</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
</tr>
<tr>
<td>Fcp'</td>
<td>625</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>E'</td>
<td>1.6 million</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>12</td>
</tr>
<tr>
<td>Emin'</td>
<td>0.58 million</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>12</td>
</tr>
</tbody>
</table>

CRITICAL LOAD COMBINATIONS:

Shear: LC #3 = D+S, V max = 261, V design = 255 lbs
Bending(+) : LC #5 = D+S (pattern: sSa), M = 453 lbs-ft
Bending(−): LC #9 = D+S (pattern: sSS), M = 564 lbs-ft
Deflection: LC #12 = (live)
LC #12 = (total)

D=dead L=live S=snow W=wind I=impact LR=roof live LC=concentrated E=earthquake
All LC's are listed in the Analysis output
Load Patterns: s=S/2, X=L+S or L+LR, −=no pattern load in this span
Load combinations: ASCE 7-10 / IBC 2015

CALCULATIONS:

Deflection: EI = 33.3e06 lb-in²
"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)
Total Deflection = 1.50{(Dead Load Deflection) + Live Load Deflection.}
Bearing: Allowable bearing at an angle F'θ calculated for each support as per NDS 3.10.3
Lateral stability(−): Lu = 13′-0.63" Le = 20′-2.06" RB = 24.3; Lu based on full span

Design Notes:

1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2015), the National Design Specification (NDS 2015), and NDS Design Supplement.
2. Please verify that the design deflection limits are appropriate for your application.
3. Continuous or Cantilevered Beams: NDS Clause 4.2.5.5 requires that normal grading provisions be extended to the middle 2/3 of 2 span beams and to the full length of cantilevers and other spans.
4. Sawed lumber bending members shall be laterally supported according to the provisions of NDS Clause 4.4.1.
5. SLOPED BEAMS: level bearing is required for all sloped beams.
6. The critical deflection value has been determined using maximum back-span deflection. Cantilever deflections do not govern design.
REACTION [lbs]
Maximum...
Uplift: 0
Bearing: 568

SHEAR [lbs]
Load Combination #3: D+S
+V max: 217
-V max: -261

BENDING [lbs-ft]
Load Combination #5: D+S (pattern: sSs)
+M max: 453
LC #9: D+S (pattern: sSs)
-M max: -564

TOTAL DEFLECTION [in]
Load Combination #12:
Total = 1.50 x Dead + Live (all others)
Critical Live: 0.24
19190 - Nash
388 Steeple LN
Wildwood, MO 63005

Area 2

2x10 rafters at 16" spacing
-Support and anchor panels at 48"
-No structural modifications required
### Roofing Dead Load

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rafters at</td>
<td>16&quot; spacing</td>
</tr>
<tr>
<td>Roofing Dead Load</td>
<td></td>
</tr>
<tr>
<td>Shingles</td>
<td>3.5 psf</td>
</tr>
<tr>
<td>Sheeting</td>
<td>3.5 psf</td>
</tr>
<tr>
<td>Total</td>
<td>7 psf</td>
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### Solar Panel Weight

<table>
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<tr>
<th>Item</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Solar Panel Weight</td>
<td>41.23 lb</td>
</tr>
<tr>
<td>Solar Panel Height</td>
<td>66.85 in</td>
</tr>
<tr>
<td>Solar Panel Width</td>
<td>39.53 in</td>
</tr>
<tr>
<td>Inverter Weight</td>
<td>2.84 lb</td>
</tr>
<tr>
<td>Mounting Rail</td>
<td>1.128 lb/ft</td>
</tr>
<tr>
<td>Solar Panel DL</td>
<td>2.81 psf</td>
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</table>

### Base Roof Live Load

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
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<tbody>
<tr>
<td>L₀</td>
<td>20 psf</td>
</tr>
<tr>
<td>Roof LL Reduction</td>
<td></td>
</tr>
<tr>
<td>Tributary area, A₄</td>
<td>9.6 ft²</td>
</tr>
<tr>
<td>R₁ = 1.2 * 0.031 * A₄</td>
<td>1</td>
</tr>
<tr>
<td>R₂ = 1.2 * 0.05 * F</td>
<td></td>
</tr>
<tr>
<td>F</td>
<td>10.07 in rise/ft</td>
</tr>
<tr>
<td>R₂ = 1.2 * 0.05 * 10.07</td>
<td>0.70</td>
</tr>
<tr>
<td>LR = 20 * 1 * 0.7</td>
<td>13.93 psf on horizontal projection</td>
</tr>
<tr>
<td>LL along rafter</td>
<td></td>
</tr>
<tr>
<td>Live Load</td>
<td></td>
</tr>
<tr>
<td>Rafter LL</td>
<td>13.93 psf * 1.33 ft = 18.57 psf on horizontal projection</td>
</tr>
</tbody>
</table>

### Snow Load

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Ground snow load, pₖ</td>
<td>20 psf</td>
</tr>
<tr>
<td>Flat roof snow load, pₚ</td>
<td>0.7 * Cₑ * Cₚ * L * pₖ</td>
</tr>
<tr>
<td>Exposure Factor, Cₑ</td>
<td>1 B, Partially Exposed</td>
</tr>
<tr>
<td>Thermal Factor, Cₚ</td>
<td>1.1 Cold ventilated roof</td>
</tr>
<tr>
<td>Importance Factor, I</td>
<td>1 II</td>
</tr>
<tr>
<td>Sloped roof snow, pₑ</td>
<td>0.7 * Cₑ * Cₚ * L * pₑ = 15.4 psf</td>
</tr>
<tr>
<td>Slope Factor, Cₛ</td>
<td>0.92 Fig 7-2 of ASCE 7</td>
</tr>
<tr>
<td>Roof Snow Load, pₛ</td>
<td>Cₛ * pₑ</td>
</tr>
<tr>
<td>SL along rafter</td>
<td></td>
</tr>
<tr>
<td>Snow Load</td>
<td></td>
</tr>
<tr>
<td>Rafter SL</td>
<td>14.21 psf * 1.33 ft = 18.95 psf on horizontal projection</td>
</tr>
</tbody>
</table>

### Solar Support Load

<table>
<thead>
<tr>
<th>Item</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Panel height</td>
<td>66.85 in</td>
</tr>
<tr>
<td>Panel width/support</td>
<td>48 in</td>
</tr>
<tr>
<td>Tributary area</td>
<td>(66.85 in / 2)²(48 in) = 11.14 ft²</td>
</tr>
<tr>
<td>Solar Point DL</td>
<td>11.14 ft² * 2.81 psf = 31.27 lb</td>
</tr>
<tr>
<td>Solar Point LL</td>
<td>11.14 ft² * 10.67 psf = 118.89 lb</td>
</tr>
<tr>
<td>Solar Point SL</td>
<td>11.14 ft² * 10.89 psf = 121.32 lb</td>
</tr>
</tbody>
</table>

11.23 psf, along slope
55.72 psf, on horizontal proj.
56.86 psf, on horizontal proj.
### Design Check Calculation Sheet

**WoodWorks Sizer 11.1**

#### Loads:

<table>
<thead>
<tr>
<th>Load</th>
<th>Type</th>
<th>Distribution</th>
<th>Pattern</th>
<th>Location [ft]</th>
<th>Magnitude</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing Dead</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td>0.00 - 0.33</td>
<td>9.3</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Live 1</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00 - 0.33</td>
<td>18.6 - 18.6</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Snow 1</td>
<td>Snow</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00 - 0.33</td>
<td>19.0 - 19.0</td>
<td>plf</td>
</tr>
<tr>
<td>Panel Dead 1</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>1.33</td>
<td>31</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Dead 2</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>4.08</td>
<td>31</td>
<td>lbs</td>
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<tr>
<td>Panel Live 1</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>1.33</td>
<td>119</td>
<td>lbs</td>
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<tr>
<td>Panel Live 2</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>4.08</td>
<td>119</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 1</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>1.33</td>
<td>121</td>
<td>lbs</td>
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<tr>
<td>Panel Snow 2</td>
<td>Snow</td>
<td>Point</td>
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<td>4.08</td>
<td>121</td>
<td>lbs</td>
</tr>
<tr>
<td>Roof Live 2</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>4.75 - 7.17</td>
<td>18.6 - 18.6</td>
<td>plf</td>
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<tr>
<td>Roof Snow 2</td>
<td>Snow</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>4.75 - 7.17</td>
<td>19.0 - 19.0</td>
<td>plf</td>
</tr>
<tr>
<td>Self-weight</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td>3.3</td>
<td></td>
<td>plf</td>
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</tbody>
</table>

#### Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):

![Diagram showing the load distribution and structural analysis](image-url)
### WoodWorks® Sizer

#### Nash, Area 2 Rafters.wwb

<table>
<thead>
<tr>
<th>Unfactored:</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Dead</td>
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<td>68</td>
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<tr>
<td>Snow</td>
<td>191</td>
<td></td>
<td>104</td>
</tr>
<tr>
<td>Roof Live</td>
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<td></td>
<td>102</td>
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<td><strong>Factored:</strong></td>
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<tr>
<td>Total</td>
<td>304</td>
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<table>
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<tr>
<th>Bearing:</th>
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<tbody>
<tr>
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<td>Support</td>
<td>4101</td>
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<tr>
<td>Des ratio</td>
<td>0.06</td>
<td></td>
<td>0.09</td>
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<tr>
<td>Joist</td>
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</tr>
<tr>
<td>Support</td>
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<tr>
<td>Length</td>
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<tr>
<td>Min req'd</td>
<td>0.50*</td>
<td></td>
<td>0.50*</td>
</tr>
<tr>
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<td></td>
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<td></td>
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<tr>
<td>Cb support</td>
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<td>-</td>
</tr>
<tr>
<td>Fcp sup</td>
<td>625</td>
<td></td>
<td>-</td>
</tr>
</tbody>
</table>

*Minimum bearing length setting used: 1/2" for end supports

Maximum reaction on at least one support is from a different load combination than the critical one for bearing design, shown here, due to Kd factor. See Analysis results for reaction from critical load combination. Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

---

**Area 2 Rafters**

Lumber-soft, D.Fir-L, No.2, 2x10 (1-1/2"x9-1/4")


Roof joist spaced at 16.00" c/c; Total length: 10'-1.66"; Clear span: 1'-1.38", 7'-9.99"; volume = 1.0 cu.ft.; Pitch: 10.07/12

Lateral support: top= full, bottom= at supports; Repetitive factor: applied where permitted (refer to online help):  

#### Analysis vs. Allowable Stress and Deflection using NDS 2015:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Analysis Value</th>
<th>Design Value</th>
<th>Unit</th>
<th>Analysis/Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear</td>
<td>f_{v} = 22</td>
<td>f'_{v} = 207</td>
<td>psi</td>
<td>f_{v}/f'_{v} = 0.11</td>
</tr>
<tr>
<td>Bending(+)</td>
<td>f_{b} = 201</td>
<td>f'_{b} = 1309</td>
<td>psi</td>
<td>f_{b}/f'_{b} = 0.15</td>
</tr>
<tr>
<td>Bending(-)</td>
<td>f_{b} = 8</td>
<td>f'_{b} = 928</td>
<td>psi</td>
<td>f_{b}/f'_{b} = 0.01</td>
</tr>
<tr>
<td>Deflection:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Live</td>
<td>0.01 = &lt;L/999</td>
<td>0.54 = L/180</td>
<td>in</td>
<td>0.03</td>
</tr>
<tr>
<td>Total</td>
<td>0.03 = &lt;L/999</td>
<td>0.81 = L/120</td>
<td>in</td>
<td>0.03</td>
</tr>
<tr>
<td>Cantil. Live</td>
<td>-0.01 = &lt;L/999</td>
<td>0.17 = L/90</td>
<td>in</td>
<td>0.04</td>
</tr>
<tr>
<td>Total</td>
<td>-0.01 = &lt;L/999</td>
<td>0.26 = L/60</td>
<td>in</td>
<td>0.05</td>
</tr>
</tbody>
</table>
**WoodWorks® Sizer SOFTWARE FOR WOOD DESIGN**

**Nash, Area 2 Rafters.wwb**

**Page 3**

---

### Additional Data:

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<thead>
<tr>
<th>FACTORS:</th>
<th>F/E(ksi)</th>
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<th>CM</th>
<th>Ct</th>
<th>CL</th>
<th>CF</th>
<th>Cfu</th>
<th>Cr</th>
<th>Cfrt</th>
<th>Ci</th>
<th>Cn</th>
<th>LC†</th>
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<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Fb'+</td>
<td>900</td>
<td>1.15</td>
<td>1.00</td>
<td>1.00</td>
<td>1.000</td>
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<td>1.15</td>
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<tr>
<td>Fb'−</td>
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<td>1.25</td>
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<td>1.15</td>
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</tr>
<tr>
<td>Fcp'</td>
<td>625</td>
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<td>1.00</td>
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<td>-</td>
<td>-</td>
<td>-</td>
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<td>E'</td>
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<td>Emin'</td>
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<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>5</td>
<td></td>
</tr>
</tbody>
</table>

### Critical Load Combinations:

- **Shear**: LC #3 = D+S, V max = 216, V design = 206 lbs
- **Bending(+)**: LC #3 = D+S, M = 359 lbs-ft
- **Bending(−)**: LC #2 = D+Lr, M = 13 lbs-ft
- **Deflection**: LC #5 = (live)
  - LC #6 = (total)

D=dead L=live S=snow W=wind I=impact Lr=roof live Lc=concentrated E=earthquake

All LC’s are listed in the Analysis output.

Load Patterns: s=S/2, X=L+R or L+Lr, =no pattern load in this span

Load combinations: ASCE 7-10 / IBC 2015

### Calculations:

- **Deflection**: EI = 158e06 lb-in²
- "Live" deflection = Deflection from all non-dead loads (live, wind, snow)...
- Total Deflection = 1.50(Dead Load Deflection) + Live Load Deflection.
- Bearing: Allowable bearing at an angle F'θ calculated for each support as per NDS 3.10.3
- Lateral stability(−): Lu = 8′-0.63" Le = 13′-10.88" RB = 26.2; Lu based on full span

### Design Notes:

1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2015), the National Design Specification (NDS 2015), and NDS Design Supplement.
2. Please verify that the default deflection limits are appropriate for your application.
3. Continuous or Cantilevered Beams: NDS Clause 4.2.5.5 requires that normal grading provisions be extended to the middle 2/3 of 2 span beams and to the full length of cantilevers and other spans.
4. Sawed lumber bending members shall be laterally supported according to the provisions of NDS Clause 4.4.1.
5. SLOPED BEAMS: level bearing is required for all sloped beams.
6. The critical deflection value has been determined using maximum back-span deflection. Cantilever deflections do not govern design.
REACTION [lbs]
Maximum...
Uplift: 0
Bearing: 304

SHEAR [lbs]
Load Combination #3: D+S

+V max: 216
-V max: -130
V design: 206

BENDING [lbs-ft]
Load Combination #3: D+S

+N max: 359
Load Combination #2: D+Lr
-N max: -13

TOTAL DEFLECTION [in]
Load Combination #5:
Total = 1.50 x Dead + Live (all others)
Critical Live: 0.01
Area 3

2x8 rafters at 16" spacing

- Support panels at 32" and anchor panels at 64"
- No structural modifications required
**Rafters at**

<table>
<thead>
<tr>
<th>Roofing Dead Load</th>
<th>16&quot; spacing</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing DL</td>
<td>7 psf * 1.33 ft = 9.33 psf</td>
</tr>
</tbody>
</table>

**Solar Panel Weight**
- 41.23 lb
- 66.85 in
- 39.53 in
- 2.84 lb
- 1.128 lb/ft
- Solar Panel DL: 2.81 psf

**Base Roof Live Load**
- \( L_0 = \text{20 psf} \)

**Roof LL Reduction**
- \( R_1 = 1.2 - 0.001 \times A_1 \)
- \( R_2 = 1.2 - 0.05 \times F \)
- \( F = \frac{10.07 \text{ in rise/ft}}{40.00 \text{ degrees}} \)
- \( A_1 = 16.3 \text{ ft}^2 \)
- \( LR = 20 \times 1 \times 0.7 = 13.93 \text{ psf on horizontal projection} \)
- \( LL = 10.67 \text{ psf} \)

**Live Load**
- \( Rafter LL = 13.93 \text{ psf} \times 1.33 \text{ ft} = 18.57 \text{ psf on horizontal projection} \)

**Snow Load**
- \( p_e = 20 \text{ psf} \)
- \( p_t = 0.7 \times C_e \times C_t \times I \times p_e \)
- \( C_e = 1 \text{, Partially Exposed} \)
- \( C_t = 1.1 \text{ Cold ventilated roof} \)
- \( I = 1 \text{ II} \)
- \( p_t = 0.7 \times C_e \times C_t \times I \times p_e = 15.4 \text{ psf} \)

**Sloped roof snow**
- \( p_s = C_e \times p_t = \)
- \( C_s = 0.92 \text{ Fig 7-2 of ASCE 7} \)
- \( Roof Snow Load = p_s \times C_s \times p_t = 14.21 \text{ psf on horizontal projection} \)
- \( SL = 10.89 \text{ psf} \)
- \( Snow Load = 14.52 \text{ psf along slope} \)

**Rafter SL**
- \( 14.21 \text{ psf} \times 1.33 \text{ ft} = 18.95 \text{ psf on horizontal projection} \)

**Solar Support Load**
- \( p_{SL} = 7.43 \text{ ft}^2 \times 37.15 \text{ psf, on horizontal proj.} \)
- \( 7.48 \text{ psf, along slope} \)
- \( 7.43 \text{ ft}^2 \times 37.90 \text{ psf, on horizontal proj.} \)
- \( 80.88 \text{ lb} \)

**Panel height**
- 66.85 in

**Panel width/support**
- 32 in

**Tributary area**
- \( 66.85 \text{ in} / 2 \times (32 \text{ in}) = 7.43 \text{ ft}^2 \)
## Design Check Calculation Sheet

**WoodWorks Sizer 11.1**

### Loads:

<table>
<thead>
<tr>
<th>Load</th>
<th>Type</th>
<th>Distribution</th>
<th>Pattern</th>
<th>Location [ft]</th>
<th>Magnitude [Start, End]</th>
<th>Unit</th>
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</thead>
<tbody>
<tr>
<td>Roofing Dead</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td>9.3</td>
<td>18.6, 18.6</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Live 1</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00, 1.17</td>
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<td>plf</td>
</tr>
<tr>
<td>Roof Snow 1</td>
<td>Snow</td>
<td>Partial UDL</td>
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<td>9.83, 12.25</td>
<td>18.6, 18.6</td>
<td>plf</td>
</tr>
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<td>Roof constr.</td>
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<tr>
<td>Roof Snow 2</td>
<td>Snow</td>
<td>Partial UDL</td>
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<td>9.83, 12.25</td>
<td>19.0, 19.0</td>
<td>plf</td>
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<tr>
<td>Panel Dead 1</td>
<td>Dead</td>
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<td>No</td>
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<td>Panel Dead 2</td>
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<td>21</td>
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<td>21</td>
<td>lbs</td>
</tr>
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<td>Panel Dead 4</td>
<td>Dead</td>
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<td>lbs</td>
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<td>Roof constr.</td>
<td>Point</td>
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<td>79</td>
<td>lbs</td>
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<tr>
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<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>4.83</td>
<td>79</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 3</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>6.42</td>
<td>79</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 4</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>9.17</td>
<td>79</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 1</td>
<td>Snow</td>
<td>Point</td>
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<td>2.17</td>
<td>81</td>
<td>lbs</td>
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<tr>
<td>Panel Snow 2</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>4.83</td>
<td>81</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 3</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>6.42</td>
<td>81</td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 4</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>9.17</td>
<td>81</td>
<td>lbs</td>
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<tr>
<td>Self-weight</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td>2.6</td>
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</tbody>
</table>

### Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):

![Diagram](https://via.placeholder.com/150)
### Area 3 Rafters

**Lumber-soft, D.Fir-L, No.2, 2x8 (1-1/2"x7-1/4")**

<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Roof joist spaced at 16.0&quot; c/c; Total length: 16'-7.62&quot;; Clear span: 1'-1.38&quot;, 14'-5.62&quot;; volume = 1.3 cu.ft.; Pitch: 10.07/12</td>
<td></td>
</tr>
<tr>
<td>Lateral support: top= full, bottom= at supports; Repetitive factor: applied where permitted (refer to online help);</td>
<td></td>
</tr>
</tbody>
</table>

### Analysis vs. Allowable Stress and Deflection using NDS 2016:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Analysis Value</th>
<th>Design Value</th>
<th>Unit</th>
<th>Analysis/Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear</td>
<td>fv = 34</td>
<td>Fv' = 207</td>
<td>psi</td>
<td>fv/Fv' = 0.16</td>
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<tr>
<td>Bending(+)</td>
<td>fc = 883</td>
<td>Fb' = 1428</td>
<td>psi</td>
<td>fb/Fb' = 0.62</td>
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<tr>
<td>Bending(-)</td>
<td>fc = 16</td>
<td>Fb' = 749</td>
<td>psi</td>
<td>fb/Fb' = 0.02</td>
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<tr>
<td>Deflection:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Live</td>
<td>0.23 = L/619</td>
<td>0.98 = L/180</td>
<td>in</td>
<td>0.29</td>
</tr>
<tr>
<td>Total</td>
<td>0.57 = L/307</td>
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<td>0.39</td>
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<td>Cantil. Live</td>
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<tr>
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<td>0.26 = L/60</td>
<td>in</td>
<td>0.62</td>
</tr>
</tbody>
</table>

*Minimum bearing length setting used: 1/2" for end supports*

Maximum reaction on at least one support is from a different load combination than the critical one for bearing design, shown here, due to Kd factor. See Analysis results for reaction from critical load combination.

Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.
Additional Data:

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>F/E (psi) CD</th>
<th>CM</th>
<th>C1</th>
<th>Cl</th>
<th>CF</th>
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<td>1.00</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
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<td>3</td>
</tr>
<tr>
<td>Fb'+</td>
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<td>1.00</td>
<td>1.00</td>
<td>1.000</td>
<td>1.200</td>
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<td>1.15</td>
<td>1.00</td>
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<td>5</td>
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<td>Fb'-</td>
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<td>Fcp'</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
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<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>5</td>
</tr>
<tr>
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<td>1.00</td>
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<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
<td>5</td>
</tr>
</tbody>
</table>

CRITICAL LOAD COMBINA'TIONS:

Shear : LC #3 = D+S, V max = 257, V design = 248 lbs
Bending(+) : LC #5 = D+S (pattern: sS), M = 966 lbs-ft
Bending(-) : LC #2 = D+Lr, M = 17 lbs-ft
Deflection: LC #5 = (live)
D=dead L=live S=Snow W=Wind I=impact Lr=roof live Lc=concentrated E=Earthquake
All LC's are listed in the Analysis output
Load Patterns: s=S/2, X=L+S or L+Lr, _=no pattern load in this span
Load combinations: ACSE 7-10 / IBC 2015

CALCULATIONS:

Deflection: EI = 76.2e06 lb-in²
"Live" deflection = Deflection from all non-dead loads (live, wind, snow...)
Total Deflection = 1.50(Dead Load Deflection) + Live Load Deflection.
Bearing: Allowable bearing at an angle F'F' calculated for each support
as per NDS 3.10.3
Lateral stability(-): Lu = 14'-8.25" Le = 22'-11.50" RB = 29.8; Lu based on full span

Design Notes:

1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2015), the National Design Specification (NDS 2015), and NDS Design Supplement.
2. Please verify that the default deflection limits are appropriate for your application.
3. Continuous or Cantilevered Beams: NDS Clause 4.2.5.5 requires that normal grading provisions be extended to the middle 2/3 of 2 span beams and to the full length of cantilevers and other spans.
4. Sawn lumber bending members shall be laterally supported according to the provisions of NDS Clause 4.4.1.
5. SLOPED BEAMS: level bearing is required for all sloped beams.
6. The critical deflection value has been determined using maximum back-span deflection. Cantilever deflections do not govern design.
**REACTION [lbs]**

- Maximum...
  - Uplift: 0
  - Bearing: 370

**SHEAR [lbs]**

- Load Combination #3: D+S
  - \( +V \text{ max: } 257 \quad 248 \)
  - \( V \text{ design: } 248 \)

- \(-4\)
- \(-15\)
- \(-213\)

**BENDING [lbs-ft]**

- Load Combination #5: D+S (pattern: sS)
  - \( +M \text{ max: } 966 \)
  - Load Combination #2: D+Lr
  - \(-M \text{ max: } -17 \)

**TOTAL DEFLECTION [in]**

- Load Combination #5:
  - Total = 1.50 \times \text{Dead} + \text{Live} (all others)
  - Critical Live: 0.28
  - Critical Total: 0.57
  - -0.16
  - -0.01
  - 0.21
  - 0.48
  - 0.57
  - 0.47
  - 0.26
Area 5

2x8 rafters at 16" spacing

-Support panels at 16" and anchor panels at 48"
-No structural modifications required
<table>
<thead>
<tr>
<th>Component</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rafters at</td>
<td>16&quot; spacing</td>
</tr>
<tr>
<td>Roofing Dead Load</td>
<td></td>
</tr>
<tr>
<td>Shingles</td>
<td>3.5 psf</td>
</tr>
<tr>
<td>Sheeting</td>
<td>3.5 psf</td>
</tr>
<tr>
<td>Total</td>
<td>7 psf</td>
</tr>
<tr>
<td>Roofing DL</td>
<td>7 psf * 1.33 ft = 9.33 plf</td>
</tr>
<tr>
<td>Solar Panel Weight</td>
<td>41.23 lb</td>
</tr>
<tr>
<td>Solar Panel Height</td>
<td>66.85 in</td>
</tr>
<tr>
<td>Solar Panel Width</td>
<td>39.53 in</td>
</tr>
<tr>
<td>Inverter Weight</td>
<td>2.84 lb</td>
</tr>
<tr>
<td>Mounting Rail</td>
<td>1.128 lb/ft</td>
</tr>
<tr>
<td>Solar Panel DL</td>
<td>2.81 psf</td>
</tr>
<tr>
<td>Base Roof Live Load</td>
<td>L0 = 20 psf</td>
</tr>
<tr>
<td>Roof LL Reduction</td>
<td>Lr = L0 * R1 * R2</td>
</tr>
<tr>
<td>Tributary area, A_t</td>
<td>21.7 ft^2</td>
</tr>
<tr>
<td>R1 = 1.2 - 0.001 * A_t</td>
<td>1</td>
</tr>
<tr>
<td>R2 = 1.2 - 0.05 * F</td>
<td>2.12 in rise/ft</td>
</tr>
<tr>
<td>F</td>
<td>10.02 degrees</td>
</tr>
<tr>
<td>R2 = 1.2 - 0.05 * 2.12</td>
<td>1.00</td>
</tr>
<tr>
<td>LR = 20 * 1 * 1</td>
<td>20.00 psf on horizontal projection</td>
</tr>
<tr>
<td>LL along rafter</td>
<td>19.70 psf</td>
</tr>
<tr>
<td>Live Load</td>
<td>26.26 plf along slope</td>
</tr>
<tr>
<td>Rafter LL</td>
<td>20 psf * 1.33 ft = 26.67 plf on horizontal projection</td>
</tr>
<tr>
<td>Snow Load</td>
<td></td>
</tr>
<tr>
<td>Ground snow load</td>
<td>p_e = 20 psf</td>
</tr>
<tr>
<td>Flat roof snow load</td>
<td>p_r = 0.7 * C_e + C_t * l * p_e</td>
</tr>
<tr>
<td>Exposure Factor</td>
<td>C_e = 1 B, Partially Exposed</td>
</tr>
<tr>
<td>Thermal Factor</td>
<td>C_t = 1.1 Cold ventilated roof</td>
</tr>
<tr>
<td>Importance Factor</td>
<td>I = 1 Ii</td>
</tr>
<tr>
<td>Sloped roof snow</td>
<td>p_s = C_s * p_r</td>
</tr>
<tr>
<td>Slope Factor</td>
<td>C_s = 1.00 Fig 7-2 of ASCE 7</td>
</tr>
<tr>
<td>Roof Snow Load</td>
<td>p_s = C_s * p_r</td>
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<tr>
<td>SL along rafter</td>
<td>15.40 psf on horizontal projection</td>
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<tr>
<td>Snow Load</td>
<td>20.22 plf along slope</td>
</tr>
<tr>
<td>Rafter SL</td>
<td>15.4 psf * 1.33 ft = 20.53 plf on horizontal projection</td>
</tr>
<tr>
<td>Solar Support Load</td>
<td></td>
</tr>
<tr>
<td>Panel height</td>
<td>66.85 in</td>
</tr>
<tr>
<td>Panel width/support</td>
<td>16 in</td>
</tr>
<tr>
<td>Tributary area</td>
<td>(66.85 in / 2&quot;(16in)) = 3.71 ft^2</td>
</tr>
<tr>
<td>Solar Point DL</td>
<td>3.71 ft^2 * 2.81 psf = 10.42 lb</td>
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<tr>
<td>Solar Point LL</td>
<td>3.71 ft^2 * 19.7 psf = 73.15 lb</td>
</tr>
<tr>
<td>Solar Point SL</td>
<td>3.71 ft^2 * 15.17 psf = 56.32 lb</td>
</tr>
</tbody>
</table>

3.74 plf, along slope
26.67 plf, on horizontal proj.
20.53 plf, on horizontal proj.
### Design Check Calculation Sheet

WoodWorks Sizer 11.1

**Loads:**

<table>
<thead>
<tr>
<th>Load</th>
<th>Type</th>
<th>Distribution</th>
<th>Pattern</th>
<th>Location [ft]</th>
<th>Magnitude Start</th>
<th>Magnitude End</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Roofing Dead</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td>0.00</td>
<td>26.7</td>
<td>26.7</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Live 1</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00</td>
<td>2.17</td>
<td>26.7</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Snow 1</td>
<td>Snow</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>0.00</td>
<td>2.17</td>
<td>20.5</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Live 2</td>
<td>Roof constr.</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>13.25</td>
<td>26.7</td>
<td>26.7</td>
<td>plf</td>
</tr>
<tr>
<td>Roof Snow 2</td>
<td>Snow</td>
<td>Partial UDL</td>
<td>Yes</td>
<td>13.25</td>
<td>16.25</td>
<td>20.5</td>
<td>plf</td>
</tr>
<tr>
<td>Panel Dead 1</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>3.25</td>
<td>10</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Dead 2</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>6.75</td>
<td>10</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Dead 3</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>8.83</td>
<td>10</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Dead 4</td>
<td>Dead</td>
<td>Point</td>
<td>No</td>
<td>12.33</td>
<td>10</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 1</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>3.25</td>
<td>73</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 2</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>6.75</td>
<td>73</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Live 3</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>8.83</td>
<td>73</td>
<td></td>
<td>lbs</td>
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<tr>
<td>Panel Live 4</td>
<td>Roof constr.</td>
<td>Point</td>
<td>Yes</td>
<td>12.33</td>
<td>73</td>
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<td>Panel Snow 1</td>
<td>Snow</td>
<td>Point</td>
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<td>3.25</td>
<td>56</td>
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<td>Panel Snow 2</td>
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<td>6.75</td>
<td>56</td>
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<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 3</td>
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<td>Point</td>
<td>Yes</td>
<td>8.83</td>
<td>56</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Panel Snow 4</td>
<td>Snow</td>
<td>Point</td>
<td>Yes</td>
<td>12.33</td>
<td>56</td>
<td></td>
<td>lbs</td>
</tr>
<tr>
<td>Self-weight</td>
<td>Dead</td>
<td>Full UDL</td>
<td>No</td>
<td></td>
<td>2.6</td>
<td></td>
<td>plf</td>
</tr>
</tbody>
</table>

**Maximum Reactions (lbs), Bearing Capacities (lbs) and Bearing Lengths (in):**

![Diagram of rafter with dimensions 21'-10.28" and 16'-3".]
### Nash, Area 5 Rafters.wwb

<table>
<thead>
<tr>
<th>Unfactored:</th>
<th></th>
<th></th>
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<tbody>
<tr>
<td>Dead</td>
<td>157</td>
<td></td>
<td>137</td>
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<td>Snow</td>
<td>174</td>
<td></td>
<td>156</td>
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<tr>
<td>Roof Live</td>
<td>227</td>
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<td>203</td>
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<table>
<thead>
<tr>
<th>Factored:</th>
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<tbody>
<tr>
<td>Total</td>
<td>384</td>
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<td>340</td>
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### Bearing:

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<td>1920</td>
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<tr>
<td>Joist</td>
<td>4974</td>
</tr>
<tr>
<td>Support</td>
<td>4101</td>
</tr>
<tr>
<td>Des ratio</td>
<td>0.08</td>
</tr>
<tr>
<td>Joist</td>
<td>0.09</td>
</tr>
<tr>
<td>Load comb</td>
<td>#2</td>
</tr>
<tr>
<td>Length</td>
<td>3.50</td>
</tr>
<tr>
<td>Min req'd</td>
<td>0.50*</td>
</tr>
<tr>
<td>Cb</td>
<td>1.11</td>
</tr>
<tr>
<td>Cb min</td>
<td>1.75</td>
</tr>
<tr>
<td>Cb support</td>
<td>1.25</td>
</tr>
<tr>
<td>Fcp sup</td>
<td>625</td>
</tr>
</tbody>
</table>

*Minimum bearing length setting used: 1/2" for end supports
*Maximum reaction on at least one support is from a different load combination than the critical one for bearing design, shown here, due to Kd factor. See Analysis results for reaction from critical load combination. Bearing for wall supports is perpendicular-to-grain bearing on top plate. No stud design included.

### Area 5 Rafters

**Lumber-soft, D.Fir-L, No.2, 2x8 (1-1/2"x7-1/4")**

Roof joist spaced at 16.0" c/c; Total length: 21'-10.28"; Clear span: 1'-1.38", 19'-8.29"; volume = 1.7 cu.ft.; Pitch: 10.07/12
Lateral support: top= full, bottom= at supports; Repetitive factor: applied where permitted (refer to online help);

### Analysis vs. Allowable Stress and Deflection using NDS 2015:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Analysis Value</th>
<th>Design Value</th>
<th>Unit</th>
<th>Analysis/Design</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shear</td>
<td>( f_v = 34 )</td>
<td>( F_v' = 225 )</td>
<td>psi</td>
<td>( f_v/F_v' = 0.15 )</td>
</tr>
<tr>
<td>Bending(+)</td>
<td>( f_d = 1210 )</td>
<td>( F_b' = 1552 )</td>
<td>psi</td>
<td>( f_b/F_b' = 0.78 )</td>
</tr>
<tr>
<td>Bending(-)</td>
<td>( f_d = 19 )</td>
<td>( F_b' = 574 )</td>
<td>psi</td>
<td>( f_b/F_b' = 0.03 )</td>
</tr>
<tr>
<td>Deflection:</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interior Live</td>
<td>0.71 = L/335</td>
<td>1.33 = L/180</td>
<td>in</td>
<td>0.54</td>
</tr>
<tr>
<td>Total</td>
<td>1.47 = L/162</td>
<td>1.99 = L/120</td>
<td>in</td>
<td>0.74</td>
</tr>
<tr>
<td>Cantil. Live</td>
<td>-0.15 = L/105</td>
<td>0.17 = L/90</td>
<td>in</td>
<td>0.86</td>
</tr>
<tr>
<td>Total</td>
<td>-0.31 = L/51</td>
<td>0.26 = L/60</td>
<td>in</td>
<td>1.18</td>
</tr>
</tbody>
</table>
WoodWorks® Sizer
SOFTWARE FOR WOOD DESIGN

Nash, Area 5 Rafters.wwb
WoodWorks® Sizer 11.1
Page 3

Additional Data:

<table>
<thead>
<tr>
<th>FACTORS</th>
<th>F/E (psi)</th>
<th>CD</th>
<th>CM</th>
<th>Ct</th>
<th>CL</th>
<th>CF</th>
<th>Cfu</th>
<th>Cr</th>
<th>Cft</th>
<th>Ci</th>
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</thead>
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<td>Fv'</td>
<td>180</td>
<td>1.25</td>
<td>1.00</td>
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<td>Fb'</td>
<td>900</td>
<td>1.25</td>
<td>1.00</td>
<td>1.00</td>
<td>1.00</td>
<td>1.200</td>
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<td>8</td>
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<tr>
<td>Fb''</td>
<td>900</td>
<td>1.25</td>
<td>1.00</td>
<td>1.00</td>
<td>0.370</td>
<td>1.200</td>
<td>1.00</td>
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<td>Fcp'</td>
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<td>-</td>
<td>-</td>
<td>-</td>
<td>1.00</td>
<td>1.00</td>
<td>-</td>
</tr>
</tbody>
</table>

CRITICAL LOAD COMBINATIONS:

- Shear: LC #2 = D+Lr, V max = 259, V design = 243 lbs
- Bending (+): LC #8 = D+Lr (pattern: L), M = 1325 lbs-ft
- Bending (-): LC #2 = D+Lr, M = 21 lbs-ft
- Deflection: LC #8 = (live)
- LC #8 = (total)

D=dead L=live S=snow W=wind I=impact Lr=roof live Lc=concentrated E=earthquake
All LC's are listed in the Analysis output
Load Patterns: s=S/2, x=L+S or L+Lr, _=no pattern load in this span
Load combinations: ASCE 7-10 / IBC 2015

CALCULATIONS:

- Deflection: EI = 76.2e06 lb-in^2
- "Live" deflection = Deflection from all non-dead loads (live, wind, snow...)
- Total Deflection = 1.50(Dead Load Deflection) + Live Load Deflection.
- Bearing: Allowable bearing at an angle F'theta calculated for each support
  as per NDS 3.10.3
- Lateral stability (-): Lu = 19'-10.88" Le = 30'-5.75" RB = 34.3; Lu based on full span

Design Notes:

1. WoodWorks analysis and design are in accordance with the ICC International Building Code (IBC 2015), the National Design Specification (NDS 2015), and NDS Design Supplement.
2. Please verify that the default deflection limits are appropriate for your application.
3. Continuous or Cantilevered Beams: NDS Clause 4.2.5.5 requires that normal grading provisions be extended to the middle 2/3 of 2 span beams and to the full length of cantilevers and other spans.
4. Sawn lumber bending members shall be laterally supported according to the provisions of NDS Clause 4.4.1.
5. SLOPED BEAMS: level bearing is required for all sloped beams.
6. The critical deflection value has been determined using maximum back-span deflection. Cantilever deflections do not govern design.
**REACTION [lbs]**
Maximum...
Uplift: 0
Bearing: 384

**SHEAR [lbs]**
Load Combination #2: D+Lr
V design: -243

**BENDING [lbs-ft]**
Load Combination #8: D+Lr (pattern: _L)
+M max: 1325
Load Combination #2: D+Lr
-M max: -21

**TOTAL DEFLECTION [in]**
Load Combination #8:
Total = 1.50 x Dead + Live (all others)
Critical Live: 0.71
Critical Total: 1.47

**ANALYSIS DIAGRAMS** (known section - includes self-weight)
Roof attachment uplift check

\[ p = q_h \times \left( (G \times C_p) - (G \times C_{pl}) \right) \]

\[ q_h = -16 \text{ psf, ASCE 7-10 figure 28.6-1} \]

\[ (G \times C_p) = 1 \]

\[ (G \times C_{pl}) = 0 \text{ open condition between panel and roof} \]

\[ p = -16 \text{ psf} \]

Panel weight = 2.81 psf

Tributary area per anchor = 14.86 ft²

\[ 0.6DL + W = -14.32 \text{ psf} \]

Uplift/anchor = -212.68 lbs

From NDS table 11.2A, withdrawal capacity of 5/16" lag screw is 274 lbs/inch of thread embedded. Therefore, 2.5" of embedment is ok.
July 31, 2019

Unirac, Inc.
1411 Broadway Boulevard NE
Albuquerque, New Mexico 87102
TEL: (505) 242-6411
FAX: (505)242-6512

Re.: Innova Technologies No.: 119-099-400
   Unirac Ground Fixed Tilt (GFT) Design Tool – Missouri

Attn: Engineering Services

Innova Technologies Inc. has reviewed Unirac’s GFT design tool and design methodology. The design tool’s methodology is approved and acceptable for the code compliant, ground mount racking structure supporting photovoltaic (PV) modules for residential and commercial uses.

All analysis and information in the GFT design tool’s formulas and tables comply with the following:


- **ASCE/SEI 7-05 and ASCE/SEI 7-10 Minimum Design Loads and Other Structures**, by American Society of Civil Engineers.


This letter certifies that the structural analysis of the racking members, connections and foundation designs are in compliance with the above codes.

For more information, see the GFT construction drawings. This analysis does not include specific corrosion requirements.

Best Regards,

Robert Napoles
Vice President
Innova Technologies, Inc.
Your Custom Solar Solution
Component List

<table>
<thead>
<tr>
<th>Type</th>
<th>Manufacturer</th>
<th>Model</th>
<th>Quantity</th>
</tr>
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<tbody>
<tr>
<td>Module</td>
<td>Trina Solar Energy Co., Ltd</td>
<td>TSM-320DD6H.08(II)</td>
<td>40</td>
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<td>Microinverter</td>
<td>Enphase Energy Inc.</td>
<td>IQ 7+ (240V)</td>
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<td>Module</td>
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System Size: 24.96
Annual Production: 23,710
Energy Offset: 53%

(kWh)

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<tr>
<th>(kWh)</th>
<th>Jan</th>
<th>Feb</th>
<th>Mar</th>
<th>Apr</th>
<th>May</th>
<th>Jun</th>
<th>Jul</th>
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<tr>
<td>Utility Consumption Pre-Solar</td>
<td>4,063</td>
<td>3,984</td>
<td>3,547</td>
<td>1,813</td>
<td>1,672</td>
<td>3,047</td>
<td>3,266</td>
<td>7,234</td>
<td>6,187</td>
<td>3,992</td>
<td>2,438</td>
<td>3,680</td>
<td>44.9k</td>
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<td>Utility Consumption Post-Solar</td>
<td>2,983</td>
<td>2,755</td>
<td>1,555</td>
<td>(621)</td>
<td>(988)</td>
<td>334</td>
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<td>Solar Production</td>
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<td>2,291</td>
<td>1,815</td>
<td>1,196</td>
<td>940</td>
<td>23.7k</td>
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</table>

Customer: Geoffrey Nash
Address: 388 Steeple Ln
Wildwood, MO 63005
NOTE: START EACH ROW WHERE THE STAKES ARE CURRENTLY SET ON THE PROPERTY

24" DIA x 6'-0" DP, CONCRETE PIER

OUTLINE OF PANEL ABOVE (TYP)

16 PANEL MODULE ARRAY

16 PANEL MODULE ARRAY

32 MODULES TOTAL

PIER PLAN

1/8" = 1'-0"
## Characteristics

<table>
<thead>
<tr>
<th>Parameter</th>
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<th>NOCT</th>
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<tr>
<td>Module specification</td>
<td>2000 VDC</td>
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<tr>
<td>Maximum power (Wp)</td>
<td>452 W</td>
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<tr>
<td>Open-circuit voltage (Voc)</td>
<td>56.0 V</td>
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<tr>
<td>Short-circuit current (Isc)</td>
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<td>7.51 A</td>
<td>7.60 A</td>
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## Operating Conditions

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<thead>
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<tbody>
<tr>
<td>1</td>
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</tr>
<tr>
<td>2</td>
<td>476 W</td>
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</table>

## Electrical Parameters at STC

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<tr>
<th>Parameter</th>
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<tr>
<td>STC Power Output</td>
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<tr>
<td>Module Efficiency (%)</td>
<td>16.0</td>
<td>17.0</td>
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<tr>
<td>Module Power (Wp)</td>
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<td>476 W</td>
</tr>
<tr>
<td>Open-circuit Voltage (Voc)</td>
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</tr>
<tr>
<td>Short-circuit Current (Isc)</td>
<td>7.51 A</td>
<td>7.60 A</td>
</tr>
</tbody>
</table>

## Specifications

- **JAM72509-375-395/PR**
- **Product Type**: 27 Per Panel
- **Module Color**: Black
- **Module Size**: 188 x 105 x 3.4 mm
- **Module Weight**: 12.95 kg
- **Module Efficiency**: 15.0%

## Mechanical Diagrams
PLAN VIEW OF TABLE

SEE LETTER FOR PILE QUANTITY REQUIREMENT PER TABLE SIZE

SECTION VIEW OF DGFT TABLE - 20° TILT
(72 CELL SOLAR PANELS)
FOUNDATION 401: DRILLED "PARTIAL" CAST-IN-HOLE CONCRETE PILE FOUNDATION (ALTERNATE OPTION)

1. The foundation must be excavated with little to no loose material in the bottom.
2. The foundation must be excavated to a minimum of the dimension shown.
3. The top of the pile must be below the depth of the frost zone.
4. The pile must be installed with a sleeve pipe with clean coarse backfill (sand or gravel).
5. The soil must be excavated with little to no loose material in the bottom.
6. The pile must be installed with a sleeve pipe with clean coarse backfill (sand or gravel).
7. The foundation must be installed in a manner that will be protected from damage.

FOUNDATION 402: PARTIAL DRIVEN PILE WITH CLEAN COARSE BACKFILL (ALTERNATE OPTION)

1. The pile must be installed to the depth shown.
2. The pile must be installed with a sleeve pipe with clean coarse backfill (sand or gravel).
3. The foundation must be installed in a manner that will be protected from damage.

NOTE: REFER TO SHEET SD-400 FOR ALL PILE ERECTION DIMENSIONS AND REFERENCES IN THE DETAILS ABOVE.
Recommendation Report
of the
Site Plan Subcommittee of the Planning and Zoning Commission
<<< Site Development Plan Package >>>
City of Wildwood, Missouri
July 20, 2020 Meeting

Petition No.: P.Z. 15-17
Request: A recommendation report by the Site Plan Subcommittee of the Planning and Zoning Commission relative to a Site Development Plan (SDP) that is required, as part of the Conditional Use Permit (CUP), which supports the allowance to retain the existing large water feature – lake – and associated waterfall structure – (as defined by §415.030 of the City of Wildwood’s Zoning Regulations) on the subject site. The large water feature is three point four (3.4) acres in size.

Petitioner: Babler Farms, L.L.C., c/o Tom Roberts, 550 Laurey Lane, Wildwood, Missouri, 63005

Zoning District(s): NU Non-Urban Residence District
Location: Terminus of Laurey Lane, south of Wild Horse Creek Road

Locator Numbers and Addresses: 20X630015 and 20X630024/500 and 550 Laurey Lane
Ward: One
Tract Size: 59.9 acres

Site Plan Subcommittee
Meeting Date: June 15, 2020

Nature of Request: Approval of the Site Development Plan (SDP) for the large water feature and associated waterfall, all being conditioned on compliance to the governing permit and public health and safety standards for water quality and sound.

Summary of Action: The Site Plan Subcommittee did consider this matter and is making a favorable recommendation, based upon compliance of the petitioner to the governing permit and all applicable health considerations relating to water quality and sound.

Introduction: The Planning and Zoning Commission is in receipt of a Site Development Plan (SDP) package that has been provided to it by the referenced petitioner, along with the report of its Site Plan Subcommittee, which reviewed this matter at its meeting held on June 15, 2020. Included in this package of information are a
number of plan sheets, supporting information, and comments from participants in this process. Collectively, this information forms the body of the items the Site Plan Subcommittee considered at its meeting.

**Current Request:**

The Site Plan Subcommittee is presenting to the Planning and Zoning Commission a Site Development Plan (SDP) that reflects the installation of the two (2) major items, prior to the granting of permits and any authorizations from the City. A water feature has been a part of this property for a number of decades, but over time, had decreased in size due to siltation and vegetative growth in and around it. This reduction in size ultimately led the current petitioner to enlarge it to a 3.5 acre size and address the structural integrity of the dam and its function. This action, since 2012, in the City of Wildwood, would require the consideration of a Conditional Use Permit (CUP) by the Planning and Zoning Commission and its final action thereafter.

The waterfall structure was started thereafter and is a component of the large water feature. This relationship between the large water feature and the waterfall structure is by the system of piping and pumps that delivers water from this body of water, up-grade, to the head of the waterfall, and then discharges thereafter. The discharge trends down grade approximately five hundred (500) feet, where the water enters into a collection area and is directed back into the large water feature, again, by the system of man-made improvements. The pumping mechanism associated with the waterfall structure, at maximum velocity, can push water at five hundred (500) gallons per minute.

This system created certain concerns for surrounding property owners, which led to the identification of several unique work program requirements by the City of Wildwood and its request to the property owner, where these improvements are located, to begin the permitting process relative to the large water feature and associated waterfall. The permitting process began in 2017, with the submittal of the required application materials, including the Preliminary Development Plan (PDP). This process has now entered its third year, which is unusual in this regard, but has been related to concerns about noise and public health, which, in the Site Plan Subcommittee’s opinion, is the cause of the delays that have led to this extended period of time. A summary of the major considerations relative to these health and sound situations is provided below:

1. Two (2) noise studies were conducted of the waterfall, one (1) with it operating. The first of these two (2) studies was to gauge the sound output of the waterfall in operation, which was greater than the ambient level associated with this area of the City, but did not exceed the limits established by the Noise Code.
2. The second noise study was undertaken to determine the ambient sound level at the common property line that forms the east boundary the petitioner’s property and the west boundary of the nearest neighbor. That study identified the ambient level of sound in a January timeframe at 37 dBA. Given the time of year, winter, the waterfall structure was not operational.

3. An air quality study was attempted to address a concern about the water being discharged at the top of the waterfall structure from the system of piping and pumps associated with the large water feature. A number of months was spent attempting to identify a consulting firm to undertake the testing, which led to one (1) such entity being recognized and, ultimately, attending a meeting of the Planning and Zoning Commission and participating in a discussion on this matter. However, after that meeting, the consulting firm withdrew its proposal. Thereafter, the air quality testing approach was dropped, given the difficulty identifying a qualified firm for such testing, and water quality testing sought, as an acceptable approach.

4. A water quality testing component was pursued, which led to a consulting firm undertaking such in October 2019, with the results published and reviewed in 2019 and part of 2020. The consulting firm was asked by the City of Wildwood to provide input on the results of the water testing, which is the source for the waterfall structure, and it noted nothing that appeared to be too problematic. Subsequent discussions from a number of different parties either seemed to verify that assessment by the City’s consultant or call it into question. Regardless, the outcome of this testing was further evidence for a prescribed level of treatment of the water to eliminate concerns about its impact on human health.

5. All of these studies and discussions allowed the Planning and Zoning Commission to approach the Site Development Plan (SDP) process with greater understanding of the issues and needs.

Once these studies were completed, the process associated with the plan component of the permit process was initiated. This process began at the end of 2019 and four (4) total Site Development Plan (SDP) submittals were made in this regard. The four (4) submittals were in response to the City’s review of the materials and the need for additional or corrected items to be provided to meet the conditions of the governing permit, the underlying zoning requirements of the NU Non-Urban Residence District, and other design criteria applicable to these types of structures and facilities. This other design criteria includes the engineering data to support the enlargement of the water feature and its management, along with the waterfall structure itself, and restoration and repair of the dam. With the fourth submittal, the Department identified a list of five (5)
items the petitioner and it could not reach a successful conclusion in terms of submittal of new or additional information. These items are as follows:

1. Engineering calculations and supporting documentation for the outfall structure (Pond Drain) relative to the 6" thick reinforced concrete walls and floor.
   **Petitioner's Response:** The Conditional Use Permit (CUP) is for both the waterfall and the large water feature. Therefore, the request for this information is not inappropriate and is justified, given the governing permit requires such.

2. Engineering calculations and supporting documentation for the choice of the 36" and 24" culvert pipes that were installed, as part of this structure. **Petitioner's Response:** The Conditional Use Permit (CUP) is for both the waterfall and the large water feature. Therefore, the request for this information is not inappropriate and is justified, given the governing permit requires such.

3. Steps to address the intent of the permit's requirement relative to the spray of water from the fountain and a method to provide a cleaner source for it. Therefore, the Department respectively requested the condition be met in terms of a design concept and engineered details added to the appropriate Site Development Plan sheet. Again, the condition for pre-treatment is as follows: "the property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a **fountain** foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a **forebay for water quality purposes**, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood's Department of Public Works."

4. Management protocol(s) to address the on-going maintenance of the pre-treatment improvements and the water quality of the large water feature as well.

5. A prescribed and complete twelve (12) month treatment program for the large water feature (the source of the water for the waterfall), which should include, but not limited to, the following steps or procedures:
   (a.) a monthly schedule, i.e. January through December, that identifies the frequency of treatment and the days of the month, when planned;
   (b.) chemicals or other materials that are planned to be used for treatment purposes and steps associated with them;
   (c.) identification of the issues that may arise with the large water feature that would prompt extra steps in terms of treatment actions, i.e. algae blooms; and
   (d.) summary of costs on a yearly basis, which are not to exceed one thousand dollars ($1,000.00) per year; and
   (e.) any other considerations that are planned to ensure the lake provides water to the waterfall structure that has been treated to minimize or eliminate mycosistins and any other harmful concentrations of minerals.

For purposes of review, the specific language of the condition from the permit is provided herein: "the maintenance of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided of the stormwater runoff entering it, along with the chemical treatment of the water contained therein to address contaminants from other sources. This chemical treatment option(s) used shall not harm any fish, aquatic life, or mammals that may come in contact with the water in the feature, but ensure it maintains an acceptable quality level for the purposes of public health purposes," and does allow for these steps or procedures to be requested by the City for inclusion in this regard.
The Site Plan Subcommittee was presented these items and the other components of the plan package at its meeting on June 15, 2020, where the Members discussed each of them and ultimately drew certain conclusions regarding the items, which are reflected in the decisions now contained in the recommendation report on this matter. Of the five (5) items identified in the Department of Planning’s review letter, the Site Plan Subcommittee agreed to accommodate the explanations of the petitioner provided relative to all, but did recommend the pre-treatment requirements in association with the large water feature be retained and inclusive of any favorable action on the Site Development Plan package. The pretreatment component was not to require more than one thousand dollars ($1,000.00) per year to maintain and keep them functional in terms of addressing the quality of the water entering the lake feature. With the pretreatment being selected, a previous discussion relating to addressing the treatment of the water that is contained within the lake, before being pumped up grade to the waterfall was eliminated. However, as noted at the Site Plan Subcommittee, the large water feature does have a fountain in it to facilitate the its aeration and minimize algae blooms and breakouts. Regardless, the Department did note at this meeting, both pre and post-treatment steps should be considered in this regard.

Regarding the other four (4) items, the Subcommittee Members believed explanations that were provided by the petitioner were acceptable and that certain materials that are part of the submittal package indicated the construction of these facilities followed best practices, despite no permits. The petitioner’s point in this regard focused more on the repair and restoration of the dam, not a new construction effort. Therefore, the dam had been in place for a number of years. As part of the petitioner’s information, a report from SCI Engineering was provided noting the company provided an on-site presence during the timeframe the dam was repaired and enlarged. The report is attached to this recommendation report.

The Site Plan Subcommittee meeting ended with the Members making a recommendation to for the Department to prepare a favorable report in this matter for the consideration by the Planning and Zoning Commission. It is important to note the petitioner was in attendance at this meeting, along with an impacted party that borders the eastern end of this Conditional Use Permit (CUP) area. Both of these parties spoke on behalf of their positions regarding the operations of the waterfall relative to its noise components and health impacts. The Site Plan Subcommittee Members did acknowledge the input of these parties, but, however, did not add, nor subtract, any of the concerns noted therein to their recommendation.
Recommendation Components:
The Planning and Zoning Commission has reviewed the Site Development Plan (SDP) that has been submitted to it for its consideration and action. In conjunction with this review process, the Planning and Zoning Commission is also supportive of this recommendation of the Site Plan Subcommittee and its individual components, including pre-treatment requirements of the large water feature. This recommendation from the Members of Site Plan Subcommittee is based upon the compliance of the large water feature and associated waterfall to the permit itself, the underlying regulations of the NU Non-Urban Residence District, and other design criteria of the City in this regard. Also supporting the recommendation of the Site Plan Subcommittee and the subsequent action of the Planning and Zoning Commission are the following items:

1. The location of the large water feature and associated waterfall comply with the setback distances established in the permit.
2. The depth of the large water feature does not exceed twenty (20) feet, per the permit's condition in this regard.
3. The location of the large water feature is far removed from any nearby property, being approximately in the middle of the sixty (60) acre tract of land that forms this permit area.
4. The location of the large water feature and its limited visibility from any adjoining property reduces the need for any type of elaborate landscaping plan in association with it.
5. The waterfall has been tested for sound considerations and found to be compliant with the current limitations of the City's Noise Code.
6. The overall system has been tested for water quality and those limited results indicate certain issues, but not beyond generally accepted tolerances for a stormwater-sourced large water feature.
7. The petitioner has provided an Emergency Management Plan (EMP) to the Planning and Zoning Commission that complies with the Missouri Department of Natural Resources protocols, given the dam height is less than thirty-five (35) feet, where State review would have been mandatory. The dam is significantly less than this height.
8. The petitioner has offered a maintenance plan for the large water feature that features checks and balances necessary to ensure that its condition is monitored on a regular basis, with a limited number of steps to address problems discovered through this process.
9. The operation of the waterfall is governed by general noise regulations of the City's Municipal Code. These regulations would prohibit its operation from 11:00 p.m. to 7:00 p.m., every day. Certain sound levels will also be managed by the Noise Code relative to daytime and nighttime hours.
10. The condition of the overall sixty (60) acre tract of land is excellent and not impacted by any of the granted conditional uses in association with the permitted activities.

However, the Site Plan Subcommittee does note that several items remain to be addressed before the Site Development Plan (SDP) would be complete and authorized for approval by the Planning and Zoning Commission. These items are identified in the Conditional Use Permit (CUP) granted for this location and intended to address considerations relating to the operation and safety of the large water feature and associated waterfall. This list of items is noted below:

1. The appropriate plan sheets need to be updated to reflect the pre-treatment requirements set forth in the permit and by the Members of this Subcommittee. This pre-treatment requirement must follow Metropolitan St. Louis Sewer District (MSD) standards and details for a drainage area that provides flow to a three point five (3.5) acre large water feature.

2. The operation of the large water feature and associated waterfall must complete all permitting requirements of the City of Wildwood and its contractual agent, St. Louis County. These permitting requirements will include all applicable submittals necessary for electrical and plumbing work for the pump systems and piping.

3. The petitioner must provide a bond, in the amount of five thousand dollars ($5,000.00), to the City of Wildwood for nuisance and maintenance purposes, as set forth in the governing Conditional Use Permit (CUP).

Additionally, although not set forth as requirements in this regard, the Site Plan Subcommittee is encouraging the petitioner to consider not only pre-treatment of the source of this large water feature, but also the management of the water quality of it by natural and chemical methods recommended by the federal, State, and/or St. Louis County governments. This step, although not required by the action of the Site Plan Subcommittee, would ensure a cleaner source of water for the waterfall. Along with this item, the Site Plan Subcommittee would recommend the petitioner consider installing native plants and other landscaping along the perimeter of the large water feature to act as filtration for the runoff that is entering it. The types of these plants and landscaping can be determined through consultation with contractors in this field, i.e. lake management and maintenance companies. These additional suggestions would make the large water feature and associated waterfall safer, healthier, and more aesthetically pleasing for all parties.

**Summary and Conditions:**

The Planning and Zoning Commission has completed its review of the aforementioned Site Development Plan (SDP) and related items and determined them to be in compliance with the requirements for the governing Conditional Use Permit (CUP). Along with this determination of support, the Planning and
Zoning Commission would also note that it concurs with the Site Plan Subcommittee’s rationales for its recommendation, along with its identified required additions (three (3) in total) and suggestions (two (2) in total) that are being offered to the petitioner for consideration, as a way to improve the character and function of these improvements for all parties. Therefore, based upon the analysis provided above in this report, the Planning and Zoning Commission hereby grants its approval of this Site Development Plan for the project.

**Action of the Planning and Zoning Commission:**

With the report from the Site Plan Subcommittee, the Planning and Zoning Commission has reviewed the information and made its final recommendation in this regard. Accordingly, acting at its July 20, 2020 meeting, and by a vote of -- to --, the Planning and Zoning Commission submits the following report and recommendation to the City Council for its receipt, filing, and consideration.

**Enclosures:**

Attachment A – Site Development Plan (SDP) and Related Items
Attachment B – Background Information
MEETING MINUTES REGULATING WATERFALL OPERATION
The Planning and Zoning Commission meeting was called to order by Chair Archeski, at 6:30 p.m., on Tuesday, January 22, 2019, at Wildwood City Hall, 16860 Main Street, Wildwood, Missouri.

I. Welcome to Attendees and Roll Call of Commission Members

Chair Archeski requested a roll call be taken by Planner Newberry. The roll call was taken, with the following results:

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<th>PRESENT – (9)</th>
<th>ABSENT – (1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chair Archeski</td>
<td>Commissioner Deppeler</td>
</tr>
<tr>
<td>Commissioner Lee</td>
<td></td>
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<tr>
<td>Commissioner Helfrey</td>
<td></td>
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<td>Commissioner Gragnani</td>
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<td>Commissioner Kohn</td>
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<td>Commissioner Beattie</td>
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<td>Commissioner Simpson</td>
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<td>Council Member Woerther</td>
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<td>Mayor Bowlin</td>
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</table>

Other City officials present: Director of Planning Vujnich, Planner Newberry, and Acting City Attorney Weber

II. Review Tonight’s Agenda/Questions or Comments

There were no questions or comments on the agenda.

III. Approval of Minutes from the December 17, 2018 Meeting

A motion was made by Commissioner Gragnani, seconded by Commissioner Simpson, to approve the minutes from the December 17, 2018 meeting. A voice vote was taken regarding the motion for approval of the minutes. Hearing no objections, Chair Archeski declared the motion approved by a vote of 9-0.

IV. Department of Planning Opening Remarks

The Department had no opening remarks.

V. Public Comment Session

Tom Roberts, 500 Laurey Lane, submitted a speaker's card, but declined to address the Commission at this time, but would be available under the item relating to his property that is to be discussed later in the agenda.
VI. Public Hearings – One (1) Item for Consideration

a) P.Z. 12-18 2540 Lindy Lane, Andrew Hildebrand, 924 Forest Lake Court, Ballwin, Missouri 63021 – A request for a change in zoning from the NU Non-Urban Residence District to the R-3 10,000 square foot Residence District upon a property that is 0.39 acres in size, which is located on the east side of Lindy Lane, north of Manchester Road (Locator Number: 24V530131/Street Address: 2540 Lindy Lane). The subject property is designated ‘Neighborhood Edge’ District under the current Town Center Regulating Plan. Proposed Use: One (1) single family dwelling on the existing non-conforming lot. (Ward Eight) 

Director Vujnic read the request into the record.

Planner Newberry provided a brief description of the request, as well as a slideshow of photographs of the current conditions of the property and various aerial imagery depicting its location within the City’s Town Center Area. Director Vujnic noted the petitioner is in attendance and available to provide a presentation of his request to the Commission.

Chair Archeski invited the petitioner to address the Commission.

Andrew Hildebrand, petitioner, stated he is requesting a change in zoning to accommodate the demolition of the existing uninhabitable dwelling, in order to construct a new home for his personal residence.

Chair Archeski invited members of the public to provide comment, as part of tonight’s Public Hearing on this request.

Bill Hill, 2538 Lindy Lane, expressed his concerns regarding the impact the construction of this new home might have on Lindy Lane relative to the future development of the other properties along the street, specifically relating to their current Neighborhood Edge Town Center District designation and the planned street network.

Discussion was held among Commission Members regarding the demolition of the existing structure; the depth of the proposed new dwelling; and the build-to requirements of the City’s Town Center Plan, as it relates to the proposed placement of the new building.

VII. Old Business – One (1) Item for Consideration

a) P.Z. 9-18 The Reserve at Wildwood, Payne Family Homes L.L.C., c/o Thomas Cummings, 10407 Baur Boulevard, Suite B, St. Louis, Missouri 63132 – A request for the following land use considerations upon a property that totals 50.65 acres of area, which is located on the west side of State Route 109, north of Manchester Road (Locator Numbers: 23V110022 and 23W320013/Street Addresses: 2431 State Route 109 and 17225 Manchester Road):

1. A modification of the Street Network Map of the Town Center Plan, which reflects the petitioner’s intent to modify the location and design standards of the proposed extension of Main Street through the site, along with the accompanying planned network of internal roadways.
2. A modification to the current Town Center Regulating Plan designations associated with the tract of land from the 'Workplace District', 'Neighborhood Edge District', and 'Neighborhood General District', to the 'Neighborhood Edge District' designation for the entirety of the site.

3. A request for a change in zoning from the C-8 Planned Commercial District and R-6A 3,000 square foot Residence District, with a Planned Environment Unit (PEU), to the R-3 10,000 square foot Residence District, with a Planned Residential Development Overlay District (PRD).

These requests have been made upon the same tract of land that was under consideration by the Planning and Zoning Commission as P.Z. 20, 21, and 22-15 Ackerley Place, which has been postponed indefinitely. Proposed Use: A total of one hundred forty (140), detached single-family dwellings on individual lots, with common ground, and required public space areas. (Ward One)

Planner Newberry read the request into the record.

Director Vujnich stated the Department met with the petitioner following the Commission's most recent meeting where this item was discussed to address certain components of the proposed development, specifically minimizing the visual impact of front entry garages on the street, if they are to be allowed. He stated the Department identified twelve (12) considerations, which are outlined in its report, of which the petitioner indicated four (4) of these items could be accommodated. Director Vujnich stated the Department is appreciative of the petitioner incorporating these items, but believes additional design components need to be included, which are also outlined in the Department's report. He stated the petitioner contacted the Department, after its report was published, and would like to request a postponement at tonight's meeting in order to further study the five (5) additional design components identified in the Department's report.

Chair Archeski invited the petitioner's representatives to address the Commission.

**Mike Doster, petitioner's legal counsel,** respectfully requested the Commission postpone action on this matter, in order for the development team to further study the five (5) items identified by the Department.

No discussion was held among Commission Members.

A motion by Mayor Bowlin, seconded by Commissioner Beattie, to postpone action on the matter, until the Commission's next regularly scheduled meeting.

A roll call vote was taken, with the following results:

Ayes: Commissioner Helfrey, Commissioner Lee, Commissioner Kohn, Commissioner Gragnani, Commissioner Beattie, Commissioner Simpson, Council Member Woerther, Mayor Bowlin, and Chair Archeski
Nays: None
Absent: Commissioner Deppeler
Abstain: None
Whereupon, Chair Archeski declared the motion approved by a vote of 9-0.

VIII. **New Business – One (1) Item for Consideration**

a) A review and determination regarding the renewal of an existing Conditional Use Permit (CUP) in the NU Non-Urban Residence District that was granted by the Planning and Zoning Commission in
2010 for a museum, research library, and meeting space for the Wildwood Historical Society (WHS); south side of State Route 100, west of Hencken Road (Locator Number 26Y630111) (P.Z. 4-10 Wildwood Historical Society). The governing Conditional Use Permit (CUP) requires that it be reviewed, following its initial five (5) year period of time, which received favorable action by the Planning and Zoning Commission and City Council in 2015. This property is 5.4 acres in size and also listed on the City of Wildwood’s Historic Registry. (Ward Six)

Planner Newberry read the request into the record.

Director Vujnicj provided a brief history of the existing Conditional Use Permit for the Wildwood Historical Society, which is also outlined in the Department’s report. He noted that, due to an error in the Department’s initial review of the file, the renewal of this permit is occurring approximately one (1) year early; however, the Department believes this approach is acceptable, given the circumstances outlined in its report. Director Vujnicj stated that many of the rationales and justifications for granting the original Conditional Use Permit (CUP) in 2010 are still true today; therefore, the Department is recommending the extension of it until 2025.

Chair Archeski invited the representative from the Wildwood Historical Society to address the Commission.

Martha Bunch, Wildwood Historical Society, provided a brief summary of the positive benefits the Wildwood Historical Society provides to the community and respectfully requested the Commission extend the Conditional Use Permit (CUP).

No discussion was held among Commission Members.

A motion by Mayor Bowlin, seconded by Commissioner Gragnani, to extend the Conditional Use Permit (CUP), as recommended.

A roll call vote was taken, with the following results:

Ayes: Commissioner Helfrey, Commissioner Lee, Commissioner Kohn, Commissioner Gragnani, Commissioner Beattie, Commissioner Simpson, Mayor Bowlin, and Chair Archeski
Nays: None
Absent: Commissioner Deppeler
Abstain: Council Member Woerther
Whereupon, Chair Archeski declared the motion approved by a vote of 8-0, with one (1) abstention (Woerther).

IX. Site Development Plans-Public Space Plans-Record Plats – One (1) Item for Consideration

a) A recommendation report by the Department of Planning regarding the placement of recycling enclosures (two (2) per facility) in four (4) City-owned properties to assist in the changeover from single stream to dual stream efforts in this regard; Anniversary Park, Bluffview Park, Community Park, and City Hall (terminus of Wildwood Avenue in the Town Center Area); multiple zoning designations, i.e. PS Park and Scenic Districts and Amended C-8 Planned Commercial District; which is supportive of said locations under the need to promote and maintain current recycling efforts of Wildwood residents within this community. (Wards – One, Four, Six, and Eight)

Planner Newberry read the request into the record.
Director Vujnic{h} provided an update to the Commission regarding the City’s upcoming changes to its recycling program, which are being driven by major changes that are occurring within the international market. He noted that a component of these changes is the need to place collection facilities, i.e. recycling dumpsters, in some of the City’s parks and other public properties. He stated the purpose of these collection areas is to allow residents to drop off recyclable materials that the City’s contracted waste hauler will no longer provide at curbside, again, due to overall changes in the market for recyclable materials. Director Vujnic{h} stated the dumpsters will be appropriately screened and the upkeep of the areas will be the responsibility of the waste hauler and closely monitored by City staff. He stated the Department is recommending approval of the identified locations, in order to offer this recycling service to its residents.

Discussion was held among Commission Members regarding the planned materials and design of the screening elements; concerns regarding illegal dumping; concerns regarding damage caused to the existing pavement by the larger trucks; and the maneuverability of the trucks at the Anniversary Park location.

A motion by Council Member Woerther, seconded by Commissioner Beattie, to approve the locations, as presented.

A roll call vote was taken, with the following results:

Ayes: Commissioner Helfrey, Commissioner Lee, Commissioner Kohn, Commissioner Gragnani, Commissioner Beattie, Commissioner Simpson, Council Member Woerther, Mayor Bowlin, and Chair Archeski
Nays: None
Absent: Commissioner Deppeler
Abstain: None
Whereupon, Chair Archeski declared the motion approved by a vote of 9-0.

X. Other – One (1) Item for Consideration

a) An update by the Department of Planning regarding P.Z. 15-17 Babler Farms, L.L.C., c/o Tom Roberts, 550 Laurey Lane, Wildwood, Missouri, 63005, which was a request for a Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a fifty-nine point nine (59.9) acre tract of land that was ultimately granted by the Planning and Zoning Commission to allow certain existing improvements to be retained on the subject site, i.e. a large water feature (3.5 acres in size) and an associated waterfall structure in excess of five hundred (500) feet in overall length. (Ward – One)

Planner Newberry read the request into the record.

Director Vujnic{h} provided an update on the Department’s progress on finding a consultant to conduct the required air quality testing of this large water feature and associated waterfall structure. He noted the Department has been spending a great deal of time addressing concerns of the abutting neighbors regarding activity that is occurring on the petitioner’s property. Director Vujnic{h} stated the Department has also been addressing the request of the petitioner to operate the waterfall feature periodically for maintenance purposes, noting the specific schedule that has been proposed is not acceptable from the Department’s perspective. He stated the Department does believe periodic maintenance is appropriate
and is seeking direction from the Commission regarding an acceptable schedule for the petitioner to follow regarding the frequency and duration for the operation of the waterfall feature, again, for the purpose of maintenance at this time.

A motion by Council Member Woerther, seconded by Commissioner Gragnani, to open discussion regarding the matter. A voice vote was held regarding the motion to discuss. Hearing no objections, Chair Archeski declared the motion approved by a vote of 9-0.

Discussion was held among Commission Members regarding the depth of the intake pipes for the waterfall feature; the need to gather additional information regarding the pumps that are currently installed; the notion a full cycle of water should be pumped through the system, in order to vacate all stagnant water from it; and the reasonable frequency and duration of allowing the property owner to operate the waterfall feature for maintenance purposes.

Chair Archeski invited the petitioner to address the Commission.

Tom Roberts, 500 Laurey Lane, outlined his rationales for wanting to operate the waterfall periodically for maintenance purposes.

A motion by Commissioner Helfrey, seconded by Commissioner Kohn, to allow the running of the waterfall feature for maintenance purposes a total of two (2) to three (3) times per week for a duration of time that will allow an entire cycle of water to be run through the system, as calculated by the specifications of the pumps and associated piping, with a report by the Department regarding the status of this allowance in ninety (90) days.

A roll call vote was taken, with the following results:

Ayes: Commissioner Helfrey, Commissioner Lee, Commissioner Kohn, Commissioner Gragnani, Commissioner Beattle, Commissioner Simpson, Council Member Woerther, Mayor Bowlin, and Chair Archeski
Nays: None
Absent: Commissioner Deppeler
Abstain: None
Whereupon, Chair Archeski declared the motion approved by a vote of 9-0.

XI. Closing Remarks and Adjournment

A motion by Commissioner Lee, seconded by Council Member Woerther, to adjourn. A voice vote was held regarding the motion. Hearing no objections, Chair Archeski adjourned the meeting at 7:40 p.m.

Approved by: [Signature]
Secretary – City of Wildwood Planning and Zoning Commission

Note: Recordation of the opinions, statements, and/or other meeting participation in these minutes shall not be deemed to be an acknowledgement or endorsement by the Commission of the factual accuracy, relevance, or propriety thereof.
* If comment cards were submitted indicating they did not wish to speak at tonight's meeting, they have been attached and made part of the official record.
WATER QUALITY TESTING RESULTS
Re: Second Update on P.Z. 15-17 Babler Farms, L.L.C., c/o Tom Roberts, 550 Laurey Lane, Wildwood, Missouri, 63005 – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District for a fifty-nine point nine (59.9) acre tract of land that is located at the terminus of Laurey Lane (Locator Numbers: 20X630015 and 20X630024/Street Addresses: 500 and 550 Laurey Lane). **Authorized Conditional Use: An existing large water feature – lake – and associated waterfall structure** – (as defined by §415.030 of the City of Wildwood’s Zoning Regulations). The large water feature is three point four (3.4) acres in size. **(Ward One)**

Commission Members:

As the Planning and Zoning Commission is aware, the City has been working to address the matter relating to a large water feature and associated waterfall, which required a City of Wildwood Conditional Use Permit (CUP). This issue has been under review for a number of months, and led to required water testing of the lake, which is the source for the waterfall feature, as well. This testing protocol, which was authorized by the Planning and Zoning Commission, tested for certain pathogens, BacT ID, and chemical analysis.

This testing took place on October 9, 2019 by ARDL, Inc. a firm from Mount Vernon, Illinois, that has participated in extensive testing services for the U.S. Army Corps of Engineers. Dean Dickerson, of ARDL, Inc., completed this testing on this morning and took multiple samples from the waterfall and one (1) sample from the large water feature. These samples were marked with information regarding time and location and packaged for shipping to two (2) testing laboratories. The delivery of the samples was to occur the same day of the collection of them to follow standard protocols in this regard.

The Department is in receipt of the testing results, which are dated November 6, 2019, and are attached to this letter for the Commission’s review and consideration. The Department did follow up with Mr. Dickerson to request additional assessment of the findings of the testing. Mr. Dickerson provided this assessment in an email correspondence dated November 14, 2019, which also attached to this letter.

Accordingly, the Department is seeking any comments or questions from the Planning and Zoning Commission Members at tonight’s meeting regarding these testing results and the assessment provided by the representative from ARDL, Inc. These comments, and then, any others from others in attendance at tonight’s meeting, would then be analyzed for any further actions, if necessary. With the November 14, 2019 email from ARDL, Inc., the Department would still support another opinion from a qualified source and, with that information, hope to finalize the permit process and then complete the remaining steps in it.
If any of the Planning and Zoning Commission Members should have comments or questions in this regard, please feel free to contact any of the Department of Planning staff at (636) 458-0440. Thank you for your consideration on this information and patience in its preparation and presentation.

Respectfully submitted,

CITY OF WILDWOOD

[Signature]
Joe Vujnic, Director
Department of Planning

Cc: The Honorable City Council of the City of Wildwood
    Sam Anselm, City Administrator
    John A. Young, City Attorney
    Kathy Arnett, Assistant Director of Planning and Parks
    Travis Newberry, Planner
Mr. Joe Vujnic
Director of Planning & Parks
16860 Main St.
Wildwood, MO 63040

RE: ARDL Report 301816, Sample collection and Analysis per Consultant/Services Agreement

Dear Mr. Vujnic:

ARDL collected samples from the Roberts Lake (sample ID 301816-02) and the watercourse (sample ID 301816-01) described as waterfall on October 9, 2019. Subsequent to the collection activities, ARDL delivered aliquots to Fed-Ex (1232 hours on Oct 9, 2019) for delivery to subsidiaries of National Testing Laboratories for analysis. In addition, aliquots of the samples were hand delivered to the PDC Laboratory location at 3278 N Hwy 67 in Florissant MO at 1342 hours on Oct 9, 2019.

Due to verbal instructions received the afternoon of Oct. 8, 2019 from the property owner, Mr. Tom Roberts, the sample container for the pathogen panel test of the Roberts Lake was not transported to the site.

The testing performed by the subcontractors was as follows:

National Testing Laboratory subsidiary Zoologix performed the pathogen panel as described in line item #2 in our quotation. None of the pathogens tested for were found in the sample from the waterfall. Appendix A contains the laboratory report, a copy of the chain-of-custody sent with the sample, and a copy of the airbill under which it was sent.

National Testing Laboratory subsidiary Benchmark Environmental Labs, Inc. performed the Bacteria Identification as described in line item #6 in our quotation. The waterfall sample contained 380 cfu/100 mL. These colonies were identified as bacillus licheniformis. The Roberts Lake sample contained 630 cfu/100 mL of pseudomonas paucimobilis. Appendix B contains the laboratory report, a copy of the chain-of-custody sent with the sample, and a copy of the airbill under which it was sent.

PDC Laboratories performed the general chemistry, nutrient and microbiology testing as described in line item #3 in our quotation. No abnormally high results were found. Appendix C contains their laboratory report, which includes a copy of the chain-of-custody accompanying the samples.

ARDL appreciates the opportunity to provide the City of Wildwood with environmental services.

Regards,

[Signature]

Dean S. Dickerson
Vice President of Technical Services

Attachments

"Test everything, keep the good" 1 Thes. 5:21
## Appendix A

### Informational Water Quality Report

**Pathogen Panel**

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</tr>
<tr>
<td>400 Aviation Drive</td>
</tr>
<tr>
<td>ML Vernon, IL 62864</td>
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<td>ATTN: Dean Dickerson</td>
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**Sample Number:** 4003534

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## Definition and Legend

This informational water quality report compares the actual test results to national standards as defined in the EPA's Primary and Secondary Drinking Water Regulations.

**Primary Standards:** Are expressed as the maximum contaminant level (MCL) which is the highest level of contaminant that is allowed in drinking water. MCLs are enforceable standards.

**Secondary Standards:** Are non-enforceable guidelines regulating contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor, or color) in drinking water. Individual states may choose to adopt them as enforceable standards.

**Action Levels:** Are defined in treatment techniques which are required processes intended to reduce the level of a contaminant in drinking water.

**mg/L (ppm):** Unless otherwise indicated, results and standards are expressed as an amount in milligrams per liter or parts per million.

**Minimum Detection Level (MDL):** The lowest level that the laboratory can detect a contaminant.

**ND:** The contaminant was not detected above the minimum detection level.

**NA:** The contaminant was not analyzed.

- ![Checkmark] (The contaminant was not detected in the sample above the minimum detection level.)
- ![Circle] (The contaminant was detected at or above the minimum detection level, but not above the referenced standard.)
- ![Triangle] (The contaminant was detected above the standard, which is not an EPA enforceable MCL.)
- ![Plus] (The contaminant was detected above the EPA enforceable MCL.)
- ![X] (These results may be invalid.)
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We certify that the analyses performed for this report are accurate, and that the laboratory tests were conducted by methods approved by the U.S. Environmental Protection Agency or variations of these EPA methods.

These test results are intended to be used for informational purposes only and may not be used for regulatory compliance.

National Testing Laboratories, Ltd.
NATIONAL TESTING LABORATORIES, LTD
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Relinquished by: (Signature)  Date  Time

Received for Laboratory by: (Signature)  Date  Time  Shipping Ticket No.

REMMeKS/SPECIAL INSTRUCTIONS:

COPYIES: White & Yellow copies accompany sample shipment to laboratory. Pink copy retained by sampler.
CLIENT INFORMATION

National Testing Laboratories
6571 Wilson Mills Rd.
Cleveland, OH 44143
Attn: Susan Henderson

M40155 399380 / H₂O
HPC
Bacterial ID
630 cfu / 100 ml
P
Pseudomonas paucimobilis

M40156 399379 / H₂O
HPC
Bacterial ID
380 cfu / 100 ml
PP
Bacillus licheniformis

*  
P – Microorganism identified is classified as a Pathogen.  
C – Microorganism identified is classified as a Contaminant.  
PP – Microorganism identified is classified as a Potential Pathogen.

Michael C. Burns, Ph.D.
Michael C. Burns, Ph.D., RM/SM (NRM)
Laboratory Director
Registered Microbiologist: Cert. No. 1041
Specialist Microbiologist: Cert. No. 852
(SM)ASCP
**CHAIN OF CUSTODY RECORD**

**PROJECT**
City of Wildwood

**SAMPLERS**
(Signature)

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**REMARKS/SPECIAL INSTRUCTIONS:**
Report to: Dean Dickerson
ODickerson@ardlin.com

**REMARKS OR SAMPLE LOCATION**
399379
399380

**PURCHASE ORDER NO:**

**COPIES:** White & Yellow copies accompany sample shipment to laboratory. Pink copy retained by sampler.
November 04, 2019

Dean Dickerson
ARDL, Inc.
PO Box 1566 400 Aviation Dr.
Mt. Vernon, IL 62864

RE: ARDL City of Wildwood

Dear Dean Dickerson:

Please find enclosed the revised analytical results for the 2 sample(s) the laboratory received on 10/10/19 10:00 am and logged in under work order 9102738. All testing is performed according to our current TNI accreditations unless otherwise noted. This report cannot be reproduced, except in full, without the written permission of PDC Laboratories, Inc.

If you have any questions regarding your report, please contact your project manager. Quality and timely data is of the utmost importance to us.

PDC Laboratories, Inc. appreciates the opportunity to provide you with analytical expertise. We are always trying to improve our customer service and we welcome you to contact the Director of Client Services, Lisa Grant, with any feedback you have about your experience with our laboratory at 309-683-1764 or lgrant@pdclab.com.

Sincerely,

Kurt Stepping
Senior Project Manager
(309) 692-8688 x1719
kstepping@pdclab.com
# Analytical Results

**Sample:** 9102738-01  
**Name:** 301816-1  
**Matrix:** Waste Water - Regular Sample  
**Sampled:** 10/09/19 11:30  
**Received:** 10/10/19 10:00

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<td>mg/L</td>
<td>H</td>
<td>10/21/19 06:47</td>
<td>1</td>
<td>1.0</td>
<td>10/24/19 11:18</td>
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<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
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<td>Chlorophyll a</td>
<td>1.9</td>
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<td>SM 12206 H*</td>
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<td>Total Microcystin</td>
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<td>µg/L</td>
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<td>10/22/19 15:02</td>
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<td>0.300</td>
<td>10/22/19 15:02</td>
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<td>EPA 546 P*</td>
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<tr>
<td>%CV</td>
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<td>%</td>
<td>H</td>
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<td></td>
<td>10/22/19 15:02</td>
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<td>EPA 546 P*</td>
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<tr>
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<tr>
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<tr>
<td>Phosphorus - total as P</td>
<td>0.1</td>
<td>mg/L</td>
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<td>10/21/19 13:29</td>
<td>1</td>
<td>0.10</td>
<td>10/23/19 07:50</td>
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<tr>
<td>Total Kjeldahl Nitrogen (TKN)</td>
<td>&lt; 1.0</td>
<td>mg/L</td>
<td>H</td>
<td>10/21/19 06:47</td>
<td>1</td>
<td>1.0</td>
<td>10/24/19 11:18</td>
<td>CJP</td>
<td>CHA/PA-DK03 &amp; EPA 351.2</td>
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### ANALYTICAL RESULTS

**Sample:** 910738-02  
**Name:** 301816-2  
**Matrix:** Waste Water - Regular Sample  
**Sampled:** 10/09/19 11:45  
**Received:** 10/10/19 10:00

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<th>Parameter</th>
<th>Result</th>
<th>Unit</th>
<th>Qualifier</th>
<th>Prepared</th>
<th>Dilution</th>
<th>MRL</th>
<th>Analyzed</th>
<th>Analyst</th>
<th>Method</th>
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<td><strong>General Chemistry - PIA</strong></td>
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<tr>
<td>Conductivity</td>
<td>120</td>
<td>umhos/cm</td>
<td></td>
<td>10/22/19 09:15</td>
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<td></td>
<td>10/22/19 09:15</td>
<td>MGU</td>
<td>SM2510B</td>
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<tr>
<td>pH</td>
<td>8.21</td>
<td>pH Units</td>
<td>H</td>
<td>10/22/19 14:59</td>
<td>1</td>
<td></td>
<td>10/22/19 14:59</td>
<td>TTH</td>
<td>SM 4500 H B</td>
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<tr>
<td>Sulfide</td>
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<td>mg/L</td>
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<td>10/16/19 15:43</td>
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<td>CS</td>
<td>SM 4000-S F</td>
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<td>Temperature at pH measurement</td>
<td>14</td>
<td>°C</td>
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<td>10/22/19 14:59</td>
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<td>10/22/19 14:59</td>
<td>TTH</td>
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<td>mg/L</td>
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<td><strong>Microbiology - PIA</strong></td>
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<td>Total Microcystin</td>
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<td>%CV</td>
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<td>SDW</td>
<td>EPA 546*</td>
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<tr>
<td><strong>Nutrients - PIA</strong></td>
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<tr>
<td>Nitrate/Nitrite-N</td>
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<td>Phosphorus - total as P</td>
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<td>mg/L</td>
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<td>10/21/19 13:29</td>
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<td>CJP</td>
<td>SM 4100-P F*</td>
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<tr>
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<td>1.5</td>
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<td></td>
<td>10/04/19 11:20</td>
<td>CJP</td>
<td>OIAAPA-DK03 &amp; EPA351.2</td>
</tr>
</tbody>
</table>
NOTES

Specifications regarding method revisions and method modifications used for analysis are available upon request. Please contact your project manager.

* Not a TNI accredited analyte

Memos

Revised report: Corrected sample description error.

Certifications

CHI - McHenry, IL - 4314 W Crystal Lake Road A, McHenry, IL 60050
   TNI Accreditation for Drinking Water, Wastewater, Fields of Testing through IL EPA Lab No. 100279
   Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 17556

PIA - Peoria, IL - 2231 W Altorfer Drive, Peoria, IL 61615
   TNI Accreditation for Drinking Water, Wastewater, Hazardous and Solid Wastes Fields of Testing through IL EPA Lab No. 100230
   Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 17553
   Drinking Water Certifications: Illinois (240); Kansas (E-10338); Missouri (073)
   Wastewater Certifications: Arkansas (68-0677); Iowa (240); Kansas (E-10338)
   Hazardous/Solid Waste Certifications: Arkansas (88-0677); Iowa (240); Kansas (E-10338)

SPIL - Springfield, IL - 1210 Capitol Airport Drive, Springfield, IL 62707
   TNI Accreditation through IL EPA Lab No. 100323

SPMO - Springfield, MO - 1805 W Sunset Street, Springfield, MO 65807
   USEPA DMR-QA Program

STL - St. Louis, MO - 3278 N Highway 67, Florissant, MO 63033
   TNI Accreditation for Wastewater, Hazardous and Solid Wastes Fields of Testing through KS Lab No. E-10389
   TNI Accreditation for Wastewater, Hazardous, and Solid Waste Analysis through IL EPA No. 200070
   Illinois Department of Public Health Bacteriological Analysis in Drinking Water Approved Laboratory Registry No. 171050
   Missouri Department of Natural Resources
   Microbiological Laboratory Service for Drinking Water

Qualifiers

H  Test performed after the expiration of the appropriate regulatory/advisory maximum allowable hold time.

Certified by: Kurt Stepping, Senior Project Manager
<table>
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<tr>
<th>SAMPLE NUMBER</th>
<th>DATE</th>
<th>TIME</th>
<th>COMPO</th>
<th>NO. OF CONTAINERS</th>
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<tbody>
<tr>
<td>301816-1</td>
<td>10/19/19</td>
<td>11:30</td>
<td>x G</td>
<td>x X X X X</td>
</tr>
<tr>
<td>-2</td>
<td>11/19</td>
<td>11:45</td>
<td>x 5</td>
<td></td>
</tr>
</tbody>
</table>

**Remarks/Special Instructions:**

1. Report to: Derrick Dickerson
2. dickerson@ardlinc.com
3. 1°C on ice @ Rorie Lab
4. 20.2°C

**Purchase Order No:**
I received this e-mail late yesterday and am providing it in advance of Monday’s meeting.

Thank you,

Joe Vujnic

--- Original Message ---
From: Joe Vujnicj
To: Dean Dickerson
Sent: Thursday, November 14, 2019 9:54 AM
Subject: Re: ARDL Report 301816

Mr. Vujnic:

According to the USEPA Drinking Water Health Advisory for the Cyanobacterial Microcystin Toxins, June 2015, the levels of microcystin observed in the samples is well below the World Health Organization’s low risk threshold for recreational water of 10 ug/L. The levels are also below the USEPA Drinking Water Health Advisory for school-age children and adults of 1.5 ug/L.

The bacteria species identified in the water samples, while both are commonly found in the environment, are classified as either pathogens or potential pathogens by the analytical laboratory, which follows CDC designations. However, I have not been successful in finding confirmation on the CDC’s website.

According to PubMed.gov, “Pseudomonas paucimobilis (formerly CDC group I1K, biotype 1) is a strictly aerobic, nonfermenting, oxidase- and catalase-positive, gram-negative bacillus that is widely distributed in water and soil. Its name derives from the difficulty encountered in demonstrating its motility, even in liquid media. This microorganism is responsible for two types of infection in humans: sporadic or community-acquired infections, probably of endogenous or environmental origin (bacteremia, meningitis, urinary tract infection, and wound infection); and outbreaks of nosocomial infection associated with the contamination of sterile fluids employed in hospitals. The majority of infections produced by P. paucimobilis have a good prognosis: no deaths related to this entity have been reported in the literature.”

While the laboratory considers bacillus licheniformis as a potential pathogen, and indeed several species of the genus are known pathogens (i.e. B. anthracis and B. cereus among others), the USEPA Final Risk Assessment of bacillus licheniformis dated February 1997 states: “B. licheniformis is not a human pathogen nor is it toxigenic. It is unlikely to be confused with related species that are. However, if challenged by large numbers of this microorganism, compromised individuals or those suffering from trauma may be infected.”

The chemical and nutrient results are within reasonable levels in my opinion.

Regards,

Dean Dickerson
Vice President of Technical Services
ARDL Inc.
(618) 244-3235 x227
(618) 731-4762 direct
www.ardlinc.com
Thank you. Your efforts and patience in this regard are appreciated.

From your perspective, and certainly compensated for such, can an assessment of the findings be provided? The pathogens seem OK, while the E.coli and the other item I am unclear upon.

Joe Vujnich

On Nov 6, 2019, at 5:58 PM, Dean Dickerson <ddickerson@ardlin.com> wrote:

Mr. Vujnich - attached please find our report for the samples collected Oct 9, 2019 at the Roberts property in Wildwood, MO. Our final invoice will follow next week.

ARDL appreciates the opportunity to provide the City of Wildwood with environmental services.

Regards,

Dean Dickerson
Vice President of Technical Services
ARDL, Inc.
918) 244-3226 x227
(818) 731-4762 direct
www.ardlin.com

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<ARDL 301816 - City of Wildwood.pdf>
DEPARTMENT’S EXPLANATION OF SITE DEVELOPMENT PLAN REVIEW PROCESSES OF THE CITY
December 9, 2019

Babler Farms, L.L.C.
c/o Tom Roberts
550 Laurey Lane
Wildwood, Missouri 63005

Re: Site Development Plan (SDP) for the Conditional Use Permit (CUP) - a Large Water Feature and Associated Waterfall Structure

Dear Mr. Roberts:

Thank you for the recent telephone call regarding the remaining process relative to the permit for the large water feature and associated waterfall structure. The process has reached its final stage, which is the Site Development Plan's review and action by the Planning and Zoning Commission. This plan process will result in all of the appropriate improvements and requirements associated with these two (2) items being identified within the boundaries of the property for the purposes of compliance and on-going use. This process is identified in detail in the Conditional Use Permit (CUP) that was granted for the large water feature and associated waterfall. However, the Department has summarized the steps in this process, which are as follows:

1. Update the previously submitted Preliminary Development Plan to now meet all of the requirements that are set forth in the granted Conditional Use Permit (CUP) by the Planning and Zoning Commission. The Department has highlighted the key conditions of this permit below.
2. Submit the updated plan, now the required Site Development Plan (SDP), to the Department of Planning for its review, along with the Department of Public Works.
3. Revise the Site Development Plan (SDP), per the comment letter from the Departments of Planning and Public Works.
4. Participate in the Site Plan Subcommittee of the Planning and Zoning Commission, when meeting is scheduled, after all comments of the City have been addressed on the plan. The Site Plan Subcommittee of the Planning and Zoning Commission can meet on the first and third Mondays of the month.
5. Complete process, once the Site Plan Subcommittee of the Planning and Zoning Commission has made its recommendation regarding the plan, with the final meeting where the process is concluded.

These steps summarize the process from its beginning to end. Key in this process is the work of the engineer under your direction to prepare the plan and make changes that are necessary to comply with the permit that governs this large water feature and associated waterfall. Additionally, for the purposes of this letter, the Department has provided attached the conditions of the permit and highlight those items that are pertinent to this final step in the process for your reference and use.

If you should have any questions or comments regarding this process or the conditions associated with the Site Development Plan (SDP) process, please feel free to contact the Department of Planning at (636) 458-0440. Thank you again for your cooperation in this regard, given the length of the process to reach this stage. Such has been much appreciated.
Sincerely,

CITY OF WILDFOOD

Joe Vujnic, Director
Department of Planning

Cc: The Honorable James. R. Bowlin, Mayor
Council Members Brost and Gragnani, Ward One
Sam Anselm, City Administrator
John A. Young, City Attorney
Rick C. Brown, P.E. and P.T.O.E., Director of Public Works
Kathy Arnett, Assistant Director of Planning and Parks
Travis Newberry, Planner

1. PERMITTED USES

This Conditional Use Permit (CUP) shall authorize a large water feature, as defined by Chapter 415.030 Definitions of the City of Wildwood’s Zoning Ordinance and, under specific compliance conditions, a waterfall structure.

2. LOT, SIZE, AND USE REQUIREMENTS

   a. The authorized large water feature shall not exceed three point five (3.5) acres in overall size.

   b. The height of the dam shall not exceed thirty-three (33) feet, as measured from final finish grade at the base of it, outside the water impoundment area.

   c. The depth of the lake, at normal pool elevation, shall not exceed twenty (20) feet.

   d. The inclusion and use of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided to treat stormwater runoff entering it, along with the chemical treatment of the water contained therein, to address contaminants from other sources. This chemical treatment option(s) that are to be used for these purposes shall not harm any fish, other aquatic life, or mammals that may come in contact with the water held in the feature, but ensure it maintains an acceptable quality level for the purposes of public health.

   e. The extent of any new/additional land disturbance, in association with the maintenance or care of this large water feature, may only be authorized by the Planning and Zoning Commission, as part of an Amended Site Development Plan review.

   f. The large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design, engineering, and ongoing maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission, as part of the Site Development Plan process, and as directed by the Department of Public Works. As part of this compliance to State stipulated requirements and standards, an Emergency Management Plan shall be provided that defines what, if dam failure occurs, the steps that have and will be taken to protect downstream properties.

   g. The waterfall structure shall not be expanded or extended from its current configuration and size, while its operation must comply with all of the City of Wildwood’s Performance Standards for Zoning Ordinance (Chapter 415.250). However, its operation is premised on a required sound study and compliance to regulations of the Noise Code and the Planning and Zoning Commission’s review and action on the required Site Development Plan.

3. PLAN SUBMITTAL REQUIREMENTS

Within twelve (12) months of the Conditional Use Permit (CUP) being granted by the Planning and Zoning Commission, and prior to any further site disturbance, the operator shall submit to the Planning and Zoning Commission for their review and approval a Site Development Plan. Where due cause is shown by the operator, this time interval may be extended once by the Planning and Zoning Commission.
Commission in accord with requirements of Chapter 415.480 of the City of Wildwood Zoning Ordinance. Said Site Development Plan shall include, but not be limited to, the following information:

a. Outboundary plat and legal description of the property.
b. Location and extent of all existing improvements, including all buildings and accessory structures, along with the planned large water feature and all improvements in association with it.
c. A general plan indicating setback lines along the perimeter of the subject tract of land and surrounding property lines and related improvements within two hundred (200) feet of this site’s boundaries, i.e., curb cut and access locations, stormwater facilities, and utility installations and easements.
d. Location of all roadways adjacent to the property, including required roadway right-of-way dedication and pavement widening, with existing and proposed improvements and trails, and general location, size, right-of-way, and pavement width of all interior drives.
e. Existing and proposed contours at vertical intervals of not more than two (2) feet.
f. General location of sanitary sewer and stormwater facilities.
g. A Landscape Plan including, but not limited to, the location, size, and general type of plant materials to be used in accord with the City of Wildwood’s Chapter 410 and accompanying Tree Manual.
h. An inventory of the percent of tree canopy or individual trees to be retained on the site indicated on a Tree Preservation Plan completed in accordance with the City of Wildwood Chapter 410 Tree Preservation and Restoration Code and accompanying Tree Manual.
i. Location of all existing and proposed easements.
j. All other information not mentioned above, but required on a preliminary plat in accord with Chapter 420.060 of the City of Wildwood Subdivision and Development Regulations.
k. A Stormwater Pollution Prevention Plan (SWPPP) for the site, which shall include the developer’s signature and acknowledgment of its requirements.
l. A maintenance plan for this large water feature that is based on annual inspections and reports to be submitted to the City of Wildwood’s Department of Planning. This plan shall indicate all steps and procedures that will be used to maintain the large water feature and ensure its stability and safety.

4. SITE DEVELOPMENT PLAN DESIGN CRITERIA

The above Site Development Plan shall adhere to the following specific design criteria:

Large Water Feature Setbacks

a. No large water feature and related improvements, including the waterfall, structure shall be located within the following setbacks, except as otherwise noted below:
   i. Seven hundred (700) feet from the southern property line and boundary of this Conditional Use Permit (CUP).
   ii. Four hundred (400) feet from the western property line and boundary of this Conditional Use Permit (CUP).
   iii. Forty (40) feet from the northern property line and boundary of this Conditional Use Permit (CUP).
   iv. Four hundred fifty (450) feet from the eastern property line and boundary of this Conditional Use Permit (CUP), except the waterfall structure may be located no closer than one hundred (100) feet to the same.

Landscape Requirements

b. Landscaping shall adhere to all requirements of Chapter 410 of the City’s Tree Preservation and Restoration Code and its accompanying Sustainable Plantings Guide and Tree Manual, including the submittal of a Tree Preservation Plan, in conjunction with the Site Development Plan. All roadway frontages shall be appropriately landscaped, as required by Chapter 410 Tree Preservation and Restoration Code, and be approved by the Planning and Zoning Commission on the Site Development Plan.

c. The areas of existing vegetation within the Conditional Use Permit (CUP) boundaries identified as to be retained shall be marked on the site prior to the commencement of any disturbance in accord with the City of Wildwood’s Chapter 410. These areas shall be indicated on the Site Development Plan submitted to the City of Wildwood for Planning and Zoning Commission review and approval. Existing mature tree canopy shall be preserved in accordance with the requirements of City of Wildwood’s Chapter 410 Tree Preservation and Restoration Code.

d. All disturbed areas of the site shall be restored in compliance to the City’s Sustainable Plantings Guide and Tree Manual by a combination of ground cover, landscaping, berms, natural stones, and other means to address stormwater runoff and erosion,
as well as improve overall site aesthetics. The restoration of disturbed areas shall be indicated on the required Landscape Plan and acted upon by the Planning and Zoning Commission.

e. A registered Landscape Architect shall prepare, submit, and sign all plan(s).

Miscellaneous Conditions

f. The hours of any future construction and grading activity in association with this large water feature shall be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. No development (grading and construction) activity shall be authorized on Sundays.

g. All retaining walls exceeding three (3) feet in height per section or crossing individual property lines shall be constructed of an appropriate inter-locking concrete block system or boulders. The Planning and Zoning Commission, as part of the Site Development Plan review process, shall review and act upon said materials and design.

h. The generalized location of all utility easements for proposed service to this development shall be as approved by the Planning and Zoning Commission on the Site Development Plan.

i. All utilities serving this site shall be installed underground in accord with the requirements of the City of Wildwood’s Subdivision and Development Regulations. Any existing easements located on the subject site, which are not being utilized, shall be vacated under the standard procedures of the City of Wildwood Subdivision and Development Regulations.

j. The property owner, or any assignee or successor, shall provide annual maintenance of this authorized large water feature on the subject property, with such being in accordance with State regulations for the same. A plan for this maintenance and upkeep shall be provided to the Planning and Zoning Commission, as part of the required Site Development Plan. Preventative maintenance shall be authorized on an as-need basis, along with any repairs, but does require an engineered plan be submitted to the City of Wildwood’s Department of Public Works for review and action. This plan will then be submitted to the Planning and Zoning Commission for receipt and filing.

5. VERIFICATIONS PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN

Prior to approval of the Site Development Plan, the developer shall provide the following:

Stormwater Improvements

a. Submit to the Planning and Zoning Commission an engineering plan approved by the City of Wildwood Department of Public Works showing that adequate handling of the stormwater drainage of the site is provided.

   i. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood standards.

   ii. All stormwater shall be discharged at an adequate natural discharge point.

   iii. The developer of this site shall be solely responsible to provide the necessary mechanisms, as part of the Site Development Plan/Improvement Plan process, to implement “best management practices” for stormwater management/water quality and the construction of related facilities. Minimally, these practices/facilities should include rain gardens, vegetated swales, and other options to substantially reduce the amount of stormwater discharging from the subject site.

   iv. The developer shall provide adequate detention and/or hydrologic calculations for review and approval of all stormwater that will enroach on City of Wildwood rights-of-way.

   v. The property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood’s Department: of Public Works.

Stormwater Pollution Prevention Plan

b. Prior to any land disturbance on this subject site, submit a Stormwater Pollution Prevention Plan, as part of the Site Development Plan review process, indicating compliance to Federal, State, and local requirements regarding the management of stormwater runoff to prevent siltation and erosion, both on-site and upon downstream properties.
Sound Study

c. The authorization of the Site Development Plan for this large water feature shall not include the waterfall structure, unless an independent sound study is conducted by the City of Wildwood with it in operation to determine the level of compliance to the Noise Code. This sound study must be conducted in accordance with accepted industry standards and by a consultant/firm with extensive experience in this field of sound analysis and testing. The results of the sound study must indicate compliance to the Noise Code, before the Site Development Plan can be acted upon for the waterfall structure.

Air Pollution Testing

d. The authorization of the Site Development Plan for this large water feature shall not include the waterfall structure, unless testing is provided regarding the odor issue associated with this improvement. This testing must be conducted in accordance with accepted industry standards and by a consultant/firm with extensive experience in this field of air pollution control. The results of the testing must indicate compliance to the Air Pollution Code, before the Site Development Plan can be acted upon for the waterfall structure.

6. RECORDING

Within sixty (60) days of granting of the Conditional Use Permit (CUP) by the Planning and Zoning Commission, the approved permit language and legal description of the property shall be recorded with the St. Louis County Recorder of Deeds.

7. VERIFICATION PRIOR TO PERMITS

Notification to Department of Planning

a. Subsequent to approval of the Site Development Plan, and prior to issuance of any grading or permit, all approvals from the Missouri Department of Transportation (MoDOT), the Department of Public Works, the U.S. Army Corp of Engineers, the Missouri Department of Natural Resources (MDNR), and the Monarch Fire Protection District must be received by the Department of Planning.

Nuisance Bond

b. Provide to the City of Wildwood a bond, letter of credit, or cash deposit in the amount of five thousand dollars ($5,000.00) for use to undertake any inspections or maintenance of the large water feature and dam, if the property and improvements are not maintained in accordance with said conditions of this permit. The City shall hold this deposit and it will be pre-authorized by the owner/operator, in writing to exercise its use, if violations are noted and not abated in a timely manner.

8. GENERAL DEVELOPMENT CONDITIONS

a. Provide adequate temporary off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driving conditions.

b. A grading permit is required prior to any grading on the site. Interim stormwater drainage controls in the form of siltation control measures are required and must comply with the Stormwater Pollution Prevention Plan for this development (SWPPP). The developer shall be solely responsible for obtaining any temporary slope and construction licenses needed to address the installation of public and private improvements on this site that require the use of adjoining parcels of ground that are not under their ownership or control.

c. The petitioner shall be responsible for obtaining all necessary permits from the Department of Natural Resources Clean Water Commission as they relate to the development of this tract of land.

d. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public right-of-way. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of infrastructure improvements.

e. If cut and fill operations occur during a season not favorable for immediate establishment of a permanent ground cover, a fast germinating annual, such as Rye or Sudan Grasses, shall be utilized to prevent erosion. This restoration must occur within thirty (30) days of the conclusion of preliminary grading as determined by the Director of Public Works.
f. Failure to comply with any or all of the conditions of this ordinance shall be adequate cause for revocation of permits by issuing City of Wildwood Departments or Commissions.

g. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accord with the Site Development Plan approved by the Planning and Zoning Commission and the Department of Planning. The owner/operator must acknowledge in writing that access to this site for inspection purposes by personnel of the City of Wildwood shall be authorized and, if refused, such action is grounds for revocation of said permit by the City.

h. Any other applicable zoning, subdivision, or other regulations or requirements of the City shall further apply to the development of this property, as authorized by this Conditional Use Permit (CUP), except as may be provided by law. Nothing herein shall be deemed a waiver of any subdivision, zoning, or other development regulation of the City whether by implication or reference.

i. This zoning approval is conditioned on compliance with the Zoning Ordinance, Subdivision and Development Regulations, and all applicable laws of the City. Such additional regulations are supplemental to the requirements herein and no modification of any applicable regulations shall result from this Conditional Use Permit (CUP), except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.

j. This Conditional Use Permit (CUP) shall be authorized for a period of one (1) year, with any adjustments to it based upon compliance to the requirements of the same. Renewal requests shall be the responsibility of the owner/operator to submit to the City and must be provided a minimum two (2) months in advance of each renewal for consideration and action by the Planning and Zoning Commission following this initial period of time. Subsequent renewals shall be on a three (3) year basis.
1st Review Letter
January 2, 2020

Tom Roberts  
550 Laurey Lane  
Wildwood, Missouri 63005

Re: Review Comments on the Large Water Feature and Associated Waterfall – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District.

Dear Mr. Roberts:

The Department has completed its review of the Site Development Plan (SDP) package for the large water feature and associated waterfall that is located on the approximately sixty (60) acre site that is situated at the terminus of Laurey Lane. The review of this package focused on the compliance of the submitted plan sheets to the site-specific permit that governs this location, the regulations of the underlying zoning district designation (NU Non-Urban Residence District), and the City of Wildwood’s Design Criteria Handbook. The results of this review indicate several issues that preclude the Department from submitting the plan sheets to the Planning and Zoning Commission for its consideration and final action. These issues are identified below for your review:

1. Please add a new sheet to the Site Development Plan (SDP) package that depicts all current conditions of the Conditional Use Permit (CUP).
2. Please provide an overall Title Sheet that provides the information identified on the attached checklist.
3. Please show, and provide, a detailed description of pre-treatment improvements at the headwaters of the large water feature. These improvement levels must reflect current Metropolitan St. Louis Sewer District (MSD) standards for pre-treatment of runoff entering the large water feature.
4. Please provide an on-going maintenance plan for the dam and large water feature.
5. Please provide an emergency management plan, which will address a potential dam failure.
6. Please provide a detailed description of planned chemical or natural treatment of the large water feature, as set forth in Condition 2(d.), for information and recently set forth by the Planning and Zoning Commission at its meeting on result of the water testing.
7. Please add/show all new improvements, particularly the waterfall structure and all other buildings and/or structures situated on the subject property.
8. Please show access improvements from the terminus of Laurey Lane through the subject lot.
9. Please add to Sheet 4 of 4 (ALTA/ACSM Land Title Survey) notes regarding the size of the large water feature, the size of the large water feature in terms of overall gallons of storage, the depth of the large water feature, and the height of the dam.
10. Please dimension the waterfall structure, specifically the total width and length.
11. Please provide details on the pumps and related piping system, as part of this single submittal package. Along with the requested plan depiction, provide manufacturers’ catalog cut sheets for the in-place equipment.
12. Please add to the Channel Cross-Section Detail a note that indicates that its depth varies, as constructed, unless such is not the case.
13. Please provide manufacturers’ catalog cut sheets for the fountain.
14. Please indicate compliance to Missouri Department of Natural Resources (MDNR) requirements and standards for the design, engineering, and on-going maintenance of the dam, including inspection frequencies and criteria.
15. Please indicate on Sheet 4 of 4 the required setback distances for the large water feature from the governing permit – 700 feet (south); 400 feet (west); 40 feet (north); and 450 feet (east) for the large water feature and 100 feet (east) for the waterfall.
16. Please be advised the Department of Public Works is reviewing the dam structure design and overflow structure and related downstream improvements for acceptance or comments.
17. Please provide a five thousand dollar ($5,000.00) bond for inspections/maintenance of the large water feature and dam, if they are not conducted by you, as part of the overall maintenance plan for this large water feature and dam.
18. Please be advised that, once the Site Development Plan (SDP) is acted upon by the Planning and Zoning Commission, the permit will be reviewed in one (1) year timeframe. This review will be before the Planning and Zoning Commission.

Please review the provided comments and address the needed changes to the plan sheets for further City review. If you should have any questions or comments, or need my assistance in this regard, please feel free to contact me at (536) 458-0440. Thank you in advance for your anticipated cooperation in this regard.

Respectfully submitted,
CITY OF WILDWOOD

Joe Vujich, Director
Department of Planning

Cc: The Honorable James R. Bowlin, Mayor
    Council Members Brost and Gragnani, Ward One
    Sam Anselm, City Administrator
    John A. Young, City Attorney
    Kathy Arnett, Assistant Director of Planning and Parks
    Travis Newberry, Planner
CITY OF WILDWOOD
PLAN/PLAT REVIEW CHECKLIST

**Please note: All checked items must be responded to on plan's resubmittal**

P. Z. # P.Z. 15-17 DEVELOPMENT NAME Tom Roberts' Large Water Feature

- Provide Missouri Department of Transportation Conceptual Approval.
- Provide Metropolitan St. Louis Sewer District Conceptual Approval.
- Submit a Flood Plain Study to the Department of Public Works.
  - Submit a Geotechnical Study to the Department of Public Works. (Check if already submitted)
  - A Professional Engineer and Engineer preparing geotechnical report must sign and seal the mylar.
- Submit a street stub study to the Department of Public Works.
  - NOTE: Developer shall install a street extension sign at roadway terminus which reads "THIS STREET TO BE EXTENDED AS PART OF FUTURE DEVELOPMENT"
- Submit steep grade verification to Department of Public Works.
- Add all ordinance conditions to the Site Development Plan, including TGA language.
- Identify pavement and right-of-way width along ____________________
- Show and dimension all improvements, i.e., existing and new right-of-way and pavement, sidewalks, TSCL, etc.
- Provide Temporary Slope Construction License (TSCL) as directed by the Department of Public Works.
- Provide photos per Section 30 of the Department of Public Works "Design Criteria Handbook."
- Provide verification of required sight distance at all access points.
- Please add as a note: Entrance, street intersection, cul-de-sac shall be constructed to City of Wildwood standards.
- Indicate Driveways with on-site turnaround capabilities as directed by the Department of Public Works.
- Show sight triangle at intersection/median. No plants, trees, signs, etc. shall be placed in this area as to restrict sight distance.
- Show and note all sidewalks will be constructed to City of Wildwood ADA standards.
- Provide easement for sidewalk conforming to City of Wildwood ADA standards adjacent to right-of-way.
- Clarify if grading is proposed. If so, show and note grading per City of Wildwood standards.
___ Show existing and proposed contours based on U.S.G.S. datum.

___ Please add the note: Grading and drainage shall be per City of Wildwood and MSD standards.

___ Please add the note: Slope shall not exceed 3 (horizontal) : 1 (vertical), unless supported by geotechnical report.

___ Please add the note: Stormwater shall be discharged at an adequate natural discharge point. Sinkholes are not adequate natural discharge points.

___ Provide and show cross access (through the site) (between the proposed lots).

___ Designate Public or Private streets.

___ Provide Book and Page in which right-of-way, roadway, easement, TSCL, etc. has been recorded.

___ Please provide a Location Map.

___ Please provide a North Arrow.

___ Please identify the Plan Scale.

___ Please identify the Subject Site's Zoning District.

___ Please provide the Subdivision Name, if applicable.

___ Provide the Lot Number, if applicable.

___ Identify the Dimensions of the Site.

___ Identify the Area of the Site.

___ Provide the Zoning of Adjacent Parcels, if different than the site.

___ Identify the Plan Submitter - Name, Address, Phone.

___ Provide the Proposed Building Use and Construction Type.

___ Identify the Building and Structure Distance from Adjacent Property Lines.

___ Provide the Building Dimensions and Gross Floor Area.

___ Provide the Parking and Loading Space Calculations, as well as, the Location and Sizes of all Proposed Spaces.

___ Identify the Parking Setbacks.

___ Identify the Drive Aisle Widths.

___ Identify the Type and Location of the Proposed Sanitary Sewer Treatment.
CITY OF WILLOWOOD
PLAN/PLAT REVIEW CHECKLIST
PAGE 3

1. Identify the Stormwater Drainage Facilities, including Retention Ponds and Detention Facilities, if applicable.
3. Provide a rendering of all Proposed Signs, which identifies their Size, Height and Location on the Plan.
4. Locate all Easements - Existing and Proposed.
5. Identify all Light Standards - Location and Height.
6. Identify any Other Structures (Fences, Canopies, etc.) - with Dimensions.

**If you should have any questions regarding the information provided on these sheets, please feel free to contact the Department of Planning at 636-458-0440**
PETITIONER’S RESPONSE TO 1ST REVIEW LETTER
Hi, Joe –

On behalf of Babler Farm, please see Tom Roberts’ attached response and revised Site Development Plan which addresses all 18 comments from your January 2, 2020 letter, inclusive of incorporating the requested figure amendments from the checklist sent with the January 2nd letter.

If you have further questions, please let us know.

Sincerely,

- Elizabeth

Elizabeth B. Schlaeger, P.E.

EnviroAnalytics
Group

Office: (314) 835-2802
Cell: (314) 807-1734
eschlaeger@enviroanalyticsgroup.com

Ms. Schlaeger:

PDF via e-mail is fine and thank you for asking.

Joe Vujnic

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From: Joe Vujnic [mailto:joe@cityofwildwood.com]
Sent: Monday, January 13, 2020 5:00 PM
To: Elizabeth Schlaeger; Tom Roberts
Cc: Travis Newberry; Sam Anselm; Jim Bowlin; Larry Brost; John Gragnani; John Young
Subject: Re: 1st Review Letter for Large Water Feature and Associated Waterfall

Ms. Schlaeger:

PDF via e-mail is fine and thank you for asking.

Joe Vujnic

---

From: Elizabeth Schlaeger <ESchlaeger@enviroanalyticsgroup.com>
Date: Monday, January 13, 2020 at 4:30 PM
To: "joe@cityofwildwood.com", Tom Roberts <troberts@cdcco.com>
Cc: Travis Newberry <travis@cityofwildwood.com>, Sam Anselm <Sam@cityofwildwood.com>, Jim Bowlin <JimBowlin@cityofwildwood.com>, Larry Brost <lbrost@cityofwildwood.com>, John Gragnani <jgragnani@cityofwildwood.com>, "jyoung@hamiltonweber.com" <jyoung@hamiltonweber.com>
Hi, Joe –

Tom and I are just about to button up the response to your January 2 emailed letter. Can we simply respond with a PDF back to you, or would you like to have 1 or more hard copies mailed to your office, as well.

Please advise.

Thanks,

• Elizabeth

Elizabeth B. Schlaeger, P.E.

EnviroAnalytics Group

Office: (314) 835-2802
Cell: (314) 307-1734
eschlaeger@enviroanalyticsgroup.com

From: Joe Vujich [mailto:joe@cityofwildwood.com]
Sent: Thursday, January 2, 2020 3:12 PM
To: Elizabeth Schlaeger; Tom Roberts
Cc: Travis Newberry; Sam Anselm; Jim Bowlin; Larry Brost; John Gagnani; jyoung@hamiltonweber.com
Subject: 1st Review Letter for Large Water Feature and Associated Waterfall

Ms. Schlaeger and Mr. Roberts:

I hope each of you had a wonderful holiday season and Happy New Year.

I have attached the comment letter regarding the current plan sheets on file with the City for the large water feature and associated waterfall structure. Please contact me with any questions or comments in this regard (636-458-0440).

Thank you in advance for your cooperation.

Joe Vujich
January 16, 2020

Mr. Joe Vujnic, Director
Department of Planning
City of Wildwood

Re: Response to the City of Wildwood’s January 2, 2020 Comments on the Large Water Feature and Associated Waterfall – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District letter

Dear Mr. Vujnic:

This letter and accompanying attachments are being submitted in response to a letter received on January 2, 2020 regarding the lake and waterfall feature located at 500 & 550 Laurey Lane. As requested in your letter, Babler Farm is presenting a cohesive, single package of information that addresses 18 separate comments, along with a corresponding checklist provided. Much of the information contained therein has been previously submitted to the City of Wildwood (CoWW), but we trust that this comprehensive Site Development Plan (SDP) package will be the last submittal needed for the Planning and Zoning Commission’s consideration to make their final decision regarding the CUP for the above referenced large water feature and associated waterfall.

**CoWW comments are presented in black text with Babler Farm responses in red.**

1) Please add a new sheet to the SDP package that depicts all current conditions of the CUP. Please see Figure 1 in the attached SDP package.

2) Please provide an overall Title Sheet that provides the information on the attached checklist. Not all checklist items could be demonstrated on one sheet. Pertinent figures were updated with checklist request requests, and all checklist requests were made. Please refer to Figures 1 through 5 in the attached SDP package.

3) Please show, and provide, a detailed description of pre-treatment improvements at the head waters of the large water feature. These improvement levels must reflect current Metropolitan St. Louis Sewer District (MSD) standards for pre-treatment of runoff entering the large water feature. Erosion and sediment control (E&SC) measures in the form of straw wattles have been installed at the head waters of the large water feature. This E&SC measure is consistent with MSD standards, per the St Louis County Sediment and Erosion Control Manual (STL S&ECM), p 100. The purpose of these E&SC measures is to intercept sheet flow, reduce flow velocity, remove sediment from the runoff, and reduce soil erosion of the head waters. The straw wattles are prefabricated and installed consistent with best management practices (BMPs), using type 1 staking and butt joints. Please refer to Attachment A of the SDP for the STL S&ECM figure demonstrating installation and staking, as well as photos of the installed wattles at the head water of the large water feature.
4) Please provide an on-going maintenance plan for the dam and large water feature.  
**Attachment B** of the SDP package contains the Dam Management and Emergency Action Plan, which contains the on-going maintenance plan for the dam and large water feature. Please refer to the “Inspection Protocol” section of that plan for the on-going maintenance plan components.

5) Please provide an emergency management plan, which will address a potential dam failure.  
Please see **Attachment B** of the attached SDP package.

6) Please provide a detailed description of planned chemical or natural treatment of the large water feature, as set forth in Condition 2(d.), for information and recently set forth by the Planning and Zoning Commission at its meeting on result of the water testing.  
**Condition 2(d.)** states the following:  
*The inclusion and use of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided to treat stormwater runoff entering it, along with the chemical treatment of the water contained therein, to address contaminants from other sources. This chemical treatment option(s) that are to be used for these purposes shall not harm any fish, other aquatic life, or mammals that may come in contact with the water held in the feature, but ensure it maintains an acceptable quality level for the purposes of public health.*

As previously mentioned, straw wattles have been placed around the head waters of the large water feature to filter stormwater runoff, reducing total suspended solids. Should some significant rain event occur to cause the water to become overly murky, an appropriate polymer (likely some type of alum) would be applied. Further, copper sulfate pentahydrate (a commonly and commercially available pond cleaning agent) will be kept on hand to periodically condition and treat the water in the large water feature, as well.

7) Please add/show all new improvements, particularly the waterfall structure and all other buildings and/or structures situated on the subject property.  
Please refer to **Figure 1** in the attached SDP package.

8) Please show access improvements from the terminus of Laurey Lane through the subject lot.  
Please refer to **Figure 1** in the attached SDP package.

9) Please add to Sheet 4.of 4 (ALTA/ACSM Land Title Survey) notes regarding the size of the large water feature, the size of the large water feature in terms of overall gallons of storage, the depth of the large water feature, and the height of the dam.  
Please refer to **Figure 2** of the attached SDP Package.

10) Please dimension the waterfall structure, specifically the total width and length.  
Please refer to **Figure 1** of the attached SDP Package.

11) Please provide details on the pumps and related piping system, as part of this single submittal package. Along with the requested plan depiction, provide manufacturer’s catalog cut sheets for the in-place equipment.  
Please refer to **Figure 3** of the attached SDP package for the plan depiction of the waterfall
structure design details. Further, please refer to Attachment C for the cut sheets for the in-place equipment being utilized.

12) Please add to the Channel Cross-Section Detail a note that indicates that its depth varies, as constructed, unless such is not the case.
    Please refer to Figure 3 of the attached SDP Package.

13) Please provide manufacturers' catalog cut sheets for the fountain.
    Please refer to Attachment C for the cut sheets for the in-place equipment being utilized.

14) Please indicate compliance to Missouri Department of Natural Resources (MDNR) requirements and standards for the design, engineering, and on-going maintenance of the dam. Including inspection frequencies and criteria.
    To the best of my knowledge, the standards for the design, engineering, and on-going maintenance (including inspection frequencies and criteria) of the dam comply with applicable MDNR requirements.

15) Please indicate on Sheet 4 of 4 the required setback distances for the large water feature from the governing permit – 700 feet (south); 400 feet (west); 40 feet (north); and 450 feet (east) for the large water feature and 100 feet (east) for the waterfall.
    For the large water feature setback distances, please refer to Figure 2 of the attached SDP package; specifically refer to the dark blue dashed lines with distances provided. For the waterfall setback distance, please refer to Figure 1 of the attached SDP package; specifically refer to the yellow dashed line with distance.

16) Please be advised the Department of Public Works is reviewing the dam structure design and overflow structure and related downstream improvements for acceptance or comments.
    Understood.

17) Please provide a five thousand dollar ($5,000.00) bond for inspections/maintenance of the large water feature and dam, if they are not conducted by you, as part of the overall maintenance plan for this large water feature and dam.
    Inspections and maintenance are being conducted by the owner.

18) Please be advised that, once the Site Development Plan (SDP) is acted upon by the Planning and Zoning Commission, the permit will be reviewed in one (1) year timeframe. This review will be before the Planning and Zoning Commission.
    Understood.

Please let me know if there is anything else the Planning and Zoning Commission needs for this matter.

Sincerely,

[Signature]

Tom Roberts/Babler Farms, LLC
ATTACHMENTS
# Table of Contents

**Figure 1**  
Current Conditions, Improvements, & Property Layout

**Figure 2**  
Babler Farm Survey & Setbacks (Sheet 4 of 4 of the ALTA/ACSM Land Title Survey, with additional notes)

**Figure 3**  
Large Water Feature & Waterfall Design Details

**Figure 4**  
Pond – Waterfall Layout and Elevation Detail

**Figure 5**  
Topographic Map for the Pond and Surrounding Area

**Attachment A**  
Erosion Control for Head Waters of Large Water Feature
  - STL S&EC Manual, page 100
  - Site Photos of S&EC Measures

**Attachment B**  
Dam Management and Emergency Action Plan

**Attachment C**  
Manufacturers’ Catalog Cut Sheets for All In-Place Equipment
ATTACHMENT A

Erosion Control for Head Waters of Large Water Feature:

STL S&EC Manual, page 100
Site Photos of S&EC Measures
FIBER ROLL SECTION & STAKING
(TYPE 2 & TYPE 3)

Notice: Construct a "U"-shaped at each end of a continuous run of fiber rolls or wattles, by turning the end of the roll uphill, to prevent storm water runoff and rolls from flowing around the ends. When water behind the roll ponded up to a level with the top of the roll.

STAKING WITH STAGGERED JOINTS
(TYPE 2)

STAKING WITH BUTT JOINTS
(TYPE 3)

GENERAL NOTES

1. Do not scale drawing, follow dimensions.
2. Row spacing for slope installations should be determined by site conditions such as slope gradient and soil type (see Table 1 for row spacing).
3. Installations as shown above are designed for slopes of 1:10 and steeper.
4. Nailing fiber rolls or outer cover of rolls must be constructed of photodegradable or biodegradable materials.
5. Fiber Rolls and Wattles shall contain straw, flax, coconut fiber (rope), rice straw or aspen excelsior. In a tight knitted roll, specifically designed for removal of sediments from storm water runoff, fill material must be biodegradable and contain no chemical additives.
6. Fiber Rolls or Wattles may be weighted for use around streams from internal roll weights or by placing a weight, such as a concrete block on the downstream side of the roll. Weight must not be placed on top of the roll, smearing or flattening the roll.
7. Follow the roll manufacturer's instructions and recommendations for the sizing, installation, and maintenance of fiber rolls or wattles.

INSTALLATION AND SPACING
(TYPE 2 & TYPE 3 STAKING)
ATTACHMENT B

Dam Management and Emergency Action Plan
Dam Management and Emergency Action Plan

Dam Name: Tom’s Dam
St. Louis County, Missouri

SEMA Area C

Reviewed and Updated:
12/12/2017

Tom Roberts
Name of dam owner/operator

12-19-17
Date
Basic Management Protocol

Purpose
The purpose of this Management protocol is to outline methods for inspection and repair to the dam to minimize risk of failure.

Dam/Lake Construction Details
Tom’s Dam was repaired/reconstructed in 2015 to eliminate the leaks from the lake and to provide needed maintenance. As part of this reconstruction process the lake was dredged to remove silt and sediment that was deposited in the lake previously. The lake bottom was then compacted at this time to help prevent future leaks. Areas of the dam that contained poor soil were replaced with clay, leaks were identified and properly repaired, and the dam was brought back to the original contours in shallow compacted lifts.

Inspection Protocol
Inspections will be divided into two classes, major and minor. Major inspection will occur on a semi annual basis in the spring and fall. Prior to a major inspection, areas around the dam and the dam itself will be mowed to allow for better viewing of the dam surface. After mowing has occurred the dam surface will be walked in its entirety and examined for burrowing of insect and/or animals, erosion, and seepage. If any seepage is found it will be immediately recorded and services for dam repair will begin as soon as possible. If burrowing animals or other surface erosion is noted then the source of the soil disturbance will be located and removed. If erosion in any isolated area becomes frequent the area will be checked for seepage and then lined with rock to prevent future erosion. Minor inspections will occur on a monthly basis; these inspections will not require mowing and will be performed along the northern face of the dam. This is the area with the greatest risk of damage should failure occur. Monthly/Minor inspections will be done to look for evidence of the same issues addressed with major inspections, and if these issues are found they will be addressed in the same manner. Contacts for repair services are provided as part of the emergency action plan, however the service providers at the time may change based on availability.
Basic EAP Data

Purpose
The purpose of this EAP is to reduce the risk to human life and minimize property damage during an unusual or emergency event at Tom's Dam.

Notification Procedure
This EAP provides general guidance for recognizing and characterizing an emergency situation occurring at the dam. The dam owner should act quickly to evaluate the emergency situation and then follow the notification procedures according to the corresponding level of emergency.

Potential Impacted Area
In the event of a dam failure released water will be diverted to a pre-existing wet weather creek causing minimal impact to local residents, businesses, roads, and utilities.

Directions to Dam
From: 183 Plaza Dr, Wildwood, MO 63040

Head east on Plaza Dr toward Fountain Pl. turn right toward Main St, turn left onto Main St, then turn left onto Taylor Rd. Turn left onto Historic U.S. 66 W, take the MO-109 exit toward Batherton Rd, and turn right onto MO-109 N. Turn left onto Wild Horse Creek Rd, take the 1st left onto Laury Ln., and destination will be on the left at 500 Laury Ln.
Guidance for Determining the Emergency Level

This information should be used as a general guide for recognizing and characterizing the type of emergency situation occurring at the dam. The dam owner should notify the appropriate emergency contacts based upon the emergency level assigned to each situation.

**Level 1 Emergency - Nonemergency, unusual event, slow to develop**
- Reservoir water surface elevation at emergency spillway crest or spillway is flowing with no active erosion.
- New seepage areas in or near the dam.
- New cracks in the embankment greater than ¼-inch wide without seepage.
- Visual movement/slippage of the embankment slope.
- Instrumentation readings beyond predetermined values.
- Measurable earthquake felt or reported on or within 50 miles of the dam.
- Damage (vandalism/sabotage) to dam or appurtenances with no impacts to the functioning of the dam.
- Modification (vandalism/sabotage) to the dam or appurtenances that could adversely impact the functioning of the dam.

**Level 2 Emergency - Potential dam failure situation, rapidly developing**
- Spillway flowing with active gully erosion.
- Spillway flow that could result in flooding of people downstream, if the reservoir level continues to rise.
- Reservoir level is 1 foot below the top of the dam.
- New seepage areas with cloudy discharge or increasing flow rate.
- Observation of new sinkhole in reservoir area, on embankment or downstream of dam.
- Cracks in the embankment with seepage.
- Earthquake resulting in visible damage to the dam or appurtenances.
- Verified bomb threat that, if carried out, could result in damage to the dam.
- Damage to dam (vandalism/sabotage) or appurtenances that has resulted in seepage flow.

**Level 3 Emergency - Urgent; dam failure imminent or is in progress**
- Spillway flowing with an advancing headcut that is threatening the control section.
- Spillway flow that is flooding people downstream.
- Water from the reservoir is flowing over the top of the dam (not just auxiliary/emergency spillway).
- Seepage that is obviously eroding soil from within the embankment or rapidly increasing in flow rate.
- Rapidly enlarging sinkhole.
- Sudden or rapidly progressing slides of the embankment slopes.
- Earthquake resulting in uncontrolled release of water from the dam.
- Detonated bomb that has resulted in damage to the dam or appurtenances.
- Damage to dam (vandalism/sabotage) or appurtenances that has resulted in uncontrolled water release.
Emergency Level 1 Notifications

Nonemergency, unusual event; slowly developing.

**Dam Operator or Owner**
Tom Roberts
314-835-2888 (Office)
314-799-4400 (Cell)

(1.)

**State Dam Safety Official**
Missouri
Water Resources Center
Robert Clay
573-368-2175 (Office)
573-341-5761 (Home)
573-368-6191 (Cell)

(2.)

**Dam Operator’s Technical Reps. (if applicable)**
Owner’s engineer
*Adam Peetz*
314-616-0279 (Cell)

Note:
1., 2., etc., denotes call sequence

Legend:
Calls by operator/owner _______
Second level calls - - - - -

See *Emergency Services Contacts* sheet for contact information about back-ups to the persons shown above and other emergency personnel.
Emergency Level 2 Notifications

Emergency event, potential dam failure situation; rapidly developing.

- **Dam Operator or Owner**
  - Tom Roberts
  - 314-835-2888 (Office)
  - 314-799-4400 (Cell)

- **911**
  - County Emergency Director/Sheriff
  - Jim Buckles
  - 314-615-4724 (office)

- **Local Emergency Management Dispatcher**

- **State Dam Safety Official**
  - Missouri Water Resources Center
  - Robert Clay
  - 573-368-2175 (Office)
  - 573-341-5761 (Home)
  - 573-368-6191 (Cell)

- **St. Louis County Amateur Radio Emergency Service**
  - Steve Wooten
  - kc0qmu@yahoo.com

- **Missouri Highway Patrol Dispatcher**

- **Local Law Enforcement/Fire Protection Agency Dispatcher**

- **National Weather Service**
  - 636-447-1876

- **Dam Operator’s Technical Reps. (if applicable)**
  - Owner’s engineer
  - Adam Peetz
  - 314-616-0279 (Cell)

---

**Note:**
1., 2., etc., denotes call sequence

**Legend:**
Calls by operator/owner _______
Second level calls - - - - -

See *Emergency Services Contacts* sheet for contact information about back-ups to the persons shown above and other emergency personnel.
Emergency Level 3 Notifications
Urgent event, dam failure appears imminent or is in progress.

- Dam Operator or Owner
  Tom Roberts
  314-835-2888 (Office)
  314-799-4400 (Cell)

1. 911
   County Emergency Director/Sheriff
   Jim Buckles
   314-615-4724 (office)

2. State Dam Safety Official
   Missouri Water Resources Center
   Robert Clay
   573-368-2175 (Office)
   573-341-5761 (Home)
   573-368-6191 (Cell)

3. Dam Operator’s Technical Reps. (if applicable)
   Owner’s engineer
   Adam Peetz
   314-616-0279 (Cell)

- Local Emergency Management Dispatcher
- Missouri Highway Patrol Dispatcher
- Local Law Enforcement/Fire Protection Agency Dispatcher

Note:
1., 2., etc., denotes call sequence

Legend:
Calls by operator/owner
Second level calls

See Emergency Services Contacts sheet for contact information for back-ups to the persons shown above and other emergency personnel.
# Emergency Services Contacts

<table>
<thead>
<tr>
<th>Agency / Organization</th>
<th>Principal Contact</th>
<th>Address</th>
<th>Office Phone No. with Area Code</th>
<th>Alternate Telephone Numbers</th>
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<tbody>
<tr>
<td>St. Louis County Sheriff</td>
<td>Jim Buckles</td>
<td>7990 Ceresole Ave, 5th Flr Clayton, MO 63105</td>
<td>314-615-4724</td>
<td></td>
</tr>
<tr>
<td>Owner/Representative of Tom’s Dam</td>
<td>Tom Roberts</td>
<td>500 Laurey Ln</td>
<td>314-835-2888</td>
<td>314-799-4400 (C)</td>
</tr>
<tr>
<td>County Emergency Management Director</td>
<td>Michael Smiley</td>
<td>1150 Hana Road Ballwin, MO 63021</td>
<td>314-615-9500</td>
<td></td>
</tr>
<tr>
<td>Wildwood Fire Department</td>
<td>Metro West Fire Protection Dist.</td>
<td>Po Box 310 Wildwood, MO 63040</td>
<td>636-458-2100</td>
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<tr>
<td>St. Louis County Police</td>
<td>Wildwood Precinct</td>
<td>16860 Main St. Wildwood, MO 63040</td>
<td>636-458-9194</td>
<td></td>
</tr>
<tr>
<td>Missouri Highway Patrol</td>
<td>Troop C</td>
<td>891 Technology Dr Weldon Spring, MO 63304</td>
<td>636-300-2800</td>
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</tr>
<tr>
<td>St. Louis County Dept of Highways &amp; Traffic</td>
<td>Contact Name, Supervisor</td>
<td>1020 N. Lindbergh Blvd St. Louis, MO 63132</td>
<td>314-615-8538</td>
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<tr>
<td>Water Resources Center Dam and Reservoir Safety Program</td>
<td>Robert Clay, Chief Engineer</td>
<td>111 Fairgrounds Rd. Rolla, MO 65401</td>
<td>573-368-2175</td>
<td>573-341-5761 (H) 573-368-6191 (C)</td>
</tr>
<tr>
<td>Department of Natural Resources Emergency Response</td>
<td>Duty Officer EER</td>
<td>P.O. Box 176 Jefferson City, MO 65102</td>
<td>24 HOUR NO: 573-634-2436</td>
<td>573-526-3380 (Brian Allen, Chief, EER)</td>
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<tr>
<td>SEMA Duty Officer</td>
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<td>573-751-2748</td>
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<td>National Weather Service</td>
<td>Jim Kramper</td>
<td>St. Charles, MO</td>
<td>636-447-1876</td>
<td>1-800-852-7497 636-447-1769 (Fax)</td>
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<tr>
<td>National Weather Service</td>
<td>Andy Bailey</td>
<td>Kansas City, MO</td>
<td>816-540-5417</td>
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<td>Steve Rummel</td>
<td>Springfield, MO</td>
<td>417-863-1456</td>
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<td>Ricky Shanklin</td>
<td>Paducah, KY</td>
<td>270-744-6440</td>
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<td>Missouri Department of Transportation</td>
<td>Emergency Operation Center 24-hour cell no.</td>
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<td>573-522-9503</td>
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<tr>
<td>Missouri Department of Transportation</td>
<td>County Shed Jason Bell</td>
<td></td>
<td>636-938-5960</td>
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<tr>
<td>Natural Resources Conservation Service (For NRCS Dams)</td>
<td>Dick Purcell, State Engineer</td>
<td>601 Bus. Loop 70 W.Columbia, MO 65203</td>
<td>573-876-0910</td>
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## Resources Available

Locally available resources include: (if not available please note)

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<th>Sand and Gravel Supply</th>
<th>Ready-mix Concrete Supply</th>
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<td>Owner provided</td>
<td>Bussen Quarry – Antire Plant</td>
<td>Breckenridge Material Co</td>
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<td>6800 Bussen Rd</td>
<td>2829 Breckenridge Industrial Ct</td>
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<td></td>
<td>Bureka, MO 63025</td>
<td>St Louis, MO 63144</td>
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<td>636) 938-4910</td>
<td>314-962-1234</td>
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<tr>
<th>Pumps</th>
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<th>Sand Bags</th>
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<tr>
<td>K&amp;K Supply</td>
<td>American Underwater Contractors</td>
<td>Bussen Quarry – Antire Plant</td>
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<tr>
<td>535 North Highway Dr.</td>
<td>3426 Forester Rd</td>
<td>6800 Bussen Rd</td>
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<tr>
<td>Fenton, MO 63026</td>
<td>Hazelwood, MO 63044</td>
<td>Bureka, MO 63025</td>
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<tr>
<td>636-349-1141</td>
<td>314-739-5235</td>
<td>636-938-4910</td>
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Appendix A

Unusual or Emergency Event Log
(To be completed during the emergency)

Dam name: 

County: 

When and how was the event detected?

Weather conditions:

General description of the emergency situation:

Emergency level determination: 

Made by:

Actions and Event Progression

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<th>Time</th>
<th>Action/event progression</th>
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Appendix B

Glossary

Abutment The part of the valley side against which the dam is constructed. The left and right abutments of dams are defined with the observer looking downstream from the dam.

Appurtenances Structures incident to or annexed to dams essential to the proper operation, maintenance or functioning of the dam. This includes such structures as spillways, low level outlet works and water conduits, such as tunnels, pipelines or penstocks, either through a dam or its abutments.

Breach An opening through the dam that allows draining of the reservoir. A controlled breach is an intentionally constructed opening. An uncontrolled breach is an unintended failure of the dam.

Control section An usually level segment in the profile of an open channel spillway above which water in the reservoir discharges through the spillway.

Dam An artificial barrier generally constructed across a watercourse for the purpose of impounding or diverting water.

Emergency spillway The appurtenant structure that provides the controlled conveyance of excess water through, over, or around the dam.

Instrumentation An arrangement of devices installed into or near dams that provide measurements to evaluate the structural behavior and other performance parameters of the dam and spillway structures. Examples include seepage measuring weirs, piezometers, inclinometers and survey monuments.

Low level outlet works An appurtenant structure, usually consisting of a pipe through the embankment or principal spillway structure equipped with a valve, whose purpose is to allow lowering the lake level.

Principal spillway The appurtenant structure that conveys normal inflow through or around the embankment.

Reservoir The body of water impounded or potentially impounded by the dam.

Seepage The natural movement of water through the embankment, foundation, or abutment of the dam.
### Appendix C

**Record of Holders of Control Copies of this EAP**

<table>
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<th>Copy Number</th>
<th>Organization</th>
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<th>E-mail Address</th>
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<tbody>
<tr>
<td>1</td>
<td>Tom Roberts</td>
<td>Tom Roberts</td>
<td><a href="mailto:troberts@cdcco.com">troberts@cdcco.com</a></td>
</tr>
<tr>
<td>2</td>
<td>St. Louis County Emergency Management</td>
<td>Mike Smiley</td>
<td><a href="mailto:msmiley@stlouisco.com">msmiley@stlouisco.com</a></td>
</tr>
<tr>
<td>3</td>
<td>Missouri Department of Natural Resources Dam Safety Program and address</td>
<td>Bob Clay</td>
<td><a href="mailto:bob.clay@dnr.mo.gov">bob.clay@dnr.mo.gov</a></td>
</tr>
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### Record of Revisions and Updates Made to EAP

| Revision Number | Date | Revisions made          | By whom |
ATTACHMENT C

Manufacturers' Catalog Cut Sheets for All In-Place Equipment
Eagle Fountain Works, Inc.
4751 E Moody Blvd Bldg 7
Bunnell, FL 32174

EFL-190 Lighted Fountain Specification Sheet

The EFL-190 fountain is for retention ponds/lakes. The minimum water depth required for proper operation is 42". The fountain spray height is approx 15’H X 15’W in a 3 tier or trumpet pattern. The following items are standard with every fountain:

Heavy Duty PVC vacuum formed float (not injection molded) is very strong and will not crack from the sun. The float body cavity is filled with polystyrene for floatation. The lighting system is built into the float.

We use a 3/4 HP stainless steel pump on the EFL190 fountain rated at 115 volts, 1 phase, 5 FLA (also available in 208/230 volts). The pumps have 3 sets of seals including 2 internal sets of silicon carbide face seals and an outboard set of lip seals. A stainless mesh filter cage is included which pre-filters water and prevents clogging of the spray heads especially in retention pond applications. All piping is 1-1/2" schedule 40 PVC.

The EFL-190 fountain cycle is fully automatic with a high quality Intermatic T-101P or T-1261P, 24 hr. system control timer. On 230volt models we use the Intermatic T104 timer. The stainless lighting control panel has GFCI protection on 115 volt units as requested. Timer service whip plugs into an 115volt or 230volt GFCI receptacle. The timer can be hardwired and locked if that option is chosen at time of ordering. All components are outdoor rated, NEMA 4 and weatherproof. Lights are machined brass fixtures with MR16 LED bulbs.

Our low voltage lighting system (12volt) is powered by a 115volt or 208/230volt transformer built into the stainless steel lighting control panel. Lights pull 1.5 amps and with both the pump and lights running the 115volt system is rated @ 6.5FLA.

100’ #12 and #14 SJTOW water rated service cable is standard. Additional service cable is available up to 250’ max. A 15’ nylon anchor rope is included with the fountain. Customer to supply anchor, typically 3 red bricks available from a hardware store works fine.

The fountain with lights and pump operating pulls 6.5amps FLA at 115volts or 3.5 amps FLA at 230volts. We Include 3 different spray head patterns for the EFL-190 fountain package.
Product Information Packet

L3711T

10HP, 3450RPM, 1PH, 60HZ, 215T, 3744LC, TEFC, F
<table>
<thead>
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<th>Part Detail</th>
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<td>Status:</td>
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<td>TEFC</td>
<td>Mfg Plant:</td>
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<td>Eff. Date:</td>
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<tr>
<td>Replaced By:</td>
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</table>
### Nameplate NP1256L

| CAT.NO. | L3711T |
| SPEC.   | 37M230W578 |
| HP      | 10 |
| VOLTS   | 230 |
| AMP     | 40 |
| RPM     | 3450 |
| FRAME   | 215T |
| HZ      | 80 |
| PH      | 1 |
| SER.F.  | 1.00 |
| CODE    | H |
| DES     | L |
| CLASS   | F |
| NEMA-NOM-EFF | 82 |
| CC      | 40C AMB-CONT |
| DE      | 8307 |
| ODE     | 8206 |
| ENCL    | TEFC |
| SN      | |

**RATING**

- **CC**: 40C AMB-CONT
- **DE**: 8307
- **ODE**: 8206
- **ENCL**: TEFC
- **SN**: USABLE AT 208V

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Page 3 of 10
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<th>Part Number</th>
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<td>OC3030F11SP</td>
<td>CYL OIL CAP 30MFD/370V</td>
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<td>EC1216C05SP</td>
<td>ELEC CAP, 216-259 MFD, 250V, 2.06D X 4.</td>
<td>3.000 EA</td>
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<td>HW3200A01</td>
<td>3/8-18X3/4 I-BLT WELDED F/S</td>
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<td>HW3001B01</td>
<td>BRASS CUP WASHER, FOR #8 SCREW</td>
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<td>HW4500A01</td>
<td>1641B(ALEMITE)400 UNIV, GREASE FITT</td>
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<td>13XF0832A08</td>
<td>8-32 X .50 PAN HD,SLTD, TYPE F SCREW, ZIN</td>
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<tr>
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## AC Induction Motor Performance Data

Record # 11882 - Typical performance - not guaranteed values

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<td>Rating - Duty</td>
<td>40C AMB-CONT</td>
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</table>

### 230 V, 60 Hz:

- **Single Voltage Motor**
  - Full Load Torque: 15 LB-FT
  - Start Configuration: Direct on line
  - Breakdown Torque: 44 LB-FT
  - Pull-up Torque: 33 LB-FT
  - Locked-rotor Torque: 42 LB-FT
  - Starting Current: 284 A
  - No-load Current: 4.3 A
  - Line-line Res. @ 25°C: 0.174 Ω A Ph, 0.681 Ω B Ph
  - Temp. Rise @ Rated Load: 102°C

### Load Characteristics 230 V, 60 Hz, 10 HP

<table>
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<th>% of Rated Load</th>
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<td>Efficiency</td>
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<td>Line amperes</td>
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<td>29.5</td>
<td>39</td>
<td>49.4</td>
<td>61.1</td>
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</tbody>
</table>
Performance Graph at 230V, 60Hz, 10.0HP Typical performance - Not guaranteed values

Baldor Electric Company

Typical performance - not guaranteed values.

10 HP, 1PH, 60HZ, 3450 RPM, 230V, 3744LC
TORQUES (LBF-FT): PD=44 FU=13 LR=42 ULA=284

WINDING # 37WGW578
NOTES:
1. STANDARD ROTATION IS CCW FACING END OPPOSITE SHAFT EXTENSION.
2. OPTIONAL THERMOSTAT IS PROVIDED WHEN SPECIFIED.
3. MULTIPLE CAPACITORS ARE CONNECTED IN PARALLEL UNLESS OTHERWISE SPECIFIED.
4. OPTIONAL OIL CAPACITOR IS PROVIDED WHEN SPECIFIED.
5. CAPACITORS MAY BE SEPARATELY MOUNTED.
6. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.
February 6, 2020

Tom Roberts
550 Laurey Lane
Wildwood, Missouri 63005

Re: 2nd Review Comments on the Large Water Feature and Associated Waterfall – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District.

Dear Mr. Roberts:

The Department has completed its second review of the Site Development Plan (SDP) package for the large water feature and associated waterfall that is located on the approximately sixty (60) acre site that is situated at the terminus of Laurey Lane. The review of this package focused on the compliance of the submitted plan sheets to the site-specific permit that governs this location, the regulations of the underlying zoning district designation (NU Non-Urban Residence District), the Department of Planning’s January 2nd Comment Letter, and the City of Wildwood’s Design Criteria Handbook. The results of this review indicate several issues that preclude the Department from submitting the plan sheets to the Planning and Zoning Commission for its consideration and final action. These issues are identified below for your review:

1. Please add a new sheet to the Site Development Plan (SDP) package that depicts all current conditions of the Conditional Use Permit (CUP).
2. Please, on Figure #1 Sheet, also identify the property boundaries as the extent of the Conditional Use Permit (CUP) that was granted by the Planning and Zoning Commission for the approximately sixty (60) acre site.
3. Please, on Figure #2 Sheet, identify the setback lines with the distances associated with each of them; in this case, thirty (30) feet, except at the terminus of Laurey Lane, which must reflect a small squared area of fifty (50) feet, being reflective of its front yard area.
4. Please, on Figure #3 Sheet, identify on the Channel Cross Section Diagram the Max. Depth as feet (0.11').
5. Please, on Figure #3 Sheet, provide the depth of the intake pipe within the large water feature that is used to feed the waterfall structure. The Department understands the normal pool elevation of this large water feature fluctuates, but a base depth must have been chosen to ensure the intake pipe would not be exposed, even in dry/drought conditions.
6. Please, on Figure #4 Sheet, provide the engineering calculations and supporting documentation for the outfall structure (Pond Drain) relative to the 6" thick reinforced concrete walls and floor.
7. Please, one Figure #4 Sheet, provide the engineering calculations and supporting documentation for the choice of the 36" and 24" culvert pipes that were chosen for installation, as part of this structure.

8. Please indicate on Sheet 4 of 4 the required setback distances for the large water feature from the governing permit – 700 feet (south); 400 feet (west); 40 feet (north); and 450 feet (east) for the large water feature and 100 feet (east) for the waterfall (indicated).

9. Please be advised, on Attachment A, the use of fiber rolls and wattles, for the pre-treatment option is not consistent with the intent of the conditions in the permit for this requirement of runoff into the lake. The condition notes the following for this pre-treatment requirement: "the property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood’s Department of Public Works."

10. Please be advised the Basic Management Protocol addresses many of the steps sought by the City, but it does not achieve the following considerations: the engineering report, geotechnical report, and/or soils report used, when the large water feature and dam were reconstructed, and the maintenance that is planned for the overflow structure and associated piping. These items, as noted above, should be provided or added to the plan to address this comment.

11. Please be advised the management protocol also needs to address the on-going maintenance of the pre-treatment improvements and the water quality of the large water feature as well.

12. Please advise if a vegetative buffer is planned along the perimeter of the large water feature. These types of vegetative buffers are generally used to filter runoff entering the body of water from sheet flow and also provide habitat and shade for fish and wildlife in the area.

13. Please add to the emergency action plan the statement the St. Louis County Police Department – Wildwood Precinct will be contacted in a Level 2 and Level 3 emergency situation. The contact will be Captain Jim Mundell at (636) 458-9194.

14. Please provide a list of steps that address the following, which would be part of the emergency action plan: an inspection determines a Level 1, 2, or 3 emergency and, thereafter, the property owner will contact the list of agencies and others, etc.

15. Please be advised, the Department appreciates the acknowledgement the large water feature has been constructed to Missouri Department of Natural Resource standards, but that does not suffice to meet the language of the condition in the permit, which reads as follows in this regard: "the large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design, engineering, and on-going maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission, as part of the Site Development Plan process, and as directed by the Department of Public Works." Accordingly, more detailed responses to the standards set forth in the attached checklist prepared by the Missouri Department of Natural Resources shall be provided.
16. The Department appreciates the description that you have provided relative to the treatment of the water in the lake feature, but it is not as detailed as necessary, based upon the discussions that have been held by the Planning and Zoning Commission over the course of the last several months. As you know, from the water testing completed of the large lake feature, certain levels of minerals and mycosistins exist in it and do cause concerns regarding public health. These concerns dictate to the City the need to have a prescribed and complete twelve (12) month treatment program for the large water feature (the source of the water for the waterfall), which should include, but not limited to, the following steps or procedures: (a) a monthly schedule, i.e. January through December, that identifies the frequency of treatment and the days of the month, when planned; (b) chemicals or other materials that are planned to be used for treatment purposes and steps associated with them; (c) identification of the issues that may arise with the large water feature that would prompt extra steps in terms of treatment actions, i.e. algae blooms, (d) summary of costs on a yearly basis, which are not to exceed one thousand dollars ($1,000.00) per year; and (e) any other considerations that are planned to ensure the lake provides water to the waterfall structure that has been treated to minimize or eliminate mycosistins and any other harmful concentrations of minerals. For purposes of review, the specific language of the condition from the permit is provided herein: "the maintenance of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided of the stormwater runoff entering it, along with the chemical treatment of the water contained therein to address contaminants from other sources. This chemical treatment option(s) used shall not harm any fish, aquatic life, or mammals that may come in contact with the water in the feature, but ensure it maintains an acceptable quality level for the purposes of public health purposes;" and does allow for these steps or procedures to be requested by the City for inclusion in this regard.

17. Please be advised the Department of Public Works will continue its review of the dam structure design and overflow structure and related downstream improvements for acceptance, once the items noted above are provided to it.

18. Please be advised that, once the Site Development Plan (SDP) is acted upon by the Planning and Zoning Commission, the permit will be reviewed in a one (1) year timeframe. This review will be before the Planning and Zoning Commission.

Please review the provided comments and address the needed changes to the plan sheets for further City review. If you should have any questions or comments, or need my assistance in this regard, please feel free to contact me at (536) 458-0440. Thank you in advance for your anticipated cooperation in this regard.

Respectfully submitted,

CITY OF WILDWOOD

Joe Vujnic, Director
Department of Planning
Cc: The Honorable James R. Bowlin, Mayor  
Council Members Erost and Gragnani, Ward One  
Sam Anselm, City Administrator  
John A. Young, City Attorney  
Kathy Arnett, Assistant Director of Planning and Parks  
Travis Newberry, Planner
MISSOURI DAM AND RESERVOIR SAFETY STAFF CHECKLIST FOR
EVALUATING CONSTRUCTION PERMIT APPLICATIONS FOR
MODIFICATIONS TO EXISTING EARTH DAMS

II. DESIGN REPORT CONSIDERATIONS

If modifications are to the existing spillway facilities or appurtenances, see Parts A, B, C, F, and G. If modifications involve raising the top of dam, changing the water storage elevation or making other geotechnical changes, see parts A, D, E, F, and G.

A. Description of Proposed Changes

1. Appurtenant Structures.
   a. Description of modifications to the principal and emergency spillways.
   b. Description of modifications to the water withdrawal works, drawdown works, and internal drain outlets.
   c. Description of modifications to the discharge channels.
   d. Description of blasting that will be performed within two (2) miles of the dam.
   e. Describe how the reservoir will be drawn while modifications are constructed.

2. Dam and Foundation
   a. Description of the modification to the height of the dam
   b. Description of modifications to the slopes and dimensions of the dam.
   c. Description of modifications to the internal drainage system.
   d. Description of modifications of the permeability of the dam and foundation by grouting.

B. Determination of an Environmental Class For Each Dam and Reservoir.

1. For Class I (Go to Part II - C.)
2. For Class II and III only

a) If a sufficient number of homes are located downstream of a dam, a breach analysis is required to justify a Class II or Class III downstream environmental zone. The following information should be submitted:

1) Topographic map showing: (The most recent USGS Topographic map is minimum acceptable).
   a) Location of dam and reservoir.
   b) Location of stream cross sections used in breach analysis.
   c) Flood plain as derived from breach analysis.
   d) Verified locations of permanent dwellings, campgrounds or industrial buildings within the dam breach flood plain.

2) Dam failure criteria:
   a) Final breach configuration (bottom width, top width, size slopes).
   b) Assumed time of failure.
   c) Description of the methodology used and the computations performed in the breach analysis.

3) Stream profile showing:
   a) Water surface elevation created by failure of the dam with the reservoir at the emergency spillway crest elevation.

(1) Stream cross section locations.

b. To show that a structure located in the dam breach flood plain is not inundated by the dam breach flood:

1) Replace cross-section data derived from topographic maps with field survey cross-sections.

2) Compare surveyed first floor elevation of structure to the computed water surface elevation for the dam breach flood.

c. In a situation where a dam is in very remote location where there are not enough buildings or other structures located downstream of the dam to justify a class I environmental zone, another environmental class may be
used without having to perform a detailed dam breach analysis. Engineers are advised to obtain the approval of the Dam and Reservoir Safety staff before using this option.

C. Evaluation of Spillway Capacity

1. The following data must be included in the application report:
   a. Drainage area (square miles or acres) shown on an up-to-date USGS topo map.
   b. SCS Curve Number for watershed draining into lake.
   c. Time of concentration for runoff draining into reservoir. Sufficient documentation should be provided to derive the value used.
   d. Storage (acre-feet) vs. elevation (feet) data for reservoir.

      This information should be provided for elevations ranging from the bottom of the reservoir to the final elevation of the dam. Surface area (acres) vs elevation data should also be submitted in support of this information.
   e. Minimum elevation of top of dam exclusive of the spillway(s).

      If the top of dam is not level, a profile of the top of dam is required.
   f. Height of dam (measured in accordance with 10 CSR 22-1.020 (13)).
   g. Length of Dam.
   h. Discharge (cubic feet per second) vs. elevation (feet) data for spillway(s) with backup computations.
   i. The required critical design in-flow hydrograph to the reservoir as determined by taking the appropriate percentage of the PMP as shown in Table 5, 10 CSR 22-3.020.
   j. The probable maximum precipitation values from Hydrometerological Report No. 51, the duration of the rainfall, and the rainfall distribution pattern used to compute the hydrograph must also be submitted. Sufficient information should be submitted to derive the hydrograph.
   k. The required design storm out-flow hydrograph derived by reservoir routing through the required design storm in-flow hydrograph through the spillway.

2. Other items that must be addressed:
   a. The possibility of submergence of the spillway control(s) by backwater conditions in the spillway discharge channel.
b. The ability of the spillway and discharge channel to withstand the exit velocity expected through them during the required design storm.

c. The alignment of the spillway discharge channel with respect to the dam and what effect, if any, erosion or overtopping of the discharge channel will have on the dam.

C. Evaluation of Slope Stability

1. General design considerations
   a. Description of drilling and backhoe exploration
   b. Test results
   c. Physical and mechanical properties of construction materials

2. Stability analysis for loading conditions Table (10 CSR 22-3.020)
   a. Identification of all assumptions
   b. Tabulation of the minimum computed factors of safety
   c. Graphical presentation of the maximum dam section showing the configuration of the embankment, foundation and core trench including:
      1) The failure surfaces associated with the minimum factors of safety listed above
      2) The phreatic surface in the dam and foundation with the appropriate reservoir levels
      3) The physical and mechanical properties of the various zones of the embankment and foundation

3. Seismic Analysis (see CSR 22-3.020 (5) and (6))

D. Design of Modifications to the Internal Drain System

1. Filter design criteria used
2. Size gradation for filters and drains
3. Permeability and design capacity of drains

E. Design of New Concrete Structures
1. Discussion of procedures used to design concrete structures

2. Discuss foundation analysis for these structures

F. Description of General Work Plan

1. Sequence of work

2. Monitoring of embankment and seepage

3. Emergency action plan

4. Construction start date and time to complete

5. Location and amount of borrow materials, if required

III. CONSTRUCTION DOCUMENTS

A. Drawings

1. Certification by experienced Professional Engineer as required by 10 CSR 22-3.040 (1) (A) 13C.

2. Certification by owner as required by 10 CSR 22-3.040 (1) (A) 13C.

3. Site plans showing the location of the dam and all proposed modifications.

4. Plans, profiles, sections, and details sufficient to construct the modifications to the dam.

B. Specifications (Include only those sections applicable to the modifications being proposed)

1. Location of and protective measures used in conjunction with all drain lines, sewer lines, utilities, or other structures that pass through or under the dam.

2. Fill Operation

3. Testing and inspection
   
   a. Compaction of earth fill
   
   b. Density tests
   
   c. Structures

4. Rip-rap
5. Filter material
6. Pipe construction
7. Concrete
8. Seeding and mulching
9. Record keeping and monitoring
PETITIONER'S RESPONSE TO 2ND REVIEW LETTER
February 6, 2020

Tom Roberts
550 Laurey Lane
Wildwood, Missouri 63005

Re: 2nd Review Comments on the Large Water Feature and Associated Waterfall – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District.

Dear Mr. Roberts:

The Department has completed its second review of the Site Development Plan (SDP) package for the large water feature and associated waterfall that is located on the approximately sixty (60) acre site that is situated at the terminus of Laurey Lane. The review of this package focused on the compliance of the submitted plan sheets to the site-specific permit that governs this location, the regulations of the underlying zoning district designation (NU Non-Urban Residence District), the Department of Planning’s January 2nd Comment Letter, and the City of Wildwood’s Design Criteria Handbook. The results of this review indicate several issues that preclude the Department from submitting the plan sheets to the Planning and Zoning Commission for its consideration and final action. These issues are identified below for your review:

1. Please add a new sheet to the Site Development Plan (SDP) package that depicts all current conditions of the Conditional Use Permit (CUP). This was provided in our response letter to you on January 16, 2020 as Figure 1 in the SDP package.

2. Please, on Figure #1 Sheet, also identify the property boundaries as the extent of the Conditional Use Permit (CUP) that was granted by the Planning and Zoning Commission for the approximately sixty (60) acre site. Figure #1 has been revised to include the requested property boundary line.

3. Please, on Figure #2 Sheet, identify the setback lines with the distances associated with each of them; in this case, thirty (30) feet, except at the terminus of Laurey Lane, which must reflect a small squared area of fifty (50) feet, being reflective of its front yard area. Will not be provided as the requested information is unclear. Figure #1 identifies the 50’ setback.

4. Please, on Figure #3 Sheet, identify on the Channel Cross Section Diagram the Max. Depth as feet (0.11'). Figure #2 has been revised to include the max depth as (0.11').

5. Please, on Figure #3 Sheet, provide the depth of the intake pipe within the large water feature that is used to feed the waterfall structure. The Department understands the normal pool elevation of this large water feature fluctuates, but a base depth must have been chosen to ensure the intake pipe would not be exposed, even in dry/drought conditions. Figure #2 has been revised to identify the intake pipe depth as 4’.

6. Please, on Figure #4 Sheet, provide the engineering calculations and supporting documentation for the outfall structure (Pond Drain) relative to the 6” thick reinforced concrete walls and floor. Will not be provided as this is not relevant and has no bearing to the waterfall.
7. Please, one Figure #4 Sheet, provide the engineering calculations and supporting documentation for the choice of the 36" and 24" culvert pipes that were chosen for installation, as part of this structure. Will not be provided as this is not relevant and has no bearing to the waterfall.

1. Please indicate on Sheet 4 of 4 the required setback distances for the large water feature from the governing permit – 700 feet (south); 400 feet (west); 40 feet (north); and 450 feet (east) for the large water feature and 100 feet (east) for the waterfall (indicated). Will not be provided as the requested setback distances are unclear and/or inaccurate (450 feet east for the large water feature and 100 feet east for the waterfall).

2. Please be advised, on Attachment A, the use of fiber rolls and wattles, for the pre-treatment option is not consistent with the intent of the conditions in the permit for this requirement of runoff into the lake. The condition notes the following for this pre-treatment requirement: "the property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood's Department of Public Works". "This is not applicable as there is no foundation, but here is what I have done. Erosion and sediment control (E&SC) measures in the form of straw wattles have been installed at the head waters of the large water feature. This E&SC measure is consistent with MSD standards, per the St Louis County Sediment and Erosion Control Manual (STL S&ECM), page 100. The purpose of these E&SC measures is to intercept sheet flow, reduce flow velocity, remove sediment from the runoff, and reduce soil erosion of the head waters. The straw wattles are prefabricated and installed consistent with best management practices (BMPs), using type 1 staking and butt joints. Please refer to Attachment A of the SDP for the STL S&ECM figure demonstrating installation and staking, as well as photos of the installed wattles at the head water of the large water feature.

3. Please be advised the Basic Management Protocol addresses many of the steps sought by the City, but it does not achieve the following considerations: the engineering report, geotechnical report, and/or soils report used, when the large water feature and dam were reconstructed, and the maintenance that is planned for the overflow structure and associated piping. These items, as noted above, should be provided or added to the plan to address this comment. These reports were all supplied in the original and previous submissions. The dam was never reconstructed, raised or altered - just a small leak was repaired. As the piping is just a gravity fed pipe for the runoff, the only maintenance required is to keep the inlet clear of debris, which is checked on a regular basis and completed.

4. Please be advised the management protocol also needs to address the on-going maintenance of the pre-treatment improvements and the water quality of the large water feature as well. The straw wattles are checked on a regular basis and maintained.

5. Please advise if a vegetative buffer is planned along the perimeter of the large water feature. These types of vegetative buffers are generally used to filter runoff entering the body of water from sheet flow and also provide habitat and shade for fish and wildlife in the area. This area has already been seeded and strawed to establish a vegetative buffer.

6. Please add to the emergency action plan the statement the St. Louis County Police Department – Wildwood Precinct will be contacted in a Level 2 and Level 3 emergency situation. The contact will be Captain Jim Mundell at (636) 458-9194. The requested statement has been
7. Please provide a list of steps that address the following, which would be part of the emergency action plan: an inspection determines a Level 1, 2, or 3 emergency and, thereafter, the property owner will contact the list of agencies and others, etc.

Owner inspects monthly & will contact the appropriate agency as needed

8. Please be advised, the Department appreciates the acknowledgement the large water feature has been constructed to Missouri Department of Natural Resource standards, but that does not suffice to meet the language of the condition in the permit, which reads as follows in this regard:

"the large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design engineering and on-going maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission as part of the Site Development Plan process, and as directed by the Department of Public Works." Accordingly, more detailed responses to the standards set forth in the attached checklist prepared by the Missouri Department of Natural Resources shall be provided. The dam or its elevation never changed as stated by SCI Engineering in a previous report and the dam has been there in excess of 50 years. Inspections are done on a regular basis, at least monthly.
The Department appreciates the description that you have provided relative to the treatment of the water in the lake feature, but it is not as detailed as necessary, based upon the discussions that have been held by the Planning and Zoning Commission over the course of the last several months. As you know, from the water testing completed of the large lake feature, certain levels of minerals and mycosistins exist in it and do cause concerns regarding public health.

Joe – Please review the e-mail dated 11-14-19 at 2:48 pm from Mr. Dean Dickerson to you. Mr. Dickerson of company ARDL, Inc. was hired by the City to do an evaluator and he summarized that there is not a public health risk based on their testing results. I am attaching a partial comment from that e-mail for your convenience.

Mr. Vujnic:

According to the USEPA Drinking Water Health Advisory for the Cyanobacterial Microcystin Toxins, June 2015, the levels of microcystin observed in the samples is well below the World Health Organization's low risk threshold for recreational water of 10 μg/L. The levels are also below the USEPA Drinking Water Health Advisory for school-age children and adults of 1.6 μg/L.

This is a Company that the City hired independently and he concluded that there is not a concern for public health.

9. These concerns dictate to the City the need to have a prescribed and complete twelve (12) month treatment program for the large water feature (the source of the water for the waterfall), which should include, but not limited to, the following steps or procedures: (a.) a monthly schedule, i.e. January through December, that identifies the frequency of treatment and the days of the month, when planned; (b.) chemicals or other materials that are planned to be used for treatment purposes and steps associated with them; (c.) identification of the issues that may arise with the large water feature that would prompt extra steps in terms of treatment actions, i.e. algae blooms, (d.) summary of costs on a yearly basis, which are not to exceed one thousand dollars ($1,000.00) per year; and (e.) any other considerations that are planned to ensure the lake provides water to the waterfall structure that has been treated to minimize or eliminate mycosistins and any other harmful concentrations of minerals. For purposes of review, the specific language of the condition from the permit is provided herein: "the maintenance of the existing fountain as a component of the large water feature, shall be authorized, if water quality measures are provided of the stormwater runoff entering it, along with the chemical treatment of the water contained therein to address contaminants from other sources. This chemical treatment option(s) used shall not harm any fish, aquatic life, or mammals that may come in contact with the water in the feature, but ensure it maintains an acceptable quality level for the purposes of public health purposes," and does allow for these steps or procedures to be requested by the City for inclusion in this regard. Please see comment above. The City should have no concerns as it has been proven and stated as such by the City’s hired consultant. Further treatment or testing is unnecessary and will not be undertaken. No chemicals will be introduced into the lake as it is currently balanced and healthy.

10. Please be advised the Department of Public Works will continue its review of the dam structure design and overflow structure and related downstream improvements for acceptance, once the items noted above are provided to it.

11. Please be advised that, once the Site Development Plan (SDP) is acted upon by the Planning and Zoning Commission, the permit will be reviewed in a one (1) year timeframe. This review will be before the Planning and Zoning Commission.

Please review the provided comments and address the needed changes to the plan sheets for further City review. If you should have any questions or comments, or need any assistance in this regard, please
feel free to contact me at (636) 458-0440. Thank you in advance for your anticipated cooperation in this regard.

The Planning and Zoning Commission voted on and passed this CUP in the fall of 2019 by a vote of 7 – 2. On January 2, 2020 you sent me a detailed letter requesting additional information for submission to the Planning and Zoning Commission. On January 16, 2020, I and my engineers supplied the detailed answers to your questions as you requested.

On February 6, 2020 you sent me the above list of additional questions and comments, some of which were previously supplied to you, which we have now answered. How many more rounds of questioning and submittals are going to be requested by the City? I have complied with all of your requests for over 3 years and this is still ongoing with no resolution in sight. This is a single family RESIDENCE and the level of government interference and scrutiny is unconscionable. The CUP has been voted on and the Planning and Zoning Commission want this permit issued.

Please respond back to me that this level of scrutiny and government oversight is going to be uniformly enforced for all residents and businesses in Wildwood in the future. I want to make sure that all lakes, ponds and large water features are as safe as mine and that all the residents have been held to the same engineering standards, including sound studies and water studies. Only then will the City be able to issue any future permits for water features, regardless of their size, in Wildwood. I am going to make sure that the health of the Wildwood residents is not impaired.

Respectfully submitted,
CITY OF WILDWOOD

Joe Vujniz
Department of Planning
Cc: The Honorable James R. Bowlin, Mayor  
Council Members Brost and Gragnani, Ward One  
Sam Anselm, City Administrator  
John A. Young, City Attorney  
Kathy Arnett, Assistant Director of Planning and Parks  
Travis Newberry, Planner
3rd Review Letter
March 27, 2020

Tom Roberts
550 Laurey Lane
Wildwood, Missouri 63005

Re: 3rd Review Comments on the Large Water Feature and Associated Waterfall – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District.

Dear Mr. Roberts:

The Department has completed its third review of the Site Development Plan (SDP) package for the large water feature and associated waterfall that is located on the approximately sixty (60) acre site that is situated at the terminus of Laurey Lane. The review of this package focused on the compliance of the submitted plan sheets to the site-specific permit that governs this location, the regulations of the underlying zoning district designation (NU Non-Urban Residence District), the Department of Planning’s January 2nd Comment Letter, and the City of Wildwood’s Design Criteria Handbook. The results of this review indicate several issues that preclude the Department from submitting the plan sheets to the Planning and Zoning Commission for its consideration and final action. These issues are identified below for your review:

1. Please be advised the requested additional sheet of all of the conditions from the Conditional Use Permit (CUP) still has not been found in the submitted items from you. The Department does apologize for this confusion, but it is requesting that an additional sheet be added to the packet of other items that shows all of the conditions from the permit, upon a single page. The permit is attached for your use.

2. Please, on Figure #4 Sheet, provide the engineering calculations and supporting documentation for the outfall structure (Pond Drain) relative to the 6” thick reinforced concrete walls and floor. **Response:** The Conditional Use Permit (CUP) is for both the waterfall and the large water feature. Therefore, the request for this information is not inappropriate and is justified, given the governing permit requires such.

3. Please, on Figure #4 Sheet, provide the engineering calculations and supporting documentation for the choice of the 36” and 24” culvert pipes that were installed, as part of this structure. **Response:** The Conditional Use Permit (CUP) is for both the waterfall and the large water feature. Therefore, the request for this information is not inappropriate and is justified, given the governing permit requires such.

4. Please be advised the misspelling of the ‘fountain to foundation’ does not make this condition non-applicable in this case. The intent of this condition was to address the spray of water from
the fountain to offer a cleaner source for it. Therefore, the Department would respectively request the condition be met in terms of a design concept and engineered details added to the appropriate Site Development Plan sheet.

Again, the condition for pre-treatment is as follows: "the property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a fountain foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood's Department of Public Works."

5. Please be advised the Basic Management Protocol addresses many of the steps sought by the City, but it does not achieve the following considerations: please include the following: the company names, their office locations, and dates, when each of them completed the engineering report, the geotechnical report, and/or the soils report that were used, when the large water feature and dam were reconstructed on the property.

6. Please add the maintenance protocols that are planned for the overflow structure and associated piping. This item, and Item #5 noted above, should be added to the applicable plan sheet as notes.

7. Please be advised the management protocol also needs to address the on-going maintenance of the pre-treatment improvements and the water quality of the large water feature as well.

8. Please add the statement noted in the latest response to the City regarding the request from the Department to provide a list of steps that address the following, which would be part of the Emergency Action Plan: an inspection determines a Level 1, 2, or 3 emergency and, thereafter, the property owner will contact the list of agencies and others, etc.

9. Please be advised, the Department appreciates the acknowledgement the large water feature has been constructed to Missouri Department of Natural Resource standards, but that does not suffice to meet the language of the condition in the permit, which reads as follows in this regard: "the large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design, engineering, and on-going maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission, as part of the Site Development Plan process, and as directed by the Department of Public Works." Accordingly, more detailed responses to the standards set forth in the attached checklist prepared by the Missouri Department of Natural Resources shall be provided by you.

10. The Department appreciates the description that you have provided relative to the treatment of the water in the lake feature, but it is not as detailed as necessary, based upon the discussions that have been held by the Planning and Zoning Commission over the course of the last several months. As you know, from the water testing completed of the large lake feature, certain levels of minerals and mycopathins exist in it and do cause concerns regarding public health. These concerns dictate to the City the need to have a prescribed and complete twelve (12) month treatment program for the large water feature (the source of the water for the waterfall), which should include, but not limited to, the following steps or procedures:
(a.) a monthly schedule, i.e. January through December, that identifies the frequency of treatment and the days of the month, when planned;
(b.) chemicals or other materials that are planned to be used for treatment purposes and steps associated with them;
(c.) identification of the issues that may arise with the large water feature that would prompt extra steps in terms of treatment actions, i.e. algae blooms,
(d.) summary of costs on a yearly basis, which are not to exceed one thousand dollars ($1,000.00) per year; and
(e.) any other considerations that are planned to ensure the lake provides water to the waterfall structure that has been treated to minimize or eliminate mycosisins and any other harmful concentrations of minerals.

For purposes of review, the specific language of the condition from the permit is provided herein: "the maintenance of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided of the stormwater runoff entering it, along with the chemical treatment of the water contained therein to address contaminants from other sources. This chemical treatment option(s) used shall not harm any fish, aquatic life, or mammals that may come in contact with the water in the feature, but ensure it maintains an acceptable quality level for the purposes of public health purposes," and does allow for these steps or procedures to be requested by the City for inclusion in this regard.

Certainly, the Department does not want to prolong this review process by asking for items that you do not believe to be applicable. The Planning and Zoning Commission can review these matters at a meeting and interpret what the Department is seeking, what is being provided, and what is needed to comply with the permit itself. Please advise if you would like to have the Planning and Zoning Commission undertake this determination regarding the items being requested by the City, which you have noted will not be submitted for its consideration in the last letter on this matter.

Please review the provided comments and address the needed changes to the plan sheets for further City review. If you should have any questions or comments, or need my assistance in this regard, please feel free to contact me at (536) 458-0440. Thank you in advance for your anticipated cooperation in this regard.

Respectfully submitted,
CITY OF WILLOWOOD

Joe Vujnic, Director
Department of Planning

Cc: The Honorable James R. Bowlin, Mayor
    Council Members Brost and Gragnani, Ward One
    Sam Anselm, City Administrator
    John A. Young, City Attorney
Kathy Arnett, Assistant Director of Planning and Parks
Travis Newberry, Planner
ATTACHMENT B - CONDITIONS

1. PERMITTED USES

This Conditional Use Permit (CUP) shall authorize a large water feature, as defined by Chapter 415.030 Definitions of the City of Wildwood's Zoning Ordinance and, under specific compliance conditions, a waterfall structure.

2. LOT, SIZE, AND USE REQUIREMENTS

a. The authorized large water feature shall not exceed three point five (3.5) acres in overall size.

b. The height of the dam shall not exceed thirty-three (33) feet, as measured from final finish grade at the base of it, outside the water impoundment area.

c. The depth of the lake, at normal pool elevation, shall not exceed twenty (20) feet.

d. The inclusion and use of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided to treat stormwater runoff entering it, along with the chemical treatment of the water contained therein, to address contaminants from other sources. This chemical treatment option(s) that are to be used for these purposes shall not harm any fish, other aquatic life, or mammals that may come in contact with the water held in the feature, but ensure it maintains an acceptable quality level for the purposes of public health.

e. The extent of any new/additional land disturbance, in association with the maintenance or care of this large water feature, may only be authorized by the Planning and Zoning Commission, as part of an Amended Site Development Plan review.

f. The large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design, engineering, and on-going maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission, as part of the Site Development Plan process, and as directed by the Department of Public Works. As part of this compliance to State stipulated requirements and standards, an Emergency Management Plan shall be provided that defines that, if dam failure occurs, the steps that have and will be taken to protect downstream properties.

g. The waterfall structure shall not be expanded or extended from its current configuration and size, while its operation must comply with all of the City of Wildwood's Performance Standards for Zoning Ordinance (Chapter 415.250). However, its operation is premised on a required sound study and compliance to regulations of the Noise Code and the Planning and Zoning Commissioner’s review and action on the required Site Development Plan.

3. PLAN SUBMITTAL REQUIREMENTS

Within twelve (12) months of the Conditional Use Permit (CUP) being granted by the Planning and Zoning Commission, and prior to any further site disturbance, the operator shall submit to the Planning and
Zoning Commission for their review and approval a Site Development Plan. Where due cause is shown by the operator, this time interval may be extended once by the Planning and Zoning Commission in accord with requirements of Chapter 415.480 of the City of Wildwood Zoning Ordinance. Said Site Development Plan shall include, but not be limited to, the following information:

a. Outboundary plat and legal description of the property.
b. Location and extent of all existing improvements, including all buildings and accessory structures, along with the planned large water feature and all improvements in association with it.
c. A general plan indicating setback lines along the perimeter of the subject tract of land and surrounding property lines and related improvements within two hundred (200) feet of this site’s boundaries, i.e. curb cut and access locations, stormwater facilities, and utility installations and easements.
d. Location of all roadways adjacent to the property, including required roadway right-of-way dedication and pavement widening, with existing and proposed improvements and trails, and general location, size, right-of-way, and pavement width of all interior drives.
e. Existing and proposed contours at vertical intervals of not more than two (2) feet.
f. General location of sanitary sewer and stormwater facilities.
g. A Landscape Plan including, but not limited to, the location, size, and general type of plant materials to be used in accord with the City of Wildwood’s Chapter 410 and accompanying Tree Manual.
h. An inventory of the percent of tree canopy or individual trees to be retained on the site indicated on a Tree Preservation Plan completed in accordance with the City of Wildwood Chapter 410 Tree Preservation and Restoration Code and accompanying Tree Manual.
i. Location of all existing and proposed easements.
j. All other information not mentioned above, but required on a preliminary plat in accord with Chapter 420.060 of the City of Wildwood Subdivision and Development Regulations.
k. A Stormwater Pollution Prevention Plan (SWPPP) for the site, which shall include the developer's signature and acknowledgment of its requirements.
l. A maintenance plan for this large water feature that is based on annual inspections and reports to be submitted to the City of Wildwood’s Department of Planning. This plan shall indicate all steps and procedures that will be used to maintain the large water feature and ensure its stability and safety.

4. SITE DEVELOPMENT PLAN DESIGN CRITERIA

The above Site Development Plan shall adhere to the following specific design criteria:

Large Water Feature Setbacks

a. No large water feature and related improvements, including the waterfall, structure shall be located within the following setbacks, except as otherwise noted below:

i. Seven hundred (700) feet from the southern property line and boundary of this Conditional Use Permit (CUP).
ii. Four hundred (400) feet from the western property line and boundary of this Conditional Use Permit (CUP).
iii. Forty (40) feet from the northern property line and boundary of this Conditional Use Permit (CUP).
iv. Four hundred fifty (450) feet from the eastern property line and boundary of this Conditional Use Permit (CUP), except the waterfall structure may be located no closer than one hundred (100) feet to the same.

**Landscape Requirements**

b. Landscaping shall adhere to all requirements of Chapter 410 of the City’s Tree Preservation and Restoration Code and its accompanying Sustainable Plantings Guide and Tree Manual, including the submittal of a Tree Preservation Plan, in conjunction with the Site Development Plan. All roadway frontages shall be appropriately landscaped, as required by Chapter 410 Tree Preservation and Restoration Code, and be approved by the Planning and Zoning Commission on the Site Development Plan.

c. The areas of existing vegetation within the Conditional Use Permit (CUP) boundaries identified as to be retained shall be marked on the site prior to the commencement of any disturbance in accord with the City of Wildwood’s Chapter 410. These areas shall be indicated on the Site Development Plan submitted to the City of Wildwood for Planning and Zoning Commission review and approval. Existing mature tree canopy shall be preserved in accordance with the requirements of City of Wildwood’s Chapter 410 Tree Preservation and Restoration Code.

d. All disturbed areas of the site shall be restored in compliance to the City’s Sustainable Plantings Guide and Tree Manual by a combination of ground cover, landscaping, berms, natural stones, and other means to address stormwater runoff and erosion, as well as improve overall site aesthetics. The restoration of disturbed areas shall be indicated on the required Landscape Plan and acted upon by the Planning and Zoning Commission.

e. A registered Landscape Architect shall prepare, submit, and sign all plan(s).

**Miscellaneous Conditions**

f. The hours of any future construction and grading activity in association with this large water feature shall be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 5:00 p.m. on Saturday. No development (grading and construction) activity shall be authorized on Sundays.

g. All retaining walls exceeding three (3) feet in height per section or crossing individual property lines shall be constructed of an appropriate inter-locking concrete block system or boulders. The Planning and Zoning Commission, as part of the Site Development Plan review process, shall review and act upon said materials and design.

h. The generalized location of all utility easements for proposed service to this development shall be as approved by the Planning and Zoning Commission on the Site Development Plan.

i. All utilities serving this site shall be installed underground in accord with the requirements of the City of Wildwood’s Subdivision and Development Regulations. Any existing easements located on the subject site, which are not being utilized, shall be vacated under the standard procedures of the City of Wildwood Subdivision and Development Regulations.
j. The property owner, or any assignee or successor, shall provide annual maintenance of this authorized large water feature on the subject property, with such being in accordance with State regulations for the same. A plan for this maintenance and upkeep shall be provided to the Planning and Zoning Commission, as part of the required Site Development Plan. Preventative maintenance shall be authorized on an as-needed basis, along with any repairs, but does require an engineered plan be submitted to the City of Wildwood’s Department of Public Works for review and action. This plan will then be submitted to the Planning and Zoning Commission for receipt and filing.

5. VERIFICATIONS PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN

Prior to approval of the Site Development Plan, the developer shall provide the following:

**Stormwater Improvements**

a. Submit to the Planning and Zoning Commission an engineering plan approved by the City of Wildwood Department of Public Works showing that adequate handling of the stormwater drainage of the site is provided.

i. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood standards.

ii. All stormwater shall be discharged at an adequate natural discharge point.

iii. The developer of this site shall be solely responsible to provide the necessary mechanisms, as part of the Site Development Plan/Improvement Plan process, to implement “best management practices” for stormwater management/water quality and the construction of related facilities. Minimally, these practices/facilities should include rain gardens, vegetated swales, and other options to substantially reduce the amount of stormwater discharging from the subject site.

iv. The developer shall provide adequate detention and/or hydrologic calculations for review and approval of all stormwater that will encroach on City of Wildwood rights-of-way.

v. The property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood’s Department of Public Works.

**Stormwater Pollution Prevention Plan**

b. Prior to any land disturbance on this subject site, submit a Stormwater Pollution Prevention Plan, as part of the Site Development Plan review process, indicating compliance to Federal, State, and local requirements regarding the management of stormwater runoff to prevent siltation and erosion, both on-site and upon downstream properties.

**Sound Study**

c. The authorization of the Site Development Plan for this large water feature shall not include the waterfall structure, unless an independent sound study is conducted by the City of Wildwood with it in operation to determine the level of compliance to the Noise Code. This sound study must be conducted in accordance with accepted industry standards and by a consultant/firm with
extensive experience in this field of sound analysis and testing. The results of the sound study must indicate compliance to the Noise Code, before the Site Development Plan can be acted upon for the waterfall structure.

Air Pollution Testing

d. The authorization of the Site Development Plan for this large water feature shall not include the waterfall structure, unless testing is provided regarding the odor issue associated with this improvement. This testing must be conducted in accordance with accepted industry standards and by a consultant/firm with extensive experience in this field of air pollution control. The results of the testing must indicate compliance to the Air Pollution Code, before the Site Development Plan can be acted upon for the waterfall structure.

6. RECORDING

Within sixty (60) days of granting of the Conditional Use Permit (CUP) by the Planning and Zoning Commission, the approved permit language and legal description of the property shall be recorded with the St. Louis County Recorder of Deeds.

7. VERIFICATION PRIOR TO PERMITS

Notification to Department of Planning

a. Subsequent to approval of the Site Development Plan, and prior to issuance of any grading or permit, all approvals from the Missouri Department of Transportation (MoDOT), the Department of Public Works, the U.S. Army Corp of Engineers, the Missouri Department of Natural Resources (MDNR), and the Monarch Fire Protection District must be received by the Department of Planning.

Nuisance Bond

b. Provide to the City of Wildwood a bond, letter of credit, or cash deposit in the amount of five thousand dollars ($5,000.00) for use to undertake any inspections or maintenance of the large water feature and dam, if the property and improvements are not maintained in accordance with said conditions of this permit. The City shall hold this deposit and it will be pre-authorized by the owner/operator, in writing, to exercise its use, if violations are noted and not abated in a timely manner.

8. GENERAL DEVELOPMENT CONDITIONS

a. Provide adequate temporary off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driving conditions.

b. A grading permit is required prior to any grading on the site. Interim stormwater drainage controls in the form of siltation control measures are required and must comply with the Stormwater Pollution Prevention Plan for this development (SWPPP). The developer shall be solely responsible for obtaining any temporary slope and construction licenses needed to address the installation of
public and private improvements on this site that require the use of adjoining parcels of ground that are not under their ownership or control.

c. The petitioner shall be responsible for obtaining all necessary permits from the Department of Natural Resources Clean Water Commission as they relate to the development of this tract of land.

d. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public right-of-way. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of infrastructure improvements.

e. If cut and fill operations occur during a season not favorable for immediate establishment of a permanent ground cover, a fast germinating annual, such as Rye or Sudan Grasses, shall be utilized to prevent erosion. This restoration must occur within thirty (30) days of the conclusion of preliminary grading as determined by the Director of Public Works.

f. Failure to comply with any or all of the conditions of this ordinance shall be adequate cause for revocation of permits by issuing City of Wildwood Departments or Commissions.

g. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accord with the Site Development Plan approved by the Planning and Zoning Commission and the Department of Planning. The owner/operator must acknowledge in writing that access to this site for inspection purposes by personnel of the City of Wildwood shall be authorized and, if refused, such action is grounds for revocation of said permit by the City.

h. Any other applicable zoning, subdivision, or other regulations or requirements of the City shall further apply to the development of this property, as authorized by this Conditional Use Permit (CUP), except as may be provided by law. Nothing herein shall be deemed a waiver of any subdivision, zoning, or other development regulation of the City whether by implication or reference.

i. This zoning approval is conditioned on compliance with the Zoning Ordinance, Subdivision and Development Regulations, and all applicable laws of the City. Such additional regulations are supplemental to the requirements herein and no modification of any applicable regulations shall result from this Conditional Use Permit (CUP), except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.

j. This Conditional Use Permit (CUP) shall be authorized for a period of one (1) year, with any adjustments to it based upon compliance to the requirements of the same. Renewal requests shall be the responsibility of the owner/operator to submit to the City and must be provided a minimum two (2) months in advance of each renewal for consideration and action by the Planning and Zoning Commission following this initial period of time. Subsequent renewals shall be on a three (3) year basis.
DEPARTMENT’S E-MAIL ON STATUS OF REVIEW
Subject: Review of SDP for Large Water Feature and Waterfall
Date: Monday, May 11, 2020 at 5:28:32 PM Central Daylight Time
From: Joe Vujnich
To: Tom Roberts
CC: Travis Newberry

Mr. Roberts:

The review has been completed. In the responses provided by you to the Department’s letter on this matter, it is noted many of the requested items associated with the expansion of the large water feature were not used or completed by an engineering firm, rather by the builder and yourself. Along with that situation, other responses provide limited background relative to the detail sought by the City. It is my intent to move the matter, i.e. the plan set, to the Planning and Zoning Commission, since it has the authority to proceed forward or not. I am hoping to have the subcommittee meeting in June, which is the first of the required two (2) sessions before the Planning and Zoning Commission.

Thank you,

Joe Vujnich
4TH REVIEW LETTER
May 26, 2020

Tom Roberts
550 Laurey Lane
Wildwood, Missouri 63005

Re: Final Review Comments on the Large Water Feature and Associated Waterfall – A Conditional Use Permit (CUP) in the NU Non-Urban Residence District.

Dear Mr. Roberts:

The Department has completed its final review of the Site Development Plan (SDP) package for the large water feature and associated waterfall, which was constructed on this approximately sixty (.60) acre site being located at the terminus of Laurey Lane. The review of this plan package focused on the compliance of the submitted plan sheets to the site-specific permit that governs this location, the regulations of the underlying zoning district designation (NU Non-Urban Residence District), the Department of Planning's March 23, 2020 Comment Letter, and the City of Wildwood's Design Criteria Handbook. The results of this review indicate there remain several items that both parties, i.e., you and the City, have not been able to agree upon regarding the Conditional Use permit (CUP) and its interpretation. Accordingly, the Department of Planning will be submitting these items to the Planning and Zoning Commission for its consideration and final action, again inclusive of all components of the plan package at this stage. These items where agreement has not been reached by the parties are identified below for your review:

1. Please, on Figure #4 Sheet, provide the engineering calculations and supporting documentation for the outfall structure (Pond Drain) relative to the 6" thick reinforced concrete walls and floor. **Response:** The Conditional Use Permit (CUP) is for both the waterfall and the large water feature. Therefore, the request for this information is not inappropriate and is justified, given the governing permit requires such.

2. Please, on Figure #4 Sheet, provide the engineering calculations and supporting documentation for the choice of the 36" and 24" culvert pipes that were installed, as part of this structure. **Response:** The Conditional Use Permit (CUP) is for both the waterfall and the large water feature. Therefore, the request for this information is not inappropriate and is justified, given the governing permit requires such.

3. Please be advised the misspelling of the 'fountain to foundation' does not make this condition non-applicable in this case. The intent of this condition was to address the spray of water from the fountain to offer a cleaner source for it. Therefore, the Department would respectively
request the condition be met in terms of a design concept and engineered details added to the appropriate Site Development Plan sheet.

Again, the condition for pre-treatment is as follows: "the property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a fountain foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood’s Department of Public Works."

4. Please be advised the management protocol also needs to address the on-going maintenance of the pre-treatment improvements and the water quality of the large water feature as well.

5. The Department appreciates the description that you have provided relative to the treatment of the water in the lake feature, but it is not as detailed as necessary, based upon the discussions that have been held by the Planning and Zoning Commission over the course of the last several months. As you know, from the water testing completed of the large lake feature, certain levels of minerals and microcystins exist in it and do cause concerns regarding public health. These concerns dictate to the City the need to have a prescribed and complete twelve (12) month treatment program for the large water feature (the source of the water for the waterfall), which should include, but not limited to, the following steps or procedures:

(a.) a monthly schedule, i.e. January through December, that identifies the frequency of treatment and the days of the month, when planned;
(b.) chemicals or other materials that are planned to be used for treatment purposes and steps associated with them;
(c.) identification of the issues that may arise with the large water feature that would prompt extra steps in terms of treatment actions, i.e. algae blooms; and
(d.) summary of costs on a yearly basis, which are not to exceed one thousand dollars ($1,000.00) per year; and
(e.) any other considerations that are planned to ensure the lake provides water to the waterfall structure that has been treated to minimize or eliminate microcystins and any other harmful concentrations of minerals.

For purposes of review, the specific language of the condition from the permit is provided herein: "the maintenance of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided of the stormwater runoff entering it, along with the chemical treatment of the water contained therein to address contaminants from other sources. This chemical treatment option(s) used shall not harm any fish, aquatic life, or mammals that may come in contact with the water in the feature, but ensure it maintains an acceptable quality level for the purposes of public health purposes," and does allow for these steps or procedures to be requested by the City for inclusion in this regard.

Given the responses you provided in your latest resubmittal to the Department’s 3rd review letter, the Planning and Zoning Commission will need to address the remaining items noted above (Items #1 through #5). The Department appreciates your responses, but they are typically not acceptable, when
engineered structures lack the plan sheets representative of the participation of a registered professional engineer.

Given this approach, the first meeting on this plan package for the large water feature and associated waterfall will be held on June 15, 2020, before the Site Plan Subcommittee of the Planning and Zoning Commission, which normally includes not less than four (4) of its members, but no more than ten (10). The next meeting, which typically follows in a two (2) to four (4) week timeframe, is before the full body of the Planning and Zoning Commission and represents the final action of it on the plan package submitted to it for such. If you should have any questions or comments, or need my assistance in this regard, please feel free to contact me at (636) 458-0440. Thank you in advance for your anticipated cooperation in this regard.

Respectfully submitted,

CITY OF WILDWOOD

Joe Vujnich, Director
Department of Planning

Cc: The Honorable James R. Bowlin, Mayor
Council Members Brost and Gragnani, Ward One
Theresa Clark, Future Council Member, Ward One
Sam Anselm, City Administrator
John A. Young, City Attorney
Kathy Arnett, Assistant Director of Planning and Parks
Travis Newberry, Planner
SITE DEVELOPMENT PLAN SUBMITTAL PACKAGE
1. PERMITTED USES

This Conditional Use Permit (CUP) shall authorize a large water feature, as defined by Chapter 415.080 Definitions of the City of Wildwood's Zoning Ordinance and, under specific compliance conditions, a waterfall structure.

2. LOT, SIZE, AND USE REQUIREMENTS

   a. The authorized large water feature shall not exceed three point five (3.5) acres in overall size.
   b. The height of the dam shall not exceed thirty-three (33) feet, as measured from final finish grade at the base of it, outside the water impoundment area.
   c. The depth of the lake, at normal pool elevation, shall not exceed twenty (20) feet.
   d. The inclusion and use of the existing fountain, as a component of the large water feature, shall be authorized, if water quality measures are provided to treat stormwater runoff entering it, along with the chemical treatment contained therein, to address contaminants from other sources. This chemical treatment option(s) that are to be used for these purposes shall not harm any fish, other aquatic life, or mammals that may come in contact with the water held in the feature, but ensure it maintains an acceptable quality level for the purposes of public health.
   e. The extent of any new/additional land disturbance, in association with the maintenance or care of this large water feature, may only be authorized by the Planning and Zoning Commission, as part of an Amended Site Development Plan review.
   f. The large water feature authorized by this permit, although created by the construction of a dam that is less than thirty-five (35) feet in height, shall meet all Missouri Department of Natural Resources (MDNR) requirements for design, engineering, and on-going maintenance, including inspection frequencies and criteria. These requirements will be reviewed and acted upon by the Planning and Zoning Commission, as part of the Site Development Plan process, and as directed by the Department of Public Works. As part of this compliance to State stipulated requirements and standards, an Emergency Management Plan shall be provided that defines that, if dam failure occurs, the steps that have and will be taken to protect downstream properties.
   g. The waterfall structure shall not be expanded or extended from its current configuration and size, while its operation must comply with all of the City of Wildwood's Performance Standards for Zoning Ordinance (Chapter 415.250). However, its operation is permitted on a required sound study and compliance to regulations of the Noise Code and the Planning and Zoning Commission's review and action on the required Site Development Plan.

3. PLAN SUBMITTAL REQUIREMENTS

   Within twelve (12) months of the Conditional Use Permit (CUP) being granted by the Planning and Zoning Commission, and prior to any further site disturbance, the operator shall submit to the Planning and Zoning Commission for their review and approval a Site Development Plan. Where due cause is shown by the operator, this time interval may be extended once by the Planning and Zoning Commission in accord with requirements of Chapter 415.480 of the City of Wildwood Zoning Ordinance. Said Site Development Plan shall include, but not be limited to, the following information:

   a. Outbound plat and legal description of the property.
   b. Location and extent of all existing improvements, including all buildings and accessory structures, along with the planned large water feature and all improvements in association with it.
   c. A general plan indicating setback lines along the perimeter of the subject tract of land and surrounding property lines and related improvements within two hundred (200) feet of it, including cut and access locations, stormwater facilities, and utility installations and easements.
   d. Location of all roadways adjacent to the property, including required roadway. roadway boundaries, i.e., the cut and access, roadways, stormwater facilities, and utility installations and easements.
   e. Existing topography shall be parallel to vertical intervals of not more than two (2) feet.
   f. General location of sanitary sewer and stormwater facilities.
   g. A Landscape Plan including, but not limited to, the location, size, and general type of plant materials to be used in accord with the City of Wildwood's Chapter 410 and accompanying Tree Manual.
   h. An inventory of the percent of tree canopy or individual trees to be retained on the site indicated on a Tree Preservation Plan completed in accordance with the City of Wildwood Chapter 410 Tree Preservation and Restoration Code and accompanying Tree Manual.
   i. Location of all existing and proposed easements.
   j. All other information not mentioned above, but required on a preliminary plat in accord with Chapter 420.080 of the City of Wildwood Subdivision and Development Regulations.
   k. A Stormwater Pollution Prevention Plan (SWPPP) for the site, which shall include the developer's signature and acknowledgment of its requirements.
   l. A maintenance plan for this large water feature that is based on annual inspections and reports to be submitted to the City of Wildwood's Department of Planning. This plan shall indicate all steps and procedures that will be used to maintain the large water feature and ensure its stability and safety.

4. SITE DEVELOPMENT PLAN DESIGN CRITERIA

   The above Site Development Plan shall adhere to the following specific design criteria:

Large Water Feature Setbacks

   a. No large water feature and related improvements, including the waterfall, structure shall be located within the following setbacks, except as otherwise noted below:
      i. Seven hundred (700) feet from the southern property line and boundary of this Conditional Use Permit (CUP).
      ii. Four hundred (400) feet from the western property line and boundary of this Conditional Use Permit (CUP).
      iii. Forty (40) feet from the northern property line and boundary of this Conditional Use Permit (CUP).
      iv. Four hundred fifty (450) feet from the eastern property line and boundary of this Conditional Use Permit (CUP), except the waterfall structure may be located no closer than one hundred (100) feet to the same.

Landscape Requirements

   b. Landscaping shall adhere to all requirements of Chapter 410 of the City’s Tree Preservation and Restoration Code and it’s accompanying Sustainable Plantings Guide and Tree Manual, including the submittal of a Tree Preservation Plan, in conjunction with the Site Development Plan. All roadway frontages shall be appropriately landscaped, as required by Chapter 410 Tree Preservation and Restoration Code, and be approved by the Planning and Zoning Commission on the Site Development Plan.
   c. The areas of existing vegetation within the Conditional Use Permit (CUP) boundaries identified as to be retained shall be marked on the site prior to the commencement of any disturbance in accord with the City of Wildwood's Chapter 410. These areas shall be indicated on the Site Development Plan submitted to the City of Wildwood for Planning and Zoning Commission review and approval. Existing mature tree canopy shall be preserved in accordance with the requirements of City of Wildwood's Chapter 410 Tree Preservation and Restoration Code.
   d. All disturbed areas of the site shall be restored in compliance to the City's Sustainable Plantings Guide and Tree Manual by a combination of ground cover, landscaping, berms, natural stones, and other means to address stormwater runoff and erosion, as well as improve overall site aesthetics. The restoration of disturbed areas shall be indicated on the required Landscape Plan and acted upon by the Planning and Zoning Commission.

   e. A registered Landscape Architect shall prepare, submit, and sign all plan(s).

Miscellaneous Conditions

   f. The hours of any future construction and grading activity in association with this large water feature shall be limited to 7:00 a.m. to 6:00 p.m. Monday through Friday, and 8:00 a.m. to 6:00 p.m. on Saturday. No development (grading and construction) activity shall be authorized on Sundays.
   g. All retaining walls exceeding three (3) feet in height per section or crossing individual property lines shall be constructed of an appropriate interlocking concrete block, stone or boulders. The Planning and Zoning Commission, as part of the Site Development Plan review process, shall review and act upon said materials and design.
   h. The generalized location of all utility easements for proposed service to this development shall be as approved by the Planning and Zoning Commission on the Site Development Plan.
   i. All utilities serving this site shall be installed underground in accord with the requirements of the City of Wildwood's Subdivision and Development Regulations. Any existing easements located on the subject site, which are not being utilized, shall be vacated under the standard procedures of the City of Wildwood Subdivision and Development Regulations.
   j. The property owner, or any assignee or successor, shall provide annual maintenance of this authorized large water feature on the subject property, with such being in accordance with State regulations for the same. A plan for this maintenance and upkeep shall be provided to the Planning and Zoning Commission, as part of the required Site Development Plan. Preventative maintenance shall be authorized on an as-needed basis, along with any repairs, but does require an engineered plan be submitted to the City of Wildwood's Department of Public Works showing that adequate handling of the stormwater drainage of the site is provided.

5. VERIFICATIONS PRIOR TO APPROVAL OF THE SITE DEVELOPMENT PLAN

   Prior to approval of the Site Development Plan, the developer shall provide the following:

Stormwater Improvements

   a. Submit to the Planning and Zoning Commission an engineering plan approved by the City of Wildwood Department of Public Works showing that adequate handling of the stormwater drainage of the site is provided.
I. The developer is required to provide adequate stormwater systems in accordance with the City of Wildwood standards.

II. All stormwater shall be discharged at an adequate natural discharge point.

III. The developer of this site shall be solely responsible to provide the necessary mechanisms, as part of the Site Development Plan/Improvement Plan process, to implement "best management practices" for stormwater management/water quality and the construction of related facilities. Minimally, these practices/facilities should include rain gardens, vegetated swales, and other options to substantially reduce the amount of stormwater discharging from the subject site.

IV. The developer shall provide adequate detention and/or hydrologie calculations for review and approval of all stormwater that will encroach on City of Wildwood rights-of-way.

V. The property owner shall be required to provide pre-treatment of runoff entering the large water feature, if a foundation is installed as part of it. This pre-treatment facility shall be designed, engineered, and constructed as a forebay for water quality purposes, all being completed in accordance with the standards, specifications, and requirements of the Metropolitan St. Louis Sewer District (MSD) for such type of improvements, and as directed by City of Wildwood's Department of Public Works.

**Stormwater Pollution Prevention Plan**

b. Prior to any land disturbance on this subject site, submit a Stormwater Pollution Prevention Plan, as part of the Site Development Plan review process, indicating compliance to Federal, State, and local requirements regarding the management of stormwater runoff to prevent siltation and erosion, both on-site and upon downstream properties.

**Sound Study**

c. The authorization of the Site Development Plan for this large water feature shall not include the waterfall structure, unless testing is provided regarding the odor issue associated with this improvement. This testing must be conducted in accordance with accepted industry standards and by a consultant/firm with extensive experience in this field of air pollution control. The results of the testing must indicate compliance to the Air Pollution Code, before the Site Development Plan can be acted upon for the waterfall structure.

**Air Pollution Testing**

d. The authorization of the Site Development Plan for this large water feature shall not include the waterfall structure, unless testing is provided regarding the odor issue associated with this improvement. This testing must be conducted in accordance with accepted industry standards and by a consultant/firm with extensive experience in this field of air pollution control. The results of the testing must indicate compliance to the Air Pollution Code, before the Site Development Plan can be acted upon for the waterfall structure.

6. **RECORDING**

Within sixty (60) days of granting of the Conditional Use Permit (CUP) by the Planning and Zoning Commission, the approved permit language and legal description of the property shall be recorded with the St. Louis County Recorder of Deeds.

7. **VERIFICATION PRIOR TO PERMITS**

Notification to Department of Planning

a. Subsequent to approval of the Site Development Plan, and prior to issuance of any grading or permit, all approvals from the Missouri Department of Transportation (MoDOT), the Department of Public Works, the U.S. Army Corp of Engineers, the Missouri Department of Natural Resources (MDNR), and the Monarch Fire Protection District must be received by the Department of Planning.

**Nuisance Bond**

b. Provide to the City of Wildwood a bond, letter of credit, or cash deposit in the amount of five thousand dollars ($5,000.00) for use to undertake any inspections or maintenance of the large water feature and dam, if the property and improvements are not maintained in accordance with said conditions of this permit. The City shall hold this deposit and it will be pre-authorized by the owner/operator, in writing, to exercise its use, if violations are noted and not abated in a timely manner.

8. **GENERAL DEVELOPMENT CONDITIONS**

a. Provide adequate temporary off-street parking for construction employees. Parking on non-surfaced areas shall be prohibited in order to eliminate the condition whereby mud from construction and employee vehicles is tracked onto the pavement causing hazardous roadway and driving conditions.

b. A grading permit is required prior to any grading on the site. Intermittent stormwater drainage controls in the form of siltation control measures are required and must comply with the Stormwater Pollution Prevention Plan for this development (SWPPP). The developer shall be solely responsible for obtaining any temporary slope and construction licenses needed to address the installation of public and private improvements on this site that require the use of adjoining parcels of ground that are not under their ownership or control.

c. The petitioner shall be responsible for obtaining all necessary permits from the Department of Natural Resources Clean Water Commission as they relate to the development of this tract of land.

d. The developer is advised that utility companies will require compensation for relocation of their utility facilities within public right-of-way. The developer should also be aware of extensive delays in utility company relocation and adjustments. Such delays will not constitute a cause to allow occupancy prior to completion of infrastructure improvements.

e. If cut and fill operations occur during a season not favorable for immediate establishment of a permanent ground cover, a fast germinating annual, such as Ryegrass or Sudan Grasses, shall be utilized to prevent erosion. This restoration must occur within thirty (30) days of the conclusion of preliminary grading as determined by the Director of Public Works.

f. Failure to comply with any or all of the conditions of this ordinance shall be adequate cause for revocation of permits by issuing City of Wildwood Departments or Commissions.

g. The Zoning Enforcement Officer of the City of Wildwood, Missouri, shall enforce the conditions of this ordinance in accord with the Site Development Plan approved by the Planning and Zoning Commission and the Department of Planning. The owner/operator must acknowledge in writing that access to this site for inspection purposes by personnel of the City of Wildwood shall be authorized and, if refused, such action is grounds for revocation of said permit by the City.

h. Any other applicable zoning, subdivision, or other regulations or requirements of the City shall further apply to the development of this property, as authorized by this Conditional Use Permit (CUP), except as may be provided by law. Nothing herein shall be deemed a waiver of any subdivision, zoning, or other development regulation of the City whether by implication or reference.

i. This zoning approval is conditioned on compliance with the Zoning Ordinance, Subdivision and Development Regulations, and all applicable laws of the City. Such additional regulations are supplemental to the requirements herein and no modification of any applicable regulations shall result from this Conditional Use Permit (CUP), except where this ordinance has expressly modified such regulations by reference to the applicable provision authorizing such modification.

j. This Conditional Use Permit (CUP) shall be authorized for a period of one (1) year, with any adjustments to it based upon compliance to the requirements of the same. Renewal requests shall be the responsibility of the owner/operator to submit to the City and must be provided a minimum two (2) months in advance of each renewal for consideration and action by the Planning and Zoning Commission following this initial period of time. Subsequent renewals shall be on a three (3) year basis.
NOTES:

- Pond Area: Approximately 3.3 acres
- Pond Volume: Approximately 8,000,000 Gallons Maximum Pond Depth: 12' - Height of Spillway: 555' - Height of Dam: 15' - Top of Dam Elevation: 559'
- Grading and discharge shall be per City of Wildwood and MSD Standards. - Slope shall not exceed 3 (horizontal) : 1 (vertical), unless supported by geotechnical report.
- Stormwater shall be discharged at an adequate natural discharge point. Sinkholes are not adequate natural discharge points.
- Water feature depth varies, as constructed.
- Since the overflow structure is below grade and constructed of concrete, the maintenance required is minimal, if any, for the next 20+ years. The top of the structure has a permeable grate to act as a further filter, which is cleared of debris on an as needed basis.
Pond Drain

2X 72"x72" steel gate panels

6" thick reinforced concrete walls and floor

2" culvert pipe

4" x 6" steel beam

36" culvert pipe

Outlet drain (see detail below)

Outlet drain convergence line

NATURALLY OCCURRING DRAINAGE DITCH

Figure 3: Pond Overflow Drain and Detail
FIGURE 4: POND ACREAGE, BABLER FARMS LLC (550 LAUREY LANE)
No large water feature and related improvements, including the waterfall, structure shall be located within the following setbacks, except as otherwise noted below:

- Seven hundred (700) feet from the southern property line and boundary of this Conditional Use Permit (CUP).
- Four hundred (400) feet from the western property line and boundary of this Conditional Use Permit (CUP).
- Forty (40) feet from the northern property line and boundary of this Conditional Use Permit (CUP).
- Four hundred fifty (450) feet from the eastern property line and boundary of this Conditional Use Permit (CUP), except the waterfall structure may be located no closer than one hundred (100) feet to the same.
GEOTECHNICAL NOTES FROM PETITIONER'S ENGINEER
December 15, 2014

Mr. Gene Roentz
Roentz Co., LLC
PO Box 140
St. Albans, Missouri 63073

RE: Compaction Testing - Dam Repair
500 Laurey Lane
Wildwood, Missouri
SCI No. 2014-0456.00

Dear Mr. Roentz:

In accordance with your request, SCI Engineering, Inc. obtained density tests on the soil backfill placed in the northeast part of the dam area. It was our understanding that the dam never leaked, but that this area was continually saturated. The existing soils in this area of the dam were removed to natural limestone boulders and bedrock. On-site soils were then placed and compacted in this area. Neither specifications nor development plans existed.

Test results obtained on the soil fill placed in the dam area are shown on the enclosed Compaction Test Summary. The test results were compared to a modified Proctor compaction control curve (ASTM D 1557), developed earlier on a representative sample of the backfill materials. The control curve and other sample information are shown on Figure 1. In general, the soil backfill was compacted to a minimum dry density of at least 90 percent of the modified Proctor maximum dry density. Areas tested indicating densities less than this criteria were rerolled and recompacted until the desired degree of compaction was achieved or rerolled and visually accepted.

We appreciate the opportunity to be of service to you on this project. If you have any questions or comments, please call.

Respectfully,

SCI ENGINEERING, INC.

[Signature]
Thomas A. Gouy
Senior Field Manager

[Signature]
David P. Nolan, P.E.
Senior Engineer/Associate

TAG/DPN/bjs

Enclosures
## Backfill

**Test Method:** ASTM D 1557  
**Specification:** 90% Modified Proctor Control  
**Test Results:** Meets specifications

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COMPACATION TEST REPORT

ASTM D 1557 Modified - Method A

ZaV = 2.70

Maximum Dry Density (pcf): 114.6

Optimum Moisture Content: 13.7%

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Project Name: Laurey Lane Pond
Project Location: Wildwood, Missouri
Client: Gene Roentz
Sample Location: On-site Site Stockpile
Sample Number: A-9204
Date Sampled: 6/3/2014
Material Description: Lean Clay (CL): Light Brown
Source: N/A

Tested By: R. Robertson
Date Tested: 6/5/2014
Reviewed By: M. Rosenberger
Title: Lab Supervisor

SCI Engineering, Inc.
130 Point West Blvd.
St. Charles, Missouri 63301

Figure 1
Joe – As a further followup, the Field Engineer from SCI Engineering called back. He confirmed that all we did was repair the dam that was leaking and replace what was there back to the original level. He said you can call him if you need to. His name is Tom Gouy and his cell phone is 314-575-9487.

Thanks.

Tom Roberts

From: Joe Vujnich <jvujnich@cityofwildwood.com>
Date: Wednesday, June 14, 2017 at 11:55 AM
To: Tom Roberts <troberts@cdcco.com>
Cc: Adam Peetz <apeetz@enviroanalyticsgroup.com>, Gene Roentz <mroentz@charter.net>, Karin <karin.roberts@me.com>
Subject: Re: 500 Laurey Lane - Dam Repair from 2014

Thank you Mr. Roberts. I will review the item today or tomorrow and then advise.

I appreciate the information.

Joe Vujnich

P.S. Thanks to your wife and you for hosting the Commission at the State Route 109 property yesterday.

On Jun 14, 2017, at 11:52 AM, Tom Roberts <troberts@cdcco.com> wrote:

Joe – Here is what I received from SCI on the elevation of the dam at our house that was repaired.

SCI was not tasked to do anything but oversee, monitor and test the dam that was saturated. Per Gene's e-mail thread below, the only work was to repair the dam. After that work was completed under the supervision of SCI, the dam was backfilled and returned to it's original elevation.

Let me know if you need anything else.

Thanks,

Tom Roberts

<CF518B5B-E4A5-421B-8310-C3A1A16A5A00[1].png>
Tom Roberts

Friday, October 13, 2017 at 1:39:11 PM Central Daylight Time

Subject: FW: 500 Laurey Lane - Dam Repair from 2014
Date: Wednesday, June 14, 2017 at 11:52:06 AM Central Daylight Time
From: Tom Roberts
To: Joe Vujnic
CC: Tom Roberts, Adam Peetz, Gene Roentz, Karin

Joe – Here is what I received from SCI on the elevation of the dam at our house that was repaired.

SCI was not tasked to do anything but oversee, monitor and test the dam that was saturated. Per Gene’s e-mail thread below, the only work was to repair the dam. After that work was completed under the supervision of SCI, the dam was backfilled and returned to its original elevation.

Let me know if you need anything else.

Thanks.

Tom Roberts

(314) 836-2888 Direct
(661) 457-1997 FAX
(314) 769-4400 Cell
troberts@cdcoc.com

From: Jim Bauer <Jbauer@sciengineering.com>
Date: Wednesday, June 14, 2017 at 11:38 AM
To: Tom Roberts <troberts@cdcoc.com>
Cc: Tom Gouy <Tgouy@sciengineering.com>
Subject: FW: 500 Laurey Lane - Dam Repair from 2014

Tom,

Attached is our compaction report for the dam repair in 2014. I have asked Tom Gouy who was our PM at that time to give you a call. Also, please see the email chain below. According to Roentz the dam was returned to its previous grade at the time of repair.

Let us know if you need anything else.

Thank you,

Jim

---
From: Marcia Roentz [mailto:mmroentz@gmail.com]
Sent: Wednesday, June 14, 2017 9:29 AM
To: Jim Bauer
Subject: Re: 500 Laurey Lane - Dam Repair from 2014

Jim,

There weren't any benchmarks set. The excavation was to repair the leak on the east side of the dam. When it was backfilled, the excavated area was returned to its original elevation which matched the existing dam.

The only site drawing that shows contours was prepared by Greg Starke at Buescher Ditch. His phone number is 314-852-4124.

Gene

On Jun 14, 2017 8:25 AM, "Jim Bauer" <JBauer@sciengineering.com> wrote:
Gene,

Yesterday afternoon I received a call from Tom Roberts of 500 Laurey Lane. He was asking if we had any documentation of the repaired dam height. It sounded like the City was asking if the dam height had been increased. I took a look through all our documents and don't have anything with elevations. I do know we tested about 19 feet of backfill with the excavation extending below grade. Based on photos it looks like the excavation to bedrock was 6 feet or so.

Do you have any plans with elevations or as-builts to help him out?

Thank you,

Jim

---
James P. Bauer, P.E. | Staff Engineer
SCI Engineering, Inc.
Direct: 636.757.1063
Mobile: 314.575.9535
WATERFALL DESIGN INFORMATION
Design for waterfall structure at 500 Laurey Lane.

This waterfall structure running adjacent to the driveway at 500 Laurey Lane is comprised a simple pumping system, supply and return piping, and a constructed waterfall that is constructed to mimic a small turbulent brook. The reservoir for this system is the adjoining pond and the water supply is pumped with 3 identical 10hp pumps. Due to the irregular nature of this waterfall and intentionally non-homogeneous channel shape calculation will be ran to show the velocity and depths of the channel under maximum and minimum restriction, as well as the expected average (normal) conditions. A drawing sheet showing the basic construction details is attached. Specifications on the pumping equipment are also attached.

Under the provided conditions the pumps are expected to provide approximately 500 gallons/min of flow in total. The pumps will be installed so that they can be operated in various “stages” providing the flow capacity of 1, 2, or all 3 pumps. Only the operating conditions with all three pumps operating will be analyzed as this will provide the anticipated maximum depth and velocity. These analyses are approximate and represent localized conditions. Slight variance in actual conditions is expected due to construction practices.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Channel Characteristics</th>
<th>Flow Characteristics</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>Width (ft)</td>
<td>Slope (ft/ft)</td>
</tr>
<tr>
<td>Maximum Velocity</td>
<td>8</td>
<td>0.3</td>
</tr>
<tr>
<td>Maximum Depth</td>
<td>8</td>
<td>0.05</td>
</tr>
<tr>
<td>Normal Conditions</td>
<td>10</td>
<td>0.15</td>
</tr>
<tr>
<td>Minimum Velocity</td>
<td>12</td>
<td>0.05</td>
</tr>
<tr>
<td>Minimum Depth</td>
<td>12</td>
<td>0.3</td>
</tr>
</tbody>
</table>

All calculations done assuming 67 cubic feet per minute flow rate.

Drawings and pump specifications are attached.
To:
EnvirosAnalytics Group
1650 Des Peres Road, Suite 230
St. Louis, MO 63131

Attention:
Adam Peetz PE
Senior Project Engineer

Email:
apetz@envioranalyticsgroup.com

<table>
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<th>Date Quoted</th>
<th>Quote Valid Until</th>
<th>Est. Lead Time</th>
<th>FOB</th>
<th>Prepared By</th>
<th>Quotation Number</th>
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<td>11/2/2016</td>
<td>12/2/2016</td>
<td>4-6 weeks</td>
<td>SHIPPING POINT</td>
<td>AG</td>
<td>AG110216-1</td>
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<table>
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<tr>
<th>Qty</th>
<th>Item #</th>
<th>Description</th>
<th>Unit Price</th>
<th>Line Amount</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>pump system</td>
<td>consisting of 3 pumps rated at approximately 175GPM @ 100' and a Nema 4/12 panel to control the system. Each pump will be mounted on a 48' long by 15' wide steel base coupled with coupling guard to a 10HP, 3600RPM, 230Volt, single phase, TEFC motor. Also included are 3 inch flanged discharge ball check valves, suction gauges, discharge gauges and air release valves. The pumps will be controlled by a 42&quot; X24' X 8' Nema 4/12 enclosure triplex panel. The panel will come with a 250 ampere main circuit breaker disconnect, 3 10HP, 230 volt 1 phase contactor/overloads, a 120 volt control transformer, 3 time delay switches, a DC power supply, 3 HOA switches, 3 green running pilot lights and a phone control module of your choice.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Best regards,

[Signature]

Tom Unckrich
Specifications:

SUCTION/DISCHARGE .......... 3" x 3" NPT, Female
LIQUID TEMPERATURE .......... 160°F (71°C) Continuous
INTERMEDIATE ............... Cast Iron ASTM A-48, Class 30
VOLUTE ....................... Cast Iron ASTM A-48, Class 30,
                        Removable
BODY .......................... Cast Iron ASTM A-48, Class 30
PEDESTAL ..................... Cast Iron ASTM A-48, Class 30
IMPELLER: Design ............. Semi-Open, Dynamically Balanced,
                             ISO G6.3
                       Material .. Cast Iron ASTM A-48, Class 30
SHAFT .......................... Stainless Steel
SQUARE RINGS ................. Buna-N
HARDWARE ..................... Series Stainless Steel
PAINT .......................... Air Dry Enamel.
SEAL: Design .................. Single Mechanical with Lip Seal
       Lubrication .............. Oil
       Material .................. Rotating Faces - Carbon
                                   Stationary Faces - Ceramic
                                   Elastomer - Buna-N
                                   Hardware -300 Series Stainless
BEARING - PUMP END:
       Design .................. Single Row, Ball
       Lubrication .............. Grease
       Load ..................... Radial
BEARING - DRIVE END:
       Design .................. Single Row, Ball
       Lubrication .............. Grease
       Load ..................... Radial
CHECK VALVE:
       Material ................. Valve Flap-Neorene
                             Weight-Cast Iron ASTM A-48, Class 30
OPTIONAL EQUIPMENT .......... Seal Material, Flex Coupled Assy. with
                             Base & OSHA Guard; Right Hand V-Belt Drive Assy., Left Hand V-Belt Drive
                             Assy., and In-Line Vertical V-Belt Drive Assy. with Base, Motor Adjusting
                             Base and OSHA Guard.

DESCRIPTION:
SELF-PRIMING CENTRIFUGAL PUMPS
DESIGNED FOR MARINE, MUNICIPAL AND
INDUSTRIAL APPLICATIONS
IMPORTANT!

1. DO NOT USE FOR PUMPING FLUIDS WITH A FLASH POINT OF LESS THAN 100°F.
2. MAKE SURE THAT PUMP AND/OR MOTOR ASSEMBLY AND CONTROLS HAVE THE APPROPRIATE RATINGS FOR THE GIVEN APPLICATION.

AREA CLASSIFICATION (e.g. DIVISION I, AGENCY LISTING, ETC.)
Testing is performed with water, specific gravity 1.0 @ 68°F @ (20°C), other fluids may vary performance.
Noise Studies
Sound Level Tests

The Information below is provided for the property at 500 Laurey Lane, Wildwood MO. Tests were performed at 3 different spots along the fence line across from adjacent property. Tests were performed using a Radio Shack Sound Level Meter Cat. NO. 33-2055. Two tests were performed at each of the 3 locations. The test was done with pumps running using A-weighting and also tested with pumps not running using A-weighting.

Location 1: (pumps running)
A weighting 52 dB

Location 1: (pumps not running)
A weighting 52 dB (ambient noise)

Location 2: (pumps running)
A weighting 53 dB

Location 2: (pumps not running)
A weighting 53 dB (ambient noise)

Location 3: (pumps running)
A weighting 55 dB

Location 3: (pumps not running)
A weighting 55 dB (ambient noise)

Tests at Location 1 were done about a quarter of the way down the hill along the fence line. Tests at Location 2 were done half way between the first tests and the top of the hill. Tests at Location 3 were done at the top of the hill along the fence line. As can be seen from the tests, there is no discernable difference in noise levels between the pumps when they were running and when they were not running.

Keith Fennewald,
TO WHOM IT MAY CONCERN,

THE PURPOSE OF THIS TEST IS TO DETERMINE THE SOUND GENERATED BY WATER FEATURE PUMPS. ON AUGUST 12, 2017, I MEASURED AT 3 LOCATIONS ALONG FENCE / PROPERTY LINE ABOUT 50' APART AND THE RESULTS OF THE TEST ARE SHOWN BELOW.

LOCATION #1  53 db A-weighted  PUMPS ON  
              53 db A-weighted  PUMPS OFF

LOCATION #2  53 db A-weighted  PUMPS ON  
              53 db A-weighted  PUMPS OFF

LOCATION #3  54 db A-weighted  PUMPS ON  
              54 db A-weighted  PUMPS OFF

IN CONCLUSION, THERE IS NO MEASURABLE DIFFERENCE IN SOUND PRESSURE LEVEL AT THE PROPERTY LINE WITH PUMPS ON. PLEASE CALL ME @(314)223-0139 IF YOU HAVE ANY QUESTIONS.

THANK YOU,

ERIC CONNORS  owner
EMERGENCY MANAGEMENT PLAN
Guidance for Determining the Emergency Level

This information should be used as a general guide for recognizing and characterizing the type of emergency situation occurring at the dam. The dam owner should notify the appropriate emergency contacts based upon the emergency level assigned to each situation.

Level 1 Emergency - Nonemergency, unusual event, slow to develop
- Reservoir water surface elevation at emergency spillway crest or spillway is flowing with no active erosion.
- New seepage areas in or near the dam.
- New cracks in the embankment greater than ¼-inch wide without seepage.
- Visual movement/slippage of the embankment slope.
- Instrumentation readings beyond predetermined values.
- Measurable earthquake felt or reported on or within 50 miles of the dam.
- Damage (vandalism/sabotage) to dam or appurtenances with no impacts to the functioning of the dam.
- Modification (vandalism/sabotage) to the dam or appurtenances that could adversely impact the functioning of the dam.

Level 2 Emergency - Potential dam failure situation, rapidly developing
- Spillway flowing with active gully erosion.
- Spillway flow that could result in flooding of people downstream, if the reservoir level continues to rise.
- Reservoir level is 1 foot below the top of the dam.
- New seepage areas with cloudy discharge or increasing flow rate.
- Observation of new sinkhole in reservoir area, on embankment or downstream of dam.
- Cracks in the embankment with seepage.
- Earthquake resulting in visible damage to the dam or appurtenances.
- Verified bomb threat that, if carried out, could result in damage to the dam.
- Damage to dam (vandalism/sabotage) or appurtenances that has resulted in seepage flow.

Level 3 Emergency - Urgent; dam failure imminent or is in progress
- Spillway flowing with an advancing headcut that is threatening the control section.
- Spillway flow that is flooding people downstream.
- Water from the reservoir is flowing over the top of the dam (not just auxiliary/emergency spillway).
- Seepage that is obviously eroding soil from within the embankment or rapidly increasing in flow rate.
- Rapidly enlarging sinkhole.
- Sudden or rapidly progressing slides of the embankment slopes.
- Earthquake resulting in uncontrolled release of water from the dam.
- Detonated bomb that has resulted in damage to the dam or appurtenances.
- Damage to dam (vandalism/sabotage) or appurtenances that has resulted in uncontrolled water release.
Emergency Level 1 Notifications

Nonemergency, unusual event; slowly developing.

**Dam Operator or Owner**
Tom Roberts
314-835-2888 (Office)
314-799-4400 (Cell)

(1.)

**State Dam Safety Official**
**Missouri Water Resources Center**
Robert Clay
573-368-2175 (Office)
573-341-5761 (Home)
573-368-6191 (Cell)

(2.)

**Dam Operator’s Technical Reps. (if applicable)**
Owner’s engineer
Adam Peetz
314-616-0279 (Cell)

**Note:**
1., 2., etc., denotes call sequence

**Legend:**
Calls by operator/owner _______
Second level cal.s - - - - -

See *Emergency Services Contacts* sheet for contact information about back-ups to the persons shown above and other emergency personnel.
Emergency Level 2 Notifications

Emergency event, potential dam failure situation; rapidly developing.

Dam Operator or Owner
Tom Roberts
314-835-2888 (Office)
314-799-4400 (Cell)

↓ (1.)

911
County Emergency Director/Sheriff
Jim Buckles
314-615-4724 (office)

(2.)

State Dam Safety Official
Missouri Water Resources Center
Robert Clay
573-368-2175 (Office)
573-341-5761 (Home)
573-368-6191 (Cell)

(3.)

Dam Operator's Technical Reps. (if applicable)
Owner’s engineer
Adam Peetz
314-616-0279 (Cell)

Local Emergency Management Dispatcher

State Dam Safety Official
St. Louis County Amateur Radio Emergency Service:
Steve Wooten
kc0qmu@yahoo.com

Missouri Highway Patrol Dispatcher

National Weather Service
636-447-1876

Local Law Enforcement/Fire Protection Agency Dispatcher

Note:
1., 2., etc., denotes call sequence

Legend:
Calls by operator/owner ______
Second level calls - - - - -

See Emergency Services Contacts sheet for contact information about back-ups to the persons shown above and other emergency personnel.
Emergency Level 3 Notifications
Urgent event, dam failure appears imminent or is in progress.

Dam Operator or Owner
Tom Roberts
314-835-2888 (Office)
314-799-4400 (Cell)

(1.)

911
County Emergency Director/Sheriff
Jim Buckles
314-615-4724 (office)

(2.)

State Dam Safety Official
Missouri Water Resources Center
Robert Clay
573-368-2175 (Office)
573-341-5761 (Home)
573-368-6191 (Cell)

(3.)

Dam Operator's Technical Reps. (if applicable)
Owner's engineer
Adam Peetz
314-616-0279 (Cell)

Local Emergency Management Dispatcher

National Weather Service
636-447-1876

Missouri Highway Patrol Dispatcher

St. Louis County Amateur Radio Emergency Service:
Steve Wooten
kc0qmu@yahoo.com

Local Law Enforcement/Fire Protection Agency Dispatcher

Note:
1., 2., etc., denotes call sequence

Legend:
Calls by operator/owner ______
Second level calls - - - - -

See Emergency Services Contacts sheet for contact information for back-ups to the persons shown above and other emergency personnel.
# Emergency Services Contacts

<table>
<thead>
<tr>
<th>Agency / Organization</th>
<th>Principal Contact</th>
<th>Address</th>
<th>Office Phone No. with Area Code</th>
<th>Alternate Telephone Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>St. Louis County Sheriff</td>
<td>Jim Buckles</td>
<td>7900 Cassadale Ave; 5th Fl. Clayton, MO 63105</td>
<td>314-615-4724</td>
<td></td>
</tr>
<tr>
<td>Owner/Representative of Tom's Dam</td>
<td>Tom Roberts</td>
<td>500 Laurey Ln</td>
<td>314-835-2888</td>
<td>314-799-4400 (C)</td>
</tr>
<tr>
<td>County Emergency Management Director</td>
<td>Michael Smiley</td>
<td>1150 Hana Road Ballwin, MO 63021</td>
<td>314-615-9500</td>
<td></td>
</tr>
<tr>
<td>Wildwood Fire Department</td>
<td>Metro West Fire Protection Dist.</td>
<td>Po Box 310 Wildwood, MO 63040</td>
<td>636-458-2100</td>
<td></td>
</tr>
<tr>
<td>St. Louis County Police</td>
<td>Wildwood Precinct</td>
<td>16860 Main St. Wildwood, MO 63040</td>
<td>636-458-9194</td>
<td></td>
</tr>
<tr>
<td>Missouri Highway Patrol</td>
<td>Troop C</td>
<td>891 Technology Dr. Weldon Spring, MO 63034</td>
<td>636-300-2800</td>
<td></td>
</tr>
<tr>
<td>St. Louis County Dept of Highways &amp; Traffic</td>
<td>Contact Name, Supervisor</td>
<td>10590 N. Lindbergh Blvd. St. Louis, MO 63132</td>
<td>314-615-8538</td>
<td></td>
</tr>
<tr>
<td>Water Resources Center Dam and Reservoir Safety Program</td>
<td>Robert Clay Chief Engineer</td>
<td>111 Fairgrounds Rd. Rolla, MO 65401</td>
<td>573-368-2175</td>
<td>573-341-5761 (H) 573-368-6191 (C)</td>
</tr>
<tr>
<td>Department of Natural Resources Emergency Response</td>
<td>Duty Officer EER</td>
<td>P.O. Box 176 Jefferson City, MO 65102</td>
<td>24 HOUR NO: 573-634-2436</td>
<td>573-526-3380 (Brian Allen, Chief, EER)</td>
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<tr>
<td>SEEMA Duty Officer</td>
<td></td>
<td></td>
<td>573-751-2748</td>
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<td>National Weather Service</td>
<td>Jim Kramper</td>
<td>St. Charles, MO</td>
<td>636-447-1876</td>
<td>1-800-852-7497 636-447-1769 (Fax)</td>
</tr>
<tr>
<td>National Weather Service</td>
<td>Andy Bailey</td>
<td>Kansas City, MO</td>
<td>816-540-5417</td>
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<tr>
<td>National Weather Service</td>
<td>Steve Runnels</td>
<td>Springfield, MO</td>
<td>417-863-1456</td>
<td></td>
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<tr>
<td>National Weather Service</td>
<td>Ricky Shanklin</td>
<td>Paducah, KY</td>
<td>270-744-6440</td>
<td></td>
</tr>
<tr>
<td>Missouri Department of Transportation</td>
<td>Emergency Operation Center 24-hour cell no.</td>
<td></td>
<td>573-522-9503</td>
<td></td>
</tr>
<tr>
<td>Missouri Department of Transportation</td>
<td>County Shed Jason Bell</td>
<td></td>
<td>636-938-5960</td>
<td></td>
</tr>
<tr>
<td>Natural Resources Conservation Service (For NRCS Dams)</td>
<td>Dick Purcell State Engineer</td>
<td>601 Bus. Loop 70 W Columbia, MO 65203</td>
<td>573-876-0910</td>
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## Resources Available

Locally available resources include: (if not available please note)

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<tr>
<th>Heavy Equipment Service and Rental</th>
<th>Sand and Gravel Supply</th>
<th>Ready-mix Concrete Supply</th>
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<tr>
<td>Owner provided</td>
<td>Bussen Quarry – Antire Plant</td>
<td>Breckenridge Material Co</td>
</tr>
<tr>
<td></td>
<td>6800 Bussen Rd</td>
<td>2829 Breckenridge Industrial Ct</td>
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<tr>
<td></td>
<td>Eureka, MO 63025</td>
<td>St Louis, MO 63144</td>
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<td></td>
<td>636) 938-4910</td>
<td>314-962-1234</td>
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<thead>
<tr>
<th>Pumps</th>
<th>Diving Service</th>
<th>Sand Bags</th>
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<tbody>
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<td>K&amp;K Supply</td>
<td>American Underwater Contractors</td>
<td>Bussen Quarry – Antire Plant</td>
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<tr>
<td>535 North Highway Dr.</td>
<td>3426 Forester Rd</td>
<td>6800 Bussen Rd</td>
</tr>
<tr>
<td>Fenton, MO 63026</td>
<td>Hazelwood, MO 63044</td>
<td>Eureka, MO 63025</td>
</tr>
<tr>
<td>636-349-1141</td>
<td>314-739-5235</td>
<td>636-938-4910</td>
</tr>
</tbody>
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Appendix A

Unusual or Emergency Event Log
(To be completed during the emergency)

Dam name: __________________________ County: __________________________

When and how was the event detected?

Weather conditions:

General description of the emergency situation:

Emergency level determination: __________________________ Made by: __________________________

Actions and Event Progression

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<tr>
<th>Date</th>
<th>Time</th>
<th>Action/event progression</th>
<th>Recorded by</th>
</tr>
</thead>
<tbody>
<tr>
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</table>
Appendix B

Glossary

**Abutment**  The part of the valley side against which the dam is constructed. The left and right abutments of dams are defined with the observer looking downstream from the dam.

**Appurtenances**  Structures incident to or annexed to dams essential to the proper operation, maintenance or functioning of the dam. This includes such structures as spillways, low level outlet works and water conduits, such as tunnels, pipelines or penstocks, either through a dam or its abutments.

**Breach**  An opening through the dam that allows draining of the reservoir. A controlled breach is an intentionally constructed opening. An uncontrolled breach is an unintended failure of the dam.

**Control section**  An usually level segment in the profile of an open channel spillway above which water in the reservoir discharges through the spillway.

**Dam**  An artificial barrier generally constructed across a watercourse for the purpose of impounding or diverting water.

**Emergency spillway**  The appurtenant structure that provides the controlled conveyance of excess water through, over, or around the dam.

**Instrumentation**  An arrangement of devices installed into or near dams that provide measurements to evaluate the structural behavior and other performance parameters of the dam and spillway structures. Examples include seepage measuring weirs, piezometers, inclinometers and survey monuments.

**Low level outlet works**  An appurtenant structure, usually consisting of a pipe through the embankment or principal spillway structure equipped with a valve, whose purpose is to allow lowering the lake level.

**Principal spillway**  The appurtenant structure that conveys normal inflow through or around the embankment.

**Reservoir**  The body of water impounded or potentially impounded by the dam.

**Seepage**  The natural movement of water through the embankment, foundation, or abutment of the dam.
## Appendix C

### Record of Holders of Control Copies of this EAP

<table>
<thead>
<tr>
<th>Copy Number</th>
<th>Organization</th>
<th>Person receiving copy</th>
<th>E-mail Address</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Tom Roberts</td>
<td>Tom Roberts</td>
<td><a href="mailto:troberts@cdcco.com">troberts@cdcco.com</a></td>
</tr>
<tr>
<td>2</td>
<td>St. Louis County Emergency Management</td>
<td>Mike Smiley</td>
<td><a href="mailto:msmile@stlouisco.com">msmile@stlouisco.com</a></td>
</tr>
<tr>
<td>3</td>
<td>Missouri Department of Natural Resources Dam Safety Program and address</td>
<td>Bob Clay</td>
<td><a href="mailto:bob.clay@dnr.mo.gov">bob.clay@dnr.mo.gov</a></td>
</tr>
</tbody>
</table>

### Record of Revisions and Updates Made to EAP

<table>
<thead>
<tr>
<th>Revision Number</th>
<th>Date</th>
<th>Revisions made</th>
<th>By whom</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Date</td>
<td>Describe revision to EAP</td>
<td>Name</td>
</tr>
</tbody>
</table>
I hope that all the Commission Members are able to attend the Monday, June 15, 2020 Subcommittee Meeting to participate in the discussion of this incomplete Site Development Plan and ongoing public health issue.

I agree with the Planning Department’s finding that the required lake water pretreatment, treatment and maintenance are insufficient. The petitioner’s claim that the lake water is clean has been disproven by Wildwood’s own testing. The lake water has high levels of algae, high levels of nutrients (nitrogen and phosphorus) that feed the algae, and toxins that are a product of the algae. These are all harmful to human health. As required by the Department of Planning, lake water pretreatment, treatment and good lake management are essential for the protection and health of the Wildwood community. I have attached the EPA Cyanobacteria and Cyanotoxins Fact Sheet.

I also agree with the Planning Department’s findings that the outfall (Pond Drain) engineering calculations and supporting documentation need to be provided as requested in order to show that the outfall design is safe for Wildwood residents downstream.

I agree with the Planning Department’s final review of the Site Development Plan dated May 26, 2020, that the requirements to complete the CUP have not been met. Final approval for the CUP should not be granted until all conditions are satisfied.

No plumbing permits for the fountain or waterfall were provided to the City of Wildwood. The Wildwood plumbing code (UPC 1504.10.2) requires that reuse of stormwater runoff “in which it is sprayed or exposed shall be disinfected.”

The waterfall sourced by the untreated lake water continues to be a health hazard and should not be allowed to run until the CUP conditions are met as agreed to by the Commissioners. It is our request as residents of Wildwood, protected by City Code and Ordinances, that the proper notification be given to the petitioner to immediately cease all operation of the unpermitted waterfall. Furthermore, if the violation is not corrected, the appropriate summons be issued to allow the process of a legal remedy be engaged to protect our and the community’s health and safety as provided in the City Code.
David Hudson Comments Regarding P.Z. 15-17 Tom Roberts Large Water Feature

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Summary
This fact sheet provides public water systems (PWSs) basic information on human health effects, analysis tools, and the effectiveness of various treatment processes to remove or inactivate four commonly occurring cyanotoxins in water bodies that are a source of drinking water throughout most of the U.S. Cyanotoxins are listed on the EPA’s fourth drinking water Candidate Contaminant List and include, but are not limited to, anatoxin-a, cylindrospermopsin, microcystins, and saxitoxin. This fact sheet does not address taste and odor issues caused by the cyanobacteria and will only focus on discussions of anatoxin-a, cylindrospermopsin, microcystins, and saxitoxin.

cylindrospermopsin in drinking water for children pre-school age and younger (less than six years old). For school-age children through adults, the recommended HA levels for drinking water are at or below 1.6 µg/L for microcystins and 3.0 µg/L for cylindrospermopsin. Young children are more susceptible than older children and adults as they consume more water relative to their body weight.

There are currently a few states that have established cyanotoxin monitoring guidelines and cyanotoxin threshold levels for public water systems (PWSs). PWSs are responsible for following those guidelines/thresholds and for undertaking any follow-up action required by their state.

Background
The Safe Drinking Water Act (SDWA) protects public health by regulating the nation's public drinking water supply, which relies on sources that include: rivers, lakes, reservoirs, springs, and ground water wells. The SDWA requires the EPA to publish a list of unregulated contaminants that are known or expected to occur in public water systems in the U.S. that may pose a risk in drinking water. This list is known as the Contaminant Candidate List (CCL).

The cyanotoxins included in the most recent CCL are produced by several species of cyanobacteria (cyanobacteria are known as blue-green algae). No federal regulatory guidelines for cyanobacteria or their toxins in drinking water or recreational waters exist at this time. The EPA published drinking water health advisories (HA) for microcystins and cylindrospermopsin in June 2015. The EPA recommends HA levels at or below 0.3 µg/L for microcystins and 0.7 µg/L for

Causes of cyanobacterial harmful algal blooms
Cyanobacteria are photosynthetic bacteria that share some properties with algae and are found naturally in lakes, streams, ponds, and other surface waters. Similar to other types of algae, when conditions are favorable, cyanobacteria can rapidly multiply in surface water and cause "blooms." Several types of cyanobacteria, for example Dolichospermum (previously Anabaena) flos-aquae, have gas-filled cavities that allow them to float to the surface or to different levels below the surface, depending on light conditions and nutrient levels. This can cause the cyanobacteria to concentrate on the water surface, causing a pea-soup green color or blue-green "scum." Some cyanobacteria, such as Planktothrix agardhii, can be found in bottom sediments and float to the surface when mobilized
by storm events or other sediment disturbances. Other cyanobacteria blooms may remain dispersed through the water column (such as *Raphidiopsis*, previously *Cylindrospermopsis* sp.) leading to a generalized discoloration of the water.

**Conditions that enhance growth of cyanobacterial harmful algal blooms**

Factors that promote cyanobacterial bloom formation and persistence include:
- Extended periods of direct sunlight,
- Elevated nutrient availability (especially phosphorus and nitrogen),
- Elevated water temperature,
- pH changes,
- An increase in precipitation events,
- Calm or stagnant water flow, and water column stability/lack of vertical mixing.

Although bloom conditions in much of the U.S. are more favorable during the late summer, the interrelationship of these factors causes large seasonal and year-to-year fluctuations in the cyanobacteria levels. Some toxin-producing strains can occur early in the summer season while others are only found during late summer.

**Effects of cyanobacterial harmful algal blooms**

Cyanobacterial blooms can be harmful to the environment, animals, and human health. The bloom decay consumes oxygen, creating hypoxic conditions which result in plant and animal die-off. Under favorable conditions of light and nutrients, some species of cyanobacteria produce toxic secondary metabolites, known as cyanotoxins. Common toxin-producing cyanobacteria are listed in Table 1. The conditions that cause cyanobacteria to produce cyanotoxins are not well understood. Some species with the ability to produce toxins may not produce them under all conditions. These species are often members of the common bloom-forming genera. Both non-toxic and toxic varieties of most of the common toxin-producing cyanobacteria exist, and it is impossible to tell if a species is toxic or not toxic by looking at it. Also, even when toxin-producing cyanobacteria are present, they may not actually produce toxins. Furthermore, some species of cyanobacteria can produce multiple types and variants of cyanotoxins. Molecular tests are available to determine if the cyanobacteria, *Microcystis* for example, carry the toxin-producing gene. However, quantitative cyanotoxin analysis is needed to determine if the cyanobacteria are producing the toxin. Water contaminated with cyanobacteria can occur without associated taste and odor problems.

In most cases, the cyanobacterial toxins naturally exist intracellularly (in the cytoplasm) and are retained within the cell. Approximately 95% of anatoxin-a and the microcystin variants are found intracellularly during the growth stage of the bloom of certain cyanobacteria species. When the cyanobacteria cell dies or the cell membrane ruptures or is stressed, the toxins are released into the water (called “extracellular” toxins). However, more significant proportions of other cyanotoxins such as cylindrospermopsin, can be naturally released to the water by the live cyanobacterial cell. The reported ratio is about 50% intracellular and 50% extracellular during the growth stage of the bloom. Extracellular toxins may adsorb to clays and organic material in the water column and are generally more difficult to remove than the intracellular toxins.

**Health effects caused from exposure to cyanotoxins**

Exposure to cyanobacteria and their toxins could occur by ingestion of drinking water contaminated with cyanotoxins and through direct contact, inhalation and/or ingestion during recreational activities. The acute recreational exposure to cyanobacterial blooms and their cyanotoxins can result in a wide range of symptoms in humans including fever, headaches, muscle and joint pain, blisters, stomach cramps, diarrhea, vomiting, mouth ulcers, and allergic
reactions (see Table 1).

### Table 1. Cyanotoxins on the Contaminant Candidate List (CCL)

<table>
<thead>
<tr>
<th>Cyanotoxin</th>
<th>Number of Variants</th>
<th>Primary Organ Affected</th>
<th>Health Effects(^1)</th>
<th>Most Common Cyanobacteria Producing Toxin(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Microcystins</td>
<td>&gt;100</td>
<td>Liver</td>
<td>Abdominal pain, Vomiting and diarrhea, Liver inflammation and hemorrhage, Acute pneumonia, Acute dermatitis, Kidney damage, Potential tumor growth promotion</td>
<td><em>Microcystis, Dolichospermum (previously Anabaena), Nodularia, Planktothrix, Fischerella, Nostoc, Oscillatoria, and Gloeotrichia</em></td>
</tr>
<tr>
<td>Cylindrospermopsin</td>
<td>3</td>
<td>Liver</td>
<td></td>
<td><em>Raphidiopsis (previously Cylindrospermopsis) raciborskii, Aphanizomenon flos-aquae, Aphanizomenon gracile, Aphanizomenon ovalisporum, Umezakia natans, Dolichospermum bergii, Dolichospermum lappenica, Dolichospermum planctonica, Lyngbya wollei, Rhaphidiopsis curvata, and Rhaphidiopsis mediterranea</em></td>
</tr>
<tr>
<td>Anatoxin-a group(^3)</td>
<td>2-6</td>
<td>Nervous System</td>
<td>Tingling, burning, numbness, drowsiness, incoherent speech, salivation, respiratory paralysis leading to death (symptoms observed in animals)</td>
<td><em>Chrysochromulina (Aphanizomenon) ovalisporum, Cuspidothrix, Raphidiopsis, Cylindrospermum, Dolichospermum, Microcystis, Oscillatoria, Planktothrix, Phormidium, Dolichospermum flos-aquae, A. lemmersmannii Raphidiopsis mediterranea</em> (strain of Raphidiopsis raciborskii), Tychonema and Woronichinia</td>
</tr>
<tr>
<td>Saxitoxin</td>
<td>&gt;50</td>
<td>Nervous System</td>
<td>Tingling, numbness, headaches, dizziness, nausea, vomiting and diarrhoea, temporary blindness, paralysis and death</td>
<td><em>Aphanizomenon flos-aquae, Dolichospermum circinalis, Lyngbya wollei, Planktothrix spp. and a Brazilian isolate of Raphidiopsis raciborskii.</em></td>
</tr>
</tbody>
</table>

\(^1\) Sources: Health Effects Support Documents (HESD) for microcystins, cylindrospermopsin and anatoxin-a (US EPA c,d,e) and Testai et al., 2016

\(^2\) Not all species of the listed genera produce toxin; in addition, listed genera are not equally as important in producing cyanotoxins.

\(^3\) The anatoxin-a group does not include the organophosphate toxin anatoxin-a(S) as it is a separate group. In the US, the most common member is thought to be anatoxin-a, and thus this toxin is listed specifically.
Such effects can occur within minutes to days after exposure. In severe cases, seizures, liver failure, respiratory arrest, and (rarely) death may occur. The cyanotoxins include neurotoxins (which affect the nervous system), hepatotoxins (which affect the liver), and dermatoxins (which affect the skin). However, there have been new studies of effects in other systems, including hemotological, kidney, cardiac, reproductive, and gastrointestinal effects. There is evidence that long-term exposure to low levels of microcystins and cylindrospermopsin may promote cell proliferation and the growth of tumors. However, more information is needed to determine the carcinogenicity of both microcystins and cylindrospermopsin.

There have been many documented reports of dog, bird and livestock deaths throughout the world as the result of consumption of surface water with cyanobacterial blooms. In 1996, 116 patients at a renal dialysis clinic in Caruaru, Brazil experienced headache, eye pain, blurred vision, nausea and vomiting when they were exposed intravenously to water containing a mixture of microcystin and cylindrospermopsin (Carmichael et al., 2001). Subsequently, 100 of the affected patients developed acute liver failure and, of these, 76 died. Analyses of blood, sera, and liver samples from the patients revealed only the microcystin toxin.

Analytical Methods

Table 2 describes the methods available for cyanotoxin measurement in freshwater. For drinking water, the EPA developed Method 544, a liquid chromatography/tandem mass spectrometry (LC/MS/MS) method for microcystins and nodularin (combined intracellular and extracellular), Method 545, a LC-ESI/MS/MS method for the determination of cylindrospermopsin and anatoxin-a, and Method 546, an ADDA-ELISA method.

Commerciably available Enzyme-Linked Immunosorbent Assay (ELISA) test kits are one of the more commonly utilized cyanotoxin testing methods, since they do no require expensive equipment or extensive training to run. Semi-quantitative field screening ELISA kits are available for the presence or absence of cyanotoxins. If cyanotoxins are detected by a field screening kit, repeat analysis is recommended using either a quantitative ELISA test or one of the other analytical methods identified in Table 2. More precise, quantitative ELISA test kits are available for microcystins/nodularins (including ADDA-ELISA), saxitoxin, anatoxin-a, and cylindrospermopsin. Although they provide rapid results, ELISA kits generally have limitations in selectivity and are not congener specific and recognizing different congeners can vary quantitatively due to different cross-reactivities.

Methods that utilize liquid chromatography combined with mass spectrometry (LC/MS) can precisely and accurately identify specific microcystin congeners for which standards are available. LC/MS methods have also been designed to minimize matrix interference. Currently, a few standards for a limited number of the known microcystin congeners are available. If congener-specific information is needed, an LC/MS (ion-trap, tandem mass spectrometry, TOF) method should be considered. Although HPLC-PDA methods are less selective than LC/MS methods and the quantitation is more problematic due to sample matrix interference, they could provide a measure of resolution of the congeners present. You may also consult the EPA Frequently Asked Questions: Laboratory Analysis for Microcystins in Drinking Water for more information.

Sample handling considerations

Samples must be handled properly to ensure reliable results. Detailed procedures are typically specified in the particular analytical methods/SOPs. Water systems should obtain and follow sample collection and handling procedures established by the laboratory performing the analysis. Laboratories establishing such procedures should adhere to analytical method defined protocols but may also consult the USGS sampling protocol Guidelines for design and sampling for cyanobacterial toxins and taste-and-odor studies in lakes and reservoirs (2008).
<table>
<thead>
<tr>
<th>Methods</th>
<th>Anatoxins</th>
<th>Cylindrospermopsin</th>
<th>Microcystins</th>
<th>Saxitoxin</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Biological Assays</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mouse</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Protein Phosphatase Inhibition Assays (PPIA)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>Neurochemical</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td></td>
</tr>
<tr>
<td>Enzyme-Linked Immunosorbent Assays (ELISA)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Chromatographic Methods</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Gas Chromatography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gas Chromatography with Flame Ionization Detection (GC/FID)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Gas Chromatography with Mass Spectrometry (GC/MS)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td><strong>Liquid Chromatography</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid Chromatography / Ultraviolet - Visible Detection (LC/UV or LC/PDA)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Liquid Chromatography/ Fluorescence (LC/FL)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td><strong>Liquid Chromatography Combined with Mass Spectrometry</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Liquid Chromatography Ion Trap Mass Spectrometry (LC/IT MS)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Liquid Chromatography Time-of-Flight Mass Spectrometry (LC/TOF MS)</td>
<td>Yes</td>
<td>Yes</td>
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<td>Yes</td>
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<tr>
<td>Liquid Chromatography Single Quadrupole Mass Spectrometry (LC/MS)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Liquid Chromatography Triple Quadrupole Mass Spectrometry (LC/MS/MS)</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Among the most important sample handling considerations are the following:

- **Collection** – Bottle type, volume, and preservative used depend on the laboratory doing the analysis. Generally, samples should be collected and stored in amber glass containers to avoid potential cyanotoxin adsorption associated with plastic containers and to minimize exposure to sunlight.
- **Quenching** – samples (particularly “finished” drinking water samples) that include a residual disinfectant, e.g., chlorine, should be quenched immediately upon sampling. Sodium thiosulfate or ascorbic acid are commonly used as quenching agents and their appropriateness can be specific to the analytical method selected to meet the monitoring data quality objectives. For example, EPA Method 544, an LC/MS/MS technique for measuring six microcystin congeners and nodularin in drinking water, specifies the use of ascorbic acid, along with other sample preservation reagents. On the other hand, EPA Method 546
Sample analysis considerations
When measuring both intracellular and extracellular toxins, rupturing cyanobacterial cells (lysing) is generally employed to break the cell wall and release the toxins into solution. Freeze/thaw cycling, traditionally carried out over three or more cycles, is the most common lysing technique, though some analytical methods rely on other approaches. Lysing is particularly important for samples collected prior to the PWS filter effluent. For a well-designed, well-operated PWS, lysing would not be expected to have a significant impact on finished water (post-filtration) samples as cyanobacteria cells should not be present at significant levels in the finished water. However, laboratories must carefully follow the requirements of the analytical methods and mandated monitoring programs, which may require lysing for all samples. Some analysts elect to confirm the effectiveness of raw-water lysing (or to judge the need for finished-water lysing) using microscopic examination for intact algal cells.

Cyanotoxin treatment and bloom management
Once cyanobacteria and/or their cyanotoxins are detected in the surface water supplying the water system, the treatment system operators can act to remove or inactivate them in several ways. Some treatment options are effective for some cyanotoxins, but not for others. Effective management strategies depend on understanding the growth patterns and species of cyanobacteria that dominates the bloom, the properties of the cyanotoxins (i.e., intracellular or extracellular), and appropriate treatment processes. For example, oxidation of microcystin depends on the chlorine dose, pH, and the temperature of the water. Applying the wrong treatment process at a specific state in treatment could damage cells and result in the release rather than removal of cyanotoxins.

Table 3 summarizes the effectiveness of different types of water treatment to remove intact cyanobacteria cells and treatment processes that are effective in removing extracellular dissolved toxins of several of the most important cyanobacteria. You may also consult the EPA Water Treatment Optimization for Cyanotoxins document for more information.

To avoid the release of cyanotoxins into the water, drinking water treatment operators can undertake different management strategies to deal with cyanobacteria blooms. For example, those drinking water utilities that have access to more than one intake can switch to an alternate source that is not as severely impacted by the bloom. Another management alternative is to adjust intake depth to avoid drawing contaminated water and cells into the treatment plant.

Pretreatment oxidation at the intake poses several concerns with respect to lysing cells and releasing toxins. Copper sulfate and ozone at the intake are not recommended because of the risk of lysing algal cells. Chlorination, in addition to lysing the cells, has the potential to produce disinfection by-products during water treatment. If pretreatment oxidation is needed, it is important to carefully evaluate the influent, as successful pre-oxidation depends on the algal species, oxidant and dose.
<table>
<thead>
<tr>
<th>Treatment Process</th>
<th>Relative Effectiveness</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Intracellular Cyanotoxins Removal (Intact Cells)</strong></td>
<td></td>
</tr>
<tr>
<td>Pre-treatment oxidation</td>
<td>Oxidation often stresses or lyses cyanobacteria cells releasing the cyanotoxin to the water. If oxidation is required to meet other treatment objectives, consider using lower doses of an oxidant less likely to lyse cells. If oxidation at higher doses must be used, sufficiently high doses should be used to not only lyse cells but also destroy total toxins present (see extracellular cyanotoxin removal).</td>
</tr>
<tr>
<td>Coagulation/ Sedimentation/ Filtration</td>
<td>Effective for the removal of intracellular toxins (cyanobacteria cells). Ensure that captured cells accumulated in sludge are removed frequently so as not to release toxins. Ensure that sludge supernatant is not returned to the supply after sludge separation.</td>
</tr>
<tr>
<td>Membranes</td>
<td>Effective for removal of intracellular cyanotoxins (cyanobacteria cells). Microfiltration and ultrafiltration are effective when cells are not allowed to accumulate on membranes for long periods of time. More frequent cleaning may be required during a HAB.</td>
</tr>
<tr>
<td>Flotation</td>
<td>Flotation processes, such as Dissolved Air Flotation (DAF), are effective for removal of intracellular cyanotoxins since many of the toxin-forming cyanobacteria are buoyant.</td>
</tr>
<tr>
<td><strong>Extracellular (Dissolved) Cyanotoxins Removal</strong></td>
<td></td>
</tr>
<tr>
<td>Membranes</td>
<td>Depends on the type of cyanotoxin, membrane material, membrane pore size distribution, and influent water quality. Nanofiltration is generally effective in removing extracellular microcystins. Reverse osmosis filtration is generally applicable for removal of microcystins and cylindrospermopsin. Cell lysis is highly likely. Further research is needed to characterize performance.</td>
</tr>
<tr>
<td>Potassium Permanganate</td>
<td>Effective for oxidizing microcystins and anatoxins. Further research is needed for cylindrospermopsin. Not effective for oxidizing saxitoxin.</td>
</tr>
<tr>
<td>Ozone</td>
<td>Very effective for oxidizing microcystins, anatoxin-a, and cylindrospermopsin. Not effective for oxidizing saxitoxin.</td>
</tr>
<tr>
<td>Chloramines Chlorine dioxide</td>
<td>Not effective. Not effective at doses typically used in drinking water treatment.</td>
</tr>
<tr>
<td>Free Chlorine</td>
<td>Effective for oxidizing microcystins as long as the pH is below 8. Effective for oxidizing cylindrospermopsin and saxitoxin. Not effective for oxidizing anatoxin-a.</td>
</tr>
<tr>
<td>UV Radiation</td>
<td>UV radiation alone is not effective at oxidizing microcystins and cylindrospermopsin at doses typically used in drinking water treatment. When UV radiation is coupled with ozone or hydrogen peroxide (called &quot;advanced oxidation&quot;), the process is effective at oxidizing anatoxin-a, cylindrospermopsin, and with high UV doses, microcystins.</td>
</tr>
<tr>
<td>Treatment Process</td>
<td>Relative Effectiveness</td>
</tr>
<tr>
<td>-------------------</td>
<td>------------------------</td>
</tr>
</tbody>
</table>
| Activated Carbon Adsorption | **Powdered activated carbon (PAC):** Effectiveness of PAC adsorption varies based on type of carbon, pore size, type of cyanotoxin, and other water quality parameters such as NOM concentration. Wood-based activated carbons are generally the most effective at microcystins adsorption. More research is needed to evaluate PAC’s effectiveness at adsorbing cylindrospermopsin, anatoxin-a, and saxitoxin, however the limited research has demonstrated promising results. Doses in excess of 20mg/L may be needed for complete toxin removal, especially if NOM concentrations are high.  
**Granular activated carbon (GAC):** Effectiveness of GAC adsorption varies based on type of carbon, pore size, type of cyanotoxin, and other water quality parameters such as NOM concentration. GAC is effective for microcystins, and likely effective for cylindrospermopsin, anatoxin-a and saxitoxin. The condition of the carbon is an important factor in determining GAC’s effectiveness for cyanotoxin removal. GAC may need to be regenerated more frequently to ensure adequate adsorption capacity for HAB season. |

In-line application of powdered activated carbon (PAC) could also be used to remove any toxins that may have been released.

**Intracellular cyanotoxin removal**

The conventional drinking water treatment processes (coagulation, flocculation, sedimentation and filtration) can be effective in removing intracellular cyanotoxins (cyanobacteria cells). Coagulation, flocculation and dissolved air flotation (DAF) are more effective than sedimentation. Microfiltration and ultrafiltration are highly effective at removing intact cyanobacterial cells. During an active bloom, operators may need to alter process parameters to account for the increased loading of cyanobacteria. It may be necessary to backwash filters more frequently to prevent retained cells from releasing intracellular toxins.

**Physical removal of extracellular cyanotoxins**

Common treatment techniques for the removal of extracellular toxins include adsorption by activated carbon, membrane filtration and chemical inactivation (disinfectants and oxidants). Both powdered activated carbon (PAC) and granular activated carbon (GAC) have been effective in adsorbing microcystins and cylindrospermopsin, although microcystin variants may have different adsorption efficiencies. The performance of activated carbon depends on the concentration of the toxin, influent water quality (i.e., NOM concentration), PAC dose, and type of activated carbon. Jar tests are recommended to test the effectiveness of various PAC types and doses, with the implementation of the carbon with the greatest capacity for removal of the target contaminants. GAC filters are effective in removing microcystins if they are properly regenerated to ensure adequate adsorption capacity is maintained. Nanofiltration and reverse osmosis may be effective in removing cylindrospermopsin and microcystin. However, site specific tests are recommended as removal efficiency depends on the membrane pore size distribution and water quality.
Oxidation of extracellular cyanotoxins

Ultraviolet (UV) radiation is not effective at typical water treatment plant doses. Much higher doses are required to photolytically destroy microcystin, anatoxin-a, and cylindrospermopsin. For example, UV inactivation dose for *Cryptosporidium parvum* is about 40 mJ/cm², while the photolytic destruction dose for microcystin, cylindrospermopsin, anatoxin-a and saxitoxin ranges between 1530 to 20,000 mJ/cm². UV has been used along with a catalyst (e.g., ozone, hydrogen peroxide, or titanium dioxide) to oxidatively decompose the toxins (this is typically called advanced oxidation). However, the effectiveness of this process is largely dependent on the organic content of the water.

Oxidants such as free chlorine, ozone and permanganate can be used to inactivate microcystins but free chlorine’s effectiveness is pH-dependent (ideal range is 6-8). Anatoxin-a is resistant to oxidation by free chlorine. Ozone is an effective oxidant for microcystins, but its efficacy may be affected by the presence of organic matter. Ozone can also be used as an oxidant for anatoxin-a and cylindrospermopsin; however, ozone is pH-dependent for the oxidation of anatoxin-a (pH 7 to 10) and for cylindrospermopsin (4 and 10). Ozone is not effective for oxidizing saxitoxin. Permanganate is effective in oxidizing microcystin and anatoxin-a (from pH 6 to 8), but is not effective for cylindrospermopsin. Chloramines and chlorine dioxide are not effective treatments for microcystin, anatoxin-a or cylindrospermopsin.

Formation of disinfection by-products is another potential problem with the use of ozone, copper sulfate, and chlorine when there are high bromide concentrations in the water. However, results from studies on the impact of chlorination of cell-bound toxins and resulting disinfection by-products formation are contradictory. Most of the findings suggest that pre-chlorination should ideally be avoided during blooms, unless adequate CT values can be guaranteed to ensure efficient oxidation of lysed cyanobacteria and the resulting extracellular cyanotoxins.

Drinking water operators are encouraged to monitor the treated water to confirm the removal of cyanotoxins.

Developing a Risk Management Plan

Water supply managers should consider developing a risk management plan for cyanobacterial bloom occurrence, especially those systems with source waters that are susceptible to HABs. Elements of such a plan should include monitoring, treatment and communication components. The plan could include a monitoring program to determine sampling locations and schedule; sample volume; whether to sample for cyanobacterial cells or specific cyanotoxins or both; which analytical screening test to use; and conditions when it is necessary to send sample(s) to an identified laboratory for confirmation. The EPA published Recommended Recreational Ambient Water Quality Criteria or Swimming Advisories for two Cyanotoxins, Microcystins and Cylindrospermopsin, that public water systems could use as part of the monitoring program during a severe bloom event with high levels of cyanobacteria and cyanotoxins in a surface water used for recreation and as a supply for drinking water treatment facilities. As part of the management plan, water supply managers should also develop strategies for effective treatment approaches to reduce the potential of cyanotoxins in the finished water. Additionally, as part of the plan, water supply managers should develop a communication plan that identifies the required communication steps to coordinate with the agencies involved, the appropriate actions that must be taken, and the steps to inform consumers and the public. The following are potential EPA resources for developing a management plan:

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1 A CT value is used in the calculation of disinfectant dosage for chlorination of drinking water. A CT value, the product of the concentration of a drinking water disinfectant and the contact time with the water being disinfected (typically expressed in units of mg-min/L).
- Recommendations for Public Water Systems to Manage Cyanotoxins in Drinking Water
- Cyanotoxin Management Plan Template and Example Plans
- Drinking Water Cyanotoxin Risk Communication Toolbox

For more information
Additional information on cyanobacteria and cyanotoxins is available on the EPA’s Cyanobacteria Harmful Algal Blooms (CyanoHABs) in Water website: [https://www.epa.gov/cyanohabs](https://www.epa.gov/cyanohabs)

Additional information and resources about cyanotoxins in drinking water is available on the EPA’s Cyanotoxins in Drinking Water webpage: [https://www.epa.gov/ground-water-and-drinking-water/cyanotoxins-drinking-water](https://www.epa.gov/ground-water-and-drinking-water/cyanotoxins-drinking-water)

Contact Dr. Lesley D’Anglada at the EPA Office of Water at (202) 566-1125 or denglada.lesley@epa.gov

References


recreational water environments. Volume 1, Coastal and fresh waters. ISBN 92 4 154580 1, 33pp.
Available on line at:
http://www.who.int/water_sanitation_health/bathing/sr
wel/en/


Planning and Zoning Commission,

The Site Plan Subcommittee recently voted to recommend removal of the lake water treatment requirement from the Conditional Use Permit (CUP). No justification was provided for this change. The CUP called for pretreatment to keep additional nutrients and contaminants from entering the lake, treatment to reduce the existing excessive nutrients and contaminants, and maintenance to insure that the lake water remains safe to reuse in the waterfall which sprays lake water into the air. Elimination of treatment is unwarranted given the existing impaired state of the lake water based on Missouri Department of Natural Resources (MoDNR) standards. The lake water test performed in October 2019 for the Planning and Zoning Commission showed an algae level 7 times the MoDNR warning level and that the nutrient; phosphorus, that feeds the algae had increased from 3 times to 19 times the warning level over the previous year. Please read the analysis of the lake water quality by the MoDNR Water Quality Section Chief. This concentration of algae in the lake water causes respiratory irritation and odors which require us to go indoors when the waterfall is running. Also, please read the opinion below of Rick Archeski (Corps of Engineers and previous Chair of the Planning and Zoning Commission) regarding the lake and waterfall.

Respectfully,
David Hudson

Please include these comments in the packet for July 20, 2020 Planning and Zoning Meeting.
MoDNR Water Quality Section Chief Analysis:

I have reviewed the analytical results you sent and here are a few observations:

Pathogen Panel
Although I am not sure of the specific method used for determining the presence/absence, the absence would indicate at the lowest level possible for the test, nothing was detected. I did note the E. coli is a specific strain. For our environmental monitoring we typically look at a broader group of E. coli so, as discussed on the phone, it is possible there would be other species present. E. coli 0157 is the typical one you hear about with food contamination so it is probably the most commonly tested for from a health perspective.

Microbial Analyzes
I am not directly familiar with the bacterial ID testing as we do not conduct this type of analysis. A few general observations though...HPC is Heterotrophic Plate Count. So they in some way were able to isolate strains and culture them to count them. The cfu unit is Colony Forming Units. Again implying they physically counted colony growth in the growth media after a period of time. I do not have any point of reference for the count numbers to know if this is low, normal, or high. From a quick literature search on the particular bacteria identified, they both seem to be common soil bacteria, so I am not sure if it is unusual to find them or find them in these quantities.

Also, I am not sure why there is a difference between the lake and water feature samples. My basic assumption would be that since the water feature pulls from a suspended, at depth area of the lake it is not capturing as many bacteria as might occur when sampled directly from the lake near shore. But again, this is just a guess.

Chemical Analyzes
As you know from your nursing background, any result needs a point of reference to determine what it might indicate. For me, the point of reference would be our environmental regulatory standards or the Missouri Water Quality Standards. MO just recently codified nutrient standards for lakes. So that is the best point of reference I have to compare the lake sample. As you have mentioned this lake would not fall into our regulatory authority since MO defines classified lakes as those greater than 10 acres. Our protocols also require at least 4 samples under representative conditions (not immediately after a heavy rainfall, extreme drought where the water levels are significantly reduced, etc.) collected between 5/1 and 9/30 of a calendar year; would need at least 3 years of data (do not have to be consecutive years); data would have to be collected in association with a Quality Assurance Project Plan; and parameters must include chlorophyll-a, total nitrogen (TN), total phosphorus (TP), and secchi depth. So there are some obvious differences with this sampling event. However, if this data had been collected on a classified waterbody it would retained until further information could be gathered and prioritized for additional sampling. That all said here is a summary of the criteria we would use to evaluate the analytical data:

This area of the state would fall into what we call the Ozark Highland Ecoregion. This is a region that we would expect there to be similarities based upon a number of ecological and geophysical conditions.

1. The first thing to be evaluated is chlorophyll-a. If the yearly geometric mean of the samples collected exceeds 15 ug/L in any of the 3 years’ worth of data, it would be considered impaired.
2. If the chlorophyll-a criteria is not exceeded then TN, TP, and chlorophyll-a will be compared to a screening threshold. Again for the Ozark Highlends: TP = 16 ug/L, TN = 401 ug/L, or chlor.a = 6 ug/L. If any of these thresholds are exceeded by the geometric mean in a year, then they would continue to the next step to evaluate if other assessment endpoints were also present in the same year.
3. A summary of the additional assessment endpoints are:
   a. Fish or other aquatic organism kills
b  Assessment of dissolved oxygen and pH levels in the surface layer of the lake
  c  Cyanobacteria counts exceeding 100,000 cells/mL. If cell counts are not available, toxin levels
      for Microcystin (other toxins are also included but I will just reference MC due to this specific
      example) exceeding 4.0 ug/L.
  d  Shifts in aquatic diversity attributed to excessive nutrients
  e  Excessive levels of mineral turbidity during the sampling period.

According to the PDC laboratory analytical results for the lake:
TN = 1600 ug/L (the listed results are in mg/L so have to be converted to ug/L)
TP = 300 ug/L (the listed results are in mg/L so have to be converted to ug/L)
Chl-a = 44 ug/L (converted from mg/m^3)
MC = 0.372 ug/l.

If these had been collected from a classified waterbody, these results would indicate a high likelihood of
nutrient impairment in this lake. All but MC greatly exceeded the listed nutrient criteria. Additional
sampling would be recommended to gather the required number of samples within the appropriate
sampling window so an accurate assessment could be conducted. Although the MC did not exceed the
toxin criteria, it was detected at a reportable level in the lake. This would indicate that a genera capable
of producing the toxin is present. It is difficult to further assess this information without further
observation of the waterbody... was a bloom occurring at the time of the sampling, was the bloom
impacting the entire lake or only a portion, where was the sample collected in relation to the bloom, was
the bloom just starting or beginning to die off, etc. Given the nutrient levels presented, it is likely
cyanoacteria blooms will be a problem for this lake.

Regardless of nutrient criteria cyanobacteria present a number of concerns and given that toxin presence
has already been identified the level of concern would be increased. Had this information on the lake been
reported to our Harmful Algal Bloom response team by the owner, we would have recommended further
testing. For recreation purposes the MC criteria action level is 8 ug/L (different from the nutrient
impairment level). If this level is exceeded we recommend all contact and recreational activity be
eliminated until test results show the levels have dropped below the level or the bloom as dissipated and
is no longer visible for at least 2 weeks. Even at lower levels some people may be more sensitive to the
toxins or lesser degrees of symptoms may be experienced. So we lean on the side of caution and
recommend people, especially animals, stay out if there is a bloom period. Animals are highly
susceptible to the cyanotoxins because they tend to take in greater quantities and have small body mass.
So illness and even death are more likely at lower toxin levels, as seen by numerous national stories this
past summer. More general cyanobacteria information can be found at: https://dar.mo.gov/env/
cyanoacteria.htm.

Sorry for long email, but hopefully this gives you some points of reference to provide some context to
what these results might indicate.

Lynn
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Rick Archeski Comments:
Points of information for some of the new commission members and a review for the other commission members.

1. The city contracted ARDL for $4560.00 for the collection and analysis of the samples, not an opinion of the results. Normally ARDL does not provide an explanation of the results. My experience over the last 20 years conducting water quality sampling is that the lab provides the results and those results are compared to the current state standards for water quality to determine if there are any water quality issues. Not all water quality parameters have state standards. However, where there are not specific standards there are recommendations by either the state or EPA that can be followed.

2. LNEQ is the state regulating body and their standards should be used to compare the results.

3. The sampling was prompted because it was a more cost effective way to determine if there was anything in the water that could be causing Mrs. Hudson’s symptoms. Obviously 1 sample is not enough to determine a trend, however it was a 1st step in determining if there is a problem. Monthly sampling from May through September would be best, but the city should not have to pay for it. The most opportune time to sample would have been when the algae appeared in the lake or waterfall.

4. Harmful Algal Blooms (HAB) occur when colonies of algae — simple plants that live in the sea and freshwater — grow out of control and produce toxic or harmful effects on people, fish, shellfish, marine mammals and birds. Toxic algae often stinks, sometimes producing a downright nauseating smell. The human illnesses caused by HABs, though rare, can be debilitating or even fatal. Harmful algal blooms are a major environmental problem in all 50 states. Nutrient pollution (nitrogen and phosphorus) from human activities makes the problem worse, leading to more severe blooms that occur more often. Not all blooms are toxic, but it’s impossible for even a trained expert to identify those that are dangerous just by looking at them. According to the Environmental Protection Agency, toxins produced by the algae can cause rashes, liver illness, vomiting, diarrhea, neurological effects, respiratory problems and even death. Ault and Pratt published an article in Environmental Science & Technology showing that biological material from algal blooms can become ejected into the air. “We found that when we had higher blue-green algae concentrations in water, we saw more aerosol particles that contained markers of biological content,” Pratt said. Ault’s and Pratt’s research has shown that particles of this size can be carried hundreds to thousands of miles by air, and wind speeds as little as 7 miles per hour can create lake spray aerosols. “Our hypothesis is that toxins from this blue-green algae might be getting into the air, in which case, people might be subjected to inhalation exposure, serving as a previously unrecognized health risk beyond drinking water contamination,” Pratt said. See article at this website: https://record.unich.edu/articles/research-shows-harmful-algal-blooms-can-become-airborne/. Among animals, dogs are most at risk because of their preference for swimming, ingesting water and licking their fur. A recent article titled “Dogs Death Raise Algal Bloom Alarm as States Report More Toxins” (https://news.bloomberglaw.com/environment-and-energy/dog-deaths-raise-algal-bloom-alarm-as-states-report-more-toxins). According to veterinarians, these toxic algae have been killing animals for over 100 years — but it’s becoming more common. The algae produce two different toxins: one that causes neurological problems,
and one that lead to liver failure. Other articles;
https://www.washingtonpost.com/science/2019/08/12/three-dogs-played-pond-toxic-algae-killed-them/

5. I still believe some of the problem is coming from runoff from the property surrounding the lake. The Planning Department's original recommendation of having pretreatment to the lake was appropriate. MSD currently requires bio-retention areas for current developments.
6. Running at a lower gpm may help reduce the amount of water particles in the air.
7. Possibly using a closed system, not using any water from the pond would allow the water to be treated and recycled.
8. Current lab results indicate the possibility that surface water may be affecting local drinking water wells. This would occur if there was a direct connection of surface water to groundwater. Normally surface water filters through the soil and rock formations providing some removal of contaminants. However, sink holes or faults can have direct connections to groundwater.
9. If the Petitioner will not grant additional testing on the property, I would suggest testing the overflow of the pond/waterfall as it leaves the petitioners property.
10. I have attached several photos of the area indicating preconstruction and post construction. There was over 3 acres of trees removed in the area around the pond which would have provided some filtering capacity.
I consider the Planning & Zoning Commission the city's most important committee. As a member of this Commission you have the responsibility to make tough decisions based on facts and not on opinions or political pressure. This is exactly why this Commission is composed of non-elected citizens representing all residents of the City of Wildwood.

Thank you for your time and commitment to the city
Rick Archeski