Karst Survey Report

Forsee Investments LLC
Lots 11+12 Blankenbaker Station II
Wood Project No. 7382213423

Prepared by:

Wood Environment & Infrastructure Solutions, Inc.

Prepared for:

Forsee Investments, LLC

5405 Morehouse Drive Suite 320, San Diego CA 92121

9/23/2021

23 September 2021

Foresee Investments, LLC
5405 Morehouse Drive, Suite 320
San Diego, CA 92121

c/o Mr. Ben T. Taylor, PE
Hollenbach-Oakley

Wood Environment & Infrastructure Solutions, Inc.
11003 Bluegrass Parkway
Suite 690
Louisville, Kentucky 40299
USA
T: 502-267-0700
www.woodplc.com

Re: Karst Survey
Blankenbaker Station II Lots 11+12
Schutte Station Place, Jefferson County, KY
Wood Project Number: 7382213423

Dear Mr. Taylor:

Wood Environment & Infrastructure Solutions, Inc., (Wood) is pleased to provide this survey report for the above referenced property. The report presents data from a document review of the site soil and geology as well as a description of observed site conditions encountered during our September 16th, 2021 site visit.

Wood appreciates the opportunity to have provided these services and we look forward to serving as your geotechnical consultant throughout the project execution. Please contact us if you have any questions regarding the information presented.

Sincerely,
Wood Environment & Infrastructure Solutions, Inc.

William A. Modrall , PE (KY License 35184)
Project Engineer

Mark J. Schuhmann, PE (KY License 12500)
Senior Principal

Enclosure: Report

9/23/2021

Copyright and non-disclosure notice

Third-party disclaimer

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Appendix

1.0 Purpose and Scope of Exploration

Wood Environment & Infrastructure Solutions, Inc. (Wood) has completed a karst survey in support of the proposed development of Lots 11 + 12 at Blankenbaker Station II, near the intersection Plantside Drive and Schutte Station Place, in Jefferson County, Kentucky. The purpose of this survey was to meet the requirements for developments in Karst Prone Areas of Jefferson County, as mapped by the Louisville Metro Land Development Code. Figure 1 below contains a portion of this map. Our survey includes a review of current and historical aerial photographs, The USDA National Resource Conservation Service Web Soil Survey, Kentucky Geologic Survey Geologic Quadrangle Mapping, and Louisville/Jefferson County Information Consortium (Lojic) Topographic Data, as well as provided site plans. Additionally, our report contains recommendations to treat karst features if they are encountered during site development.

Wood's scope of service is described in our Proposal number 2021-0067, dated 19 August 2021.

2.0 Project Information

The proposed warehouse/manufacturing facility site is located at Lots 11+12 in Blankenbaker Station II, off Plantside Drive and Schutte Station Place in Louisville, Kentucky, as shown on the attached *"Pre-Application Plan"* labeled Figure 1.

The proposed development property is a 7.2 acre tract, cut from a larger 15.6 plot in East Jefferson County, Kentucky. Per Louisville Metro Land Development Code "Where the proposed land disturbing activity is located within the Karst Prone area of Jefferson County as indicated on the Karst Prone Area Map, the applicant shall conduct a karst survey of the property". The image below shows the Land Development Code's Karst Prone Area Map, with the location of the subject property highlighted.

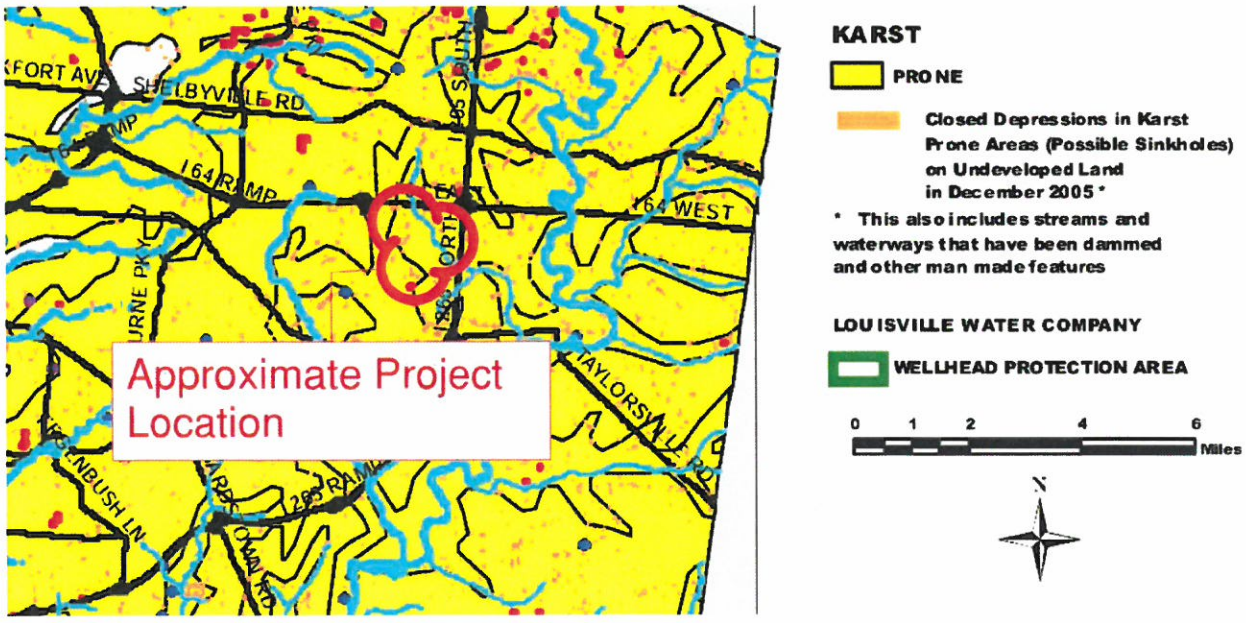


Figure 1. Louisville Metro Land Development Code Karst Prone Areas of Jefferson County

Based on Lojic mapping the property has approximately 40 feet of topographic relief ranging from a high elevation of 700 feet to 660 feet NGVD; within the proposed building area the relief is approximately 25 feet. Site drainage is generally to the southwest.

3.0 Document Review

3.1 Published Site Geology

A review of the Geologic Map of the Jeffersontown quadrangle, Jefferson County, Kentucky, published by the United States Geological Survey (USGS), indicates two separate rock formations are mapped underlying the site. These formations are listed below in descending order.

The Osgood Formation (Sob) (approximate elevations 690 to 700 feet NGVD) consists of horizontally bedded shales and dolomite. This formation is ranked with a low Karst risk. The shale is dark to light greenish gray, locally black to olive black, and is interbedded with grayish to pale red shale in the lower 10 feet weathering to same yellowish gray or grayish yellow. Muddy dolomite and dolomitic limestone are light olive gray to greenish gray, weathering to yellowish gray or grayish yellow to yellowish orange prisms or chips, which is more common in the upper part of the formation than the lower. Fossils are rare and the basil contact is conformable.

The Brassfield formation (Sob) is mapped in the lower portion of the slopes and consists of limestone of three types, each generally two feet or less thick any of which may be missing at a given locality (approximate elevations 690 to 700 feet NGVD). At the top is an orange-yellow medium grained fossil fragmental limestone, in the middle is a medium to dark gray fine grained non-fossiliferous limestone, at the base is a light olive gray coarse grained highly fossiliferous limestone. Exposures are mostly limited to stream channels and a few road cuts. This formation is mapped with the Osgood Formation. This formation is listed as having no karst risk.

The Saluda member (Od) consists of dolomite, dolomitic mud stone, limestone and minor shale (660 to 690 NGVD). The dolomite is greenish gray to olive gray and grades to a rocky weathered dolomitic limestone. The shale is light gray to olive gray to olive black and locally carbonaceous. This formation is listed as having low karst risk.

Figure 2 below shows the geologic quadrangle map.

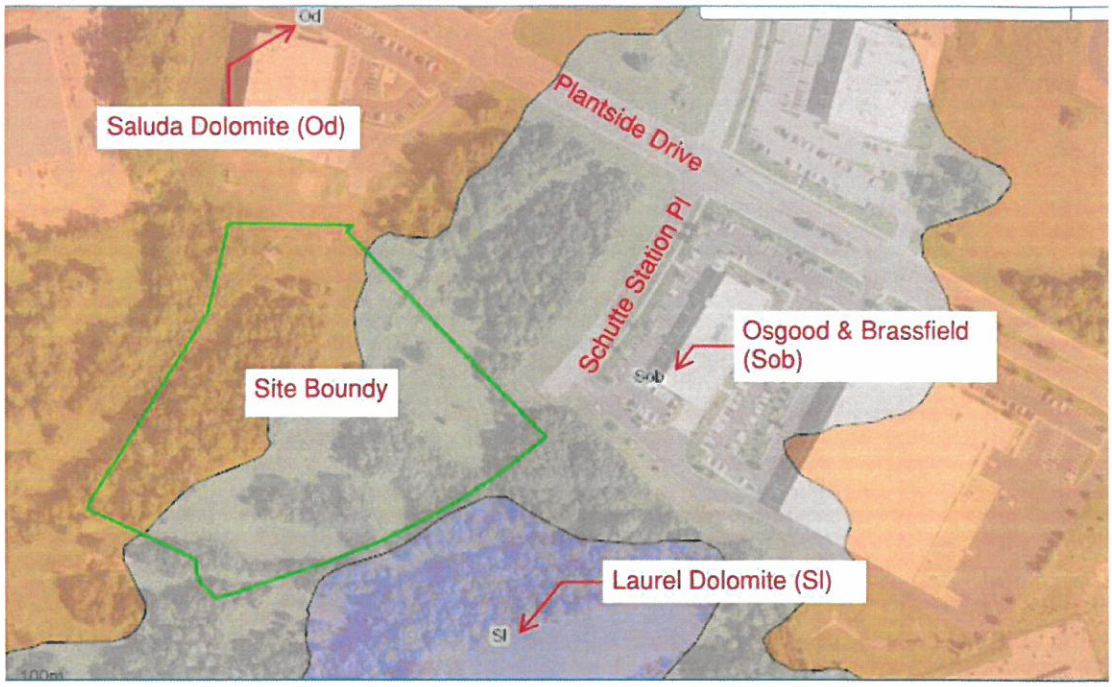


Figure 2. Geologic Mapping

The southeastern property line is near the Laurel Dolomite Formation (Sl). This formation is listed as having medium karst risk, and where a karst prone and a non karstic formation meet, may be a potential area for karst to form. The Kentucky Geologic Survey produced a Karst Risk Map, with LIDAR derived closed depressions (blue). This map shows that the Laurel Dolomite formation has medium karst risk, and the Drakes Formation (Saluda Dolomite) has low karst risk. The Osgood Brassfield Formation mostly contains shale, and therefore is listed as not having karst risk. The KGS karst risk map is shown in Figure 3.

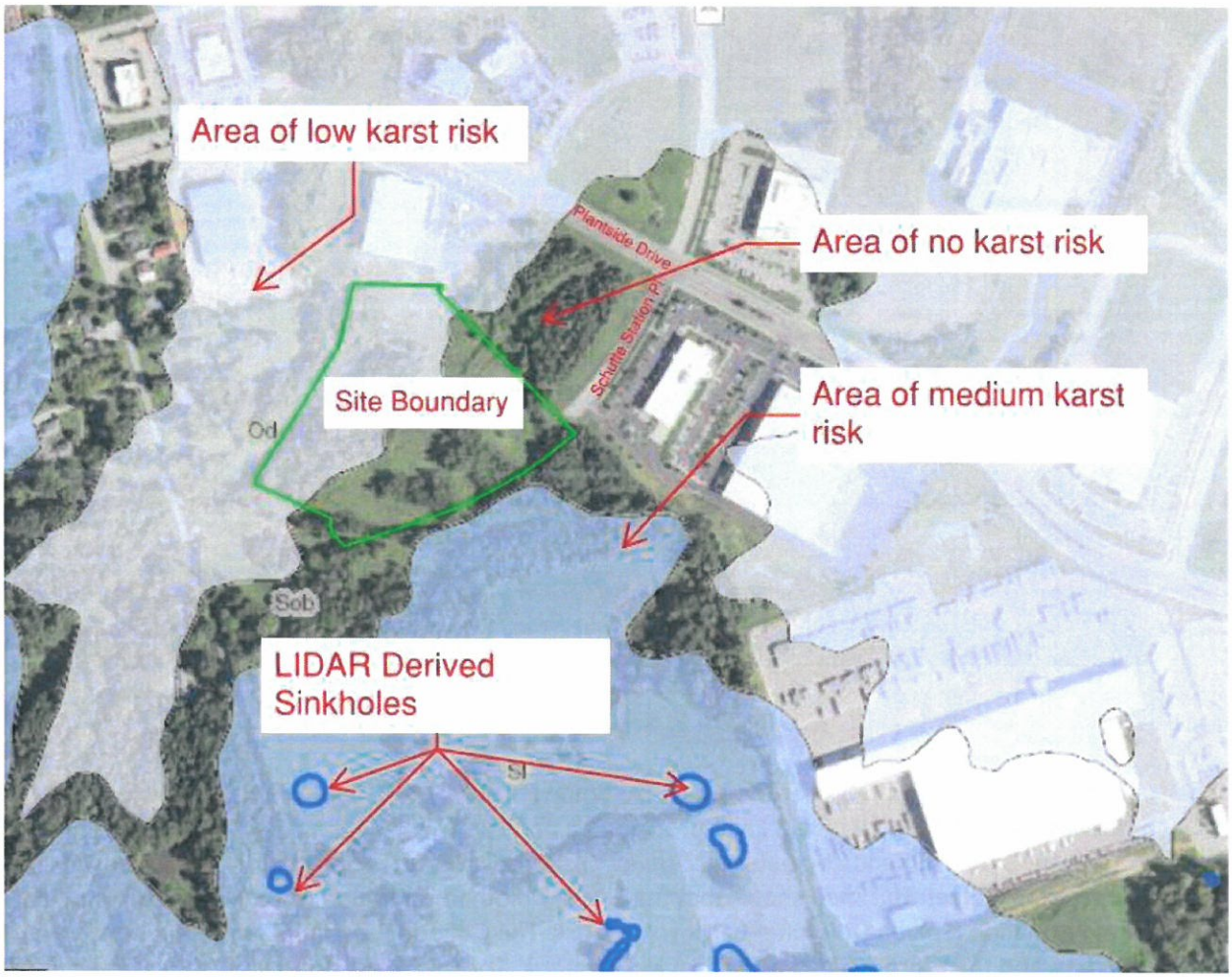


Figure 3. Kentucky Geologic Survey Karst Risk Map

3.2 Published Soil Survey

The Natural Resources Conservation Service's soil survey maps provide site specific soil information. An approximate site map with the soil types is shown below.

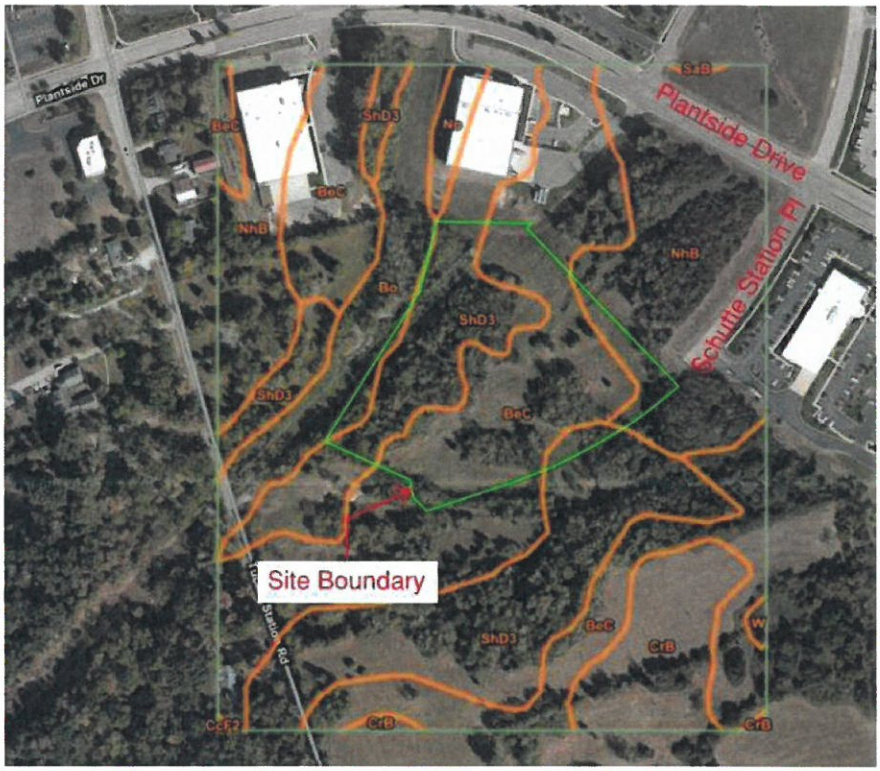


Figure 4. USDA NRCS Soil Map

The site soils are mapped as Beasley Silt Loams (BeC), and Shrouts Silt Loam (ShD3). The site soil formations are classified under the USDA soil classification system as Silt Loams, meaning they contain between 12% to 27% clay and 50% or more silt. The USDA NRCS Web Soil Survey reports the predominant soil types display the following vertical soil profile:

Beasley Silt Loams: 0-6 inches (silt loam)
6 to 48 inches (silty clay)
48-58 inches (weathered bedrock)
Water table depth is listed as greater than 80 inches

Shrouts Silt Loam: 0-2 inches (silt loam)
2 to 20 inches (silty clay)
20 to 35 inches (silty clay)
35-40 inches (weathered bedrock)
Water table depth is listed as greater than 80 inches.

The soil survey also provides ratings for how site soils will perform during typical construction or development activities. The site soils are listed as very limited in regard to construction of, shallow foundations, local roads and streets and small commercial buildings. Limiting factors include low strength, shrink swell potential, steep slopes, and depths to restrictive feature (bedrock). Site soils are rated as having low corrosion to concrete, but high corrosion to steel. The soil survey did not provide any data in regard to Karst activity on the site.

3.3 Aerial Photography

Historic aerial and satellite imagery was reviewed for previous development or the presence of karst activity. Karst activity may be indicated in photos by visible depressions, ponded water, or areas of unusually lush vegetation. Publicly available historical imagery is available as far back as 1993. A 2000 Lojic historical image indicated 2 areas of ponded water, just south of the North property boundary in an area of a proposed Storm and Drainage Easement. See Figure 5 below. The two depressions are shown on subsequent photos until 2017, at which time they appear to have been filled/covered during construction of the Office Resources building to the north. Older aerial photos revealed that the site has had some historical clearing/logging and grading activities (cutting roads, and used as a borrow source), but did not reveal any karst activity.

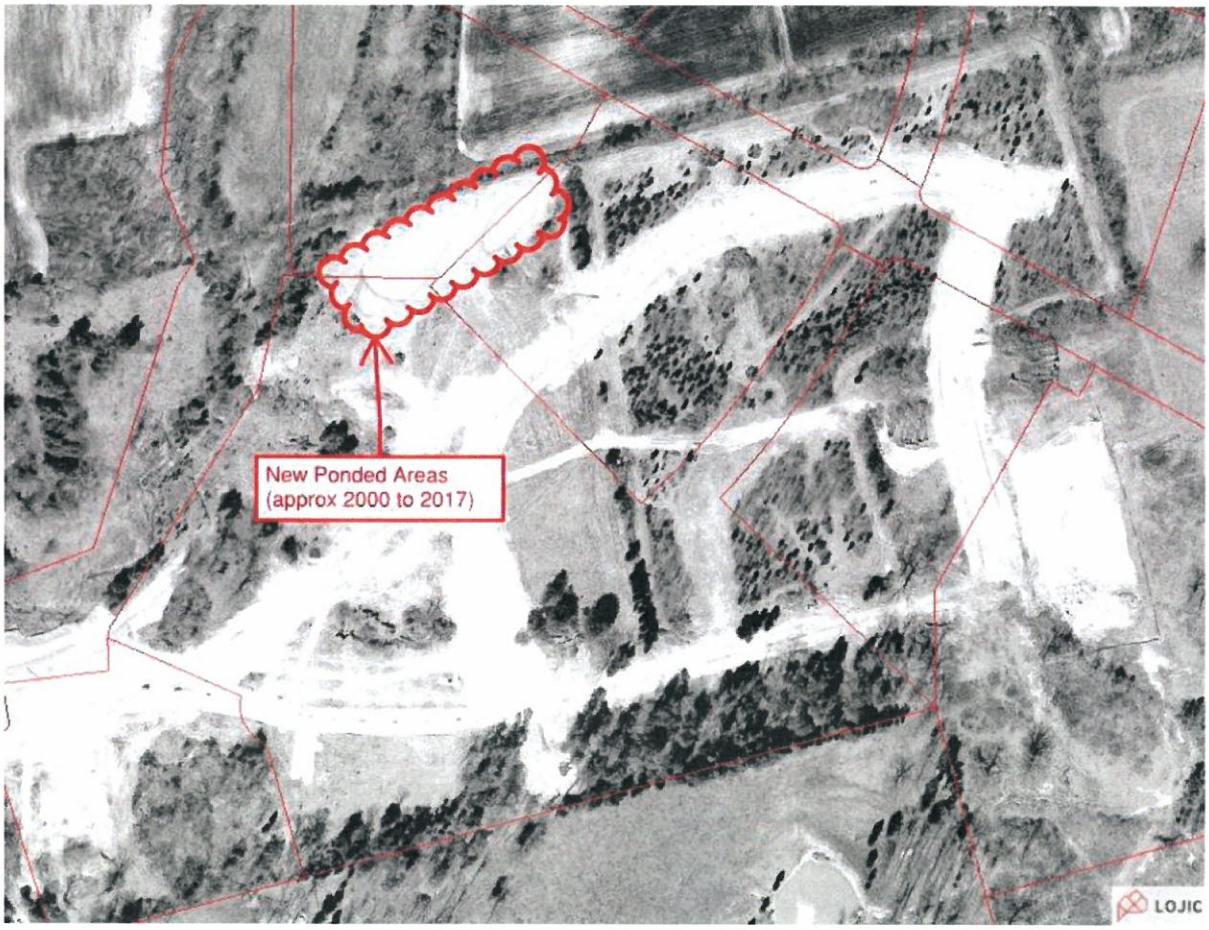


Figure 5. LOJIC Photo (2000)

3.4 Topographic Mapping

The site ground surface ranges in elevation from 660 feet to 700 feet, generally draining to the southwest towards a ravine/creek along the west property line. Topographic mapping was reviewed for indications of surficial Karst which is often illustrated by closed topographic depressions. The image below shows the LOJIC topographic map, with one closed loop topographic area highlighted.

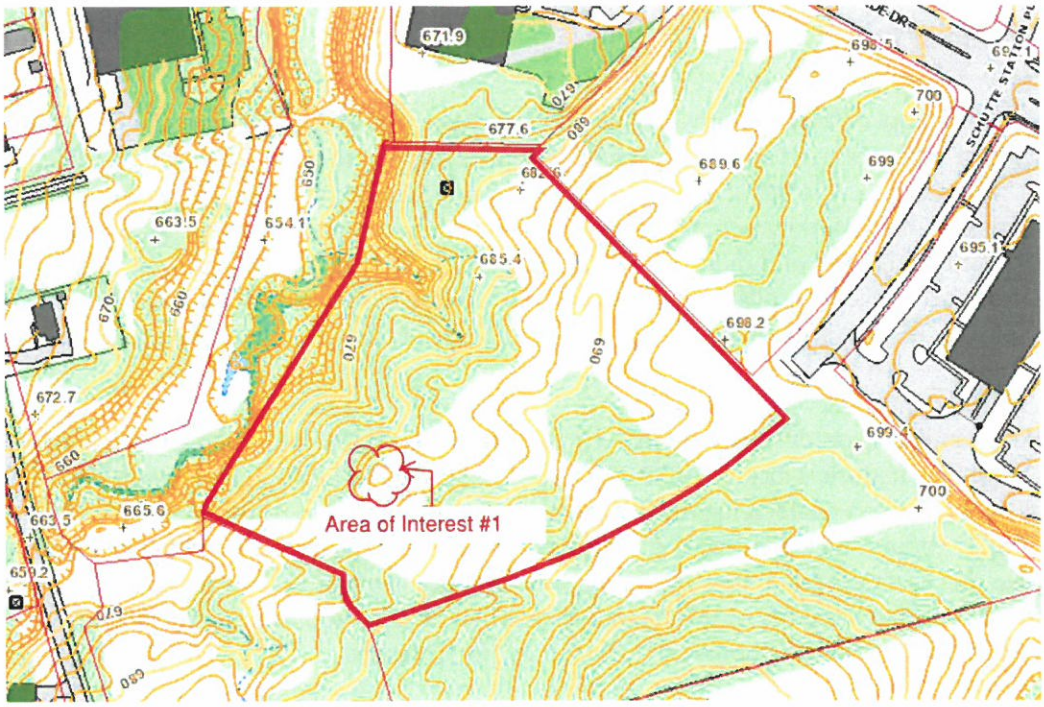


Figure 6. Lojic Topographic Map

Additionally, the Pre-application site plan indicated one additional closed topographic depression area.

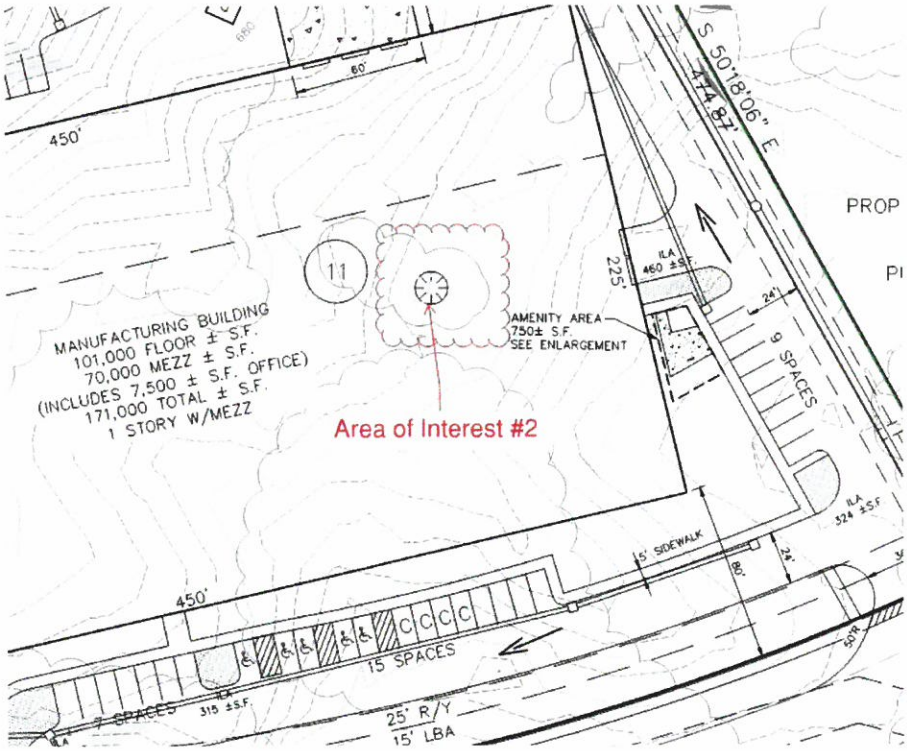


Figure 7. Pre-Application Plan Area of Interest

4.0 Field Visit

A field visit was completed by William Modrall on September 16th, 2021. William walked the site looking for any signs of potential karst activity. Special attention was given to areas of concern as discussed in the document review above. The attached photo log provides a general site overview, as well as photos of specific features. The closed loop labeled Area of Interest 1 from the topographic map review was observed to be a highpoint, and therefore not a depression of an active karst feature. Area of Interest 2 from the provided application plan was observed, and it is not an active karst feature. Historic grading and road cut, terminates at this location causing an abrupt grade change, but this is due to site grading, not karst.

A third area of interest was observed during our field visit. This area is confirmed to be an open throat of a karst feature. The feature is located at 38.209299, -85.527179. The location is shown in Figure 8. The feature has the following characteristics. It is an approximately 8ft long by 4ft wide open throat, with a visible depth of about 6 feet. The throat is of low significance, meaning that it can be cleaned and plugged. No rock is visible from the surface, however bedrock is generally shallow at the site. It is estimated that depth to bedrock at this feature is less than 10 feet. A photo of the feature is included in Figure 8 below. Additional site photos are included in the Appendix.

Figure 8. Area of interest 3 - location

Figure 9. Site photo at Area of Interest #3 - Open Throat

5.0 Project Limitations

Descriptions of the surface conditions only apply to those areas accessible without any clearing or cutting at the time of our site visit. It should be noted approximately 4 acres of the site is heavily wooded and therefore was not fully accessible for our field visit. Efforts were made with hand clearing equipment to enter and survey these areas, however areas not explored may differ significantly between the explored locations. It should be noted that no karst survey can fully assure that all incipient sinkholes or dropouts will be discovered. Therefore, there is always some risk occurring in limestone terrain. To manage the risks associated with unanticipated conditions, a qualified geotechnical consultant should be retained during the final design and construction phases for guidance.

6.0 Geotechnical Recommendations

6.1 Karst Risk

Our document review confirmed that the proposed site is located in a Karst prone area of Jefferson County. More detailed Geologic mapping by the Kentucky Geologic Survey (Figure 3) indicates the site is underlain by rock formations that have a karst risk ranging from none to low, however the site is bordered to the south by a contact with a medium risk karst formation (Laurel Dolomite). Our experience indicates border zones between formations are often areas where karst features form. Our field visit confirmed the presence of one karst feature (Area 3). This feature is relatively small and the depth to rock appears to be less than 10 feet so this feature appears to be a candidate for remedial repair during construction. The following sections provide recommendations for the encountered karst feature, as well as others that may be uncovered during development of the site.

6.2 General Site Preparation

Site preparation activities will generally involve establishing good site drainage; stripping topsoil; possible karst treatment; and earthwork cut/fill. We recommend the following measures within areas designated for structures or pavements:

6.3 Clearing and Grubbing Subgrade

Site preparation should include stripping organic materials and topsoil from the construction area.

- Establish and maintain a positive site drainage prior to the start of clearing and grubbing.
- Strip organic material, topsoil, debris and any old fill containing deleterious material from the construction area.
- Remove any buried structures or abandoned utilities encountered during construction and backfill appropriately.
- Proofroll the exposed soil subgrades with heavily loaded rubber-tired construction equipment to attempt to locate areas of wet soil, deflecting subgrades and or dropouts, all of which could indicate potential karst features.

6.4 Site Drainage

Water seeping through the soil mass is a primary trigger for sinkhole development. The proposed site grading should direct surface water runoff away from known sinkhole areas and away from structural and paved areas to reduce the risk of future sinkhole development.

Water from man-made sources can accelerate the rate of solutioning activity if directed into sinkholes. Water collected in the roofing gutter system should be piped away from the structure to existing drainage features and away from any adjacent sinkholes. Precautions should be taken to prevent subgrade pipes from leaking. These precautions might include using watertight joints, and in areas of known karst activity placing pipes in concrete or enclosing the primary pipe within a secondary pipe.

6.5 Karst Treatment

Area of interest #3 was confirmed as an open throat Karst feature. The location of this feature using handheld GPS equipment with an approximate accuracy of 20 feet, indicates under the current development plan, this feature will be situated under a landscaping/parking area, and should not directly affect the proposed structure. This feature may be repaired in the following manner:

Sinkhole Treatment Method Sinkhole Treatment Method A - When the throat is greater than 2 feet in diameter or the throat consists of cracks or joints within the limestone rock, an inverted filter should be constructed (Figure 3). Inverted filter construction is also recommended when evidence of flowing water is observed. To plug the throat, a zone of rip-rap or boulders should be placed and wedged into the throat. Using the large stone pieces as a base, place an 18-inch layer of No. 3 and/or No. 57 crushed limestone tamped or otherwise compacted into place. Next, construct a layer of dense-graded aggregate 12 inches thick tamped into place with hand tampers. The entire throat area and 10 feet of the surrounding area should be covered with a geotextile filter fabric. The resulting excavation may then be properly backfilled with engineered fill material compacted to at least 95 percent of the standard Proctor (ASTM D-698) maximum-dry density. Sketches indicating the treatment schemes are included in the Appendix.

Karst features not identified during our exploration at the site could be encountered during earthwork activities. Any newly exposed solution features should be observed by the geotechnical engineer. The engineer will make specific recommendations dependent on the characteristics of the feature and the area usage. If springs or evidence of flowing water are encountered in construction areas, Wood should be contacted to make specific recommendations dependent on the characteristics of the feature and the area usage.

We recommend the topographic depressions be explored for indications of sinkhole activity and the depressions along with sinkholes exhibiting throat areas be treated prior to earthwork construction in these areas.

It is generally recommended that no structures be located over known sinkhole locations. The closed topographic depressions (sinkholes) observed at the property and scheduled to be filled should be treated according to the size either Method A or B.

Closed topographic depressions, existing sinkholes and soil dropout exposed during construction should be filled with clay in accordance with the soil specific compaction requirements. Site drainage should be directed away from these filled depression areas.

Should smaller karst features be encountered they may be treated with the following method.

Sinkhole Treatment Method B - When the throat is less than 2 feet in diameter and no evidence of flowing water is present a concrete plug may be utilized (Figure 2). The plug should be constructed of high slump concrete and be 1½ to 2 times as tall or long as it is wide to facilitate the filling of voids and crevices. It is essential that a good concrete to rock bond be created by the plug, and the plug increase in diameter with elevation. After the concrete plug has set up, we recommend the resulting excavation be lined with a geotextile filter fabric and backfilled with engineered fill material compacted to at least 95 percent of the standard Proctor (ASTM D-698) maximum-dry density. Sketches indicating the treatment schemes are included in the Appendix.

7.0 Basis for Recommendations

The recommendations provided are based in part on project information provided to Wood and only apply to the specific project and site discussed in this report. If the project information section in this report contains incorrect information or if additional information is available, you should convey the correct or additional information to us and retain us to review our recommendations. We can then modify our recommendations if they are inappropriate for the proposed project.

The assessment of site environmental conditions or the presence of contaminants in the soil, rock, surface water or groundwater of the site was beyond the scope of this exploration. It should be noted that no karst survey can fully assure that all incipient sinkholes or dropouts will be discovered. Therefore, there is always some risk occurring in Limestone terrain.

We recommend this complete report be provided to the various design team members and the project owner for use in completing the final design. This is a Karst Survey, not a full geotechnical report and should be used as intended.

Karst Survey

Lots 11+ 12 Site Photographs, 09/16/2020

Photo 1: Photo Locations

Photo 2: North end of property looking south

Photo 3: Middle of property looking East

Photo 4: Middle of property looking South towards Area of Interest #1

Karst Survey

Lots 11+ 12 Site Photographs, 09/16/2020

Photo 5: Area of Interest #3 – Open Throat

Photo 6: Area of Interest #3 – Open Throat – Alternate View

Photo 7: Area of interest #2

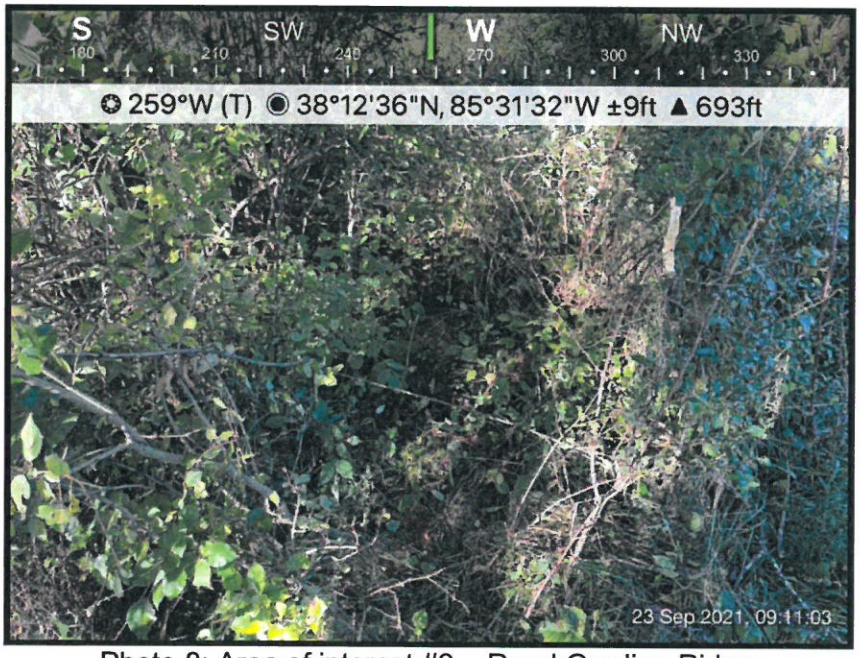
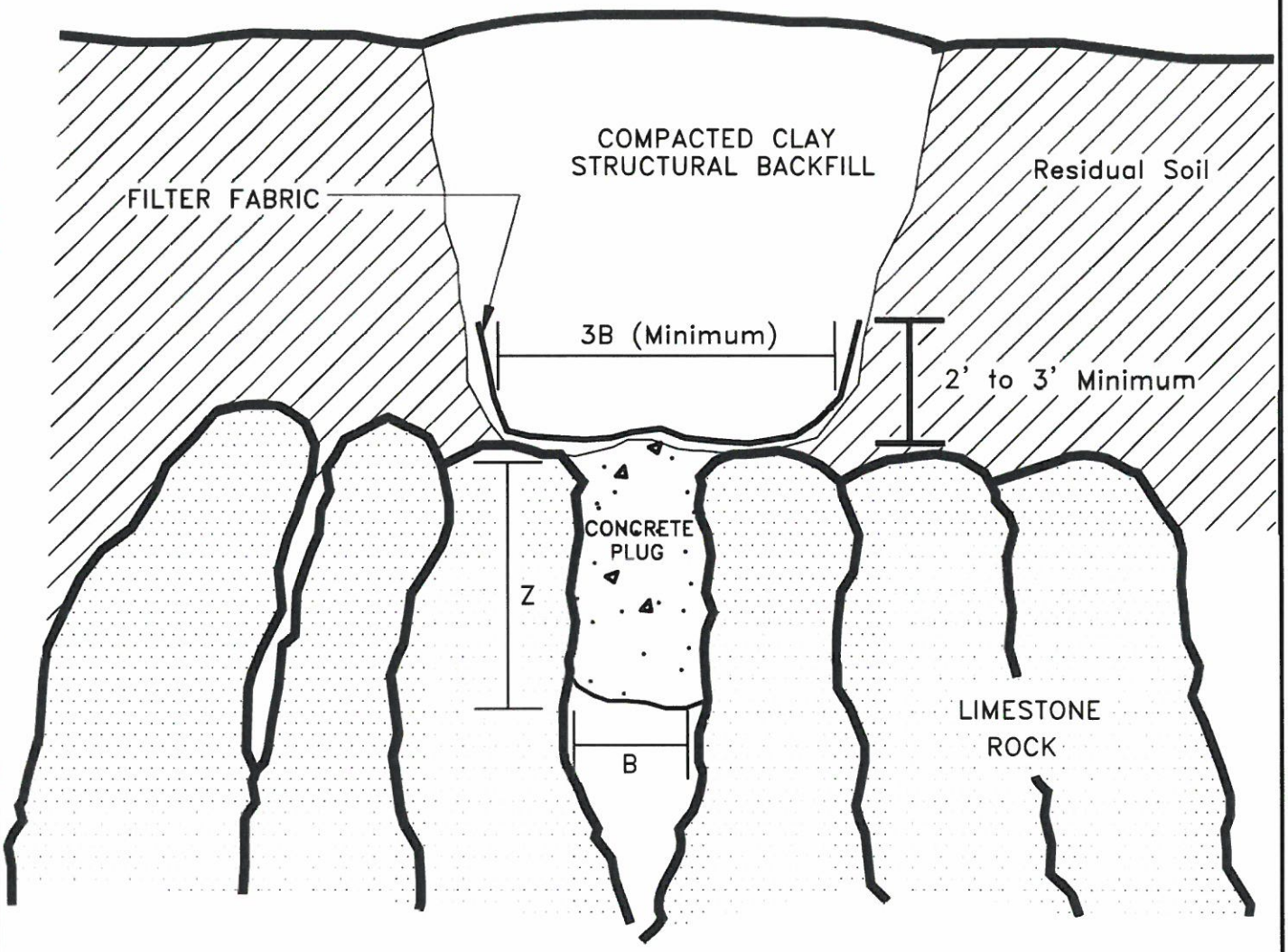


Photo 8: Area of interest #2 – Road Grading Ridge

NOTE: Good concrete to rock bond is essential (Z=1.5 to 2 times B)

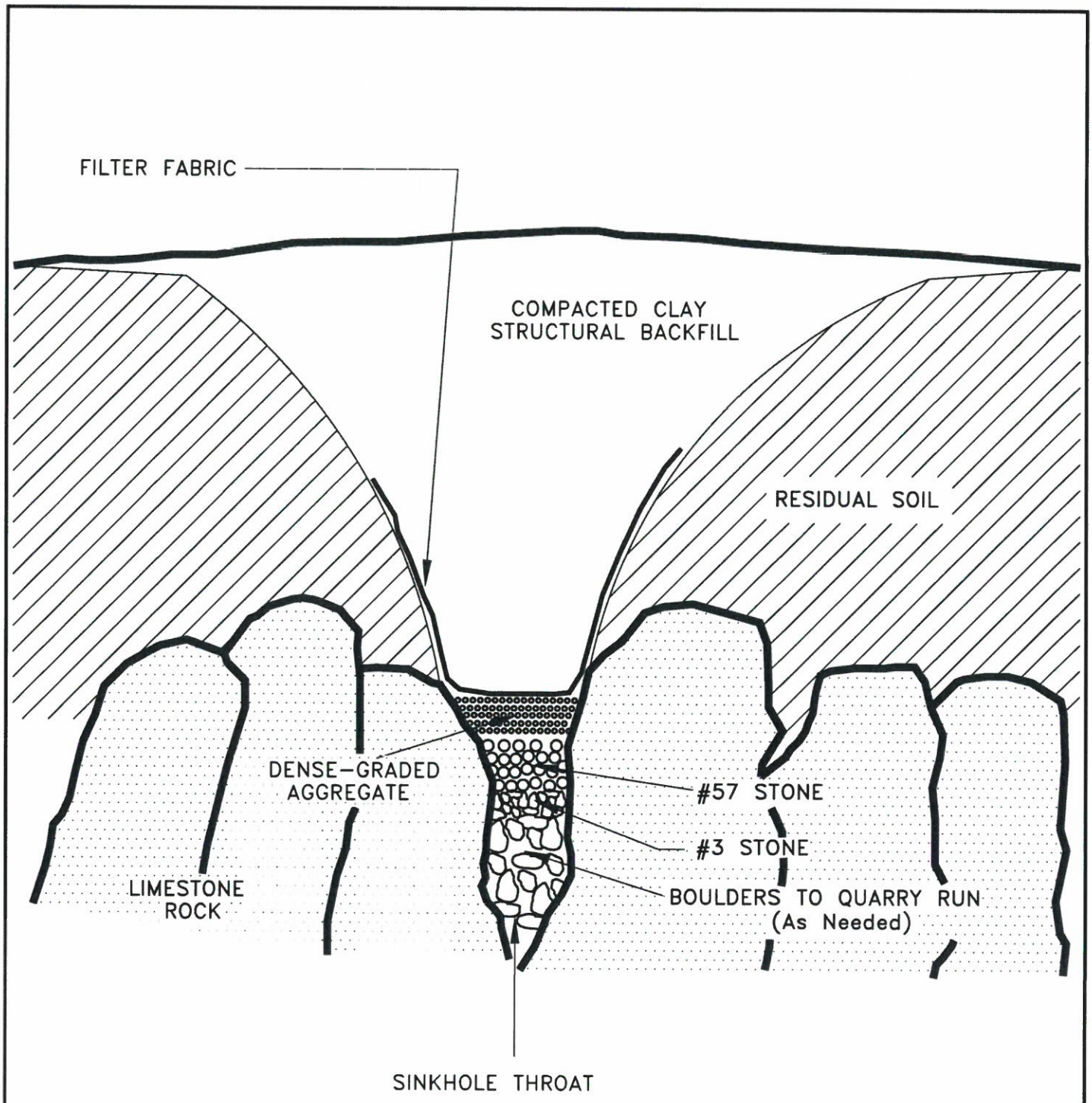


Wood
690 Commonwealth Center
11003 Bluegrass Parkway
Louisville, Ky 40299
(502) 267-0700

wood.

CLIENT: Forsee Investments, LLC

PROJECT: Blankenbaker Station II Lots 11 + 12	DWN BY: CAE	DATUM:	DATE: 9/23/2021
TITLE: SINKHOLE REPAIR METHOD A CONCRETE PLUG	CHK'D BY: SEB	REV. NO.:	PROJECT NO: 7382-21-3423
	PROJECTION:	SCALE: NOT TO SCALE	FIGURE No.: B-1



Wood 690 Commonwealth Center 11003 Bluegrass Parkway Louisville, Ky 40299 (502) 267-0700	wood.		CLIENT Forsee Investments, LLC	
PROJECT Blankenbaker Station II Lots 11 + 12		DWN BY: CAE	DATUM:	DATE: 9/23/2021
TITLE SINKHOLE REPAIR METHOD B GRADED FILTER		CHK'D BY: SEB	REV. NO.:	PROJECT NO: 7382-21-3423
		PROJECTION:	SCALE: NOT TO SCALE	FIGURE No. B-2

BARDENWERPER, TALBOTT & ROBERTS, PLLC
ATTORNEYS AT LAW
1000 N. HURSTBOURNE PARKWAY • BUILDING INDUSTRY ASSOCIATION OF GREATER LOUISVILLE BLDG. • SECOND FLOOR • LOUISVILLE, KENTUCKY 40223
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STATEMENT OF COMPLIANCE WITH ALL APPLICABLE GOALS, OBJECTIVES AND POLICIES OF THE "PLAN 2040" COMPREHENSIVE PLAN

Applicant:	Quadrant International, Inc.
Owners:	HOSTS Development, LLC
Location:	Block 39, Lot 551 (No address per PVA and LOJIC)
Proposed Use:	Magnet Manufacturing
Request:	Zone change from PEC to M-3
Engineers, Land Planners, Landscape Architects:	Mindel Scott & Associates

INTRODUCTION

The manufacturing plant that is the subject of this application is proposed by a San Diego-headquartered company whose owner resides in San Diego but is currently a Chinese National. They have global operations in the US, Europe, China, Vietnam, and Australia, however, the company already has a major engineering, logistics, and sales presence within the Blankenbaker Station business park. A direct foreign investment decision has been made to build a permanent magnet manufacturing plant in the US and to do so in Louisville, if exactly here in conjunction with the zone change requested. Otherwise the plant may be built outside of Kentucky.

Rare Earth Permanent Magnets, as proposed to be manufactured next to Quadrant's existing engineering, design, sales and fulfillment facility, are key components in a large variety of products – including consumer electronics, advanced motors, electronic vehicles, medical devices, and renewable energy. The current supply change for finished magnets and the manufacturing process has been controlled by China for the past 20+ years. This dominance by the Chinese can cause disruption with product manufacturers worldwide without the assurance that a US manufacturer can meet the production and supply of these key components essential to fully build, assemble and timely deliver products to US and global customers.

Also, skilled manufacturing and quality control jobs, like those promised at this facility, are a principal objective of any economic development effort of all cities and states, especially in Kentucky and in Louisville. Thus, the economic and innovation value of constructing a plant like this, at this time, is obvious and indisputable.

Although not fully designed yet, the manufacturing plant will conform to the design standards of Louisville's present day Land Development Code (LDC). Moreover, the Hollenbach-Oakley

design standards for Blankenbaker Station Business Park independently mandate a high level of impact mitigation plus site and building design.

The Blankenbaker Station Business Park area is also a prime growth area for development because of these principal factors: (a) the availability of sanitary sewers which MSD spent major taxpayer money to accommodate environmentally positive growth; (b) the presence of significant and growing industrial site activity; (c) the location near major arterials in close proximity to an interstate highway system which moves traffic to and from this major employment center; and (d) the close proximity to residential communities, thereby making employee commuting distances and times relatively short and appealing.

PLAN ELEMENT 4.1: COMMUNITY FORM

This "Application Package" complies with Plan Element 4.1, its 5 Goals and their Objectives plus the following Policies.

As to Goal 1, Policies 2, 2.1, 3.1.10, 4, 6, 7, 8, 9 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22 and 23, it complies as follows, in addition to the other ways set forth above and below:

The site is located in the Suburban Workplace Form District which is characterized by mostly industrial and office buildings which are set back from streets in a landscaped setting. These buildings are often large scale uses, significant in size, which this plan proposes. Public transportation is always desirable but not necessarily always fully available because of limited government funding. Here public transportation is available, although to a limited extent. Pedestrian and bicycle access to nearby retail is desired, and the infrastructure here has and will provide for it.

Land Development Code required size and height restrictions, interior and perimeter landscaping, minimum parking, maximum lighting and signage, and required setbacks will also be met.

Also, located as this proposed manufacturing plant is just a short drive in all directions from sizeable and ever-growing population centers, travel distances for workers are reduced, and walking and biking become very real possibilities, especially over time as sidewalk extensions are completed. This helps contribute to improved air quality.

Quality building components and a design compatible with other buildings in the Blankenbaker Station business park and surrounding area will assure compatibility with nearby workplace buildings, development sites and also remaining residentially occupied properties. Quality landscaping and effective screening and buffering also help assure context-appropriateness and design-compatibility for the larger area and proximate residential neighborhoods.

Partly as a consequence of what surrounds this proposal and the fact that this is a proposed industrial plant, much like its surrounding land uses, impacts such as traffic, odors, lighting, noise and aesthetic factors will not prove to be nuisance factors. After all, this area has been almost entirely built out as Suburban Workplace development. But to the extent that this manufacturing plant involves equipment and processes that raise any potentially objectionable noise, vibration, heat, odor and/or air quality issues, these plant-specific, potential nuisances will be mitigated. The manufacturing process is explained in the 8-step process attached to this Compliance Statement, and it and its related impact mitigation measures will be more fully explained at future public meetings and hearings, just as was done at the already held neighborhood meeting.

As to Goal 2, Policies 1, 2, 7 and 17, it complies as follows, in addition to the other ways set forth above and below:

As said, the proposed manufacturing plant will be located in a Suburban Workplace Form District and will adjoin already built Workplace facilities of a similar kind to this one. As such and with good and improving pedestrian and vehicular access inside the Blankenbaker Station business park and also along Blankenbaker and Bluegrass Parkways, Plantside Drive and other area streets, there already exist convenient vehicular, bicycle and pedestrian connections to other like-kind developments, commercial establishments and nearby residential neighborhoods. Indeed the proposed manufacturing plant is part of a large mixed use activity center that extends from Middletown south down Blankenbaker Parkway to Jeffersontown, west along Shelbyville Road and I-64 to Hurstbourne, St. Matthews and downtown Louisville, and east to Middletown, Frankfort and Lexington. Thus, it will access the mix of diverse residential communities nearby that provide a workforce. Plus this plant will have easy access to Louisville's interstate highway system, which leads to and from the UPS Worldport facility and is within a day's drive of a significant portion of the United States.

This location adds to the opportunities existing and planned in this high growth area to work in close and convenient proximity to places of residence, food and shopping within easy driving distances in all directions along I-64 and the Snyder Freeway.

As to Goal 3, Policies 3, 6 and 9, it complies as follows, in addition to the other ways set forth above and below:

The detailed district development plan (DDDP) filed with the rezoning application for this proposed manufacturing plant includes an outdoor community space for workers to congregate.

As to Goal 4, the applicant/developer submits that no historic structures exist on this site.

As to Goal 5, the proposed manufacturing plant is not of the kind intended nor public enough to include an element of public art.

PLAN ELEMENT 4.2: MOBILITY

This Application Package complies with Plan Element 4.2, its 3 Goals and their Objectives plus the following Policies.

As to Goal 1, Policies 1, 2, 3, 4 and 6; Goal 2, Policies 1, 2, 3, 4, 5, 6, 7, 8 and 9; and Goal 3, Policies 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20 and 21, it complies as follows, in addition to the other ways set forth above and below:

This proposed industrial plant (located as it is within an existing and growing mixed use Suburban Workplace area proximate to other large facilities of this kind, with good access off both arterial and collector level streets and thereby well connected as it is proposed to be close to restaurants, retail shopping and other nearby residential developments and communities) is plainly part and parcel of good pedestrian, bicycle and road networks. Locating its development along and with access to and from those networks, Quadrant, at its cost, will assure the provision of sidewalks and to-be-determined frontage improvements. In doing so, it will prepare construction plans that will assure safe access with good site distances and turning radii.

Also, bike racks and handicapped parking spots will be installed as and where required near buildings. And all drive lanes, parking spaces and stub connections will be designed in accordance with Metro Public Works and Transportation Planning (MPW&TP) requirements. These are preliminarily depicted on the DDDP filed with this application.

Also an updated Traffic Impact Study (TIS) can be prepared and submitted as part of this application if determined to be needed by MPW&TP.

Existing TARC service is generally available in this area.

Further, all necessary utilities are located proximate to this site and accessible by it via public right of way or easements.

PLAN ELEMENT 4.3: COMMUNITY FACILITIES

This Application Package complies with Plan Element 4.3, its 3 Goals and their Objectives plus the following Policies.

As to Goal 2, Policies 1, 2 and 3, it complies as follows, in addition to the other ways set forth above and below:

The suburban cities of Jeffersontown and Middletown have assured that necessary community facilities are located nearby, including fire stations.

PLAN ELEMENT 4.4: ECONOMIC DEVELOPMENT

This Application Package complies with Plan Element 4.4, its 2 Goals and their Objectives, plus the following Policies.

As to Goal 1, Policies 1, 2, 4 and 5 and as to Goal 2, Policies 1 and 3, it complies as follows, in addition to the other ways set forth above and below:

As Louisville Metro's population continues to grow, so does demand for workplaces of all types. This proposed manufacturing plant is part of a Hollenbach-Oakley developer response to that demand, which largely results from the UPS Worldport facility at Louisville's central location along the I-64, I-65 and I-71 corridors. This particular plant promises increased opportunities for employment initially in the building trades and ultimately in the manufacturing business.

It also increases the Metro Louisville tax base essential to the provision of government services, especially important after the worst economic setback since the Great Depression which has resulted from the current COVID crisis. If Louisville and Kentucky are to fully economically rebound from this devastating occurrence, it will be because new growth opportunities are afforded like this one. That is why this Plan Element of the Comp Plan takes on such overriding significance at this point in Louisville's history.

PLAN ELEMENT 4.5: LIVABILITY

This Application Package complies with Plan Element 4.5, its 4 Goals and their Objectives plus the following Policies.

As to Goal 1, Policies 5, 7, 8, 10, 11, 12, 13, 15, 16, 23, 26, 27, 28, 30, 31, 32, 33 and 35; and Goal 4, Policies 1 and 2, it complies as follows, in addition to the other ways set forth above and below:

The DDDP filed with this application contemplates that storm water will be accommodated by way of detention either on-site or otherwise already constructed within the Blankenbaker Station business park. Sanitary sewer service is available at the nearby Floyds Fork regional wastewater treatment plant. It can be accessed via lateral extension to and from an existing nearby manhole.

Measures will also be taken during construction to assure that erosion and sediment impacts are fully controlled and/or mitigated.

As mentioned above, given the location of this proposed manufacturing plant in and near a large existing and expanding activity center, and nearby residential living opportunities, air quality impacts will be minimized because vehicle miles travelled are reduced.

PLAN ELEMENT 4.6: HOUSING

This Application Package complies with Plan Element 4.6, its 3 Goals and their Objectives,

As to these Goals, Objectives and Policies generally, while they don't specifically address developments of this kind, this manufacturing plant proposal nevertheless complies in that it will bring additional high-quality workplace opportunities to Greater Louisville and this area so as to assure more good jobs proximate to where people live.

* * *

For all of the above-stated reasons, those shown on the detailed district development plan and those explained at the LD&T meeting and Planning Commission public hearing, this application complies with all other applicable Goals, Objectives and Policies of the "Plan 2040" Comprehensive Plan.

Respectfully submitted,

William B. Bardenwerper
Bardenwerper, Talbott & Roberts, PLLC
Building Industry Association of Greater Louisville Bldg.
1000 N. Hurstbourne Parkway, Second Floor
Louisville, KY 40223

Partly as a consequence of what surrounds this proposal and the fact that this is a proposed industrial plant, much like its surrounding land uses, impacts such as traffic, odors, lighting, noise and aesthetic factors will not prove to be nuisance factors. After all, this area has been almost entirely built out as Suburban Workplace development. But to the extent that this manufacturing plant involves equipment and processes that raise any potentially objectionable noise, vibration, heat, odor and/or air quality issues, these plant-specific, potential nuisances will be mitigated. The manufacturing process is explained in the 8-step process attached to this Compliance Statement, and it and its related impact mitigation measures will be more fully explained at future public meetings and hearings, just as was done at the already held neighborhood meeting.

As to Goal 2, Policies 1, 2, 7 and 17, it complies as follows, in addition to the other ways set forth above and below:

As said, the proposed manufacturing plant will be located in a Suburban Workplace Form District and will adjoin already built Workplace facilities of a similar kind to this one. As such and with good and improving pedestrian and vehicular access inside the Blankenbaker Station business park and also along Blankenbaker and Bluegrass Parkways, Plantside Drive and other area streets, there already exist convenient vehicular, bicycle and pedestrian connections to other like-kind developments, commercial establishments and nearby residential neighborhoods. Indeed the proposed manufacturing plant is part of a large mixed use activity center that extends from Middletown south down Blankenbaker Parkway to Jeffersontown, west along Shelbyville Road and I-64 to Hurstbourne, St. Matthews and downtown Louisville, and east to Middletown, Frankfort and Lexington. Thus, it will access the mix of diverse residential communities nearby that provide a workforce. Plus this plant will have easy access to Louisville's interstate highway system, which leads to and from the UPS Worldport facility and is within a day's drive of a significant portion of the United States.

This location adds to the opportunities existing and planned in this high growth area to work in close and convenient proximity to places of residence, food and shopping within easy driving distances in all directions along I-64 and the Snyder Freeway.

As to Goal 3, Policies 3, 6 and 9, it complies as follows, in addition to the other ways set forth above and below:

The detailed district development plan (DDDP) filed with the rezoning application for this proposed manufacturing plant includes an outdoor community space for workers to congregate.

As to Goal 4, the applicant/developer submits that no historic structures exist on this site.

As to Goal 5, the proposed manufacturing plant is not of the kind intended nor public enough to include an element of public art.

PLAN ELEMENT 4.2: MOBILITY

This Application Package complies with Plan Element 4.2, its 3 Goals and their Objectives plus the following Policies.

As to Goal 1, Policies 1, 2, 3, 4 and 6; Goal 2, Policies 1, 2, 3, 4, 5, 6, 7, 8 and 9; and Goal 3, Policies 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20 and 21, it complies as follows, in addition to the other ways set forth above and below:

This proposed industrial plant (located as it is within an existing and growing mixed use Suburban Workplace area proximate to other large facilities of this kind, with good access off both arterial and collector level streets and thereby well connected as it is proposed to be close to restaurants, retail shopping and other nearby residential developments and communities) is plainly part and parcel of good pedestrian, bicycle and road networks. Locating its development along and with access to and from those networks, Quadrant, at its cost, will assure the provision of sidewalks and to-be-determined frontage improvements. In doing so, it will prepare construction plans that will assure safe access with good site distances and turning radii.

Also, bike racks and handicapped parking spots will be installed as and where required near buildings. And all drive lanes, parking spaces and stub connections will be designed in accordance with Metro Public Works and Transportation Planning (MPW&TP) requirements. These are preliminarily depicted on the DDDP filed with this application.

Also an updated Traffic Impact Study (TIS) can be prepared and submitted as part of this application if determined to be needed by MPW&TP.

Existing TARC service is generally available in this area.

Further, all necessary utilities are located proximate to this site and accessible by it via public right of way or easements.

PLAN ELEMENT 4.3: COMMUNITY FACILITIES

This Application Package complies with Plan Element 4.3, its 3 Goals and their Objectives plus the following Policies.

As to Goal 2, Policies 1, 2 and 3, it complies as follows, in addition to the other ways set forth above and below:

The suburban cities of Jeffersontown and Middletown have assured that necessary community facilities are located nearby, including fire stations.

PLAN ELEMENT 4.4: ECONOMIC DEVELOPMENT

This Application Package complies with Plan Element 4.4, its 2 Goals and their Objectives, plus the following Policies.

As to Goal 1, Policies 1, 2, 4 and 5 and as to Goal 2, Policies 1 and 3, it complies as follows, in addition to the other ways set forth above and below:

As Louisville Metro's population continues to grow, so does demand for workplaces of all types. This proposed manufacturing plant is part of a Hollenbach-Oakley developer response to that demand, which largely results from the UPS Worldport facility at Louisville's central location along the I-64, I-65 and I-71 corridors. This particular plant promises increased opportunities for employment initially in the building trades and ultimately in the manufacturing business.

It also increases the Metro Louisville tax base essential to the provision of government services, especially important after the worst economic setback since the Great Depression which has resulted from the current COVID crisis. If Louisville and Kentucky are to fully economically rebound from this devastating occurrence, it will be because new growth opportunities are afforded like this one. That is why this Plan Element of the Comp Plan takes on such overriding significance at this point in Louisville's history.

PLAN ELEMENT 4.5: LIVABILITY

This Application Package complies with Plan Element 4.5, its 4 Goals and their Objectives plus the following Policies.

As to Goal 1, Policies 5, 7, 8, 10, 11, 12, 13, 15, 16, 23, 26, 27, 28, 30, 31, 32, 33 and 35; and Goal 4, Policies 1 and 2, it complies as follows, in addition to the other ways set forth above and below:

The DDDP filed with this application contemplates that storm water will be accommodated by way of detention either on-site or otherwise already constructed within the Blankenbaker Station business park. Sanitary sewer service is available at the nearby Floyds Fork regional wastewater treatment plant. It can be accessed via lateral extension to and from an existing nearby manhole.

Measures will also be taken during construction to assure that erosion and sediment impacts are fully controlled and/or mitigated.

As mentioned above, given the location of this proposed manufacturing plant in and near a large existing and expanding activity center, and nearby residential living opportunities, air quality impacts will be minimized because vehicle miles travelled are reduced.

PLAN ELEMENT 4.6: HOUSING

This Application Package complies with Plan Element 4.6, its 3 Goals and their Objectives,

As to these Goals, Objectives and Policies generally, while they don't specifically address developments of this kind, this manufacturing plant proposal nevertheless complies in that it will bring additional high-quality workplace opportunities to Greater Louisville and this area so as to assure more good jobs proximate to where people live.

* * *

For all of the above-stated reasons, those shown on the detailed district development plan and those explained at the LD&T meeting and Planning Commission public hearing, this application complies with all other applicable Goals, Objectives and Policies of the "Plan 2040" Comprehensive Plan.

Respectfully submitted,

William B. Bardenwerper
Bardenwerper, Talbott & Roberts, PLLC
Building Industry Association of Greater Louisville Bldg.
1000 N. Hurstbourne Parkway, Second Floor
Louisville, KY 40223

Variance Justification:

In order to justify approval of any variance, the Board of Zoning Adjustment considers the following criteria. Please answer all of the following items. Use additional sheets if needed. A response of yes, no, or N/A is not acceptable.

Variance of: Section 5.3.4.d.4.a to allow the proposed building height to exceed the 50' height allowed to a 67' maximum building height.

1. The variance will not adversely affect the public health, safety or welfare because this is an aesthetic code requirement. Further, the building has been set back an additional 20' from the required front yard setback such that, according to the Suburban Form District guidelines, an additional 4' of height is arguably allowed per 1' of additional setback. Therefore, the 67' height would be conceptually be permitted with an additional 5' of front yard setback. As a result of the attempt to comply with the intent of LDC 5.2.4.d.4.a., there will not be any adverse effects on the public health, safety, or welfare, particularly because there is no evidence that the extra height will cause any traffic or other safety problems. Further, the site is in the Blankenbaker Station II development and thus subject to the strict covenants, conditions, and restrictions for all properties within the development. The building will meet the same standards the other properties owners expect for buildings within the development.

2. The variance will not alter the essential character of the general vicinity this is an aesthetic code requirement and, as said, the property is subject to the Blankenbaker Station II covenants, conditions and restrictions prepared and recorded to ensure all properties in the development meet certain design standards.

3. The variance will not cause a hazard or a nuisance to the public because this is an aesthetic code requirement and the proposed building height is similar to other buildings in the business park.

4. The variance will not allow an unreasonable circumvention of the requirements of the zoning regulations because this is an aesthetic code requirement. Further, the additional setback being provided is anticipated to allow additional building height, and because the building will be in compliance with the Blankenbaker Station II CCRs.

Additional consideration:

1. The Variance arises from special circumstances, which do not generally apply to land in the general vicinity because building height is already governed by private deed restrictions, which does not apply to all properties in this area of town.

2. Strict application of the provisions of the regulation would deprive the applicant of the reasonable use of the land or would create unnecessary hardship because this is an aesthetic code requirement, which is already regulated by private restrictions.

3. The circumstances are not the result of actions of the applicant taken subsequent to the adoption of the regulation, but rather are a result of a constrained site for the proposed use.

Tab 9
Proposed findings of fact pertaining to compliance with the 2040 Plan and Variance criteria

BARDENWERPER, TALBOTT & ROBERTS, PLLC
ATTORNEYS AT LAW
1000 N. HURSTBOURNE PARKWAY • BUILDING INDUSTRY ASSOCIATION OF GREATER LOUISVILLE BLDG. • SECOND FLOOR • LOUISVILLE, KENTUCKY 40223
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PROPOSED FINDINGS OF FACT REGARDING COMPLIANCE WITH ALL APPLICABLE GOALS, OBJECTIVES AND POLICIES OF 2040 PLAN

Applicant:	Quadrant International, Inc.
Owners:	HOSTS Development, LLC
Location:	Block 39, Lot 551 (No address per PVA and LOJIC)
Proposed Use:	Magnet Manufacturing
Request:	Zone change from PEC to M-3
Engineers, Land Planners, Landscape Architects:	Mindel Scott & Associates

The Louisville Metro Planning Commission, having heard testimony before its Land Development & Transportation Committee, in the Public Hearing held on November 4, 2021 and having reviewed evidence presented by the applicant and the staff's analysis of the application, make the following findings:

INTRODUCTION

WHEREAS, the manufacturing plant that is the subject of this application is proposed by a San Diego-headquartered, Chinese owned company, which has global operations in the US, Europe, China, Vietnam, and Australia and has a major engineering, logistics, and sales presence within the Blankenbaker Station business park;

WHEREAS, this proposal involves a direct foreign investment to build a permanent magnet manufacturing plant in the US, specifically in Louisville;

WHEREAS, Rare Earth Permanent Magnets, as proposed to be manufactured next to Quadrant's existing engineering, design, sales and fulfillment facility, are key components in a large variety of products – including consumer electronics, advanced motors, electronic vehicles, medical devices, and renewable energy; the current supply change for finished magnets and the manufacturing process has been controlled by China for the past 20+ years; this dominance by the Chinese can cause disruption with product manufacturers worldwide without the assurance that a US manufacturer can meet the production and supply of these key components essential to fully build, assemble and timely deliver products to US and global customers; and

WHEREAS, skilled manufacturing and quality control jobs, like those promised at this facility, are a principal objective of any economic development effort of all cities and states, especially in

Kentucky and in Louisville; and thus, the economic and innovation value of constructing a plant like this, at this time, is obvious and indisputable; and

WHEREAS, although not fully designed yet, the manufacturing plant will conform to the design standards of Louisville's present day Land Development Code (LDC); and the Hollenbach-Oakley design standards for Blankenbaker Station Business Park independently mandate a high level of impact mitigation plus site and building design; and

WHEREAS, the Blankenbaker Station Business Park area is also a prime growth area for development because of these principal factors: (a) the availability of sanitary sewers which MSD spent major taxpayer money to accommodate environmentally positive growth; (b) the presence of significant and growing industrial site activity; (c) the location near major arterials in close proximity to an interstate highway system which moves traffic to and from this major employment center; and (d) the close proximity to residential communities, thereby making employee commuting distances and times relatively short and appealing; and

PLAN ELEMENT 4.1: COMMUNITY FORM

This "Application Package" complies with Plan Element 4.1, its 5 Goals and their Objectives plus the following Policies:

As to Goal 1, Policies 2, 2.1, 3.1.10, 4, 6, 7, 8, 9 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22 and 23, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, the site is located in the Suburban Workplace Form District which is characterized by mostly industrial and office buildings which are set back from streets in a landscaped setting; these buildings are often large scale uses, significant in size, which this plan proposes; public transportation is always desirable but not necessarily always fully available because of limited government funding; here public transportation is available, although to a limited extent; and pedestrian and bicycle access to nearby retail is desired, and the infrastructure here has and will provide for it; and

WHEREAS, Land Development Code required size and height restrictions, interior and perimeter landscaping, minimum parking, maximum lighting and signage, and required setbacks will also be met; and

WHEREAS, located as this proposed manufacturing plant is just a short drive in all directions from sizeable and ever-growing population centers, travel distances for workers are reduced, and walking and biking become very real possibilities, especially over time as sidewalk extensions are completed; this helps contribute to improved air quality; and

WHEREAS, quality building components and a design compatible with other buildings in the Blankenbaker Station business park and surrounding area will assure compatibility with nearby workplace buildings, development sites and also remaining residentially occupied properties; quality landscaping and effective screening and buffering also help assure context-appropriateness and design-compatibility for the larger area and proximate residential neighborhoods; and

WHEREAS, partly as a consequence of what surrounds this proposal and the fact that this is a proposed industrial plant, much like its surrounding land uses, impacts such as traffic, odors, lighting, noise and aesthetic factors will not prove to be nuisance factors; after all, this area has been almost entirely built out as Suburban Workplace development; but to the extent that this manufacturing plant involves equipment and processes that raise any potentially objectionable noise, vibration, heat, odor and/or air quality issues, these plant-specific, potential nuisances will be mitigated, as the manufacturing process was explained in the 8-step process presented in the PowerPoint at the public hearing; and

As to Goal 2, Policies 1, 2, 7 and 17, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, the proposed manufacturing plant will be located in a Suburban Workplace Form District and will adjoin already built Workplace facilities of a similar kind to this one; as such and with good and improving pedestrian and vehicular access inside the Blankenbaker Station business park and also along Blankenbaker and Bluegrass Parkways, Plantside Drive and other area streets, there already exist convenient vehicular, bicycle and pedestrian connections to other like-kind developments, commercial establishments and nearby residential neighborhoods; indeed the proposed manufacturing plant is part of a large mixed use activity center that extends from Middletown south down Blankenbaker Parkway to Jeffersontown, west along Shelbyville Road and I-64 to Hurstbourne, St. Matthews and downtown Louisville, and east to Middletown, Frankfort and Lexington; thus, it will access the mix of diverse residential communities nearby that provide a workforce; plus this plant will have easy access to Louisville's interstate highway system, which leads to and from the UPS Worldport facility and is within a day's drive of a significant portion of the United States; and

WHEREAS, this location adds to the opportunities existing and planned in this high growth area to work in close and convenient proximity to places of residence, food and shopping within easy driving distances in all directions along I-64 and the Snyder Freeway; and

As to Goal 3, Policies 3, 6 and 9, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, the detailed district development plan (DDDP) filed with the rezoning application for this proposed manufacturing plant includes an outdoor community space for workers to congregate; and

As to Goal 4, the applicant/developer submits that no historic structures exist on this site; and

As to Goal 5, the proposed manufacturing plant is not of the kind intended nor public enough to include an element of public art; and

PLAN ELEMENT 4.2: MOBILITY

This Application Package complies with Plan Element 4.2, its 3 Goals and their Objectives plus the following Policies:

As to Goal 1, Policies 1, 2, 3, 4 and 6; Goal 2, Policies 1, 2, 3, 4, 5, 6, 7, 8 and 9; and Goal 3, Policies 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 14, 15, 17, 18, 19, 20 and 21, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, this proposed industrial plant (located as it is within an existing and growing mixed use Suburban Workplace area proximate to other large facilities of this kind, with good access off both arterial and collector level streets and thereby well connected as it is proposed to be close to restaurants, retail shopping and other nearby residential developments and communities) is plainly part and parcel of good pedestrian, bicycle and road networks; locating its development along and with access to and from those networks, Quadrant, at its cost, will assure the provision of sidewalks; and in doing so, it will prepare construction plans that will assure safe access with good site distances and turning radii; and

WHEREAS, bike racks and handicapped parking spots will be installed as and where required near buildings; and all drive lanes, parking spaces and stub connections will be designed in accordance with Metro Public Works and Transportation Planning (MPW&TP) requirements; and these are preliminarily depicted on the DDDP filed with this application; and

WHEREAS, all of the traffic and transportation studies and improvements anticipated for Blankenbaker Station II were conducted and made at earlier stages of review and development of this larger project; and

WHEREAS, existing TARC service is generally available in this area; and

WHEREAS, further, all necessary utilities are located proximate to this site and accessible by it via public right of way or easements; and

WHEREAS, Schutte Station Road is required to be built through this site to service other properties, including a future one that the applicant's representatives explained at the public hearing; and, as a consequence, Schutte Station Road will extend across an existing stream and

through existing open space, which was contemplated at the time the DDDP was approved in Docket No. 15ZONE1028; and

PLAN ELEMENT 4.3: COMMUNITY FACILITIES

This Application Package complies with Plan Element 4.3, its 3 Goals and their Objectives plus the following Policies:

As to Goal 2, Policies 1, 2 and 3, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, the suburban cities of Jeffersontown and Middletown have assured that necessary community facilities are located nearby, including fire stations; and

PLAN ELEMENT 4.4: ECONOMIC DEVELOPMENT

This Application Package complies with Plan Element 4.4, its 2 Goals and their Objectives, plus the following Policies:

As to Goal 1, Policies 1, 2, 4 and 5 and as to Goal 2, Policies 1 and 3, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, as Louisville Metro's population continues to grow, so does demand for workplaces of all types; this proposed manufacturing plant is part of a Hollenbach-Oakley developer response to that demand, which largely results from the UPS Worldport facility at Louisville's central location along the I-64, I-65 and I-71 corridors; this particular plant promises increased opportunities for employment initially in the building trades and ultimately in the manufacturing business; and

WHEREAS, it also increases the Metro Louisville tax base essential to the provision of government services; and

PLAN ELEMENT 4.5: LIVABILITY

This Application Package complies with Plan Element 4.5, its 4 Goals and their Objectives plus the following Policies:

As to Goal 1, Policies 5, 7, 8, 10, 11, 12, 13, 15, 16, 23, 26, 27, 28, 30, 31, 32, 33 and 35; and Goal 4, Policies 1 and 2, it complies as follows, in addition to the other ways set forth above and below:

WHEREAS, the DDDP filed with this application contemplates that storm water will be accommodated by way of detention either on-site or otherwise already constructed within the Blankenbaker Station business park; sanitary sewer service is available at the nearby Floyds Fork regional wastewater treatment plant; and it can be accessed via lateral extension to and from an existing nearby manhole; and

WHEREAS, measures will also be taken during construction to assure that erosion and sediment impacts are fully controlled and/or mitigated; and

WHEREAS, as mentioned above, given the location of this proposed manufacturing plant in and near a large existing and expanding activity center, and nearby residential living opportunities, air quality impacts will be minimized because vehicle miles travelled are reduced; and

PLAN ELEMENT 4.6: HOUSING

This Application Package complies with Plan Element 4.6, its 3 Goals and their Objectives:

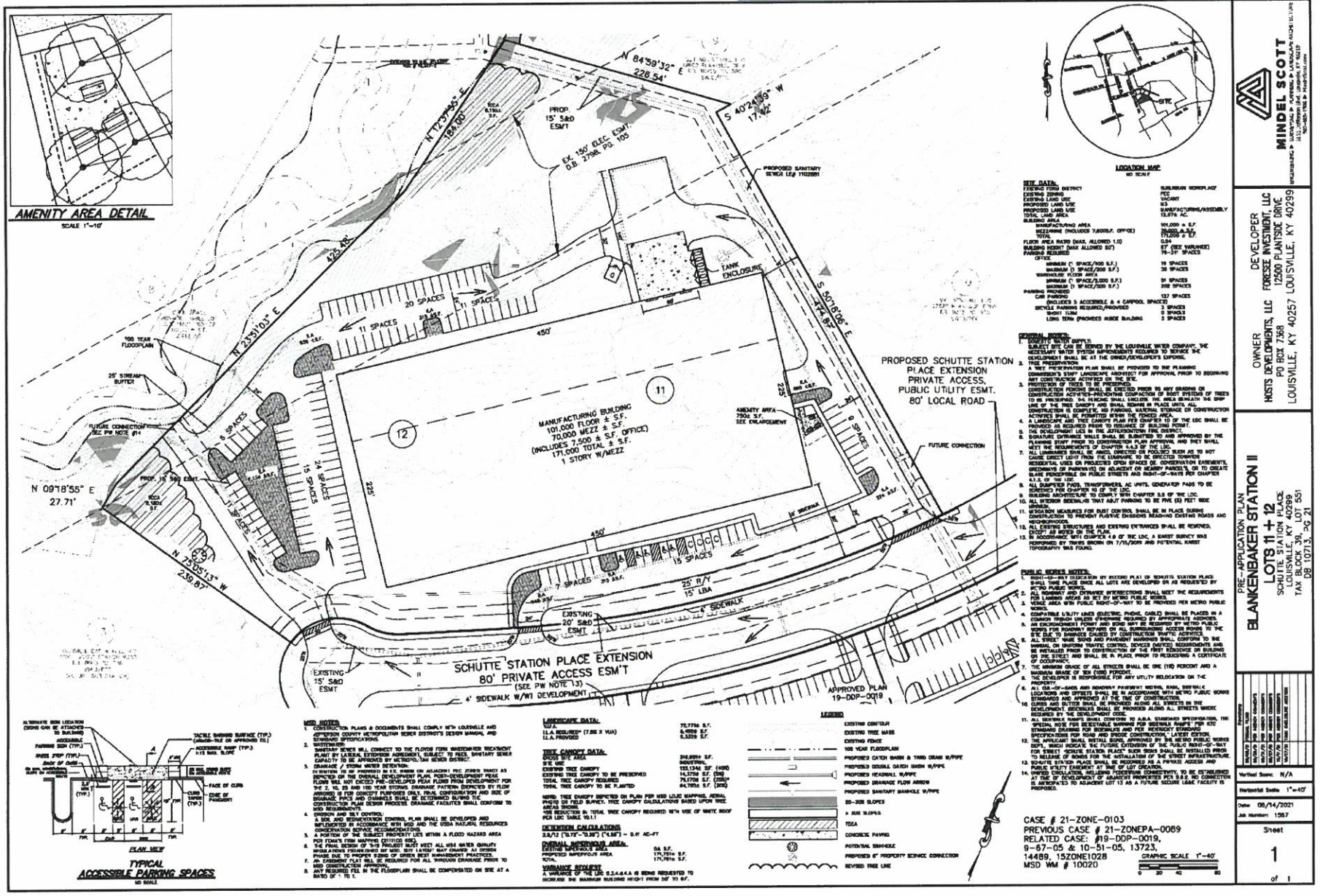
WHEREAS, as to these Goals, Objectives and Policies generally, while they don't specifically address developments of this kind, this manufacturing plant proposal nevertheless complies in that it will bring additional high-quality workplace opportunities to Greater Louisville and this area so as to assure more good jobs proximate to where people live; and

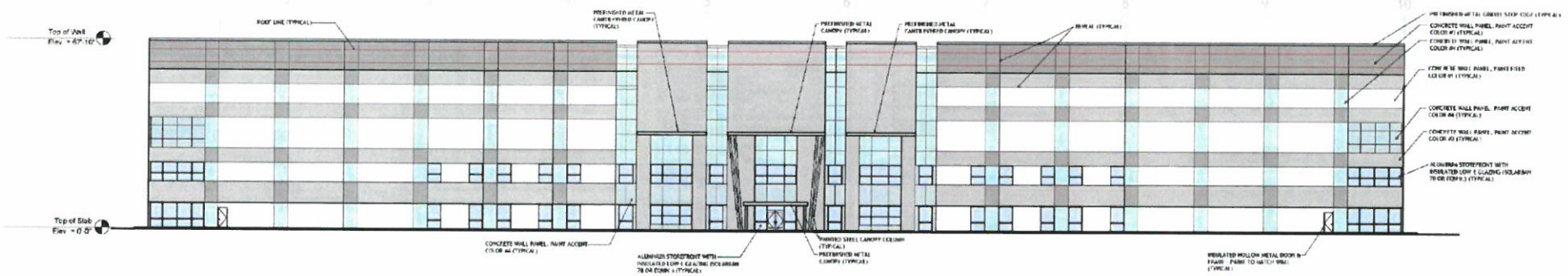
* * *

WHEREAS, for all the reasons explained at LD&T and the Planning Commission public hearing and also in the public hearing exhibit books, on the approved detailed district development plan, this application also complies with all other applicable Goals, Objectives and Policies of Plan 2040;

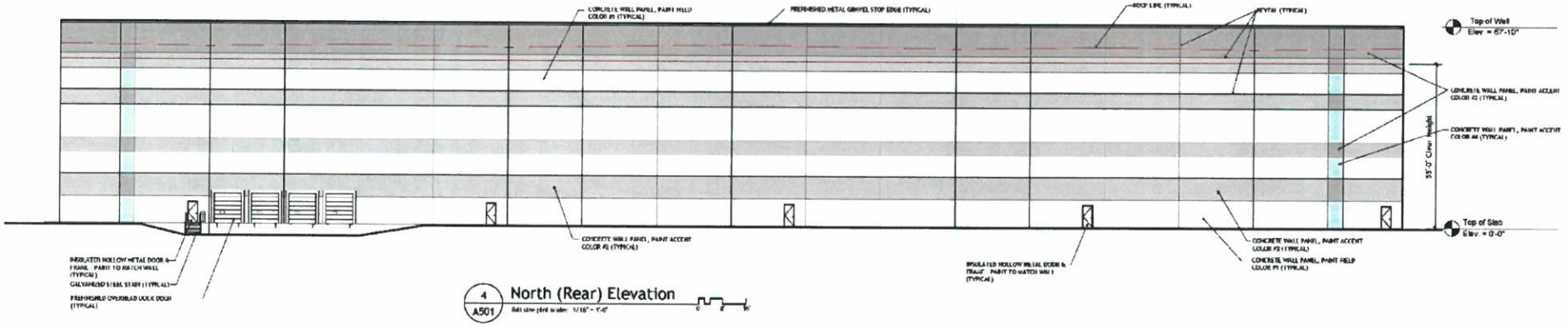
NOW, THEREFORE, the Louisville Metro Planning Commission hereby recommends to the Louisville Metro Council that it rezone the subject property from PEC to M-3 and approves the Detailed District Development Plan.

Updated DDDP since time of LD&T

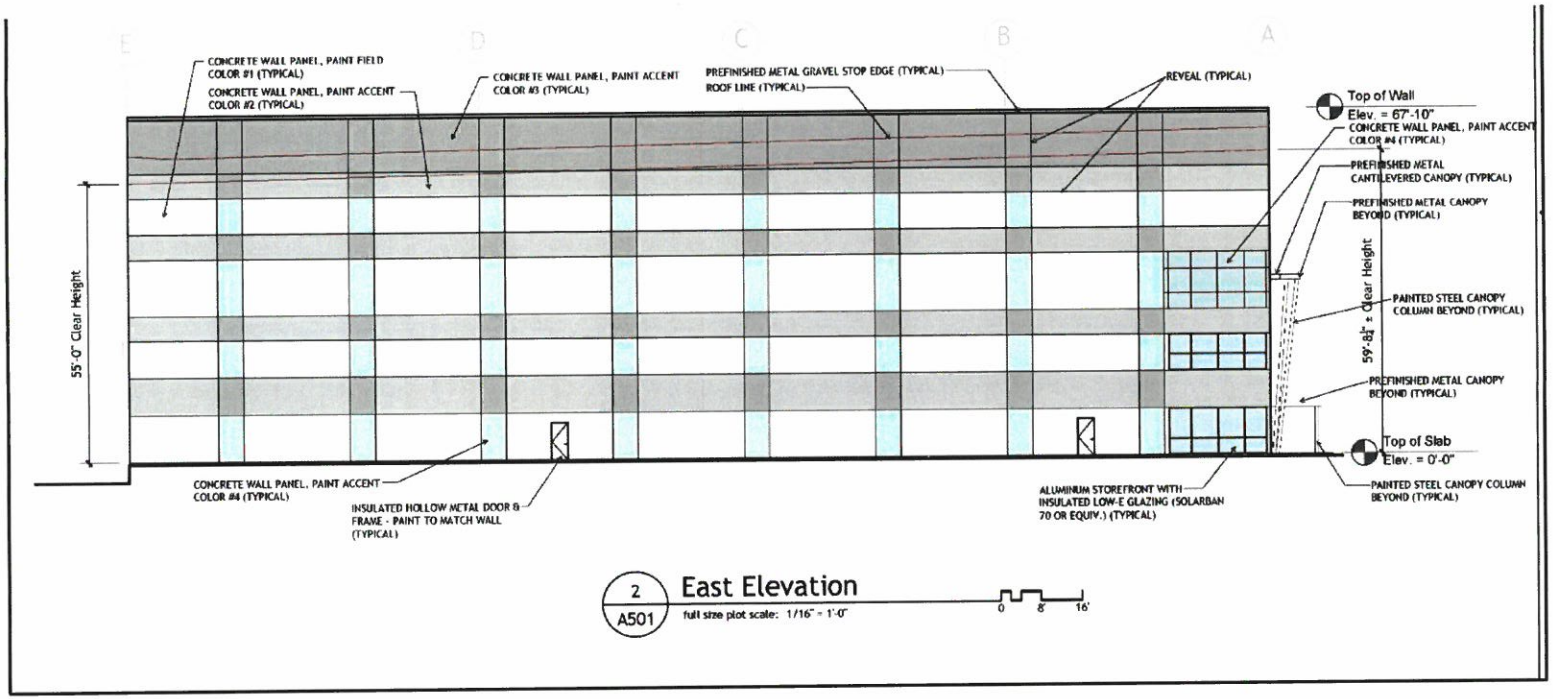




1 A501 **South (Front) Elevation**



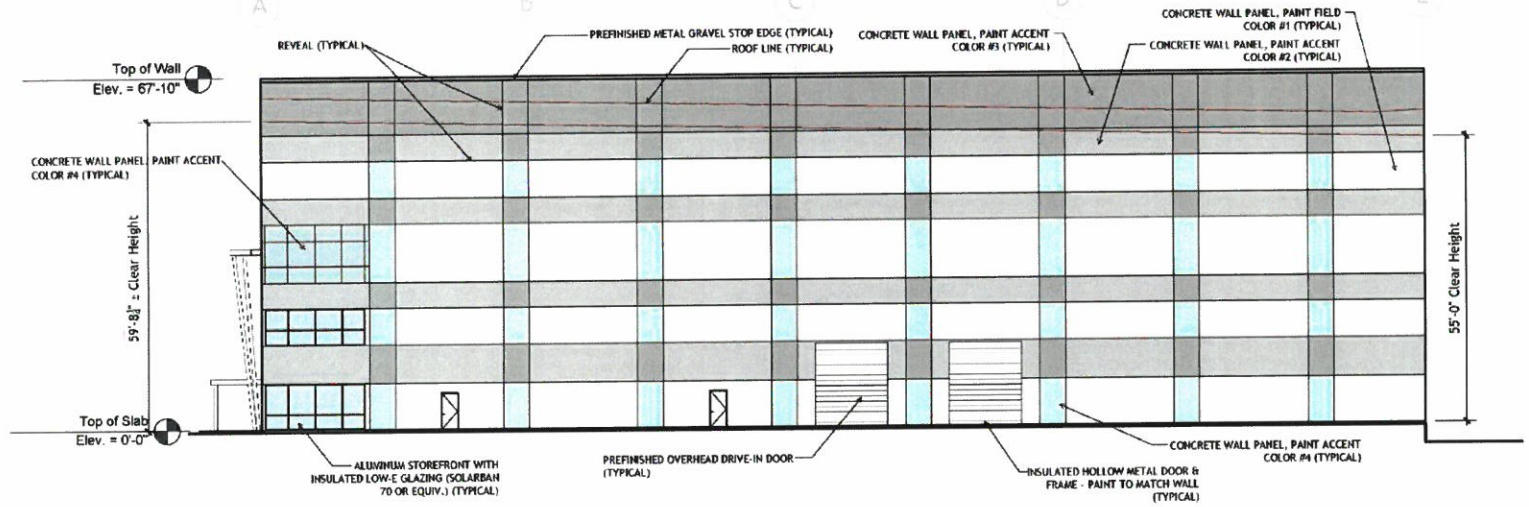
4 A501 **North (Rear) Elevation**



2 / A501 **East Elevation**

full size plot scale: 1/16" = 1'-0"

0 8' 16'



3 / A501 **West Elevation**

full size plot scale: 1/16" = 1'-0"

0 8' 16'

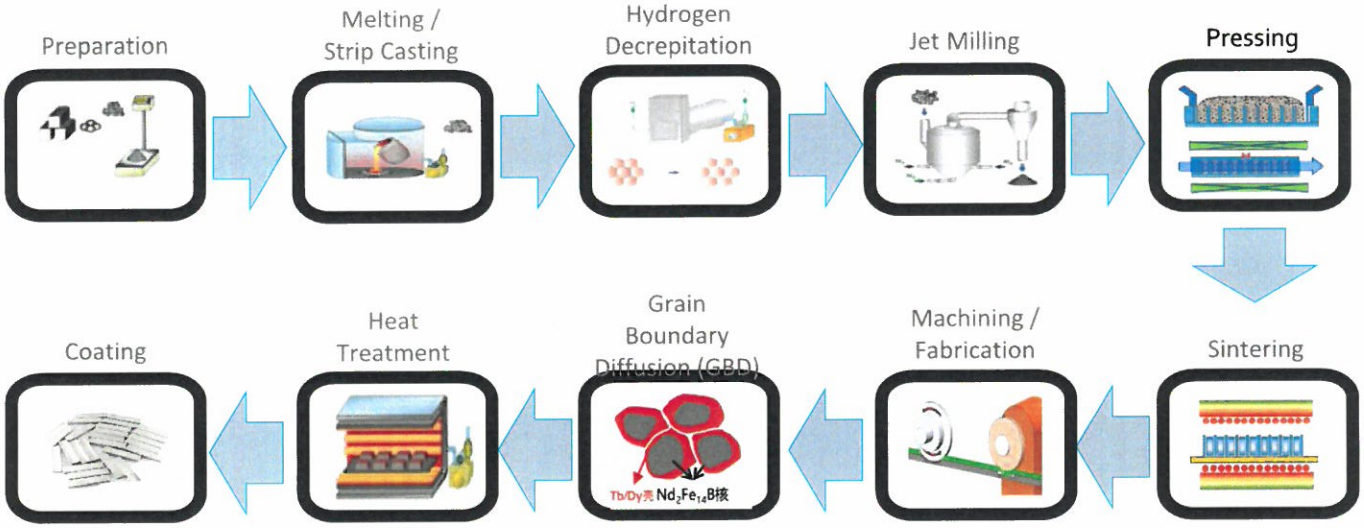
Tab 6
Proposed Additional Binding Element

Proposed Additional Binding Element

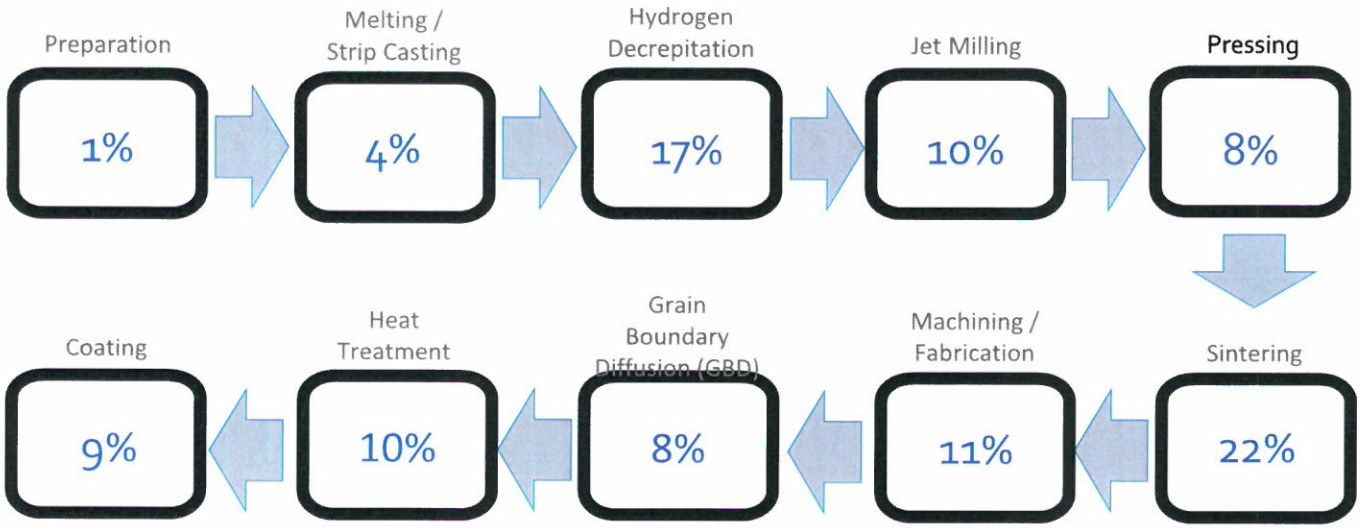
- No other M3 uses are allowed, except those in M1 & M2 and this one, unless approved by the Planning Commission.

Tab 7
Manufacturing Process

Magnet Manufacturing Process



Magnet Manufacturing Process Percentages



Melting /
Strip Casting

Melting / Strip Casting

Smelting Furnace GVIM-800-SC

Equipment Specifications

Maximum Capability: 800kg
Limiting Vacuum: 0.4Pa
Melting Power: 0.8kHz 700kW Area: W12m x L14m x H8m

Overview

Turn solid metals into liquid. The intent of the process is to combine different materials / metals into a homogeneous mixture.

The Strip Casting process produces small "flakes" of materials that includes a consistent mixture of rare earths and metals. These flakes are the basis for determine the magnetic grade that will be produced, and the starting point for the remaining processes.

Hydrogen Decrepitation

Hydrogen Decrepitation

Hydrogen Decrepitation Furnace BQDHD-1200L

Equipment Specifications

Maximum Capability: 1,200kg
Power: 75kW
Rated Heating Temp: 550C
Maximum Pressure: 0.7Mpa

Overview

To break apart material particles into smaller sizes.

Hydrogen is fed from a hydrogen station into the furnace, which is then heated. This process is in a closed state and no dust or chemicals are produced. Once the process is completed, the materials continue to the next stage of production while remaining in a closed state to avoid contamination from oxygen.

Jet Milling

Jet Milling

Jet Milling Equipment QLMR-300G

Equipment Specifications

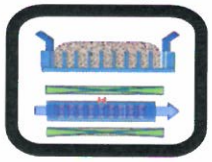
Maximum Capability: 50-100 kg/h
Power: 78kW
Oxygen Content of Supply Gas: <10ppm

Overview

To use a tornadic movement of particles to achieve a 3-5 micron size.

Parts are circulating in a nitrogen filled sealed chamber. The particles are continually moving and forming smaller sizes of particles until a 3-5 micron size is achieved. A screening processes within the chamber allows for passage of only the correct sized particles.

Pressing



Pressing

Pressing Equipment BDM-350/2W

Equipment Specifications

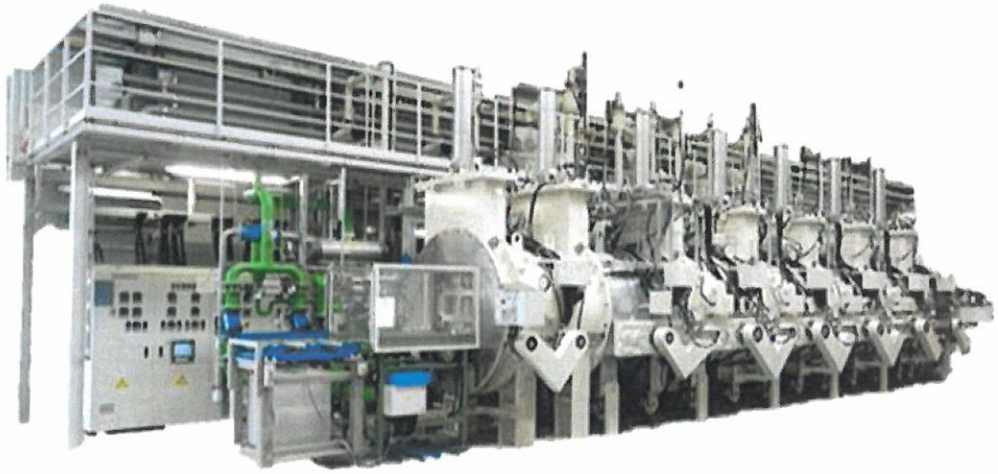
Rated Pressure: 40T
Power: 80kW
Electromagnetic Pole Diameter: 350mm

Overview

To press powders from Jet Milling into semi-finished blocks and orient the domains within the powder.

Under a nitrogen-filled state, the powdered material is pressed into blocks or cylinders under a magnetic field in order to orient the material. This is done in a sealed-stated to avoid contact with oxygen.

Sintering



Continuous Vacuum Sintering Furnace FSC-6090C-7

Equipment Specifications

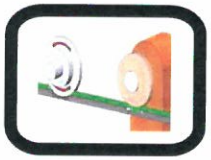
Maximum Temp: 1200C
Power: 900kW
Loading Capacity: 300kg

Overview

To increase the density and performance of the magnetic materials.

In a vacuum condition, the pressed blocks & cylinders are sintered into a denser material. These blocks and cylinders are exposed to temperatures of approximately 1150C. This process is performed using argon in a closed, vacuum chamber to prevent oxidation, and the result is a magnetic block that exhibits better magnetic properties.

Machining / Fabrication



Machining & Fabrication

Multi-Wire Cutting Machine DX2260

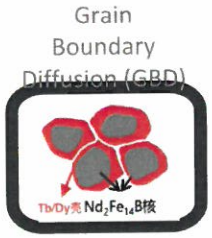
Equipment Specifications

Max. Work Size: 220mm x 600mm x 160mm
Steel Wire Diameter: 0.10mm – 0.18mm
Power: 65kW

Overview

To cut, grind, and shape permanent magnet materials to customer specifications.

This cutting process results in high accuracy in large volumes, and effectively reduces the scrap rate and improves overall output. This equipment is highly automated and allows 1 operator to operate several machines at a time.



Grain Boundary Diffusion (GBD)

PVD Equipment TS1400CJLW

Equipment Specifications

Maximum Capacity: 100kg
Power: 300kW
Ultimate Vacuum: 0.002 Pa

Overview

To infuse Dy or Tb to the surface of a magnet via PVD

During the PVD process, the process is completed in a closed chamber. Heavy Rare Earths of Dy and TB are layered into the surface of the magnetic materials via PVD for 24-36 hours. The result is a magnetic material that has a rich layer of Dy and Tb within its surface, and now prepared for the next step of the process, Heat Treatment.

Heat Treatment

Heat Treatment

Diffusion Furnace FHB-60C

Equipment Specifications

Maximum Temp: 1,350C
Power: 150kW
Ultimate Vacuum: 0.002 Pa
Loading Capacity: 500kg

Overview

To diffuse the PVD layered material into the magnet

Heat Treatment is the second step in the diffusion process. Heavy Rare Earth materials deposited on the surface of the magnets using PVD are diffused further into the magnets during Heat Treatment. The furnace operates in a closed state. This process improves the performance of the magnet, which are best suited for high heat applications such as electric vehicles and high-performance motors.

Coating

Coating

Nickel Plating Line

Overview

To apply a layer of nickel-copper-nickel, or zinc, over a magnet to ensure no oxidation in, or on, the magnet.

The coating process uses a series of electrically charged baths of fluids to coat a magnet. This process involves ultra-sonic washing stations, chemical baths, rinsing stations, drying stations, and quality control checks. The process is semi-automated and requires the precise use of electricity and time to ensure the proper coating and thickness are applied.

Tab 8
Statement of Compliance filed with the original zone change application with all applicable Goals of the 2040 Plan and Variance Justification

BARDENWERPER, TALBOTT & ROBERTS, PLLC
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(502) 426-6688 • (502) 425-0561 (FAX) • WWW.BARDLAW.NET

STATEMENT OF COMPLIANCE WITH ALL APPLICABLE GOALS, OBJECTIVES AND POLICIES OF THE "PLAN 2040" COMPREHENSIVE PLAN

Applicant:	Quadrant International, Inc.
Owners:	HOSTS Development, LLC
Location:	Block 39, Lot 551 (No address per PVA and LOJIC)
Proposed Use:	Magnet Manufacturing
Request:	Zone change from PEC to M-3
Engineers, Land Planners, Landscape Architects:	Mindel Scott & Associates

INTRODUCTION

The manufacturing plant that is the subject of this application is proposed by a San Diego-headquartered company whose owner resides in San Diego but is currently a Chinese National. They have global operations in the US, Europe, China, Vietnam, and Australia, however, the company already has a major engineering, logistics, and sales presence within the Blankenbaker Station business park. A direct foreign investment decision has been made to build a permanent magnet manufacturing plant in the US and to do so in Louisville, if exactly here in conjunction with the zone change requested. Otherwise the plant may be built outside of Kentucky.

Rare Earth Permanent Magnets, as proposed to be manufactured next to Quadrant's existing engineering, design, sales and fulfillment facility, are key components in a large variety of products – including consumer electronics, advanced motors, electronic vehicles, medical devices, and renewable energy. The current supply change for finished magnets and the manufacturing process has been controlled by China for the past 20+ years. This dominance by the Chinese can cause disruption with product manufacturers worldwide without the assurance that a US manufacturer can meet the production and supply of these key components essential to fully build, assemble and timely deliver products to US and global customers.

Also, skilled manufacturing and quality control jobs, like those promised at this facility, are a principal objective of any economic development effort of all cities and states, especially in Kentucky and in Louisville. Thus, the economic and innovation value of constructing a plant like this, at this time, is obvious and indisputable.

Although not fully designed yet, the manufacturing plant will conform to the design standards of Louisville's present day Land Development Code (LDC). Moreover, the Hollenbach-Oakley

design standards for Blankenbaker Station Business Park independently mandate a high level of impact mitigation plus site and building design.

The Blankenbaker Station Business Park area is also a prime growth area for development because of these principal factors: (a) the availability of sanitary sewers which MSD spent major taxpayer money to accommodate environmentally positive growth; (b) the presence of significant and growing industrial site activity; (c) the location near major arterials in close proximity to an interstate highway system which moves traffic to and from this major employment center; and (d) the close proximity to residential communities, thereby making employee commuting distances and times relatively short and appealing.

PLAN ELEMENT 4.1: COMMUNITY FORM

This "Application Package" complies with Plan Element 4.1, its 5 Goals and their Objectives plus the following Policies.

As to Goal 1, Policies 2, 2.1, 3.1.10, 4, 6, 7, 8, 9 10, 11, 12, 14, 16, 17, 18, 19, 20, 21, 22 and 23, it complies as follows, in addition to the other ways set forth above and below:

The site is located in the Suburban Workplace Form District which is characterized by mostly industrial and office buildings which are set back from streets in a landscaped setting. These buildings are often large scale uses, significant in size, which this plan proposes. Public transportation is always desirable but not necessarily always fully available because of limited government funding. Here public transportation is available, although to a limited extent. Pedestrian and bicycle access to nearby retail is desired, and the infrastructure here has and will provide for it.

Land Development Code required size and height restrictions, interior and perimeter landscaping, minimum parking, maximum lighting and signage, and required setbacks will also be met.

Also, located as this proposed manufacturing plant is just a short drive in all directions from sizeable and ever-growing population centers, travel distances for workers are reduced, and walking and biking become very real possibilities, especially over time as sidewalk extensions are completed. This helps contribute to improved air quality.

Quality building components and a design compatible with other buildings in the Blankenbaker Station business park and surrounding area will assure compatibility with nearby workplace buildings, development sites and also remaining residentially occupied properties. Quality landscaping and effective screening and buffering also help assure context-appropriateness and design-compatibility for the larger area and proximate residential neighborhoods.

Louisville Metro Planning Commission Public Hearing – November 4, 2021
Louisville Metro Land Development & Transportation Committee – October 14, 2021
Neighborhood Meeting – July 22, 2021

Docket No. 21-ZONE-0103

Zone change from PEC to M3 on 7.27 acres in to allow Quadrant International to construct a magnet manufacturing plant at its existing Blankenbaker Station facility, being lots 11 and 12 in Blankenbaker Station II

QUADRANT

in cooperation with

HORIZON COMMERCIAL REALTY

HOLLENBACH OAKLEY

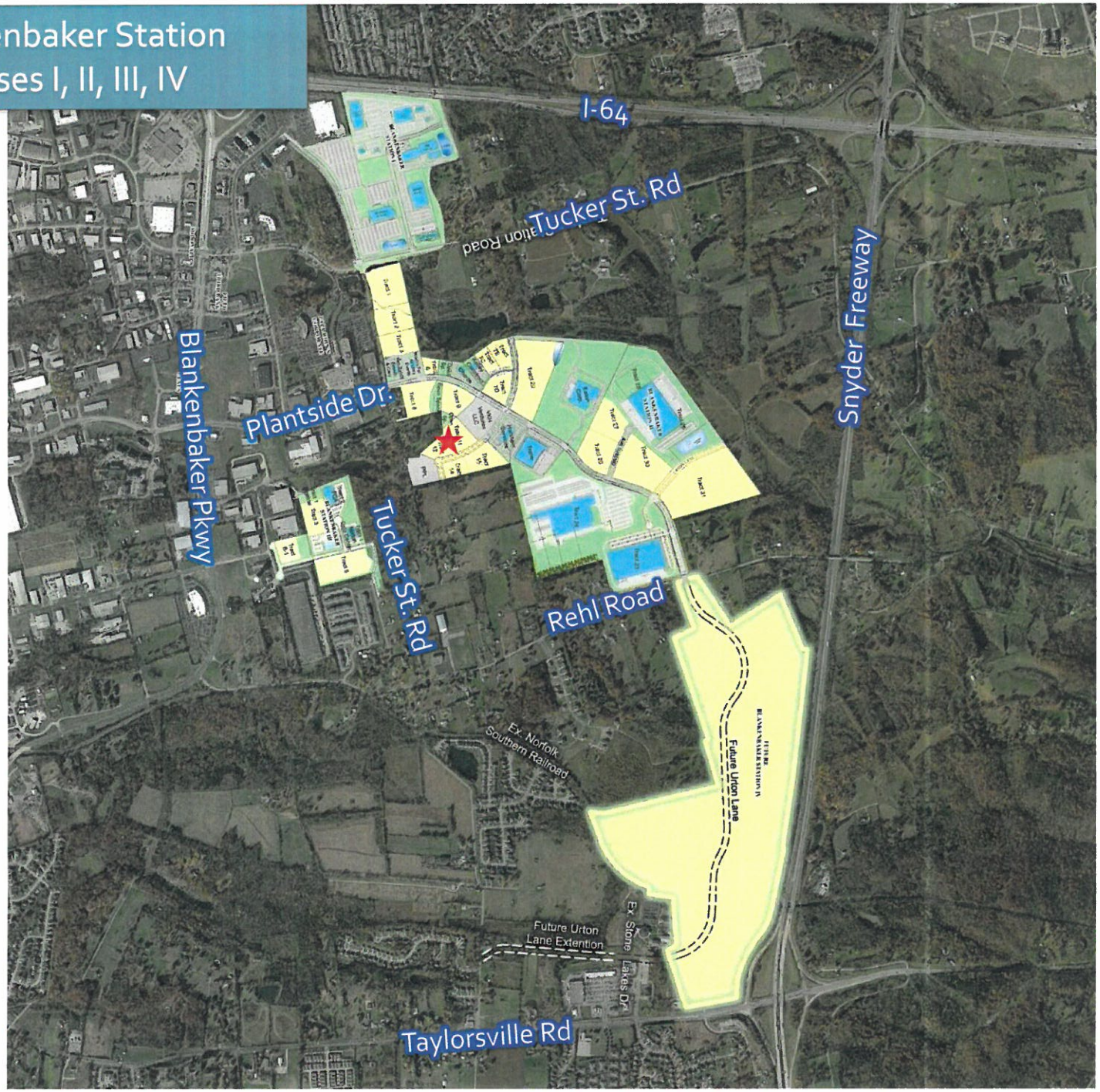
INDEX

1. Aerial photograph of the site and surrounding area Aerial photographs of the site and surrounding area
2. LOJIC Zoning Map
3. Aerial and ground level photographs of the 3 Quadrant sites in context of the surrounding area Building elevations
4. Prior development plan approval in 15ZONE1028 re: future Quadrant site based on LDC stub road and stream crossing regulatory provisions
5. Updated site plan and current building elevations
6. Proposed Additional Binding Element
7. Manufacturing Process
8. Statement of Compliance filed with the original zone change application with all applicable Goals of the 2040 Plan and Variance Justification
9. Proposed findings of fact pertaining to compliance with the 2040 Plan and Variance criteria

ttorneys: Bardenwerper Talbott & Roberts, PLLC
and Planners, Landscape Architects & Engineers: Mindel Scott & Associates

Tab 1
Aerial photograph of the site and surrounding area

Blankenbaker Station
Phases I, II, III, IV



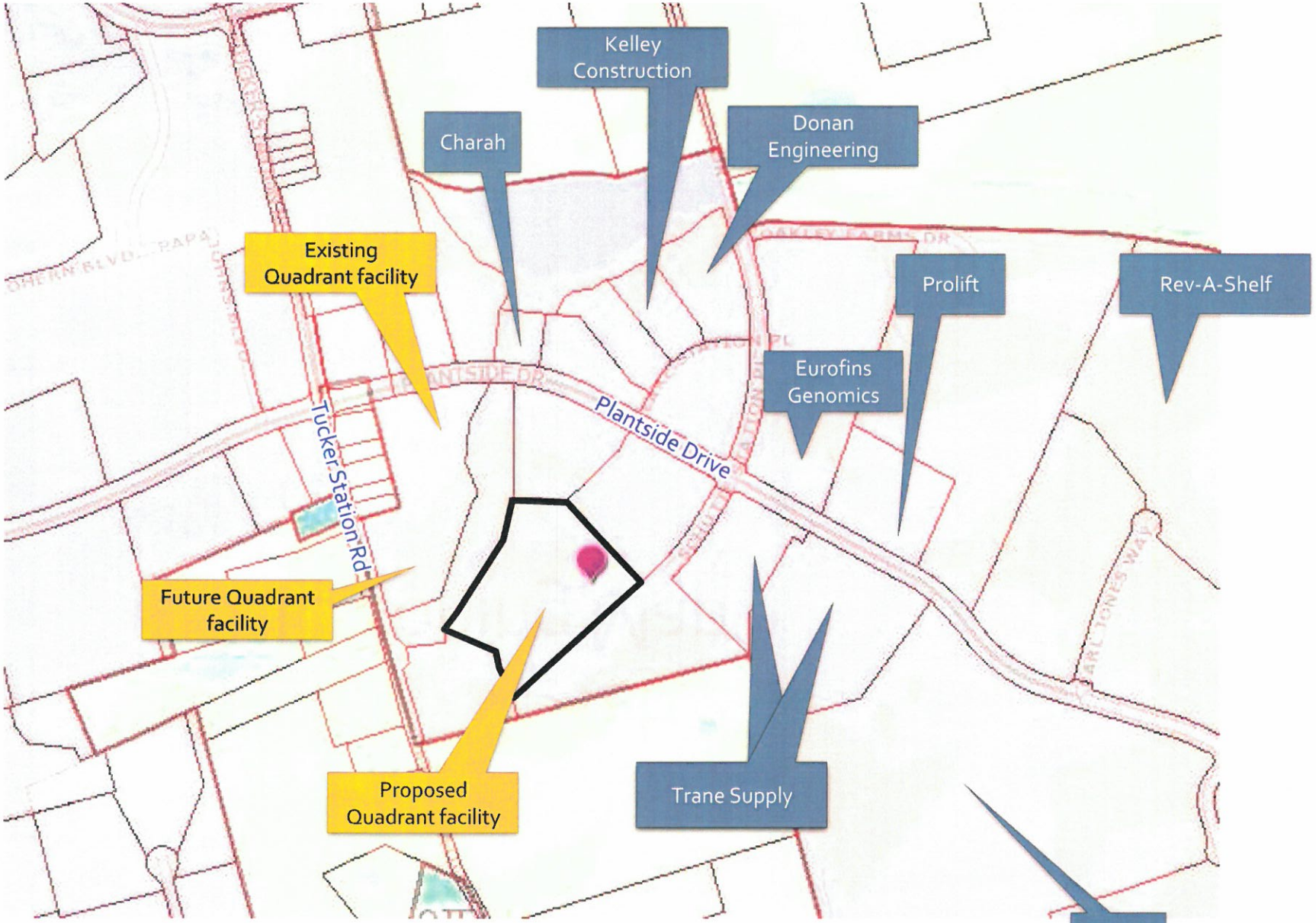
BLANKENBAKER STATION

Phase II

DEL SCOTT

HOLLENBACH OAKLEY

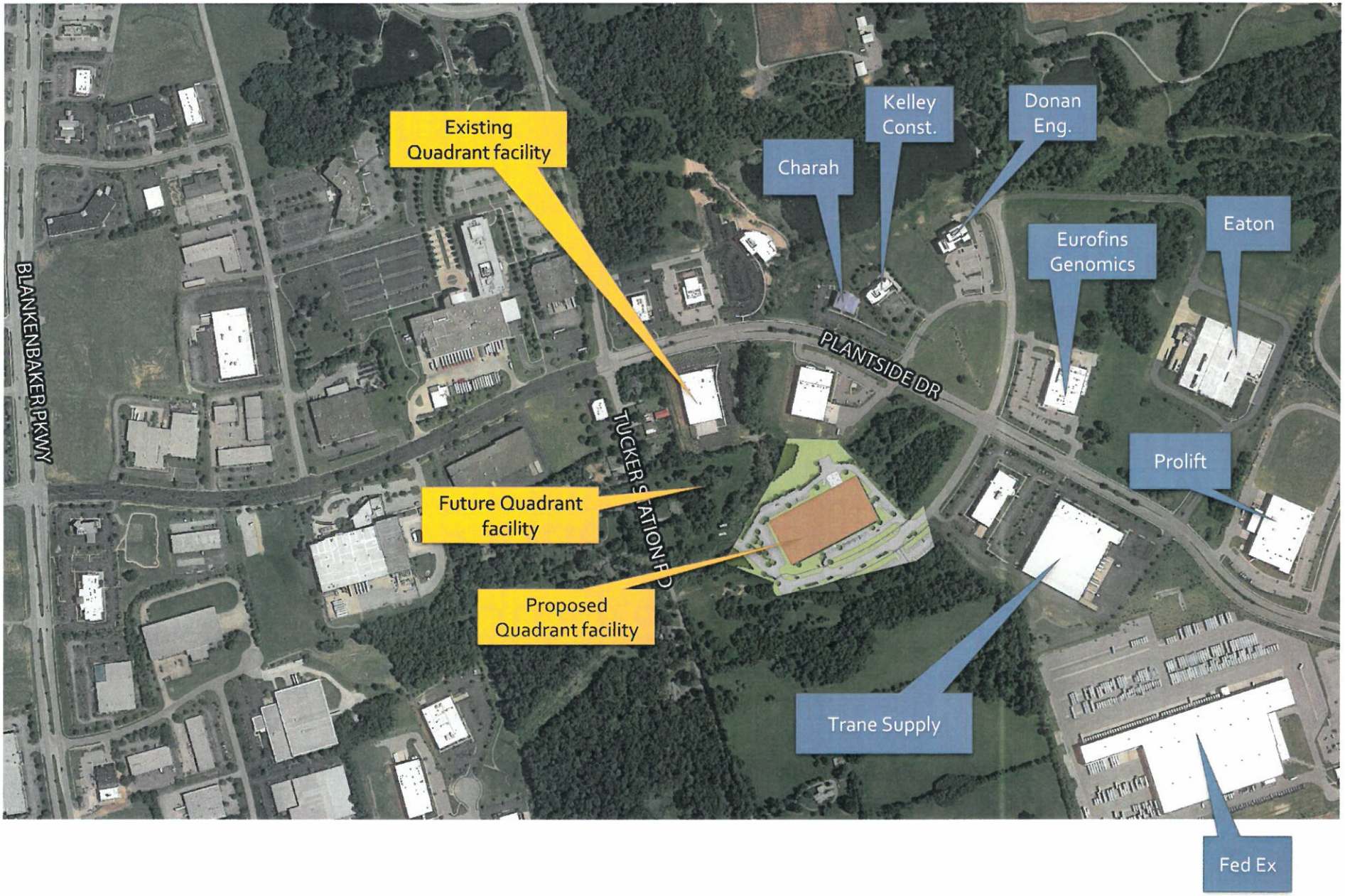
Tab 2
LOJIC Zoning Map

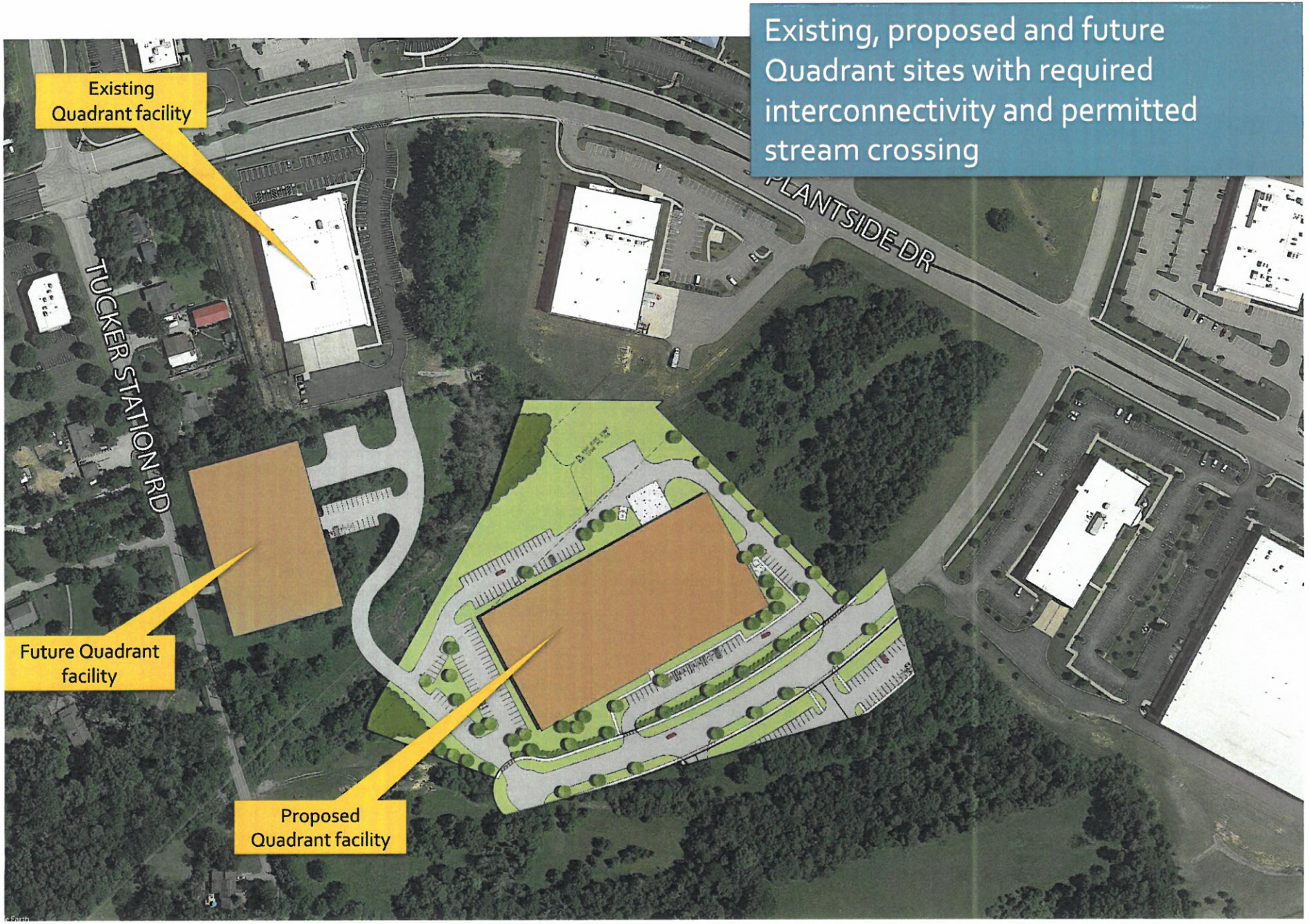


- PEC zoned area in Pink
- R4 zoned area in Yellow
- OR3 & OTF zoned area in Aqua

- PEC to M3 proposed rezoning area outlined in Black

Tab 3
Aerial and ground level photographs of the 3 Quadrant sites in context of the surrounding area

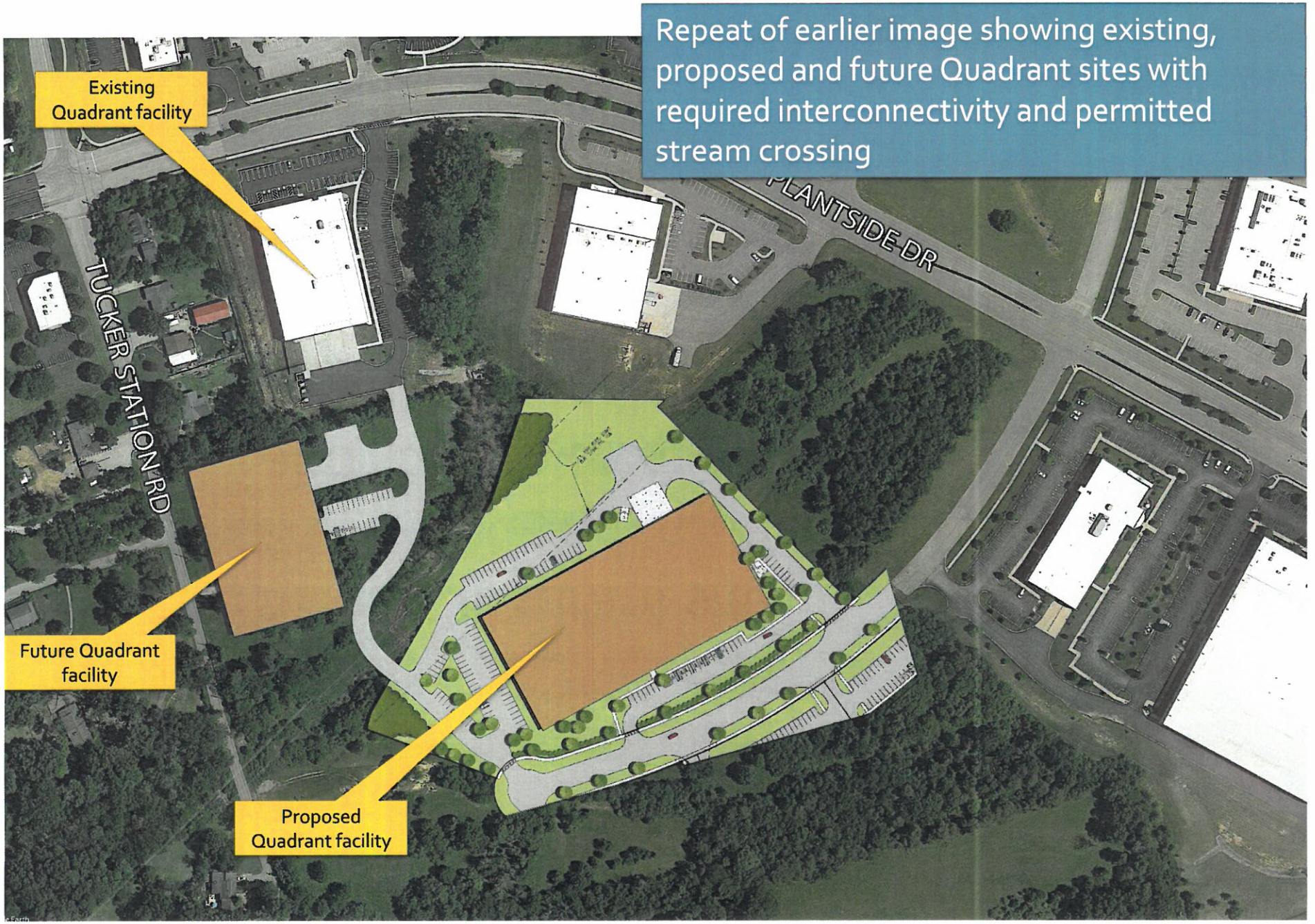

Existing Quadrant facility
Kelley Const.
Donan Eng.
Charah
Eurofins Genomics
Eaton
BLANKENBAKER PKWY
PLANTSIDE DR
TUCKER STATION RD
Prolift
Future Quadrant facility
Proposed Quadrant facility
Trane Supply
Fed Ex


Existing, proposed and future Quadrant sites with required interconnectivity and permitted stream crossing
Existing Quadrant facility
TUCKER STATION RD
PLANTSIDE DR
Future Quadrant facility
Proposed Quadrant facility

/iew of existing Quadrant facility.

View from Schutte Station Rd (off Plantside Drive) to the location of the Schutte Station extension and proposed Quadrant facility site also leading to the future and existing Quadrant sites plus other property.

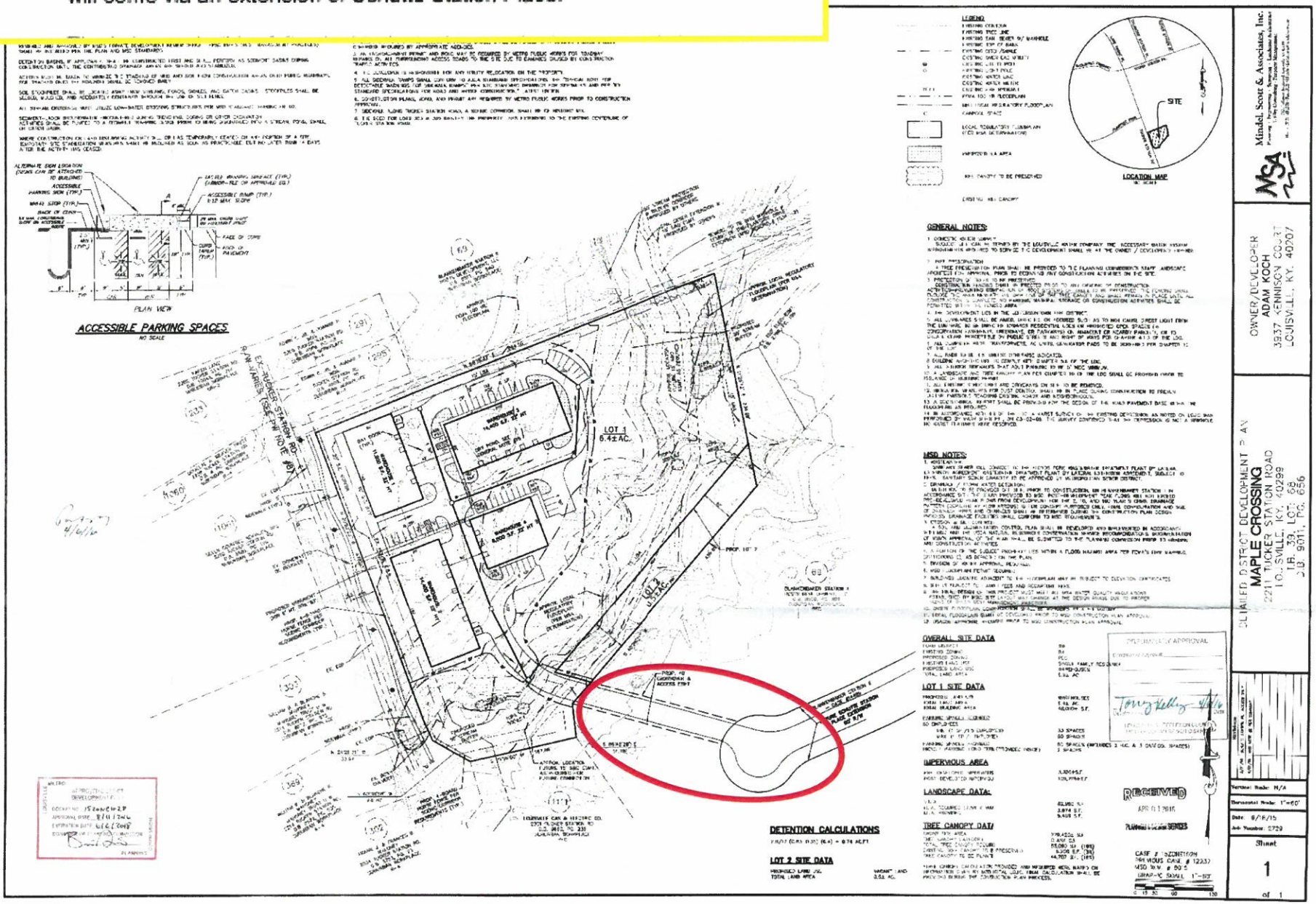
View from existing Quadrant site across future Quadrant site to proposed Quadrant site, completing what is essentially a circular access from Plantside Drive east to Plantside Drive west.


Repeat of earlier image showing existing, proposed and future Quadrant sites with required interconnectivity and permitted stream crossing
Existing Quadrant facility
TUCKER STATION RD
PLANTSIDE DR
Future Quadrant facility
Proposed Quadrant facility

Tab 4
Prior development plan approval in 15ZONE1028 re: future Quadrant site based on LDC stub road and stream crossing regulatory provisions

#15ZONE1028 Binding Element #11

11. There is no direct access to the site from Tucker Station Road. Access will come via an extension of Schutte Station Place.



6.2.5 General Layout of Streets

A. Coordination with Surrounding Streets - A proposed street shall recognize and extend the plan and profile of off-site existing streets, and shall make possible the future extension of streets into adjacent undeveloped land. Collector streets shall intersect with surrounding collector or arterial streets at safe and convenient locations.

Continuation of Existing Streets – Subdivisions shall be designed to ensure that existing public and private streets, which stub into the subject property must be extended through the subject property. For subdivisions creating any lot that abuts or has access to any proposed stub street extension, right-of-way shall be dedicated sufficient to accommodate the extension of the street, and the street shall be constructed in accordance with the requirements of this Land Development Code for constructing public or private roads.

7.3.10 Streets

B. Continuation of existing streets. Subdivisions shall be designed to ensure that existing public and private streets which stub into the subject property can be extended through the subject property. For subdivisions creating any lot that abuts or has access to any proposed stub street extension, right-of-way shall be dedicated sufficient to accommodate the extension of the street, and the street shall be constructed in accordance with the requirements of this Land Development Code for constructing public or private roads.

1.5 Joint and Cross Access

B. Required cross-access corridors shall be shown on any subdivision or site plan. A system of joint use driveways and cross access easements shall be required to provide unified access and circulation among parcels and assist in local traffic movement. In such cases, the building site shall incorporate the following:

2. Stub-outs and other design features to make it visually obvious that abutting vacant properties should be tied in to provide cross access at the time they are developed.

1.6 Requirements for Unified Access and Circulation

B. Where abutting properties are in different ownership and not part of an overall development plan, cooperation between the various owners to create a unified access and circulation system is encouraged. Abutting properties shall provide unified access and circulation at the time that they are developed, or are redeveloped as provided in Section 1.8.

Table 4.8.1		
Type of Protected Waterway	Buffer Area Type & Minimum Buffer Area Width (Feet) By Form District	
	Type "A" Buffer Area Applies in the Following Form Districts • Downtown • Traditional Neighborhood • Traditional Marketplace Corridor • Traditional Workplace • Village FD Center	Type "B" Buffer Area Applies in the Following Form Districts: • Regional Marketplace Center • Town Center • Suburban Marketplace Corridor • Neighborhood • Suburban Workplace • Campus • Village FD Area outside of Center
Protected Waterways Other than Wetlands	Total Buffer Area = 25 feet	Total Buffer Area = 100 feet, comprised of the following 3 zones: 1. Streamside zone: 25 feet: 2. Middle zone: 50 feet. 3. Outer zone: 25 feet.

The proposed road does not cross a regulated perennial stream, but rather an intermittent stream. However, even if it were perennial, the stream could be crossed.

4.8.6 Standards for Protected Waterways and All Buffer Areas

A. General Rule.

No land-disturbing activity, development, or subdivision of any type shall occur in a protected waterway or Buffer Area, except as expressly allowed in this part and other applicable County, state, or federal laws and regulations. The County shall not approve any land-disturbing activity, development, or subdivision until the Applicant obtains all other necessary county, state, and/or federal permits. All Buffer Areas shall remain in a vegetated, natural state and shall not be modified in any manner except as expressly allowed in this section. Plant material adequate for filtering surface drainage shall be maintained within all Buffer Areas.

B. Permitted Uses and Activities in the 100-Year Floodplain.

Any land disturbing activity, development, or subdivision in the 100-year floodplain shall demonstrate compliance with the Jefferson County Floodplain Ordinance, as amended.

C. Uses Permitted in the Type A Buffer Areas and the Streamside Buffer Zone.

Within a Type "A" Buffer Area and the Streamside Zone of a Type "B" Buffer Area, allowable uses and activities are restricted to:

1. Public flood control structures,
2. Utility rights of way (Type A buffer only),
3. Pedestrian-only trails, and
4. Road crossings, where permitted.

Tab 5
Updated site plan and current building elevations